



Institute for Child Health Policy at the University of Florida
Texas External Quality Review Organization

Children with Special Health Care Needs:

Quality of Care in the Medicaid Managed Care and Children's Health Insurance Programs in Texas

Fiscal Years 2009 and 2010

Measurement Period:

September 1, 2008 through August 31, 2010

**The Institute for Child Health Policy
University of Florida**

**The External Quality Review Organization
for Texas Medicaid Managed Care and CHIP**

Submitted: November 2, 2011

Final Submitted:

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
INTRODUCTION.....	14
METHODOLOGY	15
DATA SOURCES	15
SAMPLE SELECTION PROCEDURES.....	16
CSHCN IDENTIFICATION METHODS.....	17
ADMINISTRATIVE QUALITY OF CARE INDICATORS	19
SURVEY-BASED PARENT EXPERIENCE AND SATISFACTION MEASURES	20
DATA ANALYSIS.....	21
ESTIMATES OF THE NUMBERS OF CSHCN.....	24
ADMINISTRATIVE RATES	24
SURVEY RATES	25
RESULTS OF ADMINISTRATIVE MEASURES.....	27
CHILDREN AND ADOLESCENTS’ ACCESS TO PRIMARY CARE PRACTITIONERS	27
WELL-CHILD VISITS IN THE FIRST 15 MONTHS OF LIFE.....	32
WELL-CHILD VISITS IN THE 3 RD , 4 TH , 5 TH , AND 6 TH YEARS OF LIFE	35
ADOLESCENT WELL-CARE	38
HEDIS [®] INPATIENT UTILIZATION	41
HEDIS [®] AMBULATORY CARE	43
HEDIS [®] ANNUAL DENTAL VISIT	45
HEDIS [®] OUTPATIENT DRUG UTILIZATION	47
AHRQ PEDIATRIC QUALITY INDICATOR – ASTHMA	48
AHRQ PEDIATRIC QUALITY INDICATOR – DIABETES SHORT-TERM COMPLICATIONS.....	50
AHRQ PEDIATRIC QUALITY INDICATOR – GASTROENTERITIS.....	51
AHRQ PEDIATRIC QUALITY INDICATOR – PERFORATED APPENDIX	52
AHRQ PEDIATRIC QUALITY INDICATOR – URINARY TRACT INFECTION	53
SURVEY FINDINGS.....	55
CAHPS [®] COMPOSITE: GETTING NEEDED CARE	57
CAHPS [®] COMPOSITE: GETTING CARE QUICKLY.....	59
CAHPS [®] COMPOSITE: HOW WELL DOCTORS COMMUNICATE	61
CAHPS [®] COMPOSITE: HEALTH PLAN INFORMATION AND CUSTOMER SERVICE	63
CAHPS [®] COMPOSITE: PRESCRIPTION MEDICINES.....	65
CAHPS [®] COMPOSITE: GETTING SPECIALIZED SERVICES.....	66
CAHPS [®] COMPOSITE: PERSONAL DOCTOR.....	69
CAHPS [®] COMPOSITE: SHARED DECISION-MAKING.....	71
CAHPS [®] COMPOSITE: GETTING NEEDED INFORMATION	73
CAHPS [®] COMPOSITE: CARE COORDINATION	74
PEDIATRIC QUALITY OF LIFE (PedsQL™) SCORES	77
CSHCN TRANSITION TO ADULT CARE	81
CSHCN SERVICES PROGRAM	84

APPENDIX A. DETAILED SURVEY METHODOLOGY	89
APPENDIX B. SURVEY ITEMS COMPRISING THE CAHPS [®] COMPOSITES	94
ENDNOTES	96

List of Tables

Table 1. Distribution of Children by CRG in STAR, PCCM, STAR Health, and CHIP	24
Table 2. HEDIS [®] Inpatient Utilization – Medical/Surgical Discharges per 1,000 Member-Months	41
Table 3. HEDIS [®] Inpatient Utilization – Medical/Surgical Days per 1,000 Member-Months	42
Table 4. HEDIS [®] Ambulatory Care – Outpatient and ED Visits per 1,000 Member-Months	43
Table 5. HEDIS [®] Outpatient Drug Utilization – Annual Number and Cost of Prescriptions	47
Table 6. AHRQ PDI for Asthma, by Program and CRG (per 100,000 members)	48
Table 7. AHRQ PDI for Diabetes Short-Term Complications, by Program and CRG (per 100,000 members)	49
Table 8. AHRQ PDI for Gastroenteritis, by Program and CRG (per 100,000 members)	51
Table 9. AHRQ PDI for Perforated Appendix, by Program and CRG (per 100 members with appendicitis)	52
Table 10. AHRQ PDI for Urinary Tract Infection, by Program and CRG (per 100,000)	53
Table 11. CAHPS [®] Composite Scores by Program – CSHCN and Non-CSHCN	55
Table 12. Counseling for CSHCN Transition to Adult Care, Parent Responses by Program	82
Table 13. Parent-reported Conditions Among Children in the CSHCN Services Program and the Waiting List	86
Table A1. Telephone Survey Samples	90
Table A2. Survey Data Collection Details	92
Table A3. Survey Data Collection Rates	93

List of Figures

Figure 1. Prevalence of CSHCN in Survey Samples – Comparison of CRG Classification and CSHCN Screener [®]	25
Figure 2. Types of Special Health Care Needs – Percent of Child Members, by Program	26
Figure 3. Children and Adolescents' Access to PCPs – by Program and Health Status ^a	27
Figure 4. Access to PCPs in CHIP (1 to 6 years) – Trends 2007 - 2009	29
Figure 5. Access to PCPs in STAR (1 to 6 years) – Trends 2007 - 2009	29
Figure 6. Well-Child Visits in the First 15 Months of Life – by Program and Health Status	32
Figure 7. Well-Child Visits in the 3 rd , 4 th , 5 th , and 6 th Years of Life – by Program and Health Status	34
Figure 8. Well-Child Visits (3 - 6 years old) in STAR and CHIP- Trends 2007 - 2009	35

Figure 9. <i>Adolescent Well-Care – by Program and Health Status</i>	38
Figure 10. <i>Adolescent Well-Care Visits in STAR and CHIP- Trends 2007 - 2009</i>	39
Figure 11. <i>HEDIS Annual Dental Visit – by Program and Health Status</i>	45
Figure 12. <i>AHRQ PDI for Asthma in STAR and CHIP- Trends 2007 - 2009</i>	49
Figure 13. <i>AHRQ PDI for Diabetes Short-Term Complications in STAR and CHIP- Trends 2007 - 2009</i>	50
Figure 14. <i>AHRQ PDI for Gastroenteritis in STAR and CHIP- Trends 2007 - 2009</i>	52
Figure 15. <i>AHRQ PDI for Perforated Appendix in STAR and CHIP- Trends 2007 - 2009</i>	53
Figure 16. <i>AHRQ PDI for Urinary Tract Infection in STAR and CHIP- Trends 2007 - 2009</i>	54
Figure 17. <i>Percent of Parents Having Positive Experiences with Getting Needed Care for Their Child</i>	57
Figure 18. <i>Percent of Parents Having Positive Experiences with Getting Care Quickly for Their Child</i>	59
Figure 19. <i>Percent of Parents Having Positive Experiences with How Well Doctors Communicate</i>	61
Figure 20. <i>Percent of Parents Having Positive Experiences with Health Plan Information and Customer Service</i>	63
Figure 21. <i>Percent of Parents Having Positive Experiences with Prescription Medicines</i>	65
Figure 22. <i>Percent of Parents Having Positive Experiences with Getting Specialized Services</i>	67
Figure 23. <i>Percent of Parents Having Positive Experiences with Their Child’s Personal Doctor</i>	69
Figure 24. <i>Percent of Parents Having Positive Experiences with Shared Decision-Making</i>	71
Figure 25. <i>Percent of Parents Having Positive Experiences with Getting Needed Information</i>	73
Figure 26. <i>Percent of Parents Having Positive Experiences with Care Coordination</i>	75
Figure 27. <i>Health-Related Quality of Life (PedsQL™) Scores for Toddlers in STAR Health</i>	77
Figure 28. <i>Health-Related Quality of Life (PedsQL™) Scores for Young Children in STAR Health</i>	78
Figure 29. <i>Health-Related Quality of Life (PedsQL™) Scores for Children in STAR Health</i>	78
Figure 30. <i>Health-Related Quality of Life (PedsQL™) Scores for Teens in STAR Health</i>	79
Figure 31. <i>Health-Related Quality of Life (PedsQL™) Scores for Toddlers in CHIP</i>	79
Figure 32. <i>Health-Related Quality of Life (PedsQL™) Scores for Young Children in CHIP</i>	80
Figure 33. <i>Health-Related Quality of Life (PedsQL™) Scores for Children in CHIP</i>	80
Figure 34. <i>Health-Related Quality of Life (PedsQL™) Scores for Teens in CHIP</i>	81
Figure 35. <i>CSHCN Services Program – Overall and Mental Health Status</i>	85
Figure 36. <i>Health-Related Quality of Life (PedsQL™) Scores for Children in the CSHCN Services Program</i>	87
Figure 37. <i>Health-Related Quality of Life (PedsQL™) Scores for Children on the Waiting List</i>	87
Figure 38. <i>CSHCN Services Program – CAHPS® Composite Scores</i>	88

Executive Summary

Introduction

Based on the National Survey of Children With Special Health Care Needs (NS-CSHCN), an estimated 14 percent of children nationally and 13 percent of children in Texas under 18 years old have special health care needs.¹ Children with special health care needs (CSHCN) comprise a unique group who are more susceptible than healthy children to adverse outcomes from variations in their health care, and for whom close monitoring of access to care and quality of care are important components of quality assessment.

This report presents results of studies conducted by the Institute for Child Health Policy at the University of Florida – the External Quality Review Organization (EQRO) for Texas Medicaid Managed Care and the Children’s Health Insurance Program (CHIP) – to assess the quality of care for CSHCN enrolled in the Texas STAR, PCCM, STAR Health, CHIP, and CSHCN Services (Title V) programs during fiscal years 2009 and 2010.

Methodology

The EQRO analyzed data compiled from three sources:

- (1) Enrollment files containing information about the child’s age, sex, race/ethnicity, the managed care organization (MCO) in which the child was enrolled, and the number of months the child was enrolled in the program;
- (2) Person-level claims and encounter data, which contain the information necessary to calculate quality of care indicators, including measures from the Healthcare Effectiveness Data and Information Set (HEDIS[®]) and the Agency for Healthcare Research and Quality (AHRQ) Pediatric Quality Indicators (PDIs); and
- (3) Telephone survey data from families who participated in the EQRO’s caregiver surveys in fiscal year 2009 (STAR, PCCM) and fiscal year 2010 (CHIP, STAR Health, and CSHCN Services Program), which included questions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS[®]) Survey for children in Medicaid and the NS-CSHCN.

The EQRO used two methods to identify CSHCN: (1) Clinical Risk Groups (CRGs) that use health care claims and encounter data to categorize children into one of five health status categories; and (2) the CSHCN Screener[®], used in surveys to classify children as having or not having special health care needs by parent report.

In addition, the EQRO added several quality of care measures based on recommendations from the Forum on Measuring Quality of Health Care for CSHCN in Texas. The following eight

HEDIS® measures were used to assess the access and utilization of health care for CSHCN and non-CSHCN in STAR, PCCM, STAR Health, and CHIP, using fiscal year 2009 data:

- Children and Adolescents' Access to Primary Care Practitioners (CAP)
- Well-Child Visits in the First 15 Months of Life (W15)
- Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life (W34)
- Adolescent Well-Care Visits (AWC)
- Inpatient Utilization – General Hospital/Acute Care (IPU)
- Ambulatory Care (AMB)
- Annual Dental Visit (ADV)
- Outpatient Drug Utilization (ORX)

Rates for the HEDIS® measures were calculated using National Committee for Quality Assurance (NCQA) certified software and following NCQA specifications for HEDIS® 2010. At the request of Texas Health and Human Services Commission (HHSC), the EQRO allows flexibility in the provider specialty codes when determining eligibility for certain HEDIS® measures. Provider specialty codes are an important component of these measures and lifting the provider constraints may result in rate inflation.

The AHRQ PDIs were used to evaluate rates of inpatient admissions for the following five ambulatory care sensitive conditions (ACSCs): Asthma, Diabetes Short-Term Complications, Gastroenteritis, Perforated Appendix, and Urinary Tract Infection. The AHRQ considers ACSCs to be “conditions for which early intervention can prevent complications or more severe disease.”² Rates of inpatient admissions for ACSCs may therefore be seen as indicators of access to good outpatient care.

Questions from the CAHPS® Health Plan Survey were used to construct the following ten composite measures of parents' experiences and satisfaction with their children's health care:

Getting Needed Care

Getting Care Quickly

How Well Doctors Communicate

Health Plan Information and Customer Service

Prescription Medicines

Getting Specialized Services

Personal Doctor

Shared Decision-Making

Getting Needed Information

Care Coordination

The EQRO calculated CAHPS® composite scores on a scale of 0 to 100, with higher scores indicating greater satisfaction. A score of 75 or higher was considered to indicate that the parent's experience was usually or always positive.

The fiscal year 2010 STAR Health, CHIP, and CSHCN Services Program surveys included the 23-item PedsQL™ instrument to assess members' health-related quality of life (HRQOL) by parent report. This tool assesses HRQOL in children and adolescents 2 to 18 years old across four domains of functioning: Physical, Emotional, Social, and School. The four PedsQL™ scores are computed on a 0- to 100-point scale, representing lowest to higher HRQOL. Two composite scores are also calculated – a Psychosocial Health Summary score combining items from the Emotional, Social, and School Functioning scales, and an Overall Summary score combining all four domains of functioning.

Questions from the NS-CSHCN were included in the surveys to assess issues related to transition of care that may arise when a child with special health care needs reaches adulthood. The fiscal year 2010 CSHCN Services Program included additional questions from the NS-CSHCN to assess more comprehensively the health status of children in this program, and the experiences of parents with their child's health services.

The EQRO calculated program-level results for the HEDIS®, PDI, CAHPS, PedsQL™, and NS-CSHCN measures separately for each CRG, permitting comparisons of the quality of care between healthy children and those with special health care needs. For descriptive and multivariate analyses, the EQRO used three member-level datasets: (1) The administrative dataset including all members in STAR, PCCM, STAR Health, and CHIP for whom HEDIS and/or PDI measures were calculated; (2) The Medicaid/CHIP survey dataset including all respondents in the fiscal year 2009 STAR and PCCM surveys, and the fiscal year 2010 CHIP and STAR Health surveys combined; and (3) The CSHCN Services Program survey dataset.

Descriptive statistics compared results for all measures across programs and CRGs, with findings at $p < 0.05$ considered statistically significant. The administrative and Medicaid/CHIP survey datasets included information on the member's health plan, allowing for comparison of performance among health plans in STAR and CHIP. The CSHCN Services Program survey dataset included the member's enrollment status, allowing for comparisons between children enrolled in the program at the time of the survey and children on the program's waiting list.

The EQRO also conducted multivariate analyses on the administrative and Medicaid/CHIP survey datasets, using regression models to test the influence of program or health plan membership on quality of care measures, controlling for the member's age, sex, race/ethnicity, CRG, and place of residence.

Summary of Findings

CSHCN prevalence and health status factors

- *Estimates of the numbers of CSHCN.* Using administrative data and the CRGs to group children based on health status, the prevalence of CSHCN was highest in STAR Health (57 percent), followed by PCCM (26 percent), STAR (16 percent), and CHIP (13 percent). Using the CSHCN Screener[®] administered via telephone survey, the prevalence of CSHCN was also highest in STAR Health (62 percent), followed by PCCM (22 percent), CHIP (20 percent), and STAR (19 percent). Members in the survey dataset were also assigned to a CRG health status category, producing estimates of CSHCN prevalence that were approximately equal to those determined using the CSHCN Screener[®].
- *Types of special health care needs.* Using the CSHCN Screener[®], dependence on medications was the most frequent type of special health care need in STAR, PCCM, and CHIP, ranging from 15 percent to 17 percent of all child members. The profile of special health care needs was different in STAR Health, where rates greatly exceeded those in STAR, PCCM, and CHIP for all five types of needs: (1) dependence on medications; (2) above-routine need or use of services; (3) activity limitations; (4) need or use of special therapies; and (5) need or use of counseling. In STAR Health, need or use of behavioral health treatment or counseling was the most frequent type of need, affecting nearly half of all enrolled members (48 percent).
- *Parent-reported health-related quality of life (HRQOL).* Using the PedsQL[™] survey tool, CSHCN of all age groups in both STAR Health and CHIP had lower scores than non-CSHCN for physical, psychosocial, and overall functioning. In STAR Health, Physical Functioning scores tended to increase with the child's age, while Psychosocial Health scores tended to decrease with the child's age. In CHIP, both Physical Functioning and Psychosocial Health scores tended to decrease with the child's age.

Access to and timeliness of care

- *Children and Adolescents' Access to Primary Care Practitioners.* All programs performed equally well on this measure, with rates of PCP visits for children with significant acute conditions and CSHCN about 10 percent higher than rates for healthy children. Across all age categories, the percentage of CSHCN who had a PCP visit was close to 100 percent. In STAR and CHIP, rates of PCP visits for CSHCN were constant between fiscal year 2007 and 2009. Controlling for demographic and program membership factors, children with significant acute conditions were 4 to 10 times more likely than

healthy children to have had a visit with a PCP, and CSHCN were up to 20 times more likely to have had a visit with a PCP.

Access to PCPs was half as likely among Black, non-Hispanic children as among White, non-Hispanic children. Children two years of age and older living in non-metro areas were also about half as likely as children living in metro areas to have had a visit with a PCP.

- *CAHPS® Getting Needed Care.* In PCCM, the percentage of parents of CSHCN with positive experiences getting needed care for their child was significantly lower than for parents of non-CSHCN (56 percent vs. 81 percent). This difference was largely due to lower parent-reported access to care, tests, or treatment for CSHCN. Compared to parents of White, non-Hispanic children, parents of children in other racial/ethnic groups were less likely to have had positive experiences on this measure.
- *CAHPS® Getting Care Quickly.* In CHIP, the percentage of parents of CSHCN with positive experiences getting care quickly for their child was significantly higher than for parents of non-CSHCN (78 percent vs. 70 percent), a difference that was largely due to better timeliness of routine care for CSHCN. In general, children with significant acute or chronic conditions were more likely than healthy children to have had good timeliness of care. Compared to parents of White, non-Hispanic children, parents of children in other racial/ethnic groups were less likely to have had positive experiences on this measure.
- *CAHPS® Prescription Medicines.* Results from fiscal year 2009 and 2010 generally show a high level of access to *Prescription Medicines* for both CSHCN and non-CSHCN. However, compared to parents of White, non-Hispanic children, parents of Hispanic and Other, non-Hispanic children were less likely to have had positive experiences.
- *CAHPS® Getting Specialized Services.* Results from fiscal year 2009 and 2010 generally show a low level of access to specialized services, which is an important quality indicator for CSHCN. Overall, children with significant acute or chronic conditions were more likely than healthy children to have had good access to specialized services. However, the percentage of parents of CSHCN in PCCM with positive experiences getting specialized services for their child was particularly low (58 percent), and was significantly lower than the percentage among parents of non-CSHCN (79 percent). This difference was largely due to lower access to special therapies for CSHCN. The likelihood of positive experiences on this measure generally decreased with the member's age.
- *CAHPS® Care Coordination.* Results from fiscal year 2009 and 2010 generally show a low level of access to care coordination, which is an important quality indicator for CSHCN. In STAR Health, the percentage of parents with positive care coordination experiences was low for both CSHCN and non-CSHCN (46 percent and 45 percent, respectively). These low rates were largely due to reduced access to care coordination

from the child's health plan, doctor's office, or clinic. Compared to parents of White, non-Hispanic children, parents of Hispanic and Other, non-Hispanic children were more likely to have had positive experiences with *Care Coordination* for their child.

Utilization of health services

- *Well-Child Visits in the First 15 Months of Life.* Rates of well-child visits for CSHCN in the first 15 months of life were highest in PCCM (71 percent), about 10 percent lower in STAR (59 percent), and considerably lower in STAR Health (45 percent). Controlling for program membership and demographic factors, children with major chronic conditions were 1.1 to 1.4 times more likely than healthy children in this age group to have had a well-child visit. This increase was small, suggesting that CSHCN with major chronic conditions are in need of improved access to well-child care in the first 15 months of life. Children living in non-metro areas were also less likely than children living in metro areas to have had six or more well-child visits.
- *Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life.* Rates of well-child visits for CSHCN age three to six years old were highest in STAR Health (86 percent), slightly lower in PCCM (84 percent) and STAR (79 percent), and considerably lower in CHIP (72 percent). Rates among CSHCN were typically about 10 percentage points higher than rates for healthy children. Between fiscal year 2007 and 2009, rates remained generally the same in STAR, and increased slightly in CHIP. Controlling for program membership and demographic factors, CSHCN were 1.6 to 1.8 times more likely than healthy children in this age group to have had a well-child visit.

Well-child visits for Hispanic children were 1.5 to 1.6 times more likely than for White, non-Hispanic children.

- *Adolescent Well-Care.* Rates of adolescent well-care visits for CSHCN were highest in PCCM (71 percent), slightly lower in STAR (66 percent), and considerably lower in CHIP (57 percent). Rates in these three programs were about 12 to 13 percent higher for CSHCN than for healthy children. In STAR Health, the rate for CSHCN was high (78 percent), while the rate for children with significant acute conditions was much lower (46 percent). Overall, rates of adolescent well-care increased between 2007 and 2009 in STAR and CHIP.

Controlling for program membership and demographic factors, adolescents with special health care needs were 1.6 to 1.9 times more likely than healthy adolescents to have had a well-care visit. Well-care visits for Hispanic adolescents were 1.5 to 1.6 times more likely than for White, non-Hispanic adolescents. Adolescents living in non-metro areas were less likely than those living in metro areas to have had a well-care visit, particularly those enrolled in CHIP.

- *HEDIS® Inpatient Utilization – Inpatient Stays.* Overall, STAR had the highest rates of medical and surgical inpatient utilization. The rate of medical discharges in STAR was 70 times greater among CSHCN (333 per 1,000 member-months) than among healthy children. The rate of surgical discharges in STAR was 48 times greater among CSHCN (14 per 1,000 member-months) than among healthy children. The lowest rate of medical inpatient stays for CSHCN occurred in PCCM (21 per 1,000 member-months). The lowest rate of surgical inpatient stays for CSHCN occurred in STAR Health (1.2 per 1,000 member-months).
- *HEDIS® Inpatient Utilization – Inpatient Days.* Overall, CSHCN in STAR had the greatest number of medical days in the hospital (409 per 1,000 member-months), and CSHCN in PCCM had the greatest number of surgical days in the hospital (57 per 1,000 member-months). In all programs, CSHCN had a considerably greater number of days in the hospital than healthy children. For medical stays, this difference was greatest in CHIP (119 times greater among CSHCN). For surgical stays, this difference was greatest in STAR (96 times greater among CSHCN).
- *HEDIS® Ambulatory Care.* Overall, STAR had the highest rates of outpatient and emergency department (ED) utilization. The rate of outpatient visits was 2.3 times greater among CSHCN (738 per 1,000 member-months) than among healthy children. The rate of ED visits in STAR was 2.5 times greater among CSHCN (94 per 1,000 member-months) than among healthy children. The lowest rate of outpatient visits for CSHCN occurred in STAR Health (492 per 1,000 member-months). The lowest rate of ED visits for CSHCN occurred in CHIP (43 per 1,000 member-months).
- *HEDIS® Annual Dental Visit.* Overall, STAR Health performed better than CHIP in all health status groups for this measure, yet had broader disparities among healthy children, those with significant acute conditions, and CSHCN. In CHIP, 63 percent of CSHCN had at least one dental visit. In STAR Health, 92 percent of CSHCN had at least one dental visit. Controlling for program membership and demographic factors, CSHCN were 1.2 to 1.5 times more likely than healthy children to have had a dental visit. All demographic factors were associated with the likelihood of having a dental visit, although most effects were modest. Hispanic members were 1.3 to 1.4 times more likely than White, non-Hispanic members to have had a dental visit. Children age 2 to 3 years old and adolescents 15 to 18 years old were about half as likely to have had a dental visit as children 7 to 10 years old. Members living in non-metro areas were also less likely than those living in metro areas to have had a dental visit.
- *HEDIS® Outpatient Drug Utilization.* The number of prescriptions per member-year for CSHCN ranged from 13 in CHIP to 33 in STAR Health. In STAR Health, the rate among CSHCN was nearly 8 times greater than the rate among healthy children. The cost of prescriptions per member-month ranged from \$113 in CHIP to \$343 in STAR Health. In STAR Health, the cost among CSHCN was 22 times greater than the cost among

healthy children. The highest ratio of annual prescription costs to number of prescriptions for CSHCN was observed in STAR Health, at approximately \$125 per prescription. From EQRO surveys, STAR Health members were found to have a high rate of dependence on medications (43 percent). It is therefore likely that a greater proportion of children in STAR Health require costly prescription drugs than children in other programs. In CHIP, only 17 percent of members were found to be dependent on medications, yet the ratio of annual prescription costs to number of prescriptions was \$103, suggesting less efficient outpatient drug utilization in this program.

- *AHRQ Pediatric Quality Indicator – Asthma.* The highest rate of potentially preventable inpatient admissions for asthma among CSHCN was observed in STAR (1,092 per 100,000), followed by PCCM (919 per 100,000) and CHIP (856 per 100,000). The rate among CSHCN in STAR Health was considerably lower (287 per 100,000). Rates for CSHCN in all programs were considerably greater than the AHRQ national rate of 123 per 100,000 for this measure. The asthma admission rate for CSHCN in STAR was nearly nine times the national rate. In STAR, the rate of asthma admissions increased considerably between 2007 and 2008, then improved in 2009, reaching its lowest point in three years (1,092 per 100,000). In CHIP, asthma admissions gradually decreased over the three-year period.
- *AHRQ Pediatric Quality Indicator – Diabetes Short-Term Complications.* The highest rate of potentially preventable inpatient admissions for diabetes short-term complications among CSHCN was observed in STAR (205 per 100,000), followed by CHIP (196 per 100,000). Rates among CSHCN were lower in PCCM (132 per 100,000) and STAR Health (160 per 100,000). Rates for CSHCN in all programs were considerably greater than the AHRQ national rate of 28 per 100,000 for this measure. The diabetes short-term complications admissions rate for CSHCN in STAR was greater than seven times the national rate. In 2007, diabetes short-term complications admissions among CSHCN were considerably greater in CHIP than in STAR. In 2008, the rate decreased in CHIP and increased in STAR, to approximately 246 per 100,000 in both programs. Rates for both programs declined further in 2009. However, particular attention is warranted in the STAR Program, where the rate of potentially preventable admissions for diabetes short-term complications has nearly doubled over the three-year period.
- *AHRQ Pediatric Quality Indicator – Gastroenteritis.* The highest rate of potentially preventable inpatient admissions for gastroenteritis among CSHCN was observed in PCCM (650 per 100,000). Lower rates were observed in STAR (247 per 100,000), STAR Health (163 per 100,000), and CHIP (164 per 100,000). Rates for CSHCN in all programs were greater than the AHRQ national rate of 105 per 100,000 for this measure. The gastroenteritis admissions rate for CSHCN in PCCM was greater than six times the national rate. Both STAR and CHIP had an increase in admissions rates

between 2007 and 2008. In 2009, there was a slight decline in the rate of admissions in CHIP, and a much greater decline in STAR.

- *AHRQ Pediatric Quality Indicator – Perforated Appendix.* The highest rate of potentially preventable inpatient admissions for perforated appendix among CSHCN was observed in STAR (42 per 100), followed by PCCM (38 per 100) and CHIP (38 per 100). Rates for CSHCN in all three programs were greater than the AHRQ national rate of 29 per 100 for this measure. The perforated appendix admission rate for CSHCN in STAR was nearly 1.5 times the national rate. However, the rate for healthy children in STAR (32 per 100) was also higher than the national rate. Both STAR and CHIP had a slight increase in rates between 2007 and 2009.
- *AHRQ Pediatric Quality Indicator – Urinary Tract Infection.* The highest rate of potentially preventable inpatient admissions for urinary tract infection among CSHCN was observed in PCCM (255 per 100,000). Rates were lower in STAR (150 per 100,000), STAR Health (78 per 100,000), and CHIP (136 per 100,000). Considerable differences in admissions rates were observed between healthy children and CSHCN. In CHIP, the rate of admissions for urinary tract infection among CSHCN was nearly 23 times the rate among healthy children. Rates for CSHCN in all programs were also greater than the AHRQ national rate of 43 per 100,000 for this measure. The urinary tract infection admission rate for CSHCN in PCCM was nearly six times the national rate. In STAR there was a sharp increase in the rate of admissions for urinary tract infection between 2007 and 2008, followed by a sharp decrease in 2009. In CHIP, there was a gradual increase in rates between 2007 and 2009.

Patient-centered care

- *CAHPS® How Well Doctors Communicate.* At the program level, results for *How Well Doctors Communicate* were good for all programs, and approximately the same between CSHCN and non-CSHCN.
- *CAHPS® Health Plan Information and Customer Service.* In PCCM and STAR Health, the percentage of parents of CSHCN with positive experiences on this measure (75 percent and 78 percent, respectively) was notably higher than among parents of non-CSHCN (67 percent and 68 percent, respectively). These differences were largely due to better experiences among parents of CSHCN in getting the information they needed from their child's health plan's customer service. Parents of Hispanic children were generally more likely than parents of White, non-Hispanic children to have had positive customer service experiences.
- *CAHPS® Personal Doctor.* At the program level, results for *Personal Doctor* were good for all programs. In STAR Health, the percentage of parents of CSHCN having positive

experiences with their child’s personal doctor was significantly lower than the percentage among parents of non-CSHCN (79 percent vs. 87 percent). The difference was largely because families reported that their children’s personal doctors did not understand how their child’s condition affects the family’s day-to-day life. The likelihood of positive experiences with the child’s personal doctor generally decreased with the member’s age.

- *CAHPS® Shared Decision-Making.* At the program level, results for *Shared Decision-Making* were good in all programs. In STAR Health, the percentage of parents of CSHCN with positive experiences was notably higher than among parents of non-CSHCN (94 percent vs. 78 percent). In general, parents of children with significant acute conditions were more likely than parents of healthy children to have had positive experiences with shared decision-making.
- *CAHPS® Getting Needed Information.* At the program level, results for *Getting Needed Information* were good in all programs, for both CSHCN and non-CSHCN. Compared to parents of White, non-Hispanic children, parents of Other, non-Hispanic children were less likely to have had positive experiences on this measure.

Recommendations

The following recommendations focus on aspects of the delivery and quality of care for CSHCN that can directly impact the overarching goals set by Texas HHSC, including reducing potentially preventable emergency department visits and improving access to specialty care. Issues related to continuity of care, access to care, shared decision-making, and care coordination are particularly important for CSHCN.

