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## SECURING A HEALTHY FUTURE

The Commonwealth Fund  
State Scorecard on Child Health  
System Performance, 2011



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Sabrina K. H. How, Ashley-Kay Fryer, Douglas McCarthy,  
Cathy Schoen, and Edward L. Schor

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# The Commonwealth Fund State Scorecard on Child Health System Performance, 2011

Sabrina K. H. How, Ashley-Kay Fryer, Douglas McCarthy,  
Cathy Schoen, and Edward L. Schor

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### ABSTRACT

The State Scorecard on Child Health System Performance, 2011, examines states' performance on 20 key indicators of children's health care access, affordability of care, prevention and treatment, the potential to lead healthy lives, and health system equity. The analysis finds wide variation in performance across states. If all states achieved benchmark performance levels, 5 million more children would be insured, 10 million more would receive at least one medical and dental preventive care visit annually, and nearly 9 million more would have a medical home. The findings demonstrate that federal and state policy actions maintained and, in some cases, expanded children's insurance coverage during the recent recession, even as many parents lost coverage. The report also highlights the need for initiatives specifically focused on improving health system performance for children. The report includes state-by-state insurance coverage projections for children once relevant provisions of the Affordable Health Act are implemented.



## **CONTENTS**

5	List of Exhibits
6	About the Authors
7	Acknowledgments
9	Executive Summary
14	Highlight: Iowa
20	Introduction
21	What the <i>Scorecard</i> Measures
22	Access and Affordability
25	Highlight: Alabama
31	Prevention and Treatment
34	Highlight: Colorado
36	Highlight: North Carolina
38	Highlight: Massachusetts
40	Highlight: Cincinnati, Ohio
41	Children’s Potential to Lead Healthy Lives
44	Highlight: Minnesota
47	Equity
54	Impact of Improved Performance
55	Policy Implications: Moving Forward to Improve Children’s Health, Access, and Care Experiences and Address Costs Concerns
58	Highlight: Oregon
60	Conclusion
62	Notes
67	Appendices
88	Further Reading



## **LIST OF EXHIBITS**

- EXHIBIT 1 Indicators of State Child Health System Performance
- EXHIBIT 2 State Scorecard Summary of Child Health System Performance Across Dimensions
- EXHIBIT 3 State Ranking on Child Health System Performance

### **Access and Affordability**

- EXHIBIT 4 State Ranking on Access and Affordability Dimension
- EXHIBIT 5 Percent of Children Ages 0–18 Uninsured by State
- EXHIBIT 6 Percent of Parents Ages 19–64 Uninsured by State
- EXHIBIT 7 Uninsured Rates and Medicaid/CHIP Income Eligibility Standards by State
- EXHIBIT 8 Affordability of Health Insurance: Premiums for Employer-Based Family Coverage Relative to Median Incomes for Family Households Under Age 65
- EXHIBIT 9 State Ranking on Access and Affordability Dimension vs. Prevention and Treatment Dimension

### **Prevention and Treatment**

- EXHIBIT 10 State Ranking on Prevention and Treatment Dimension
- EXHIBIT 11 State Variation: Medical Home and Preventive Care
- EXHIBIT 12 State Initiatives to Advance Medical Homes in Medicaid/CHIP
- EXHIBIT 13 State Rates of Hospital Admissions for Asthma Among Children, 2006

### **Healthy Lives**

- EXHIBIT 14 State Ranking on Potential to Lead Healthy Lives Dimension
- EXHIBIT 15 Infant Mortality by State Deaths per 1,000 Live Births, 2006
- EXHIBIT 16 State Rates on Infant Mortality and Low-Birthweight Babies
- EXHIBIT 17 State Variation: Healthy Lives

### **Equity**

- EXHIBIT 18 Equity Dimension and Equity Type Ranking
- EXHIBIT 19 Children Without a Medical Home by Income and Insurance
- EXHIBIT 20 Children Without Both Preventive Medical and Dental Care Visits by Income and Insurance
- EXHIBIT 21 Children with Oral Health Problems by Income and Insurance

### **Impact of Improved Performance**

- EXHIBIT 22 National Cumulative Impact if All States Achieved Top State Rate

### **Policy Implications**

- EXHIBIT 23 Post-Reform: Percent of Children Ages 0–18 Uninsured by State
- EXHIBIT 24 Post-Reform: Percent of Parents Ages 19–64 Uninsured by State

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and programs that will lead to higher health system performance, especially for low-income populations, emphasizing the integration of services to achieve better coordination of care and efficiency. He previously directed the Fund's Child Development and Preventive Care program. He is a pediatrician and has held a number of positions in pediatric practice, academic pediatrics, health services research, and public health. Prior to joining The Commonwealth Fund he was medical director for Family and Community Health in the Iowa Department of Public Health.

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## EXECUTIVE SUMMARY

A child's health, ability to participate fully in school, and capacity to lead a productive, healthy life depend on access to preventive and effective health care—starting well before birth and continuing throughout early childhood and adolescence. Since healthy children are key to the well-being and economic prosperity of families and society, investing in child health has long been a high priority for federal and state policy. This *State Scorecard on Child Health System Performance, 2011*, finds that federal action to extend insurance to children has made a critical difference in reducing the number of uninsured children across states and maintaining children's coverage during the recent recession. However, the report also finds that where children live and their parent's incomes significantly affect their access to affordable care, receipt of preventive care and treatment, and opportunities to survive past infancy and thrive. Better and more equitable results will require improving the quality of children's health care across the continuum of their needs as well as holding health care systems accountable for preventing health problems and promoting health, not just caring for children when they are sick or injured.

The *Scorecard's* findings on children's health insurance attest to the pivotal role of federal and state partnerships. Until the start of this decade, the number of uninsured children had been rising rapidly as the levels of employer-sponsored family coverage eroded for low- and middle-income families. This trend was reversed across the nation as a result of state-initiated Medicaid expansions and enactment and renewal of the Children's Health Insurance Program (CHIP). Currently, Medicaid, CHIP, and other public programs fund

health care for more than one-third of all children nationally. Children's coverage has expanded in 35 states since the start of the last decade and held steady even in the middle of a severe recession. At the same time, coverage for parents—lacking similar protection—deteriorated in 41 states.

With the goal of identifying opportunities to improve, this *Scorecard* examines state performance on 20 key health system indicators for children clustered into three dimensions: access and affordability, prevention and treatment, and potential to lead healthy lives. It also examines state performance by family income, insurance status, and race/ethnicity to assess the equity of the child health care system—the fourth dimension of performance. The analysis ranks states and the District of Columbia on each indicator and the four dimensions. The analysis finds wide variation in system performance, with often a two- to threefold difference across states, as illustrated in Exhibit 1.

Benchmark levels set by leading states show there are abundant opportunities to improve health system performance to benefit children. If all states achieved top levels on each dimension of performance, 5 million more children would be insured and 10 million more children would receive at least one medical and dental preventive care visit per year. About six hundred thousand more children ages 19 to 35 months would be up to date on all recommended doses of six key vaccines, and 370,000 fewer children with special health care needs would have problems getting referrals to specialty care services. Likewise, nearly 9 million additional children would have a medical home to help coordinate their care.

The 14 states in the top quartile of the overall performance ranking—Iowa, Massachusetts, Vermont,

**Indicators of State Child Health System Performance**

Dimension and indicator	Year	All states median	Range of performance (Bottom state rate—Top state rate)	Best state
<b>Access &amp; Affordability</b>				
1 Children ages 0–18 insured	2008–09	91.4	82.0–96.7	MA
2 Parents ages 19–64 insured	2008–09	83.7	65.5–95.6	MA
3 Currently insured children whose health insurance coverage is adequate to meet needs	2007	77.0	68.7–83.8	HI
4 Average total premium for employer-based family coverage as percent of median income for family household (all members under age 65)	2009	18.6	24.9–13.9	CT
<b>Prevention &amp; Treatment</b>				
5 Children with a medical home	2007	60.7	45.4–69.3	NH
6 Young children (ages 19–35 months) received all recommended doses of six key vaccines	2009	74.4	64.6–84.1	IA
7 Children with a preventive medical care visit in the past year	2007	87.8	76.7–97.7	RI
8 Children ages 1–17 with a preventive dental care visit in the past year	2007	79.1	68.5–86.9	HI
9 Children ages 2–17 needing mental health treatment/ counseling who received mental health care in the past year	2007	63.0	41.7–81.5	PA
10 Young children (ages 10 months–5 years) received standardized developmental screening during visit	2007	18.8	10.7–47.0	NC
11 Hospital admissions for pediatric asthma per 100,000 children ages 2–17	2006	128.7	251.0–44.1	OR
12 Children with special health care needs who had no problems receiving referrals when needed	2005–06	80.3	70.3–89.8	RI
13 Children with special health care needs whose families received all needed family support services	2005–06	72.8	56.7–83.0	IN
<b>Potential to Lead Healthy Lives</b>				
14 Infant mortality, deaths per 1,000 live births	2006	6.8	11.9–4.7	WA
15 Child mortality, deaths per 100,000 children ages 1–14	2007	20.0	34.0–9.0	RI
16 Young children (ages 4 months–5 years) at moderate/ high risk for developmental or behavioral delays	2007	25.8	35.2–18.6	ME & MN
17 Children ages 10–17 who are overweight or obese	2007	30.6	44.4–23.1	MN & UT
18 Children ages 1–17 with oral health problems	2007	25.8	31.6–20.0	MN
19 High school students who currently smoked cigarettes	2009	18.3	26.1–8.5	UT
20 High school students not meeting recommended physical activity level	2009	56.0	66.7–46.4	ID

Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

Maine, New Hampshire, Rhode Island, Hawaii, Minnesota, Connecticut, North Dakota, Pennsylvania, Wisconsin, Kansas, and Washington—often perform well on multiple indicators and across dimensions (Exhibit 2). At the same time, the *Scorecard* finds that even the leading states have opportunities to improve: no state ranks in the top half of the performance distribution on all indicators. At the other end of the spectrum, states in the bottom quartile generally lag in multiple areas, with worse access to care, lower rates of recommended prevention and treatment, poorer health outcomes, and wide disparities related to income, race/ethnicity, and insurance status.

Throughout, the findings underscore the importance of policy action to sustain children's access to care in the midst of rising health care costs and financial stress on families. Access to care must be coupled with statewide initiatives and community efforts to improve health care system performance for children.

The *State Scorecard on Child Health System Performance, 2011*, finds that some states do markedly better than others in promoting the health and development of their youngest residents, and in ensuring that all children are on course to lead healthy and productive lives. As states, clinicians, and hospitals prepare to implement health reforms, the *Scorecard* provides a framework to take stock of where they stand today and what they could gain by reaching and raising benchmark performance levels.

The findings reveal crucial areas in which comprehensive federal, state, and community

policies are needed to improve child health system performance for all families. States that invest in children's health reap the benefits of having children who are able to learn in school and become healthy, productive adults. Other states can learn from models of high performance to shape policies that ensure all children are given the opportunity to lead long, healthy lives and realize their potential.

Greater investment in measurement and data collection at the state level could enrich understanding of variations in child health system performance. For many dimensions, only a limited set of indicators is available. Moreover, there is often a time lag in the availability of data. National surveys of children's health care are conducted at three-year intervals, for example. Hence, a large number of indicators discussed in this *Scorecard* date from 2007. The indicators of child health care quality presented here are also largely parent-reported. The collection of more robust clinical data on children's health care quality is integral to future state and federal child health policy reform and could modify the state rankings provided in this report. The CHIP program reauthorization has begun to lead the way by creating a set of standardized quality measures for use by CHIP, Medicaid, and health plans. The availability of core measures and information on community-level variation will enable states to learn from innovative models. Work under way in many states as well as efforts supported by CHIP and the Affordable Care Act should lay a foundation for public and private action.

**State Scorecard Summary of Child Health System Performance Across Dimensions**

**State Rank**  
 □ Top Quartile  
 □ Second Quartile  
 □ Third Quartile  
 ■ Bottom Quartile

RANK	STATE	Access & Affordability	Prevention & Treatment	Potential to Lead Healthy Lives	Equity
1	Iowa	6	1	2	7
1	Massachusetts	1	4	7	4
3	Vermont	9	8	3	2
4	Maine	7	5	10	1
5	New Hampshire	2	2	13	11
6	Rhode Island	9	2	14	14
7	Hawaii	3	12	23	3
8	Minnesota	18	11	1	12
9	Connecticut	8	26	6	6
10	North Dakota	16	23	11	17
10	Pennsylvania	11	17	24	15
12	Wisconsin	21	14	8	25
13	Kansas	19	6	20	26
13	Washington	12	26	12	21
15	Michigan	14	29	21	9
16	Nebraska	22	16	14	23
17	West Virginia	24	10	39	5
18	Maryland	4	18	26	34
19	Ohio	14	8	36	27
20	Colorado	28	28	4	27
21	Missouri	26	19	30	13
21	New York	27	34	17	10
23	Utah	17	25	5	42
24	Virginia	4	34	25	27
25	Indiana	31	15	33	22
26	Tennessee	32	7	44	19
27	South Dakota	25	13	33	35
28	Illinois	33	22	31	32
29	New Jersey	23	41	16	39
30	Alaska	34	38	40	8
31	Delaware	13	33	32	45
32	North Carolina	35	20	28	43
33	South Carolina	44	23	45	15
34	Montana	42	49	17	20
35	Wyoming	36	31	22	41
36	Kentucky	40	30	46	17
37	Alabama	29	32	48	27
38	Oregon	39	46	9	47
39	District of Columbia	20	39	51	33
40	Louisiana	43	21	47	37
41	Idaho	38	50	17	44
42	Arkansas	41	37	49	23
43	Georgia	29	34	42	46
44	California	44	42	27	39
45	Oklahoma	36	47	41	31
46	New Mexico	46	40	37	35
47	Florida	49	44	35	38
48	Texas	50	48	29	50
49	Arizona	47	45	38	49
50	Mississippi	51	43	50	48
51	Nevada	48	51	43	51

Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

## Highlights

**Children's health insurance coverage has expanded in many states, while parents' coverage has eroded. Yet the number of uninsured children continues to vary widely across states.**

Currently 10 percent of children are uninsured nationally, and the uninsured rate for children exceeds 16 percent in three states. In contrast, 19 percent of parents are uninsured nationally, and there are nine states in which 23 percent or more of parents are uninsured. The difference between children's and parents' coverage rates reflects federal action taken early in the last decade to insure children, as well as continued federal support for children's coverage. There is no national standard for coverage of parents, however poor. Still, the percent of uninsured children continues to vary widely across states, ranging from a low of 3 percent in Massachusetts to a high of 17 percent to 18 percent in Nevada, Florida, and Texas. The range underscores the importance of state as well as federal action to ensure access and continuity of care.

The passage of the Affordable Care Act will—for the first time—provide health insurance to all low- and middle-income families. To achieve this, the law will expand Medicaid to low-income parents as well as childless adults with incomes up to 133 percent of the federal poverty level, beginning in 2014. This represents a substantial change in Medicaid's coverage of adults. The law will also assist families with low and moderate incomes to purchase coverage through insurance exchanges and tax credits. These policies will directly benefit children as families gain financial security, and parents' health improves.

**Across states, the extent to which children have access to care is closely related to their receipt of preventive care and treatment. Yet insurance does not guarantee receipt of recommended care or positive health outcomes.**

Seven of the 13 leading states in the access and affordability dimension also rank among the top quartile of states in terms of prevention and treatment. Children in states with the lowest uninsured rates are more likely to have a medical home and receive preventive care or referrals to needed care than children in states with the highest uninsured rates. While insurance matters, good care and outcomes are also a function of a well-functioning health care delivery system. Securing coverage and access to affordable care for families is only a first step to ensure that children obtain essential care that is well coordinated and patient-centered.

**Children's access to care, health care quality, and health outcomes vary widely across states.**

The *Scorecard* findings show that where a child lives has an impact on his or her potential to lead a healthy life into adulthood. States vary widely in their provision of children's health care that is effective, coordinated, and equitable. This variability extends to states' ability to ensure opportunities for children to achieve optimal health.

There is a twofold or greater spread between the best and worst states across important indicators of access and affordability, prevention and treatment, and potential to lead healthy lives (Exhibit 1). The performance gaps are particularly wide on indicators assessing developmental screening rates, provision of mental health care, hospitalizations because of asthma, prevalence of teen smoking, and mortality rates among infants and children. Lagging states would need to improve their

performance by 60 percent on average to achieve benchmarks set by leading states.

If all states were to improve their performance to levels achieved by the best states, the cumulative effect would translate to thousands of children's lives saved because of more accessible and improved delivery of high-quality care. In fact, improving performance to benchmark levels across the nation would mean: 5 million more children would have health insurance coverage, nearly 9 million children would have a medical home to help coordinate care, and some 600,000 more

children would receive recommended vaccines by the age of 3 years.

**Leading states—those in the top quartile—often do well on multiple indicators across dimensions of performance; public policies and state/local health systems make a difference.**

The 14 states at the top quartile of the overall performance rankings generally ranked high on multiple indicators and dimensions (Exhibit 2). In fact, the five top-ranked states—Iowa, Massachusetts, Vermont, Maine, and New Hampshire—

### **IOWA'S COMPREHENSIVE PUBLIC POLICIES MAKE A DIFFERENCE FOR CHILDREN'S HEALTH**

Iowa, tied in first place with Massachusetts in terms of overall children's health system performance, has had a long-standing commitment to children. In the past decade, the state paid particular attention to the needs of its youngest residents, from birth to age 5. After piloting a variety of programs in the early 1990s to identify and serve at-risk children and families, the Iowa legislature established a statewide initiative to fund "local empowerment areas" across the state. The partnerships among clinicians, parents, child care representatives, and educators seek to ensure children receive needed preventive care.

State leaders have focused on child health outcomes by promoting the federal Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program. In 1993, an EPSDT Interagency Collaborative was formed with a fourfold purpose: to increase the number of Iowa children enrolled in EPSDT; to increase the percentage of children who receive well-child screenings; to ensure effective linkages to diagnostic and treatment services; and to promote the overall quality of services delivered through EPSDT. As a result of these efforts, the statewide rate of well-child screenings rose from 9 percent to 95 percent in just over five years.

Iowa has also been making strides in providing high-quality mental health care for children. Its 1st Five Healthy Mental Development Initiative focuses on a child's first five years. The state-led initiative helps private providers to develop a sound structure for assessing young children's social and developmental skills. Under the 1st Five system, a primary care provider screens children and their caregivers when they come in for a visit; if a concern is identified, the provider

notifies the 1st Five Child Health Center. The center's care coordinator then contacts the family to link them to appropriate services in the community or help coordinate referrals.

Iowa also has expansive policies in place to ensure children have health care coverage. The State Children's Health Insurance Program covers all children under age 19 in families with income levels up to 133 percent of the federal poverty level (FPL). Children ages 6–18 whose family income is between 100 percent and 133 percent of FPL and infants whose family income is between 185 percent and 300 percent of FPL are covered through an expansion of Medicaid. Meanwhile, children in families with income from 133 percent to 300 percent of FPL are covered through private insurance, in a program known as Healthy and Well Kids in Iowa (hawk-i). Iowa contracts with private health plans to provide covered services to children enrolled in the hawk-i program, with little or no cost-sharing for families. Recently, in the spring of 2010, hawk-i implemented a dental-only plan.

Iowa's innovative policies and public-private partnerships to improve children's health care serve as evidence-based models that other states can follow to move toward a higher-performing child health system.

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For more information see N. Kaye, J. May, and M. K. Abrams, *State Policy Options to Improve Delivery of Child Development Services: Strategies from the Eight ABCD States* (Portland, Maine, and New York: National Academy for State Health Policy and The Commonwealth Fund, Dec. 2006); and S. Silow-Carroll, *Iowa's 1st Five Initiative: Improving Early Childhood Developmental Services Through Public-Private Partnerships*, (New York: The Commonwealth Fund, Sept. 2008).



performed in the top quartile on each of the four dimensions of performance. Many have been leaders in improving their health systems by taking steps to cover children or families, promote public health, and improve care delivery systems (See box on Iowa).

In contrast, states at the bottom quartile of overall child health system performance lagged well behind the leaders on multiple indicators of performance. These states had rates of uninsured children and parents that were, on average, more than double those in the top quartile of states. Reflecting the strong association between access to care and the quality and continuity of care, children in the lowest-quartile states were among the least likely to receive routine preventive care visits or mental health services when needed, or to report having a primary care practice that serves as a medical home to provide care and care coordination. Notably, rates of developmental delays and infant mortality are more than 20 percent to 30 percent higher, respectively, in the lowest-quartile states compared with top-quartile states.

These patterns indicate that public policies, as well as state and local health systems, can make a difference to children's health and health care. But socioeconomic factors also play a role—underscoring the importance of federal and state policies in areas with high rates of poverty.

### **Regional performance patterns provide valuable insight.**

The *Scorecard* revealed regional patterns in child health system performance (Exhibit 3). Across dimensions, states in New England and the Upper Midwest often rank in the highest quartile of performance, whereas states with the lowest rankings tend to be concentrated in the South and Southwest. Yet within any region, there are exceptions. For example, West

Virginia and Tennessee face high rates of poverty, unemployment, and disease yet rank in the top half of performance on indicators of children's health. West Virginia does exceptionally well in ensuring access and high-quality care for its most vulnerable children, ranking fifth in terms of equity. Alabama is in the top quartile for children's insurance, with nearly 94 percent insured. And North Carolina leads in providing developmental screening for young children.

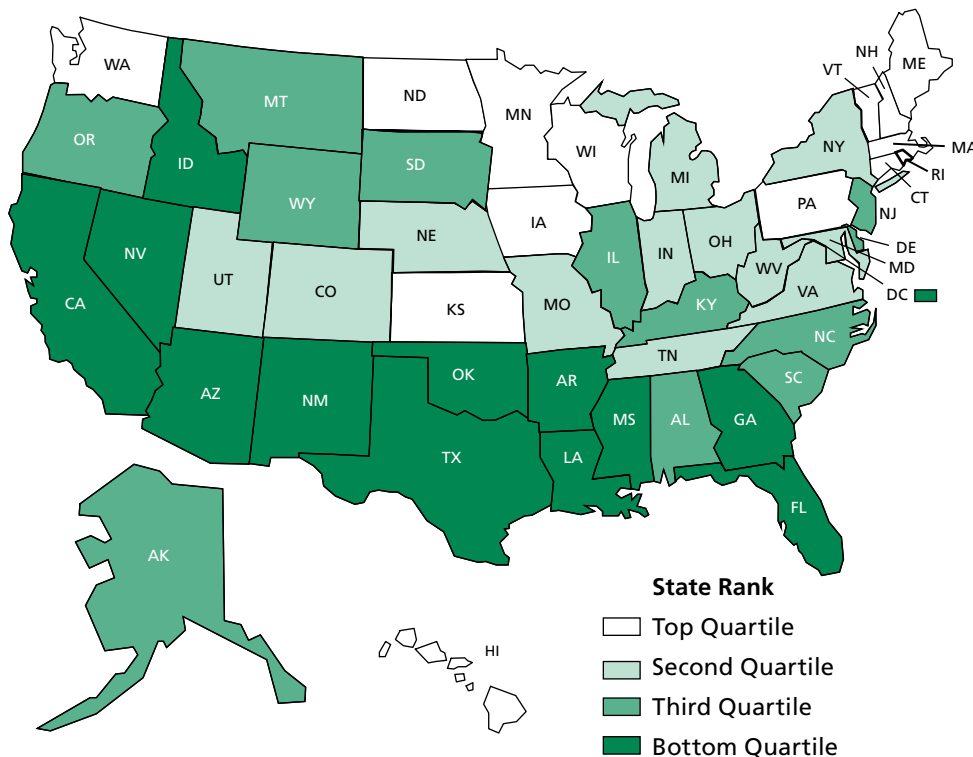
Leading states as well as those that outperform neighboring states within a region have often made concerted efforts to improve through coverage and quality improvement initiatives. Learning about these initiatives can offer insights for other states, particularly those starting with similar health systems or resource constraints.

### **There is room to improve in all states. Even in the best states, performance falls short on at least some indicators and state averages are below what should be achievable.**

All states have room to improve. None ranked in the top half of the performance distribution across all indicators. For some indicators, performance was not outstanding even in the high-ranked states. For example, North Carolina ranked first in terms of screening children for developmental or behavioral delays, yet more than half of children in the state were not screened, based on parents' reports. Nearly a third of children did not have access to care meeting the definitions of a medical home, even in the top-ranked state in this indicator. Conversely, states that performed poorly overall outperformed higher-ranking states on some indicators. There is value in learning from best practices around the nation.

Rising rates of childhood overweight or obesity plague all states. Moreover, many children live with oral health problems that could be

State Ranking on Child Health System Performance



Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

addressed with timely, affordable access to effective preventive dental care and treatment. Even in the top-ranked state on this indicator, Minnesota, one of five children has oral health problems such as tooth decay, pain, or bleeding gums.

Inequitable care and outcomes by insurance status, income, and race/ethnicity remain a large concern. Uninsured, low-income, and minority children have less than equal opportunity to thrive in nearly all states. Yet in some higher-performing states, these vulnerable children do nearly as well as the national average and rival performance levels achieved for children in higher-income families, indicating that gains in statewide performance are achievable by focusing on the most vulnerable children.

**POLICY IMPLICATIONS**

Overall, the *Scorecard* indicates that multiple dimensions of health system performance for children are related. Reducing high rates of admission to the hospital or emergency department for children’s asthma requires primary care resources and, potentially, public health interventions to reduce the triggers of asthma attacks. Poor access undermines the quality of care and drives up costs for complications that could have been prevented. High rates of infant mortality are related to high rates of low-birthweight babies, which in turn are related to the mother’s health and care during pregnancy. Promoting healthy family behaviors in medical and community settings is a key component to preventing

unnecessary deaths, chronic conditions, and complications among both children and adults. Ensuring well-coordinated, high-quality care, including preventive care, will require physicians and hospitals to work together with families and share accountability for children's health. Clinical care systems also need to work hand in hand with public health professionals and community-based groups to implement programs and evaluate progress toward achieving population health goals.<sup>1</sup>

The report indicates that federal action is essential to support state and community efforts for children. This year will mark the second anniversary of the Children's Health Insurance Program Reauthorization Act (CHIPRA), an event that affirmed the national commitment to expanding coverage of children in low- and modest-income families. The federal stimulus bill strengthened this support by increasing federal matching rates for Medicaid to enable states to maintain these programs in the midst of a severe recession.

By expanding coverage to adults, as well as to children, the Affordable Care Act will for the first time ensure that coverage will be accessible and affordable for families in all states. Insurance expansion to parents will enhance children's health and financial security, based on studies that find that children are more likely to be enrolled in coverage and receive care when their parents are also insured and have the ability to pay for care.

Health system provisions of the Affordable Care Act will improve primary care in all states by enhancing Medicaid as well as Medicare payments for primary care and encouraging physician practices to serve as medical homes.<sup>2</sup>

Provisions for support of pediatric accountable care organizations through state Medicaid programs will promote innovative, integrated care systems that emphasize the "triple aim" of better health, better care experiences, and slower cost growth.<sup>3</sup>

Overall, the *State Scorecard on Child Health System Performance, 2011*, reveals that—in the period leading up to the enactment of federal health care reforms—there were wide geographic variations in health care system performance for children and ample opportunities to improve. The gaps between benchmarks set by top-performing states and average performance, as well as the wide range of performance across the nation, indicate that the United States is failing to ensure that all children receive the timely, effective, and well-coordinated care they need for their health and development. This *Scorecard* documents geographic variations in risk factors such as developmental delay and obesity, pointing out the need for comprehensive medical and public health interventions to support children and their families in obtaining needed services and adopting healthy lifestyles.

While top-performing states provide examples for other states, the fact remains that none of the states performed well on all indicators and many performed at levels that are far from optimal—highlighting the need for systemic change. Compared with other states, poorly performing states often have fewer resources, larger uninsured populations, and greater socioeconomic challenges that may limit their capacity for improvement.<sup>4</sup> The formula for determining federal funding of state Medicaid programs recognizes this inequality among states. Likewise, the recent economic recession illustrates how federal funding plays a countercyclical role to help all states maintain coverage during times of fiscal duress. The Affordable Care Act will continue

this precedent with a flow of resources into states with the highest rates of poverty.

Hence, a coherent set of national and state policies is essential to sustain improvements in children's health care across the nation. Federal health reform provides the common foundation on which states can build to help eliminate the variations, gaps, and disparities in children's coverage and care documented in this *Scorecard*. Notably for children, the Affordable Care Act strengthens and depends on successful federal–state partnership—not only to expand coverage but also to improve the quality of care for children.

State action and leadership will be essential to implement reforms effectively and to support initiatives tailored to specific state circumstances. Actions states can take include:

1. Ensure continuous insurance coverage for all children by making it easy to sign up for and keep insurance for children and families. This includes: removing administrative barriers, streamlining applications, and coordinating public and private coverage for lower-income families through health insurance exchanges.
2. Strengthen Medicaid and CHIP provider networks with support of care systems that provide high-quality care and superior outcomes for children and their families.
3. Align provider incentives to promote access and high-value care. This includes participating in multipayer initiatives that support care coordination in primary care medical homes, which can help reduce hospitalizations and emergency department use.
4. Promote accountable, accessible, patient-centered, and coordinated care for children by participating in various Medicaid pilots and demonstrations as well as grant opportunities to create integrated care delivery models to improve care in local communities.
5. Support information systems to inform and guide efforts to improve quality, health outcomes, and efficiency. This includes: adoption of pediatric quality measures to report on CHIP performance; expanded use of children's outcome measures, including tracking potentially preventable rates of hospital and emergency department use; and promoting effective use of health information technology with exchange across sites of care to enhance coordination and safety and to support clinicians caring for children and their families.
6. Participate in statewide initiatives, including support for shared resources such as after-hours care and community health teams, to provide the accountable leadership and collaboration essential to set and achieve goals for children's health.