The EQRO recommends the following strategies to Texas HHSC and the MCOs participating in Texas Medicaid and CHIP for improving the delivery and quality of care for children with special health care needs:

Domain	Recommendations	Rationale	HHSC Recommendations/ Responses
Outpatient care for asthma	<ul style="list-style-type: none"> • STAR MCOs should consider implementing proven strategies to improve asthma management programs for CSHCN. One model is the Easy Breathing program used by primary care clinicians in Connecticut, which 	In STAR, the rate of asthma admissions among CSHCN was nine times the AHRQ national rate. In PCCM, the rate of potentially preventable asthma admissions among CSHCN was seven	<ul style="list-style-type: none"> • MCOs have a performance improvement project (PIP) targeting the reduction of asthma-related ED visits. • MCOs provide disease management services that include

	<p>translates key elements of the National Asthma Education and Prevention Program guidelines into an efficient, effective, user-friendly format.³</p> <p>Expansion of this program to pediatrician's offices in six communities resulted in significant reductions in the number of hospitalizations and emergency department visits for children with persistent asthma.</p> <ul style="list-style-type: none"> STAR MCOs moving into former PCCM counties should prioritize the implementation of asthma management programs to meet the needs of CSHCN in these areas. 	<p>times the AHRQ national rate.</p> <p>Improving outpatient care for asthma among CSHCN will help to reduce both potentially preventable inpatient and emergency department admissions.</p>	<p>asthma. Children with special health care needs (CSHCN) diagnosed with an asthmatic condition are enrolled in their MCO's disease management program.</p> <ul style="list-style-type: none"> HHSC will work with the Office of Medical Directors to ensure the current DM model meets the needs of CSHCN diagnosed with asthma.
<p>Access to specialized services</p>	<ul style="list-style-type: none"> Medicaid and CHIP MCOs should consider implementing proven strategies to improve access to specialized services. One model is the University of New Mexico's Project ECHO, which leverages teletechnology to train primary care doctors in underserved areas to treat complex illnesses, creating "knowledge networks" that connect specialists with primary 	<p>Results for the CAHPS[®] composite <i>Getting Specialized Services</i> were below-average for all programs.</p> <p>Scores were particularly low for CSHCN in PCCM, largely due to lower access to special therapies.</p> <p>Controlling for other factors, access to</p>	<ul style="list-style-type: none"> MCOs have a PIP targeting the improvement of access to specialized services. HHSC monitors all MCOs through the Performance Indicator Dashboard to ensure their provider network includes an adequate number of specialty providers to meet the

	<p>care teams.⁴</p> <ul style="list-style-type: none"> STAR MCOs moving into former PCCM counties should focus on ensuring their networks include an adequate number of specialty providers, especially specialty therapy providers, to meet the needs of this population. STAR MCOs moving into former PCCM counties should consider implementation of Performance Improvement Projects (PIPs) designed to improve access to specialized services for CSHCN. 	<p>specialized services was improved for CSHCN, but reduced for adolescents.</p>	<p>needs of CSHCN.</p>
Care coordination	<ul style="list-style-type: none"> STAR and CHIP MCOs should consider implementation of rapid referral programs for their network providers, which can improve the timeliness of the specialist referral process and the overall coordination of care. Components of these programs may include referral agreements between PCPs and specialists, and referral experts to expedite insurance authorization.⁵ 	<p>Results for the CAHPS® composite <i>Care Coordination</i> were below-average for all programs.</p> <p>Scores were particularly low for both CSHCN and non-CSHCN in STAR Health, largely due to reduced access to care coordination from the child's health plan, doctor's office, or clinic.</p> <p>Improving care</p>	<ul style="list-style-type: none"> HHSC will work with MCOs to ensure all new and existing network providers receive appropriate training on the importance of timely referrals to specialist for CSHCN. Encourage MCOs to develop PIP targeting improvement of care coordination for CSHCN.

		coordination for CSHCN in Texas Medicaid and CHIP will help to reduce both potentially preventable inpatient and emergency department admissions.	
--	--	--	--

Introduction

A key aspect of assessing the quality of care for children in Medicaid and the Children's Health Insurance Program (CHIP) is identifying children with special health care needs (CSHCN) in programs and health plans. The Federal Maternal and Child Health Bureau defines *Children with Special Health Care Needs* as children who:

- 1) have or are at an increased risk for a chronic physical, developmental, behavioral, or emotional condition, and
- 2) require health and related services of a type or amount beyond that required by children generally.⁶

Included in this definition are children at increased biological risk (such as low birth weight) and increased environmental risk (such as extreme poverty, absence of social support, and child abuse or neglect), as well as those who require specialized medical and nursing services, therapeutic services, family support services, or special medical equipment and supplies. A broad range of chronic conditions affect CSHCN, from prevalent conditions such as asthma to rare conditions such as childhood cancer.

Based on the National Survey of CSHCN, an estimated 14 percent of children nationally and 13 percent of children in Texas under 18 years old have special health care needs.⁷ Recent population surveys have found that the prevalence of CSHCN is highest among boys, school-age children, and children in lower-income families.⁸ Eighteen percent of CSHCN are reported to have unmet health needs, while one-third lack critical elements of family-centered health care.

Children with special health care needs therefore comprise a unique group who may be more susceptible than healthy children to adverse outcomes from variations in their health care, and for whom close monitoring of access to care and quality of care are important components of quality assessment.

This report presents results of studies conducted by the Institute for Child Health Policy at the University of Florida – the External Quality Review Organization (EQRO) for Texas Medicaid Managed Care and the Children's Health Insurance Program (CHIP) – to assess the quality of care for CSHCN enrolled in the Texas STAR, PCCM, STAR Health, CHIP, and CSHCN Services (Title V) programs during fiscal years 2009 and 2010. The purpose of this report is to describe and analyze the following aspects of health and health services delivery for CSHCN in Texas Medicaid and CHIP:

- *Demographic and health status factors*, including estimates of the numbers of CSHCN in each program, clinical risk group (CRG) classifications, and parent-reported quality of life.

- *Access to and timeliness of care*, including measures of access to primary care practitioners and outpatient care using administrative claims and encounter data, and survey-based measures of access to and timeliness of routine, urgent, and specialist care, specialized services, prescription medicines, and care coordination.
- *Utilization of health services*, including rates of well-child visits, inpatient stays, ambulatory care, dental care, and outpatient pharmaceutical care using administrative claims and encounter data.
- *Patient-centered care*, including survey-based measures of health plan information and customer service, communication with personal doctors, shared decision-making, and CSHCN transition issues.

Methodology

Data sources

This report includes data from three sources:

- (1) Enrollment files containing information about the child's age, sex, race/ethnicity, the managed care organization (MCO) in which the child was enrolled, and the number of months the child was enrolled in the program. These files were used to identify children who met the sample selection criteria for telephone survey participation, obtain contact information for their families, and assess whether children met the enrollment criteria necessary to be included in the calculation of administrative measures. The EQRO also used data from enrollment files in multivariate analyses to assess the relative influence of demographics, health status, geography, and program/MCO membership on the quality of care for CSHCN.
- (2) Person-level claims and encounter data, which were provided to the EQRO by the Texas Health and Human Services Commission (HHSC) and the MCOs participating in Texas Medicaid Managed Care and CHIP. The person-level claims and encounter data contain Physician's Current Procedural Terminology (CPT) codes, International Classification of Diseases, 9th Revision, Clinical Modification (ICD 9-CM) codes, place of service (POS) codes, and other information necessary to calculate quality of care indicators. These included measures from the Healthcare Effectiveness Data and Information Set (HEDIS[®]) and the Agency for Healthcare Research and Quality (AHRQ) Pediatric Quality Indicators (PDIs).
- (3) Telephone survey data from families who participated in the EQRO's caregiver surveys in fiscal year 2009 (STAR, PCCM) and fiscal year 2010 (CHIP, STAR Health, and CSHCN Services Program). All surveys included questions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS[®]) Survey (Version 4.0) for children in Medicaid and the National Survey of CSHCN (NS-CSHCN).^{9, 10}

Sample selection procedures

Administrative data samples

The HEDIS® and PDI quality of care measures rely on administrative data – enrollment files, health care claims, and encounter data. The measures included in this report require at least one year of health care claims and encounter data for their calculations. For this report, the time frame used was fiscal year 2009 (September 1, 2008 through August 31, 2009).

Telephone survey samples

Telephone surveys were conducted by the EQRO for the following programs and time periods:

- STAR – November 2008 to June 2009
- PCCM – November 2008 to June 2009
- STAR Health – December 2009 to February 2010
- CHIP – November 2009 to April 2010
- CSHCN Services Program – June 2010 to July 2010

To be eligible for inclusion, the child had to be enrolled in the respective program for at least 9 continuous months in the year prior to the survey (or a minimum of 6 continuous months for children in STAR Health), and had to be currently enrolled at the time of the survey. These criteria were chosen to ensure that the family had sufficient experience with the program to respond to the questions. Selected members must not have participated in the corresponding survey from the prior reporting year (fiscal year 2007 for STAR and PCCM, fiscal year 2008 for CHIP, and fiscal year 2009 for STAR Health).¹¹ For the STAR, PCCM, and STAR Health surveys, sampled members must also have been 18 years of age or younger during the eligibility period. For the CSHCN Services Program survey, sampled members must have been 21 years of age or younger.

- **The STAR Program** survey was conducted with a stratified random sample of families. The sample was stratified to include representation from the 14 MCOs serving Texas Medicaid during fiscal year 2009. Three MCOs – Aetna, AMERIGROUP, and Superior – were further divided by service area (SA), resulting in a total of 23 sampling strata. A target sample of 6,900 telephone surveys was set, representing 300 respondents per MCO/SA group. There were 6,909 surveys completed with caregivers of children enrolled in STAR. For the purposes of this report, analyses were conducted at the MCO level only.
- **The PCCM Program** survey was conducted with a simple random sample of families, with a target sample of 400 telephone surveys. There were 400 surveys completed with caregivers of children enrolled in PCCM.
- **The STAR Health Program** survey was conducted with a simple random sample of families, with a target sample of 400 telephone surveys. There were 400 surveys completed with caregivers of children enrolled in STAR Health.

- **The CHIP** survey was conducted with a stratified random sample of families. The sample was stratified to include representation from the 17 MCOs serving Texas CHIP during fiscal year 2010. A target sample of 5,100 telephone surveys was set, representing 300 respondents per MCO group. There were 4,748 surveys completed with caregivers of children enrolled in CHIP.
- **The CSHCN Services Program** survey was conducted with two simple random samples of families – one with a target sample of 300 children enrolled in the CSHCN Services Program at the time of sampling, and the other with a target sample of 100 children on the program’s waiting list. There were 302 in-program and 100 waiting list surveys completed with caregivers. This program represents a mix of children insured through Medicaid, CHIP, and commercial insurance; the survey sample therefore included caregivers of both publicly-insured and commercially-insured children.

A complete description of the sampling strategies, response rates, and data collection techniques for each of the surveys discussed in this report is presented in **Appendix A**.

CSHCN identification methods

The EQRO used two methods to identify CSHCN, depending on the data source. The EQRO used Clinical Risk Groups (CRGs) to categorize children into one of five health status categories.¹² The CRGs use diagnostic information found in health care claims and encounter data to place children into the health status categories. The advantage of this approach is that it uses diagnoses given by providers at the time of health care encounters and is likely to accurately reflect the child’s health status. Another accepted approach to identify CSHCN is through the use of parent interviews, either face-to-face, via telephone, or in writing. In telephone surveys that the EQRO conducts, the CSHCN Screener[®] was used to classify children as having or not having special health care needs.¹³ The advantage to the CSHCN Screener[®] is that it can identify CSHCN among those who are newly enrolled to a program. Systems that use claims and encounter data (such as the CRGs) require 6 months of enrollment for children 12 months and older and 3 months of enrollment for those under 12 months to classify them accurately into a health status category. The CSHCN Screener[®] is dependent on parent report only. However, the parent report may not be consistently accurate.

CRG classification

CRGs use more than 2,000 ICD-9-CM codes and some CPT codes from all health care encounters to assign enrollees to one of five health status categories:

- 1) **Healthy** members who had no medical encounters during the measurement period or were seen only for routine care.
- 2) **Significant Acute Conditions**, including illnesses or injuries, such as head injury with coma or meningitis, which could place a child at risk for developing a chronic condition.

- 3) **CSHCN – Minor**, including illnesses that can usually be managed effectively with few complications, such as hearing loss or attention deficit/hyperactivity disorder (ADHD).
- 4) **CSHCN – Moderate**, involving illnesses that vary in their severity and progression, can be complicated, and require extensive care, such as asthma, epilepsy, or major depression.
- 5) **CSHCN – Major**, referring to serious illnesses that often result in progressive deterioration, debilitation, and death, such as active malignancies or cystic fibrosis.

To ensure a sufficient diagnostic history for accurate classification, children one year of age and older had to be enrolled in the program or MCO for at least six months, and those under one year of age had to be enrolled for at least three months. Because CRG classification relies on actual diagnostic information provided by a physician, it allows for an accurate assessment regarding the severity of a child's condition.

CSHCN[®] Screener classification

The Child and Adolescent Health and Measurement Initiative (CAHMI) developed the CSHCN[®] Screener, which is a five-item survey tool for determining whether a child has special health care needs based on parent report. Based on the consequences-based definition of "CSHCN" by the Federal Maternal and Child Health Bureau, the CSHCN Screener[®] is the method used by the NS-CSHCN for identifying children with special needs. It allows for screening of five types of special health care needs:

- 1) Need or use of prescription medicine
- 2) Above-routine need or use of medical care, mental health, or educational services
- 3) Functional limitations in the child's ability to do perform age-appropriate activities
- 4) Need or use of special therapy, such as physical, occupational, or speech therapy
- 5) Need of treatment or counseling for an emotional, behavioral, or developmental problem

If the child had one or more of the consequences listed above due to a condition that lasted or was expected to last for 12 months or longer, then he or she was considered to have special health care needs.

Parents' reports of their children's health status can provide useful information for program planning, particularly for new enrollees who do not have sufficient enrollment time to be classified using the CRGs or other similar classification systems. In addition, parent report can identify CSHCN who would not have been identified using claims and encounter data, notably for those children who were not seen by a health care provider or were seen only for routine health care needs during the measurement period. Children with minor or manageable chronic conditions, such as asthma, may only have been seen for well-child visits or minor routine health care needs during the measurement period. In some of those cases, the physician does

not record the underlying asthma diagnosis, meaning that these children would be classified as “healthy” using CRG classification.

Administrative quality of care indicators

The EQRO assessed the access and utilization of health care for CSHCN and non-CSHCN using the following eight HEDIS[®] measures:

- Children and Adolescents’ Access to Primary Care Practitioners (CAP)
- Well-Child Visits in the First 15 Months of Life (W15)
- Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life (W34)
- Adolescent Well-Care Visits (AWC)
- Inpatient Utilization – General Hospital/Acute Care (IPU)
- Ambulatory Care (AMB)
- Annual Dental Visit (ADV)
- Outpatient Drug Utilization (ORX)

Rates for the HEDIS[®] measures were calculated using National Committee for Quality Assurance (NCQA) certified software and following NCQA specifications for HEDIS[®] 2010. When appropriate, discussion of results in this report includes comparison with HEDIS[®] national Medicaid rates, which are derived from rates reported to the NCQA by Medicaid Managed Care plans nationally.¹⁴ Because health plans submit HEDIS[®] data to the NCQA on a voluntary basis, those included in the national Medicaid rates may not be fully representative of the industry, which should be considered when interpreting comparisons with the findings of this report.¹⁵

At the request of Texas HHSC, the EQRO developed a methodology to allow for flexibility in the provider specialty codes when determining eligibility for certain HEDIS[®] measures. Provider specialty codes are an important component for these measures and lifting the provider constraints may result in some rate inflation. For example, NCQA specifications require that a primary care practitioner be the provider of record for a member to be compliant with the CAP measure. The revised methodology allows any visit with a physician provider to count toward compliance for this measure. The CAP, W15, W3, and AWC measures rely on specific provider specialty codes, and are therefore affected by this change in methodology. For these measures, the name HEDIS[®] has been removed from the titles in this report, as these measures do not adhere precisely to NCQA specifications.

The AHRQ PDIs were used to evaluate program-level performance on rates of inpatient admissions for the following five ambulatory care sensitive conditions (ACSCs): Asthma, Diabetes Short-Term Complications, Gastroenteritis, Perforated Appendix, and Urinary Tract Infection.¹⁶ The AHRQ considers ACSCs to be “conditions for which good outpatient care can

potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease.”¹⁷ Rates of inpatient admissions for ACSCs may therefore be seen as indicators of access to outpatient care. Unlike most other measures discussed in this report, low PDI rates are desired, as they suggest a better quality health care system outside the hospital setting. All PDI rates are calculated per 100,000 hospital admissions, except for Perforated Appendix, which is calculated per 100 admissions for appendicitis. Discussion of PDI rates in this report includes comparisons with national rates reported by AHRQ.¹⁸ It should be noted that the AHRQ national estimates are based on data collected in 2008 and are area-level indicators, including commercial and Medicaid populations.

Survey-based parent experience and satisfaction measures

Questions from the CAHPS[®] Health Plan Survey were used to construct the following ten composite measures of parents’ experiences and satisfaction with their children’s health care:

<i>Getting Needed Care</i>	<i>Getting Specialized Services</i>
<i>Getting Care Quickly</i>	<i>Personal Doctor</i>
<i>How Well Doctors Communicate</i>	<i>Shared Decision-Making</i>
<i>Health Plan Information and Customer Service</i>	<i>Getting Needed Information</i>
<i>Prescription Medicines</i>	<i>Care Coordination</i>

While all ten composite measures are important for a comprehensive assessment of the quality of care for CSHCN, this report emphasizes the performance of programs and health plans on measures that are particularly relevant for children with chronic conditions – *Prescription Medicines*, *Getting Specialized Services*, and *Care Coordination*. Children with special health care needs have a greater need for these services than children in the general member population. Having composite scores on these measures that are equal to or greater than those for children in the general membership is an indication that resources are being appropriately distributed to ensure a high level of access to care for CSHCN.

The individual items used to construct these measures are presented in **Appendix B**. The EQRO calculated CAHPS[®] composite scores on a scale of 0 to 100, with higher scores indicating greater satisfaction. A score of 75 or higher was considered an indication that the parent’s experience was usually or always positive. This method of calculation deviates from the CAHPS[®] scoring specifications of the NCQA and the AHRQ specifications for CAHPS[®] global proportions of core composite measures, both of which express scores at the aggregate level.^{19,20} The 100-point scale used in this report permits the calculation of composite scores at the member level, which is necessary for conducting multivariate analyses. Furthermore, this method is congruent with the scoring methodology of the original EQRO survey reports, and provides scores that allow simple interpretation and comparison of findings.

The fiscal year 2010 STAR Health and CHIP surveys included the 23-item PedsQL™ instrument to assess members' health-related quality of life (HRQOL) by parent report.²¹ This tool assesses HRQOL in children and adolescents 2 to 18 years old across four domains of functioning: Physical, Emotional, Social, and School. For each domain, parents are asked "how much of a problem" their child has had in the past year with issues such as low energy (Physical Functioning), feeling afraid or scared (Emotional Functioning), getting along with other children (Social Functioning), or paying attention in class (School Functioning).

The four generic PedsQL™ scores are computed on a 0- to 100-point scale, representing lowest to highest HRQOL. Two composite scores are also calculated – an Overall Summary score combining all four domains of functioning, and a Psychosocial Health Summary score combining items from the Emotional, Social, and School Functioning scales.

Questions from the NS-CSHCN were included in the surveys to assess issues related to transition of care that may arise when a child with special health care needs reaches adulthood. These questions are only answered by parents of CSHCN 11 years of age or older. They are intended to evaluate efforts by providers to counsel CSHCN and their parents on the following transition issues:

- Moving from pediatric to adult primary care.
- Health care needs for CSHCN in their transition to adulthood.
- Obtaining/keeping health insurance coverage for CSHCN in transition.
- CSHCN taking responsibility for their health care needs.

Data analysis

The EQRO calculated program-level results for the HEDIS®, PDI, CAHPS®, NS-CSHCN, and PedsQL™ measures separately for each CRG, permitting comparisons of the quality of care among healthy children, those with significant acute conditions, and those with special health care needs. Percentages shown in figures and tables are rounded to the nearest whole number; therefore, percentages may not add up to exactly 100 percent.

For descriptive and multivariate analyses, the EQRO used three member-level datasets.

- The administrative dataset included all members in STAR, PCCM, STAR Health, and CHIP for whom HEDIS® and/or PDI measures were calculated. Because the denominators in HEDIS® utilization measures (IPU, AMB, and ORX) represent all members in a health plan, the administrative dataset included all children in every program enrolled during the measurement period (subject to the enrollment and age restrictions of measure specifications).

- The Medicaid/CHIP survey dataset included all respondents in the fiscal year 2009 STAR and PCCM surveys, and the fiscal year 2010 CHIP and STAR Health surveys combined.
- The CSHCN Services Program survey dataset included only respondents who participated in the fiscal year 2010 CSHCN Services Program survey. Members in this program may be concurrently enrolled in Medicaid or CHIP, which prevents their comparison with members in the other programs. Therefore, the EQRO treated this dataset independently and performed only descriptive analyses of the data.

Descriptive statistics compared results across programs and CRGs, using the Pearson chi-square test for differences in percentages, and using t-tests and analysis of variance (ANOVA) for differences in means. Findings at $p < 0.05$ were considered statistically significant. The administrative and Medicaid/CHIP survey datasets included information on the member's health plan, allowing for comparison of performance among health plans in STAR and CHIP. The CSHCN Services Program survey dataset included the member's enrollment status, allowing for comparisons between children enrolled in the program at the time of the survey and children on the program's waiting list.

The EQRO also conducted multivariate analyses on the administrative and Medicaid/CHIP survey datasets. Regression models were used to test the influence of program or health plan membership on the quality of care measures, controlling for the member's age, sex, race/ethnicity, CRG, and place of residence. In models comparing the member's program membership, the STAR Program was treated as the reference group to which PCCM, STAR Health, and CHIP were compared. In models comparing the member's health plan membership, the health plan with the highest performance on the outcome in question was treated as the reference group.

- Age was grouped into four categories in most models: (1) 0 to 4 years old; (2) 5 to 7 years old; (3) 8 to 12 years old; and (4) 13 to 18 years old. The oldest age group – 13 to 18 years old – was used as the reference group to which the other groups were compared.²² Age was not included as a covariate for age-specific measures, such as Children and Adolescents' Access to PCPs, Well-Child Visits, and Adolescent Well-Care. Models assessing HEDIS[®] Annual Dental Visit measure used the pre-defined age groups for that measure.
- Sex was treated as a binary covariate, with male members as the reference group.
- Race/ethnicity was grouped into four categories for most models: (1) White, non-Hispanic; (2) Black, non-Hispanic; (3) Hispanic; and (4) Other, non-Hispanic (including Asian/Pacific Islander and Native American). For models of administrative measures, two additional racial/ethnic groups were included – American Indian/Alaskan and

Asian/Pacific Islander. In both cases, White, non-Hispanic members were the reference group.

- CRG was grouped according to its five category classification system: (1) Healthy; (2) Significant Acute Conditions; (3) CSHCN – Minor; (4) CSHCN – Moderate; and (5) CSHCN – Major. Healthy members were the reference group. Children who did not meet the minimum enrollment criteria to be classified were excluded from the analyses and were not assigned a CRG category.
- Place of residence was categorized using Rural-Urban Commuting Area (RUCA) codes for survey-based measures, and Rural-Urban Continuum (RUCC) codes for measures based on administrative data. Both types of codes are based on the member's address, and were found to be highly correlated.²³ The RUCA codes use standard Bureau of Census Urbanized Area and Urban Cluster definitions to characterize census tracts regarding their rural and urban status.²⁴ For multivariate analyses, the 33 RUCA codes were collapsed into two categories – “urban” and “rural/isolated”, with “urban” functioning as the reference group. The RUCC codes use classifications established by the Office of Management and Budget to characterize counties as metropolitan and non-metropolitan, determined by degree of urbanization and adjacency to other metropolitan areas.²⁵ For multivariate analyses, the 9 RUCC codes were collapsed into two categories – “metro” and “non-metro”, with “metro” functioning as the reference group.

Logistic regression was used for most measures, predicting whether or not a member met the criteria for compliance on HEDIS[®] CAP, W15, W34, AWC, and ADV. To assess the influence of program or health plan on surveyed parents' experiences and satisfaction, the ten CAHPS[®] composites were each dichotomized and treated as outcomes in logistic regression models. For these models, members with a composite score of 75 or greater were considered to have had positive experiences with the domain being assessed.

This report presents the findings of logistic regression models as odds ratios, which represent the likelihood of a member having the outcome in question in comparison to members in the reference group. For any particular member characteristic (e.g., age, sex, health plan), an odds ratio above 1.0 suggests that members with the specified characteristic were more likely to have had the outcome compared to members in the reference group (often, those without the specified characteristic). An odds ratio below 1.0 suggests that members with the characteristic were less likely to have had the outcome than those in the reference group.

Multivariate analyses were not conducted on the HEDIS[®] utilization measures (IPU, AMB, and ORX) or the AHRQ PDIs.²⁶ Discussion of these measures in the body of this report focuses on differences by program and CRG. Tables providing program- and CRG-specific rates and the full results of regression models discussed in this report are presented in two separate technical appendices (**Appendix C** for administrative measures and **Appendix D** for survey measures).

Estimates of the Numbers of CSHCN

Administrative rates

The CRG distribution of children in STAR, PCCM, STAR Health, and CHIP using fiscal year 2009 claims and encounter data is shown in **Table 1**.²⁷ The programs with the highest percentage of healthy children were CHIP (79 percent) and STAR (74 percent), followed by PCCM (61 percent). Slightly greater than one-third of children in STAR Health (36 percent) were classified as healthy.

Adding together CSHCN in the Minor, Moderate, and Major categories, the percentage of children having special health care needs was highest in STAR Health (57 percent). This is comparable to the national percentage of children in foster care with special health care needs (54 percent), based on analysis of data from the 2007 National Survey of Adoptive Parents.²⁸ The increased prevalence of CSHCN among children in foster care is associated with higher rates of numerous conditions, including common medical issues (e.g., asthma), chronic conditions associated with environmental exposures (e.g., lead poisoning), consequences of prenatal exposure to illicit substances, and mental health problems.²⁹

Prevalence of CSHCN by CRG was lower in STAR (16 percent) and CHIP (13 percent). One in four children in PCCM had special health care needs (26 percent).

Table 1. Distribution of Children by CRG in STAR, PCCM, STAR Health, and CHIP

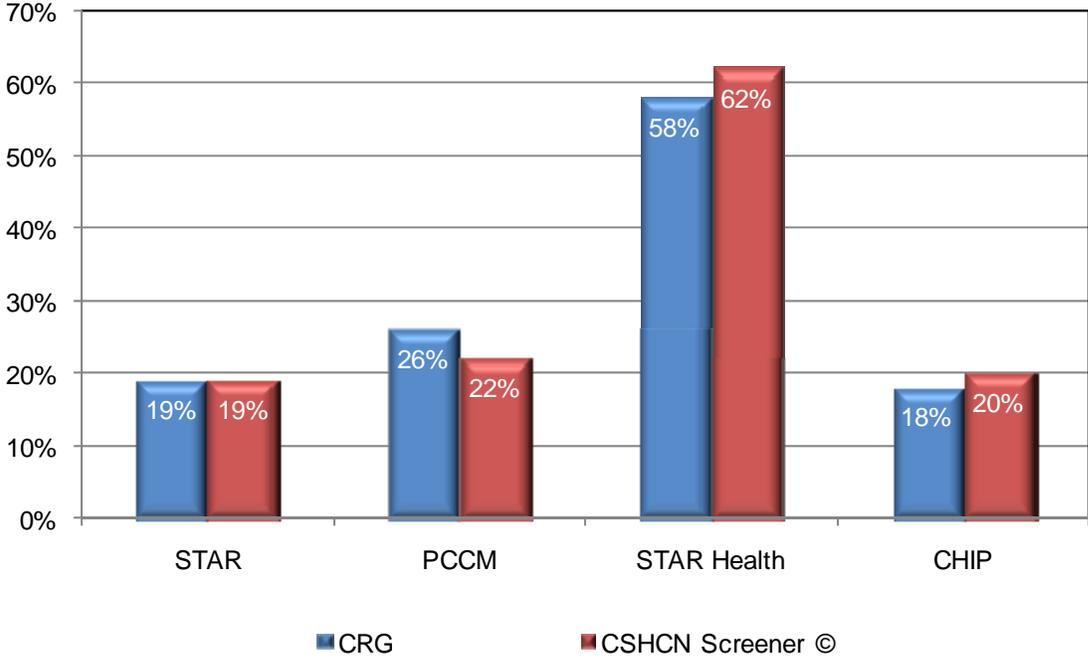
CRG	STAR		PCCM		STAR Health		CHIP	
	N	%	N	%	N	%	N	%
Healthy	867,712	74%	461,788	61%	10,135	36%	354,991	79%
Significant Acute	129,206	11%	96,628	13%	1,942	7%	34,241	8%
CSHCN – Minor	54,978	5%	59,388	8%	3,066	11%	22,249	5%
CSHCN – Moderate	106,538	9%	90,839	12%	9,448	34%	32,739	7%
CSHCN – Major	21,809	2%	48,312	6%	3,278	12%	5,285	1%
Total Assigned	1,180,243	100%	756,955	100%	27,869	100%	449,505	100%

Survey rates

Based on telephone survey data using the CSHCN Screener[®], an estimated 19 percent of children in STAR, 20 percent in CHIP, 22 percent in PCCM, and 62 percent in STAR Health have special health care needs.³⁰ The estimates for STAR, CHIP, and STAR Health are all higher than those calculated in the full administrative dataset, while the estimate for PCCM is slightly lower. The parent-reported CSHCN prevalence estimates in all four programs are also higher than estimates for children in the national and Texas populations (14 percent and 13 percent, respectively), which derive from the NS-CSHCN and use the same survey tool to screen for special health care needs.³¹

Members in the survey dataset were also assigned to one of the five CRGs, allowing for a direct comparison between the CRG classification system and the CSHCN Screener[®]. **Figure 1** shows the percentage of CSHCN in the STAR, PCCM, STAR Health, and CHIP survey samples, assessed using both methods.

Figure 1. Prevalence of CSHCN in Survey Samples – Comparison of CRG Classification and CSHCN Screener[®]

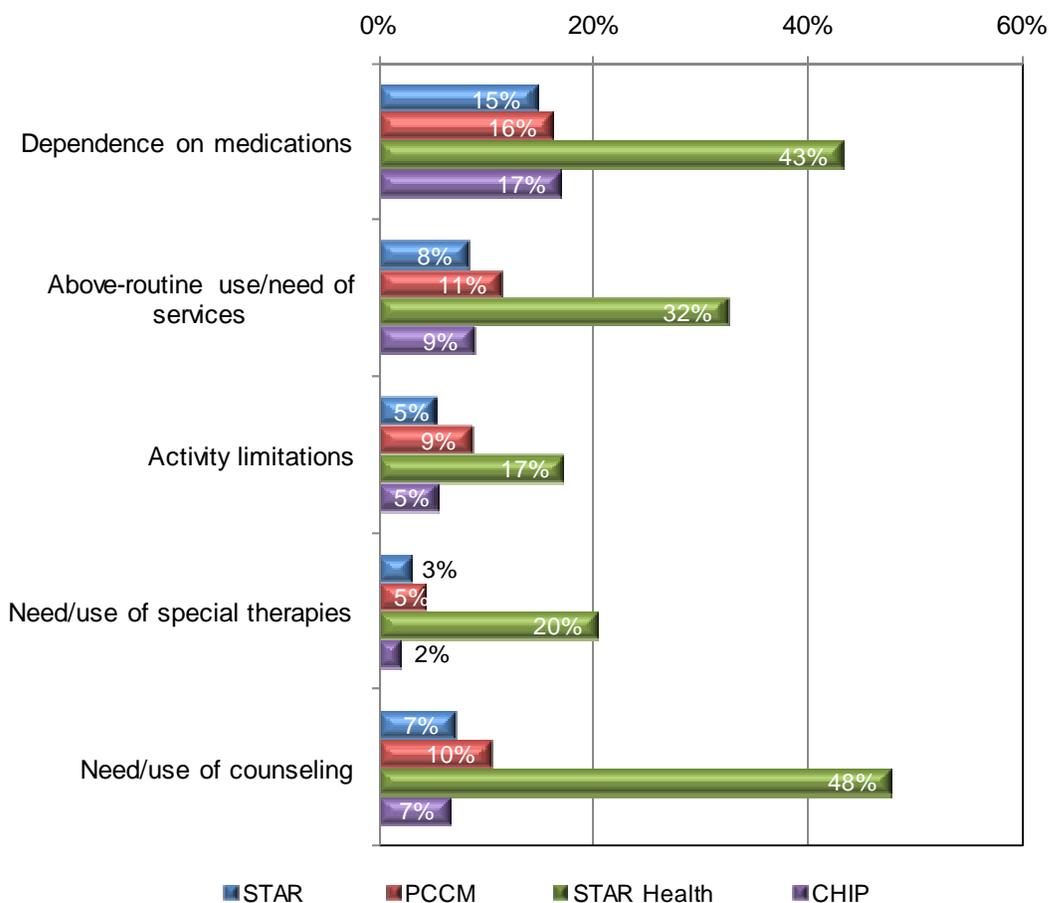


Estimates of CSHCN prevalence were approximately equal between the CRGs and CSHCN Screener[®]. Combining the three chronic CRG categories (minor, moderate, and major) and

excluding children whose CRGs were unassigned, 19 percent of children in STAR, 26 percent of children in PCCM, 58 percent of children in STAR Health, and 18 percent of children in CHIP were classified as having special health care needs.

Figure 2 shows the distribution of child members in STAR, PCCM, STAR Health, and CHIP for each of five types of special health care needs assessed by the CSHCN Screener[®]. Dependence on medications was the most frequent type of special health care need in STAR, PCCM, and CHIP, ranging from 15 percent to 17 percent of all child members. The second-most frequent type of health care need in these programs was above-routine use or need of services, ranging from 8 percent to 11 percent. Need or use of special therapies was the least frequent type in these programs, ranging from 2 percent to 5 percent.

Figure 2. Types of Special Health Care Needs – Percent of Child Members, by Program



The profile of special health care needs was different in STAR Health, where rates greatly exceeded those in STAR, PCCM, and CHIP for all five types of needs. In STAR Health, need or use of behavioral health treatment or counseling was the most frequent type, affecting nearly

half of all enrolled members (48 percent). Functional activity limitations were the least frequent type in STAR Health (17 percent), although this rate was still considerably higher than rates of activity limitations in the other three programs, which ranged from 5 percent to 9 percent.

Results of Administrative Measures

This section presents findings from the EQRO's analysis of selected HEDIS[®] and AHRQ PDI measures, showing program-level comparisons of rates between CSHCN and healthy children, trends in rates between fiscal year 2007 and 2009 (for STAR and CHIP), and discussion of the program-level, STAR MCO-level, and CHIP MCO-level multivariate analyses.³²

Children and Adolescents' Access to Primary Care Practitioners

The *Children and Adolescents' Access to Primary Care Practitioners (PCPs)* measure provides the percentage of members 12 to 24 months and 25 months to 6 years old who had a visit with a PCP in the past year, and the percentage of members 7 to 11 years old and 12 to 19 years old who had a visit with a PCP in the past two years. This measure addresses an essential component of the medical home – an ongoing relationship with a personal physician – as defined by the American Academy of Family Physicians (AAFP) and other groups.³³

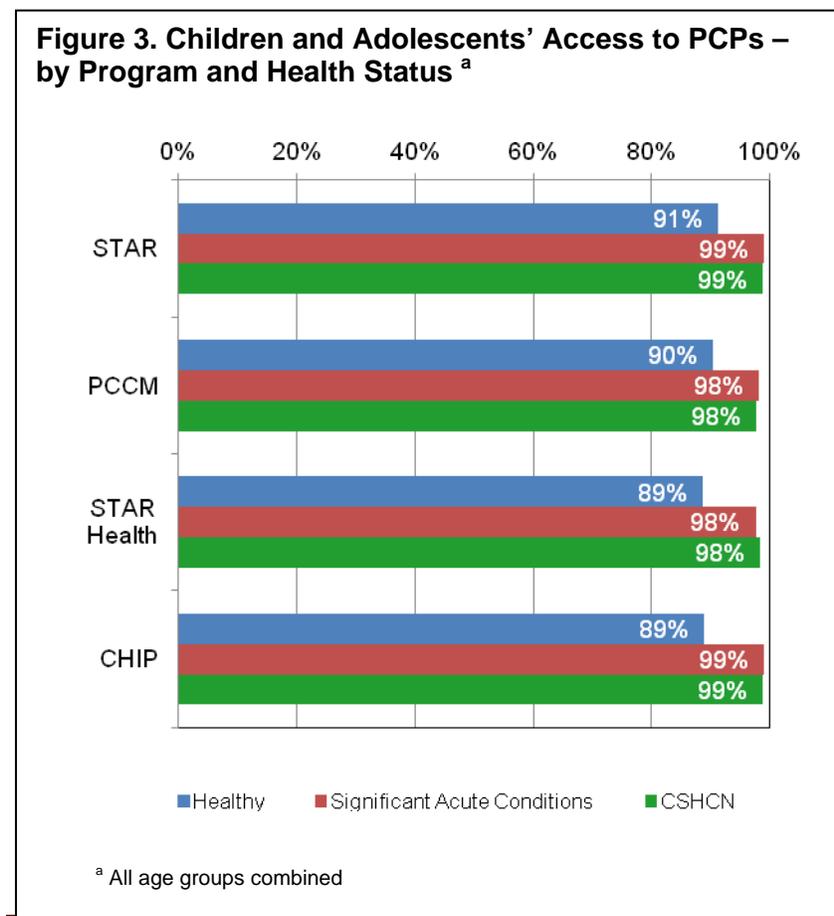


Figure 3 presents the percentage of members in all age categories who had a visit with a PCP, by program and child's health status. All programs performed equally on this measure, with rates of PCP visits for children with significant acute conditions and CSHCN about 10 percent higher than rates for healthy children. Across all age categories, the percentage of CSHCN who had a PCP visit during the applicable measurement period was close to 100 percent.

Program- and CRG-specific results for the separate age categories are presented in **Tables C1 to C4 in Appendix C**. Comparisons between

healthy children and CSHCN are shown below. While these are assessed against the HEDIS[®] 2010 national means, it should be noted that results for Texas Medicaid and CHIP are inflated due to the lifting of provider constraints.

Access to PCPs: 12 to 24 months old		
	Healthy	CSHCN
STAR	95.8%	99.7%
PCCM	97.3%	99.7%
STAR Health	92.0%	99.5%
CHIP	92.3%	100.0%

Access to PCPs for CSHCN 12 to 24 months old was higher than the HEDIS[®] national mean (95.2 percent) for all programs – in each case, at approximately 100 percent.

- Rates for CSHCN in STAR Health (99.5 percent) and CHIP (100 percent) were notably higher than rates for healthy children (92.0 percent and 92.3 percent, respectively).

Access to PCPs: 25 months to 6 years old		
	Healthy	CSHCN
STAR	90.4%	98.8%
PCCM	88.3%	97.7%
STAR Health	87.8%	98.2%
CHIP	88.5%	99.1%

Access to PCPs for CSHCN 25 months to 6 years old was higher than the HEDIS[®] national mean (88.3 percent) for all programs.

- Rates for CSHCN in all programs were notably higher than rates for healthy children. These differences were greatest in STAR Health (by 10.4 percent) and CHIP (by 10.6 percent).

Access to PCPs for CSHCN 7 to 11 years old was higher than the HEDIS[®] national mean (90.3 percent) for STAR, PCCM, and CHIP.

- Rates for CSHCN in STAR, PCCM, and CHIP were notably higher than each program's rates for healthy children. This difference was greatest in CHIP (by 8.3 percent)

Access to PCPs: 7 to 11 years old		
	Healthy	CSHCN
STAR	92.1%	98.8%
PCCM	90.6%	97.2%
STAR Health	NA	NA
CHIP	90.7%	99.0%

Access to PCPs: 12 to 19 years old		
	Healthy	CSHCN
STAR	89.9%	98.7%

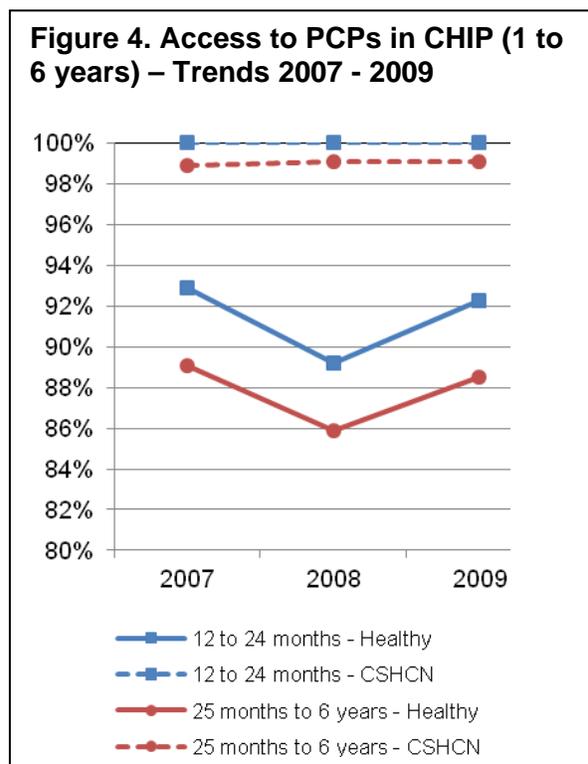
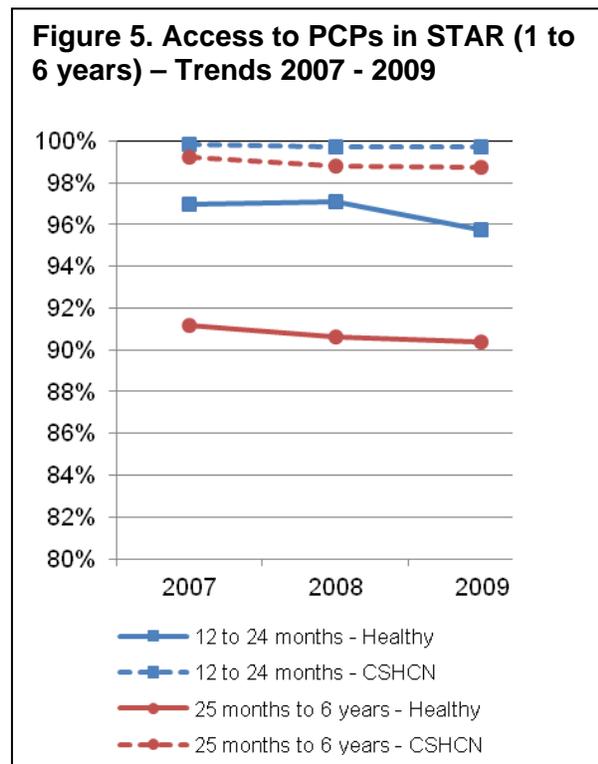
Access to PCPs for adolescents with special health care needs 12 to 19 years old was higher than the HEDIS® national mean (87.9 percent) for STAR, PCCM, and CHIP.

PCCM	91.4%	97.9%
STAR Health	NA	NA
CHIP	87.8%	98.5%

- Rates for adolescents with special health care needs in STAR, PCCM, and CHIP were notably higher than each program’s rates for healthy adolescents. This difference was greatest in CHIP (by 10.7 percent).

Rates of access to PCPs for children 7 to 11 years old and adolescents 12 to 19 years old were not calculated for STAR Health because this program did not have two full years of claims data.

Figures 4 and 5 present three-year trends in *Children’s Access to PCPs* for members in STAR and CHIP, ages 12 to 24 months and 25 months to 6 years.³⁴ In both programs and age groups, rates of PCP visits for CSHCN were constant between fiscal year 2007 and 2009, at approximately 100 percent. In CHIP, rates of PCP visits for healthy members in both age groups declined in 2008 (by 3 to 4 percent), then increased back to their prior levels in 2009.



Children and Adolescents’ Access to PCPs – Program-level analysis

Tables C5 to C8 in Appendix C show results of the EQRO’s program-level analyses, testing the influence of demographic, health status, and program membership factors on *Children and*

Adolescents' Access to PCPs for each of the four age groups. Controlling for demographic and health status factors, significant differences were observed among the programs as follows:

- **12 to 24 months.** Children in PCCM were more likely than children in STAR to have had a PCP visit in the prior year (x 1.68). Children in STAR Health were less likely than children in STAR to have had a PCP visit (x 0.64).³⁵
- **25 months to 6 years.** There were no meaningfully significant differences between STAR and the other programs in the likelihood of PCP visits for children 25 months to 6 years old.
- **7 to 11 years.** There were no differences between STAR and PCCM or CHIP in the likelihood of PCP visits for children 7 to 11 years old.³⁶
- **12 to 19 years.** Adolescents in PCCM were more likely than adolescents in STAR to have had a PCP visit in the prior two years (x 1.29). Adolescents in CHIP were slightly less likely than adolescents in STAR to have had a PCP visit (x 0.84).³⁷

Health Status

Controlling for demographic and program membership factors, children and adolescents' access to PCPs was significantly higher for CSHCN and children with significant acute conditions, compared to healthy children. Across all age groups, children with significant acute conditions were 4 to 10 times more likely than healthy children to have had a visit with a PCP. Estimates for CSHCN varied by severity and age group. Among CSHCN with minor or moderate conditions, age two years and older, the likelihood of a PCP visit was 3 to 8 times greater than among healthy children. Major chronic conditions had the greatest effect on access to PCPs, although the smaller number of children in this category made it difficult to more precisely determine the likelihood increase. Estimates for children 12 to 24 months were also less precise, as the total number of CSHCN in all categories was low in this analysis, in relation to analyses of the other age groups.³⁸ The highest increase in likelihood was observed in the 7- to 11-year-old category, where children with major chronic conditions were about 20 times more likely than healthy children to have had a PCP visit in the prior two years.

CRG	Change in likelihood of PCP visit ^a			
	12 to 24 months	25 months to 6 years	7 to 11 years	12 to 19 years
Healthy	Ref	Ref	Ref	Ref
Significant acute	x 4 – 6	x 6 – 7	x 7 - 10	x 7 – 9
CSHCN – Minor	x 9 – 55	x 5 – 6	x 3 – 4	x 5 – 6
CSHCN – Mod.	x 8 - 17	x 6 – 8	x 6 – 7	x 5 – 6
CSHCN – Major	x 5 – 22	x 12 – 20	x 13 - 30	x 11 – 19

^a The associations in this table represent the 95% confidence interval for the increase in likelihood (odds ratio) in the adjusted model.

	Change in likelihood of PCP visit ^a			
	12 to 24 months	25 months to 6 years	7 to 11 years	12 to 19 years
Race/ethnicity				

Demographic Factors

Controlling for health status and program membership factors, children and adolescents' access to PCPs was significantly lower for Black, non-Hispanic children than White, non-Hispanic children – by approximately half in all age categories. (No significant effects were observed in the 12 to 24 month age category.)

White, non-Hisp.	Ref	Ref	Ref	Ref
Black, non-Hisp.	NS	x 0.6 – 0.7	x 0.5 – 0.6	x 0.5 – 0.6
Hispanic	x 2 – 3	x 1.5	x 1.6 – 1.8	x 1.4 – 1.5
RUCC				
Metro	Ref	Ref	Ref	Ref
Non-metro	x 0.6 – 0.9	x 0.5	x 0.4 – 0.5	x 0.5 – 0.6

^a The associations in this table represent the 95% confidence interval for the increase/decrease in likelihood (odds ratio) in the adjusted model.

Hispanic children and adolescents (between the ages of 2 and 19) were about 50 percent more likely than White, non-Hispanic children to have had a PCP visit. The increase in likelihood for Hispanic children was greater in the 12 to 24 month age category (between 2 and 3 times more likely). Children living in non-metro areas had consistently lower access to PCPs than children living in metro areas, by approximately half for children two years of age and older.

Children and Adolescents' Access to PCPs – STAR MCO-level analysis

Table C9 in **Appendix C** shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of having at least one visit with a PCP during the appropriate measurement period (one or two years), controlling for demographic and health status factors. Compared to Driscoll (the reference group) a significantly lower likelihood of having a PCP visit was observed in all STAR MCOs. However, rates of PCP visits were still high in most MCOs. Molina, UniCare, and UnitedHealthcare-Texas had overall rates lower than 90 percent, suggesting that some improvement in access to PCPs is warranted in these STAR MCOs.

The same health status and demographic factors significant in the program-level analysis were also independent predictors of access to PCP visits in STAR. Compared to healthy children, those with chronic conditions had remarkably improved access – at 6 times the likelihood for minor conditions, 9 times for moderate conditions, and 14 times for major conditions.

Children and Adolescents' Access to PCPs – CHIP MCO-level analysis

Table C10 in **Appendix C** shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of having at least one visit with a PCP during the appropriate measurement period (one or two years), controlling for demographic and health status factors. Compared to Driscoll (the reference group) a significantly lower likelihood of having a PCP visit was observed in all CHIP MCOs. However, rates of PCP visits were still high in most MCOs. Aetna, Molina, Seton, and UniCare all had rates lower than 90 percent, suggesting that some improvement in access to PCPs is warranted in these CHIP MCOs.

The same health status and demographic factors significant in the program-level analysis were also independent predictors of access to PCP visits in CHIP. Compared to healthy children, those with chronic conditions had remarkably improved access – at 8 times the likelihood for children with minor conditions, 11 times for children with moderate conditions, and 41 times for children with major conditions. It should be noted that the effect estimate for children with major chronic conditions had a wide confidence interval, from 18 to 91 times the likelihood found in healthy children.

Well-Child Visits in the First 15 Months of Life

The *Well-Child Visits in the First 15 Months of Life* measure provides the percentage of members who turned 15 months old during the measurement year and who had six or more well-child visits with a physician provider. Regular well-child visits are essential for the health of infants and toddlers, providing needed monitoring of the child’s growth and development, scheduled immunizations, and counseling of new parents for injury prevention, dental health, and diet. Well-child visits are particularly important for infants with special health care needs. Research has found that missed well-care visits for infants and toddlers with chronic conditions (3.5 years and younger) are associated with an increased risk of ambulatory-care sensitive hospitalizations.³⁹

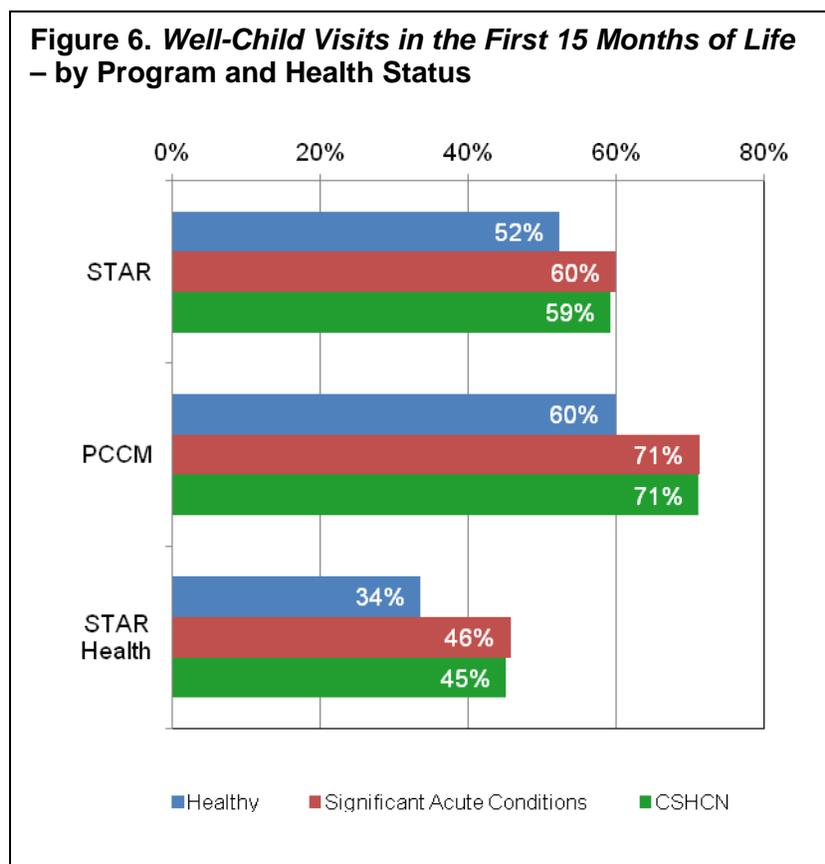


Figure 6 presents the percentage of members age 15 months and younger who had six or more well-child visits in the first 15 months of life, by program and child’s health status. Members in CHIP are not presented in the figure because the denominators were too low for this age group (as most CHIP members age 15 months and younger receive services through CHIP Perinate).

Children in PCCM had the highest rates for this measure – at 71 percent for children with significant acute conditions and CSHCN, and 60 percent for healthy children. Rates in STAR were

approximately 10 percent lower in each of the three CRG categories. Children in STAR Health had the lowest rates for this measure – at 46 percent for children with significant acute conditions, 45 percent for CSHCN, and 34 percent for healthy children. In all three programs, children with significant acute conditions and CSHCN had higher rates of well-child visits than healthy children.

Program- and CRG-specific results for *Well-Child Visits in the First 15 Months of Life* in STAR, PCCM, and STAR Health are also presented in **Tables C11 to C13 in Appendix C**. Comparisons of these rates to the HEDIS[®] 2010 national mean for this measure (59.4 percent) are shown below. It should be noted that results for Texas Medicaid are inflated due to the lifting of provider constraints.

- **STAR.** Rates of well-child visits in the first 15 months of life were approximately equal to the HEDIS[®] national mean for children with significant acute conditions (60 percent) and CSHCN (59 percent).
- **PCCM.** Rates of well-child visits in the first 15 months of life were substantially higher than the HEDIS[®] national mean for children with significant acute conditions (71 percent) and CSHCN (71 percent).
- **STAR Health.** Rates of well-child visits in the first 15 months of life were substantially lower than the HEDIS[®] national mean for children with significant acute conditions (46 percent) and CSHCN (45 percent).

Trends in rates of *Well-Child Visits in the First 15 Months of Life* from 2007 to 2009 could not be determined because the programs did not have reportable data for all three years.

Well-Child Visits in the First 15 Months of Life – Program-level analysis

Table C15 in Appendix C shows results of the EQRO's program-level analyses, testing the influence of demographic, health status, and program membership factors on *Well-Child Visits in the First 15 Months of Life*. This analysis excluded CHIP and STAR Health due to the small number of members in each program for whom this measure could be calculated.⁴⁰ Controlling for demographic and health status factors, children in PCCM were 1.6 times more likely than children in STAR to have had six or more well-child visits in the first 15 months of life.

CRG	Change in likelihood of six or more well-child visits^a
Healthy	Ref
Significant acute	x 1.4 – 1.5
CSHCN – Minor	x 1.5 – 1.8
CSHCN – Mod.	x 1.3 – 1.5

Health Status

CSHCN – Major	x 1.1 – 1.4
---------------	-------------

^a The associations in this table represent the 95% confidence interval for the increase in likelihood (odds ratio) in the adjusted model.

Controlling for demographic and program membership factors, the likelihood of well-child visits in the first 15 months of life was higher for CSHCN and children with significant acute conditions, compared to healthy children. Estimates for CSHCN were moderate, yet statistically significant, and varied little by severity. Among CSHCN 15 months of age or younger with minor or moderate conditions, the likelihood of having six or more well-child visits was 1.3 to 1.8 times greater than among healthy children. The increase in likelihood for children with major chronic conditions was lower, ranging from 1.1 to 1.4 times greater than among healthy children. Although this difference was significant, the effect size was small, suggesting that CSHCN with major chronic conditions are in need of improved access to well-child care in the first 15 months of life.

Demographic Factors

There were few significant and meaningful differences in the likelihood of having a well-child visit within the demographic factors. Controlling for health status and program membership factors, well-child visits for Black, non-Hispanic children were less likely than for White, non-Hispanic children (x 0.73). A negligible decrease in likelihood was observed for Hispanic children. Children 15 months of age and younger living in non-metro areas were also less likely than children living in metro areas to have had six or more well-child visits (x 0.66).

Well-Child Visits in the First 15 Months of Life – STAR MCO-level analysis

Table C16 in Appendix C shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of having six or more well-child visits in the first 15 months of life, controlling for demographic and health status factors. Compared to Cook Children’s (the reference group), a significantly lower likelihood of having six well-child visits was observed in all STAR MCOs. Nine MCOS had overall rates lower than the HEDIS[®] national mean for this measure (59 percent). The reduction in likelihood was greatest in Molina (x 0.32), Texas Children’s (x 0.36), and FirstCare (x 0.36). These findings suggest there is need for improvement in access to well-child visits at the program level, and particularly in these three MCOs.

The same health status factors significant in the program-level analysis were also independent predictors of access to well-child visits in STAR. Compared to healthy children, those with chronic conditions had slightly improved access – at 1.6 times the likelihood for minor conditions, 1.3 times for moderate conditions, and 1.2 times for major conditions.

Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life

The *Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life* measure provides the percentage of members between three and six years old who received one or more well-child visits with a provider during the measurement period. An annual well-child visit for young children is critical for ensuring good health, and typically includes a physical exam and assessments to identify developmental, behavioral, and learning problems.

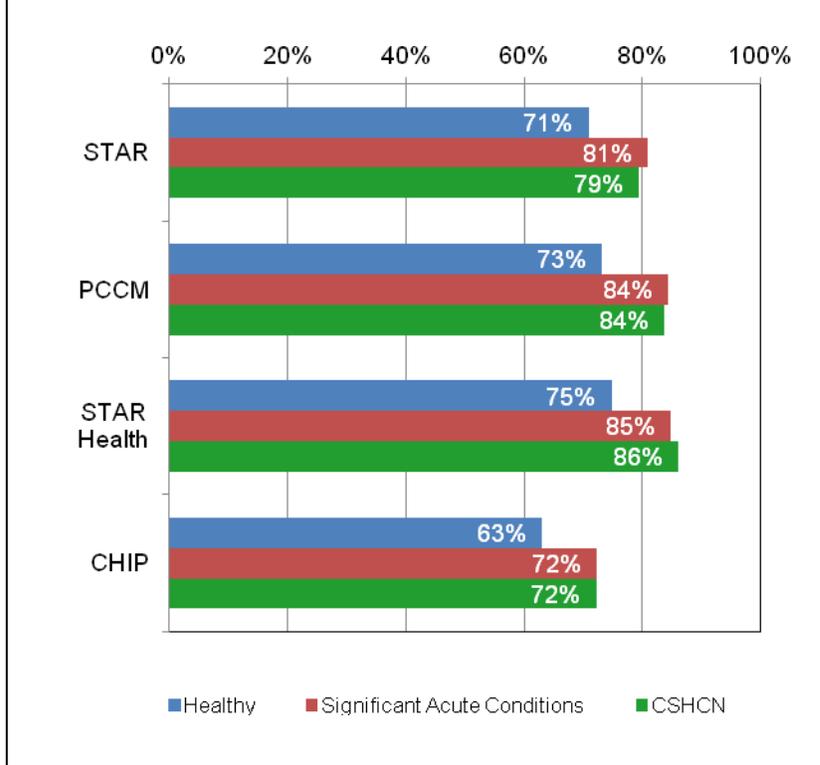
Figure 7 presents the percentage of members three to six years old who had at least one well-child visit during the measurement period, by

program and child's health status. Performance on this measure was similar among STAR, PCCM, and STAR Health. The highest rates were observed in STAR Health – at 75 percent for healthy children, 85 percent for children with significant acute conditions, and 86 percent for CSHCN. Performance was substantially lower in CHIP, where only 72 percent of children with significant acute conditions and CSHCN had at least one well-child visit. Rates among CSHCN were typically about 10 percentage points higher than rates for healthy children.

Program- and CRG-specific results for *Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life* are also presented in **Tables C11 to C14 in Appendix C**. Comparisons of these rates to the HEDIS® 2010 national mean for this measure (71.6 percent) are shown below. It should be noted that results for Texas Medicaid and CHIP are inflated due to the lifting of provider constraints.

- **STAR.** Rates of well-child visits for children three to six years old were higher than the HEDIS® national mean for children with significant acute conditions (81 percent) and CSHCN (79 percent).

Figure 7. Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life – by Program and Health Status



- **PCCM.** Rates of well-child visits for children three to six years old were higher than the HEDIS® national mean for children with significant acute conditions (84 percent) and CSHCN (84 percent).
- **STAR Health.** Rates of well-child visits for children three to six years old were higher than the HEDIS® national mean for children with significant acute conditions (85 percent) and CSHCN (86 percent).
- **CHIP.** Rates of well-child visits for children three to six years old were equal to the HEDIS® national mean for children with significant acute conditions (72 percent) and CSHCN (72 percent).

Figure 8. Well-Child Visits (3 - 6 years old) in STAR and CHIP- Trends 2007 - 2009

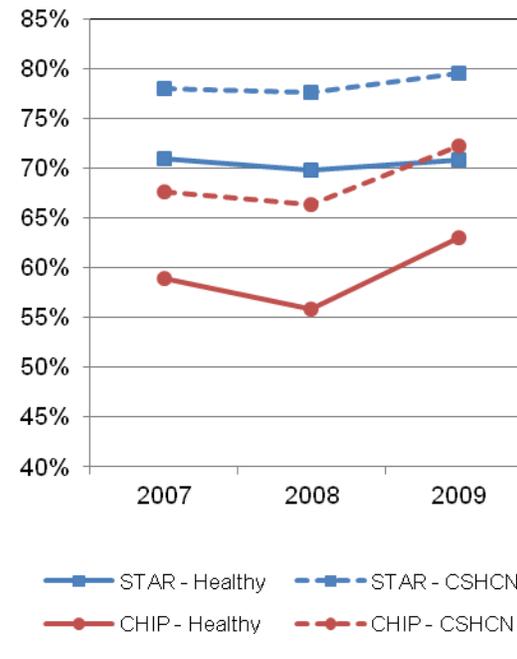


Figure 8 shows three-year trends in *Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life* for members in STAR and CHIP, showing trends separately for healthy children and CSHCN.⁴¹ Rates remained generally the same in STAR over the three years. In CHIP, rates of well-child visits for CSHCN were lower than rates for healthy children in STAR during 2007 and 2008.

In 2009, CHIP showed a slight increase in rates for both healthy children and CSHCN.

Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life – Program-level analysis

Table C17 in **Appendix C** shows results of the EQRO’s program-level analysis, testing the influence of demographic, health status, and program membership factors on *Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life*. Controlling for demographic and health status factors, children three to six years old in STAR Health were 1.6 times more likely than children in STAR to have had a well-child visit. A moderate increase in likelihood was observed for children in PCCM (x 1.27), and a moderate decrease was observed for children in CHIP (x 0.77).

CRG	Change in likelihood of well-child visit ^a
Healthy	Ref
Significant acute	x 1.7 – 1.8
CSHCN – Minor	x 1.6 – 1.8
CSHCN – Mod.	x 1.6 – 1.7

Health Status

CSHCN – Major	x 1.7 – 2.0
---------------	-------------

^a The associations in this table represent the 95% confidence interval for the increase in likelihood (odds ratio) in the adjusted model.

Controlling for demographic and program membership factors, the likelihood of having a well-child visit was significantly higher for CSHCN and children with significant acute conditions, compared to healthy children. Children with significant acute conditions were 1.7 times more likely than healthy children to have had a well-child visit. Estimates for CSHCN varied little by severity, ranging from 1.6 to 1.8 times greater for children with minor and moderate chronic conditions. The estimate was highest for CSHCN with major chronic conditions, who were 1.8 times more likely than healthy children to have had a well-child visit.

Demographic Factors

There were few significant and meaningful differences in the likelihood of having a well-child visit within the demographic factors. Controlling for health status and program membership factors, well-child visits for Hispanic children were 1.5 to 1.6 times more likely than for White, non-Hispanic children. A negligible decrease in likelihood was observed for Black, non-Hispanic children. Children three to six years old living in non-metro areas were also less likely than children living in metro areas to have had a well-child visit (x 0.82).

Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life – STAR MCO-level analysis

Table C18 in Appendix C shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of having at least one well-child visit during the measurement period, controlling for demographic and health status factors. Compared to Driscoll (the reference group), the likelihood of having a well-child visit for children three to six years old was significantly lower in all STAR MCOs except Community First. In particular, Aetna, FirstCare, Molina, UniCare, and UnitedHealthcare-Texas performed below the national HEDIS[®] mean of 72 percent for this measure. The greatest reduction in likelihood was observed in UnitedHealthcare-Texas (x 0.47). These findings suggest there is need for improvement in access to well-child visits for children three to six years old in these MCOs.

Most of the health status and demographic factors significant in the program-level analysis were also independent predictors of well-child visits for children three to six years old in STAR. Compared to healthy children, those with chronic conditions were about 1.6 times more likely to have had a well-child visit. Compared to White, non-Hispanic children, Hispanic children were 1.4 times more likely to have had a well-child visit. No significant association was observed for the child's urban/rural residence (RUCC).

Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life – CHIP MCO-level analysis

Table C19 in Appendix C shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of having at least one well-child visit during the measurement period, controlling for demographic and health status factors. Compared to Texas Children's

(the reference group), the likelihood of having a well-child visit for children three to six years old was significantly lower in 12 CHIP MCOs. However, all CHIP MCOs, including Texas Children's, performed below the national HEDIS® mean of 72 percent for this measure. The greatest reduction in likelihood was observed in UniCare (x 0.46). These findings suggest there is need for improvement in access to well-child visits for children three to six years old in all CHIP MCOs.

Most of the health status and demographic factors significant in the program-level analysis were also independent predictors of well-child visits for children three to six years old in CHIP. Compared to healthy children, those with chronic conditions were about 1.5 times more likely to have had a well-child visit. Compared to White, non-Hispanic children, Hispanic children were 1.3 times more likely to have had a well-child visit. Children three to six years old living in non-metro areas were less likely than those living in metro areas to have had a well-child visit (x 0.64).

Adolescent Well-Care

The *Adolescent Well-Care* measure provides the percentage of members 12 to 21 years old who received one or more comprehensive adolescent well-care visits with a provider during the measurement period. Adolescence is characterized by rapid changes in physical, cognitive, and socio-emotional realms of development. These changes bring forth many developmental challenges, including interest in sexuality, individuating from one's family of origin, forming an identity, experimenting, and risk-taking. As a result, the American Medical Association recommends preventive annual visits for adolescents for medical screening and discussion of physical and psychological health, with an emphasis on developing healthy lifestyles.⁴² Preventive care is particularly important for adolescents with special health care needs, as prior research has found that CSHCN age 12 to 17 years old who have a well-care visit are less likely

to have unmet medical needs than those who do not have a well-care visit.⁴³

Figure 9. Adolescent Well-Care – by Program and Health Status

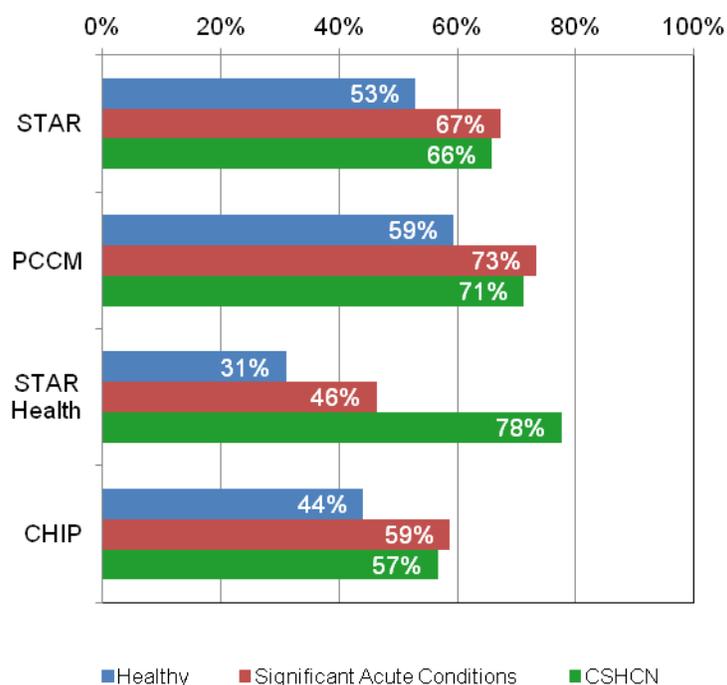


Figure 9 presents the percentage of adolescent members who had a well-care visit during the measurement period, by program and child's health status. In STAR, PCCM, and CHIP, rates of adolescent well-care visits were approximately 12 to 13 percent higher among CSHCN than among healthy children. The

lowest rate for CSHCN was observed in CHIP (57 percent), which was about 10 percent lower than the rate for CSHCN in STAR (66 percent) and 15 percent lower than the rate for CSHCN in PCCM (71 percent). Among these three programs, adolescents with significant acute conditions had slightly higher rates of well-care visits than CSHCN.