With costs rising faster than incomes and pressuring families and businesses, effective public policies as well as improvement efforts within care systems are needed. Realizing the potential of recent federal reforms that focus on children will require a team effort, calling upon both community-level interventions and effective state policies. One of

the strengths of the U.S. health care system is its examples of excellence and innovation. Ensuring that all children have the opportunity to thrive through a health care system that responds to their needs will depend on learning from these diverse experiences and spreading successful improvement strategies. Investing in children's health yields

long-term payoffs: healthy children are better able to learn in school and are more likely to become healthy, productive adults. Individuals, families, and society as a whole benefit from reduced dependency and disability, a healthier future workforce, and a stronger economy.

## INTRODUCTION

The early years of a child's life are pivotal to their future health and development. Disparities in health and development emerge during children's first few years and worsen with age.<sup>5</sup> The nation's health care system plays a vital role in helping children get a healthy start so they can lead long, healthy, and productive lives, laying the groundwork for a strong workforce and economy. A high-performing health care system would ensure that all children have equal access to high-quality and efficiently delivered care and would partner with schools and community organizations to support families in effectively meeting children's health and developmental needs.

Despite the best efforts of health care professionals, our current health system underperforms in accomplishing these goals in comparison with other industrialized countries.<sup>6</sup> Recent reports, for example, find the United States falling further behind other wealthy countries on one key indicator: survival of children past age 5.<sup>7</sup> Within the United States, children's health and the care they receive, to a certain extent, depends on where they live. National and state-level analyses repeatedly find that the performance of the health care system varies widely across states in terms of access to care as well as the quality, cost, and equity of care that children receive.<sup>8</sup> The Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) and enactment of federal health reform provide a strong foundation on which the nation and states can build more effective systems of care for children, who are the future of our nation.

As states implement reforms to achieve higher-value, affordable health care systems for children and their families, they need a way to take stock of their performance and identify areas for improvement. Canvassing states to identify top

performers on child health system measures is one such way; it provides achievable benchmarks and focuses attention on opportunities to improve.

The *State Scorecard on Child Health System Performance, 2011*, builds on The Commonwealth Fund's series of scorecards assessing national and state health care systems across core dimensions of performance. Prepared for state policymakers, national leaders, and other health care stakeholders, this *Scorecard* offers information on states' performance with respect to children's access to care, health care quality, population health, and equity. It also provides a means to gauge the impact of reform efforts as states, communities, providers, and other constituencies work to organize more effective local delivery systems that, collectively, determine statewide performance.

This report follows and expands on a report published in 2008 on state variations in child health system performance.<sup>9</sup> It expands the set of indicators and omits others that could not be updated. Changes in the definitions of several indicators subsequent to the 2008 report made it impossible to compare trends for those indicators. As a result, this 2011 report provides a new state baseline rather than trends, and is not directly comparable to the 2008 report.

This report follows the methodology used in the earlier report and The Commonwealth Fund's general state health system scorecards. The analysis ranks states relative to the performance of other states based on the most recent data available—typically from 2007 to 2009—and clusters indicators into four dimensions of performance. Specifically, the report includes 20 key indicators of health system performance for children along the dimensions of access and affordability, prevention and treatment, the potential to lead healthy lives, and equity. The methods box below explains the

*Scorecard* methodology and limitations on data currently available at the state level. The Appendix to this report provides data for all indicators organized by dimension and shows the states' rates and rankings on each indicator. The first two appendix tables display summary information: [Appendix A1](#) shows overall state rankings and where each state ranks on the four dimensions, and [Appendix A2](#) shows how many indicators

each state had in each performance quartile. The Appendix also includes demographic tables that profile states by incidence of poverty, health risks, and race/ethnicity.

The *State Scorecard Data Tables*, which are available online at [http://www.commonwealthfund.org/-/media/Files/Publications/Fund%20Report/2011/Feb/Child%20Health%20Scorecard/state\\_data\\_tables.pdf](http://www.commonwealthfund.org/-/media/Files/Publications/Fund%20Report/2011/Feb/Child%20Health%20Scorecard/state_data_tables.pdf), show differences by family

## WHAT THE SCORECARD MEASURES

### Dimensions and Indicators

The *State Scorecard on Child Health System Performance, 2011*, measures health system performance for all 50 states and the District of Columbia using 20 key indicators (Exhibit 1). It organizes indicators by four broad dimensions that capture critical aspects of health system performance:

- Access and Affordability—includes rates of insurance coverage for children and parents as well as indicators of coverage adequacy and the affordability of care.
- Prevention and Treatment—includes indicators that measure three related quality-of-care components: effective primary and preventive care, provision of mental health services, and care coordination, including supportive services for children with special health care needs.
- Potential to Lead Healthy Lives—includes indicators that measure the degree to which a state's children enjoy long and healthy lives.
- Equity—includes differences in performance on selected indicators from the other three dimensions associated with children and parent's income level, type of insurance, or race or ethnicity.

Where possible, indicators for this report were selected to be equivalent to those used in the *National Scorecard on U.S. Health System Performance*. However, for some areas, there are no child measures available across states that are comparable to indicators that are available in the *National Scorecard*. For instance, databases do not currently track effective management of chronic conditions, adverse medical or medication events, utilization of the emergency department, or potential overuse or duplication of health services across all states for adults or children.

As child-specific indicators evolve, future child health system scorecards will add new measures to enrich the cross-state comparisons.

[Appendix B](#) describes the 20 indicators, years, and data sources for the *State Scorecard on Child Health System Performance, 2011*.

### Scorecard Ranking Methodology

The *State Scorecard on Child Health System Performance, 2011*, first ranks states from best to worst on each of the 20 performance indicators. We averaged rankings for those indicators within each of the four dimensions to determine a state's dimension rank and then averaged the dimension rankings to arrive at an overall ranking on health system performance. This approach gives each dimension equal weight and, within dimensions, weights indicators equally. We use average state rankings for the *Scorecard* because we believe that this approach is easily understandable. This ranking method follows that used by Stephen Jencks and colleagues when assessing the quality of care for Medicare beneficiaries at the state level across multiple indicators.\*

For the equity dimension, we ranked states based on the difference between the most vulnerable subgroup (i.e., low-income, uninsured, or racial/ethnic minority) and the national average on selected indicators. The gap indicates how the vulnerable subgroup fares compared with the U.S. average—an absolute standard.

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\*S. F. Jencks, T. Cuerdon, D. R. Burwen et al., "Quality of Medical Care Delivered to Medicare Beneficiaries: A Profile at State and National Levels," *Journal of the American Medical Association*, Oct. 4, 2000 284(13):1670–76; and S. F. Jencks, E. D. Huff, and T. Cuerdon, "Change in the Quality of Care Delivered to Medicare Beneficiaries, 1998–1999 to 2000–2001," *Journal of the American Medical Association*, Jan. 15, 2003 289(3):305–12.

income as well as insurance status and race/ethnicity for the subset of indicators used in the equity dimension. State profiles, available online at <http://www.commonwealthfund.org/Charts-and-Maps/State-Data-Center/Child-Health.aspx>, provide estimates for each state of the potential gain it could achieve if it met the benchmark performance level set by the leading state for each indicator.

## **ACCESS AND AFFORDABILITY**

Access to health care is the foundation and hallmark of a high performance health system. The foremost factor in determining whether people have access to care when needed is having insurance that covers essential care. Consequently, the extent to which families are able to obtain coverage that is both comprehensive and affordable plays a critical role. The access and affordability dimension of this *Scorecard* looks at the percent of children and parents with health insurance coverage, the percent of currently insured children whose health coverage is adequate based on reports by their parents, and the average total premium for employer-based family coverage as a percent of median income for family households.

This analysis finds that significant gaps and variability in access to care persist across the nation. Children in the Northeast and Midwest as well as in the Pacific states of Hawaii and Washington generally were more likely to be insured and have better access to care than their peers in the West and South (Exhibit 4). The three top-ranked states in this dimension—Massachusetts, New Hampshire, and Hawaii—performed well on all four access indicators. These states are among those with the most expansive policies supporting public health insurance for low- and moderate-income families and insurance market reforms to expand

coverage. Massachusetts achieved top ranking on this dimension because it has the lowest rates of uninsured children and parents in the country.

## **Health Insurance Coverage**

Over the last decade there has been considerable expansion of health coverage for children (Exhibit 5). From 1999–2000 to 2008–09, the number of states with high rates of uninsured children (16% or more) has declined from 11 to three states. The remaining three states—Florida, Nevada, and Texas—fall within the bottom five states on this *Scorecard's* access dimension. West Virginia is particularly notable for having reduced their children's uninsured rate by half in the last 10 years, as is Alabama for having one of the lowest rates of uninsured children among Southern states and ranking high among all states—with 94 percent of children insured as of 2008–09. The high rates of children insured in Alabama compared with other states in the region reflect that state's targeted effort to expand insurance to children. (See box on Alabama.)

Much of the success in expanding the number of insured children can be attributed to federal and state action to cover low- and moderate-income families. Medicaid expanded coverage to young children living in poverty by providing states with federal matching funds for this purpose. In 1997, the State Children's Health Insurance Program (CHIP) was enacted to provide a capped amount of federal matching funds to states for coverage of children and some parents with incomes too high to qualify for Medicaid, but for whom private health insurance was either unavailable or unaffordable. Covering nearly 8 million children in 2009, CHIP has played an important role in reducing the number of uninsured children.<sup>10</sup>

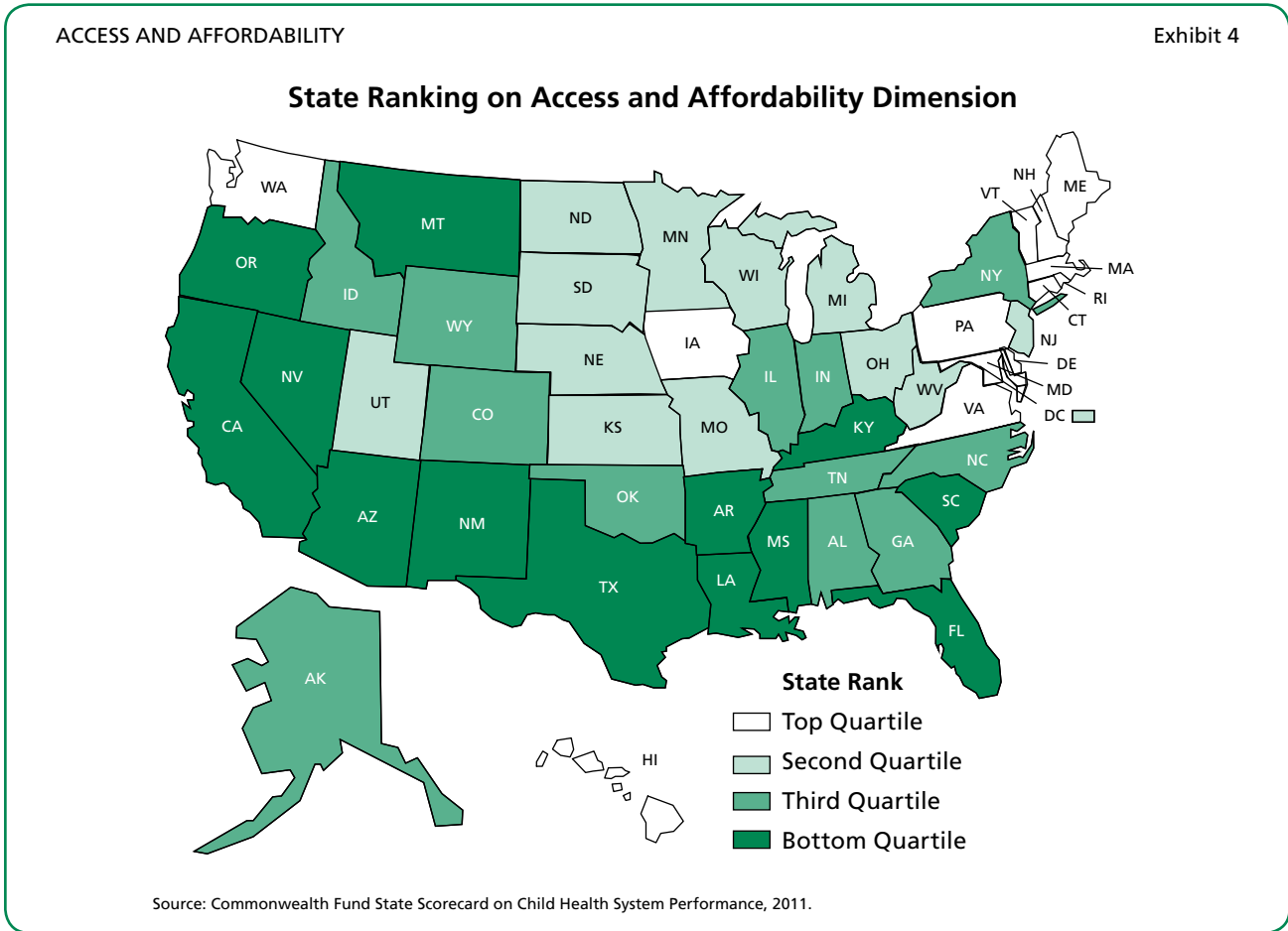
In particular, investments in CHIP and Medicaid support to states have largely offset the



impact of the economic downturn and resulting loss of employer-based coverage. Unlike adult coverage rates, which declined during the recent recession, coverage of children held and improved slightly, with one of 10 children uninsured, on average, in 2008–09. The coverage landscape for children would have looked far worse had states not had federal financial support to expand eligibility for children and increase outreach and enrollment efforts, as well as the enhanced federal support of Medicaid with the stimulus funds. With the congressional reauthorization of CHIP in 2009, as well as additional Medicaid funds made available to states under the American Recovery and Reinvestment Act (ARRA) of 2009, states have managed to preserve and in some cases broaden health coverage for children. Such federal action

made it possible for more than half of states to increase eligibility levels or streamline enrollment and retention procedures since the passage of CHIPRA, despite coping with excruciating budget pressures.<sup>11</sup>

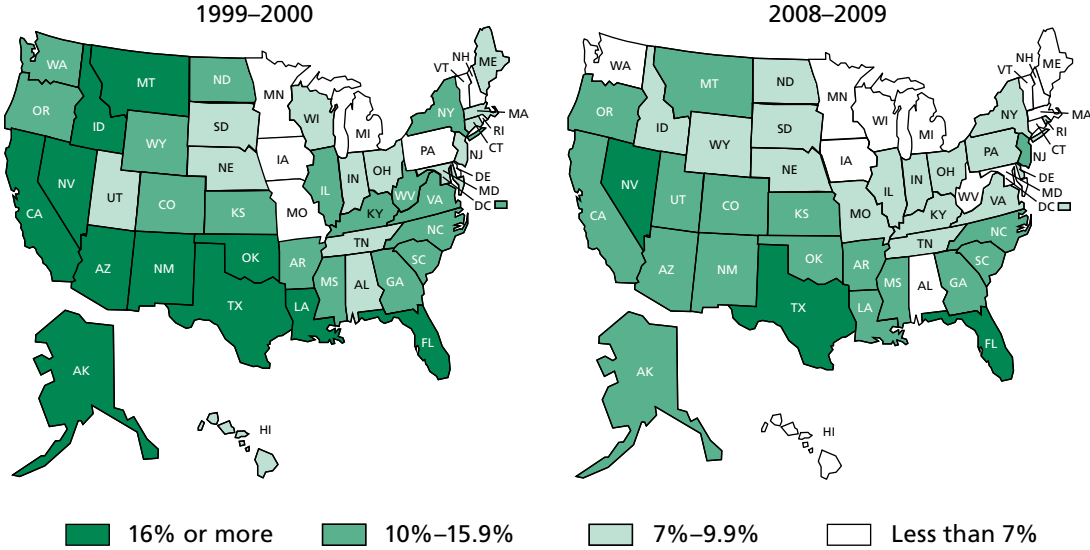
Still, children’s risk of being uninsured remains uneven across states ([Appendix A3](#)). In 2008–09, the percentage of children age 18 and under who were uninsured ranged from a low of 3 percent in Massachusetts to a high of 18 percent in Texas. This gap in part reflects the differences in current eligibility standards in addition to enrollment and retention barriers for public health insurance programs across states. Varying Medicaid/CHIP policies across states are illuminated by the even wider variation in insurance coverage among children living in low-income families. (The Equity



ACCESS AND AFFORDABILITY

Exhibit 5

**Percent of Children Ages 0–18 Uninsured by State**

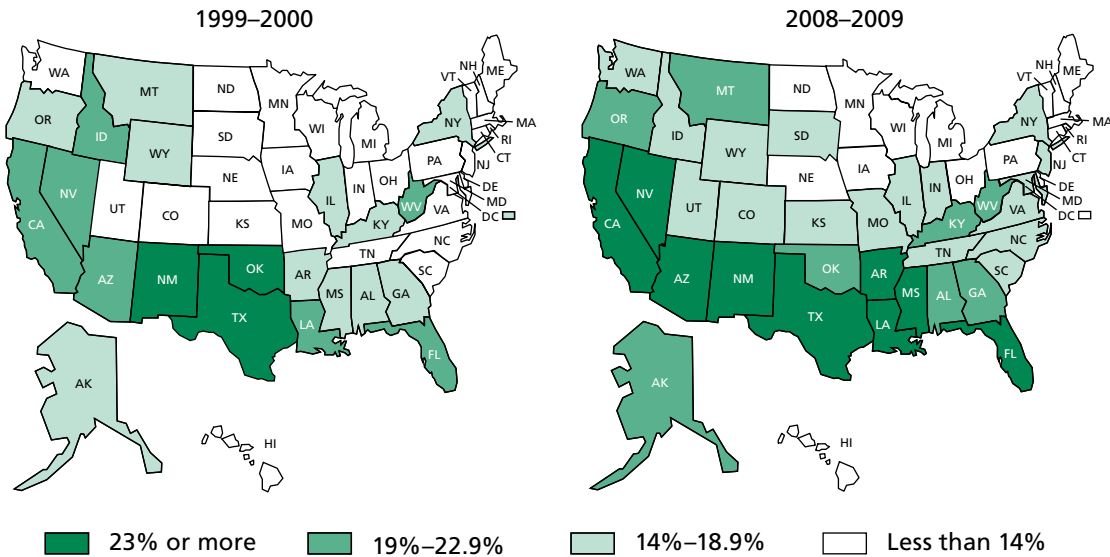


Data: U.S. Census Bureau, 2000–01 and 2009–10 Current Population Survey ASEC Supplement.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

ACCESS AND AFFORDABILITY

Exhibit 6

**Percent of Parents Ages 19–64 Uninsured by State**



Data: U.S. Census Bureau, 2000–01 and 2009–10 Current Population Survey ASEC Supplement.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

section of this report examines coverage variations by income in more detail.)

The contrast between children's coverage trends and those for parents highlights the importance of federal as well as state action. While states have made great strides in covering children following federal Medicaid and CHIP expansions, the number of parents under age 65 without health insurance has remained high and risen rapidly as lower-income parents have been unable to afford coverage on their own and secure jobs with health benefits. In the past decade, the number of states with 23 percent or more of parents uninsured

increased from just three to nine (Exhibit 6). At the same time, the number of states with low rates of uninsured parents (under 14%) declined from 29 states to 17 (including the District of Columbia). Across states, the share of parents who were uninsured ranged from 4 percent in Massachusetts to nearly 35 percent in Texas. In all, 41 states experienced some decline in the percentage of parents with insurance from 1999–2000 to 2008–09 ([Appendix A4](#)).

The failure of states to insure parents—and entire families—hinders their ability to sustain and advance access for children. Studies show that if

### **A COLLABORATIVE RELATIONSHIP IN ALABAMA THAT MAXIMIZES ENROLLMENT FOR CHILDREN**

Alabama has made great strides in expanding children's access to health care. With 94 percent of children insured as of 2008–09, the state has one of the highest children's insurance rates among Southern states. Much of Alabama's success can be attributed to high enrollment rates in the state's children's insurance programs. Alabama's State Children's Health Insurance Program (SCHIP), the first such program to be approved nationally, began in February 1998 as an effort to expand Medicaid eligibility to children up to age 19 in families with incomes up to 100 percent of the federal poverty level (FPL). In late 1998, Alabama rolled out a separate program through the Blue Cross/Blue Shield network. Called All Kids, it covers children under age 19 in families with incomes up to 200 percent FPL. One year ago the Alabama legislature voted to expand All Kids eligibility to children in families with incomes up to 300 percent FPL. The Alabama Department of Public Health estimates an additional 10,000 children will be eligible for coverage under this expansion.

The Alabama Department of Public Health, which administers All Kids, and the Alabama Medicaid Agency have created a successful collaborative relationship that benefits enrollees of both programs and encourages administrative efficiencies. By sharing marketing and outreach efforts, aligning eligibility rules, and improving system interfaces, the two agencies have overcome many common barriers to enrolling children in health insurance. Technology-driven solutions such as an online joint application are being used to simplify

the application and renewal process for insurance. An initiative to create a common client index across Alabama's social service agencies further simplifies data-sharing and may also make Express Lane Eligibility for children in other public programs easier to implement. Alabama also has raised Medicaid reimbursement rates for physicians and dentists in an effort to increase provider participation and improve access for enrollees.

States can learn from Alabama's success in fielding effective outreach efforts, establishing community-based partnerships, building trust among both families and providers, and fostering relationships at the local level; all have yielded statewide support for children's coverage. States can also look to the Children's Health Insurance Program Reauthorization Act (CHIPRA), which provides states with new tools and incentives to address shortfalls in participation in Medicaid and CHIP. The tools include outreach and enrollment grants and bonus payments to states that adopt five of eight enrollment and retention strategies, as well as to states that experience Medicaid enrollment increases that exceed target growth rates.

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For more information see R. Kellenberg, L. Duchon, and E. Ellis, *Maximizing Enrollment in Alabama: Results from a Diagnostic Assessment of the State's Enrollment and Retention Systems for Kids*, Maximizing Enrollment for Kids Program (Portland, Maine, and Princeton, N.J.: National Academy for State Health Policy and Robert Wood Johnson Foundation, Feb. 2010), available at <http://www.rwjf.org/files/research/56388alabama.pdf>.

parents are insured, the likelihood is greater that their children will be insured and receive necessary care.<sup>12</sup> Still, Medicaid eligibility levels for parents remain incredibly low: in 33 states, a working parent would have to earn less than 100 percent of the federal poverty level to qualify.<sup>13</sup> In contrast, nearly all states extend CHIP coverage to children in families with incomes up to 200 percent of the federal poverty level or higher. In some states, eligibility extends to as much as 300 percent and 400 percent of poverty (Exhibit 7).

Past studies find that states that implemented broad coverage expansions to low-income parents had higher child participation rates, compared with states that had not done so.<sup>14</sup> Not surprisingly, there is a strong positive relationship between coverage among parents and children across states.<sup>15</sup> Massachusetts, Hawaii, Maine, Wisconsin, and Vermont—the five states with the lowest rates of uninsured parents—also have among the lowest rates of uninsured children in the nation (with an average of 8% of parents who are uninsured and 5% of children who are uninsured). Meanwhile, Texas, New Mexico, Florida, Arizona, and Nevada stand out for having high uninsured rates for both parents and children (averaging 27% and 17%, respectively). A few states with relatively high rates of uninsured parents have achieved especially low rates of uninsured children, such as Alabama and West Virginia.

It is also critical to understand that health insurance coverage does not guarantee receipt of appropriate care. Insurance is not enough if it does not adequately cover needed services and offer financial protection in the event of illness. In 2007, a quarter of parents (24%) across the country reported that their children's current health insurance coverage was insufficient for their child's needs. These parents said that it did

not provide adequate benefits, provider choices, or coverage of costs. Parents' rating of their children's coverage as adequate ranged from a high of 84 percent of all insured children in Hawaii to a low of 69 percent in Minnesota. Interestingly, children residing in the Midwest—a region with higher-than-average rates of coverage—were less likely to be adequately covered, based on their parent's assessment. A separate study of inadequate coverage among children found that those classified as underinsured have many of the same negative experiences affecting children who were uninsured, including delayed or forgone care, lack of a medical home, and difficulty obtaining referrals and specialty care.<sup>16</sup>

Parents' views of the adequacy of their children's coverage varied by insurance type. On average, according to parents' reports, a larger portion of children with private insurance than with public insurance had coverage that did not meet their needs (26% vs. 19%). In the majority of states, rates of inadequate insurance among privately insured children exceeded rates for children covered by public programs by more than 50 percent; in eight states, ratings of the adequacy of private compared with public insurance differed more than 200 percent ([Appendix A5](#)). The stronger performance of public insurance in terms of meeting children's needs underscores the protection both Medicaid and CHIP provide low-income families against high out-of-pocket costs. Private coverage, on the other hand, may contain fairly substantial cost-sharing requirements, a narrower scope of benefits, and coverage limits or exclusions. As an exception, there was no difference between parents' perceptions of private and public plans' adequacy for their children in Hawaii, the state with the best ratings of coverage adequacy overall.

Uninsured Rates and Medicaid/CHIP Income Eligibility Standards by State

State	Percent Uninsured, 2008–09		Income Eligibility for Medicaid/CHIP (as percent of federal poverty levels), 2009	
	Children Ages 0–18	Parents Ages 19–64	Children	Working Parents
Alabama	6.5	20.0	300	24
Alaska	12.4	20.0	175	81
Arizona	15.0	23.2	200 <sup>^</sup>	106
Arkansas	11.0	24.3	200	17/200 <sup>1</sup>
California	11.1	23.5	250	106/200 <sup>1</sup>
Colorado	11.4	17.2	250	106
Connecticut	6.8	11.2	300	191/306 <sup>1</sup>
Delaware	9.5	13.4	200	121
District of Columbia	7.5	10.5	300	207
Florida	17.8	26.4	200	59
Georgia	11.5	22.6	235	50
Hawaii	4.6	7.4	300	100/200 <sup>1</sup>
Idaho	9.7	18.7	185	39/185 <sup>1</sup>
Illinois	8.1	16.4	200/300 <sup>2</sup>	191/200 <sup>1</sup>
Indiana	7.7	15.5	250	25/200 <sup>1</sup>
Iowa	5.8	11.9	300	83/250 <sup>1</sup>
Kansas	10.0	15.7	241	32
Kentucky	9.6	20.3	200	62
Louisiana	10.3	23.0	250	25
Maine	5.3	8.5	200	200/300 <sup>1</sup>
Maryland	6.8	15.4	300	116
Massachusetts <sup>1</sup>	3.3	4.4	300	133/300 <sup>1</sup>
Michigan	5.6	13.4	200	64
Minnesota	6.1	10.1	275	215/275 <sup>1</sup>
Mississippi	12.3	23.4	200	44
Missouri	8.5	16.3	300	25
Montana	11.1	20.9	250	56
Nebraska	8.4	13.6	200	58
Nevada	16.6	23.3	200	88/200 <sup>1</sup>
New Hampshire	3.9	11.7	300	49
New Jersey	10.4	16.1	350	133/200 <sup>1</sup>
New Mexico	15.6	28.8	235	85/408 <sup>1^</sup>
New York	7.6	15.9	400	75/150 <sup>1</sup>
North Carolina	11.0	18.7	200	49
North Dakota	7.3	10.1	160	59
Ohio	7.5	12.0	200	90
Oklahoma	10.4	22.1	185	53/200 <sup>1</sup>
Oregon	11.9	19.2	300	40/201 <sup>1</sup>
Pennsylvania	7.3	12.0	300	46/208 <sup>1^</sup>
Rhode Island	7.4	12.6	250	116/181 <sup>1</sup>
South Carolina	12.9	18.1	200	93
South Dakota	9.9	15.6	200	52
Tennessee	8.6	16.7	250	127
Texas	18.0	34.5	200	26
Utah	11.0	14.4	200	44/150 <sup>1^</sup>
Vermont	4.9	8.6	300	83/300 <sup>1</sup>
Virginia	7.5	15.0	200	31
Washington	6.1	16.3	300	74/200 <sup>1^</sup>
West Virginia	6.2	19.0	250	33
Wisconsin <sup>1</sup>	5.5	8.5	300	200
Wyoming	9.3	16.9	200	52

<sup>1</sup>Denotes income eligibility for a more limited waiver/state-funded coverage or premium assistance with work-related eligibility requirement.

<sup>2</sup>Denotes income eligibility for state-funded coverage to insure children in families with incomes above CHIP levels.

<sup>^</sup>Denotes enrollment is closed to new applicants.

Note: Income eligibility listed for children is the highest level reported among regular Medicaid, CHIP-funded Medicaid expansions, or separate state programs.