In STAR Health, rates of adolescent well-care visits varied considerably by child's health status. Rates for healthy children and children with significant acute conditions were lower than in the other three programs (31 percent and 46 percent, respectively), while the rate for CSHCN was higher than in the other three programs (78 percent).

Program- and CRG-specific results for *Adolescent Well-Care* are also presented in **Tables C11 to C14** in **Appendix C**. Comparisons of these rates to the HEDIS[®] 2010 national mean for this measure (47.7 percent) are shown below. It should be noted that results for Texas Medicaid and CHIP are inflated due to the lifting of provider constraints.

- **STAR.** Rates of adolescent well-care visits were higher than the HEDIS[®] national mean for children with significant acute conditions (67 percent) and CSHCN (66 percent).
- **PCCM.** Rates of adolescent well-care visits were higher than the HEDIS[®] national mean for children with significant acute conditions (73 percent) and CSHCN (71 percent).
- **STAR Health.** Rates of adolescent well-care visits were approximately equal to the HEDIS[®] national mean for children with significant acute conditions (46 percent) and considerably higher for CSHCN (78 percent).
- **CHIP.** Rates of adolescent well-care visits were higher than the HEDIS[®] national mean for children with significant acute conditions (59 percent) and CSHCN (57 percent).

Figure 10. Adolescent Well-Care Visits in STAR and CHIP- Trends 2007 - 2009

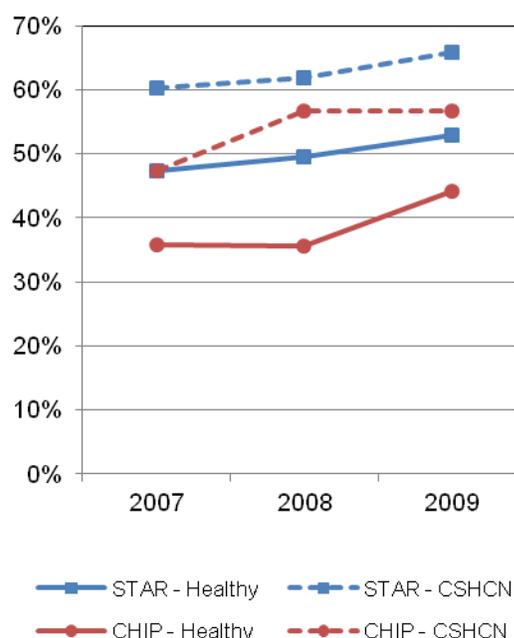


Figure 10 shows three-year trends in *Adolescent Well-Care* for members in STAR and CHIP, showing trends separately for healthy children and CSHCN. Overall, rates of adolescent well-care increased between 2007 and 2009 for both programs and health status groups. In CHIP, rates for healthy children increased substantially between 2008 and 2009, while rates for CSHCN remained approximately the same. This finding suggests that any program-level efforts in CHIP that were responsible for the increase in well-care visits for healthy adolescents did not necessarily improve rates for adolescents with special health care needs.

Adolescent Well-Care – Program-level analysis

Table C20 in Appendix C shows results of the EQRO's program-level analysis, testing the influence of demographic, health status, and program membership factors on *Adolescent Well-Care*. Controlling for demographic and health status factors, adolescents in PCCM were 1.4 times more likely than adolescents in STAR to have had a well-care visit during the measurement year. Adolescents in STAR Health were 1.3 times more likely than adolescents in STAR to have had a well-care visit. Adolescents in CHIP were less likely to have had a visit (x 0.74).

Health Status

Controlling for demographic and program membership factors, the likelihood of having an adolescent well-care visit was significantly higher for adolescents with significant acute conditions and special health care needs, compared to healthy adolescents. Adolescents with significant acute conditions were 1.8 times more likely than healthy adolescents to have had a well-care visit. Estimates for CSHCN varied little by severity, ranging from 1.6 to 1.9 times greater for adolescents with minor and moderate chronic conditions. The estimate was highest for adolescents with major chronic conditions, who were 1.9 times more likely than healthy adolescents to have had a well-care visit. These associations were approximately the same as those found between CRG and well-child visits for children three to six years old.

CRG	Change in likelihood of well-care visit ^a
Healthy	Ref
Significant acute	x 1.7 – 1.8
CSHCN – Minor	x 1.6 – 1.7
CSHCN – Mod.	x 1.8 – 1.9
CSHCN – Major	x 1.8 – 2.0

^a The associations in this table represent the 95% confidence interval for the increase in likelihood (odds ratio) in the adjusted model.

Demographic Factors

There were few significant and meaningful differences in the likelihood of having an adolescent well-care visit within the demographic factors. Controlling for health status and program membership factors, well-care visits for Hispanic adolescents were 1.5 to 1.6 times more likely than for White, non-Hispanic adolescents. A negligible decrease in likelihood was observed for Black, non-Hispanic adolescents. Adolescents living in non-metro areas were less likely than adolescents living in metro areas to have had a well-care visit during the measurement period (x 0.70). The geographic effect was stronger for adolescents than for children three to six years old, suggesting that members in this age group who live in rural areas have lower rates of access to preventive care.

Adolescent Well-Care – STAR MCO-level analysis

Table C21 in Appendix C shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of having at least one adolescent well-care visit during the

measurement period, controlling for demographic and health status factors. Compared to Driscoll (the reference group), the likelihood of having an adolescent well-care visit was significantly lower in all STAR MCOs. However, rates for this measure in most MCOs exceeded the national HEDIS[®] mean of 48 percent. Rates were below the national HEDIS[®] mean in Aetna, Molina, and UnitedHealthcare-Texas. The greatest reduction in likelihood was observed in UnitedHealthcare-Texas (x 0.40). These findings suggest there is need for improvement in access to well-care visits for adolescents in these STAR MCOs.

Most of the health status and demographic factors significant in the program-level analysis were also independent predictors of well-care visits for adolescents in STAR. Compared to healthy adolescents, those with chronic conditions were about 1.7 times more likely to have had a well-care visit. Compared to White, non-Hispanic adolescents, Hispanic adolescents were 1.4 times more likely to have had a well-care visit. The geographic effect observed at the program level was reversed in STAR, with adolescents living in non-metro areas about 1.1 times more likely than those living in metro areas to have had a well-care visit. Due to the small magnitude of this effect, this finding is not considered to have meaningful policy implications.

Adolescent Well-Care – CHIP MCO-level analysis

Table C22 in Appendix C shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of having at least one adolescent well-care visit during the measurement period, controlling for demographic and health status factors. Compared to Texas Children's (the reference group), the likelihood of having an adolescent well-care visit was significantly lower in all CHIP MCOs. In particular, rates for this measure were below the national HEDIS[®] mean in Aetna, Community First, Cook Children's, FirstCare, Molina, Superior, UniCare, and UnitedHealthcare-Texas. The greatest reduction in likelihood was observed in Molina (x 0.45). These findings suggest there is need for improvement in access to well-care visits for adolescents in these CHIP MCOs.

The same health status and demographic factors significant in the program-level analysis were also independent predictors of well-care visits for adolescents in CHIP. Compared to healthy adolescents, those with chronic conditions were about 1.7 times more likely to have had a well-care visit. Compared to White, non-Hispanic adolescents, Hispanic adolescents were 1.4 times more likely to have had a well-care visit. The geographic effect observed at the program level was stronger in CHIP, with adolescents living in non-metro areas less likely than those living in metro areas to have had a well-care visit (x 0.59).

HEDIS[®] Inpatient Utilization

The *HEDIS® Inpatient Utilization* measure summarizes utilization of acute inpatient care services in the following categories: Medical, Surgical, Maternity, and Total (all three inpatient care categories combined). For each inpatient care category, the measure provides the mean number of discharges per 1,000 member-months and the mean number of days in the hospital per 1,000 member-months. This report focuses on utilization rates for medical and surgical stays at the program level only.⁴⁴

Table 2 provides rates of medical and surgical discharges per 1,000 member-months, by program and CRG (all CSHCN categories combined). Overall, STAR had the highest rates of medical and surgical inpatient utilization. Differences among the programs for both types of inpatient discharges were statistically significant.⁴⁵

The rate of medical discharges in STAR was 70 times greater among CSHCN (333.1 per 1,000 member-months) than among healthy children (4.6 per 1,000 member-months). The rate of surgical discharges in STAR was 48 times greater among CSHCN (14.4 per 1,000 member-months) than among healthy children (0.3 per 1,000 member-months). Across all programs combined, differences in rates of both types of inpatient discharges by child's CRG were statistically significant.⁴⁶

The lowest rates of medical inpatient stays occurred in PCCM – ranging from 1.0 per 1,000 member-months for healthy children to 21.4 per 1,000 member-months for CSHCN. The lowest rates of surgical inpatient stays occurred in STAR Health – ranging from 0.1 per 1,000 member-months for healthy children to 1.2 per 1,000 member-months for CSHCN. It should be noted that STAR Health did have a considerable difference in the rate of medical inpatient stays between healthy children and CSHCN, by a factor of 67.

Rates of medical and surgical inpatient stays for CSHCN in Texas Medicaid and CHIP were considerably greater than the HEDIS® national means for medical inpatient stays (1.4 to 9.8 per 1,000 member-months) and surgical inpatient stays (0.5 to 1.7 per 1,000 member-months).⁴⁷

Table 2. HEDIS® Inpatient Utilization – Medical/Surgical Discharges per 1,000 Member-Months, by Program and CRG

	STAR	PCCM	STAR Health	CHIP
Medical Discharges				
Healthy	4.6	1.0	3.0	1.1
Significant acute	30.3	6.4	26.1	11.8
CSHCN	333.1	21.4	200.2	113.3
Surgical Discharges				
Healthy	0.3	0.0	0.1	0.2
Significant acute	1.7	0.6	0.5	1.4
CSHCN	14.4	6.3	1.2	5.0

More detailed inpatient utilization rates are found in **Appendix C**, showing results for all CRGs in STAR (**Tables C23 and C24**), PCCM (**Tables C25 and C26**), STAR Health (**Tables C27 and C28**), and CHIP (**Tables C29 and C30**).

Table 3 provides rates of medical and surgical inpatient days per 1,000 member-months, by program and CRG (all CSHCN categories combined). Overall, children in STAR had the greatest number of medical days in the hospital, and children in PCCM had the greatest number of surgical days in the hospital. Differences among the programs for both types of inpatient stays were statistically significant.⁴⁸

In all programs, CSHCN had a considerably greater number of days in the hospital than healthy children. For medical stays, this difference was greatest in CHIP, where the rate of days in the

hospital was 119 times greater among CSHCN (131.0 per 1,000 member-months) than among healthy children (1.1 per 1,000 member-months). For surgical stays, this difference was greatest in STAR, where the rate of days in the hospital was 96 times greater among CSHCN (28.8 per 1,000 member-months) than among healthy children (0.3 per 1,000 member-months). Across all programs combined, differences in rates of both types of inpatient stays by child's CRG were statistically significant.⁴⁹

Rates of medical and surgical inpatient days for CSHCN in Texas Medicaid and CHIP were considerably greater than the HEDIS[®] national means for medical inpatient days (7.9 to 47.1 per 1,000 member-months) and surgical inpatient days (3.1 to 25.8 per 1,000 member-months).⁵⁰

More detailed rates of inpatient days are found in **Appendix C**, showing results for all CRGs in STAR (**Tables C23 and C24**), PCCM (**Tables C25 and C26**), STAR Health (**Tables C27 and C28**), and CHIP (**Tables C29 and C30**).

HEDIS[®] Ambulatory Care

Table 3. HEDIS[®] Inpatient Utilization – Medical/Surgical Days per 1,000 Member-Months, by Program and CRG

	STAR	PCCM	STAR Health	CHIP
Medical days				
Healthy	5.6	2.6	3.4	1.1
Significant acute	40.0	18.1	34.5	12.9
CSHCN	408.9	108.1	232.9	131.0
Surgical days				
Healthy	0.3	0.3	0.2	0.3
Significant acute	2.2	2.2	0.5	2.2
CSHCN	28.8	57.4	1.7	8.4

The *HEDIS® Ambulatory Care* measure summarizes utilization of ambulatory care in the following categories: Outpatient, Emergency Department, Ambulatory Surgery, and Observation Room. The measure expresses rates of ambulatory care visits per 1,000 member-months. This report focuses on utilization rates for outpatient visits and emergency department (ED) visits at the program level only.

Table 4 provides rates of outpatient and ED visits per 1,000 member-months, by program and CRG (all CSHCN categories combined). Overall, STAR had the highest rates of outpatient and ED utilization. Differences among the programs for both types of ambulatory care visits were statistically significant.⁵¹

The rate of outpatient visits in STAR was 2.3 times greater among CSHCN (728.1 per 1,000 member-months) than among healthy children (321.2 per 1,000 member-months). The rate of ED visits in STAR was 2.5 times greater among CSHCN (93.7 per 1,000 member-months) than among healthy children (36.8 per 1,000 member months). Across all programs combined, differences in rates of both types of ambulatory care visits by child’s CRG were statistically significant.⁵²

Table 4. *HEDIS® Ambulatory Care – Outpatient and ED Visits per 1,000 Member-Months, by Program and CRG*

	STAR	PCCM	STAR Health	CHIP
Outpatient visits				
Healthy	321.2	317.0	243.7	184.0
Significant acute	685.2	737.1	594.0	496.5
CSHCN	728.1	718.1	491.5	532.5
ED visits				
Healthy	36.8	38.2	34.3	14.6
Significant acute	106.1	80.0	86.9	44.1
CSHCN	93.7	87.1	51.4	42.5

The lowest rates of outpatient visits for healthy children and children with significant acute conditions occurred in CHIP – at 184.0 and 496.5 per 1,000 member-months, respectively. The lowest rate of outpatient visits for CSHCN occurred in STAR Health (491.5 per 1,000 member-months). Within the programs, rates of outpatient visits were similar between children with significant acute conditions and children with chronic conditions. In STAR Health, the rate among children with significant acute conditions (594.0 per 1,000 member-months) was about 20 percent greater than among CSHCN (491.5 per 1,000 member-months).

The lowest rates of ED visits for children in all health status categories occurred in CHIP – at 14.6 per 1,000 member-months among healthy children, 44.1 per 1,000 member-months among children with significant acute conditions, and 42.5 per 1,000 member-months among CSHCN. It is expected that visits to the ED will be higher among children with significant acute conditions than among CSHCN, because good outpatient care for children with chronic conditions should minimize their need for urgent care. However, differences in ED visit rates between children in

these two groups varied by program. Rates were approximately the same between the two groups in PCCM and CHIP. In STAR, the rate of ED visits was slightly higher for children with significant acute conditions (106.1 per 1,000 member-months) than CSHCN (93.7 per 1,000 member months). In STAR Health, the rate of ED visits was considerably higher for children with significant acute conditions (86.9 per 1,000 member-months) than CSHCN (51.4 per 1,000 member months).

Rates of outpatient visits and ED visits for CSHCN in Texas Medicaid and CHIP were generally within the range of HEDIS® national means for outpatient visits (243.1 to 718.3 per 1,000 member-months) and ED visits (46.9 to 98.3 per 1,000 member-months).⁵³

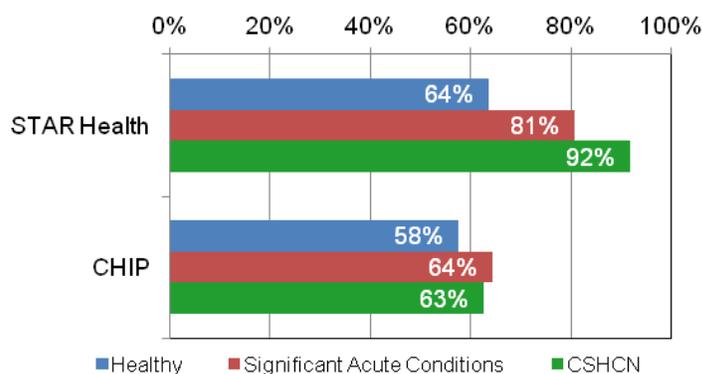
More detailed rates of outpatient and ED visits are found in **Appendix C**, showing results for all CRGs in STAR (**Table C31**), PCCM (**Table C32**), STAR Health (**Tables C33**), and CHIP (**Tables C34**).

HEDIS® Annual Dental Visit

The *HEDIS® Annual Dental Visit* measure provides the percentage of members 2 to 21 years of age who had at least one dental visit during the measurement year. This measure applies only to the CHIP and STAR Health programs, in which dental care is a covered benefit. HEDIS® specifications for this measure allow for the separate calculation of rates for six age groups – 2 to 3 years, 4 to 6 years, 7 to 10 years, 11 to 14 years, 15 to 18 years, and 19 to 21 years – as well as a total category that combines all age groups. This report focuses on total rates of annual dental visits across all age groups.⁵⁴

Figure 11 presents the percentage of members who had a dental visit, by program and child's health status. STAR Health performed better than CHIP in all health status groups, yet had broader disparities among healthy children, those with significant acute conditions, and CSHCN. In CHIP, which during the measurement year administered dental benefits through CHIP Dental, rates of having at least one dental visit were similar between healthy children (58 percent) and CSHCN (63 percent).

Figure 11. HEDIS Annual Dental Visit – by Program and Health Status



The percent of CSHCN having a dental visit exceeded the HEDIS® national mean of 45.7 percent for this measure in both STAR Health and CHIP. The rate for CSHCN in STAR Health was remarkably high (92 percent), exceeding the HEDIS® national 90th percentile (64.1 percent).

HEDIS® Annual Dental Visit – Program-level analysis

Table C35 in Appendix C shows results of the EQRO's program-level analysis, testing the influence of demographic, health status, and program membership factors on annual dental visits. Controlling for demographic and health status factors, STAR Health members were 5 to 6 times more likely than CHIP members to have had at least one dental visit during the measurement year. This finding corresponds with the difference in percent of members compliant on this measure between STAR Health (89 percent) and CHIP (59 percent), and suggests a high level of access to dental care for children and adolescents in STAR Health.

Health Status

Controlling for demographic and program membership factors, the likelihood of having a dental visit was significantly higher for members with significant acute conditions and special health care needs, compared to healthy members. Estimates for CSHCN were modest, ranging from 1.2 to 1.5 times the likelihood of having a dental visit for healthy members.

CRG	Change in likelihood of dental visit ^a
Healthy	Ref
Significant acute	x 1.3 – 1.4
CSHCN – Minor	x 1.2 – 1.3
CSHCN – Mod.	x 1.3 – 1.4
CSHCN – Major	x 1.3 – 1.5

^a The associations in this table represent the 95% confidence interval for the increase in likelihood (odds ratio) in the adjusted model.

Demographic Factors

All demographic factors were significantly associated with the likelihood of having a dental visit, although most effects were modest. Hispanic members were 1.3 to 1.4 times more likely than White, non-Hispanic members to have had a dental visit. The likelihood of a dental visit was negligibly higher for female members than for male members (x 1.13). The effect of age was tested against children 7 to 10 years old, who had the most frequent rate of dental visits among the age groups (68 percent). Children age 2 to 3 years old and adolescents 15 to 18 years old

CRG	Change in likelihood of dental visit ^a
Race/ethnicity	
White, non-Hisp.	Ref
Hispanic	x 1.3 – 1.4
Age	
2 to 3 years	x 0.5 – 0.6
4 to 6 years	x 0.9

were about half as likely to have had a dental visit as children 7 to 10 years old. Members living in non-metro areas were also less likely than members living in metro areas to have had a dental visit during the measurement period (x 0.70).

7 to 10 years	Ref
11 to 14 years	x 0.7
15 to 18 years	x 0.5

^a The associations in this table represent the 95% confidence interval for the increase in likelihood (odds ratio) in the adjusted model.

HEDIS[®] Annual Dental Visit – CHIP MCO-level analysis

Table C36 in Appendix C shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of having at least one dental visit during the measurement period, controlling for demographic and health status factors. Compared to Parkland Community (the reference group), the likelihood of having a dental visit was significantly lower in all CHIP MCOs. However, although differences among the MCOs were significant, all CHIP MCOs performed above the HEDIS[®] national mean on this measure, ranging from 48 percent in FirstCare to 64 percent in Parkland Community. These findings suggest an overall high level of access to dental care for children in all CHIP MCOs.

The same health status and demographic factors significant in the program-level analysis were also independent predictors of dental visits in CHIP. Compared to healthy children, those with chronic conditions were about 1.3 times more likely to have had a dental visit. Compared to White, non-Hispanic adolescents, Hispanic adolescents were 1.4 times more likely to have had a dental visit. The geographic effect observed at the program level was the same in CHIP, with adolescents living in non-metro areas less likely than those living in metro areas to have had a well-care visit (x 0.70).

HEDIS[®] Outpatient Drug Utilization

The *HEDIS[®] Outpatient Drug Utilization* measure provides the mean number of prescriptions per member-year and the cost of prescriptions per member-month during the measurement year. Children with chronic conditions are more dependent on prescription medications than healthy children, and are therefore expected to have higher utilization and cost of prescription medications. This report focuses on utilization and cost of prescription drugs for healthy children and CSHCN at the program level only.

Table 5 provides rates of outpatient drug utilization, showing the annual number and cost of prescriptions by program and CRG (all CSCHN

Table 5. HEDIS[®] Outpatient Drug Utilization – Annual Number and Cost of Prescriptions, by Program and CRG

	STAR	PCCM	STAR Health	CHIP
Number of prescriptions (per member-year)				
Healthy	5.29	7.19	4.34	2.81
Significant acute	12.98	18.23	10.55	8.04
CSHCN	20.91	28.35	32.91	13.15
Cost of prescriptions (per member-month)				
Healthy	\$16.18	\$21.90	\$15.88	\$11.82
Significant acute	\$40.01	\$52.53	\$39.31	\$36.41
CSHCN	\$139.61	\$199.94	\$342.83	\$112.98

categories combined). The number of prescriptions per member-year for CSHCN ranged from 13.15 in CHIP to 32.91 in STAR Health. The greatest difference in number of prescriptions between healthy children and CSHCN was observed in STAR Health, where the rate among CSHCN was 7.6 times greater than the rate among healthy children. Rates of outpatient drug utilization for CSHCN in Texas Medicaid and CHIP were considerably greater than the HEDIS® national means for number of prescriptions (5.2 to 5.8 per member-year).⁵⁵

The cost of prescriptions per member-month for CSHCN ranged from \$112.98 in CHIP to \$342.83 in STAR Health. The greatest difference in cost of prescriptions between healthy children and CSHCN was observed in STAR Health, where the cost among CSHCN was 21.6 times greater than the cost among healthy children. Rates of outpatient drug utilization for CSHCN in Texas Medicaid and CHIP were considerably greater than the HEDIS® national means for cost of prescriptions (\$18.10 to \$28.30 per member-month).⁵⁶

Differences among the programs for both number and cost of prescriptions were statistically significant.⁵⁷ Across all programs combined, differences in rates of both types of ambulatory care visits by child's CRG were statistically significant.⁵⁸

One indicator of the efficiency of outpatient drug utilization is the ratio of annual prescription costs to number of prescriptions. Higher ratios indicate a higher cost per prescription, and may represent less efficient prescription drug treatment (e.g., through the use of brand-name medications), a sicker population requiring more costly drugs, or both. The highest ratio of annual prescription costs to number of prescriptions among CSHCN was observed in STAR Health, at approximately \$125.00 per prescription. This compares to a ratio of \$80.12 per prescription in STAR, \$84.63 per prescription in PCCM, and \$103.10 per prescription in CHIP.⁵⁹

Drawing on findings from the CSHCN Screener® administered through the EQRO surveys, members in STAR Health have a high rate of dependence on medications (43 percent). It is therefore likely that a greater proportion of children in STAR Health require costly prescription drugs than children in the other programs, and a ratio of \$125.00 per prescription is expected. In CHIP, 17 percent of members were found to be dependent on medications by parent-report. The ratio of \$103.10 per prescription in CHIP suggests less efficient outpatient drug utilization.

More detailed rates of outpatient drug utilization are found in **Appendix C**, showing results for all CRGs in STAR (**Table C37**), PCCM (**Table C38**), STAR Health (**Tables C39**), and CHIP (**Tables C40**).

AHRQ Pediatric Quality Indicator – Asthma

The AHRQ Pediatric Quality Indicator (PDI) for asthma represents the rate of potentially preventable asthma-related inpatient admissions among children age 2 to 17 years old. Unlike other quality indicators discussed in this report, higher rates represent low performance, as they

indicate a low quality of care for asthma in the outpatient setting. Rates are expressed per 100,000 members.

Table 6 presents rates of potentially preventable admissions for asthma, by program and CRG (all CSHCN categories combined). The highest rate of admissions for asthma among CSHCN was observed in STAR (1092 per 100,000), followed by PCCM (919 per 100,000) and CHIP (856 per 100,000). The rate of admissions for asthma among CSHCN in STAR Health was considerably lower, at 287 per 100,000. Rates for CSHCN were considerably greater than rates for healthy children or children with significant acute conditions.

Table 6. AHRQ PDI for Asthma, by Program and CRG (per 100,000 members)

	STAR	PCCM	STAR Health	CHIP
Healthy	0.31	0.00	0.00	0.61
Significant acute	2.50	0.00	0.00	6.29
CSHCN	1091.54	918.75	287.12	855.75

This finding is expected, since in practically all cases, children with a diagnosis of asthma will have been classified into the Moderate Chronic Conditions or Major Chronic Conditions CRGs.

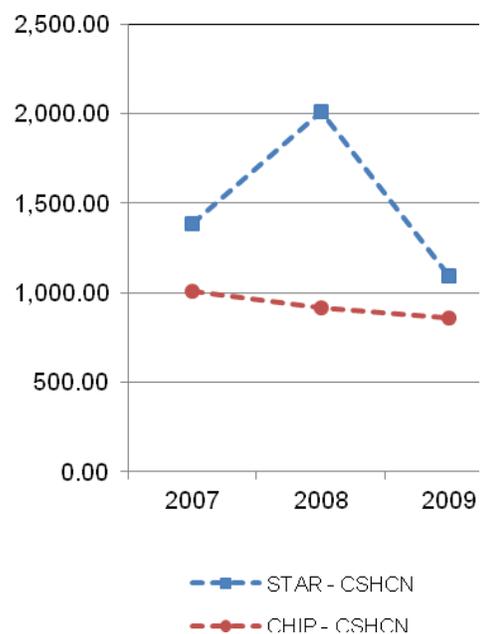
These rates are also considerably greater than the AHRQ national

rate of 123 per 100,000. The asthma admission rate for CSHCN in STAR Health was only twice the national rate, while the asthma admission rate for CSHCN in STAR was nearly nine times the national rate. More detailed rates of asthma admissions are found in **Appendix C**, showing results for all CRGs in STAR (**Table C41**), PCCM (**Table C42**), STAR Health (**Table C43**), and CHIP (**Table C44**).

Figure 12 shows three-year trends in AHRQ Asthma PDI rates for CSHCN in STAR and CHIP, from 2007 to 2009. Overall, rates of potentially preventable inpatient admissions for asthma for CSHCN were greater in STAR than in CHIP. In STAR, asthma admissions increased considerably from 1,384 per 100,000 in 2007 to 2,014 per 100,000 in 2008. The rate of asthma admissions in STAR improved in 2009, reaching its lowest point in three years (1,092 per 100,000). In CHIP, asthma admissions gradually decreased over the three-year period, from 1,006 per 100,000 in 2007 to 856 per 100,000 in 2009.

While these trends show an overall decline in asthma admissions rates for both programs, rates are still high – particularly in STAR. These findings

Figure 12. AHRQ PDI for Asthma in STAR and CHIP- Trends 2007 - 2009



suggest a need for improvement in outpatient care for CSHCN with asthma and program-wide efforts to reduce potentially preventable inpatient admissions for asthma.

AHRQ Pediatric Quality Indicator – Diabetes Short-term Complications

The AHRQ Pediatric Quality Indicator (PDI) for diabetes short-term complications represents the rate of potentially preventable inpatient admissions among children age 6 to 17 years old due to short-term complications of diabetes. Unlike other quality indicators discussed in this report, higher rates represent low performance, as they indicate a low quality of care for pediatric diabetes in the outpatient setting. Rates are expressed per 100,000 members.

Table 7 presents rates of potentially preventable admissions for diabetes short-term complications, by program and CRG (all CSHCN categories combined). The highest rate of admissions for diabetes short-term complications among CSHCN was observed in STAR (205 per 100,000), followed by CHIP (196 per 100,000). Rates of admissions for diabetes short-term complications among CSHCN were lower in PCCM (132 per 100,000) and STAR Health (160 per 100,000). There were no potentially preventable admissions for diabetes short-term complications among healthy children or children with significant acute conditions in fiscal year 2009. This finding is expected, since in all cases, children with a diagnosis of diabetes will have been classified into the Moderate Chronic Conditions or Major Chronic Conditions CRGs.

Table 7. AHRQ PDI for Diabetes Short-Term Complications, by Program and CRG (per 100,000 members)

	STAR	PCCM	STAR Health	CHIP
Healthy	0.00	0.00	0.00	0.00
Significant acute	0.00	0.00	0.00	0.00
CSHCN	204.79	132.42	160.35	196.45

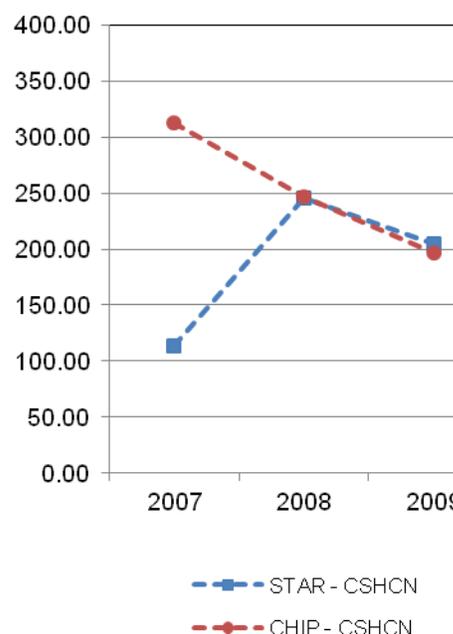
There were no potentially preventable admissions for diabetes short-term complications among healthy children or children with significant acute conditions in fiscal year 2009. This finding is expected, since in all cases, children with a diagnosis of diabetes will have been classified into the Moderate Chronic Conditions or Major Chronic Conditions CRGs.

Rates of diabetes short-term complications admissions for CSHCN are considerably greater than the AHRQ national rate of 28 per 100,000.

The rate for CSHCN in PCCM was nearly five times the national rate, while the rate for CSHCN in STAR was greater than seven times the national rate. More detailed rates of diabetes short-term complications admissions are found in **Appendix C**, showing results for all CRGs in STAR (**Table C41**), PCCM (**Table C42**), STAR Health (**Table C43**), and CHIP (**Table C44**).

Figure 13 shows three-year trends in AHRQ Diabetes Short-Term Complications PDI rates for CSHCN in STAR and CHIP, from 2007 to

Figure 13. AHRQ PDI for Diabetes Short-Term Complications in STAR and CHIP- Trends 2007 - 2009



2009. In 2007, the rate of potentially preventable inpatient admissions for diabetes short-term complications among CSHCN was considerably greater in CHIP (312 per 100,000) than in STAR (114 per 100,000). In 2008, the rate decreased for CSHCN in CHIP, and increased for CSHCN in STAR, to approximately 246 per 100,000 in both programs. Between 2008 and 2009, rates declined to 205 per 100,000 in STAR and 196 per 100,000 in CHIP.

At their present levels, rates of potentially preventable inpatient admissions for diabetes short-term complications suggest there is need for improvement in outpatient care for CSHCN with diabetes in both STAR and CHIP. Particular attention is warranted in the STAR Program, where the rate has nearly doubled over the three-year period.

AHRQ Pediatric Quality Indicator – Gastroenteritis

The AHRQ Pediatric Quality Indicator (PDI) for gastroenteritis represents the rate of potentially preventable gastroenteritis-related inpatient admissions among children age 3 months to 17 years old. Unlike other quality indicators discussed in this report, higher rates represent low performance, as they indicate a low quality of care for gastroenteritis in the outpatient setting.

Table 8. AHRQ PDI for Gastroenteritis, by Program and CRG (per 100,000 members)

	STAR	PCCM	STAR Health	CHIP
Healthy	38.57	145.63	73.44	21.77
Significant acute	241.04	768.12	455.32	251.00
CSHCN	247.38	649.59	162.50	163.95

Rates are expressed per 100,000 members.

Table 8 presents rates of potentially preventable admissions for gastroenteritis, by program and CRG (all CSHCN categories combined). Rates of admissions for gastroenteritis varied considerably across programs and CRGs. The highest rate among

CSHCN was observed in PCCM (650 per 100,000). Rates of admissions for gastroenteritis among CSHCN were lower in STAR (247 per 100,000), STAR Health (163 per 100,000), and CHIP (164 per 100,000). Gastroenteritis is an acute condition; therefore, higher rates among children with significant acute conditions are expected. This difference was greatest in STAR Health, where the rate of admissions for gastroenteritis among children with significant acute

conditions was 455 per 100,000. In STAR, the rate of admissions for gastroenteritis was slightly lower among children with significant acute conditions (241 per 100,000) than among CSHCN.

Rates of gastroenteritis admissions for CSHCN are greater than the AHRQ national rate of 105 per 100,000. The rate for CSHCN in PCCM was greater than six times the national rate, while the rate for CSHCN in STAR was more than twice the national rate. There is a particular need for improvement in outpatient care for gastroenteritis in STAR and PCCM, where efforts toward reducing admissions should focus on both children with significant acute conditions and CSHCN. In STAR Health and CHIP, efforts should focus primarily on children with significant acute conditions.

More detailed rates of gastroenteritis admissions are found in **Appendix C**, showing results for all CRGs in STAR (**Table C41**), PCCM (**Table C42**), STAR Health (**Table C43**), and CHIP (**Table C44**).

Figure 14 shows three-year trends in AHRQ Gastroenteritis PDI rates for CSHCN in STAR and CHIP, from 2007 to 2009. Overall, rates of potentially preventable inpatient admissions for gastroenteritis among CSHCN were greater in STAR than in CHIP. Both programs had an increase in rates between 2007 and 2008. This increase was greater in STAR, from 331 per 100,000 to 468 per 100,000. In 2009, there was a slight decline in the rate of admissions in CHIP, and a much greater decline in STAR. To encourage a further decline in rates of potentially preventable inpatient admissions for gastroenteritis, STAR MCOs should continue and expand upon efforts toward reducing these rates that were made in fiscal year 2009.

AHRQ Pediatric Quality Indicator – Perforated Appendix

The AHRQ Pediatric Quality Indicator (PDI) for perforated appendix represents the rate of potentially preventable inpatient admissions among children age 1 to 17 years old due to perforated appendix. Unlike other quality indicators discussed in this report, higher rates represent low performance, as they indicate a low quality of care for appendicitis in the outpatient setting. Rates are expressed per 100 members with a diagnosis of appendicitis.

Figure 14. AHRQ PDI for Gastroenteritis in STAR and CHIP- Trends 2007 - 2009

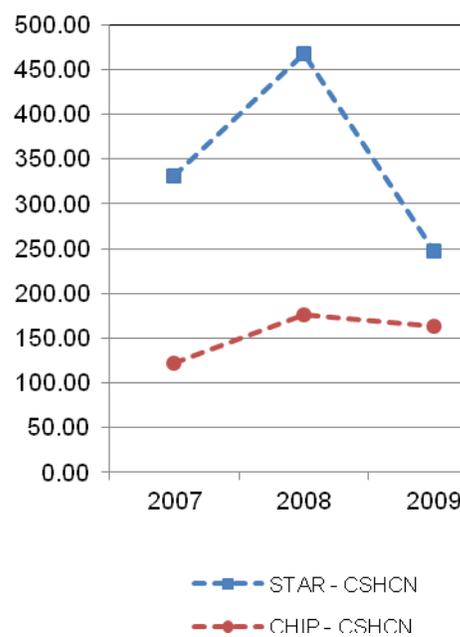


Table 9 presents rates of potentially preventable admissions for perforated appendix, by program and CRG (all CSHCN categories combined). The highest rate of admissions for perforated appendix among CSHCN was observed in STAR (42 per 100), followed by PCCM (38 per 100) and CHIP (38 per 100). Rates are not shown for STAR Health because only 15 members age 1 to 17 years old had a diagnosis of appendicitis in fiscal year 2009 (low denominator). Perforated appendix is an acute condition; therefore, higher rates among children with significant acute conditions are expected. Rates were slightly higher for children with

Table 9. AHRQ PDI for Perforated Appendix, by Program and CRG (per 100 members with appendicitis)

	STAR	PCCM	STAR Health	CHIP
Healthy	32.03	28.96	LD	19.91
Significant acute	44.84	40.83	LD	31.52
CSHCN	42.42	38.14	LD	38.04

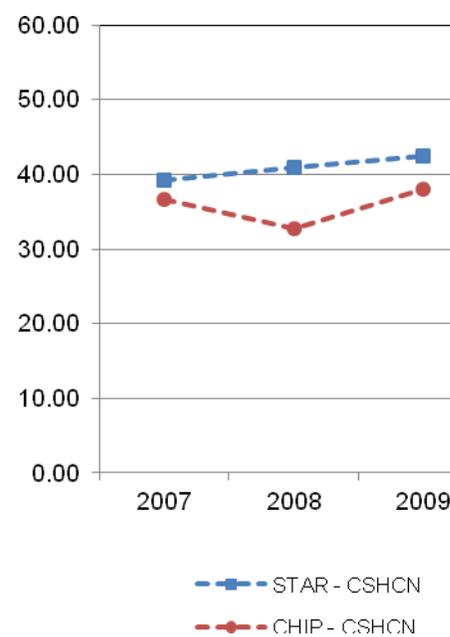
significant acute conditions in STAR (45 per 100) and PCCM (41 per 100). However, in CHIP, the rate for children with significant acute conditions (32 per 100) was lower than the rate for CSHCN.

Rates of admissions for perforated appendix among CSHCN are greater than the AHRQ national rate of 29 per 100. The rate for CSHCN in STAR was nearly 1.5 times the national rate, while the rates for CSHCN in PCCM and CHIP were 1.3 times the national rate. It should be noted that the rate for healthy children in STAR (32 per 100) was also higher than the national rate. These findings suggest there is need for improvement in outpatient care for children in all health status categories with appendicitis in STAR. In CHIP, efforts toward reducing rates of potentially preventable admissions for perforated appendix should focus on CSHCN.

More detailed rates of perforated appendix admissions are found in **Appendix C**, showing results for all CRGs in STAR (**Table C41**), PCCM (**Table C42**), and CHIP (**Table C44**).

Figure 15 shows three-year trends in AHRQ Perforated Appendix PDI rates for CSHCN in STAR and CHIP, from 2007 to 2009. Overall, rates of potentially preventable inpatient admissions for perforated appendix among CSHCN were slightly higher in STAR than in CHIP. Both programs had a slight increase in rates between 2007 and 2009.

Figure 15. AHRQ PDI for Perforated Appendix in STAR and CHIP- Trends 2007 - 2009



AHRQ Pediatric Quality Indicator – Urinary Tract Infection

The AHRQ Pediatric Quality Indicator (PDI) for urinary tract infection represents the rate of potentially preventable inpatient admissions among children age 3 months to 17 years old due

Table 10. AHRQ PDI for Urinary Tract Infection, by Program and CRG (per 100,000)

	STAR	PCCM	STAR Health	CHIP
Healthy	10.84	29.13	12.24	6.35
Significant acute	166.68	355.76	113.83	137.75
CSHCN	149.48	255.22	77.72	135.75

to urinary tract infection. Unlike other quality indicators discussed in this report, higher rates represent low performance, as they indicate a low quality of care for urinary tract infection in the outpatient setting. Rates are expressed per 100,000 members.

Table 10 presents rates of potentially preventable admissions for urinary tract infection, by program and CRG (all CSHCN categories combined). The highest rate of admissions for urinary tract infection among CSHCN was observed in PCCM (255 per 100,000). Rates were lower in STAR (150 per 100,000), STAR Health (78 per 100,000), and CHIP (136 per 100,000). Urinary tract infection is an acute condition; therefore, higher rates among children with significant acute conditions are expected. This difference was greatest in PCCM, where the rate of admissions for urinary tract infection among children with significant acute conditions was 356 per 100,000. In CHIP the rate of admissions for children with significant acute conditions (138 per 100,000) was approximately equal to the rate for CSHCN. Considerable differences in admissions rates were observed between healthy children and CSHCN. In CHIP, the rate of admissions for urinary tract infection among CSHCN was nearly 23 times the rate among healthy children.

Rates of urinary tract infection admissions for CSHCN are considerably greater than the AHRQ national rate of 43 per 100,000. The rate for CSHCN in PCCM was nearly six times the national rate, while the rate for CSHCN in STAR was greater than three times the national rate. These findings suggest there is a particular need for improvement in outpatient care for urinary tract infection in former PCCM counties, where efforts toward reducing admissions should focus on both children with significant acute conditions and CSHCN.

More detailed rates of urinary tract infection admissions are found in **Appendix C**, showing results for all CRGs in STAR (**Table C41**), PCCM (**Table C42**), STAR Health (**Table C43**), and CHIP (**Table C44**).

Figure 16. AHRQ PDI for Urinary Tract Infection in STAR and CHIP- Trends 2007 - 2009

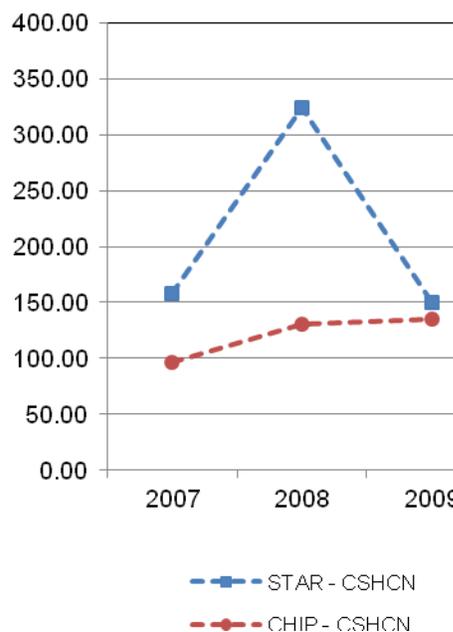


Figure 16 shows three-year trends in AHRQ Urinary Tract Infection PDI rates for CSHCN in STAR and CHIP, from 2007 to 2009. Overall, rates of potentially preventable inpatient admissions for urinary tract infection among CSHCN were greater in STAR than in CHIP, although by 2009 rates between the programs were approximately equal. In STAR, there was a sharp increase in the rate of admissions for urinary tract infection between 2007 (158 per 100,000) and 2008 (324 per 100,000), followed by a sharp decrease in 2009 (to 149 per 100,000). In CHIP, there was a gradual increase in rates between 2007 and 2009. To encourage a further decline in rates of potentially preventable inpatient admissions for urinary tract infection, STAR MCOs should continue and expand upon efforts toward reducing these rates that were made in fiscal year 2009.

Survey Findings

This section presents findings from the fiscal year 2009 STAR and PCCM surveys and the fiscal year 2010 STAR Health and CHIP Surveys, comparing results of CAHPS[®], Peds-QL[™], and NS-CSHCN measures between CSHCN and non-CSHCN. Comparisons are based on CSHCN classification using the CRGs assigned to sampled members. A summary is provided for each of the ten CAHPS[®] composite domains, showing results of both program-level and MCO-level multivariate analyses. The section concludes with a description of findings from the fiscal year 2010 CSHCN Services Program Survey.

Table 11 presents mean scores on each of the ten CAHPS[®] composite domains by CSHCN status, separately for STAR, PCCM, STAR Health, and CHIP.⁶⁰ For each domain, a score of 75 points or greater is considered to indicate the child's parent had positive health care experiences. Mean scores were 75 points or greater for all domains across the four programs, except for *Getting Needed Care*, *Getting Specialized Services*, and *Care Coordination*. In particular, all programs performed well for *How Well Doctors Communicate*, *Prescription Medicines*, and *Shared Decision-Making* – domains in which all mean scores, for both CSHCN and non-CSHCN, were greater than 85 points.

Table 11. CAHPS[®] Composite Scores by Program – CSHCN and Non-CSHCN

CAHPS [®] Composite Domain	STAR		PCCM		STAR Health		CHIP	
	Non-CSHCN	CSHCN	Non-CSHCN	CSHCN	Non-CSHCN	CSHCN	Non-CSHCN	CSHCN
Getting Needed Care	73.6	76.4	80.6	64.1	70.1	74.8	71.4	75.4
Getting Care Quickly	81.1	83.2	80.4	82.5	88.4	89.2	74.7	81.0
How Well Doctors Communicate	88.3	87.5	88.1	87.4	90.8	91.5	89.2	90.3

Health Plan Information and Customer Service	78.0	79.9	79.7	78.1	78.6	82.6	83.2	81.4
Prescription Medicines	89.7	89.2	92.7	94.3	90.0	89.3	89.0	90.4
Getting Specialized Services	66.0	74.4	80.4	71.1	73.4	79.5	60.9	70.1
Personal Doctor or Nurse	85.7	85.6	83.3	84.9	87.9	86.0	82.7	86.1
Shared Decision Making	88.7	90.1	90.8	85.1	86.7	97.1	89.9	88.6
Getting Needed Information	86.2	87.6	83.8	86.3	89.4	91.1	90.7	91.1
Care Coordination	68.2	69.2	70.7	73.5	45.9	49.2	65.3	73.5

Differences between CSHCN and non-CSHCN on the CAHPS[®] composite scores varied by program:

- STAR:** Mean scores for CSHCN in STAR were 75 or greater for all CAHPS[®] composite domains except *Getting Specialized Services* (74.4) and *Care Coordination* (69.2). Overall, CSHCN had mean scores that were equal to or slightly higher than mean scores for non-CSHCN. The mean for *Getting Specialized Services* was moderately good for CSHCN, and significantly higher than the non-CSHCN mean (74.4 vs. 66.0).⁶¹ In the survey sample, the number of parents reporting on this measure (those whose child needed specialized services) was approximately equal between parents of CSHCN (n = 534) and parents of non-CSHCN (n = 540).
- PCCM:** Mean scores for CSHCN in PCCM were 75 or greater for all CAHPS[®] composite domains except *Getting Needed Care* (64.1), *Getting Specialized Services* (71.1), and *Care Coordination* (73.5). Mean scores for CSHCN were equal to or slightly higher than means for non-CSHCN in all domains except *Getting Needed Care*, *Getting Specialized Services*, and *Shared Decision-Making*, for which the CSHCN means were lower. The mean for *Getting Needed Care* was significantly lower among CSHCN than non-CSHCN (64.1 vs. 80.6).⁶² This difference is most influenced by a survey question asking parents about access to care, tests, or treatment for their child through the PCCM program. The percentage of parents saying it was “usually” or “always” easy to get care, tests, or treatment was lower among parents of CSHCN (56 percent) than parents of non-CSHCN (88 percent).⁶³
- STAR Health:** Mean scores for CSHCN in STAR Health were 75 or greater for all CAHPS[®] composite domains except *Care Coordination*. The mean score for *Care Coordination* was remarkably low for both CSHCN (49.2) and non-CSHCN (45.9), suggesting a need to improve care coordination efforts from Superior HealthPlan and the doctor’s offices and clinics in the MCO’s network. Mean scores for CSHCN were generally equal to or higher than means for non-CSHCN in all domains except *Shared Decision-Making*, which was significantly higher among CSHCN than non-CSHCN (97.1

vs. 86.7).⁶⁴ It should be noted that scores in both groups were high enough to be considered an indication of positive parental experiences.

- CHIP:** Mean scores for CSHCN in CHIP were 75 or greater for all CAHPS[®] composite domains except *Getting Specialized Services* (70.1) and *Care Coordination* (73.5). Overall, CSHCN had mean scores that were equal to or higher than mean scores for non-CSHCN. The mean scores for CSHCN were significantly higher than scores for non-CSHCN for *Getting Care Quickly* (81.0 vs. 74.7), *Getting Specialized Services* (70.1 vs. 60.9), and *Care Coordination* (73.5 vs. 65.3).⁶⁵

Overall, findings from parent surveys reveal that all programs performed well on the CAHPS[®] composite domains for CSHCN. However, generally low scores for *Getting Specialized Services* and *Care Coordination* suggest a need for state-wide improvement in these domains, which are of particular relevance to CSHCN.

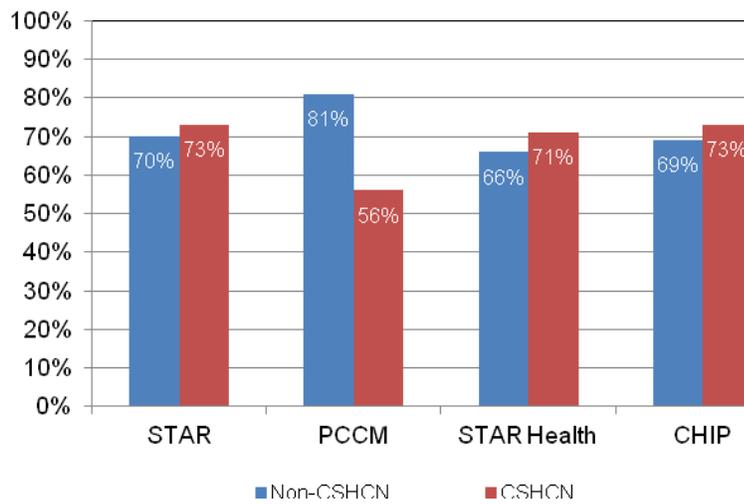
CAHPS[®] Composite: Getting Needed Care

The *Getting Needed Care* composite assesses parents' experiences with two aspects of access to their child's health care: (1) How often it was easy to get appointments for their child with specialists; and (2) How often it was easy to get the care, tests, or treatment their child needed through his or her health plan. **Figure 17** presents the percentage of parents in each program who had positive experiences with getting needed care for their child (composite score ≥ 75), showing results separately for non-CSHCN and CSHCN. These percentages exclude children who could not be classified using the CRGs because they did not meet the minimum enrollment requirement.

The percentage of parents of CSHCN with positive experiences getting needed care for their child was good in STAR (73 percent), STAR Health (71 percent), and CHIP (73 percent). In all three programs, positive experiences were slightly more frequent among parents of CSHCN than parents of non-CSHCN.

In PCCM, the percentage of parents of CSHCN with

Figure 17. Percent of Parents Having Positive Experiences with *Getting Needed Care* for Their Child, by Program and CSHCN Status



positive experiences getting needed care for their child was significantly lower than for parents of non-CSHCN (56 percent vs. 81 percent).⁶⁶ This finding corresponds with the difference in composite means for PCCM shown on Table 11, and is largely due to lower parent-reported access to care, tests, or treatment for CSHCN.

Getting Needed Care – Program-level analysis

Table D1 in **Appendix D** shows results of the EQRO’s program-level analysis, testing the influence of demographic, health status, and program membership factors on parents’ experiences with *Getting Needed Care*. Controlling for demographic and health status factors, there was no observed relationship between program membership and good parent-reported access to needed care. The child’s CRG showed statistically significant, but moderate, associations with the likelihood of positive experiences – with a slight increase in positive experiences among parents of CSHCN with moderate chronic conditions relative to those with less severe health care needs.

Stronger associations were found between *Getting Needed Care* and child’s race/ethnicity. Compared to parents of White, non-Hispanic children, the likelihood of positive experiences was significantly lower among parents of Black, non-Hispanic children (x 0.65), Hispanic children (x 0.80), and Other, non-Hispanic children (x 0.68).

Getting Needed Care – STAR MCO-level analysis

Table D2 in **Appendix D** shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of positive experiences with *Getting Needed Care*, controlling for demographic and health status factors. Compared to El Paso First (the plan with the most positive results), the likelihood of positive parent experiences on this composite was significantly lower in the seven STAR MCOs. The reduction in likelihood was greatest in Molina and UnitedHealthcare-Texas, where the percentage of parents with positive experiences getting needed care for their child was 54 percent and 58 percent, respectively.

STAR MCO	Effect on likelihood of positive <i>Getting Needed Care</i> experiences
Aetna	x 0.39
AMERIGROUP	x 0.40
FirstCare	x 0.45
Molina	x 0.24
Texas Children’s	x 0.44
UniCare	x 0.34
UnitedHealthcare-Texas	x 0.25

The associations between *Getting Needed Care* and child's race/ethnicity that were found in the program-level analysis were not significant in the STAR MCO-level analysis.

Getting Needed Care – CHIP MCO-level analysis

Table D3 in **Appendix D** shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of positive experiences with *Getting Needed Care*, controlling for demographic and health status factors. Compared to Superior EPO (the reference group), the likelihood of positive parent experiences on this composite was significantly lower in six CHIP MCOs. The reduction in likelihood was greatest in Molina, where only 54 percent of parents had positive experiences getting needed care for their child.

As in the program-level analysis, the likelihood of positive experiences with *Getting Needed Care* in CHIP was associated with child's race/ethnicity. Compared to parents of White, non-Hispanic children, the positive experiences were less common among parents of Black, non-Hispanic children (x 0.52) and Hispanic children (x 0.60).

CHIP MCO	Effect on likelihood of positive <i>Getting Needed Care</i> experiences
Aetna	x 0.46
Community First	x 0.46
Cook Children's	x 0.47
Molina	x 0.33
UniCare	x 0.48
UnitedHealthcare-Texas	x 0.50

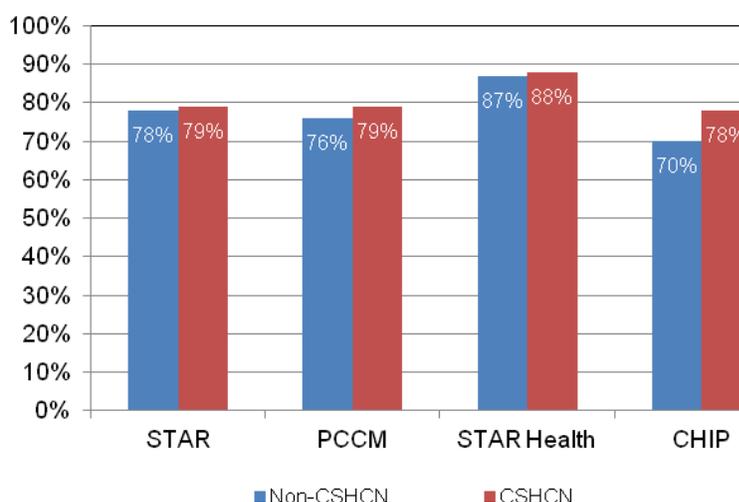
CAHPS® Composite: Getting Care Quickly

The *Getting Care Quickly* composite assesses parents' experiences with the timeliness of their child's urgent and routine health care. Parents were asked: (1) How often their child received urgent care (for an injury, illness, or condition) as soon as they thought it was needed; and (2) How often their child received an appointment for health care at a doctor's office or clinic as soon as they thought it was needed. **Figure 18** presents the percentage of parents in each program who had positive experiences with getting care quickly for their child (composite score ≥ 75), showing results

separately for non-CSHCN and CSHCN. These percentages exclude children who could not be classified using the CRGs because they did not meet the minimum enrollment requirement.

The percentage of parents of CSHCN with positive

Figure 18. Percent of Parents Having Positive Experiences with *Getting Care Quickly* for Their Child, by Program and CSHCN Status



experiences getting timely care for their child was good in all four programs – at 79 percent in STAR and PCCM, 88 percent in STAR Health, and 78 percent in CHIP. In STAR, PCCM, and STAR Health, positive experiences were slightly higher among parents of CSHCN than non-CSHCN.

In CHIP, the percentage of parents of CSHCN with positive experiences getting care quickly for their child was significantly higher than for parents of non-CSHCN (78 percent vs. 70 percent).⁶⁷ This finding corresponds with the difference in composite means for CHIP shown on Table 11, and is largely due to high level of timeliness of routine care for CSHCN.

Getting Care Quickly – Program-level analysis

Table D4 in **Appendix D** shows results of the EQRO's program-level analysis, testing the influence of demographic, health status, and program membership factors on parents' experiences with *Getting Care Quickly*. Controlling for demographic and health status factors, parents of children in STAR Health were 1.6 times more likely than parents of children in STAR to have had positive experiences on this measure. Parents of children in CHIP were slightly less likely (x 0.75) to have had positive experiences. The child's CRG showed statistically significant, but moderate, associations with the likelihood of positive experiences – with a slight increase in positive experiences among parents of CSHCN with minor and moderate chronic conditions.

Stronger associations were found between *Getting Care Quickly* and child's race/ethnicity. Compared to parents of White, non-Hispanic children, the likelihood of positive experiences was significantly lower among parents of Black, non-Hispanic children (x 0.52), Hispanic children (x 0.43), and Other, non-Hispanic children (x 0.29).

Getting Care Quickly – STAR MCO-level analysis

Table D5 in **Appendix D** shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of positive experiences with *Getting Care Quickly*, controlling for demographic and health status factors. All MCOs performed well on this measure, with the percentage of parents having positive experiences with the timeliness of their child's care ranging from 72 percent in Community Health Choice and Molina to 82 percent in Texas Children's.

As in the program-level analysis, the likelihood of positive experiences with *Getting Care Quickly* in STAR was associated with child's race/ethnicity. Compared to parents of White, non-Hispanic children, positive experiences were less common among parents of Black, non-Hispanic children (x 0.49), Hispanic children (x 0.50) and Other, non-Hispanic children (x 0.35).

Getting Care Quickly – CHIP MCO-level analysis

Table D6 in **Appendix D** shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of positive experiences with *Getting Care Quickly*, controlling for demographic and health status factors. Compared to Driscoll (the reference group), the

likelihood of positive parent experiences on this composite was significantly lower in ten CHIP MCOs. The reduction in likelihood was greatest in Molina, where only 58 percent of parents had positive experiences getting needed care for their child.

CHIP MCO	Effect on likelihood of positive <i>Getting Care Quickly</i> experiences
Aetna	x 0.45
AMERIGROUP	x 0.43
Community Health Choice	x 0.49
Cook Children's	x 0.51
Molina	x 0.36
Parkland Community	x 0.43
Superior EPO	x 0.54
Texas Children's	x 0.56
UniCare	x 0.46

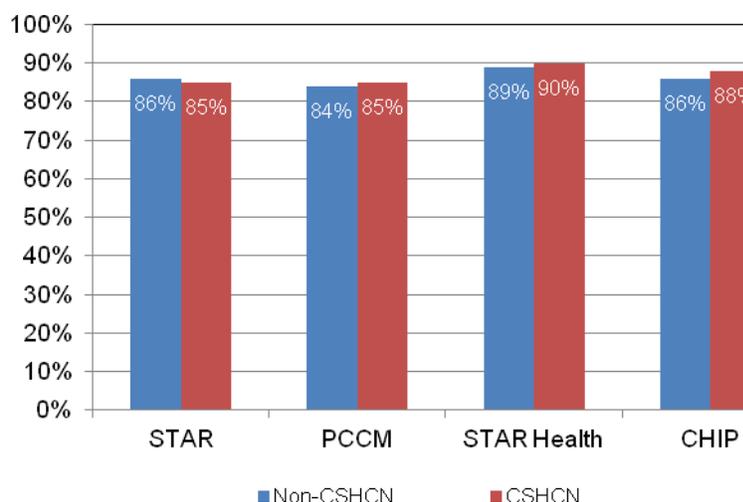
Associations between *Getting Care Quickly* and child's CRG and age were stronger in CHIP than in the program-level or STAR MCO-level analyses. Compared to parents of healthy children, the likelihood of positive experiences was significantly higher for parents of children with minor chronic conditions (x 1.43) and moderate chronic conditions (x 1.44). Timeliness of care tended to decrease with child's age.

As in the program-level analysis, the likelihood of positive experiences with *Getting Care Quickly* in CHIP was associated with child's race/ethnicity. Compared to parents of White, non-Hispanic children, positive experiences were less common among parents of Black, non-Hispanic children (x 0.65), Hispanic children (x 0.37), and Other, non-Hispanic children (x 0.23).

CAHPS® Composite: How Well Doctors Communicate

The *How Well Doctors Communicate* composite assesses parents' experiences with five aspects of communication with their child's personal doctor, measuring how often their child's personal doctor: (1) explained things in a way that was easy for the parent to understand; (2) explained things in a way that was easy for the child to understand; (3) listened carefully to the parent; (4) showed respect for what the parent had to say; and (5) spent enough time with the child. **Figure 19** presents the percentage of parents in each program who had

Figure 19. Percent of Parents Having Positive Experiences with *How Well Doctors Communicate*, by Program and CSHCN Status



positive experiences communicating with their child's doctor (composite score ≥ 75), showing results separately for non-CSHCN and CSHCN. These percentages exclude children who could not be classified using the CRGs because they did not meet the minimum enrollment requirement.

The percentage of parents of CSHCN with positive experiences communicating with their child's doctor was good in STAR (85 percent), PCCM (85 percent), STAR Health (90 percent), and CHIP (88 percent). In all four programs, the percentage of parents with positive experiences was similar between parents of CSHCN and parents of non-CSHCN.

How Well Doctors Communicate – Program-level analysis

Table D7 in **Appendix D** shows results of the EQRO's program-level analysis, testing the influence of demographic, health status, and program membership factors on parents' experiences with *How Well Doctors Communicate*. Controlling for demographic and health status factors, there was no observed relationship between program membership and positive parent experiences with doctors' communication.

Child's race/ethnicity and urban/rural residence showed statistically significant, but moderate, associations with the likelihood of positive experiences. The likelihood of positive experiences was slightly lower among parents of Hispanic and Other, non-Hispanic children, compared to parents of White, non-Hispanic children. Positive experiences with doctors' communication were slightly higher among parents of children living in rural/isolated areas than those living in urban areas.

How Well Doctors Communicate – STAR MCO-level analysis

Table D8 in **Appendix D** shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of positive experiences with *How Well Doctors Communicate*, controlling for demographic and health status factors. All STAR MCOs performed well on this measure, with the percentage of parents having positive experiences with doctors' communication ranging from 78 percent in Parkland Community to 88 percent in Driscoll, El Paso First, and Superior.

The associations between *How Well Doctors Communicate* and child's race/ethnicity and urban/rural residence that were found in the program-level analysis were not significant in the STAR MCO-level analysis.

How Well Doctors Communicate – CHIP MCO-level analysis

Table D9 in **Appendix D** shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of positive experiences with *How Well Doctors Communicate*, controlling for demographic and health status factors. All CHIP MCOs performed well on this

measure, with the percentage of parents having positive experiences with doctors' communication ranging from 77 percent in Molina to 93 percent in FirstCare.

The associations between *How Well Doctors Communicate* and child's race/ethnicity and urban/rural residence that were found in the program-level analysis were not significant in the CHIP MCO-level analysis.

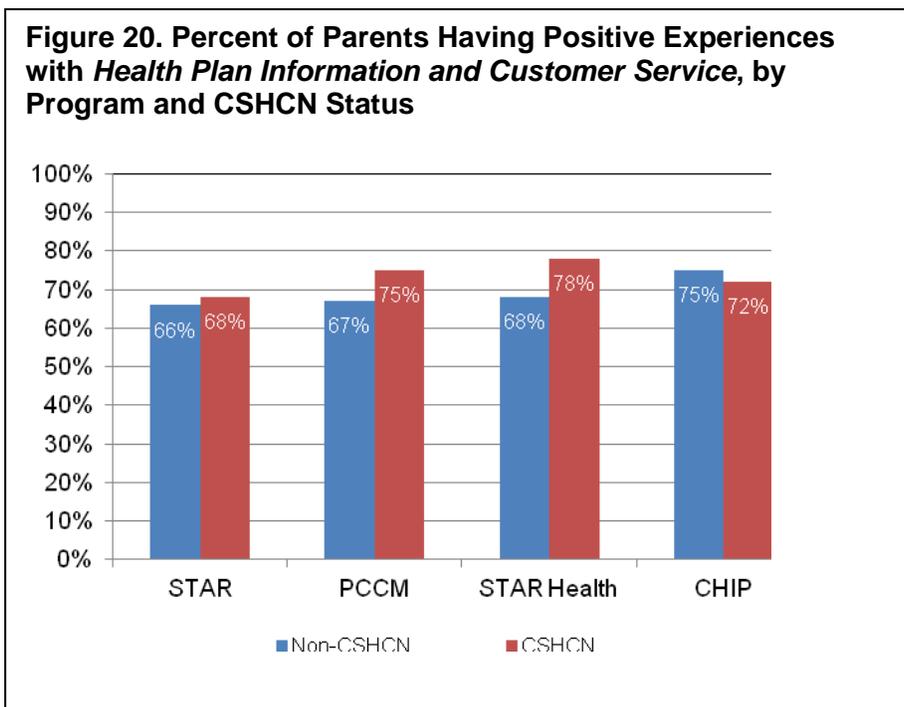
CAHPS® Composite: Health Plan Information and Customer Service

The *Health Plan Information and Customer Service* composite assesses parents' experiences with two aspects of the parent-MCO relationship. Parents were asked: (1) How often customer service at their child's health plan gave them the information or help they needed; and (2) How often customer service at their child's health plan treated them with courtesy and respect.

Figure 20 presents the percentage of parents in each program who had positive experiences with customer service at their child's health plan (composite score ≥ 75), showing results separately for non-CSHCN and CSHCN. These percentages exclude children who could not be classified using the CRGs because they did not meet the minimum enrollment requirement.

The percentage of parents of CSHCN with positive customer service experiences at their child's health plan was good in PCCM (75 percent) and STAR Health (78 percent). In both programs, positive experiences were more common among parents of CSHCN than among parents of non-CSHCN (67 percent in PCCM, and 68 percent in STAR Health).