Data: Uninsured—2009–2010 CPS ASEC Supplement; Income eligibility for children and parents—M. Heberlein, T. Brooks, J. Guyer et al.,  *Holding Steady, Looking Ahead: Annual Findings of a 50-State Survey of Eligibility Rules, Enrollment and Renewal Procedures, and Cost Sharing Practices in Medicaid and CHIP, 2010–2011* (Menlo Park, Calif.: Kaiser Family Foundation, Jan. 2011), available at <http://www.kff.org/medicaid/upload/8130.pdf>. Data based on a national survey conducted by the Center on Budget and Policy Priorities for the Kaiser Commission on Medicaid and the Uninsured, January 2011.

Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

The full effects of the recession that officially ended in 2009<sup>17</sup>—in terms of access to care—remain to be seen. When parents lose jobs, privately insured children lose their coverage, and these losses are greatest among children in middle- and low-income families.<sup>18</sup> Helping to provide coverage for these vulnerable families amidst continued job losses and rising poverty is essential to maintaining the gains in insurance rates for children. CHIPRA extended federal commitment to funding for CHIP through September 30, 2013, and is projected to cover 4.1 million children who would otherwise be uninsured by 2013.<sup>19</sup> The Affordable Care Act further extended CHIP funding through 2015. Yet unprecedented budget shortfalls, combined with accelerated demand for public programs, will still make it difficult for states to maintain coverage.

### **Affordability of Health Insurance**

The rapid rise in health insurance premiums and deductibles has severely strained the finances of U.S. families and employers. From 2003 to 2009, employer-based premiums for family coverage increased an average of 41 percent across states—more than three times faster than increases in median family incomes. If recent state cost trends continue, the average annual family premium is projected to reach \$23,342 by 2020.<sup>20</sup> As a result, acquiring health insurance has become out of reach for many low- and middle-income working families who are buying coverage on their own.

In 2009, the average annual premium for family coverage—including employee and employer shares—equaled or exceeded 20 percent of the median family household income for the working-age population in 14 states and the District of Columbia (Exhibit 8). The variability of premiums relative to incomes for families is notable, ranging from a low of 14 percent in

Connecticut to a high of 25 percent in Mississippi. The financial burden of insurance was highest in Southern and lower-income states. In particular, families in Louisiana and Texas face private health insurance costs that are above the national average while having among the lowest median incomes in the country.

The increasing cost of health insurance, combined with the severe downturn in the economy, have forced difficult choices at workplaces and among families. Slower growth in wages as employers absorb increasing insurance costs, as well as reduced savings for retirement, have been part of the trade-offs to preserve health benefits.<sup>21</sup> Provisions in the Patient Protection and Affordable Care Act of 2010, if successfully tested and adopted by private and public payers, could provide substantial relief to families by slowing the growth in health insurance premiums.<sup>22</sup> Yet, before reforms are fully phased in, families will remain at risk.

Given states' current fiscal duress and their failure to enact comprehensive reforms in the years before the recession, it is unlikely that many will succeed in getting close to universal coverage on their own. The Affordable Care Act provides a common insurance coverage framework and financing to support state efforts, which is especially important for states that face large coverage gaps and socioeconomic challenges.

The Affordable Care Act aims to provide access to affordable, comprehensive coverage to many families, particularly for those with low and moderate incomes. The provisions are expected to greatly benefit the lives of low- and middle-income children by securing coverage for entire families. In particular, many low-income parents will gain coverage with the expansion of Medicaid to 133 percent of the federal poverty level in 2014. At

**Affordability of Health Insurance: Premiums for Employer-Based Family Coverage Relative to Median Incomes for Family Households Under Age 65**

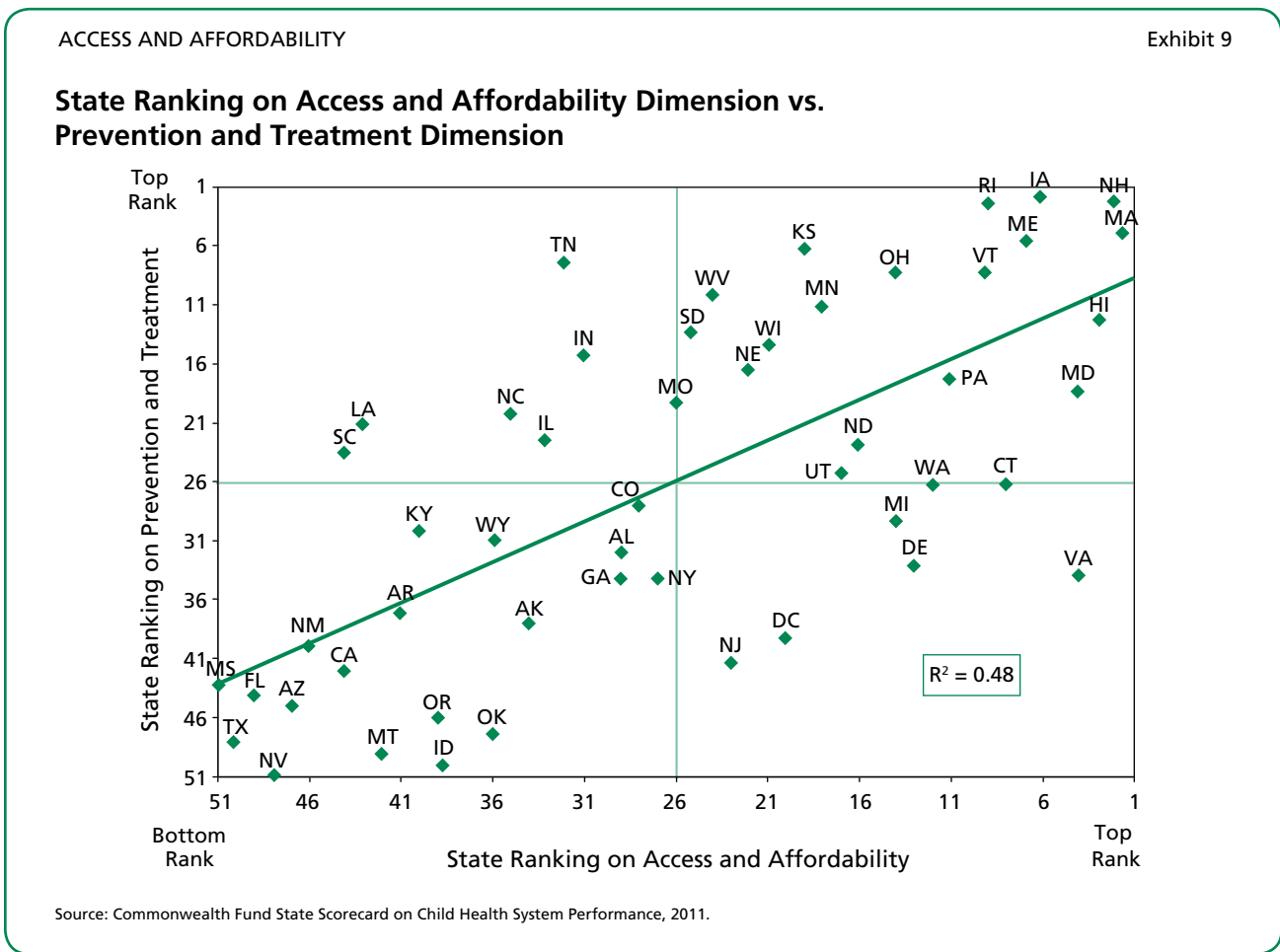
State	Average Total Premium for Employer-Based Family Coverage as Percent of Median Income for Family Household		Median Income for Family Household (All Under Age 65)	Average Total Premium for Employer-Based Family Coverage
	2009	Rank	2008-09	2009
<b>United States</b>	<b>19.0</b>		<b>\$68,683</b>	<b>\$13,027</b>
Alabama	20.9	41	\$57,189	\$11,978
Alaska	17.0	14	\$83,548	\$14,182
Arizona	21.4	44	\$59,787	\$12,813
Arkansas	20.9	41	\$52,500	\$10,969
California	19.2	31	\$65,788	\$12,631
Colorado	16.4	10	\$81,700	\$13,360
Connecticut	13.9	1	\$101,103	\$14,064
Delaware	17.4	19	\$72,965	\$12,682
District of Columbia	21.5	46	\$66,000	\$14,222
Florida	19.9	35	\$65,000	\$12,912
Georgia	19.0	28	\$67,500	\$12,792
Hawaii	17.4	19	\$68,000	\$11,826
Idaho	18.2	24	\$65,460	\$11,887
Illinois	19.3	32	\$71,002	\$13,708
Indiana	19.9	35	\$64,749	\$12,872
Iowa	16.6	11	\$72,306	\$12,036
Kansas	16.9	13	\$70,200	\$11,829
Kentucky	21.4	44	\$58,010	\$12,407
Louisiana	22.2	48	\$62,500	\$13,846
Maine	18.9	27	\$71,720	\$13,522
Maryland	14.8	4	\$93,221	\$13,833
Massachusetts	15.2	6	\$96,800	\$14,723
Michigan	18.6	26	\$70,670	\$13,160
Minnesota	16.7	12	\$79,016	\$13,202
Mississippi	24.9	51	\$50,630	\$12,590
Missouri	17.9	22	\$69,000	\$12,353
Montana	17.1	16	\$66,514	\$11,365
Nebraska	17.2	18	\$71,050	\$12,227
Nevada	20.1	37	\$63,301	\$12,700
New Hampshire	14.5	3	\$95,000	\$13,822
New Jersey	14.0	2	\$98,000	\$13,750
New Mexico	22.3	49	\$57,490	\$12,848
New York	20.4	40	\$67,546	\$13,757
North Carolina	21.5	46	\$61,000	\$13,087
North Dakota	16.1	9	\$71,841	\$11,590
Ohio	17.4	19	\$68,064	\$11,870
Oklahoma	18.2	24	\$62,605	\$11,417
Oregon	19.0	28	\$67,400	\$12,783
Pennsylvania	17.9	22	\$74,000	\$13,229
Rhode Island	17.0	14	\$80,065	\$13,608
South Carolina	20.1	37	\$61,373	\$12,343
South Dakota	17.1	16	\$68,000	\$11,596
Tennessee	20.2	39	\$60,000	\$12,134
Texas	23.0	50	\$57,500	\$13,221
Utah	15.5	7	\$76,675	\$11,869
Vermont	19.4	33	\$74,908	\$14,558
Virginia	14.8	4	\$85,000	\$12,622
Washington	15.9	8	\$80,400	\$12,758
West Virginia	20.9	41	\$60,100	\$12,554
Wisconsin	19.7	34	\$74,500	\$14,656
Wyoming	19.1	30	\$75,000	\$14,319

Data: Median income for family household—2009-10 CPS ASEC Supplement; Average total premium for employer-based family coverage—2009 MEPS-IC.  
Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

the same time, uninsured children and families that are not eligible for Medicaid or CHIP will gain premium assistance up to 400 percent of the federal poverty level (\$88,000 for a family of four) to purchase coverage through newly established state health insurance exchanges. States will have the critical task of implementing reform; how they go about this will determine the success of the federal law and its potential to improve overall health system performance.

Across states, higher insurance rates and more affordable access are closely associated with better quality of care in terms of receipt of preventive

and treatment services and continuity of care (Exhibit 9). In states with higher insurance rates among children, children are more likely to have a primary source of care that serves as a “medical home,” to receive recommended preventive care, and to receive more specialized care when needed. At the same time, although insurance is essential, it is not sufficient to ensure high-quality care for children. The wide variations across states and often low rates achieved by even top-performing states highlight gaps in health care delivery system performance.





## PREVENTION AND TREATMENT

The receipt of high-quality treatment and preventive primary care throughout a child's development is instrumental in promoting and establishing good health and growth. Timely receipt of recommended preventive care, screening for potential developmental delays in early childhood, and referral to more specialized care when needed are all indicators of how well care systems meet children's health care needs. Further, families expect and rely on clinicians working together to ensure that care is well coordinated and timely, and that those delivering services will be responsive to their child's needs and focus on the whole child. This report examines nine indicators of health care prevention and treatment, including: five that assess the extent to which children receive effective primary and preventive care; one that assesses the provision of mental health services; and three that assess care coordination, including supportive services for children with special health care needs.

The *Scorecard* revealed wide variations among states in terms of the preventive and treatment services that children receive. There are also distinct geographic patterns in states' overall rankings on this dimension (Exhibit 10). With some notable exceptions, states in the South, Southwest, and West rank lowest on this dimension, while states in New England and pockets of the Midwest rank highest. However, even the top-ranked states on this dimension (Iowa, New Hampshire, Rhode Island, Massachusetts, and Maine) did not perform well across each of the nine indicators. This underscores the extensive variability in quality across care settings and types of services, as well as among geographic regions. The variability highlights the need for state and federal action to expand child-health metrics to promote higher

quality and better care coordination across a continuum of care, with the capacity to identify gaps within as well as across states.

### Effective Primary Care: The Medical Home

Primary care is the foundation for an effective and efficient health care system.<sup>23</sup> Children and their families benefit from having an ongoing relationship with a primary care provider, especially one who takes a holistic approach to child health and assumes responsibility for coordinating all health services for his or her patients.<sup>24</sup> A model of enhanced primary care, called the patient-centered medical home, seeks to address these needs by emphasizing access and establishing stronger partnerships between primary care providers, children, and their families.

Providers with practices aiming to serve as medical homes work cooperatively with families to manage children's health, share information and resources, coordinate care across disciplines and service settings, and ensure smooth transitions of care throughout all stages of a child's development.<sup>25</sup> Studies find that children who have a medical home, especially those with special needs and chronic conditions, are more likely to receive the preventive care they need and adhere to prescribed medications, and are less likely to visit the emergency department or be hospitalized.<sup>26</sup>

As of 2007, a majority of children and adolescents did not receive care that meets all of the elements of a medical home, based on parents' reports (Exhibit 11 and [Appendix A6](#)). The elements of this indicator include: parents' reports that their child had a personal doctor or nurse, had a usual source for sick care, received family-centered care, received effective care coordination when needed, and had no problems getting referrals when needed.



principles and goals.<sup>30</sup> As of January 2011, 40 states have initiated projects to advance medical homes (Exhibit 12). The National Academy for State Health Policy has partnered with the Patient-Centered Primary Care Collaborative to help advance medical homes in state Medicaid and CHIP programs. Reflecting this broad support, the Affordable Care Act includes several provisions to promote the medical home concept, such as enhanced Medicaid payment for primary care and an Innovation Center to enable payment pilots to support successful models of care.<sup>31</sup>

**Timely Preventive Care**

Childhood and adolescence are key times for delivering preventive services to promote healthy growth and development. Important preventive services measured in this *Scorecard* are vaccinations,

well-child examinations, dental examinations, and developmental screening.

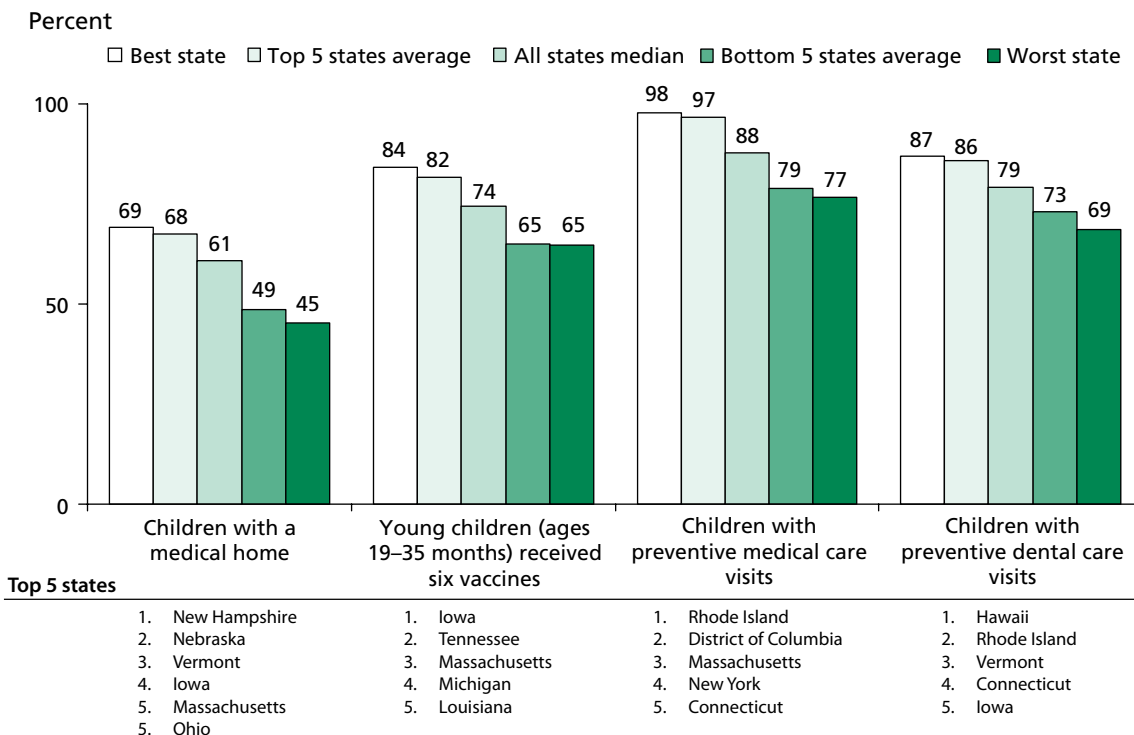
**Vaccinating Children**

Vaccinations are a cost-effective disease prevention strategy and central pillar in recommended preventive care for children.<sup>32</sup> In the United States, vaccination programs have made a major contribution to the elimination of many deadly or debilitating infectious diseases and significantly reduced the incidence of others that result in absences from school and lost work days for parents.<sup>33</sup> Historically, rising rates of immunization have been a direct result of partnerships between local, state, and federal governments and the private sector. The federal Vaccines for Children Program, for example, provides vaccinations at no cost for eligible children and has been effective in

PREVENTION AND TREATMENT

Exhibit 11

**State Variation: Medical Home and Preventive Care**



Data: Medical home—2007 National Survey of Children’s Health; Vaccines—2009 National Immunization Survey; Medical and dental preventive care visits—2007 National Survey of Children’s Health.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

reducing gaps in immunization coverage resulting from poverty.<sup>34</sup>

Nevertheless, the timely and complete immunization of U.S. children ages 19 to 35 months has reached a plateau in recent years, leaving one of four young children exposed to vaccine-preventable diseases at some point in his or her early development. Moreover, substantial variation in vaccination rates persists among states, with a nearly 20 percentage point spread between the highest-ranked state, Iowa (84.1%), and the lowest-ranked states (64.6%), on rates of coverage of all recommended doses of six key vaccines (Exhibit 11 and [Appendix A6](#)). Hence, intensified efforts are needed to reach the goal of universal vaccine coverage in all areas of the country.

### **Preventive Medical Visits**

Pediatric primary care practitioners play a vital role in promoting optimal child development by regularly interacting with children and their

families to monitor children's progress and recommend services when needed. For this reason, pediatric experts recommend that all children receive a series of well-child visits from birth to age 21 years, during which clinicians conduct a physical examination, perform developmental screenings, and provide counsel for health-related behaviors.<sup>35</sup> The importance of preventive care has long been recognized in federal legislation, such as Medicaid's requirement that all states offer eligible children access to Early and Periodic Screening, Diagnosis, and Treatment services.<sup>36</sup> Receiving the recommended number of preventive visits in early childhood may also reduce emergency department visits and hospitalizations.<sup>37</sup>

Disparities in receipt of preventive medical care persist across states (Exhibit 11 and [Appendix A6](#)). The percentage of children ages 0 to 17 who received a preventive medical care visit in the past year ranged from an average of 97 percent in the top five states (Rhode Island, District of Columbia,

### **COLORADO PROMOTES THE MEDICAL HOME MODEL AMONG PEDIATRIC PRACTICES: THE CHILDREN'S HEALTHCARE ACCESS PROGRAM**

A medical home is a place where children receive enhanced access to comprehensive primary care that is well coordinated, efficient, and cost-effective. While the medical home model has gained wide support, many children without insurance or those with public insurance do not have access to medical homes because many pediatricians do not participate in Medicaid or the Children's Health Insurance Program (CHIP), and many are not equipped to provide the array of medical home services.

The Colorado Children's Healthcare Access Program is a nonprofit organization that addresses barriers that prevent private pediatric and family practices from participating in Medicaid and CHIP and seeks to ensure low-income children have access to medical homes. It helps participating practices negotiate with Medicaid to receive enhanced payments for certain preventive services. This can be economically feasible since improved preventive care and care coordination

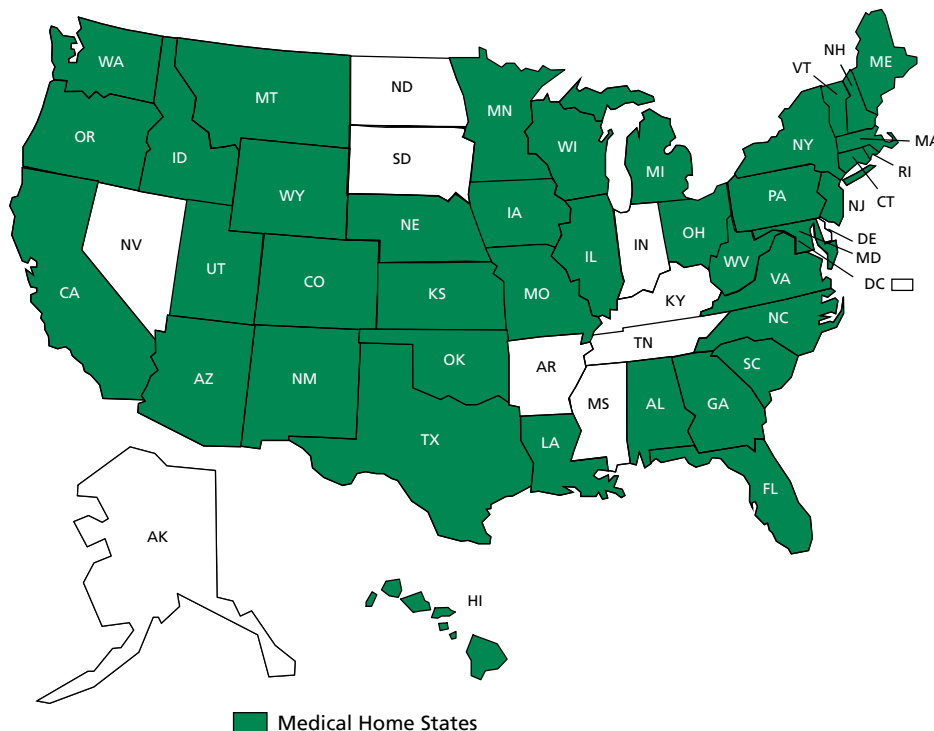
in medical homes can reduce the number of inpatient stays. The organization also offers 14 support services to providers, including care coordination, a resource hotline, and Medicaid billing assistance. In addition, it links private practices with 30 community-based organizations that provide families with services, including mental health counseling, social services, case management, and quality improvement coaching.

The Children's Healthcare Access Program has been replicated in Grand Rapids, Michigan. The success of these two organizations illustrates that the support and spread of the medical home model can be achieved through centralized support services.

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For more information visit <http://www.cchap.org> and see S. Silow-Carroll and J. Bitterman, *Colorado Children's Healthcare Access Program: Helping Pediatric Practices Become Medical Homes for Low-Income Children* (New York: The Commonwealth Fund, June 2010).

**State Efforts to Advance Medical Homes in Medicaid/CHIP**



Note: NASHP is monitoring state efforts to advance medical homes for Medicaid and CHIP participants and has identified 40 states that meet the following criteria: 1) program implementation (or major expansion or improvement) in 2006 or later; 2) Medicaid or CHIP agency participation (not necessarily leadership); 3) explicitly intended to advance medical homes for Medicaid or CHIP participants; and 4) evidence of commitment, such as workgroups, legislation, executive orders, or dedicated staff.  
 Source: National Academy for State Health Policy State Scan, Jan. 2011, <http://www.nashp.org/med-home-map>.

Massachusetts, New York, and Connecticut) to 79 percent in the bottom five states (Idaho, North Dakota, Nevada, Oregon, and South Dakota). The fact that some states are achieving very high rates suggests that universal access to preventive care is an achievable goal, especially as coverage expands under federal reform in the coming years.

Attention also must be given to improving the content of care provided during preventive care visits. Research suggests that the quality of preventive medical care is inconsistent, with large variations among different populations.<sup>38</sup> For example, literature suggests that few adolescents are screened or receive information during a physician visit about health risks such as unsafe sexual practices or alcohol, tobacco, and drug use.<sup>39</sup>

**Preventive Dental Care Visits**

Preventive dental care is often overlooked but equally important to children’s health and well-being. It is estimated that children miss about 1.6 million school days each year because of dental disease.<sup>40</sup> A lack of dental care can lead to tooth decay, which can cause pain, infection, nutritional problems, and sleep deprivation and can affect children’s learning and growth.<sup>41</sup> National health objectives, as set forth by the U.S. Department of Health and Human Services in *Healthy People 2010*, include ensuring that children have a minimum of one dental visit each year.<sup>42</sup> Despite this goal, performance remains uneven across states: almost one-third of children did not see a dentist for a preventive visit in the bottom-ranked

state (Florida) and more than 10 percent did not have a dental check-up in the top-ranked state (Hawaii) (Exhibit 11 and [Appendix A6](#)). Better access to oral health services can reduce tooth decay and lead to a better quality of life for children, as well as reduce financial and societal costs.<sup>43</sup> As discussed in the Potential to Lead Healthy Lives section below, the high rate of poor yet preventable dental health outcomes among children in many states attests to the need to improve preventive dental health care.

### **Developmental Screening**

The early identification of children at risk for developmental delays or disorders can help families prepare for and seek intervention services to support children from a young age, when chances are best to effect change. The American Academy of Pediatrics (AAP) recommends that primary

care providers conduct developmental surveillance at all well-child visits for children from birth to three years, and perform structured developmental screening using a standardized instrument at nine, 18, and 30 months of age.<sup>44</sup> The AAP also recommends that children judged to be at risk for developmental delays are referred for detailed developmental and medical evaluations and for Early Intervention services.

Literature suggests that few pediatricians use effective means to screen their patients for developmental problems.<sup>45</sup> This was evident in the data available for this report. Only one of five young children (ages 10 months to five years) received a standardized developmental screening during their health care visit in 2007, according to their parents ([Appendix A6](#)). The variability among states on this indicator was wide, ranging

#### **NORTH CAROLINA'S USE OF COMMUNITY CARE NETWORKS TO IMPROVE THE DELIVERY OF CHILDHOOD DEVELOPMENTAL SCREENING AND REFERRAL TO EARLY INTERVENTION SERVICES**

Identifying and treating developmental problems during the early years of a child's life is critical and requires a well-coordinated system of care at the community level. A 1999 survey revealed that only 2.6 percent of North Carolina children ages 0 to 3 were receiving essential Early Intervention services. To address this, North Carolina launched the Assuring Better Child Health and Development (ABCD) program in 2000, with support from The Commonwealth Fund. From 2004 to 2008, North Carolina's ABCD program quintupled the number of screening tests administered during Medicaid well-child visits. Screening tests are used to identify young children at risk for developmental disabilities and delays that can compromise their growth and readiness for school. Under the ABCD program, referrals to Early Intervention programs quadrupled. As a result, fewer North Carolina children are entering school with unrecognized or untreated developmental problems. North Carolina ranks first among states on this *Scorecard's* developmental screening measure.

Key elements of the ABCD program include: identifying standardized screening tools and training physicians

on how to implement them without disrupting their workflow; building providers' knowledge of referral agencies; helping practices develop processes for tracking cases; and establishing relationships between practices and community agencies to enhance communication and bridge gaps in understanding.

To implement the ABCD program, North Carolina relied on 14 local community care networks—collectively known as Community Care of North Carolina—that serve low-income children and adults enrolled in Medicaid or CHIP. The networks sought to forge partnerships between physicians and other local stakeholders, helped introduce easy-to-use screening tools, educated medical providers about community resources, and enhanced communication between providers and referral organizations.

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For more information see S. Klein and D. McCarthy, *North Carolina's ABCD Program: Using Community Care Networks to Improve the Delivery of Childhood Developmental Screening and Referral to Early Intervention Services* (New York: The Commonwealth Fund, Aug. 2009).

from a high of only 47 percent in North Carolina to a low of 11 percent in Pennsylvania.

The leading performance of North Carolina likely reflects extensive efforts across the state to emphasize early childhood, screen children, and link children to care if identified as at risk for developmental delays. (See box on North Carolina.)

### **Mental Health Services**

More than one of five children and adolescents in the United States have mental and/or behavioral health problems.<sup>46</sup> Mounting evidence suggests that the early identification and treatment of behavioral health problems may decrease the risk of long-term disability for children and adolescents and avert significant mental health problems in adulthood.<sup>47</sup> Left untreated among children, mental health disorders can lead to higher rates of juvenile incarcerations, school dropout, family dysfunction, drug abuse, and unemployment.<sup>48</sup> The lack of recognition and treatment of these disorders among children is of great concern.<sup>49</sup>

National survey data indicate that mental health support for children in this country is inadequate. On average, only 60 percent of children ages 2 to 17 needing mental health treatment and/or counseling received such care in 2007, according to parents ([Appendix A6](#)). In the bottom five states (Texas, Mississippi, Oregon, Georgia, and Florida), more than half who needed mental health care did not receive it. Even among the top five states (Pennsylvania, Connecticut, Delaware, Rhode Island, and Iowa), over 20 percent on average did not receive needed mental health care.

The shortage of mental health providers for children, stigma attached to receiving mental health services, chronic underfunding of the public mental health system, decreased reimbursement to

mental health providers, and inadequate insurance benefits contribute to underutilization of mental health services among children.<sup>50</sup> Moreover, up to half of families who begin therapy terminate it prematurely.<sup>51</sup> While newly enacted federal mental health parity legislation may help to alleviate some financial barriers, other challenges remain.<sup>52</sup> For example, many pediatricians report that they are ill-equipped to treat patients needing mental health support, indicating the need for systemic changes such as collaborative care models in which mental health specialists partner with primary care physicians to improve the detection and treatment of mental illness.

For example, mental health specialists could work in regional centers as consultants to primary care physicians. Massachusetts is supporting such a shared services approach for children with mental health needs, irrespective of their insurance coverage; the approach has received high ratings from both families and providers. (See box on Massachusetts.)

### **Coordinated Care**

Coordination of care is essential to a high-performing and patient-centered health care system and is a key component of the patient-centered medical home. Fragmentation of care can result in inefficiencies and lead to poor care experiences and poor health outcomes. Pediatric care coordination is intended to link children and their families with appropriate services and resources in an effort to achieve good health.<sup>53</sup> Yet according to the professional literature, families and providers say that care coordination is often lacking in primary care.<sup>54</sup>

Care coordination is crucial to effectively manage chronic conditions such as childhood asthma, and may reduce hospital admissions through the prevention of acute flare-ups.<sup>55</sup>

Asthma, one of the most prevalent chronic diseases of childhood, affects 6.7 million children and is the most common cause of school absenteeism due to chronic conditions.<sup>56</sup> Childhood asthma accounts for almost 600,000 emergency department visits and more than 150,000 hospitalizations annually.<sup>57</sup>

There is great variability in rates of hospital admissions for pediatric asthma (Exhibit 13 and [Appendix A6](#)). Among the 39 states that collect all-payer hospital data, rates of hospital admissions for childhood asthma range from a low of 44 per 100,000 children in Oregon to 251 per 100,000 in New York—nearly six times higher. Four of the top five states in terms of low rates of pediatric asthma

hospital admissions (Vermont, Hawaii, New Hampshire, and Iowa) are leaders in the overall child health system performance ranking. These states, along with Oregon, average 56 pediatric asthma hospital admissions per 100,000 children. This contrasts with the average of the bottom five states (New York, Colorado, Oklahoma, New Jersey, and Kentucky), which is nearly 200 admissions per 100,000 children.

Data on the number of children's asthma admissions are not available for 12 states because they do not collect and report all-payer hospital data to the Healthcare Cost and Utilization Project (HCUP), from which this indicator was drawn.

#### **THE MASSACHUSETTS MENTAL HEALTH MODEL—SUPPORTING MENTAL HEALTH TREATMENT AND SCREENING SERVICES IN PRIMARY CARE**

Insufficient access to child and adolescent mental health and screening services is a nationwide problem and often leads to a failure to appropriately diagnose and treat children suffering from behavioral and developmental delays or emotional disturbances. Massachusetts has developed a variety of programs to improve the early identification of children requiring mental health services and provide primary care physicians with the tools needed to treat such patients.

Because of a shortage in child psychiatrists nationwide, primary care providers find themselves ill equipped to meet the burgeoning demand for children's mental health services. To support primary care providers, Massachusetts developed the Massachusetts Child Psychiatry Access Project. Six regional teams, each consisting of a child psychiatrist, licensed social worker, care coordinator, and administrative staff member, serve pediatric and family practices in their communities. These teams provide primary care physicians with timely access to child psychiatry consultation and, when indicated, help in arranging for families to receive consultations or referrals for children, regardless of their insurance status. It is funded by the state and managed by a private organization, the Massachusetts Behavioral Health Partnership. It has enrolled most primary care practices, representing an estimated 95 percent of all youth in the state, and has high rates of physician participation.

Massachusetts also has programs in place to help primary care physicians identify children who may have behavioral health problems. In 2006, the state formed the Medicaid Children's Behavioral Health Initiative to serve low- to moderate-income residents. Under the initiative, pediatric primary care providers throughout the state are offered training in behavioral health screening and parents receive repeated notifications of screenings and available services. By 2008, the percent of MassHealth (Medicaid) well-child behavioral health screenings for children under age 6 had nearly tripled compared with the previous year. Massachusetts is also refining a comprehensive online information gateway to support this initiative. Developmental screening scores are entered into the system by clinicians and can be accessed by other clinicians involved with the child's care. The state also has procured a system of 32 community service agencies to provide wraparound services and intensive care coordination for children with serious emotional disturbances.

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For more information see B. Sarvet, J. Gold, J. Q. Bostic et al., "Improving Access to Mental Healthcare for Children: The Massachusetts Child Psychiatry Access Project," *Pediatrics*, Dec. 2010 126(6):1191–200; D. R. Lyman, W. Holt, and R. H. Dougherty, *State Case Studies of Infant and Early Childhood Mental Health Systems: Strategies for Change* (New York: The Commonwealth Fund, July 2010); and W. Holt, *The Massachusetts Child Psychiatry Access Project: Supporting Mental Health Treatment in Primary Care* (New York: The Commonwealth Fund, March 2010).

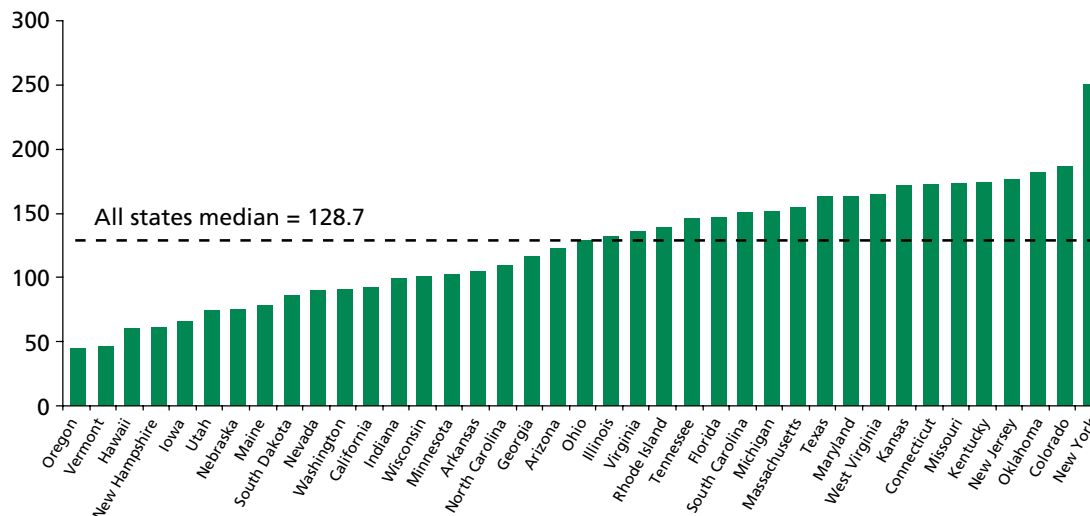


PREVENTION AND TREATMENT

Exhibit 13

**State Rates of Hospital Admissions for Asthma Among Children, 2006**

Admissions per 100,000 children ages 2–17



Data: 2006 Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (AHRQ, HCUP-SID 2006); not all states participate in HCUP. Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

More generally, population data on the number of children with asthma are not available across states.

Still, there is ample evidence that effective care for children with asthma can substantially lower the risk of complications leading to hospital or emergency department use or missed days of school. As illustrated by the Cincinnati Children’s Hospital experience, and repeated by the Children’s Hospital initiative in Boston, a population approach with outreach to families and children at risk makes a difference.<sup>58</sup> (See box on Cincinnati.)

**Children with Special Health Care Needs**

Children with special health care needs are identified by the Maternal and Child Health Bureau as those “who have or are at increased risk for chronic physical, developmental, behavioral, or emotional conditions and who also require health and related services of a type or amount beyond that required by children generally.” Fourteen

percent of U.S. children meet these criteria as of 2005–2006, when the latest National Survey of Children with Special Health Care Needs occurred.<sup>59</sup> These children, and their families, not only have to manage a complex health condition, but also must learn to navigate an even more complex and disorganized health care system.

Families of children and adolescents with an array of medical and nonmedical issues, and families in which caregivers are stressed or depressed, often have difficulty navigating the health, mental health, education, social welfare, housing, and other support systems that might address their needs. Children with special health care needs may require a variety of medical, social, and educational services and frequently receive fragmented or duplicative services.<sup>60</sup> According to parents, the proportion of special needs children who experienced problems getting referrals to see another doctor or receive services ranged from a high of 30 percent in Arizona to a low of 10

percent in Rhode Island. On average, one of five special needs children had difficulty receiving referrals in 2005–2006 (Appendix A6).

One reason for this is that making referrals can be time-consuming for pediatricians and family practitioners, since they require in-depth knowledge of the resources available in the community and state.<sup>61</sup> Having better models of care coordination in pediatric practices would facilitate the referral process. Care coordination also has been shown to lead to shorter average

hospital stays, lower costs, greater satisfaction with services, and stronger relationships with primary care providers.<sup>62</sup>

Children with special health care needs also may require more specialized mental health and other support services to cope with stresses associated with their condition.<sup>63</sup> Family members are put under a great deal of stress and psychological burden in managing the complex care of children with special health needs and may also require assistive services. Therapeutic

### **HARNESSING THE POWER OF COLLABORATIVES—AN INNOVATIVE MODEL IN CINCINNATI LINKING POPULATION HEALTH IMPROVEMENT TO PAY-FOR-PERFORMANCE**

In Cincinnati, Ohio, 165 local physicians in 44 practices have teamed up with Cincinnati Children's Hospital Medical Center to pool their expertise in helping children prevent asthma episodes before they become life-threatening. In 2003, this group of physicians, known as the Physician–Hospital Organization affiliated with Cincinnati Children's Hospital, launched an asthma improvement collaborative. Its aim is to ensure children with asthma receive evidence-based care, thus reducing asthma-related emergency department/urgent care visits, office visits, missed school days, and missed parent workdays. The collaborative has served more than 13,000 children with asthma in greater Cincinnati, representing approximately 35 percent of the region's pediatric asthma population.

In early 2004, the Physician–Hospital Organization approached Anthem Blue Cross and Blue Shield in Ohio, which provides coverage to the highest percentage of the commercially insured population in greater Cincinnati, to elicit its support for an asthma pay-for-performance program. The program sought to reward measurable improvements in asthma care achieved at the network and practice levels, accelerate practices' engagement in improvement work, and support the business case for quality improvement.

In addition, members of the asthma improvement collaborative designed strategies to drive changes at the provider level. These included: creation of multidisciplinary quality leadership teams, including a physician, nurse or medical assistant, and office manager, at each practice; concurrent data collection during office visits through the use of an asthma decision support

tool; all-payer asthma population identification; practice workflow redesign; a patient self-management collaborative; a flu shot improvement collaborative; and multiple network meetings and conference calls to promote communication and collaboration among practices.

From 2003 to 2006, the percentage of the asthma population in the network receiving "perfect care" increased from 4 percent to 88 percent, with 18 of 44 practices achieving a perfect care percentage of 95 percent or greater. Compared with baseline performance in 2004–05, the number of asthma-related Cincinnati Children's Hospital emergency department/urgent care visits had decreased by 44.9 percent by 2007–08. Similarly, the number of asthma-related hospital admissions decreased by 47.1 percent over this period. While the pay-for-performance program has since concluded, the asthma improvement collaborative continues. Recent recognition includes selection by the American Academy of Pediatrics for a national spread campaign, and the Web-based asthma registry being designated a "best practice" by the federal Agency for Healthcare Research and Quality.

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For more information visit <http://www.tristatepho.org> and see K. E. Mandel and U. R. Kotagal, "Pay for Performance Alone Cannot Drive Quality," *Archives of Pediatrics and Adolescent Medicine*, July 2007 161(7):650–54. For outcomes data, see "Improving Asthma Care within a Large Community-Based Pediatric Network," a poster presented at the National Initiative for Children's Healthcare Quality (NICHQ) annual conference in Orlando, Florida, in March 2008, available at [https://www.tristatepho.org/portal/Uploads/NICHQ\\_Poster.pdf](https://www.tristatepho.org/portal/Uploads/NICHQ_Poster.pdf).

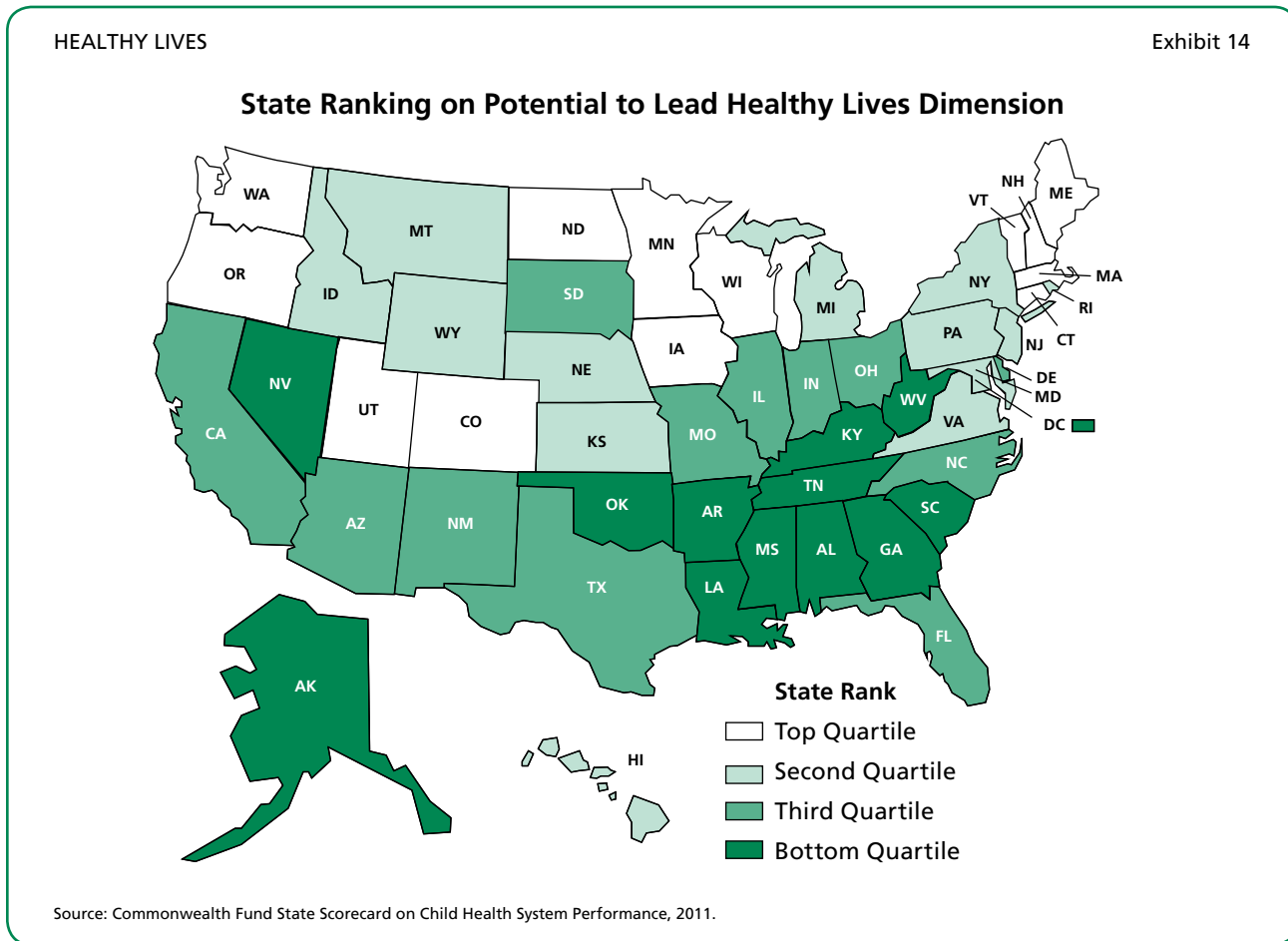
and supportive services such as rehabilitation, environmental adaptations, personal assistance, mental health, home health, or respite care play a pivotal role in decreasing burdens on families and promoting maximal health and independence of special needs children.<sup>64</sup>

While over 10 million children in the nation were estimated to have a special health care need in 2005–2006, the parents of nearly 30 percent of such children, on average, reported needing but not receiving family support services such as family counseling, respite care, and genetic counseling services (Appendix A6).<sup>65</sup> The rate of children with special health care needs who did not receive the support services their families needed ranged from nearly 20 percent in Indiana to more than 40 percent in Utah.

Current federal policies, including *Healthy People 2010* and the Maternal and Child Health Bureau Strategic Plan, explicitly target improving access to services for children with special health care needs.<sup>66</sup> Successful adoption and spread of the patient-centered medical home model for children would particularly benefit such children.

## CHILDREN'S POTENTIAL TO LEAD HEALTHY LIVES

The early years of life offer a critical window of opportunity in which to lay a foundation for good health, school readiness, and ultimately, success in adulthood. Therefore, ensuring that children have a healthy start in life is fundamental to the progress of all states. To do so, states are looking for comprehensive approaches that emphasize



early childhood health and development as well as prevention of chronic disease. These include policies and programs intended to stem the rise of obesity, curb smoking, and promote healthy lifestyles while ensuring the timely delivery of effective care and resources.

States' performance in achieving optimal child health outcomes reflects the complex interaction of multiple determinants of health. There is little question that health outcomes are heavily shaped by forces both outside and inside the health care system. Variations in income, education, and the living environment of a child's family are some of the factors that influence the extent to which children are able to reach their full health potential. The *Scorecard* findings of wide variations in children's health outcomes point to targets for improvement, yet effective interventions often require comprehensive approaches that address broader social and public health risk factors as well as the health care system.

The *Scorecard* uses seven indicators of children's health outcomes to assess state performance in this dimension: infant mortality, mortality among children ages 1 to 14, children at risk for developmental delays, overweight or obese children, children with oral health problems, and adolescents who smoke or do not get the minimum recommended physical activity.

The analysis found large variation in states' ability to promote healthy lives for their children, with distinct regional patterns. States in the South consistently lag on this dimension, while the top-ranked states were spread across parts of the Upper Midwest, Mountain, and Pacific Northwest regions, and New England (Exhibit 14). Minnesota—the leading state in terms of children's health outcomes—was the only state to consistently perform in the top quartile on all

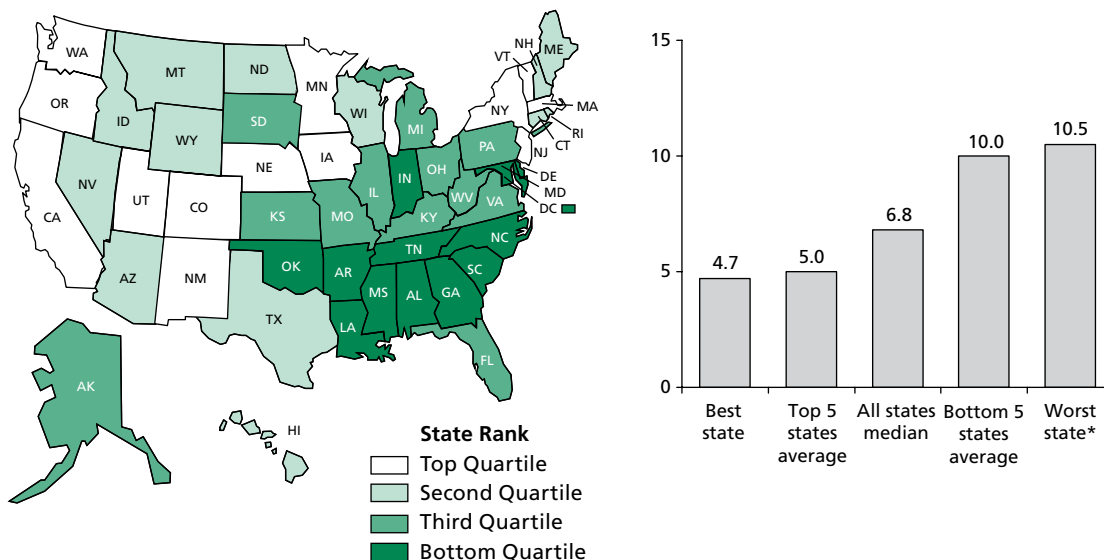
seven indicators of healthy lives for children.<sup>67</sup> (See box on Minnesota.) For several of the top-ranked states, performance on at least one of the indicators fell in the bottom half of the distribution, pointing to areas for further improvement.

### Infant and Child Mortality

After decades of substantial decline, the rate of infant deaths has leveled off since 2000. The plateau in the U.S. infant mortality rate is largely due to rising numbers of preterm births and low-birthweight infants. More than a third of infant deaths are caused by problems related to babies being born too early.<sup>68</sup> Timely and continuous prenatal care and healthy maternal behaviors can help improve birth outcomes through early identification of risk factors and provision of advice to encourage healthy lifestyles, treatment of conditions such as diabetes and high blood pressure, birth planning, and referrals to promote healthy pregnancies, including nutrition and smoking-cessation counseling.<sup>69</sup>

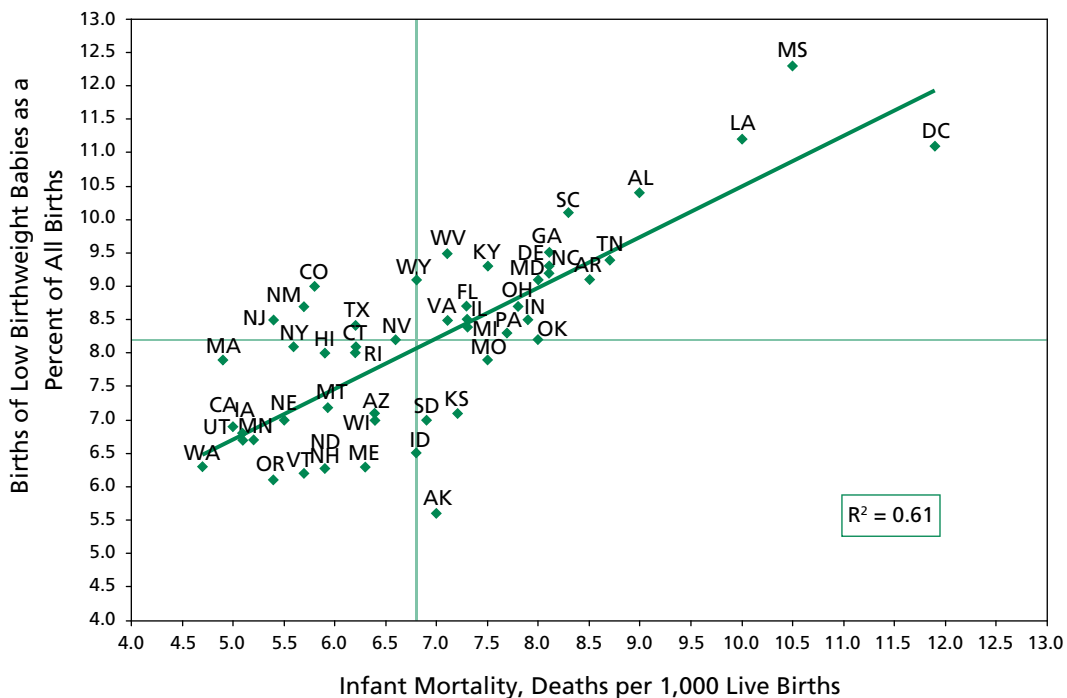
The chances that infants will survive to their first birthday vary considerably across states (Exhibit 15). Rates in the states with the highest infant mortality are twice as high as those in states with the lowest rates. In 2006, the infant death rates in Louisiana, Mississippi, and the District of Columbia averaged 10 to nearly 12 per 1,000 live births—well above the national average of 6.7 per 1,000 (Appendix A7). Meanwhile, infant death rates averaged five per 1,000 live births in the five highest-rate states (Washington, Massachusetts, California, Iowa, and Utah). States in the South and Midwest generally had higher infant mortality rates than in other regions. Disturbingly, rates have increased in some of the worst-performing states in recent years. As expected, across states there is a strong correlation between the number of low-birthweight infants and infant mortality

Infant Mortality by State: Deaths per 1,000 Live Births, 2006



\* Excludes District of Columbia with 11.9 infant deaths per 1,000 live births.  
 Data: National Vital Statistics System.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

State Rates on Infant Mortality and Low-Birthweight Babies



Data: Infant mortality—2006 National Vital Statistics System; Low birthweight—Kaiser [statehealthfacts.org](http://statehealthfacts.org) (2007 National Vital Statistics System).  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

### MINNESOTA—PROMOTING LOCAL INITIATIVES TO DRIVE HEALTHY LIVES

Minnesota, the leading state on this *Scorecard's* Healthy Lives dimension, is using community-driven efforts to create sustainable and systemic changes that support healthy choices among its population. In 2009, the Minnesota Department of Health awarded 40 grants to Minnesota communities to help lower rates of smoking and obesity. The \$47 million appropriation for the Statewide Health Improvement Program (SHIP) will contribute to over 80 projects in Minnesota that span all 87 counties and eight tribal governments. Each community that receives a grant is required to make a 10 percent match. Grantees are required to create community action plans, assemble leadership teams, and establish partnerships.

SHIP is part of Minnesota's historic health care reform initiative, signed into law in 2008. To address the leading preventable causes of illness and death in the United States, SHIP will focus on reducing obesity and tobacco use through efforts in community, worksite, health care, and school settings. Schools in particular are uniquely situated to support children's healthy behavior during the years when they are acquiring lifestyle habits. For example, communities have used SHIP

funds to: deploy a tobacco-free policy for all students, staff, and visitors on all school and university grounds, in student housing, and at all school- and university-sponsored events; increase opportunities to walk and bike to and from school; expand access to recreation facilities outside of school hours; promote healthy food and drink options; and implement policies that support high-quality physical education.

SHIP is a unique state initiative because it is locally controlled; grantees establish plans that are best suited to their communities and employ evidence-based strategies that result in system-level changes. The program is evaluated at both the state and local levels to ensure progress is made toward a set of measurable outcomes. SHIP interventions are expected to decrease the state's health care spending by \$1.9 billion by 2015. Other states can look to Minnesota's success on this *Scorecard's* Healthy Lives indicators, which is significantly attributable to its support of a comprehensive public health agenda.

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For more information visit <http://www.health.state.mn.us/healthreform/ship/index.html>.

rates—underscoring the importance of promoting healthy pregnancies to maximize the likelihood of full-term births (Exhibit 16).

Wide differences across states also exist in the risk of death for an infant or for a child between ages 1 and 14 years. In 2007, there was a threefold range across states in such mortality rates—ranging from more than 30 per 100,000 children in Alaska and Mississippi to less than 10 per 100,000 in Rhode Island.

Massachusetts, Minnesota, and Washington have among the lowest death rates for both infants and children (ages 1 to 14 years), whereas the District of Columbia along with Arkansas, Louisiana, and Mississippi grapple with the highest infant and child death rates in the nation.

An individual state's performance on these two mortality indicators did not always correlate. For example, Delaware had a relatively high mortality

rate among infants up to one year of age, yet ranked second-best for its low child mortality rate. Such divergence suggests that states may be able to look for benchmarks for improvement within their own borders to address factors putting children at risk from birth through adolescence.

### Developmental Delays

Developmental, behavioral, or learning delays in the early years of life can hinder children from reaching their full potential. Based on parental reports, the percentage of young children (ages 4 months to 5 years) judged to be at moderate or high risk of developmental delays ranged from an average of 19 percent in the top five states (Minnesota, Maine, Colorado, Oregon, and West Virginia) to more than 30 percent in the bottom five states (Louisiana, Mississippi, Arkansas, Alabama, and Nevada) (Appendix A7). Notably,

states generally lack registries or other means to track and monitor such at-risk children. States with high rates of children with developmental delays appear to be missing opportunities for early detection and intervention, as evidenced by their low reported rates of developmental screening. For example, Alabama, Arkansas, California, and the District of Columbia have among the highest rates of children at risk of developmental delays (30% or more) and were also the bottom states in terms of early childhood screening.

### **Oral Health**

As mentioned above, oral health is an integral component of children's learning and growth. Yet oral health care is often neglected, unavailable, or unaffordable, especially for low-income children.<sup>70</sup> In 2007, more than one-quarter of children ages 1 to 17 (27%) had at least one of the following oral health problems within the past six months: decayed teeth or cavities, toothache, broken teeth, or bleeding gums, based on their parents' reports ([Appendix A7](#)).<sup>71</sup> Even in the state with the lowest rate of such problems, Minnesota, one of five children had oral health concerns ([Exhibit 17](#)). Unmet needs for dental care based on reports of pain and tooth decay or damage were highest in Arizona and Mississippi, where nearly one of three children had such oral health problems.