These differences are largely due to better experiences among parents of CSHCN in getting the information they needed from their child's health plan's customer service.⁶⁸



Parent experiences with customer service at their child's health plan were less positive in STAR (68 percent) and CHIP (72 percent). In both programs, positive experiences among parents of

CSHCN were similar to those among parents of non-CSHCN (66 percent in STAR, and 75 percent in CHIP).

Health Plan Information and Customer Service – Program-level analysis

Table D10 in **Appendix D** shows results of the EQRO’s program-level analysis, testing the influence of demographic, health status, and program membership factors on parents’ experiences with *Health Plan Information and Customer Service*. Controlling for demographic and health status factors, parents of children in CHIP were 1.4 times more likely than parents of children in STAR to have had positive experiences on this measure.

Child’s race/ethnicity was the only demographic or health status factor to have significant associations with *Health Plan Information and Customer Service*. Parents of Hispanic children were 1.6 times more likely than parents of White, non-Hispanic children to have had positive customer service experiences.

Health Plan Information and Customer Service – STAR MCO-level analysis

Table D11 in **Appendix D** shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of positive experiences with *Health Plan Information and Customer Service*, controlling for demographic and health status factors. Although a number of STAR MCOs performed low on this measure, differences among the MCOs were not significant. The lowest rates of positive experiences were observed in Parkland Community (55 percent) and FirstCare (59 percent).

As in the program-level analysis, the likelihood of positive experiences with *Health Plan Information and Customer Service* in STAR was associated with child’s race/ethnicity. Parents of Hispanic children were 1.4 times more likely than parents of White, non-Hispanic children to have had positive customer service experiences.

CHIP MCO	Effect on likelihood of positive <i>Customer Service</i> experiences
AMERIGROUP	x 0.41
Molina	x 0.38

Superior EPO	x 0.26
Texas Children's	x 0.40
UnitedHealthcare-Texas	x 0.39

Health Plan Information and Customer Service – CHIP MCO-level analysis

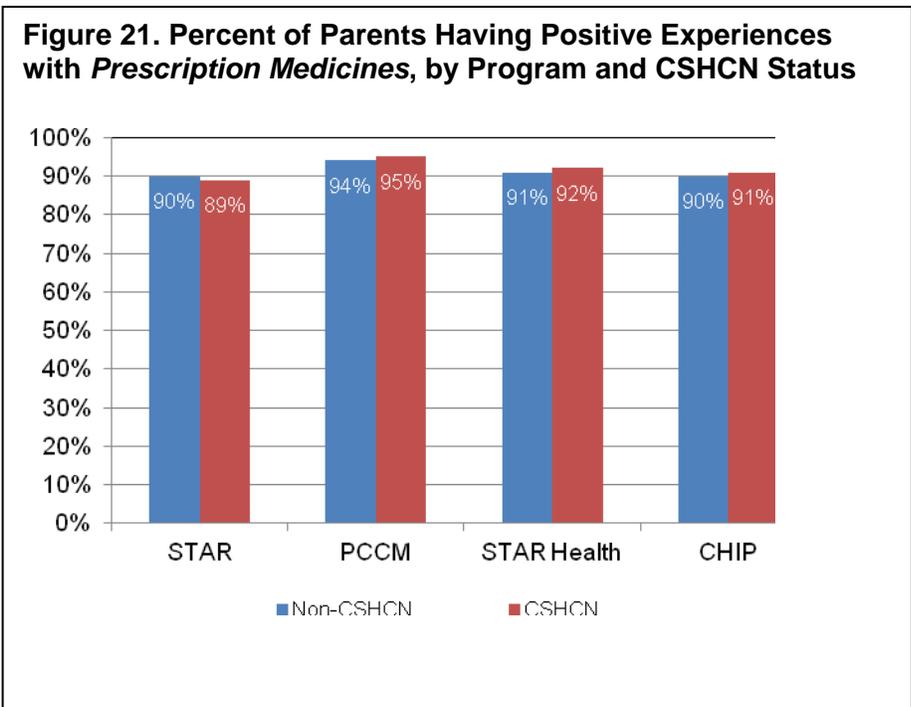
Table D12 in Appendix D shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of positive experiences with *Health Plan Information and Customer Service*, controlling for demographic and health status factors. Compared to Community Health Choice (the reference group), the likelihood of positive parental experiences on this composite was significantly lower in five CHIP MCOs. The reduction in likelihood was greatest in Superior EPO, where only 63 percent of parents had positive experiences with customer service at their child's health plan.

As in the program-level analysis, the likelihood of positive experiences with *Health Plan Information and Customer Service* in CHIP was associated with child's race/ethnicity. Parents of Hispanic children were 1.6 times more likely than parents of White, non-Hispanic children to have had positive customer service experiences.

CAHPS® Composite: Prescription Medicines

The *Prescription Medicines* composite assesses parents' experiences with access to needed prescription medications for their child. Parents who indicated they received or refilled prescription medications for their child in the past six months were asked how often it was easy to get these medicines

through their child's health plan. Figure 21 presents the percentage of parents in each program who had positive experiences with getting prescription medicines for their child (composite score ≥ 75), showing results separately for non-CSHCN and CSHCN. These percentages exclude children who could not be classified using the CRGs because they did not meet the minimum enrollment requirement.



The percentage of parents of CSHCN with positive experiences getting prescription medicines for their child was good in STAR (89 percent), PCCM (95 percent), STAR Health (92 percent), and CHIP (91 percent). In all four programs, positive experiences were similar between parents of CSHCN and parents of non-CSHCN.

Prescription Medicines – Program-level analysis

Table D13 in Appendix D shows results of the EQRO's program-level analysis, testing the influence of demographic, health status, and program membership factors on parents' experiences with *Prescription Medicines*. Controlling for demographic and health status factors, there were no differences among programs in the likelihood of positive experiences with getting prescription medicines.

Compared to parents of White, non-Hispanic children, the likelihood of positive experiences was lower among parents of Hispanic children (x 0.76) and Other, non-Hispanic children (x 0.46). However, although these associations were statistically significant, it should be noted that rates of positive experiences were still high for these racial/ethnic groups (at 90 percent and 85 percent, respectively).

Prescription Medicines – STAR MCO-level analysis

Table D14 in Appendix D shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of positive experiences with *Prescription Medicines*, controlling for demographic and health status factors. All STAR MCOs performed well on this measure, with the percentage of parents having positive experiences with prescription medicines ranging from 83 percent in Molina and Parkland Community to 96 percent in Driscoll.

As in the program-level analysis, the likelihood of positive experiences with *Prescription Medicines* in STAR was associated with child's race/ethnicity. Compared to parents of White, non-Hispanic children, positive experiences were less common among parents of Black, non-Hispanic children (x 0.59), Hispanic children (x 0.56), and Other, non-Hispanic children (x 0.41). Although these associations were statistically significant, rates of positive experiences were still high for these racial/ethnic groups.

Prescription Medicines – CHIP MCO-level analysis

Table D15 in Appendix D shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of positive experiences with *Prescription Medicines*, controlling for demographic and health status factors. All CHIP MCOs performed well on this measure, with the percentage of parents having positive experiences with prescription medicines ranging from 87 percent in UniCare and UnitedHealthcare-Texas to 94 percent in Community Health Choice and Parkland Community.

The associations between *Prescription Medicines* and child's race/ethnicity that were found in the program-level analysis were not significant in the STAR MCO-level analysis. Although parents of Other, non-Hispanic children were less likely to have positive experiences than parents of White, non-Hispanic children (x 0.41), the rate of positive experiences in this racial/ethnic group was still high.

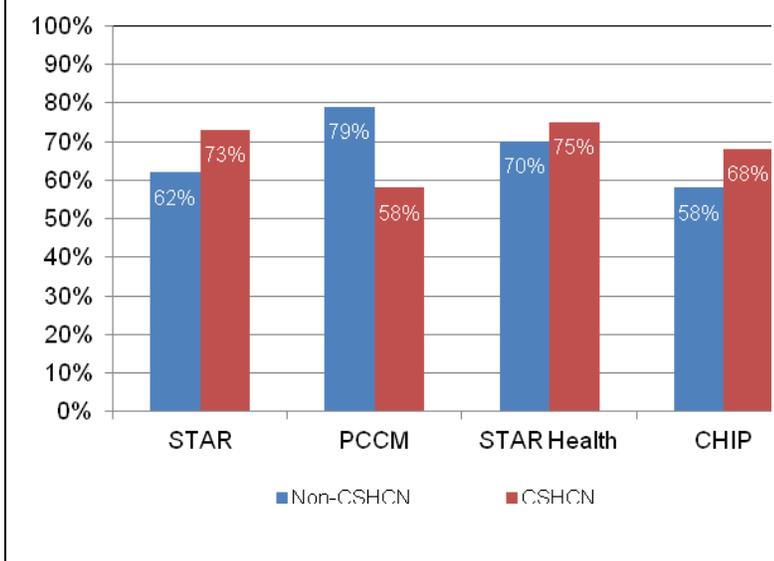
CAHPS® Composite: Getting Specialized Services

The *Getting Specialized Services* composite assesses parents' experiences with three aspects of access to specialized services for their child. Parents were asked how often it was easy to get: (1) special medical equipment or devices; (2) special therapy such as physical, occupational, or speech therapy; and (3) treatment or counseling for an emotional, developmental, or behavioral problem.

Figure 22 presents the percentage of parents in each program who had positive experiences with getting specialized services for their child (composite score ≥ 75), showing results separately for non-CSHCN and CSHCN. These percentages exclude children who could not be classified using the CRGs because they did not meet the minimum enrollment requirement.

The percentage of parents of CSHCN with positive experiences getting specialized services for their child was good in STAR (73 percent) and STAR Health (75 percent). In STAR, positive experiences were significantly higher among parents of CSHCN than parents of non-CSHCN (62 percent).⁶⁹ This finding is largely due to better access to treatment and counseling for CSHCN.⁷⁰

Figure 22. Percent of Parents Having Positive Experiences with Getting Specialized Services by Program and CSHCN Status



In CHIP, the percentage of parents of CSHCN with positive experiences on this measure was low (68 percent), yet significantly higher than the percentage among parents of non-CSHCN (58 percent).⁷¹ As in the STAR program, this difference is largely due to better access to treatment and counseling for CSHCN.⁷²

In PCCM, the percentage of parents of CSHCN with positive experiences getting specialized services for their child was low (58 percent), and was significantly lower than the percentage among parents of non-CSHCN (79 percent).⁷³ This finding corresponds with the difference in composite means in PCCM shown on Table 11, and is largely due to lower access to special therapies for CSHCN.⁷⁴ These findings suggest that access to specialized services for children in former PCCM counties is not effectively distributed according to the member's needs. Medicaid managed care MCOs moving into these counties should make access to specialized care for CSHCN a priority in their quality improvement initiatives.

Getting Specialized Services – Program-level analysis

Table D16 in **Appendix D** shows results of the EQRO's program-level analysis, testing the influence of demographic, health status, and program membership factors on parents' experiences with *Getting Specialized Services*. Controlling for demographic and health status factors, there were no differences among programs in the likelihood of positive experiences with getting specialized services.

Compared to parents of healthy children, the likelihood of positive experiences on this measure was significantly greater among parents of children with significant acute conditions (x 1.60), minor chronic conditions (x 1.80), moderate chronic conditions (x 1.71), and major chronic conditions (x 1.77). However, because of the importance of specialized services for CSHCN, rates among children with chronic conditions (71 to 71 percent) are still in need of improvement.

Parent-reported access to specialized services generally decreased with the member's age. The rate of positive experiences was particularly low for parents of children 5 to 7 years old (69 percent), children 8 to 12 years old (67 percent), and adolescents 13 to 18 years old (63 percent).

Getting Specialized Services – STAR MCO-level analysis

Table D17 in **Appendix D** shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of positive experiences with *Getting Specialized Services*, controlling for demographic and health status factors. Compared to Cook Children's (the reference group), the likelihood was significantly lower in UnitedHealthcare-Texas (x 0.31). However, all STAR MCOs had generally low rates on this measure, with rates of less than 70 percent in ten MCOs. These findings suggest there is a program-wide need of improvement in access to specialized services for CSHCN in STAR.

As in the program-level analysis, the likelihood of positive experiences with *Getting Specialized Services* in STAR was associated with child's CRG and age. Compared to parents of healthy children, positive experiences were more common among parents of children with minor chronic conditions (x 1.90), moderate chronic conditions (x 1.64), and major chronic conditions (x 2.13). Among the age groups, the rate of positive experiences was lowest for adolescents 13 to 18 years old (59 percent).

Getting Specialized Services – CHIP MCO-level analysis

Table D18 in Appendix D shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of positive experiences with *Getting Specialized Services*, controlling for demographic and health status factors. Compared to FirstCare (the reference group), where 83 percent of parents had positive experiences on this measure, the likelihood of positive experiences was significantly lower in seven CHIP MCOs. The reduction in likelihood

CHIP MCO	Effect on likelihood of positive <i>Specialized Services</i> experiences
Aetna	x 0.24
AMERIGROUP	x 0.10
Community Health Choice	x 0.16
El Paso First	x 0.28
Molina	x 0.21
Seton	x 0.26
Texas Children's	x 0.30

was greatest in AMERIGROUP, where only 37 percent of parents had positive experiences getting specialized services for their child. Although the differences in likelihood were significant, it should be noted that estimates at the MCO-level are less precise due to low sample sizes.

Parent-reported access to specialized services in CHIP was

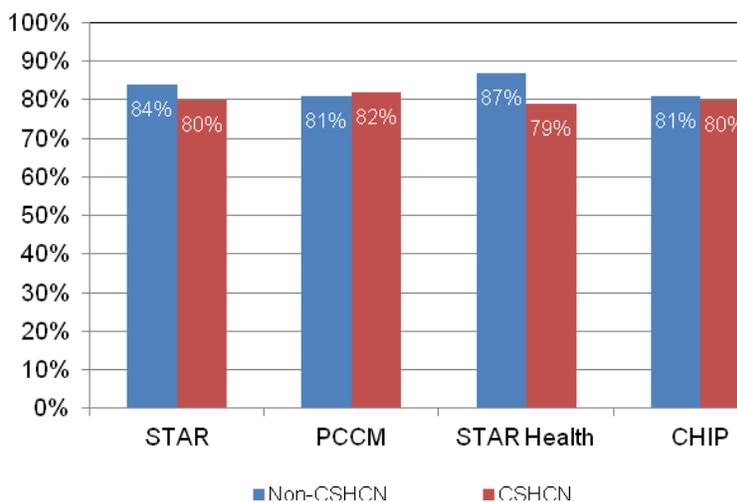
strongly associated with child's health status. Compared to parents of healthy children, the likelihood of positive experiences was higher for parents of children with significant acute conditions (x 2.61), minor chronic conditions (x 2.33), moderate chronic conditions (x 1.90), and major chronic conditions (x 2.91).

CAHPS® Composite: Personal Doctor

The *Personal Doctor* composite assesses parents' experiences with their child's personal doctor. Parents were asked whether their child's personal doctor: (1) talked with them about how their child is feeling, growing,

Texas Contract Year 2010
 FY 2009 and 2010 CSHCN State-wide Adm
 Version: 1.0
 HHSC Approval Date: May 10, 2012

Figure 23. Percent of Parents Having Positive Experiences with Their Child's Personal Doctor by Program and CSHCN Status



or behaving; (2) understood how their child's medical, behavioral, or other health conditions affect their child's day-to-day life; and (3) understood how their child's medical, behavioral, or other health conditions after their family's day-to-day life. **Figure 23** presents the percentage of parents in each program who had positive experiences with their child's personal doctor (composite score ≥ 75), showing results separately for non-CSHCN and CSHCN. These percentages exclude children who could not be classified using the CRGs because they did not meet the minimum enrollment requirement.

The percentage of parents of CSHCN with positive experiences with their child's personal doctor was high in STAR (80 percent), PCCM (82 percent), STAR Health (79 percent), and CHIP (80 percent).

In STAR Health, the percentage of parents of CSHCN with positive experiences with their child's personal doctor was significantly lower than the percentage among parents of non-CSHCN (87 percent).⁷⁵ It should be noted that in all programs, rates for CSHCN were within an acceptable range of performance on this measure.

Personal Doctor – Program-level analysis

Table D19 in **Appendix D** shows results of the EQRO's program-level analysis, testing the influence of demographic, health status, and program membership factors on parents' experiences with their child's *Personal Doctor*. Controlling for demographic and health status factors, there was no observed relationship between program membership and parents' positive experiences with their child's personal doctor. No meaningfully significant associations were found between *Personal Doctor* experiences and any of the demographic or health status factors.

Personal Doctor – STAR MCO-level analysis

Table D20 in **Appendix D** shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of positive experiences with the child's *Personal Doctor*, controlling for demographic and health status factors. All STAR MCOs performed well on this measure, with the percentage of parents having positive experiences with their child's personal doctor ranging from 79 percent in UnitedHealthcare-Texas to 87 percent in Driscoll and El Paso First. No meaningfully significant associations were found between *Personal Doctor* experiences and any of the demographic or health status factors in STAR.

Personal Doctor – CHIP MCO-level analysis

Table D21 in **Appendix D** shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of positive experiences with child's *Personal Doctor*, controlling

for demographic and health status factors. All CHIP MCOs performed well on this measure, with the percentage of parents having positive experiences with their child's personal doctor ranging from 74 percent in UniCare to 86 percent in Cook Children's.

Positive experiences with personal doctors in CHIP were associated with child's age. Compared to parents of adolescents 13 to 18 years old, an increased likelihood of positive experiences was observed for parents of children 0 to 4 years old (x 1.69) and parents of children 5 to 7 years old (x 1.40). Although these differences were statistically significant, it should be noted that the rate of positive experiences was high in all age groups.

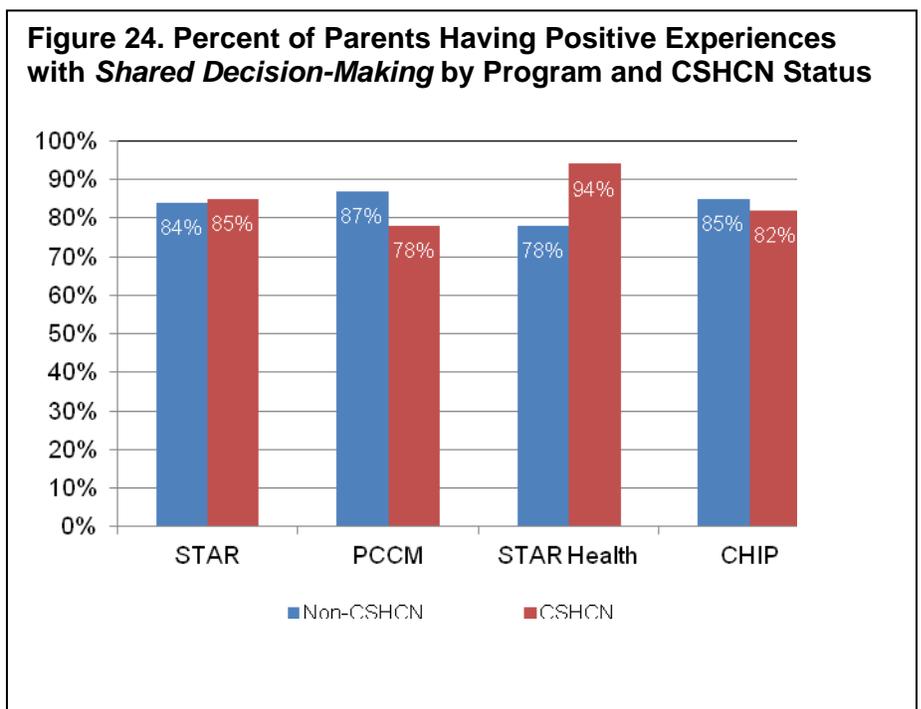
CAHPS® Composite: Shared Decision-Making

The *Shared Decision-Making* composite assesses parents' experiences with decision-making in clinical encounters with their child's doctors and other health care providers. Parents were asked: (1) Whether their child's doctor or other health provider talked with them about the pros and cons of each choice for their child's treatment; and (2) Whether their child's doctor or other health provider asked them which choice they thought was best for their child.

Figure 24 presents the percentage of parents in each program who had positive experiences with shared decision-making (composite score ≥ 75), showing results separately for non-CSHCN and CSHCN. These percentages exclude children who could not be classified using the CRGs because they did not meet the minimum enrollment requirement.

The percentage of parents of CSHCN with positive experiences with shared decision-making was high in STAR (85 percent), PCCM (78 percent), STAR Health (94 percent), and CHIP (82 percent).

In PCCM, the percentage of parents of CSHCN with positive experiences on this measure was lower than the percentage among parents of non-CSHCN (78 percent vs. 87 percent). However, this difference was not statistically significant, and the rate among parents of CSHCN was within an acceptable range of performance.



Parents of CSHCN in STAR Health had significantly better experiences with shared decision-making than parents of non-CSHCN (94 percent vs. 78 percent).⁷⁶ The difference was due to better shared decision-making experiences among parents of CSHCN, on both items in the composite.⁷⁷

Shared Decision-Making – Program-level analysis

Table D22 in Appendix D shows results of the EQRO's program-level analysis, testing the influence of demographic, health status, and program membership factors on parents' experiences with *Shared Decision-Making*. Controlling for demographic and health status factors, there was no observed relationship between program membership and parents' positive experiences with shared decision-making.

No meaningfully significant associations were found between *Shared Decision-Making* and child's health status. This finding is not surprising, given that many parents of children with moderate to severe chronic conditions have limited treatment options available for their children. Shared decision-making plays a greater role for healthy children and those with acute conditions, for whom a greater range of treatment options is available. However, even with limited treatment options for CSHCN, it is important for providers to involve parents in the decision-making process and incorporate the families' cultural values into that process.

Parents of Other, non-Hispanic children were less likely than parents of White, non-Hispanic children to have had positive experiences on this measure (x 0.58). However, the rate among Other, non-Hispanic children (77 percent) was still within an acceptable range of performance.

Shared Decision-Making – STAR MCO-level analysis

Table D23 in Appendix D shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of positive experiences with *Shared Decision-Making*, controlling for demographic and health status factors. Most STAR MCOs performed well on this measure, with 11 MCOs having rates higher than 80 percent. Compared to UniCare (the reference group), the likelihood of positive parent experiences on this composite was significantly lower in Community Health Choice (x 0.29) and Molina (x 0.36). While significant differences were observed for other MCOs as well, the percentage of parents with positive experiences was low in Community Health Choice (71 percent) and Molina (74 percent). In these STAR health plans there is a need for improvement in shared decision-making – a domain that is particularly important for the delivery of high quality health care for CSHCN.

Positive experiences with shared decision-making in STAR were not associated with any of the demographic or health status factors in the model.

Shared Decision-Making – CHIP MCO-level analysis

Table D24 in Appendix D shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of positive experiences with *Shared Decision-Making*, controlling for demographic and health status factors. Most CHIP MCOs performed well on this measure, with 14 MCOs having rates higher than 80 percent. Compared to Seton (the reference group), the likelihood of positive parent experiences on this composite was significantly lower in Molina (x 0.23) and UniCare (x 0.20). While significant differences were observed for other MCOs as well, the percentage of parents with positive experiences was low in Molina (78 percent) and UniCare (75 percent). There is need for improvement in shared decision-making in these health plans to ensure an adequate level of care for CSHCN.

Parents of children with significant acute conditions were 2.1 times more likely than parents of healthy children to have had positive experiences with shared decision-making. This finding is not surprising, given that children in this CRG frequently have a broader range of treatment options available, and there is therefore greater opportunity for shared decision-making. Positive experiences on this measure in CHIP were not associated with any of the other demographic factors in the model.

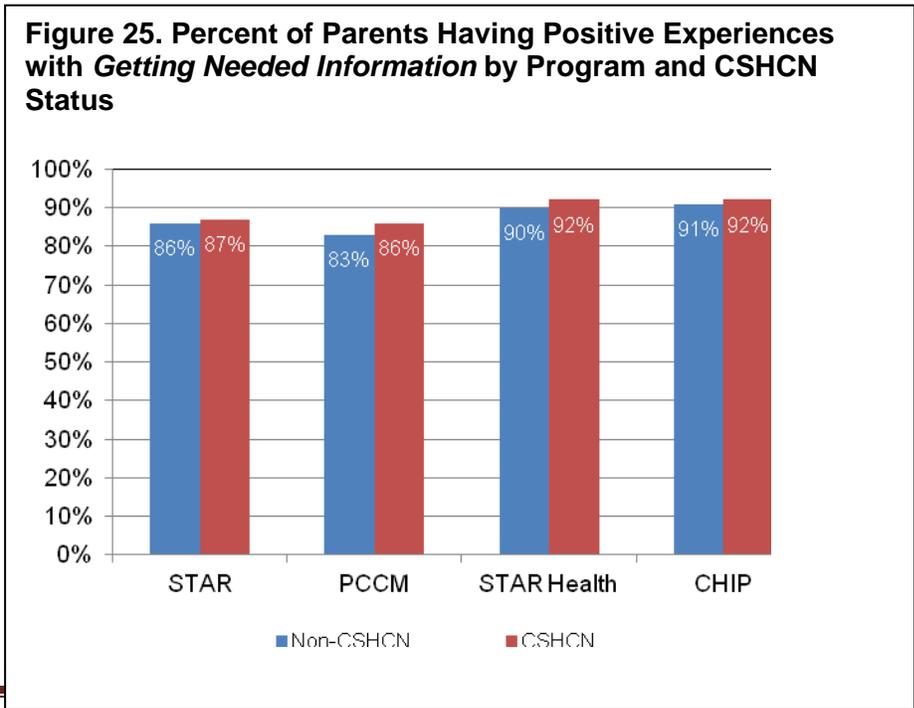
CAHPS® Composite: Getting Needed Information

The *Getting Needed Information* composite assesses parents’ experiences with getting information regarding their child’s health care in the clinical setting. Parents were asked how often they had their questions answered by their child’s doctors or other health providers.

Figure 25 presents the percentage of parents in each program who had positive experiences with getting needed information for their child (composite score ≥ 75), showing results separately for non-CSHCN

and CSHCN. These percentages exclude children who could not be classified using the CRGs because they did not meet the minimum enrollment requirement.

The percentage of parents of CSHCN with positive experiences getting needed information for their child was good in STAR (87 percent), PCCM (86 percent), STAR Health (92 percent), and CHIP (92 percent). In all four programs, the percentage of parents of CSHCN with



positive experiences on this measure was similar to the percentage among parents of non-CSHCN.

Getting Needed Information – Program-level analysis

Table D25 in Appendix D shows results of the EQRO's program-level analysis, testing the influence of demographic, health status, and program membership factors on parents' experiences with *Getting Needed Information*. Controlling for demographic and health status factors, parents of children in STAR Health were 1.5 times more likely, and parents of children in CHIP were 1.7 times more likely than parents of children in STAR to have had positive experiences on this measure. However, rates of positive experiences in STAR (86 percent) and PCCM (83 percent) were still within an acceptable range of performance.

No meaningfully significant associations were found between *Getting Needed Information* and any of the demographic or health status factors in the model.

Getting Needed Information – STAR MCO-level analysis

Table D26 in Appendix D shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of positive experiences with *Getting Needed Information*, controlling for demographic and health status factors. All STAR MCOs performed well on this measure, with the percentage of parents having positive experiences within getting needed information ranging from 79 percent in Molina to 92 percent in Driscoll.

No meaningfully significant associations were found between *Getting Needed Information* and any of the demographic or health status factors in the model.

Getting Needed Information – CHIP MCO-level analysis

Table D27 in Appendix D shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of positive experiences with *Getting Needed Information*, controlling for demographic and health status factors. All CHIP MCOs performed well on this measure, with the percentage of parents having positive experiences with getting needed information ranging from 84 percent in UniCare to 96 percent in Driscoll.

Parents of Other, non-Hispanic children were less likely than parents of White, non-Hispanic children to have had positive experiences getting needed information (x 0.28). However, the rate of positive experiences for parents of Other, non-Hispanic children (78 percent) was still within an acceptable range of performance for this measure. No meaningfully significant associations were found between *Getting Needed Information* and any of the other demographic or health status factors in the model.

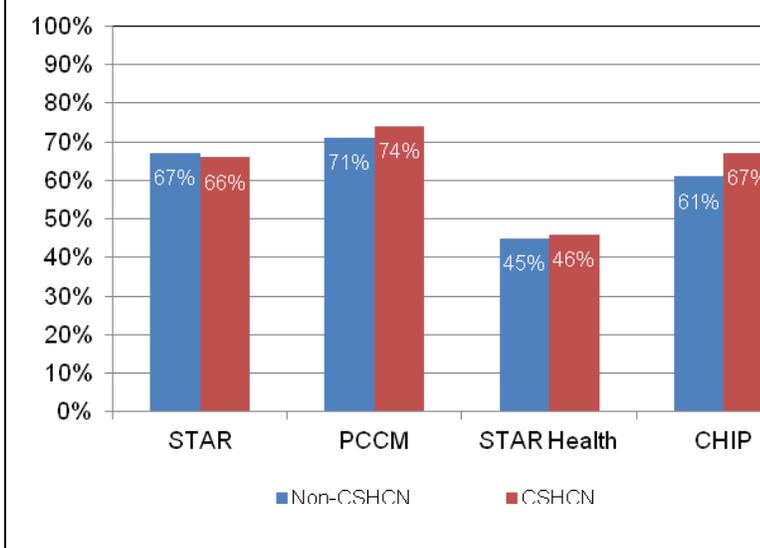
CAHPS® Composite: Care Coordination

The *Care Coordination* composite assesses parents' experiences with two aspects of the coordination of their child's care: (1) Whether they received the help they needed from their child's doctor or other health providers in contacting their child's school or daycare; and (2) Whether anyone from their child's health plan, doctor's office, or clinic helped coordinate their child's care among different providers and services. **Figure 26** presents the percentage of parents in each program who had positive experiences with care coordination for their child (composite score ≥ 75), showing results separately for non-CSHCN and CSHCN. These percentages exclude children who could not be classified using the CRGs because they did not meet the minimum enrollment requirement.

The percentage of parents of CSHCN having positive experiences with care coordination for their child was low in STAR (66 percent), PCCM (74 percent), STAR Health (46 percent), and CHIP (67 percent). Care coordination is important for the delivery of high quality health care

for CSHCN. Although rates for CSHCN in all four programs were similar to or slightly higher than rates for non-CSHCN, they are still in need of improvement.

Figure 26. Percent of Parents Having Positive Experiences with Care Coordination by Program and CSHCN Status



Rates of positive experiences in were particularly low in STAR Health, for both parents of CSHCN and parents of non-CSHCN. These low rates were largely due to low rates of care coordination from the child's health plan, doctor's office, or clinic.⁷⁸

Care Coordination – Program-level analysis

Table D28 in **Appendix D** shows results of the EQRO's program-level analysis, testing the influence of demographic, health status, and program membership factors on parents' experiences with *Care Coordination*. Controlling for demographic and health status factors, parents of children in STAR Health were significantly less likely than parents of children in STAR to have had positive experiences with care coordination for their child (x 0.39).

Parents of children with major chronic conditions were 1.6 times more likely than parents of healthy children to have had good care coordination experiences. However, it should be noted

that rates of positive experiences were low for CSHCN in all severity categories – at 58 percent for mild chronic conditions, 66 percent for moderate chronic conditions, and 70 percent for major chronic conditions.

Compared to parents of White, non-Hispanic children, the likelihood of positive experiences on this measure was significantly higher for parents of Hispanic children (x 1.62) and Other, non-Hispanic children (x 1.62).

Care Coordination – STAR MCO-level analysis

Table D29 in Appendix D shows results of the analysis testing for the influence of STAR MCO membership on the likelihood of positive experiences with *Care Coordination*, controlling for demographic and health status factors. Although a number of STAR MCOs performed low on this measure, differences among the MCOs were not significant. Nine STAR MCOs had rates of positive parent experiences with care coordination below 70 percent. The lowest rates were observed in Community First (58 percent) and Cook Children's (55 percent).

As in the program-level analysis, the likelihood of positive experiences with *Care Coordination* in STAR was associated with child's CRG and race/ethnicity. Parents of children with major chronic conditions were 2.0 times more likely than parents of healthy children to have had positive experiences. Compared to parents of White, non-Hispanic children, the likelihood of positive experiences on this measure was significantly higher for parents of Black, non-Hispanic children (x 1.63) and Hispanic children (x 1.95).

Care Coordination – CHIP MCO-level analysis

Table D30 in Appendix D shows results of the analysis testing for the influence of CHIP MCO membership on the likelihood of positive experiences with *Care Coordination*, controlling for demographic and health status factors. Compared to Texas Children's (the reference group), the likelihood of positive parent experiences on this measure was significantly lower in AMERIGROUP (x 0.44), Community First (x 0.44), and El Paso First (x 0.45). Although significant differences were not observed for other CHIP MCOs, most health plans had rates of positive parent care coordination experiences below an acceptable range of performance. The percentage of parents with positive experiences was below 70 percent in 14 MCOs.