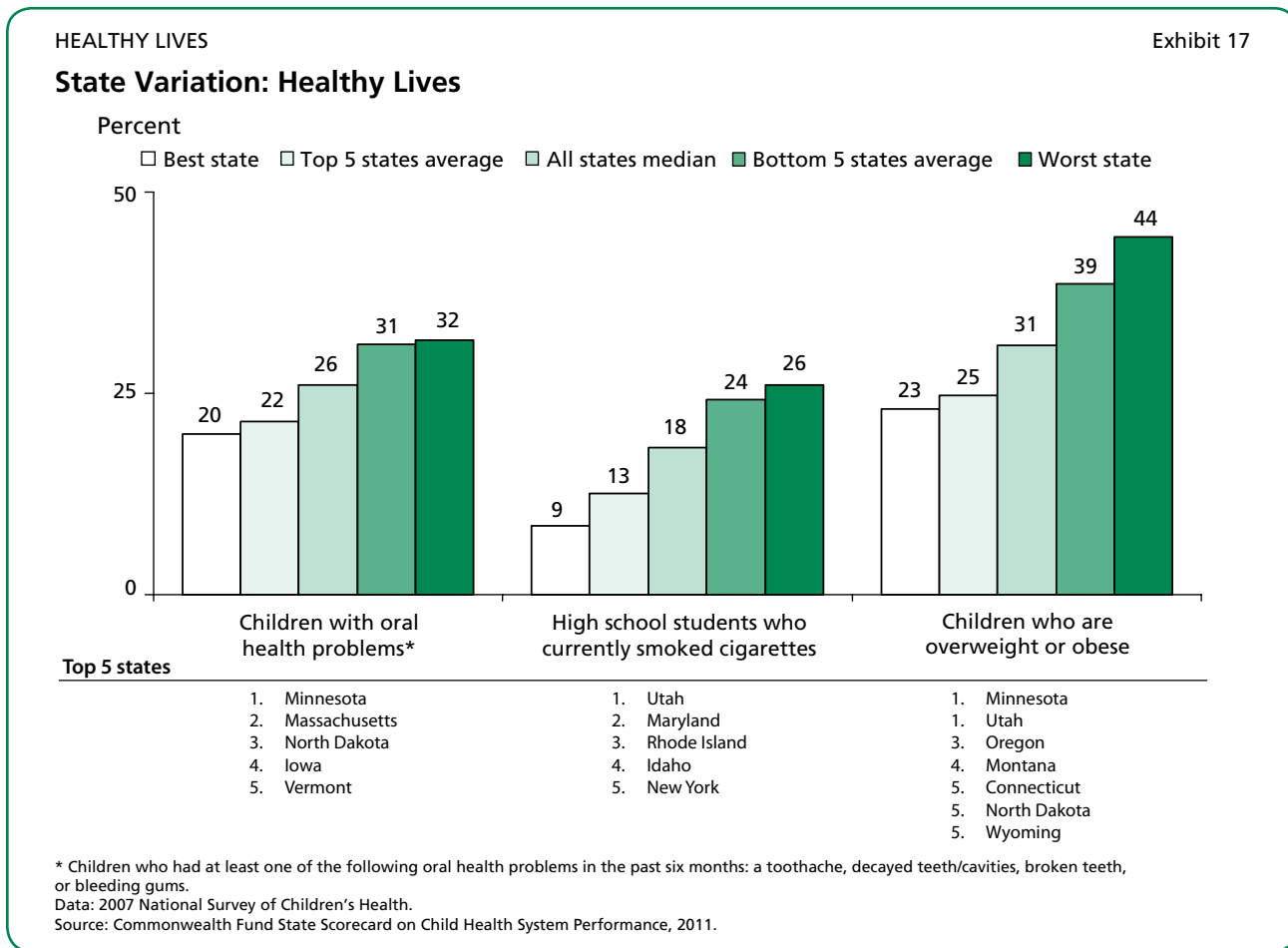
Combating these largely preventable and treatable dental conditions will require public education, expansion of access to dental care, and integration of oral health into routine well-child care. Increasing the availability of dental care for children through broader use of midlevel dental providers will likely be instrumental to ensure access to timely, affordable care in all communities, including rural and low-income areas.<sup>72</sup> Strategies to improve will also require raising awareness of the importance of preventive dental practices and

expanding access for parents. Parents who do not obtain dental care for themselves are less likely to bring their children in for dental care.<sup>73</sup>

### **Public Health: Smoking, Obesity, and Exercise**

Cigarette smoking is the leading preventable cause of death in the United States, costing an estimated 443,000 lives a year.<sup>74</sup> It is a serious child health issue, because dependence begins during childhood or adolescence in the majority of cases. Experts recommend that physicians counsel adolescents on health-related behaviors such as smoking as part of multifaceted prevention programs involving coordinated effort by families, schools, and the community.<sup>75</sup>

While the rate of youth who smoke began to decline in the late 1990s, progress has slowed in recent years and smoking rates continue to vary widely across states.<sup>76</sup> There was a threefold difference in the reported rate of current cigarette use among high school students across the 42 states reporting data in 2009 ([Exhibit 17](#)).<sup>77</sup> An average of 13 percent of high school students smoke cigarettes in the five lowest-rate states (Utah, Maryland, Rhode Island, Idaho, and New York), compared with a quarter of students (24%)—double the rate—in the five states with the highest adolescent smoking rates (Kentucky, New Mexico, Indiana, South Dakota, and Oklahoma) ([Appendix A7](#)). In fact, only a handful of states have cigarette use rates among high school students that meet the *Healthy People 2010* target of 16 percent or less.<sup>78</sup> Any further progress is at risk unless states make it more difficult for children to smoke and increase funding for tobacco prevention and cessation programs. According to the latest estimates, states have reduced funding for such programs to the lowest level since 1999.<sup>79</sup> In 2011, only 2 percent of all revenues from the tobacco settlement and



tobacco taxes will be spent to prevent tobacco use among children as well as reduce use among adults.

As with smoking, preventing obesity among children and lowering childhood obesity rates are national health priorities. Research has found that overweight children are at increased risk of becoming obese adults and obese parents are, in turn, at risk for raising obese children.<sup>80</sup> Obesity in adolescence raises the likelihood of becoming severely obese in adulthood.<sup>81</sup> Higher rates of overweight and obesity during childhood increases the likelihood of diabetes, hypertension, stroke, and heart disease later in life, as well as emotional problems such as poor self-esteem and depression. The consequences place a tremendous financial strain on our health care system: recent estimates place obesity-related medical costs at \$168 billion

each year, a figure that is bound to increase without a reversal of trends.<sup>82</sup> Targeting the prevention of obesity prior to adulthood is essential to overcoming the epidemic and controlling health care costs.

Nationally, nearly one-third of children ages 10 to 17 (32%) are either overweight or obese, according to parent-reported height and weight (Appendix A7).<sup>83</sup> The variation across states is wide and startling, ranging from a low of 23 percent of children who are overweight or obese in Utah and Minnesota to a high of 44 percent in Mississippi, as of 2007 (Exhibit 17). Only three states—Minnesota, Utah, and Oregon—had less than one-quarter of children who were overweight or obese. States in the Southeastern region have the nation's highest rates of overweight or obese



children, and parts of the Upper Midwest, the Mountain region, and New England have the lowest. Not surprisingly, these geographic patterns closely resemble those for obesity among the adult population.<sup>84</sup>

Concerns about the lack of physical activity among youth have been mounting in light of the link between inactivity and obesity and other negative health outcomes during childhood and later in life. In 2009, only 37 percent of high school students met recommended levels of physical activity, defined as doing any kind of physical activity (that includes vigorous activity for some of the time) for a total of at least one hour per day on five or more days per week ([Appendix A7](#)). Idaho was the only state out of 42 states with available survey data where more than half of students (54%) participated in recommended levels of physical activity. In South Carolina and Massachusetts, the same was true for only a third of students. Clearly, there are many missed opportunities to achieve sustained weight loss and guard against the risk of premature death through increased physical activity.

There have been coordinated national efforts to reduce childhood obesity. In early 2010, the U.S. Preventive Services Task Force recommended that clinicians screen children age 6 and older for obesity and offer or refer them to intensive weight-loss programs.<sup>85</sup> The Affordable Care Act requires private insurance plans to provide obesity screening for all adults and children at no cost, including body mass index (BMI) measurements for children.<sup>86</sup> As part of the national *Let's Move!* campaign, the President's Task Force on Childhood Obesity outlined an action plan focused on early childhood, healthy eating, and physical activity to drive down obesity rates to 5 percent by 2030.<sup>87</sup> The effort further recognizes the integral role

that primary care and pediatric providers play in managing obesity, urging them to engage in BMI measurement as well as counsel parents and children on behavioral interventions in the context of families and communities.<sup>88</sup>

Smoking and obesity are serious threats to the U.S. population's quality of life and health. Nonetheless, they can be overcome through a population-based approach to care, focused on disease prevention and health promotion in early childhood. A number of states are integrating public health approaches into their reform efforts by developing policies and models of care that prioritize prevention and support healthy environments and lifestyles, along with improved access to care for underserved groups.<sup>89</sup> In doing so, states must incorporate public health principles into the day-to-day functioning of health care delivery systems. In supporting their children's ability to lead healthy lives, states also must seek to better understand the broader economic and social conditions in which children live.

## **EQUITY**

A state's health system should be judged by how well it performs for its youngest and most vulnerable residents. By offering public health insurance programs such as Medicaid and CHIP, and by funding safety net providers, all states devote considerable resources to providing care for children in disadvantaged or low-income families. In particular, delivery of preventive services under Medicaid's Early and Periodic Screening, Diagnosis, and Treatment benefit has contributed significantly to the quality of care received by enrolled children, helping to ensure they are ready for school and able to reach their full potential.<sup>90</sup> Policy strategies that continue to support a standard of care for child development

and eliminate barriers to early and preventive health care are effective levers to ameliorate health disparities among low-income, uninsured, and minority populations.

The *Scorecard* assesses equity by comparing gaps in performance among subgroups of children by income level, insurance status, and race/ethnicity. The analysis compares performance levels among each state's most vulnerable child populations to a common benchmark—the national average—for a subset of indicators. We call the difference between the state's most vulnerable group and the national average the “equity gap.” Up to six indicators are examined for each of the relevant subgroups, depending on data availability. In total, there are 14 comparisons included in the equity dimension of state health system performance for children: five by income, three by insurance status, and six by race/ethnicity.

States ranked at the top of the equity dimension have the smallest gaps in performance between national averages and levels attained for low-income, uninsured, and minority children. The five top-ranked states for equity—Maine, Vermont, Hawaii, Massachusetts, and West Virginia—score in the top quartile on this dimension for all three vulnerable populations (Exhibit 18). Conversely, seven of the 13 states in the bottom quartile score in the bottom quartile for all three groups. Given its substantial low-income and rural populations, West Virginia stands out for its performance in providing relatively equitable care for the most-disadvantaged children, providing an example for states facing similar demographics.

States that perform well on overall rankings—on measures of access and quality—tend to have smaller performance gaps between the national average and their vulnerable child populations. This relationship indicates that states that do

better for their entire child population also tend to do better for their most vulnerable groups on the equity indicators examined.

The following section examines equity gaps in terms of access to care and prevention and treatment, and explores disparities on selected health outcomes.

### Health Insurance Coverage: Gaps by Income

Extending health insurance to the uninsured is the most important step to ensuring equitable access to health care. Nonetheless, about 16 percent of children living in families with incomes less than 200 percent of the federal poverty level were uninsured in 2008–09—more than double the uninsured rate among children in higher-income families (Appendix A8). Among the 45 states with sufficient data, uninsured rates among low-income children (under 200 percent of poverty) ranged from an average of 24 percent in the bottom five states (Florida, Nevada, Texas, Arizona, and Colorado) to less than 7 percent in the top five states (Hawaii, Massachusetts, West Virginia, Maine, and Michigan). Remarkably, low-income children in these top-ranked states had higher insurance rates than the average of all U.S. children. On the other hand, low-income children in the bottom-ranked states had uninsured rates up to 18 percentage points higher than those among higher-income children in the same states.

Studies estimate that four of five currently uninsured low-income children are eligible for public health insurance under either Medicaid or CHIP.<sup>91</sup> States' success in enrolling eligible children in these programs varies greatly, from a 55 percent participation rate in Nevada to highs of 95 percent in the District of Columbia and Massachusetts.<sup>92</sup> The majority of states with the lowest participation rates (under 80 percent) also had among the

highest rates of low-income children without any coverage. In these states, greater effort is needed to enroll those who are already eligible for publicly sponsored health insurance through better outreach and simplified enrollment and renewal procedures.

Low-income parents are also at great risk for being uninsured. Nearly 40 percent of parents ages 19–64 earning less than 200 percent of the federal poverty level were without insurance, compared with 10 percent of those at 200 percent of the poverty level or higher (Appendix A8). As with low-income children, Massachusetts far outperformed the rest of the nation on this indicator, with 10 percent of parents living below 200 percent of the federal poverty level uninsured. Hawaii and Maine had the next-lowest uninsured rates among low-income parents (12% and 14%, respectively). Outside of these states, however, rates ranged from 23 percent in Ohio to 59 percent in Texas. While parents with higher incomes in Texas fare better than their low-income counterparts, their uninsured rate (18%) is also the worst among high-income parents in the nation.

These inequities in insurance status have consequences for children’s health and growth. As discussed below, children who have no insurance face markedly higher risk of lacking a regular source of care, not receiving comprehensive care, and having unmet needs for health and dental care.

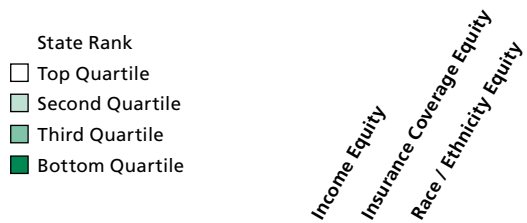
**Access to Primary Care and Health Outcomes: Gaps by Income and Insurance**

Providing all children with a medical home can promote equity and improve their health and well-being.<sup>93</sup> Yet the likelihood of a child having a primary care provider that meets the criteria of a medical home varies significantly by income and insurance (Exhibit 19 and Appendix A9).

**EQUITY**

Exhibit 18

**Equity Dimension and Equity Type Ranking**



RANK	STATE	PERFORMANCE BY EQUITY TYPE		
		Income Equity	Insurance Coverage Equity	Race / Ethnicity Equity
1	Maine	3	1	3
2	Vermont	5	2	1
3	Hawaii	6	4	2
4	Massachusetts	2	12	6
5	West Virginia	1	9	11
6	Connecticut	21	3	3
7	Iowa	3	20	8
8	Alaska	12	7	13
9	Michigan	7	6	23
10	New York	10	10	19
11	New Hampshire	8	21	13
12	Minnesota	17	10	22
13	Missouri	26	21	5
14	Rhode Island	28	4	21
15	Pennsylvania	9	17	29
15	South Carolina	20	25	10
17	Kentucky	14	36	7
17	North Dakota	28	17	12
19	Tennessee	11	8	39
20	Montana	35	14	13
21	Washington	23	31	9
22	Indiana	13	28	23
23	Arkansas	22	13	41
23	Nebraska	17	26	33
25	Wisconsin	27	16	35
26	Kansas	17	34	29
27	Alabama	16	39	27
27	Colorado	43	23	16
27	Ohio	14	32	36
27	Virginia	25	23	34
31	Oklahoma	24	27	32
32	Illinois	32	30	25
33	District of Columbia	31	17	41
34	Maryland	41	14	37
35	New Mexico	44	37	18
35	South Dakota	28	28	43
37	Louisiana	37	43	20
38	Florida	46	38	17
39	California	48	35	26
39	New Jersey	37	44	28
41	Wyoming	39	41	31
42	Utah	34	41	38
43	North Carolina	36	33	50
44	Idaho	40	45	39
45	Delaware	42	40	48
46	Georgia	33	51	49
47	Oregon	47	47	44
48	Mississippi	44	49	46
49	Arizona	49	46	46
50	Texas	50	49	44
51	Nevada	51	48	51

Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

Low-income children in all states fare poorly on this indicator. In 2007, almost half of children in poor families, on average, did not have a medical home in the five top-ranked states (West Virginia, Vermont, Iowa, Montana, and Nebraska). This rate worsens to over 70 percent in the bottom five states (Nevada, Utah, Texas, New Mexico, and California). West Virginia stands out for being the only state where children in low-income families are more likely to have a medical home than the national average rate. In contrast, Texas has one of the lowest rates of medical home access among poor children (72% did not have a medical home). Interestingly, Texas children in higher-income families (400% of the federal poverty level or higher) have the highest rate of access to medical homes in the nation, indicating a concentration of resources in more affluent communities.

Among the uninsured, a similar pattern appears: uninsured children were far less likely to have primary care medical homes than children with private insurance in all states. On average, 45 percent to 75 percent of uninsured children did not have a medical home in the top- and bottom-ranked states (Exhibit 19).

Lower incomes and lack of insurance are associated with poorer access to primary care and preventive services. Nationally, more than a third of children in families living below the poverty level (35%) did not have visits for medical and dental preventive care in 2007, compared with 21 percent of children in families with higher incomes (Exhibit 20). The disparity is even wider by insurance: half of children without insurance coverage (52%) did not receive these preventive care visits, compared with about a quarter of those who were privately insured (25%) or publicly insured (28%).

Looking across states, more than 40 percent of poor children in the five bottom-ranked states (Nevada, Oregon, Colorado, Florida, and North Dakota) did not receive medical and dental preventive care visits, compared with 22 percent of poor children in the top four states (Rhode Island, Hawaii, New York, and West Virginia) and the District of Columbia. Rates of preventive care visits among uninsured children varied more than twofold across the top- and bottom-ranked five states (24% vs. 61% did not receive both medical and dental preventive care visits, respectively). Among the five states with the largest equity gaps (Oregon, Louisiana, Texas, North Carolina, and Utah), even children with private insurance did worse than the average for all U.S. children on this measure.

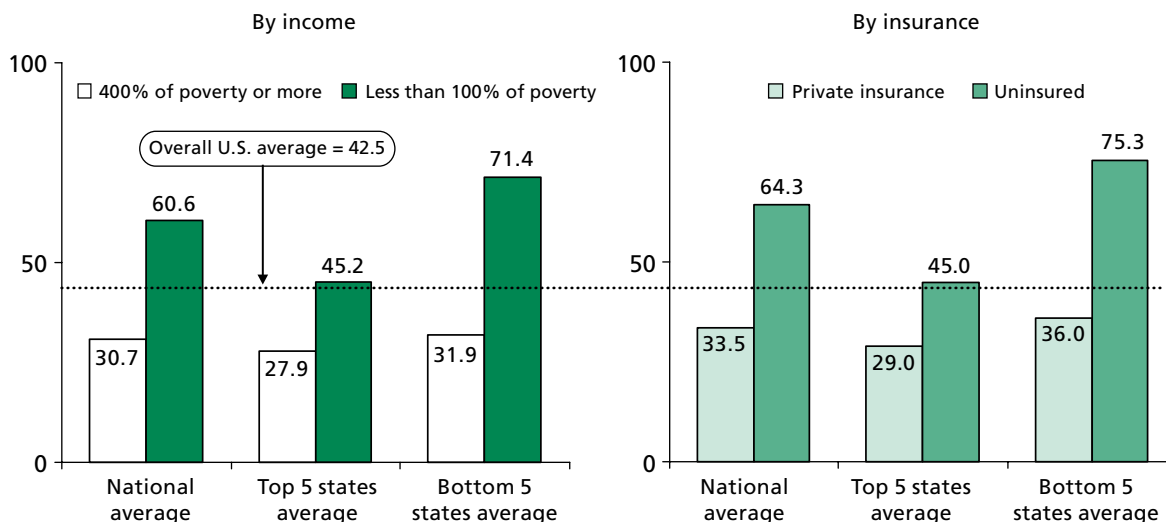
Many of these children who have inadequate access to primary and preventive care—those without any coverage and living in poverty—are at increased risk of experiencing worse health outcomes than other children. In terms of oral health problems, children in low-income families have more than one-and-a-half times the prevalence of untreated cavities, pain, bleeding gums, or other dental problems than higher-income children in most states (Exhibit 21). Even in the five states with the smallest equity gap between low-income children and the national average (Iowa, Alaska, Kansas, Utah, and Alabama), 28 percent of low-income children had such preventable oral health concerns in 2007. Likewise, uninsured children are far more likely to live with oral health problems than those with insurance: rates of such problems were two times higher among uninsured than privately insured children in some states. Moreover, the share of uninsured children with unmet dental needs varied more than threefold across states—14

EQUITY

Exhibit 19

### Children Without a Medical Home by Income and Insurance

Percent of children without a medical home



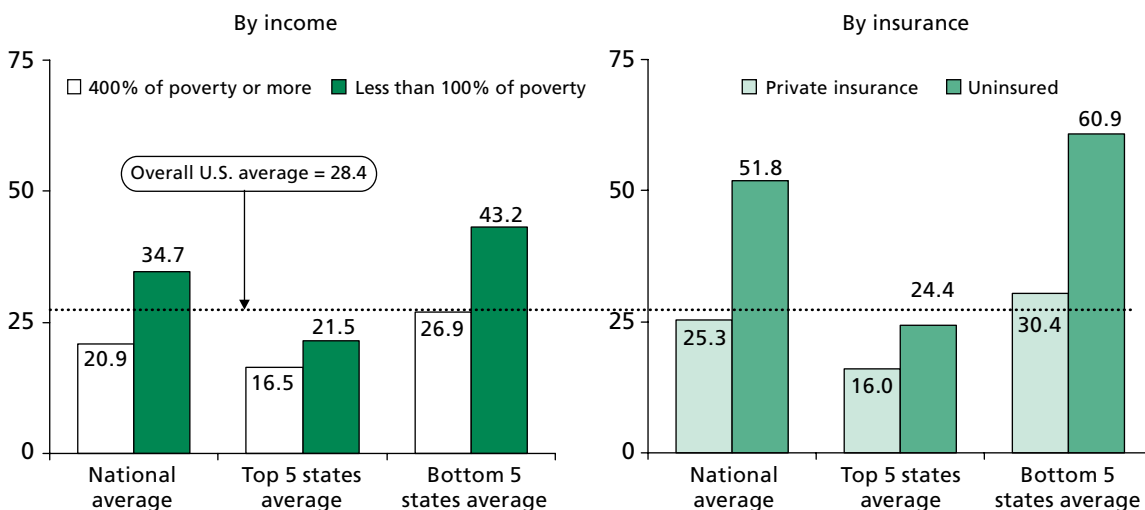
Note: Top 5 states refer to states with smallest gaps between overall U.S. average and low-income/uninsured groups.  
 Bottom 5 states refer to states with largest gaps between overall U.S. average and low-income/uninsured groups.  
 Data: 2007 National Survey of Children's Health.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

EQUITY

Exhibit 20

### Children Without Both Preventive Medical and Dental Care Visits by Income and Insurance

Percent of children without preventive medical and dental care visits



Note: Top 5 states refer to states with smallest gaps between overall U.S. average and low-income/uninsured groups.  
 Bottom 5 states refer to states with largest gaps between overall U.S. average and low-income/uninsured groups.  
 Data: 2007 National Survey of Children's Health.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

percent in Massachusetts and Maine to 47 percent in Pennsylvania.

Oral health problems are also more prevalent among children with public insurance than those with private insurance (Appendix A10). A report by the Government Accountability Office found that publicly insured children often do not receive needed dental care, despite being substantially more likely to experience dental disease.<sup>94</sup> Low dentist participation in Medicaid and CHIP contributes to reduced dental access for low-income children. Some states are increasing the supply of dental care through higher reimbursement and simplified administration, in addition to expanding member outreach and education.<sup>95</sup> Notably, Alaska began the Dental Health Aide Therapist program in 2003 in response to the high unmet needs of its rural Alaskan Native population. The successful program has since served as a model of how greater use of midlevel dental providers can improve

children’s access to dental services and the quality of care.<sup>96</sup>

The Children’s Health Insurance Program Reauthorization Act of 2009 requires all CHIP programs to provide a comprehensive dental benefit package. In addition, states can draw from CHIP funds to offer dental-only supplemental coverage for children who lack adequate dental coverage.<sup>97</sup> However, findings indicate inclusion of a benefit is not sufficient: states will need to address the supply of dental care, likely with workforce innovations to meet children’s preventive and other oral health needs.

### Gaps by Race and Ethnicity

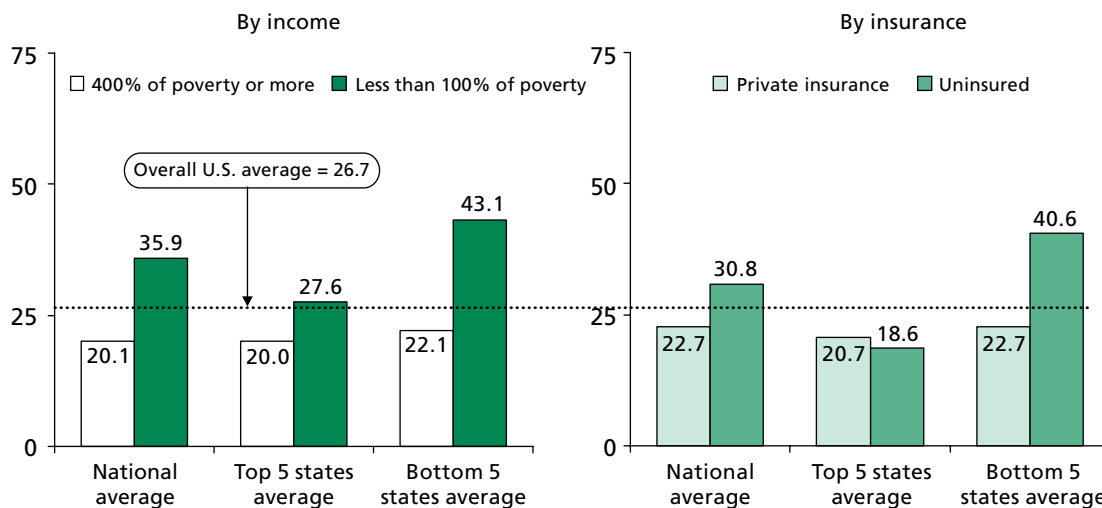
The *Scorecard* compares access to and quality of care by racial and ethnic groups, focusing on states that have substantial minority populations and sufficient data for analysis. Because minorities often have lower incomes and are more likely to be uninsured than whites, the disparities observed

**EQUITY**

Exhibit 21

### Children with Oral Health Problems by Income and Insurance

Percent of children with a toothache, decayed teeth/cavities, broken teeth, or bleeding gums in past six months



Note: Top 5 states refer to states with smallest gaps between overall U.S. average and low-income/uninsured groups. Bottom 5 states refer to states with largest gaps between overall U.S. average and low-income/uninsured groups. Data: 2007 National Survey of Children’s Health. Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

among minorities also reflect concerns related to income and insurance status.

Overall, Hispanic children have the highest uninsured rate: 18 percent were without any coverage in 2008–09, compared with only 7 percent of white children. Across the 29 states with sufficient data to generate uninsured estimates among Hispanic children, uninsured rates ranged from a low of 5 percent in Massachusetts to a high of 28 percent in North Carolina. Uninsured rates among black children—varying from 2 percent in Massachusetts to more than 20 percent in Florida—were generally lower than among Hispanic children, and at times white children, within the same state. Meanwhile, the highest uninsured rate among white children in any state was 14 percent (Mississippi).

The variation in coverage levels among minority parents is even wider. Overall, 22 percent of black parents and 41 percent of Hispanic parents were without health insurance—two and four times higher than their white counterparts, respectively. In fact, Hispanic parents had the highest uninsured rate in all 24 states with available data. In the five states with the largest equity gaps (North Carolina, Georgia, Texas, Oregon, and Maryland), more than half of Hispanic parents (53%), on average, were without insurance.

Black, Hispanic, and other minority children are at higher risk of lacking a primary care medical home to coordinate their care: medical home rates among minority children were about 20 percentage points to 40 percentage points lower than among white children in the majority of states. As an exception, minority children in West Virginia and Vermont had more favorable rates compared with the U.S. average for all children. Meanwhile, the low rates among Hispanic children in Pennsylvania, Utah, and Nevada and children of

other ethnicities in New Mexico and Alaska placed these states at the bottom—more than 70 percent of these children did not have a medical home.

Some minority children fare relatively better than white children in terms of receipt of medical and dental preventive visits, with black children more likely to receive preventive visits in two-thirds of the states for which data are available. This was not the case for Hispanic children, who were much more likely than other children to go without routine preventive care. In several cases, states ranked low on measures of equitable care as a result of shortfalls for selected minority groups that comprise relatively small shares of these states' total child populations. For example, Minnesota and North Carolina performed poorly for a racial/ethnic category that included Asian Americans and Native Americans. For these states, improvement efforts focused on these populations could substantially reduce health disparities.<sup>98</sup>

The racial/ethnic disparities in an infant's chance of survival are a striking example of the human toll that can result from failure to reduce inequities in health. The rate of infant deaths among blacks was above the national average for all states in 2006, ranging from eight per 1,000 live births in Washington State to more than 20 per 1,000 live births in Hawaii ([Appendix A11](#)). Death rates were above the national average among American Indian or Alaska Native infants as well. Moreover, racial disparities persist in all states: on average, death rates among black infants are two-and-one-half times higher than the rate of white infants in states with reliable data, reaching more than five times as high in the District of Columbia and Hawaii. The large racial inequity is largely due to a high incidence among blacks of very premature births.<sup>99</sup> Ensuring that high-risk mothers and newborns have insurance and receive

coordinated care and support services could improve health outcomes to the levels that should be attainable for all infants.<sup>100</sup> Without a healthy start to life, these children will be at greater risk for ill health as adults.

**IMPACT OF IMPROVED PERFORMANCE**

There are many ways to improve child health system performance, involving stakeholders at all levels of the system. This section illustrates the potential gains in terms of healthy lives and access to coverage and care if all states were able to meet the levels of performance achieved by top states.

Exhibit 22 shows the estimated impact if all states were to improve their performance to the rate of the best-performing state for eight key indicators of child health system performance. If all states could approach the low levels of child mortality achieved by the top state in 2007, there

would be nearly 6,000 fewer deaths per year among children ages of 1 to 14. The prevalence of childhood illnesses and developmental disabilities could also be reduced through improved access and timely delivery of care.

If all states performed at the levels achieved by the top states:

- about 16 million more children and parents would have health insurance coverage—reducing the number of uninsured by 70 percent;
- approximately 9 million more children would have a medical home to help coordinate care and an additional 11 million children would receive preventive care visits, including routine dental care and immunizations;
- over 300,000 fewer children with special health care needs would have problems getting needed referrals; and

Exhibit 22

**National Cumulative Impact If All States Achieved Top State Rate**

Indicator	If all states improved their performance to the level of the best-performing state for this indicator, then:	
Insured Children	5,568,435	more children ages 0–18 would be covered by health insurance (public or private), and therefore would be more likely to receive health care when needed.
Insured Parents	10,394,481	more parents ages 19–64 would be covered by health insurance (public or private), and therefore would be more likely to receive health care when needed.
Medical Home	8,791,965	more children ages 0–17 would have a medical home to help ensure that care is coordinated and accessible when needed.
Vaccinations	592,963	more young children (ages 19–35 months) would be up-to-date on all recommended doses of six key vaccines.
Preventive Care Visits	10,170,287	more children ages 0–17 would receive both routine preventive medical and dental care visits.
Specialty Referrals	366,637	fewer children with special health care needs ages 0–17 who needed a referral to see another doctor or receive services would have problems getting such referrals.
Child Mortality	5,749	fewer deaths among children ages 1–14 might occur.
Oral Health Problems	4,691,470	fewer children ages 1–17 would be suffering from oral health problems, including toothaches, decayed teeth/cavities, broken teeth, and bleeding gums.

Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.



- 4.7 million fewer children would have oral health problems.

These examples illustrate only a few of the many important opportunities for improvement. Because some indicators would affect the same individuals, some of these numbers cannot be combined. Yet across states over the course of several years, the numbers add up to substantial gains in value for the nation. The Web resource at <http://www.commonwealthfund.org/Charts-and-Maps/State-Data-Center/Child-Health.aspx> provides state-specific estimates of potential gains of achieving benchmark rates of performance on the *Scorecard* indicators.

## **POLICY IMPLICATIONS: MOVING FORWARD TO IMPROVE CHILDREN'S HEALTH, ACCESS, AND CARE EXPERIENCES AND ADDRESS COSTS CONCERNS**

The *State Scorecard on Child Health System Performance, 2011*, reveals that—in the period prior to the enactment of federal health care reform—the U.S. health care system failed to ensure that all children received the timely, effective, and well-coordinated care they need for their health and development. The *Scorecard* documents variations in risk factors such as developmental delays and obesity, pointing to the need for comprehensive medical and public health interventions to support children and their families in obtaining services and adopting healthy lifestyles.

While top-performing states provide examples for other states, no state performed well on all indicators and many performed at levels that are far from optimal—highlighting the need for systemic change across the nation. Poorly performing states often have fewer resources, larger uninsured

populations, and socioeconomic challenges that may limit their capacity for improvement.<sup>101</sup> The formula for determining federal funding of state Medicaid programs recognizes this inequality among states. Likewise, the recent economic recession illustrates how federal funding can play a countercyclical role to help all states maintain coverage during times of fiscal duress.

Looking forward, a coherent set of national and state policies and innovations at the delivery system level will be essential to sustain improvements in children's health care across the nation and raise benchmarks of performance.

Federal health reform provides the common foundation on which states can build to address the variations, gaps, and disparities in children's coverage and care documented in the *Scorecard*. Notably for children, the Affordable Care Act strengthens and extends the successful federal–state partnership renewed in the Children's Health Insurance Program Reauthorization Act of 2009 to expand coverage to parents as well as children and improve the quality of care for children.

State action and leadership will be essential to implement reforms effectively and support initiatives tailored to specific state circumstances. Actions that states can take include:

1. Ensure continuous insurance coverage for all children.
2. Strengthen Medicaid and CHIP provider networks with support of care systems that provide high-quality care and superior outcomes for children and their families.
3. Align provider incentives to promote access and high-value care.
4. Promote accountable, accessible, patient-centered, and coordinated care for children.

5. Support information systems to inform and guide efforts to improve quality, health outcomes, and efficiency.
6. Participate in statewide initiatives to provide accountable leadership and collaboration, which are essential to set and achieve national goals.

### **Ensure Continuous Insurance Coverage for All Children**

States can make progress toward achieving near-universal coverage for children as they take advantage of enhanced federal matching funds for CHIP and forthcoming Medicaid expansions under the Affordable Care Act. Despite the economic recession, more than half the states expanded eligibility or made it easier for families to apply for and renew children's enrollment in CHIP or Medicaid since CHIPRA was enacted, indicating their commitment to children's health.<sup>102</sup> Research finds that children who gain CHIP coverage are more likely to have a regular provider and receive preventive care and are less likely to have unmet needs.<sup>103</sup> Almost half the states are promoting continuous eligibility in Medicaid and CHIP to reduce coverage losses that lead to gaps in essential care.<sup>104</sup>

In September 2009, the federal government awarded \$40 million of the \$100 million authorized by CHIPRA to help states, safety-net organizations, and local communities expand and improve outreach efforts to enroll more children in CHIP and Medicaid. As of December 2009, nine states had earned almost \$73 million in performance bonuses for using innovative strategies to meet enrollment targets. For example, Louisiana automatically enrolled more than 10,000 children in its Medicaid program under "Express Lane Eligibility" procedures using data

from the Supplemental Nutrition Assistance Program to determine eligibility. Families affirm their enrollment when they use the Medicaid card to access services.<sup>105</sup>

Going forward, states will play a critical role in implementing key pieces of comprehensive reform, such as designing health insurance exchanges to offer affordable private coverage to families of workers in small businesses. Expansion of family coverage under the Affordable Care Act is critical to the health and well-being of children.

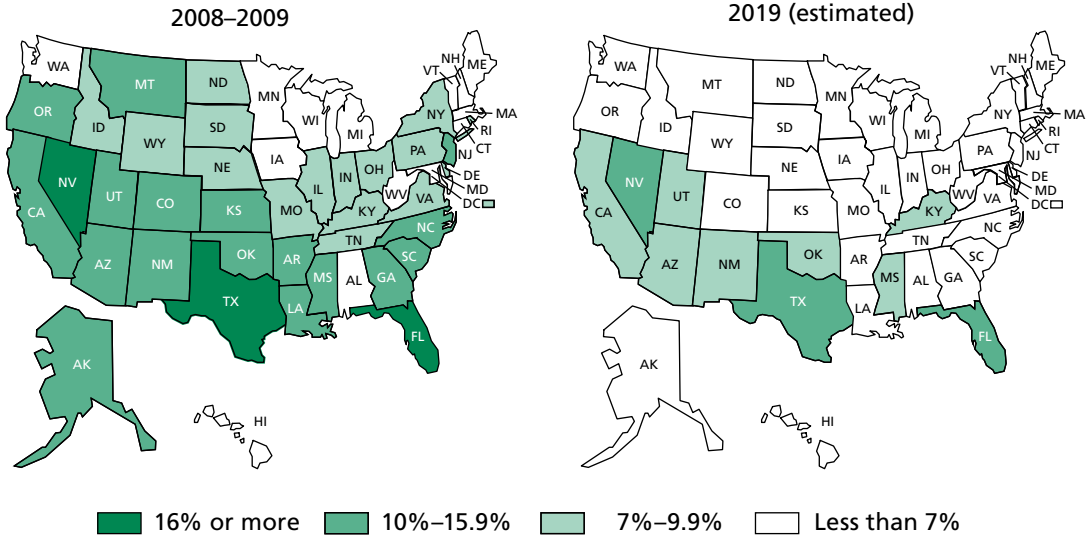
The Affordable Care Act's expansion of coverage to all families has the potential to dramatically alter the map of insurance coverage across the country (Exhibits 23 and 24). When the law is fully implemented, rates of coverage among parents will rival the rates among the top states today. Moreover, by 2019 no states will have more than 12 percent of children uninsured, and only three states will have uninsured rates among children above 10 percent.

By 2019, only three states (Nevada, New Mexico, and Texas) are expected to have more than 14 percent of their parental population ages 19–64 uninsured. This contrasts with 34 states in 2008–09 (Exhibit 23). And 28 states are expected to have less than 7 percent of parents uninsured, compared with just one state in 2008–09. When parents are insured, their children are more likely to obtain the health care they need. States have the opportunity to make family coverage more affordable and efficient through complementary reforms in health insurance markets outside of the exchanges and through value-based purchasing of coverage for state employees.

States also can take independent action to fill coverage gaps before (and after) federal subsidies become available in 2014 for families to purchase coverage through the exchanges. Oregon enacted

Exhibit 23

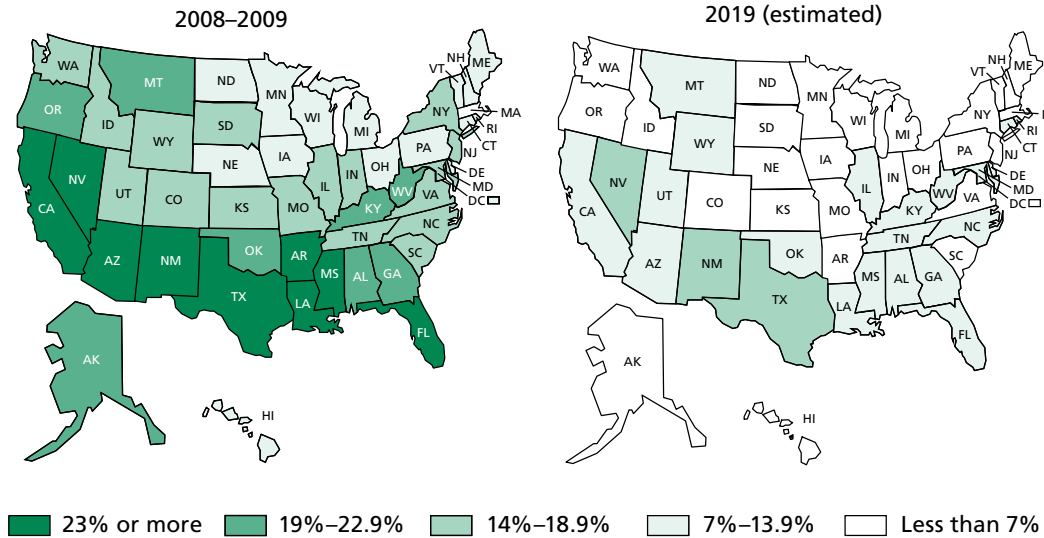
Post-Reform: Percent of Children Ages 0–18 Uninsured by State



Data: 2009–10 Current Population Survey ASEC Supplement; estimates for 2019 by Jonathan Gruber and Ian Perry of MIT using the Gruber Microsimulation Model for The Commonwealth Fund.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

Exhibit 24

Post-Reform: Percent of Parents Ages 19–64 Uninsured by State



Data: 2009–10 Current Population Survey ASEC Supplement; estimates for 2019 by Jonathan Gruber and Ian Perry of MIT using the Gruber Microsimulation Model for The Commonwealth Fund.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

### OREGON'S HEALTHY KIDSCONNECT—THE FIRST HEALTH EXCHANGE FOR CHILDREN

In January 2010, five health plans in Oregon came together to form the first-ever health exchange for children. Under the state's new health care program for children, called Healthy Kids, children are given comprehensive coverage, including medical, dental, vision, mental health care, and prescription benefits. There is one streamlined application for the Healthy Kids program, but three different means of coverage: 1) Oregon Health Plan Plus, the state's Medicaid program; 2) employer-sponsored insurance; or 3) Healthy KidsConnect.

Healthy KidsConnect is a private-market insurance option for families who earn too much to qualify for the Oregon Health Plan, but can't afford private insurance—those with incomes between 201 percent and 300 percent of the federal poverty level (FPL). If a family makes more than 300 percent FPL, it can buy Healthy KidsConnect coverage for the full cost of \$165 to \$475 a month per child, depending on the

age of the child and the carrier. Healthy KidsConnect is designed to serve as many as 34,000 children with benefits similar to those offered through the Oregon Health Plan. The five carriers participating in the exchange are PacificSource, the statewide carrier, and four regional carriers: Clear One Health Plans, Kaiser Foundation Health Plan of the Northwest, Samaritan Health Plans, and a partnership between local plans Trillium Community Health and Lane Individual Practice Association. Exchanges are a promising model for states, offering a way to increase children's access to care, drive down costs, and create incentives for quality improvement through competition.

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For more information see D. Mooradian, "Up to 34,000 Children May Get Benefits in New Oregon Exchange," *Health-Leaders-InterStudy*, Oregon and Washington Health Plan Analysis, Winter 2010 7(1), available at [http://www.oregon.gov/OPHP/kidconnect/docs/orwa\\_upto34000.pdf](http://www.oregon.gov/OPHP/kidconnect/docs/orwa_upto34000.pdf).

reform legislation in 2009 that will cover up to 80,000 uninsured children through a Medicaid expansion and a new Healthy KidsConnect exchange that offers a choice of private plans with sliding-scale premiums based on family income. The expansion is funded by a tax on insurers as well as federal matching funds. Several states have instituted buy-in programs that enable moderate-income families to purchase Medicaid and CHIP coverage for their children—often those with disabilities—who do not have access to affordable private coverage.<sup>106</sup> (See box on Oregon.)

#### **Strengthen Medicaid and CHIP to Support Care Systems That Provide High-Quality Care and Superior Outcomes for Children and Families**

Collaborative learning and technical assistance can help states create the necessary infrastructure and information systems to inform efforts to improve. The Assuring Better Child Health and Development (ABCD) program sponsored by The Commonwealth Fund has enabled several state

Medicaid programs to learn from each other about ways to improve the provision of developmental services for children. (See box on North Carolina.) A growing number of multipayer, public-private collaborations are focusing on improving quality, coordination, and accountability of children's care. In Pennsylvania, for example, commercial payers are participating in a state-led collaboration targeting care for childhood asthma (along with adult diabetes) within medical group practices.<sup>107</sup>

CHIPRA allocates \$225 million over five years for initiatives to improve care for children enrolled in CHIP and Medicaid. In February 2010, the Department of Health and Human Services awarded \$100 million in grants to 10 projects involving 18 states that will test new quality measures, promote health information technology, evaluate provider-based delivery models, and demonstrate a model electronic health record for children. For example, Colorado and New Mexico are collaborating to form an Interstate Alliance of School-Based Health Centers to improve care

for underserved children using a medical home approach.<sup>108</sup>

### **Promote Accountable, Accessible, Patient-Centered, and Coordinated Care**

Under federal health reform legislation, state Medicaid programs may elect to provide benefits through a “health home” that uses health information technology to improve coordination of care for beneficiaries with chronic illnesses. The Affordable Care Act also provides funds for several pilots, demonstrations, and grant opportunities for states and community organizations to promote prevention and wellness and to improve coordination and quality of care for children as well as adults.<sup>109</sup> Notable among these are grant programs to establish and support:

- interdisciplinary community-based health teams, such as those being deployed through Vermont’s Blueprint for Health, that support patient-centered medical homes for individuals with chronic conditions;
- evidence-based maternal, infant, and early childhood home visitation programs serving at-risk communities identified by states;
- cooperative community care networks, such as those developed by Community Care of North Carolina, that promote integrated health care services for low-income populations; and
- primary care extension program state hubs and agencies that provide educational support and assistance to primary care providers to implement quality improvement programs and establish patient-centered medical homes.

### **Support Information Systems to Inform and Guide Efforts to Improve Quality, Health Outcomes, and Efficiency**

Information is critical to guide and drive change, and to set targets and monitor progress over time. Yet the nation lacks comprehensive data on the child health system to assess performance across all payers, including Medicaid and CHIP. Not all states participate in the voluntary federal–state partnership that produces the national Healthcare Cost and Utilization Project (HCUP) database, for example, limiting the ability to compare potentially preventable hospitalization rates such as pediatric asthma admissions across all states. Likewise, state reporting on CHIP has not yet been fully standardized and the voluntary nature of quality reporting limits its potential for comparative evaluation. A few states such as California, New York, Pennsylvania, and Utah have led robust efforts to develop public reporting and data monitoring systems that serve as models for other states, though additional focus on children may be warranted.

Better uniform data on the performance of the child health care system will become available as states conform to federal CHIPRA and Medicaid requirements to measure and report on the quality of care. A core pediatric quality measurement set, building on existing Healthcare Effectiveness Data and Information Set (HEDIS) measures, has been adopted and additional measures are being considered and developed. However, many of the existing measures focus on care processes or utilization and will need to be expanded to include child health outcomes. Further, much as we have found substantial variability among states in terms of child health system performance, there likely is equal or greater variability within states. Methods

to identify and reduce that variation remain to be developed and adopted.

Widespread adoption of electronic health records and health information exchange among providers would promote more effective and efficient care delivery.<sup>110</sup> The federal Health Information Technology for Economic and Clinical Health Act (HITECH) has provided state planning grants and loans to support and expand the effective statewide use and exchange of electronic information.<sup>111</sup> CHIPRA builds on this effort by funding the development of a model electronic medical record for children and encouraging adoption of electronic record systems for children in Medicaid and CHIP. Ongoing diligence will be needed to ensure that the new information systems are capable of supporting clinicians and generating robust and comparable data to measure and improve performance at both the micro and macro levels.

Some states such as Arizona are incorporating health information exchange into Medicaid programs to promote efficient, patient-centered care. Starting in pilot regions in 2008, Arizona providers are exchanging patients' demographic, eligibility, and clinical information. The state is also creating a group-purchasing arrangement for providers to acquire systems that will support statewide objectives for the effective use of health information technology.<sup>112</sup> Alabama is using a health information system to provide clinicians with free electronic access to medical claims history, including laboratory test results, and to enable electronic prescribing to pharmacies. Federal funds support the initiative.<sup>113</sup>

### **Participate in Statewide Initiatives to Provide the Accountable Leadership and Collaboration Essential to Set and Achieve Goals**

Several leading states have histories of a collaborative culture of quality improvement focused on improving leadership, transparency, and sustainability of results. Such efforts tend to focus on expanding access as well as quality, with a goal of improving health outcomes. For example, Kansas set a goal that 85 percent of the state's children have a medical home. In addition, the state has achieved agreement on indicators of quality, access, cost, and public health—including several measures of the quality of care provided in Medicaid managed care organizations—and has started publicly reporting results. Kansas also has created a consumer Web site for comparing the cost and quality of health care plans and providers.<sup>114</sup>

### **CONCLUSION**

The overall picture that emerges from the *State Scorecard on Child Health System Performance, 2011*, is the clear potential for improvement across dimensions of performance. Our national values emphasize that we are one nation, yet where children live affects their health care in nearly every respect. The view across states reveals startlingly wide gaps between leading and lagging states on multiple indicators. Gaps between actual and achievable performance represent lost opportunities to foster children's health and development. Exemplary initiatives in the top-performing states and models of excellence in health care delivery that exist within many states can help set the pace for change.

Continuing variation in state performance and state capacity to effect change also provides compelling evidence of the need for concerted and complementary federal and state policies to improve health system performance. The interdependency of federal and state policy was amply demonstrated during the recent recession, when the federal government enabled states to maintain coverage by providing a temporary increase in funding for public programs to counter the loss of state tax revenue and the decline in private coverage. Enactment of national reform provides a common foundation and shared resources for states to build a more coherent health system infrastructure, so that benchmark levels

achieved by top-performing states become realistic targets for all states to meet and exceed.

With costs rising faster than incomes and pressuring families and businesses, it is urgent that states join together to aim higher—to take action locally to enhance the value of health care and ensure that everyone can participate in the health care system according to their needs. Investing in children’s health yields long-term payoffs: healthy children are better able to learn in school and are more likely to become healthy, productive adults. Individuals, families, and society as a whole benefit from reduced dependency and disability, a healthier future workforce, and a stronger economy.

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## **APPENDICES**

### **Appendix A**

- APPENDIX A1 State Ranking on Health System Performance by Dimension
- APPENDIX A2 Summary of Indicator Rankings by State
- APPENDIX A3 Access and Affordability: Dimension Ranking and Performance on Indicators
- APPENDIX A4 Health Insurance Coverage Rates for Children and Parents, 1999–2000 to 2008–09
- APPENDIX A5 Percent of Currently Insured Children Ages 0–17 Whose Health Insurance Coverage Is Adequate to Meet Needs, by Insurance Type, 2007
- APPENDIX A6 Prevention and Treatment: Dimension Ranking and Performance on Indicators
- APPENDIX A7 Potential to Lead Healthy Lives: Dimension Ranking and Performance on Indicators
- APPENDIX A8 Equity: Uninsured Rates for Children and Parents, by Income, 2008–09
- APPENDIX A9 Equity: Percent of Children Without a Medical Home, by Income and Insurance Type, 2007
- APPENDIX A10 Equity: Percent of Children with Oral Health Problems, by Income and Insurance Type, 2007
- APPENDIX A11 Equity: Infant Mortality, by Race/Ethnicity, 2004–2006
- APPENDIX A12 State Characteristics: Poverty and Health Status
- APPENDIX A13 State Characteristics: Child Population by Race/Ethnicity, 2008–2009

### **Appendix B**

- APPENDIX B1 State Scorecard Data Years and Databases
- APPENDIX B2 State Scorecard Indicator Descriptions
- APPENDIX B3 Complete References for Data Sources

Appendix A1. State Ranking on Health System Performance by Dimension

○ = State in top quartile

Overall Rank*	State	Access & Affordability Rank	Prevention & Treatment Rank	Potential to Lead Healthy Lives Rank	Equity Rank
37	Alabama	29	32	48	27
30	Alaska	34	38	40	⑧
49	Arizona	47	45	38	49
42	Arkansas	41	37	49	23
44	California	44	42	27	39
20	Colorado	28	28	④	27
⑨	Connecticut	⑧	26	⑥	⑥
31	Delaware	⑬	33	32	45
39	District of Columbia	20	39	51	33
47	Florida	49	44	35	38
43	Georgia	29	34	42	46
⑦	Hawaii	③	⑫	23	③
41	Idaho	38	50	17	44
28	Illinois	33	22	31	32
25	Indiana	31	15	33	22
①	Iowa	⑥	①	②	⑦
⑬	Kansas	19	⑥	20	26
36	Kentucky	40	30	46	17
40	Louisiana	43	21	47	37
④	Maine	⑦	⑤	⑩	①
18	Maryland	④	18	26	34
①	Massachusetts	①	④	⑦	④
15	Michigan	14	29	21	⑨
⑧	Minnesota	18	⑪	①	⑫
50	Mississippi	51	43	50	48
21	Missouri	26	19	30	⑬
34	Montana	42	49	17	20
16	Nebraska	22	16	14	23
51	Nevada	48	51	43	51
⑤	New Hampshire	②	②	⑬	⑪
29	New Jersey	23	41	16	39
46	New Mexico	46	40	37	35
21	New York	27	34	17	⑩
32	North Carolina	35	20	28	43
⑩	North Dakota	16	23	⑪	17
19	Ohio	14	⑧	36	27
45	Oklahoma	36	47	41	31
38	Oregon	39	46	⑨	47
⑩	Pennsylvania	⑪	17	24	15
⑥	Rhode Island	⑨	②	14	14
33	South Carolina	44	23	45	15
27	South Dakota	25	⑬	33	35
26	Tennessee	32	⑦	44	19
48	Texas	50	48	29	50
23	Utah	17	25	⑤	42
③	Vermont	⑨	⑧	③	②
24	Virginia	④	34	25	27
⑬	Washington	⑫	26	⑫	21
17	West Virginia	24	⑩	39	⑤
⑫	Wisconsin	21	14	⑧	25
35	Wyoming	36	31	22	41

\* Final rank for overall health system performance across four dimensions.  
Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

Appendix A2. Summary of Indicator Rankings by State

Overall Rank*	State	No. of main indicators	Top 5 States	Top Quartile	2nd Quartile	3rd Quartile	Bottom Quartile	Bottom 5 States
37	Alabama	19	1	4	1	6	8	4
30	Alaska	19	0	1	5	7	6	3
49	Arizona	20	0	1	3	7	9	4
42	Arkansas	20	0	1	3	6	10	4
44	California	18	1	3	2	5	8	4
20	Colorado	20	1	7	5	3	5	1
9	Connecticut	20	6	9	5	2	4	0
31	Delaware	19	2	5	3	6	5	1
39	District of Columbia	17	1	4	2	1	10	5
47	Florida	20	0	2	2	9	7	5
43	Georgia	20	1	3	5	6	6	3
7	Hawaii	20	5	7	5	7	1	1
41	Idaho	19	2	3	4	6	6	1
28	Illinois	20	0	0	9	7	4	0
25	Indiana	20	1	2	9	5	4	1
1	Iowa	18	9	14	3	1	0	0
13	Kansas	20	2	10	4	5	1	0
36	Kentucky	20	0	0	7	5	8	3
40	Louisiana	19	1	2	5	2	10	4
4	Maine	20	3	12	5	1	2	1
18	Maryland	20	2	7	4	4	5	1
1	Massachusetts	20	9	14	3	1	2	1
15	Michigan	20	1	4	9	7	0	0
8	Minnesota	18	4	10	6	0	2	1
50	Mississippi	19	0	1	3	1	14	8
21	Missouri	20	1	5	5	6	4	2
34	Montana	19	1	2	5	5	7	1
16	Nebraska	18	1	6	7	5	0	0
51	Nevada	20	0	1	3	3	13	7
5	New Hampshire	20	5	11	7	2	0	0
29	New Jersey	20	1	4	4	9	3	2
46	New Mexico	19	1	4	2	3	10	5
21	New York	20	2	6	5	5	4	2
32	North Carolina	20	2	4	7	7	2	0
10	North Dakota	19	3	8	5	3	3	1
19	Ohio	18	2	3	10	5	0	0
45	Oklahoma	20	0	1	4	5	10	3
38	Oregon	18	3	5	1	5	7	2
10	Pennsylvania	19	1	5	8	4	2	2
6	Rhode Island	20	6	9	5	4	2	0
33	South Carolina	20	0	2	3	8	7	1
27	South Dakota	20	0	4	9	3	4	2
26	Tennessee	20	2	5	5	4	6	2
48	Texas	20	0	0	4	6	10	5
23	Utah	20	3	7	9	2	2	1
3	Vermont	20	7	12	4	3	1	1
24	Virginia	18	2	3	7	7	1	1
13	Washington	18	1	6	5	5	2	0
17	West Virginia	20	2	6	4	4	6	0
12	Wisconsin	20	2	8	7	4	1	1
35	Wyoming	19	3	3	5	9	2	0

\* Final rank for overall health system performance across four dimensions.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

## Appendix A3. Access and Affordability: Dimension Ranking and Performance on Indicators

State	Dimension Rank	Indicator Performance							
		Percent Children Ages 0–18 Insured		Percent Parents Ages 19–64 Insured		Percent Currently Insured Children Whose Coverage Is Adequate		Family Premiums as Percent of Median Income for Family Household (Under Age 65)	
		2008–09	Rank	2008–09	Rank	2007	Rank	2009	Rank
<b>United States</b>		<b>89.6</b>		<b>80.9</b>		<b>76.5</b>		<b>19.0</b>	
Alabama	29	93.5	12	80.0	37	77.3	24	20.9	41
Alaska	34	87.6	45	80.0	37	76.6	31	17.0	14
Arizona	47	85.0	47	76.8	44	75.1	38	21.4	44
Arkansas	41	89.0	36	75.7	48	78.1	18	20.9	41
California	44	88.9	39	76.5	47	75.1	38	19.2	31
Colorado	28	88.6	41	82.8	31	76.7	30	16.4	10
Connecticut	8	93.2	13	88.8	9	76.9	28	13.9	1
Delaware	13	90.5	28	86.6	15	79.9	6	17.4	19
District of Columbia	20	92.5	18	89.5	8	79.3	9	21.5	46
Florida	49	82.2	50	73.6	49	72.8	46	19.9	35
Georgia	29	88.5	42	77.4	42	81.6	2	19.0	28
Hawaii	3	95.4	3	92.6	2	83.8	1	17.4	19
Idaho	38	90.3	30	81.3	33	72.8	46	18.2	24
Illinois	33	91.9	23	83.6	28	73.2	42	19.3	32
Indiana	31	92.3	22	84.5	21	73.5	41	19.9	35
Iowa	6	94.2	8	88.1	11	78.1	18	16.6	11
Kansas	19	90.0	32	84.3	23	78.8	11	16.9	13
Kentucky	40	90.4	29	79.7	39	77.0	26	21.4	44
Louisiana	43	89.7	33	77.0	43	77.5	23	22.2	48
Maine	7	94.7	5	91.5	3	78.6	14	18.9	27
Maryland	4	93.2	13	84.6	20	79.5	8	14.8	4
Massachusetts	1	96.7	1	95.6	1	81.5	3	15.2	6
Michigan	14	94.4	7	86.6	15	77.9	21	18.6	26
Minnesota	18	93.9	9	89.9	6	68.7	51	16.7	12
Mississippi	51	87.7	44	76.6	46	72.7	48	24.9	51
Missouri	26	91.5	25	83.7	26	75.3	36	17.9	22
Montana	42	88.9	39	79.1	40	68.8	50	17.1	16
Nebraska	22	91.6	24	86.4	17	75.5	35	17.2	18
Nevada	48	83.4	49	76.7	45	73.1	44	20.1	37
New Hampshire	2	96.1	2	88.3	10	80.2	5	14.5	3
New Jersey	23	89.6	34	83.9	25	75.7	34	14.0	2
New Mexico	46	84.4	48	71.2	50	78.8	11	22.3	49
New York	27	92.4	21	84.1	24	77.2	25	20.4	40
North Carolina	35	89.0	36	81.3	33	78.6	14	21.5	46
North Dakota	16	92.7	15	89.9	6	73.2	42	16.1	9
Ohio	14	92.5	18	88.0	12	78.0	20	17.4	19
Oklahoma	36	89.6	34	77.9	41	75.9	33	18.2	24
Oregon	39	88.1	43	80.8	36	76.9	28	19.0	28
Pennsylvania	11	92.7	15	88.0	12	78.7	13	17.9	22
Rhode Island	9	92.6	17	87.4	14	79.6	7	17.0	14
South Carolina	44	87.1	46	81.9	32	73.7	40	20.1	37
South Dakota	25	90.1	31	84.4	22	75.3	36	17.1	16
Tennessee	32	91.4	26	83.3	29	77.0	26	20.2	39
Texas	50	82.0	51	65.5	51	76.6	31	23.0	50
Utah	17	89.0	36	85.6	18	78.6	14	15.5	7
Vermont	9	95.1	4	91.4	5	79.2	10	19.4	33
Virginia	4	92.5	18	85.0	19	80.4	4	14.8	4
Washington	12	93.9	9	83.7	26	77.7	22	15.9	8
West Virginia	24	93.8	11	81.0	35	78.2	17	20.9	41
Wisconsin	21	94.5	6	91.5	3	72.6	49	19.7	34
Wyoming	36	90.7	27	83.1	30	73.0	45	19.1	30
<b>State Variation</b>									
Best State Rate		96.7		95.6		83.8		13.9	
All States Median Rate		91.4		83.7		77.0		18.6	
Worst State Rate		82.0		65.5		68.7		24.9	

Data: See Part B in Appendix for years, databases, and descriptions for each indicator.  
Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.