As in the program-level analysis, the likelihood of positive experiences with *Care Coordination* in CHIP was associated with child's CRG and race/ethnicity. Parents of children with moderate chronic conditions were 1.8 times more likely than parents of healthy children to have had positive experiences. Compared to parents of White, non-Hispanic children, the likelihood of positive experiences on this measure was significantly higher for parents of Hispanic children (x 1.51) and Other, non-Hispanic children (x 2.11).

Pediatric Quality of Life (PedsQL™) Scores

Health-related quality of life (HRQOL) is a concept that includes self-perceptions of physical and mental health, health risks and conditions, functional status, social support, and socioeconomic status.⁷⁹ For children, HRQOL is commonly measured using the PedsQL™ – a survey tool that assesses the child’s functional status using parent report.⁸⁰ Measures such as the PedsQL™ permit researchers to objectively demonstrate the impact of health on quality of life, and are particularly important for a global assessment of the health status of CSHCN.

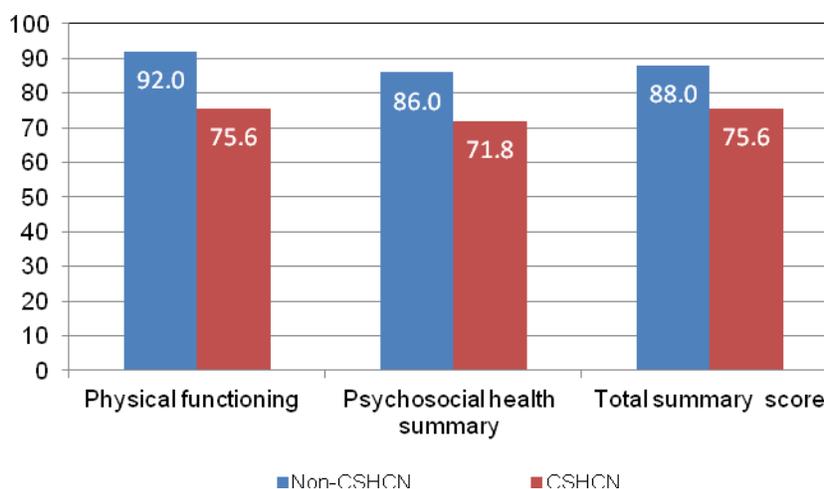
The EQRO used the PedsQL™ instrument as part of its fiscal year 2010 STAR Health and CHIP caregiver surveys. The instrument produces four generic scores computed on a 0- to 100-point scale, representing lowest to highest HRQOL with regard to physical, emotional, social, and school functioning. Two composite scores are also calculated – an Overall Summary score combining all four domains of functioning, and a Psychosocial Health Summary score combining items from the Emotional, Social, and School Functioning scales.

This section presents the EQRO’s findings on HRQOL in the STAR Health and CHIP survey samples, comparing scores for Physical Functioning, Psychosocial Health, and Overall HRQOL between CSHCN and non-CSHCN. Following PedsQL™ specifications, results are presented separately for four age groups: (1) Toddlers (2 to 4 years old); (2) Young children (5 to 7 years old); (3) Children (8 to 12 years old); and (4) Teens (13 to 18 years old).

Health-related quality of life in STAR Health

Figures 27 to 30 present PedsQL™ scores for each of the four age groups in STAR Health, showing HRQOL separately for non-CSHCN and CSHCN. Across all age groups, CSHCN in STAR Health had lower scores than non-CSHCN for physical,

Figure 27. Health-Related Quality of Life (PedsQL™) Scores for Toddlers in STAR Health, by CSHCN Status



psychosocial, and overall functioning.

Compared to score means for children with chronic conditions in school-based samples, STAR Health members with special health care needs had higher scores in both Physical Functioning (school-based mean score = 66.4) and Psychosocial Functioning (school-base mean score = 62.9).⁸¹ However, Total Summary scores among CSHCN were still below clinically meaningful cutoff scores that have been established in prior research on the PedsQL™.⁸²

In STAR Health, Physical Functioning scores tended to increase with the child's age, while Psychosocial Health scores tended to decrease with the child's age. Total Summary scores were highest for toddlers but decreased in the latter three age groups.

Toddlers with special health care needs in STAR Health scored lowest in Psychosocial Health (mean = 71.8), and slightly higher in Physical Functioning (mean = 75.6). On all three scales, CSHCN in this age group scored significantly lower than non-CSHCN.⁸³

Young children with special health care needs in STAR Health scored lowest in Psychosocial Health (mean = 64.4), and substantially higher in Physical

Figure 28. Health-Related Quality of Life (PedsQL™) Scores for Young Children in STAR Health, by CSHCN Status

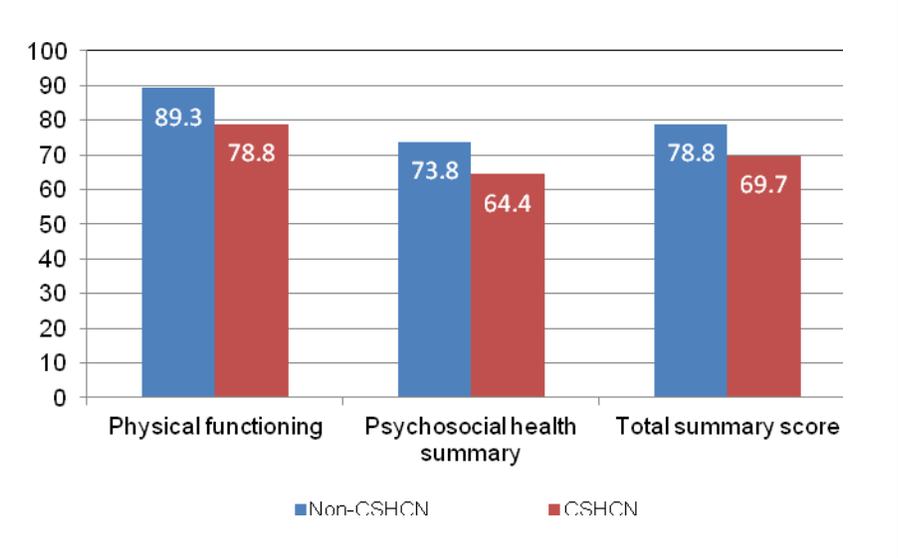
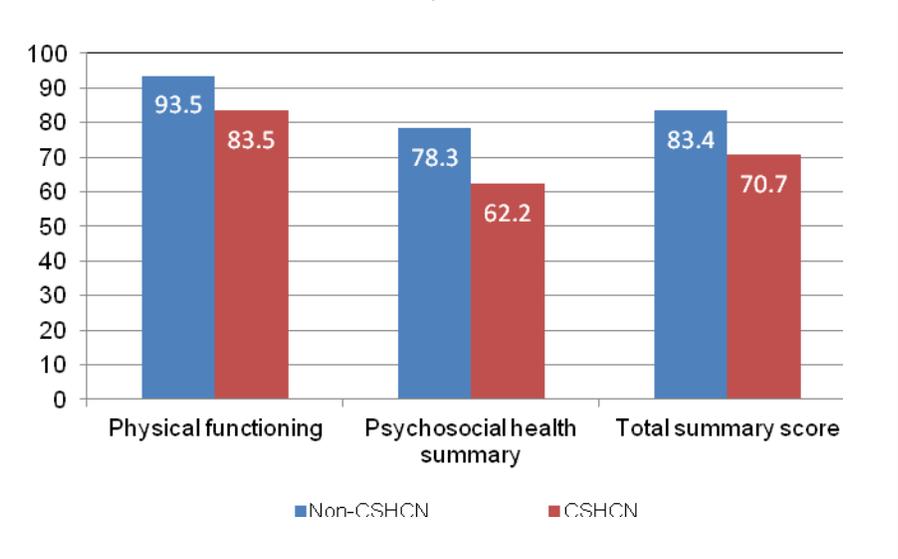


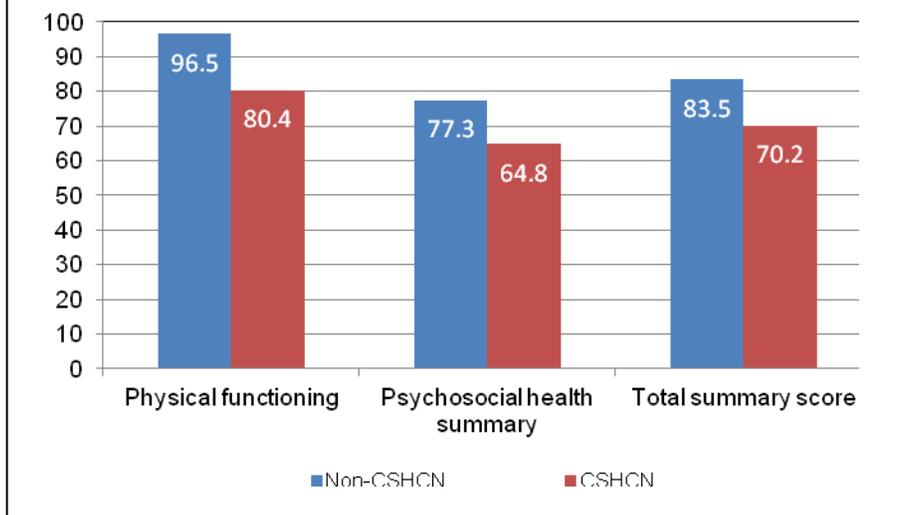
Figure 29. Health-Related Quality of Life (PedsQL™) Scores for Children in STAR Health, by CSHCN Status



Functioning (mean = 78.8). A notable decrease in emotional, social, and school functioning was observed between the toddler and young child age groups. Young children with special health care needs scored significantly lower than non-CSHCN on the Physical Functioning and Total Summary scores.⁸⁴

Children 8 to 12 years old with special health care needs in STAR Health scored lowest in Psychosocial Health (mean = 62.2), and substantially higher in Physical Functioning (mean = 83.5). A notable increase in physical functioning was observed between young children (5 to 7 years) and children (8 to 12 years). On all three scales, CSHCN in this age group scored significantly lower than non-CSHCN.⁸⁵

Figure 30. Health-Related Quality of Life (PedsQL™) Scores for Teens in STAR Health, by CSHCN Status

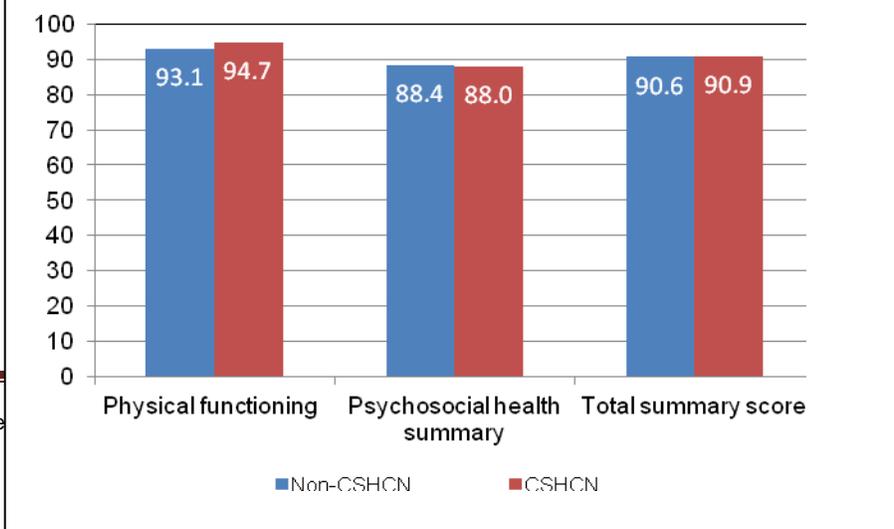


Teenagers with special health care needs in STAR Health scored lowest in Psychosocial Health (mean = 64.8), and substantially higher in Physical Functioning (mean = 80.4). Only minor differences were observed in these scores between children (8 to 12 years) and teens, with teens having slightly lower Physical Functioning scores and slightly higher Psychosocial Health scores. Teenagers with special health care needs scored significantly lower than non-CSHCN on the Physical Functioning scale.⁸⁶

Health-related quality of life in CHIP

Figures 31 to 34 present PedsQL™ scores for each of the four age groups in CHIP, showing HRQOL separately for non-CSHCN and CSHCN. In the toddler age group, scores for physical, psychosocial,

Figure 31. Health-Related Quality of Life (PedsQL™) Scores for Toddlers in CHIP, by CSHCN Status



and overall functioning were approximately equal between CSHCN and non-CSHCN in CHIP. In the latter three age groups, CSHCN in CHIP had lower scores than non-CSHCN in the three domains of functioning. Compared to score means for children with chronic conditions in school-based samples, CHIP members with special health care needs had higher scores in both

Physical Functioning (school-based mean score = 66.4) and Psychosocial Functioning (school-base mean score = 62.9).⁸⁷ Total Summary scores among CSHCN were also above clinically meaningful cutoff scores that have been established in prior research on the PedsQL™.⁸⁸ This finding suggests that CSHCN in CHIP may have higher quality of life than CSHCN in other programs.

In CHIP, Physical Functioning, Psychosocial Functioning, and Total Summary scores all tended to decrease with the child's age. These decreases were more pronounced among CSHCN.

Toddlers with special health care needs in CHIP scored lowest in Psychosocial Health (mean = 88.0), and substantially higher in Physical Functioning (mean = 94.7). The mean Physical Functioning score in this age group was slightly higher among CSHCN than among non-CSHCN.

Young children with special health care needs in CHIP scored lowest in Psychosocial Health (mean = 78.4), and substantially higher in Physical Functioning (mean = 85.6). A notable decrease in scores for physical and psychosocial

Figure 32. Health-Related Quality of Life (PedsQL™) Scores for Young Children in CHIP, by CSHCN Status

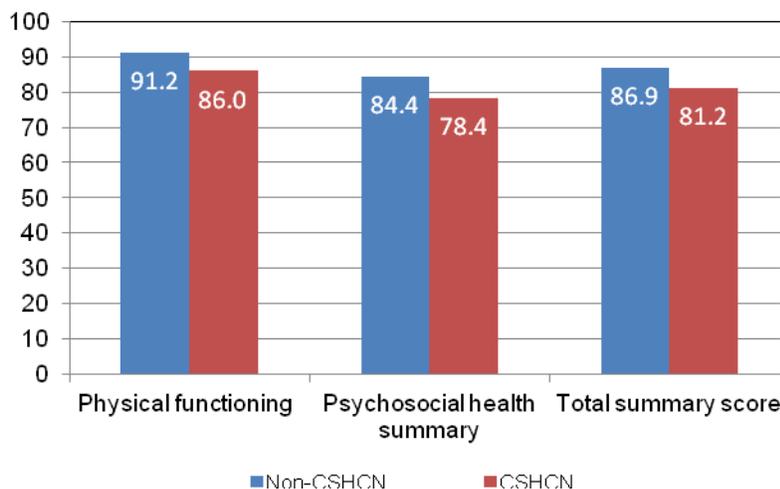
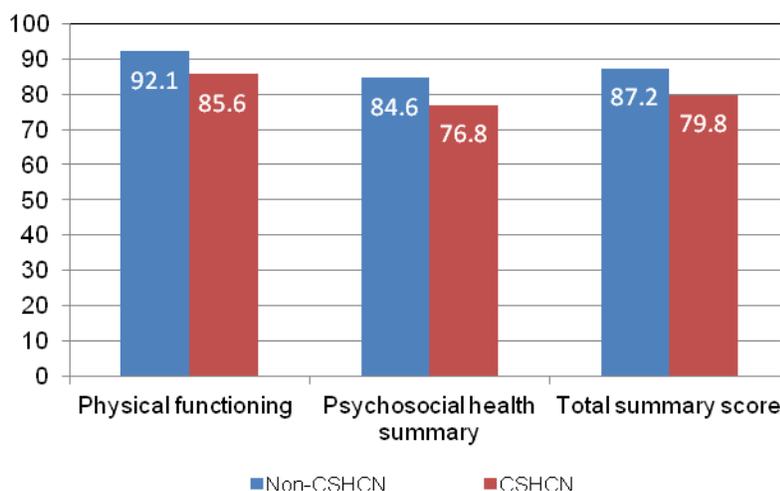


Figure 33. Health-Related Quality of Life (PedsQL™) Scores for Children in CHIP, by CSHCN Status



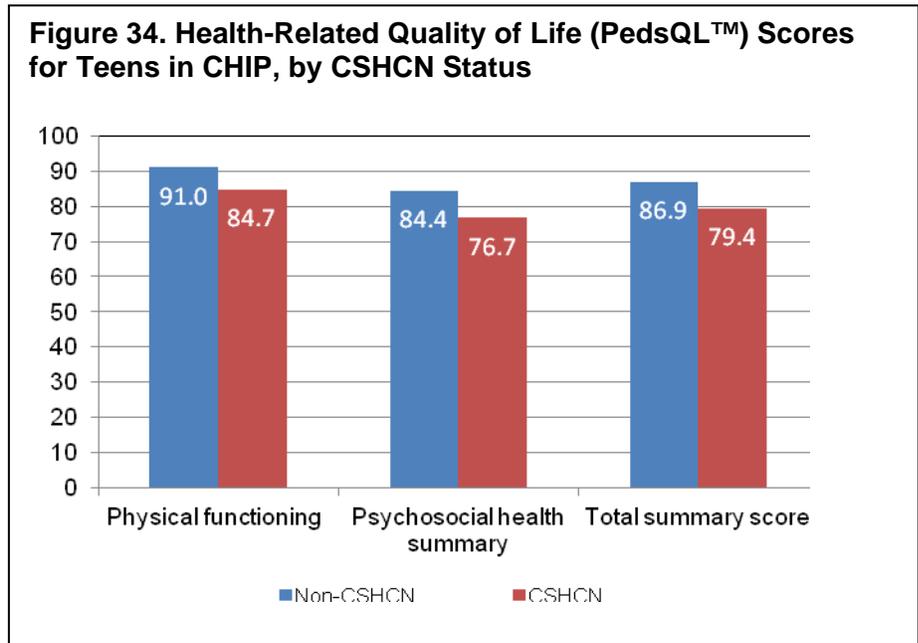
functioning was observed between the toddler and young child age groups. On all three scales, CSHCN in this age group scored significantly lower than non-CSHCN.⁸⁹

Children 8 to 12 years old with special health care needs in CHIP scored lowest in Psychosocial Health (mean = 76.8), and substantially higher in Physical Functioning (mean = 85.6). A slight decrease in both scores was observed between the young children (5 to 7 years) and children (8 to 12 years). On all three scales, CSHCN in this age group scored significantly lower than non-CSHCN.⁹⁰

Teenagers with special health care needs in CHIP

scored lowest in Psychosocial Health (mean = 76.7), and substantially higher in Physical Functioning (mean = 84.7). Only minor differences were observed in these scores between children (8 to 12 years) and teens. On all three scales, CSHCN in this age group scored significantly lower than non-CSHCN.⁹¹

Figure 34. Health-Related Quality of Life (PedsQL™) Scores for Teens in CHIP, by CSHCN Status



CSHCN Transition to Adult Care

Parents of CSHCN participating in the STAR, PCCM, STAR Health, and CHIP surveys were asked a series of questions about how their child’s doctors and other health providers were preparing their child for the transition from pediatric to adult care. Issues surrounding the transition from adolescence to adulthood are especially relevant for those with chronic conditions, who report lower utilization rates of recommended care and difficulty finding adult-oriented providers who can meet their health care needs.⁹²

These questions were only asked of parents if their child: (1) was 11 years of age or older at the time of the survey; and (2) had at least one special health care need, as identified by the CSHCN Screener®. To correspond with the survey results, the following summary therefore discusses experiences of parents of CSHCN as defined by the CSHCN Screener®, rather than the CRG classification system.

Table 12 presents parents’ responses to eight questions regarding the transition of their child to adult care, showing results by program. Approximately two-thirds of parents in all programs reported that their child had doctors or other health care providers who treated only children.

Table 12. Counseling for CSHCN Transition to Adult Care, Parent Responses by Program

	STAR	PCCM	STAR Health	CHIP
The child has doctors or health care providers who treat only children.	65%	65%	62%	62%
<u>Moving to a doctor who treats adults</u>				
The child's doctors talked to the parent about having the child eventually see doctors or other health care providers who treat adults.	20%	LD ^a	13%	21%
A discussion about doctors who treat adults would have been helpful to the parent.	53%	LD ^a	24%	51%
<u>Changing health care needs</u>				
The child's doctors or other health care providers talked to the parent or child about the child's health care needs as he/she becomes an adult.	43%	56%	30%	41%
A discussion about the child's health care needs would have been helpful to the parent.	72%	LD ^a	48%	70%
<u>Health insurance coverage</u>				
Someone has discussed with the parent how to obtain or keep some type of health insurance coverage as their child becomes an adult.	14%	19%	29%	10%
A discussion about health insurance would have been helpful to the parent.	81%	80%	66%	84%
<u>Self-sufficient care</u>				
The child's doctors or other health care providers "usually" or "always" encouraged the child to take responsibility for his/her health care needs, such as taking medication, understanding (his/her) health, or following medical advice.	69%	76%	58%	73%
The child's doctors or other health care providers "usually" or "always" encouraged the child to take responsibility for his/her health care needs, such as learning about his/her health or helping with treatments and medications. (Children 5-10 years old.)	54%	63%	47%	51%

^a The result is not shown due to a low denominator (< 30) in the calculation.

Parents whose children were in pediatric care were asked whether their child's doctors talked to them about: (1) Moving their child to a doctor who treats adults; (2) Their child's changing health care needs; and (3) Obtaining or keeping health insurance for their child.

- **Moving to a doctor who treats adults.** Approximately one-fifth of parents of CSHCN in STAR and CHIP whose children were in pediatric care reported that their child's doctor talked to them about their child eventually seeing a doctor who treats adults. This percentage was lower among parents of CSHCN in STAR Health (13 percent). Parents who indicated that their child's doctor did *not* talk to them about moving their child to adult care were asked whether a discussion about moving their child to adult care would have been helpful to them. A significantly lower percentage of parents of CSHCN in STAR Health (24 percent) said that such a discussion would have been helpful, compared to parents of CSHCN in STAR (53 percent) or CHIP (51 percent).⁹³
- **Changing health care needs.** The percentage of parents of CSHCN who said their child's doctor talked to them about their child's health care needs as they transition to adulthood was lower in STAR Health (30 percent) than in STAR (43 percent), PCCM (56 percent), or CHIP (41 percent). Parents who indicated that their child's doctor did *not* talk to them about their child's changing health care needs were asked whether a discussion about these changes would have been helpful to them. A significantly lower percentage of parents of CSHCN in STAR Health (48 percent) said that such a discussion would have been helpful, compared to parents of CSHCN in STAR (72 percent) or CHIP (70 percent).⁹⁴
- **Health insurance coverage.** The percentage of parents of CSHCN who said their child's doctor talked to them about obtaining or keeping health insurance for their child was low in all four programs. A significantly higher percentage of parents of CSHCN in STAR Health (29 percent) said they had a discussion about health insurance coverage with their child's doctor, compared to parents of CSHCN in STAR (14 percent), PCCM (19 percent), or CHIP (10 percent).⁹⁵ Parents who indicated that their child's doctor did *not* talk to them about health insurance coverage for their child were asked whether a discussion about these changes would have been helpful to them. A significantly lower percentage of parents of CSHCN in STAR Health (66 percent) said that such a discussion would have been helpful, compared to parents of CSHCN in STAR (81 percent), PCCM (80 percent), or CHIP (70 percent).⁹⁶

Lastly, parents of CSHCN were asked how often their child's doctor encouraged their child to take responsibility for his or her own health care needs.

- For parents of CSHCN 11 years of age and older, these responsibilities include taking medication, understanding health, and following medical advice. The percentage of parents who said their child's doctor "usually" or "always" counseled them on these responsibilities was fairly high across programs, ranging from 58 percent in STAR Health to 76 percent in PCCM.

- For parents of CSHCN 5 to 10 years of age, these responsibilities include learning about health and helping with treatment and medications. The percentage of parents who said their child's doctor "usually" or "always" counseled them on these responsibilities was average across programs, ranging from 47 percent in STAR Health to 63 percent in PCCM.

Overall, results of the CSHCN transition survey questions reveal that rates of counseling by doctors are low (particularly for moving children to adult care and health insurance coverage), and in most cases do not meet the parent's perceived need for counseling. Parents of CSHCN in STAR Health tended to perceive a lower need for counseling than parents of CSHCN in STAR, PCCM, and CHIP.

CSHCN Services Program

The CSHCN Services Program is a Title V program that provides direct services (e.g., health benefits), enabling services (e.g., case management), and population-based services (e.g., newborn screening) to CSHCN and their families.⁹⁷ The program is available to individuals in Texas under 21 years old (or any age with cystic fibrosis) who meet a certain family income level, and who meet the CSHCN Screener[®] criteria as having special health care needs. Program membership includes both publicly-insured and commercially-insured children.

In fiscal year 2010, the EQRO conducted a one-time survey with 302 caregivers of children enrolled in the CSHCN Services Program and 100 caregivers of children on the program's waiting list. Only members under 21 years of age were eligible for the survey. The survey included standard demographic and health status questions, the PedsQL[™] HRQOL instrument, and the CAHPS[®] instrument. It also included the NS-CSHCN questions regarding the transition of CSHCN to adult care, and a number of selected questions from the NS-CSHCN that more comprehensively assess the health status of CSHCN and the experiences of their parents with their child's health services. This section presents descriptive results of the CSHCN Services Program survey regarding child member demographics, health status, HRQOL, and health services, comparing members in the program with members on the program's waiting list.

CSHCN Services Program – Member demographics

- **Member sex.** Among both children enrolled in the CSHCN Services Program and children on the program's waiting list, the majority were male (53 percent and 54 percent, respectively).
- **Member race/ethnicity.** The majority of children in both programs were Hispanic, although the percentage was higher among enrolled children (76 percent) than among children on the waiting list (66 percent). White, non-Hispanic children represented 16 percent of enrolled children and 26 percent of children on the waiting list. In both groups, Black, non-Hispanic children and Other, non-Hispanic children each represented 4 percent of the sample.

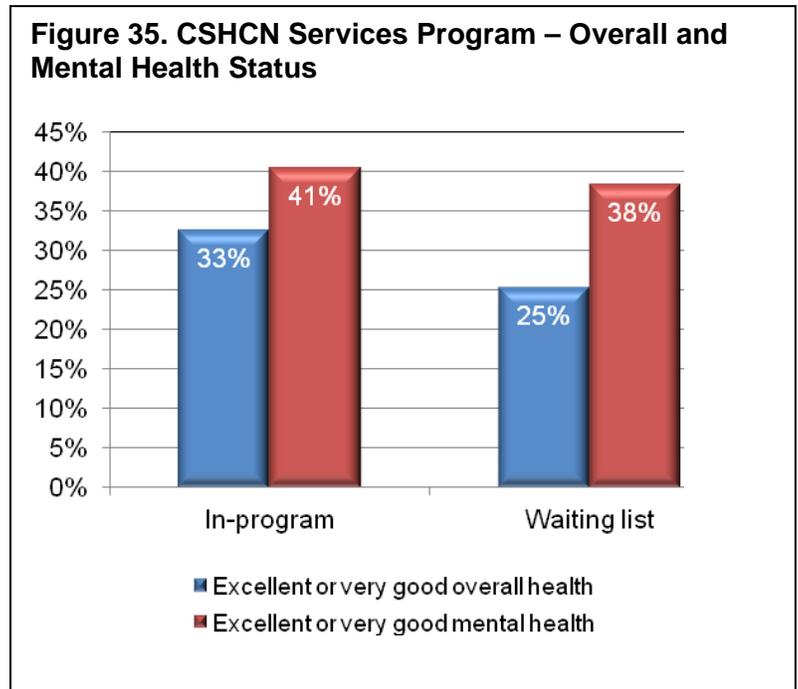
- **Member age.** The mean age was 11.5 years among children enrolled in the program, and 9.5 years among children on the program’s waiting list. This difference was statistically significant.⁹⁸

CSHCN Services Program – Member health status

Parent-reported overall and mental/emotional health status was approximately equal between CSHCN enrolled in the program and those on the waiting list, as shown in **Figure 35**.

Overall, 28 percent of parents of children in the program, and 35 percent of parents of children on the waiting list characterized the difficulties caused by their child’s health problems as “severe”. While this difference was not statistically significant, it does suggest that efforts should be made to expedite enrollment of children on the waiting list.

Among parents of children in the program, 11 percent said their child’s health care needs change all the time, while 49 percent said their child’s health care needs are generally stable. Among parents of children on the waiting list, 22 percent said their child’s health care needs change all the time, while 40 percent said their child’s health care needs are generally stable. These differences were statistically significant, and support the conclusion that efforts should be made to expedite enrollment of children on the waiting list.⁹⁹ From the survey data alone, the EQRO was unable to determine whether higher health status findings for children in the program were the result of differing case-mix, or the result of successful program interventions and services.



The NS-CSHCN asks a series of questions regarding specific conditions that a child may or may not have. **Table 13** shows the percentage of parents in both groups who said their child had each of these conditions.

- Among both children in the program and children on the waiting list, the most common specified condition was allergies. The percent of children with allergies was significantly higher among those on the waiting list than those in the program (55 percent vs. 41 percent).¹⁰⁰

- The next most common condition for both groups was mental retardation or developmental delay, for which the percentage was also significantly higher among children on the waiting list (50 percent vs. 37 percent).¹⁰¹
- Emotional problems, including depression, anxiety, and eating disorders were significantly more common among children on the waiting list than among children in the program (34 percent vs. 20 percent).¹⁰²
- Attention Deficit Hyperactive Disorder (ADHD) was also significantly more common among children on the waiting list than among children in the program (26 percent vs. 16 percent).¹⁰³

Table 13. Parent-reported Conditions Among Children in the CSHCN Services Program and Children on the Program Waiting List

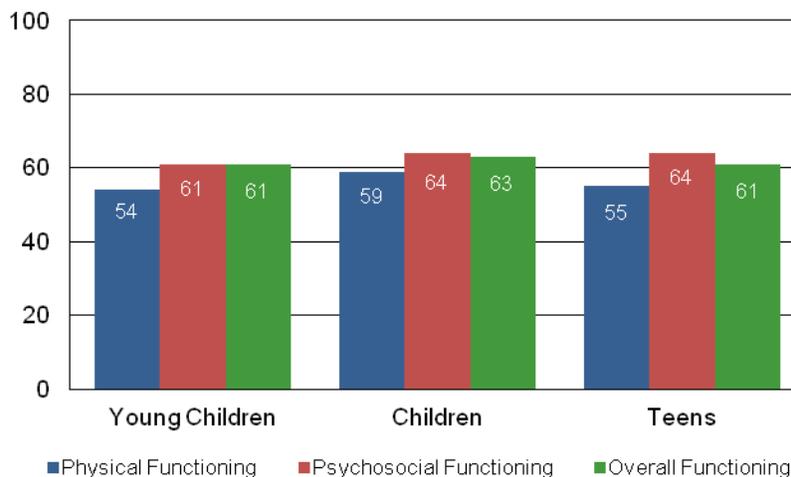
Condition	In-program (%)	Waiting list (%)
Allergies ^a	41%	55%
Arthritis or other joint problems	16%	22%
Asthma	25%	26%
Attention Deficit Hyperactive Disorder ^a	16%	26%
Autism / Autism Spectrum Disorder	10%	8%
Blood problems, such as anemia or sickle cell disease	6%	7%
Cerebral Palsy	20%	24%
Cystic Fibrosis	5%	4%
Depression, anxiety, eating disorder, or other emotional problem ^a	20%	34%
Diabetes	8%	5%
Down Syndrome	4%	6%
Epilepsy or other seizure disorder	24%	28%
Heart problem, including congenital heart disease	14%	14%
Mental retardation / developmental delay ^a	37%	50%
Migraine or frequent headaches	17%	17%
Muscular Dystrophy	9%	13%

^a Differences between children in the program and children on the waiting list were significant at $p < 0.05$.

Overall, children on the waiting list tended to have a higher prevalence of specified conditions and disorders than children in the CSHCN Services Program. Due to the chronic nature of these conditions, these differences are more likely the result of differing case-mix than the impact of program services on health outcomes.