## Appendix A4. Health Insurance Coverage Rates for Children and Parents, 1999–2000 to 2008–09

State	Percent Children Ages 0–18 Insured				Percent Parents Ages 19–64 Insured			
	2008–09	1999–2000	Actual Change	Percent Change	2008–09	1999–2000	Actual Change	Percent Change
<b>United States</b>	<b>89.6</b>	<b>87.6</b>	<b>2.0</b>	<b>2.3%</b>	<b>80.9</b>	<b>84.3</b>	<b>-3.4</b>	<b>-4.0%</b>
Alabama	93.5	90.2	3.3	3.7%	80.0	84.4	-4.4	-5.2%
Alaska	87.6	83.9	3.7	4.4%	80.0	81.7	-1.7	-2.1%
Arizona	85.0	82.9	2.1	2.5%	76.8	77.4	-0.6	-0.8%
Arkansas	89.0	88.4	0.6	0.7%	75.7	84.7	-9.0	-10.6%
California	88.9	83.7	5.2	6.2%	76.5	78.1	-1.6	-2.0%
Colorado	88.6	85.0	3.6	4.2%	82.8	86.2	-3.4	-3.9%
Connecticut	93.2	92.4	0.8	0.9%	88.8	91.3	-2.5	-2.7%
Delaware	90.5	93.2	-2.7	-2.9%	86.6	90.5	-3.9	-4.3%
District of Columbia	92.5	87.7	4.8	5.5%	89.5	84.2	5.3	6.3%
Florida	82.2	82.8	-0.6	-0.7%	73.6	79.5	-5.9	-7.4%
Georgia	88.5	88.9	-0.4	-0.5%	77.4	85.1	-7.7	-9.0%
Hawaii	95.4	91.1	4.3	4.7%	92.6	92.7	-0.1	-0.1%
Idaho	90.3	82.9	7.4	8.9%	81.3	80.1	1.2	1.5%
Illinois	91.9	89.2	2.7	3.0%	83.6	85.9	-2.3	-2.7%
Indiana	92.3	90.8	1.5	1.7%	84.5	90.1	-5.6	-6.2%
Iowa	94.2	93.8	0.4	0.4%	88.1	92.9	-4.8	-5.2%
Kansas	90.0	88.5	1.5	1.7%	84.3	87.4	-3.1	-3.5%
Kentucky	90.4	90.0	0.4	0.4%	79.7	85.9	-6.2	-7.2%
Louisiana	89.7	80.8	8.9	11.0%	77.0	77.5	-0.5	-0.6%
Maine	94.7	92.6	2.1	2.3%	91.5	87.4	4.1	4.7%
Maryland	93.2	91.2	2.0	2.2%	84.6	88.5	-3.9	-4.4%
Massachusetts	96.7	92.7	4.0	4.3%	95.6	91.3	4.3	4.7%
Michigan	94.4	93.1	1.3	1.4%	86.6	90.0	-3.4	-3.8%
Minnesota	93.9	94.0	-0.1	-0.1%	89.9	93.0	-3.1	-3.3%
Mississippi	87.7	88.4	-0.7	-0.8%	76.6	83.4	-6.8	-8.2%
Missouri	91.5	94.8	-3.3	-3.5%	83.7	92.9	-9.2	-9.9%
Montana	88.9	82.9	6.0	7.2%	79.1	81.4	-2.3	-2.8%
Nebraska	91.6	92.0	-0.4	-0.4%	86.4	92.1	-5.7	-6.2%
Nevada	83.4	81.8	1.6	2.0%	76.7	80.0	-3.3	-4.1%
New Hampshire	96.1	94.2	1.9	2.0%	88.3	89.8	-1.5	-1.7%
New Jersey	89.6	91.6	-2.0	-2.2%	83.9	87.6	-3.7	-4.2%
New Mexico	84.4	77.5	6.9	8.9%	71.2	67.5	3.7	5.5%
New York	92.4	89.1	3.3	3.7%	84.1	82.9	1.2	1.4%
North Carolina	89.0	89.0	0.0	0.0%	81.3	86.1	-4.8	-5.6%
North Dakota	92.7	90.0	2.7	3.0%	89.9	88.4	1.5	1.7%
Ohio	92.5	90.8	1.7	1.9%	88.0	88.6	-0.6	-0.7%
Oklahoma	89.6	83.3	6.3	7.6%	77.9	76.8	1.1	1.4%
Oregon	88.1	88.1	0.0	0.0%	80.8	85.6	-4.8	-5.6%
Pennsylvania	92.7	93.5	-0.8	-0.9%	88.0	90.9	-2.9	-3.2%
Rhode Island	92.6	95.4	-2.8	-2.9%	87.4	93.6	-6.2	-6.6%
South Carolina	87.1	87.5	-0.4	-0.5%	81.9	86.1	-4.2	-4.9%
South Dakota	90.1	91.3	-1.2	-1.3%	84.4	91.1	-6.7	-7.4%
Tennessee	91.4	92.2	-0.8	-0.9%	83.3	89.8	-6.5	-7.2%
Texas	82.0	77.0	5.0	6.5%	65.5	72.9	-7.4	-10.2%
Utah	89.0	90.7	-1.7	-1.9%	85.6	88.9	-3.3	-3.7%
Vermont	95.1	94.6	0.5	0.5%	91.4	92.3	-0.9	-1.0%
Virginia	92.5	88.8	3.7	4.2%	85.0	87.7	-2.7	-3.1%
Washington	93.9	89.6	4.3	4.8%	83.7	87.0	-3.3	-3.8%
West Virginia	93.8	88.1	5.7	6.5%	81.0	78.5	2.5	3.2%
Wisconsin	94.5	92.8	1.7	1.8%	91.5	91.7	-0.2	-0.2%
Wyoming	90.7	86.9	3.8	4.4%	83.1	83.1	0.0	0.0%
<b>Number of States:</b>								
Rate Improved (+)			35				9	
Rate Worsened (-)			14				41	
No Change in Rate			2				1	

Data: U.S. Census Bureau, 2000–01 and 2009–10 Current Population Survey ASEC Supplement.  
Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

Appendix A5. Percent of Currently Insured Children Ages 0–17 Whose Health Insurance Coverage Is Adequate to Meet Needs, by Insurance Type, 2007

State	Currently Insured		Insurance Type	
	Rate	Rank	Public	Private
<b>United States</b>	<b>76.5</b>		<b>81.4</b>	<b>74.2</b>
Alabama	77.3	24	83.9	73.8
Alaska	76.6	31	83.5	73.7
Arizona	75.1	38	80.4	72.3
Arkansas	78.1	18	83.9	72.7
California	75.1	38	75.7	75.0
Colorado	76.7	30	82.5	75.1
Connecticut	76.9	28	83.8	74.7
Delaware	79.9	6	88.5	75.7
District of Columbia	79.3	9	82.3	76.6
Florida	72.8	46	78.0	70.2
Georgia	81.6	2	87.0	78.1
Hawaii	83.8	1	83.5	83.8
Idaho	72.8	46	82.1	69.2
Illinois	73.2	42	77.6	71.1
Indiana	73.5	41	84.0	69.1
Iowa	78.1	18	85.9	75.3
Kansas	78.8	11	89.2	75.5
Kentucky	77.0	26	86.4	71.2
Louisiana	77.5	23	83.9	71.0
Maine	78.6	14	88.1	73.7
Maryland	79.5	8	82.7	78.5
Massachusetts	81.5	3	87.6	79.4
Michigan	77.9	21	81.5	75.9
Minnesota	68.7	51	83.0	64.8
Mississippi	72.7	48	77.3	68.3
Missouri	75.3	36	82.9	71.7
Montana	68.8	50	82.9	64.3
Nebraska	75.5	35	89.7	70.9
Nevada	73.1	44	75.8	72.7
New Hampshire	80.2	5	87.1	78.5
New Jersey	75.7	34	78.4	75.1
New Mexico	78.8	11	83.6	75.5
New York	77.2	25	79.8	75.9
North Carolina	78.6	14	86.5	74.0
North Dakota	73.2	42	82.0	71.3
Ohio	78.0	20	83.7	76.3
Oklahoma	75.9	33	80.5	72.1
Oregon	76.9	28	81.9	75.2
Pennsylvania	78.7	13	82.0	77.3
Rhode Island	79.6	7	86.9	76.2
South Carolina	73.7	40	83.8	68.1
South Dakota	75.3	36	80.7	73.2
Tennessee	77.0	26	80.1	75.0
Texas	76.6	31	82.0	73.7
Utah	78.6	14	82.0	78.2
Vermont	79.2	10	85.4	75.0
Virginia	80.4	4	87.9	78.0
Washington	77.7	22	83.7	75.3
West Virginia	78.2	17	86.2	72.5
Wisconsin	72.6	49	76.1	71.6
Wyoming	73.0	45	86.6	67.0

Data: 2007 National Survey of Children's Health.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

## Appendix A6. Prevention and Treatment: Dimension Ranking and Performance on Indicators

State	Dimension Rank	Indicator Performance							
		Percent Children with a Medical Home		Percent Children Ages 19–35 Months Received Key Vaccines		Percent Children with Preventive Medical Care Visit		Percent Children with Preventive Dental Care Visit	
		2007	Rank	2009	Rank	2007	Rank	2007	Rank
<b>United States</b>		<b>57.5</b>		<b>75.7</b>		<b>88.5</b>		<b>78.4</b>	
Alabama	32	56.1	39	77.9	11	87.4	27	78.4	32
Alaska	38	52.3	44	64.6	49	85.1	36	80.5	16
Arizona	45	50.0	47	73.4	30	83.9	40	75.5	45
Arkansas	37	60.7	26	66.7	43	83.5	42	74.7	48
California	42	49.6	49	78.2	10	87.2	29	78.4	32
Colorado	28	59.3	30	69.2	42	88.2	23	77.0	39
Connecticut	26	62.4	18	71.4	36	95.2	5	84.9	4
Delaware	33	59.9	28	73.5	29	92.8	10	76.8	40
District of Columbia	39	49.7	48	75.5	23	97.6	2	81.7	11
Florida	44	56.8	37	77.4	15	91.5	12	68.5	51
Georgia	34	58.5	35	76.7	19	88.3	21	80.3	18
Hawaii	12	60.1	27	73.2	33	90.2	17	86.9	1
Idaho	50	56.1	39	73.3	32	76.7	51	76.6	41
Illinois	22	55.9	41	73.4	30	90.3	16	80.5	16
Indiana	15	61.7	21	69.9	40	86.3	33	79.4	23
Iowa	1	66.9	4	84.1	1	87.8	26	84.8	5
Kansas	6	61.3	24	80.5	6	90.4	15	78.7	29
Kentucky	30	61.8	20	76.8	18	88.1	24	78.4	32
Louisiana	21	55.3	43	80.7	5	88.6	19	76.5	42
Maine	5	65.5	7	69.5	41	92.2	11	80.9	13
Maryland	18	58.6	34	64.6	49	93.5	8	79.1	25
Massachusetts	4	66.2	5	81.1	3	96.6	3	83.8	7
Michigan	29	62.5	17	80.8	4	88.6	19	83.0	8
Minnesota	11	63.0	14	76.9	16	83.6	41	79.5	21
Mississippi	43	51.6	45	77.7	14	82.3	44	75.5	45
Missouri	19	64.8	8	64.6	49	87.1	31	75.4	47
Montana	49	61.5	22	65.9	45	80.5	45	76.5	42
Nebraska	16	69.1	2	74.3	27	84.8	37	79.5	21
Nevada	51	45.4	51	65.8	46	79.1	49	73.1	50
New Hampshire	2	69.3	1	78.7	8	94.5	7	84.2	6
New Jersey	41	56.8	37	70.2	38	95.0	6	78.7	29
New Mexico	40	49.0	50	74.3	27	87.2	29	79.3	24
New York	34	56.9	36	77.9	11	96.2	4	80.8	14
North Carolina	20	60.9	25	78.3	9	88.3	21	78.3	35
North Dakota	23	64.0	10	77.8	13	78.9	50	77.2	38
Ohio	8	66.2	5	74.8	25	89.7	18	78.7	29
Oklahoma	47	55.7	42	76.5	21	83.5	42	78.2	36
Oregon	46	63.4	12	73.0	34	79.7	48	75.7	44
Pennsylvania	17	61.9	19	74.4	26	93.0	9	82.7	9
Rhode Island	2	63.6	11	70.0	39	97.7	1	86.5	2
South Carolina	23	58.8	32	76.7	19	87.0	32	82.0	10
South Dakota	13	63.3	13	76.9	16	80.0	47	80.7	15
Tennessee	7	61.4	23	81.8	2	87.4	27	78.8	28
Texas	48	50.3	46	66.7	43	85.6	34	74.0	49
Utah	25	63.0	14	75.8	22	80.2	46	79.1	25
Vermont	8	67.2	3	65.1	48	91.3	14	86.1	3
Virginia	34	58.8	32	75.0	24	88.1	24	79.0	27
Washington	26	59.9	28	70.3	37	84.2	38	81.3	12
West Virginia	10	64.6	9	65.8	46	91.4	13	80.3	18
Wisconsin	14	62.9	16	80.0	7	84.2	38	80.2	20
Wyoming	31	59.3	30	72.5	35	85.3	35	78.0	37
<b>State Variation</b>									
Best State Rate		69.3		84.1		97.7		86.9	
All States Median Rate		60.7		74.4		87.8		79.1	
Worst State Rate		45.4		64.6		76.7		68.5	

CSHCN = children with special health care needs

Data: See Part B in Appendix for years, databases, and descriptions for each indicator.

Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

**Appendix A6. Prevention and Treatment: Dimension Ranking and Performance on Indicators (continued)**

State	Indicator Performance									
	Percent Children Ages 2–17 Received Needed Mental Health Care		Percent Children Ages 10 Months–5 Years Received Standardized Developmental Screening		Hospital Admissions for Pediatric Asthma per 100,000 Children Ages 2–17		Percent CSHCN Needing Referrals Had No Problems Receiving Them		Percent CSHCN Whose Families Received All Needed Support Services	
	2007	Rank	2007	Rank	2006	Rank	2005–06	Rank	2005–06	Rank
<b>United States</b>	<b>60.0</b>		<b>19.5</b>		<b>144.1</b>		<b>78.9</b>		<b>72.1</b>	
Alabama	61.7	32	12.1	48	*	*	85.3	9	80.7	4
Alaska	63.0	26	20.7	18	*	*	79.7	29	61.6	50
Arizona	62.1	31	17.3	36	123.1	19	70.3	51	71.3	30
Arkansas	56.5	38	15.9	41	105.1	16	84.9	10	68.8	37
California	53.5	43	14.0	45	92.3	12	72.4	49	71.2	31
Colorado	64.8	22	25.9	8	186.6	38	75.1	43	73.6	20
Connecticut	78.8	2	16.6	39	172.4	33	76.0	40	64.0	46
Delaware	76.9	3	10.9	50	*	*	75.7	41	78.4	11
District of Columbia	56.5	38	14.3	44	*	*	74.8	44	63.3	49
Florida	52.0	47	17.1	37	147.2	25	73.1	47	67.8	39
Georgia	51.2	48	22.7	12	116.1	18	82.6	21	63.7	47
Hawaii	62.8	28	27.2	7	61.0	3	78.6	33	70.8	32
Idaho	63.4	25	18.1	32	*	*	77.9	34	65.5	42
Illinois	53.0	46	21.1	15	131.4	21	83.3	19	73.1	24
Indiana	64.3	23	19.4	22	99.1	13	80.0	28	83.0	1
Iowa	74.5	5	18.7	28	65.7	5	87.3	3	81.7	2
Kansas	72.3	8	24.7	11	171.3	32	88.6	2	79.9	8
Kentucky	65.5	21	15.5	42	174.1	35	84.1	16	73.3	22
Louisiana	55.3	40	28.7	6	*	*	84.2	15	74.1	19
Maine	70.8	12	21.5	14	78.4	8	84.5	13	76.0	17
Maryland	59.4	37	22.3	13	163.2	30	79.1	32	77.1	15
Massachusetts	66.6	19	16.4	40	154.6	28	86.1	6	77.2	14
Michigan	60.4	36	18.2	30	151.6	27	77.1	37	69.6	34
Minnesota	67.0	17	41.6	2	103.1	15	81.1	23	80.3	6
Mississippi	43.0	50	20.0	21	*	*	81.2	22	79.0	10
Missouri	73.9	6	19.0	25	173.3	34	85.7	7	79.2	9
Montana	67.9	15	16.7	38	*	*	76.6	38	65.9	41
Nebraska	71.0	11	18.8	26	75.1	7	79.6	30	77.7	13
Nevada	53.1	45	18.6	29	89.8	10	72.5	48	64.7	45
New Hampshire	63.0	26	18.1	32	61.8	4	84.0	17	76.4	16
New Jersey	55.2	41	12.7	47	176.4	36	77.8	35	72.8	25
New Mexico	53.5	43	29.6	4	*	*	74.1	46	65.0	43
New York	61.1	35	11.7	49	251.0	39	77.3	36	75.2	18
North Carolina	61.7	32	47.0	1	109.5	17	86.7	4	72.8	25
North Dakota	72.4	7	17.6	35	*	*	84.4	14	80.7	4
Ohio	66.2	20	20.8	16	128.7	20	86.2	5	69.3	36
Oklahoma	53.6	42	20.8	16	181.6	37	80.2	27	67.1	40
Oregon	46.2	49	13.5	46	44.1	1	76.5	39	69.7	33
Pennsylvania	81.5	1	10.7	51	*	*	72.0	50	73.2	23
Rhode Island	76.0	4	14.5	43	139.1	23	89.8	1	78.3	12
South Carolina	62.7	29	19.1	24	150.4	26	85.5	8	64.8	44
South Dakota	69.3	13	18.8	26	85.4	9	83.4	18	73.4	21
Tennessee	64.1	24	29.0	5	146.1	24	84.7	12	80.1	7
Texas	41.7	51	19.2	23	163.0	29	74.6	45	71.8	29
Utah	66.8	18	20.6	19	74.0	6	81.0	24	56.7	51
Vermont	69.3	13	17.9	34	46.2	2	82.7	20	72.1	28
Virginia	72.2	9	18.2	30	136.2	22	79.2	31	63.4	48
Washington	62.4	30	25.6	10	90.3	11	75.4	42	69.4	35
West Virginia	72.0	10	31.9	3	165.3	31	80.3	26	72.2	27
Wisconsin	61.4	34	25.9	8	100.8	14	84.9	10	68.5	38
Wyoming	67.6	16	20.2	20	*	*	80.8	25	80.9	3
<b>State Variation</b>										
Best State Rate	81.5		47.0		44.1		89.8		83.0	
All States Median Rate	63.0		18.8		128.7		80.3		72.8	
Worst State Rate	41.7		10.7		251.0		70.3		56.7	

CSHCN = children with special health care needs  
 Data: See Part B in Appendix for years, databases, and descriptions for each indicator.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

## Appendix A7. Potential to Lead Healthy Lives: Dimension Ranking and Performance on Indicators

State	Dimension Rank	Indicator Performance					
		Infant Mortality, Deaths per 1,000 Live Births		Child Mortality, Deaths per 100,000 Children Ages 1–14		Percent Children Ages 4 Months–5 Years at Moderate/High Risk for Developmental Delays	
		2006	Rank	2007	Rank	2007	Rank
<b>United States</b>		<b>6.7</b>		<b>19.0</b>		<b>26.4</b>	
Alabama	48	9.0	48	23.0	40	32.0	48
Alaska	40	7.0	28	31.0	50	27.3	36
Arizona	38	6.4	22	21.0	27	27.7	40
Arkansas	49	8.5	46	28.0	46	32.1	49
California	27	5.0	3	16.0	11	30.5	46
Colorado	4	5.8	13	16.0	11	19.2	3
Connecticut	6	6.2	18	12.0	3	22.7	13
Delaware	32	8.1	42	10.0	2	25.8	26
District of Columbia	51	11.9	51	29.0	47	30.1	45
Florida	35	7.3	32	21.0	27	27.6	38
Georgia	42	8.1	42	21.0	27	26.6	33
Hawaii	23	5.9	14	21.0	27	27.6	38
Idaho	17	6.8	25	22.0	36	23.3	18
Illinois	31	7.3	32	19.0	19	26.2	27
Indiana	33	7.9	39	21.0	27	22.5	12
Iowa	2	5.1	4	19.0	19	21.2	6
Kansas	20	7.2	31	19.0	19	27.4	37
Kentucky	46	7.5	35	22.0	36	26.2	27
Louisiana	47	10.0	49	29.0	47	35.2	51
Maine	10	6.3	21	16.0	11	18.6	1
Maryland	26	8.0	40	21.0	27	27.7	40
Massachusetts	7	4.9	2	12.0	3	22.1	9
Michigan	21	7.3	32	18.0	15	23.7	21
Minnesota	1	5.2	6	15.0	6	18.6	1
Mississippi	50	10.5	50	34.0	51	32.8	50
Missouri	30	7.5	35	23.0	40	24.2	23
Montana	17	6.0	17	22.0	36	22.1	9
Nebraska	14	5.5	9	20.0	24	23.6	20
Nevada	43	6.6	24	22.0	36	31.2	47
New Hampshire	13	5.9	14	15.0	6	22.1	9
New Jersey	16	5.4	7	15.0	6	26.7	34
New Mexico	37	5.7	11	24.0	42	22.7	13
New York	17	5.6	10	15.0	6	28.6	43
North Carolina	28	8.1	42	21.0	27	26.9	35
North Dakota	11	5.9	14	19.0	19	22.7	13
Ohio	36	7.8	38	18.0	15	22.9	17
Oklahoma	41	8.0	40	29.0	47	26.2	27
Oregon	9	5.4	7	17.0	14	19.4	4
Pennsylvania	24	7.7	37	18.0	15	26.2	27
Rhode Island	14	6.2	18	9.0	1	26.5	31
South Carolina	45	8.3	45	25.0	44	26.5	31
South Dakota	33	6.9	27	27.0	45	28.5	42
Tennessee	44	8.7	47	20.0	24	28.9	44
Texas	29	6.2	18	21.0	27	25.5	24
Utah	5	5.1	4	20.0	24	21.9	8
Vermont	3	5.7	11	12.0	3	21.8	7
Virginia	25	7.1	29	18.0	15	25.7	25
Washington	12	4.7	1	15.0	6	23.3	18
West Virginia	39	7.1	29	24.0	42	20.4	5
Wisconsin	8	6.4	22	19.0	19	22.8	16
Wyoming	22	6.8	25	21.0	27	24.0	22
<b>State Variation</b>							
Best State Rate		4.7		9.0		18.6	
All States Median Rate		6.8		20.0		25.8	
Worst State Rate		11.9		34.0		35.2	

Data: See Part B in Appendix for years, databases, and descriptions for each indicator.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

**Appendix A7. Potential to Lead Healthy Lives: Dimension Ranking and Performance on Indicators (continued)**

State	Indicator Performance							
	Percent Children Ages 10–17 Who are Overweight or Obese		Percent Children Ages 1–17 with Oral Health Problems		Percent High School Students Who Currently Smoked Cigarettes		Percent High School Students Not Meeting Recommended Physical Activity Level	
	2007	Rank	2007	Rank	2009	Rank	2009	Rank
<b>United States</b>	<b>31.6</b>		<b>26.7</b>		<b>19.5</b>		<b>63.0</b>	
Alabama	36.1	46	26.3	27	20.8	31	62.7	38
Alaska	33.9	40	24.7	17	15.7	7	57.6	25
Arizona	30.6	25	31.6	50	19.7	28	53.2	9
Arkansas	37.5	50	27.5	37	20.3	29	58.0	27
California	30.5	24	30.5	47	*	*	*	*
Colorado	27.2	10	24.3	14	17.7	17	53.0	8
Connecticut	25.7	5	23.6	9	17.8	19	54.8	18
Delaware	33.2	36	26.4	28	19.0	26	59.6	32
District of Columbia	35.4	43	30.6	48	*	*	*	*
Florida	33.1	35	25.8	26	16.1	9	59.2	30
Georgia	37.3	49	27.5	37	16.9	10	57.2	24
Hawaii	28.5	15	25.3	20	15.2	6	65.6	40
Idaho	27.5	11	27.9	41	14.5	4	46.4	1
Illinois	34.9	42	26.5	31	18.1	20	55.3	20
Indiana	29.9	21	25.5	24	23.5	40	59.4	31
Iowa	26.5	8	22.3	4	*	*	*	*
Kansas	31.1	30	23.6	9	16.9	10	51.1	2
Kentucky	37.1	48	29.4	44	26.1	42	61.1	36
Louisiana	35.9	45	26.8	32	17.6	15	60.5	35
Maine	28.2	13	23.2	7	18.1	20	63.2	39
Maryland	28.8	16	23.7	11	11.9	2	61.2	37
Massachusetts	30.0	22	21.1	2	16.0	8	66.5	41
Michigan	30.6	25	25.4	22	18.8	24	53.2	9
Minnesota	23.1	1	20.0	1	*	*	*	*
Mississippi	44.4	51	31.6	50	19.6	27	60.3	33
Missouri	31.0	27	27.4	35	18.9	25	51.7	5
Montana	25.6	4	27.2	34	18.7	23	54.0	13
Nebraska	31.5	31	22.9	6	*	*	*	*
Nevada	34.2	41	31.3	49	17.0	13	55.9	21
New Hampshire	29.4	17	25.7	25	20.8	31	54.7	17
New Jersey	31.0	27	25.0	18	17.0	13	58.5	29
New Mexico	32.7	33	29.4	44	24.0	41	54.2	16
New York	32.9	34	23.9	12	14.8	5	57.7	26
North Carolina	33.5	38	23.9	12	17.7	17	54.0	13
North Dakota	25.7	5	21.7	3	22.4	37	56.3	23
Ohio	33.3	37	27.4	35	*	*	*	*
Oklahoma	29.5	18	28.9	43	22.6	38	52.6	6
Oregon	24.3	3	30.0	46	*	*	*	*
Pennsylvania	29.7	20	26.4	28	18.4	22	54.1	15
Rhode Island	30.1	23	26.4	28	13.3	3	56.0	22
South Carolina	33.7	39	25.3	20	20.5	30	66.7	42
South Dakota	28.4	14	24.6	16	23.2	39	53.3	11
Tennessee	36.5	47	23.5	8	20.9	33	60.3	33
Texas	32.2	32	28.8	42	21.2	34	53.4	12
Utah	23.1	1	27.0	33	8.5	1	52.7	7
Vermont	26.7	9	22.5	5	17.6	15	55.1	19
Virginia	31.0	27	25.4	22	*	*	*	*
Washington	29.5	18	27.8	40	*	*	*	*
West Virginia	35.5	44	25.2	19	21.8	35	58.2	28
Wisconsin	27.9	12	24.3	14	16.9	10	51.5	4
Wyoming	25.7	5	27.5	37	22.1	36	51.1	2
<b>State Variation</b>								
Best State Rate	23.1		20.0		8.5		46.4	
All States Median Rate	30.6		25.8		18.3		56.0	
Worst State Rate	44.4		31.6		26.1		66.7	