CSHCN Services Program – Health-related quality of life

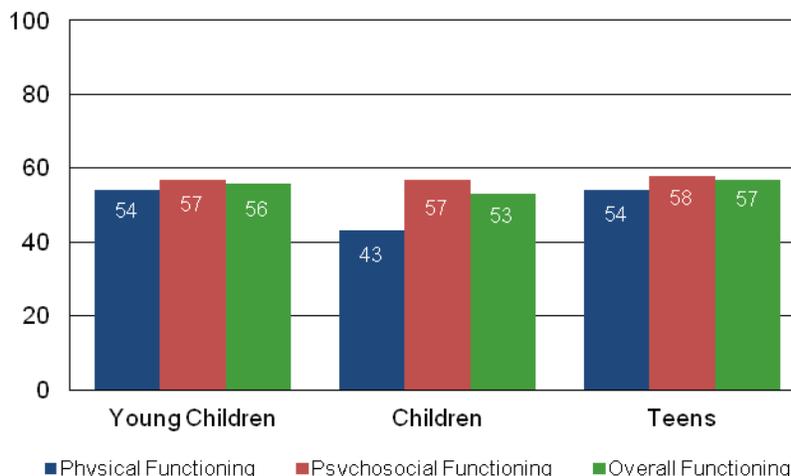
Figure 36. Health-Related Quality of Life (PedsQL™) Scores for Children and Adolescents in the CSHCN Services Program



Figures 36 and 37 present parental ratings of their child's quality of life for young children (ages 5 to 7), children (ages 8 to 12), and teenagers (ages 13 to 19), using the PedsQL™ survey tool.¹⁰⁴

Based on parent report, the highest area of functioning for children in the CSHCN Services Program was Psychosocial Functioning (61 to 64). This range of scores is similar to the mean Psychosocial Functioning score for children with chronic conditions in school-based samples (62.9).¹⁰⁵ Physical Functioning scores were the lowest area of functioning across all age groups, and were generally lower than the school-based mean for children with chronic conditions (66.4).¹⁰⁶

Figure 37. Health-Related Quality of Life (PedsQL™) Scores for Children and Adolescents on the CSHCN Services Program Waiting List



Parents of children on the waiting list for the CSHCN Services Program reported lower scores across all quality of life domains when compared to children enrolled in the CSHCN Services Program. In contrast to children in the program, the lowest area of functioning for children on the waiting list was Physical Functioning (43 to 54). This suggests that children on the waiting list may have more physical limitations than children enrolled in the program. While it is possible that these differences may be explained by improved quality of care for children enrolled in the program, this could not be determined from the survey alone. Furthermore, differences in parent-reported chronic conditions between children enrolled in the program and those on the waiting list (discussed above) may also explain the differences observed in HRQOL.

CSHCN Services Program – CAHPS® Composites

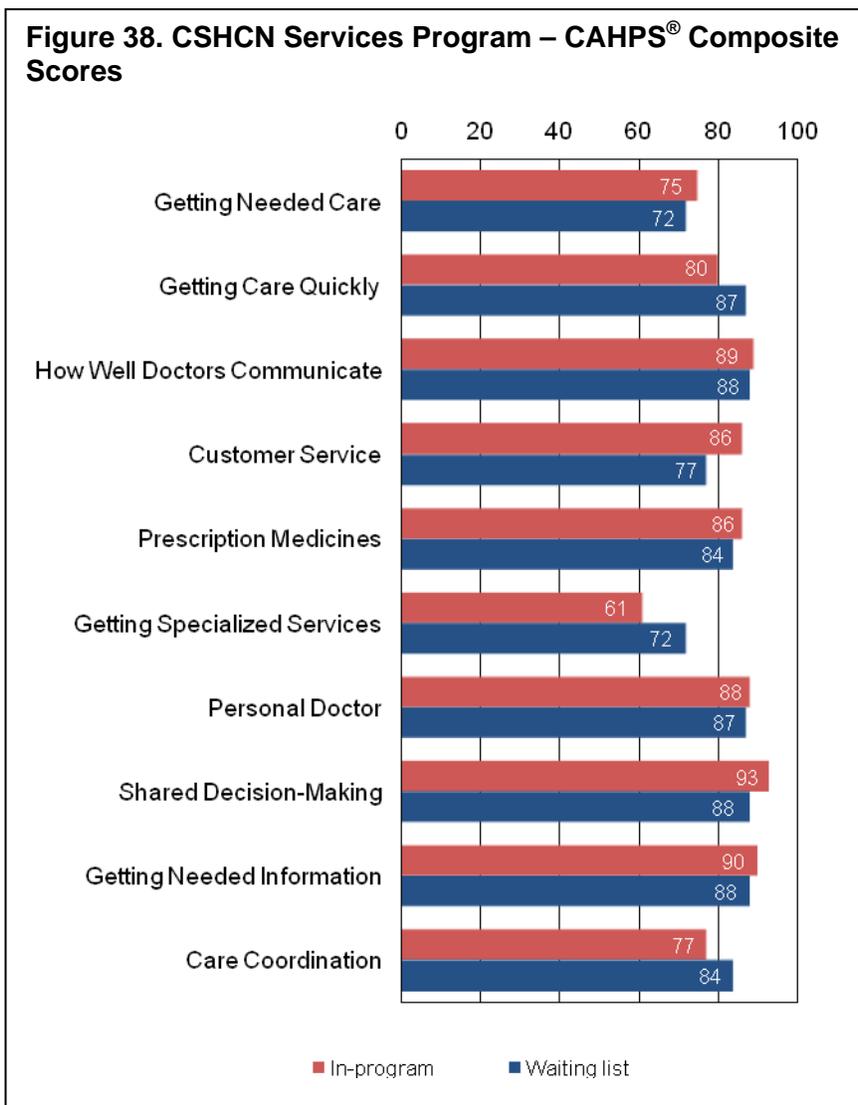


Figure 38 compares all 10 CAHPS® composite scores between children in the CSHCN Services Program and children on the program’s waiting list. No significant differences were observed between the two groups on any of the measures except for *Getting Specialized Services*. Children in the CSHCN Services Program scored lower (61 points) on *Getting Specialized Services* than children on the waiting list (72 points). This difference is largely explained by better access to special therapies for children on the waiting list.¹⁰⁷

However, it should be noted that scores for specialized services were low overall and neither group scored 75 points or higher.

Appendix A. Detailed Survey Methodology

Sample selection procedures

Survey participants were selected from stratified random samples of children enrolled in STAR, CHIP, and the CSHCN Services Program, and selected from simple random samples of children enrolled in PCCM and STAR Health. In order to be eligible for one of these surveys, children had to be enrolled in the corresponding Texas program for nine months or longer. Telephone surveys were conducted by the EQRO for the following programs and time periods:

- STAR – November 2008 to June 2009
- PCCM – November 2008 to June 2009
- STAR Health – December 2009 to February 2010
- CHIP – November 2009 to April 2010
- CSHCN Services Program – June 2010 to July 2010

For the STAR survey, the sample was stratified to include representation from the 23 MCO/SA groups participating in STAR during fiscal year 2009. For the CHIP survey, the sample was stratified to include representation from the 17 MCOs participating in CHIP during fiscal year 2010. The CSHCN Services Program survey sample was stratified to include children who were enrolled in the program at the time of the survey (“in-program”) and children who were on the program’s waiting list (“waiting list”). **Table A1** presents the stratification strategy by survey report, showing the survey quotas, the number of targeted interviews, and the number of completed interviews. Sample sizes for each survey report were established to: (1) provide a reasonable confidence interval for the survey responses; and (2) ensure there was a sufficient sample size to allow for comparisons among program members, health plans, or service areas.

To be eligible for inclusion, the child had to be enrolled in the respective program for at least 9 continuous months in the year prior to the survey (or a minimum of 6 continuous months for children in STAR Health), and had to be currently enrolled at the time of the survey. These criteria were chosen to ensure that the family had sufficient experience with the program to respond to the questions. Selected members must not have participated in the corresponding survey from the prior reporting year (fiscal year 2007 for STAR and PCCM, fiscal year 2008 for CHIP, and fiscal year 2009 for STAR Health). For the STAR, PCCM, and STAR Health surveys, sampled members must also have been 18 years of age or younger during the eligibility period. For the CSHCN Services Program survey, sampled members must have been 21 years of age or younger.

Table A1. Telephone Survey Samples

Program/Quota	Targeted Interviews	Completed Interviews
STAR (FY 2009)	6,900	6,909
Aetna – Bexar	300	301
Aetna – Tarrant	300	301
AMERIGROUP – Dallas	300	300
AMERIGROUP – Harris	300	300
AMERIGROUP – Nueces	300	300
AMERIGROUP – Tarrant	300	300
AMERIGROUP – Travis	300	300
Community First – Bexar	300	300
Community Health Choice – Harris	300	301
Cook Children’s – Tarrant	300	300
Driscoll – Nueces	300	301
El Paso First – El Paso	300	300
FirstCare – Lubbock	300	300
Molina – Harris	300	300
Parkland Community – Dallas	300	300
Superior – Bexar	300	301
Superior – El Paso	300	300
Superior – Lubbock	300	301
Superior – Nueces	300	301
Superior – Travis	300	301
Texas Children’s – Harris	300	300
UniCare – Dallas	300	300
UnitedHealthcare-Texas – Harris	300	301
PCCM (FY 2009)	400	400
STAR Health (FY 2010)	400	400

Table A1 (continued).

CHIP (FY 2010)	5,100	4,748
Aetna	300	300
AMERIGROUP	300	300
Community First	300	300
Community Health Choice	300	300
Cook Children's	300	300
Driscoll	300	300
El Paso First	300	300
FirstCare	300	300
Mercy	300	30
Molina	300	213
Parkland Community	300	300
Seton	300	300
Superior	300	301
Superior EPO	300	303
Texas Children's	300	300
UniCare	300	301
United Health Care	300	300
CSHCN Service Program (FY 2010)	400	402
In-program	300	302
Waiting list	100	100

Enrollment data for all survey reports were provided to ICHP from a third party administrator in Texas. These data were used to identify the enrollees who met the sample selection criteria and to obtain their contact information. Member names, mailing addresses, and telephone contact information for eligible program enrollees were collected and provided to interviewers. For households with multiple children enrolled in a Texas program, one child from the household was randomly chosen as the enrollee for whom the caregiver would respond to the survey. Member age, sex, and race/ethnicity were also collected for the enrollment data to allow for comparisons between respondents and non-respondents and identify any participation biases in the final sample.

Survey data collection

The EQRO sent letters written in English and Spanish to parents of sampled enrollees requesting their participation in the survey. **Tables A2** and **A3** provide data collection details and rates for each survey report. The EQRO uses The Survey Research Center (SRC) at the University of Florida to conduct all member surveys. The SRC uses computer-assisted telephone interviewing (CATI) to call parents of enrollees seven days a week between 10 a.m. and 9 p.m. Central Time. The Sawtooth Software System was used to rotate calls in the morning, afternoon and evening to maximize the likelihood of reaching potential survey respondents. If a respondent was unable to complete the interview in English, SRC rescheduled the interview at a later date and time with a Spanish-speaking interviewer. Up to 30 attempts were made to reach a family, and if the family was not reached after that time, the software selected the next individual on the list. No financial incentives were offered to participate in the surveys. The respondent was selected by asking to speak to the person in the household who was most knowledgeable about the child's health and health care. The respondent was also asked to confirm that the child was presently enrolled in the Texas program under evaluation.

For most survey items, parents had the option of stating they did not know the answer to a question. They also were given the choice to refuse to answer a particular question. If a respondent refused to answer an individual question or series of questions but completed the interview, their responses were used in the analyses. If the respondent ended the interview before all questions had been asked, her or his responses were not included in the analyses.

Table A2. Survey Data Collection Details

	Letters Sent	Letters Undeliverable	Parents Attempted to Contact	Average calls per Phone Number
STAR	28,220	121 (0.4%)	28,011	6.52
PCCM	1,700	2 (0.1%)	1,350	7.97
STAR Health	1,400	N/A	1,248	9.20
CHIP	21,036	17 (0.1%)	21,086	11.40
CSHCN Service Program	1,769	N/A	1,760	

Table A3. Survey Data Collection Rates

	Location Rate	Cooperation Rate	Response Rate	Refusal Rate
STAR	63%	70%	56%	17%
PCCM	63%	86%	71%	8%
STAR Health	74%	80%	59%	11%
CHIP	70%	72%	52%	13%
CSHCN Service Program	70%	79%	54%	9%

Appendix B. Survey Items Comprising the CAHPS[®] Composites

Getting Needed Care

- 1) How often was it easy to get appointments for your child with specialists?
- 2) How often was it easy to get the care, tests, or treatment you thought your child needed through his or her health plan?

Getting Care Quickly

- 1) When your child needed care right away for an illness, injury or condition, how often did you get care as soon as you needed?
- 2) Not counting the times your child needed care right away, how often did you get an appointment for health care as soon as you thought your child needed?

How Well Doctors Communicate

- 1) How often did your child's personal doctor explain things in a way that was easy to understand?
- 2) How often did your child's personal doctor listen carefully to you?
- 3) How often did your child's personal doctor show respect for you?
- 4) How often did your child's personal doctor explain things in a way that was easy for your child to understand?
- 5) How often did your child's personal doctor spend enough time with you?

Health Plan Information and Customer Service

- 1) How often did customer service at your child's health plan give you the information or help you needed?
- 2) How often did customer service staff at your child's health plan treat you with courtesy and respect?

Prescription Medicines

- 1) How often was it easy to get prescription medicines for your child through his or her health plan?

Getting Specialized Services

- 1) How often was it easy to get special medical equipment or devices for your child?
- 2) How often was it easy to get special therapy for your child?
- 3) How often was it easy to get behavioral health treatment or counseling for your child?

Personal Doctor

- 1) Did your child's personal doctor talk to you about how your child is feeling, growing, or behaving?
- 2) Does your child's personal doctor understand how these medical, behavioral, or other health conditions affect your child's day-to-day life?
- 3) Does your child's personal doctor understand how your child's medical, behavioral, or other health conditions affect your family's day-to-day life?

Shared Decision-Making

- 1) Did your child's doctor or other health provider talk with you about the pros and cons of each choice for your child's treatment or health care?
- 2) When there was more than one choice for your child's treatment or health care, did your child's doctor or other health provider ask you which choice was best for your child?

Getting Needed Information

- 1) How often did you have your questions answered by your child's doctors or other health care providers?

Care Coordination

- 1) Did anyone from your child's health plan, doctor's office, or clinic help coordinate your child's care among these different providers or services?
- 2) Did you get the help you needed from your child's doctors or other health providers in contacting your child's school or daycare?

Endnotes

- ¹ Data Resource Center for Child & Adolescent Health. National Survey of Children with Special Health Care Needs - 2005/2006. Available at <http://childhealthdata.org>.
- ² AHRQ (Agency for Healthcare Research and Quality). 2004. *AHRQ Quality Indicators – Guide to Prevention Quality Indicators: Hospital Admission for Ambulatory Care Sensitive Conditions*. Rockville, MD: AHRQ. Revision 4 (November 24, 2004). AHRQ Pub. No. 02-R0203.
- ³ Cloutier, M.M. and D.B. Wakefield. 2011. “Translation of a Pediatric Asthma-Management Program Into a Community in Connecticut.” *Pediatrics* 127(1): 11-18.
- ⁴ RWJF (Robert Wood Johnson Foundation). 2011. *Project ECHO: Transforming Specialty Health Care for Underserved Populations*. Available at: <http://www.rwjf.org/files/research/71905.pdf>.
- ⁵ AHRQ. 2011. *The CAHPS Improvement Guide – Rapid Referral Programs*. Available at: <https://www.cahps.ahrq.gov/QIGuide/content/interventions/RapidReferral.aspx>
- ⁶ McPherson, M., P. Arango, H. Fox, C. Lauver, M. McManus, P.Q. Newacheck, J.M. Perrin, J.P. Shonkoff, and B. Strickland. 1998. “A New Definition of Children With Special Health Care Needs.” *Pediatrics* 102(1): 137-140.
- ⁷ Data Resource Center for Child & Adolescent Health. National Survey of Children with Special Health Care Needs - 2005/2006. Available at <http://childhealthdata.org>.
- ⁸ Van Dyck, P.C., M.D. Kogan, M.G. McPherson, G.R. Weissman, and P.W. Newacheck. 2004. “Prevalence and Characteristics of Children With Special Health Care Needs.” *Archives of Pediatrics and Adolescent Medicine* 158: 884-890.
- ⁹ CAHPS[®] (Consumer Assessment of Healthcare Providers and Systems). 2011. “CAHPS Health Plan Survey 4.0, Child Medicaid Questionnaire.” Available at: <http://www.cahps.ahrq.gov/cahpskit/>.
- ¹⁰ NS-CSHCN (National Survey of Children with Special Health Care Needs). 2005/2006 “Data Resource Center for Child & Adolescent Health.” Available at: <http://cshcndata.org>.
- ¹¹ The CSHCN Services Program Survey was conducted in fiscal year 2010 on a one-time basis.
- ¹² Neff, J., V. Sharp, J. Muldoon, J. Graham, J. Popalisky, and J.C. Gay. 2002. “Identifying and Classifying Children with Chronic Conditions Using Administrative Data with the Clinical Risk Group Classification System.” *Ambulatory Pediatrics* 2(1): 71-79.
- ¹³ CAHMI (The Child and Adolescent Health Measurement Initiative). 2007. *Children with Special Health Care Needs Screener[®] – Fast Facts*. Available at: <http://childhealthdata.org/docs/cshcn/cshcn-screener-cahmi-quickguide-pdf.pdf>.
- ¹⁴ The information that NCQA compiles for Medicaid Managed Care programs can be viewed at www.ncqa.org. Submission of data to the NCQA is a voluntary process; therefore, health plans that

submit HEDIS[®] data are not fully representative of the industry. Health plans participating in NCQA HEDIS[®] reporting tend to be older, are more likely to be federally qualified, and are more likely to be affiliated with a national managed care company than the overall population of health plans in the United States. (See Beaulieu and Epstein, 2002.)

¹⁵ Beaulieu, N.D., and A.M. Epstein. 2002. "National Committee on Quality Assurance Health-Plan Accreditation: Predictors, Correlates of Performance, and Market Impact." *Medical Care* 40(4): 325-337.

¹⁶ The EQRO used PDI Version 4.2 specifications to calculate rates of ACSC-related inpatient admissions. Rates are based on the number of hospital discharges divided by the number of people in the area (except for perforated appendix).

¹⁷ AHRQ. 2004.

¹⁸ AHRQ. 2011. *AHRQ Quality Indicators – Pediatric Quality Indicator Comparative Data: Based on the 2008 Nationwide Inpatient Sample (NIS), Version 4.3*. Rockville, MD: AHRQ.

¹⁹ NCQA (National Committee for Quality Assurance). 2010. *HEDIS[®] 2010 Specifications for Survey Measures – Volume 3*. Washington, D.C.: NCQA.

²⁰ AHRQ. 2008. *Reporting Measures for the CAHPS[®] Health Plan Survey 4.0*. Available at: https://www.cahps.ahrq.gov/cahpskit/files/1108_HP40_Reporting_Measures_2008.pdf.

²¹ Varni, J.W. 2010. *The Pediatric Quality of Life Inventory (PedsQL[™])*. Available at: <http://www.pedsq.org/>.

²² While a reference group at the lowest range is preferred for these models, the EQRO used adolescents (the highest range) as the age category reference group because these members had greater representation across the programs. In CHIP, the 0- to 4-year old category was not sufficient enough in size to function as a comparison group, because many of the youngest members were receiving care through CHIP Perinate.

²³ The correlation of RUCA and RUCC codes ($r = 0.78$) was significant at $p < 0.001$. Because of the high correlation between the types of codes, the EQRO used the code type with the highest frequency of valid values in multivariate analyses. The RUCA codes had higher frequencies in the survey data, and were therefore used for analyses of survey-based measures. The RUCC codes had higher frequencies in the administrative data, and were therefore used for analyses of administrative measures.

²⁴ RHRC (Rural Health Research Center). 2011. *Rural Urban Commuting Area Codes Data*. Available at: <http://depts.washington.edu/uwruca/ruca-uses.php>.

²⁵ ERS/USDA (U.S. Department of Agriculture Economic Research Service). 2004. *ERS/USDA Briefing Room – Measuring Rurality: Rural-Urban Continuum Codes*. Available at: <http://www.ers.usda.gov/briefing/Rurality/RuralUrbCon/>.

²⁶ Preliminary ordinary least squares (OLS) regression models conducted on the utilization measures found low goodness-of-fit, and their results were therefore not reportable. The EQRO will conduct multivariate analyses of the AHRQ PDIs as part of its series of fiscal year 2011 Quarterly Topic Reports.

²⁷ Not shown in the table are the frequency and percentage of children whose CRG was unassigned. The percentage of unassigned children was fairly high in all programs, ranging from 20 percent in STAR Health, to 30 percent in PCCM, 34 percent in STAR, and 36 percent in CHIP.

²⁸ NCHS (National Center for Health Statistics). 2010. *National Survey of Adoptive Parents*. Available at: <http://www.cdc.gov/nchs/slaits/nsap.htm>. The NSAP is a nationally representative sample, and therefore includes children of all income levels and insurance status.

²⁹ Jee, S.H., R.P. Barth, M. A. Szilagyi, P.G. Szilagyi. 2006. "Factors Associated with Chronic Conditions Among Children in Foster Care." *Journal of Health Care for the Poor and Underserved*, 17(2): 328-341.

³⁰ Estimates for STAR, PCCM, and CHIP are weighted to the full set of eligible members from which the survey samples were pulled, adjusting for the probability of inclusion in the sample by MCO.

³¹ NS-CSHCN. 2005/2006.

³² Rates for trends are collected from prior EQRO reports on CSHCN in Texas Medicaid and CHIP, which in fiscal year 2008 focused on STAR and CHIP. Trends are not shown for PCCM or STAR Health because neither program had all three years of data. PCCM was added to the CSHCN reports in fiscal year 2009, and STAR Health has not been included before.

³³ AAFP (American Academy of Family Physicians), AAP (American Academy of Pediatrics), ACP (American College of Physicians), and AOA (American Osteopathic Association). 2007. *Joint Principles of the Patient-Centered Medical Home*. Available at: <http://www.medicalhomeinfo.org/downloads/pdfs/JointStatement.pdf>.

³⁴ The y-axis for both figures has been adjusted (minimum 80 percent) to allow a clearer representation of trends.

³⁵ Children in CHIP were not included in the analysis due to low sample size in this age group.

³⁶ Children in STAR Health were not included in the analysis because this program did not have two years of claims data.

³⁷ Children in STAR Health were not included in the analysis because this program did not have two years of claims data.

³⁸ Number of CSHCN in CAP analysis: 12 to 24 months (n = 14,569), 25 months to 6 years (n = 72,456), 7 to 11 years (n = 41,635), and 12 to 19 years (n = 46,193).

³⁹ Tom, J.O., C-W. Tseng, J. Davis, C. Solomon, C. Zhou, and R. Mangione-Smith. 2010. "Missed Well-Child Care Visits, Low Continuity of Care, and Risk of Ambulatory-Care Sensitive Hospitalizations for Young Children." *Archives of Pediatrics and Adolescent Medicine*, 164(11): 1052-1058.

⁴⁰ For *Well-Child Visits in the First 15 Months of Life*, the number of observations was 69 in CHIP, and 366 in STAR Health.

⁴¹ The y-axis has been adjusted (minimum 40 percent) to allow a clearer representation of trends.

⁴² Elster, A.B. and N.J. Kuznets. 1994. *AMA Guidelines for Adolescent Preventive Services (GAPS): Recommendations and rationale*. Philadelphia, PA: Williams and Wilkens.

⁴³ Van Cleave, J. and M.M. Davis. 2008. "Preventive Care Utilization Among Children With and Without Special Health Care Needs: Associations With Unmet Need." *Ambulatory Pediatrics* 8(5): 305-311.

⁴⁴ HEDIS[®] Inpatient Utilization rates are calculated for the < 1 year, 1-9 year, and 10-19 year age groups combined.

⁴⁵ Statistical tests of differences in Inpatient Utilization rates were conducted using the member-level administrative dataset. The rates tested are per member, rather than per member-month. Tests for differences among the programs were significant for Medical Discharges (F = 867.19, p < 0.001) and Surgical Discharges (F = 366.77, p < 0.001).

⁴⁶ Statistical tests of differences in Inpatient Utilization rates were conducted using the member-level administrative dataset. The rates tested are per member, rather than per member-month. Tests for differences among CRGs were significant for Medical Discharges (F = 2294.53, p < 0.001) and Surgical Discharges (F = 844.80, p < 0.001).

⁴⁷ The 2010 HEDIS[®] national means for Inpatient Utilization are broken down into three age groups for children: < 1 year, 1-9 years, and 10-19 years. This report provides the range of the three means for comparison.

⁴⁸ Statistical tests of differences in Inpatient Utilization rates were conducted using the member-level administrative dataset. The rates tested are per member, rather than per member-month. Tests for differences among the programs were significant for Medical Days (F = 360.16, p < 0.001) and Surgical Days (107.78, p < 0.001).

⁴⁹ Statistical tests of differences in Inpatient Utilization rates were conducted using the member-level administrative dataset. The rates tested are per member, rather than per member-month. Tests for differences among CRGs were significant for Medical Days (F = 3018.12, p < 0.001) and Surgical Days (F = 738.17, p < 0.001).

⁵⁰ The 2010 HEDIS[®] national means for Inpatient Utilization are broken down into three age groups for children: < 1 year, 1-9 years, and 10-19 years. This report provides the range of the three means for comparison.

⁵¹ Statistical tests of differences in Ambulatory Care rates were conducted using the member-level administrative dataset. The rates tested are per member, rather than per member-month. Tests for differences among the programs were significant for Outpatient Visits (F = 16049.20, p < 0.001) and ED Visits (F = 8409.21, p < 0.001).

⁵² Statistical tests of differences in Ambulatory Care rates were conducted using the member-level administrative dataset. The rates tested are per member, rather than per member-month. Tests for differences among CRGs were significant for Outpatient Visits (F = 73430.70, p < 0.001) and ED Visits (F = 16432.00, p < 0.001).

⁵³ The 2010 HEDIS® national means for Ambulatory Care are broken down into three age groups for children: < 1 year, 1-9 years, and 10-19 years. This report provides the range of the three means for comparison.

⁵⁴ The 19 to 21 year age group is under-represented in these analyses because most CHIP and STAR Health members in this category would have aged out of the program.

⁵⁵ The 2010 HEDIS® national means for Outpatient Drug Utilization are broken down into two age groups for children: 0-9 years, and 10-17 years. This report provides the range of the two means for comparison.

⁵⁶ The 2010 HEDIS® national means for Outpatient Drug Utilization are broken down into two age groups for children: 0-9 years, and 10-17 years. This report provides the range of the two means for comparison.

⁵⁷ Statistical tests of differences in Outpatient Drug Utilization rates were conducted using the member-level administrative dataset. The rates tested are per member, rather than per member-month or member-year. Tests for differences among the programs were significant for Number of Prescriptions (F = 30791.60, p < 0.001) and Cost of Prescriptions (F = 1026.83, p < 0.001).

⁵⁸ Statistical tests of differences in Outpatient Drug Utilization rates were conducted using the member-level administrative dataset. The rates tested are per member, rather than per member-month or member-year. Tests for differences among CRGs were significant for Number of Prescriptions (F = 108761.00, p < 0.001) and Cost of Prescriptions (F = 3573.53, p < 0.001).

⁵⁹ To calculate the ratio of annual prescription costs to number of prescriptions, rates of prescription costs per member-month were first multiplied by 12.

⁶⁰ All means shown in the table are unweighted, to permit statistical comparisons between CSHCN and non-CSHCN. In these analyses CSHCN status was determined using CRG classification; therefore, mean scores shown here differ from those presented in the original survey reports, which used the CSHCN Screener®.

⁶¹ T-test = 3.58, p < 0.001

⁶² T-test = -2.36, p = 0.02

⁶³ While this difference was statistically significant (chi-square = 10.85, p = 0.013), caution in interpretation is warranted due to the small sample size of PCCM parents responding to this question (n = 65).

⁶⁴ T-test = 3.152, p = 0.002

⁶⁵ *Getting Care Quickly* – T-test = 4.55, p < 0.001; *Getting Specialized Services* – T-test = 2.71, p = 0.007; *Care Coordination* – T-test = 2.30, p = 0.003.

⁶⁶ Chi-square = 6.89, p = 0.009

⁶⁷ Chi-square = 15.19, p < 0.001.

⁶⁸ In PCCM, 75 percent of parents of CSHCN said they “usually” or “always” got the information or help they needed from customer service, compared to 67 percent of non-CSHCN. In STAR Health, 78 percent of parents of CSHCN said they “usually” or “always” got this information, compared to 68 percent among parents of non-CSHCN.

⁶⁹ Chi-square = 13.21, $p < 0.001$.

⁷⁰ In STAR, the percentage of parents who said it was “usually” or “always” easy to get treatment or counseling for their child was 71 percent among parents of CSHCN, and 51 percent among parents of non-CSHCN (chi-square = 23.22, $p < 0.001$).

⁷¹ Chi-square = 6.81, $p = 0.009$.

⁷² In CHIP, the percentage of parents who said it was “usually” or “always” easy to get treatment or counseling for their child was 73 percent among parents of CSHCN, and 53 percent among parents of non-CSHCN (chi-square = 13.66, $p = 0.003$).

⁷³ Chi-square = 4.30, $p = 0.038$.

⁷⁴ The percentage of parents in PCCM who said it was “usually” or “always” easy to get special therapy for their child was 58 percent among parents of CHSCN, and 93 percent among parents of non-CSHCN (chi-square = 10.69, $p = 0.014$).

⁷⁵ Chi-square = 3.90, $p = 0.048$.

⁷⁶ Chi-square = 8.42, $p = 0.004$

⁷⁷ The percentage of parents of CSHCN who said their child’s doctor or other health provider talked with them about the pros and cons of choices for their child’s health care was 99 percent, compared to 90 percent among parents of non-CSHCN (chi-square = 6.09, $p = 0.014$). The percentage of parents of CSHCN who said their child’s doctor or other health provider asked them which choice they thought was best for their child was 95 percent, compared to 83 percent among parents of non-CSHCN (chi-square = 5.13, $p = 0.024$).

⁷⁸ The percentage of parents of CSHCN who said they “usually” or “always” got the care coordination they needed from their child’s health plan, doctor’s office, or clinic was 46 percent, compared to 36 percent among parents of non-CSHCN.

⁷⁹ CDC (Centers for Disease Control and Prevention). 2011. *Health-Related Quality of Life (HRQOL) – HRQOL Concepts*. Available at: <http://www.cdc.gov/hrqol/concept.htm>.

⁸⁰ Varni, J.W. 2010

⁸¹ Varni, J.W., T. M. Burwinkle, and M. Seid. 2006. “The PedsQL™ 4.0 as a School Population Health Measure: Feasibility, Reliability, and Validity.” *Quality of Life Research* 15: 203-215.

⁸² Huang, I-C., L.A. Thompson, Y-Y. Chi, C.A. Knapp, D.A. Revicki, M. Seid, and E.A. Shenkman. 2011. “The Linkage between Pediatric Quality of Life and Health Conditions: Establishing Clinically Meaningful Cutoff Scores for the PedsQL.” *Value in Health* 12(5): 773-781.

⁸³ Physical functioning: $F = 18.66$, $p < 0.001$; Psychosocial health: $F = 12.23$, $p = 0.001$; Total summary score: $F = 10.00$, $p = 0.002$.

⁸⁴ Physical functioning: $F = 4.69$, $p = 0.034$; Total summary score: $F = 4.64$, $p = 0.036$.

⁸⁵ Physical functioning: $F = 4.47$, $p = 0.038$; Psychosocial health: $F = 12.51$, $p = 0.001$; Total summary score: $F = 10.70$, $p = 0.002$.

⁸⁶ $F = 5.58$, $p = 0.02$.

⁸⁷ Varni, J. W., et al.. 2006.

⁸⁸ Huang, I-C. et al. 2011.

⁸⁹ Physical functioning: $F = 8.00$, $p = 0.005$; Psychosocial health: $F = 10.73$, $p = 0.001$; Total summary score: $F = 11.78$, $p = 0.001$.

⁹⁰ Physical functioning: $F = 49.47$, $p < 0.001$; Psychosocial health: $F = 63.89$, $p < 0.001$; Total summary score: $F = 73.80$, $p < 0.001$.

⁹¹ Physical functioning: $F = 58.87$, $p < 0.001$; Psychosocial health: $F = 73.67$, $p < 0.001$; Total summary score: $F = 90.17$, $p < 0.001$.

⁹² Lotstein, D.S., M. Inkelas, R.D. Hays, N. Halfon, and R. Brook. 2008. "Access to Care for Youth with Special Health Care Needs in the Transition to Adulthood." *Journal of Adolescent Health* 43: 23-29.

⁹³ Chi-square = 16.38, $p = 0.001$.

⁹⁴ Chi-square = 18.39, $p < 0.001$.

⁹⁵ Chi-square = 24.32, $p < 0.001$.

⁹⁶ Chi-square = 13.26, $p = 0.004$.

⁹⁷ DSHS (Texas Department of State Health Services).2011. *CSHCN Services Program: Health Benefits*. Available at: <http://www.dshs.state.tx.us/CSHCN/benefits.shtm>

⁹⁸ T-test = 4.13, $p < 0.001$

⁹⁹ Chi-square = 10.44, $p = 0.015$.

¹⁰⁰ Chi-square = 6.20, $p = 0.013$.

¹⁰¹ Chi-square = 5.54, $p = 0.019$.

¹⁰² Chi-square = 7.64, $p = 0.006$.

¹⁰³ Chi-square = 5.10, $p = 0.024$.

¹⁰⁴ The toddler age group (age 2 to 4) is not represented in these figures because the sample size for this age group was too low (Physical Functioning, $n = 27$; Psychosocial Functioning, $n = 11$; Total Summary Score, $n = 9$).

¹⁰⁵ Varni, J.W., et al. 2006.

¹⁰⁶ Varni, J.W., et al. 2006.

¹⁰⁷ The percentage of parents who said it was “usually” or “always” easy to get special therapies for their child was 60 percent for parents of children in the CSHCN Services Program and 82 percent for parents of children on the program’s waiting list (chi-square = 7.73, $p = 0.005$).