Data: See Part B in Appendix for years, databases, and descriptions for each indicator.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

Appendix A8. Equity: Uninsured Rates for Children and Parents, by Income, 2008–09

State	Percent Children Ages 0–18 Uninsured By Income as Share of Federal Poverty Level				Percent Parents Ages 19–64 Uninsured By Income as Share of Federal Poverty Level			
	Income Gap	Rank	0–199% FPL	200%+ FPL	Income Gap	Rank	0–199% FPL	200%+ FPL
<b>United States</b>	<b>-5.4</b>		<b>15.8</b>	<b>6.5</b>	<b>-19.5</b>		<b>38.6</b>	<b>10.1</b>
Alabama	0.9	6	9.5	3.4	-19.1	26	38.2	7.8
Alaska	*	*	*	10.6	*	*	*	13.1
Arizona	-12.2	42	22.6	7.5	-22.5	32	41.6	11.4
Arkansas	-2.1	17	12.5	9.4	-23.0	34	42.1	12.4
California	-5.0	27	15.4	7.8	-22.4	31	41.5	13.7
Colorado	-10.6	41	21.0	6.2	-22.5	32	41.6	8.1
Connecticut	-2.3	18	12.7	4.8	-8.4	9	27.5	7.6
Delaware	-7.8	35	18.2	4.8	*	*	*	7.4
District of Columbia	*	*	*	*	*	*	*	*
Florida	-17.5	45	27.9	10.1	-31.1	40	50.2	14.3
Georgia	-6.9	33	17.3	6.9	-27.2	37	46.3	9.8
Hawaii	5.7	1	4.7	4.5	6.7	2	12.4	5.6
Idaho	-3.8	26	14.2	6.0	-17.8	23	36.9	8.5
Illinois	-3.7	25	14.1	4.0	-14.9	15	34.0	8.6
Indiana	-0.1	9	10.5	5.5	-11.4	12	30.5	8.3
Iowa	-0.2	10	10.6	3.1	-11.6	13	30.7	5.8
Kansas	-6.0	31	16.4	5.4	-15.9	17	35.0	7.1
Kentucky	-1.8	16	12.2	7.5	-15.9	17	35.0	11.7
Louisiana	-5.3	30	15.7	5.8	-28.0	38	47.1	10.1
Maine	3.4	4	7.0	4.2	5.6	3	13.5	6.5
Maryland	-3.1	22	13.5	4.0	-21.5	30	40.6	8.6
Massachusetts	4.9	2	5.5	2.3	9.1	1	10.0	2.9
Michigan	1.2	5	9.2	3.3	-8.6	10	27.7	7.3
Minnesota	-1.3	13	11.7	3.2	-5.7	7	24.8	5.4
Mississippi	-3.4	24	13.8	10.6	-19.3	27	38.4	11.5
Missouri	-3.2	23	13.6	4.9	-18.5	24	37.6	6.8
Montana	-5.2	29	15.6	7.4	*	*	*	11.3
Nebraska	-5.0	27	15.4	4.4	-14.1	14	33.2	6.4
Nevada	-15.2	44	25.6	10.3	-24.9	36	44.0	13.9
New Hampshire	*	*	*	3.5	*	*	*	7.4
New Jersey	-8.5	39	18.9	6.7	-20.6	29	39.7	9.1
New Mexico	-10.5	40	20.9	9.8	-28.6	39	47.7	15.3
New York	-0.2	10	10.6	5.3	-8.0	8	27.1	10.4
North Carolina	-8.3	38	18.7	5.1	-23.2	35	42.3	7.1
North Dakota	*	*	*	4.8	*	*	*	4.7
Ohio	-2.3	18	12.7	3.9	-3.9	4	23.0	7.0
Oklahoma	-1.7	15	12.1	9.0	-19.0	25	38.1	14.1
Oregon	-8.0	37	18.4	6.9	-19.8	28	38.9	9.5
Pennsylvania	-1.2	12	11.6	5.0	-5.2	6	24.3	7.7
Rhode Island	-2.6	20	13.0	3.7	*	*	*	8.2
South Carolina	-7.8	35	18.2	8.9	-16.5	21	35.6	9.8
South Dakota	-6.6	32	17.0	4.9	*	*	*	6.7
Tennessee	-1.5	14	11.9	5.7	-16.2	20	35.3	6.3
Texas	-12.5	43	22.9	13.0	-40.1	41	59.2	18.2
Utah	-7.6	34	18.0	7.7	-10.4	11	29.5	9.4
Vermont	*	*	*	2.4	*	*	*	5.1
Virginia	-3.0	21	13.4	4.7	-17.1	22	36.2	8.7
Washington	0.6	7	9.8	4.0	-16.0	19	35.1	8.9
West Virginia	4.0	3	6.4	6.1	-15.6	16	34.7	11.6
Wisconsin	0.1	8	10.3	3.0	-4.8	5	23.9	3.8
Wyoming	*	*	*	7.3	*	*	*	9.7

Note: Income gap is the difference between the US average for this indicator (10.4) and each state's low-income (0–199% FPL) group. A positive or negative value indicates that this state's most vulnerable group is that much better or worse than the US average for the indicator.

Data: U.S. Census Bureau, 2009–10 Current Population Survey ASEC Supplement.

Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

Appendix A9. Equity: Percent of Children Without a Medical Home, by Income and Insurance Type, 2007

State	Percent Children Without a Medical Home By Income as Share of Federal Poverty Level						Percent Children Without a Medical Home By Insurance Type				
	Income Gap	Rank	0–99% FPL	100–199% FPL	200–399% FPL	400%+ FPL	Insurance Gap	Rank	Public	Private	Uninsured
<b>United States</b>	<b>-18.1</b>		<b>60.6</b>	<b>50.6</b>	<b>37.5</b>	<b>30.7</b>	<b>-21.8</b>		<b>54.6</b>	<b>33.5</b>	<b>64.3</b>
Alabama	-19.7	37	62.2	54.9	33.8	28.8	-26.2	43	54.2	33.7	68.7
Alaska	-17.6	31	60.1	54.7	45.7	32.3	-16.3	24	55.9	41.3	58.8
Arizona	-20.7	40	59.8	63.2	46.9	33.9	-31.3	49	55.3	40.6	73.8
Arkansas	-8.3	10	48.0	50.8	31.5	25.7	-12.1	17	46.3	30.8	54.6
California	-25.9	47	68.4	64.0	44.4	36.9	-23.7	35	65.8	38.5	66.2
Colorado	-20.4	39	62.9	45.1	39.0	30.2	-24.1	36	59.4	31.0	66.6
Connecticut	-23.7	45	66.2	51.1	36.8	27.4	-12.8	19	54.2	31.0	55.3
Delaware	-18.4	35	60.9	50.4	35.2	30.1	-13.1	21	52.7	32.8	55.6
District of Columbia	-23.1	43	65.6	61.7	44.7	31.1	-20.1	31	61.9	37.4	62.6
Florida	-12.7	17	47.3	55.2	40.8	33.9	-24.5	38	46.2	37.4	67.0
Georgia	-16.1	25	58.6	47.6	35.5	30.8	-25.1	40	52.6	30.3	67.6
Hawaii	-16.8	27	59.3	45.9	35.7	30.8	-16.6	26	53.2	34.9	59.1
Idaho	-19.9	38	62.4	48.0	37.2	35.7	-25.1	40	52.4	36.3	67.6
Illinois	-23.0	42	65.5	52.2	42.0	30.8	-18.6	29	58.6	36.2	61.1
Indiana	-7.9	8	50.4	40.4	38.3	27.2	-25.7	42	44.7	32.0	68.2
Iowa	-4.1	3	46.6	42.6	27.7	27.0	-2.9	3	43.0	28.5	45.4
Kansas	-19.1	36	61.6	41.1	35.2	28.5	-17.6	27	50.2	31.3	60.1
Kentucky	-7.0	7	49.5	38.1	37.7	27.2	-23.1	34	41.7	33.4	65.6
Louisiana	-21.0	41	63.5	51.4	35.0	29.3	-26.4	44	55.1	31.4	68.9
Maine	-6.7	6	49.2	37.0	33.5	24.2	-5.2	6	46.2	27.0	47.7
Maryland	-17.5	30	60.0	48.4	40.7	34.8	-10.1	12	57.3	35.4	52.6
Massachusetts	-12.8	18	55.3	40.0	33.1	26.5	-31.5	50	45.3	28.6	74.0
Michigan	-14.0	21	56.5	46.9	29.9	26.7	-3.8	4	50.3	30.3	46.3
Minnesota	-12.8	18	55.3	42.5	32.1	32.8	-9.2	11	48.7	32.0	51.7
Mississippi	-23.2	44	65.7	49.4	39.3	29.7	-28.4	46	56.7	35.9	70.9
Missouri	-8.2	9	50.7	38.2	30.7	26.8	-8.8	10	43.5	29.3	51.3
Montana	-4.6	4	47.1	43.4	34.1	33.1	-7.8	9	45.1	33.2	50.3
Nebraska	-6.6	5	49.1	37.0	23.6	23.6	-6.7	8	41.4	24.4	49.2
Nevada	-32.0	51	74.5	65.4	50.0	41.0	-40.9	51	65.3	43.1	83.4
New Hampshire	-9.0	12	51.5	32.2	30.3	25.9	-1.1	2	41.3	26.9	43.6
New Jersey	-25.3	46	67.8	58.2	38.7	34.3	-30.5	48	60.2	34.3	73.0
New Mexico	-27.6	48	70.1	51.7	45.5	29.9	-26.5	45	60.6	37.9	69.0
New York	-17.7	32	60.2	48.2	36.9	36.2	-12.9	20	56.8	34.9	55.4
North Carolina	-14.5	23	57.0	38.0	36.0	30.6	-20.9	32	43.9	32.6	63.4
North Dakota	-8.5	11	51.0	38.5	34.6	27.7	-10.8	14	40.1	33.4	53.3
Ohio	-9.7	14	52.2	43.3	24.1	25.2	-12.0	16	47.9	25.8	54.5
Oklahoma	-17.7	32	60.2	50.4	38.2	27.0	-16.5	25	53.3	34.3	59.0
Oregon	-15.7	24	58.2	45.3	28.9	25.1	-21.3	33	51.5	26.6	63.8
Pennsylvania	-16.6	26	59.1	44.9	30.8	30.1	-4.2	5	52.5	30.9	46.7
Rhode Island	-18.2	34	60.7	44.6	30.4	26.1	-10.6	13	50.5	29.2	53.1
South Carolina	-13.4	20	55.9	40.9	41.1	27.6	-13.4	22	48.3	34.6	55.9
South Dakota	-16.8	27	59.3	38.1	33.6	25.7	-19.7	30	47.2	29.6	62.2
Tennessee	-11.0	15	53.5	47.8	30.3	25.4	-11.0	15	50.6	28.7	53.5
Texas	-29.1	49	71.6	61.2	46.4	22.6	-29.8	47	67.1	33.4	72.3
Utah	-29.8	50	72.3	38.4	29.8	29.2	-24.5	38	47.6	30.2	67.0
Vermont	-2.1	2	44.6	38.4	29.8	27.3	-0.7	1	37.4	28.5	43.2
Virginia	-12.2	16	53.4	54.7	38.6	32.3	-18.5	28	47.5	37.3	61.0
Washington	-14.3	22	56.8	43.2	43.5	27.8	-16.1	23	47.4	33.7	58.6
West Virginia	3.8	1	38.7	38.3	35.0	28.3	-5.5	7	37.7	32.4	48.0
Wisconsin	-16.9	29	59.4	47.8	32.6	25.0	-24.1	36	50.7	30.8	66.6
Wyoming	-9.5	13	52.0	47.8	39.2	31.7	-12.5	18	45.4	36.0	55.0

Note: Income gap is the difference between the US average for this indicator (42.5 in 2007) and each state's most vulnerable low-income (0–99% or 100–199% FPL) group. Insurance gap is the difference between the US average and each state's uninsured group. A positive or negative value indicates that this state's most vulnerable group is that much better or worse than the US average for the indicator.

Data: 2007 National Survey of Children's Health.

Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.



Appendix A10. Equity: Percent of Children with Oral Health Problems, by Income and Insurance Type, 2007

State	Percent Children Ages 1–17 With Oral Health Problems By Income as Share of Federal Poverty Level						Percent Children Ages 1–17 With Oral Health Problems By Insurance Type				
	Income Gap	Rank	0–99% FPL	100–199% FPL	200–399% FPL	400%+ FPL	Insurance Gap	Rank	Public	Private	Uninsured
<b>United States</b>	<b>-9.2</b>		<b>35.9</b>	<b>31.9</b>	<b>24.0</b>	<b>20.1</b>	<b>-4.1</b>		<b>34.1</b>	<b>22.7</b>	<b>30.8</b>
Alabama	-3.0	5	29.7	29.7	26.1	19.7	-4.9	36	30.9	22.5	31.6
Alaska	-1.0	2	24.1	27.7	24.5	21.9	1.0	12	30.5	22.0	25.7
Arizona	-16.7	48	43.4	33.2	26.8	26.2	-8.8	42	39.8	27.4	35.5
Arkansas	-5.3	14	32.0	28.5	26.7	22.0	0.2	13	31.7	23.8	26.5
California	-18.8	50	39.9	45.5	24.5	21.3	-3.3	27	41.4	24.3	30.0
Colorado	-3.6	6	28.4	30.3	23.5	19.9	2.8	8	27.6	23.6	23.9
Connecticut	-9.8	33	24.4	36.5	24.6	18.5	-0.8	15	33.3	20.3	27.5
Delaware	-8.7	28	35.4	32.1	25.6	20.3	-8.0	39	35.3	22.0	34.7
District of Columbia	-11.5	38	38.2	37.9	26.3	20.2	-3.9	33	38.4	22.3	30.6
Florida	-8.0	25	34.7	26.7	27.2	18.2	-2.4	23	25.1	25.7	29.1
Georgia	-9.1	29	35.8	30.1	26.0	20.9	-12.8	49	35.4	20.6	39.5
Hawaii	-6.8	20	33.5	26.5	24.2	21.7	3.6	5	32.3	23.3	23.1
Idaho	-9.1	29	35.8	27.6	27.7	22.7	-5.4	37	31.4	25.6	32.1
Illinois	-10.5	35	37.2	32.4	22.3	21.5	-8.1	41	32.6	23.7	34.8
Indiana	-9.8	33	36.5	29.3	20.8	20.5	3.3	6	32.5	23.1	23.4
Iowa	-0.2	1	26.9	26.5	21.7	17.8	-12.8	49	23.9	20.6	39.5
Kansas	-1.4	3	28.1	28.1	23.8	17.0	-9.4	43	26.3	20.9	36.1
Kentucky	-12.9	42	39.6	31.9	26.2	21.0	-11.3	46	38.7	23.2	38.0
Louisiana	-4.3	8	30.0	31.0	25.5	20.6	2.4	11	31.9	21.6	24.3
Maine	-5.0	12	31.7	30.4	20.9	14.9	11.9	2	36.2	17.1	14.8
Maryland	-12.1	40	31.4	38.8	21.5	18.4	-3.4	29	30.1	21.4	30.1
Massachusetts	-4.5	9	31.2	21.0	19.5	19.2	12.4	1	27.6	19.4	14.3
Michigan	-3.8	7	30.5	28.1	23.7	22.0	-2.2	21	31.2	21.7	28.9
Minnesota	-11.1	36	37.8	19.7	17.4	17.0	-3.5	30	15.4	20.2	30.2
Mississippi	-14.9	47	41.6	32.7	25.7	22.1	-8.0	39	37.2	26.2	34.7
Missouri	-8.1	26	34.8	29.3	28.3	19.1	-2.9	24	32.6	24.9	29.6
Montana	-12.5	41	39.2	29.7	24.0	20.1	-1.6	17	35.0	24.1	28.3
Nebraska	-9.4	32	36.1	19.6	20.6	20.3	-7.1	38	25.0	20.7	33.8
Nevada	-20.1	51	46.8	38.3	26.7	22.5	-11.6	47	43.3	26.5	38.3
New Hampshire	-6.6	18	33.3	29.6	30.1	18.8	-11.9	48	31.3	23.1	38.6
New Jersey	-4.6	11	31.1	31.3	25.9	20.7	-4.1	34	32.2	22.0	30.8
New Mexico	-7.5	24	34.2	33.5	27.7	19.8	-3.3	27	36.1	22.9	30.0
New York	-6.6	18	32.1	33.3	19.6	17.1	-3.0	26	31.4	19.7	29.7
North Carolina	-7.4	22	34.1	25.3	23.3	15.7	3.0	7	33.8	18.4	23.7
North Dakota	-7.4	22	34.1	24.1	20.2	15.7	-1.8	19	24.9	20.3	28.5
Ohio	-12.9	42	39.6	30.0	24.8	21.1	-3.8	31	38.8	23.2	30.5
Oklahoma	-9.1	29	32.5	35.8	25.5	20.9	2.8	8	35.6	24.7	23.9
Oregon	-14.3	46	41.0	32.7	28.6	23.0	-10.7	45	39.5	25.9	37.4
Pennsylvania	-6.2	17	32.9	29.1	27.9	19.1	-20.6	51	30.3	22.5	47.3
Rhode Island	-17.0	49	43.7	30.2	24.6	18.4	-2.3	22	37.7	22.0	29.0
South Carolina	-8.2	27	34.9	25.5	22.3	19.8	4.8	4	31.6	23.0	21.9
South Dakota	-5.9	16	32.6	27.3	23.2	18.9	-2.9	24	32.5	20.9	29.6
Tennessee	-5.0	12	31.7	24.8	22.2	15.6	-2.1	20	33.6	16.4	28.8
Texas	-13.1	44	39.8	33.3	19.8	23.1	-4.5	35	37.2	23.1	31.2
Utah	-2.5	4	29.2	27.6	27.9	23.6	-1.3	16	26.6	27.0	28.0
Vermont	-5.5	15	32.2	24.5	21.6	18.0	-0.3	14	26.1	19.6	27.0
Virginia	-7.2	21	33.9	28.9	25.6	20.2	2.8	8	32.4	23.5	23.9
Washington	-11.2	37	37.9	36.3	28.8	17.6	-1.7	18	42.4	22.0	28.4
West Virginia	-4.5	9	27.3	31.2	22.1	20.9	-3.8	31	28.3	22.4	30.5
Wisconsin	-14.0	45	40.7	25.2	22.2	18.7	7.9	3	38.7	20.6	18.8
Wyoming	-11.9	39	25.7	38.6	26.5	20.6	-10.3	44	31.8	24.2	37.0

Note: Income gap is the difference between the US average for this indicator (26.7 in 2007) and each state's most vulnerable low-income (0–99% or 100–199% FPL) group. Insurance gap is the difference between the US average and each state's uninsured group. A positive or negative value indicates that this state's most vulnerable group is that much better or worse than the US average for the indicator.

Data: 2007 National Survey of Children's Health.

Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

Appendix A11. Equity: Infant Mortality, by Race/Ethnicity, 2004–2006

State	Deaths per 1,000 Live Births By Race/Ethnicity						
	Race/Ethnic Gap	Rank	White	Black	Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander
<b>United States</b>	<b>-6.7</b>		<b>5.7</b>	<b>13.5</b>	<b>5.5</b>	<b>8.3</b>	<b>4.7</b>
Alabama	-7.0	26	7.0	13.8	7.4	*	*
Alaska	-3.0	8	5.0	*	*	9.8	*
Arizona	-5.5	18	6.1	12.3	6.7	7.2	6.0
Arkansas	-7.2	30	7.0	14.0	6.3	*	*
California	-4.6	12	4.7	11.4	4.9	6.3	4.1
Colorado	-7.2	30	5.2	14.0	7.0	*	5.6
Connecticut	-6.6	25	4.0	13.4	7.8	*	3.2
Delaware	-8.2	37	6.3	15.0	5.5	*	*
District of Columbia	-11.7	46	3.2	18.5	*	*	*
Florida	-6.0	21	5.9	12.8	5.1	*	5.5
Georgia	-6.2	23	6.1	13.0	5.2	*	5.9
Hawaii	-14.1	47	3.7	20.9	6.1	*	6.4
Idaho	-0.5	1	6.0	*	7.3	*	*
Illinois	-7.6	34	5.9	14.4	6.2	*	5.1
Indiana	-9.3	44	7.0	16.1	6.7	*	*
Iowa	-1.8	4	5.0	8.2	5.0	*	8.6
Kansas	-7.7	35	6.8	14.5	6.4	*	6.4
Kentucky	-5.7	20	6.5	12.5	7.4	*	*
Louisiana	-7.9	36	7.0	14.7	5.7	*	6.3
Maine	*	*	6.2	*	*	*	*
Maryland	-6.1	22	5.6	12.9	5.3	*	4.6
Massachusetts	-3.5	11	4.0	10.3	6.4	*	3.6
Michigan	-8.9	40	5.7	15.7	7.3	*	4.9
Minnesota	-2.8	7	4.4	9.6	4.3	9.5	4.1
Mississippi	-8.6	39	6.8	15.4	5.7	*	*
Missouri	-7.0	26	6.5	13.8	6.2	*	5.5
Montana	-3.1	10	5.0	*	*	9.9	*
Nebraska	-5.4	17	5.3	12.2	5.8	*	*
Nevada	-7.5	32	5.5	14.3	5.1	*	5.6
New Hampshire	*	*	5.3	*	*	*	*
New Jersey	-5.0	15	3.7	11.8	5.1	*	4.7
New Mexico	-0.8	2	6.8	*	5.4	7.6	*
New York	-4.7	14	4.6	11.5	5.3	*	3.8
North Carolina	-8.9	40	6.4	15.7	6.2	10.6	6.1
North Dakota	-3.0	8	5.4	*	*	9.8	*
Ohio	-9.1	42	6.4	15.9	5.6	*	4.4
Oklahoma	-6.3	24	7.7	13.1	5.4	8.3	6.3
Oregon	-2.6	6	5.5	9.4	5.4	8.3	5.2
Pennsylvania	-7.0	26	5.8	13.8	7.7	*	5.6
Rhode Island	-4.6	12	4.0	11.4	8.0	*	*
South Carolina	-7.5	32	6.3	14.3	7.4	*	6.1
South Dakota	-5.5	18	6.2	*	*	12.3	*
Tennessee	-9.1	42	6.9	15.9	6.5	*	7.4
Texas	-5.3	16	5.8	12.1	5.5	*	4.2
Utah	-0.9	3	4.7	*	5.3	*	7.7
Vermont	*	*	5.6	*	*	*	*
Virginia	-7.0	26	5.7	13.8	5.3	*	4.0
Washington	-2.5	5	4.5	8.1	4.8	9.3	4.4
West Virginia	-8.3	38	7.3	15.1	*	*	*
Wisconsin	-10.1	45	5.0	16.9	5.7	8.1	5.6
Wyoming	*	*	7.3	*	*	*	*

\* Indicates data value is missing because there were fewer than 20 deaths.

Note: Race/ethnic gap is the difference between the US average for this indicator (6.8 in 2004–06) and each state's most vulnerable non-white group. A positive or negative value indicates that this state's most vulnerable group is that much better or worse than the US average for the indicator.

Data: National Vital Statistics System—Linked Birth and Infant Death Data.

Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011

Appendix A12. State Characteristics: Poverty and Health Status

State	Percent Children Ages 0–18 Living Below 200% of Federal Poverty Level		Percent Parents Ages 19–64 Living Below 200% of Federal Poverty Level		Percent Children with Special Health Care Needs		Percent Children with Asthma Problems	
	2008–09	Rank	2008–09	Rank	2005–06	Rank	2007	Rank
<b>United States</b>	<b>41.5</b>		<b>31.7</b>		<b>13.9</b>		<b>9.0</b>	
Alabama	51.4	48	40.1	48	17.1	45	12.3	49
Alaska	31.6	7	24.2	9	11.9	5	6.4	4
Arizona	49.7	45	39.2	46	12.5	9	8.5	20
Arkansas	50.9	47	40.3	49	17.7	48	10.2	35
California	43.7	36	35.3	41	9.9	1	8.0	15
Colorado	35.0	13	27.0	19	12.5	9	7.9	14
Connecticut	25.2	2	17.9	2	16.0	36	11.8	47
Delaware	35.4	15	24.9	13	17.5	47	11.4	45
District of Columbia	52.4	49	36.3	44	14.7	25	14.4	51
Florida	43.4	35	33.7	37	13.4	15	8.3	17
Georgia	44.0	37	35.0	39	13.9	18	10.0	34
Hawaii	37.5	21	26.5	16	12.0	6	11.2	43
Idaho	45.4	41	36.1	43	11.4	4	5.3	2
Illinois	40.6	24	30.6	25	13.9	18	8.4	18
Indiana	44.1	38	32.6	32	16.6	43	8.7	23
Iowa	35.8	18	24.5	11	14.2	20	8.6	22
Kansas	41.5	29	30.7	26	16.0	36	9.1	28
Kentucky	45.6	43	36.6	45	18.5	51	11.9	48
Louisiana	45.5	42	35.0	39	14.8	26	9.0	26
Maine	37.4	20	28.3	20	17.7	48	9.0	26
Maryland	29.3	3	21.2	3	15.5	34	9.6	32
Massachusetts	30.7	4	21.2	3	16.4	40	10.8	39
Michigan	38.7	22	29.7	23	15.4	32	9.5	30
Minnesota	33.7	11	24.3	10	14.4	22	6.0	3
Mississippi	54.9	51	44.4	51	15.0	27	10.6	37
Missouri	41.0	25	30.7	26	16.2	38	10.8	39
Montana	45.0	39	34.1	38	13.6	16	6.6	5
Nebraska	36.7	19	26.7	18	14.6	24	6.6	5
Nevada	41.1	26	31.4	29	10.4	2	8.8	24
New Hampshire	23.2	1	17.4	1	16.6	43	8.8	24
New Jersey	30.7	4	22.9	5	13.3	14	8.4	18
New Mexico	52.6	50	41.9	50	12.1	7	7.7	13
New York	42.7	32	32.7	33	12.7	13	11.1	42
North Carolina	43.2	33	33.0	34	15.4	32	9.2	29
North Dakota	35.5	16	26.5	16	12.2	8	6.9	7
Ohio	41.1	26	30.9	28	16.2	38	12.3	49
Oklahoma	45.0	39	33.2	36	16.5	42	11.7	46
Oregon	43.2	33	33.0	34	13.6	16	7.4	12
Pennsylvania	35.0	13	25.7	15	15.3	30	10.6	37
Rhode Island	39.9	23	28.3	20	17.2	46	11.2	43
South Carolina	42.4	30	32.2	31	15.2	29	8.5	20
South Dakota	41.3	28	30.5	24	12.6	11	5.2	1
Tennessee	46.6	44	35.8	42	16.4	40	9.5	30
Texas	50.4	46	40.0	47	12.6	11	6.9	7
Utah	31.6	7	24.8	12	11.0	3	7.0	11
Vermont	34.9	12	25.1	14	15.0	27	9.6	32
Virginia	32.4	9	23.0	6	15.8	35	10.3	36
Washington	35.5	16	28.4	22	14.3	21	6.9	7
West Virginia	42.6	31	32.0	30	18.3	50	10.8	39
Wisconsin	33.5	10	23.2	8	15.3	30	8.1	16
Wyoming	31.1	6	23.1	7	14.4	22	6.9	7

Data: Children/Parents income less than 200% of poverty—2009 and 2010 Current Population Survey ASEC Supplement; Special health care needs—2005–2006 National Survey of Children with Special Health Care Needs; Asthma problems—2007 National Survey of Children’s Health.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

Appendix A13. State Characteristics: Child Population by Race/Ethnicity, 2008–2009

State	Distribution of Children Ages 0–18			
	White	Black	Hispanic	Other
<b>United States</b>	<b>55.5</b>	<b>14.3</b>	<b>22.2</b>	<b>7.9</b>
Alabama	62.2	30.7	4.0	3.1
Alaska	63.2	4.0	5.3	27.5
Arizona	41.1	4.8	44.0	10.1
Arkansas	66.4	19.1	8.4	6.1
California	29.8	5.8	51.5	12.8
Colorado	63.3	4.0	26.2	6.4
Connecticut	68.7	10.5	14.4	6.4
Delaware	60.3	24.5	8.9	6.3
District of Columbia	20.3	60.6	14.7	4.4
Florida	50.3	20.9	24.7	4.1
Georgia	50.8	32.1	11.7	5.4
Hawaii	9.0	1.5	14.3	75.2
Idaho	81.4	1.5	14.0	3.1
Illinois	56.0	17.0	20.1	7.0
Indiana	76.5	12.3	8.0	3.2
Iowa	81.1	3.7	9.1	6.2
Kansas	72.6	7.9	13.4	6.1
Kentucky	84.2	9.2	4.2	2.5
Louisiana	55.1	38.4	3.4	3.2
Maine	90.9	1.6	2.6	4.9
Maryland	49.4	31.6	9.9	9.1
Massachusetts	70.0	7.4	13.9	8.8
Michigan	69.9	17.5	5.4	7.3
Minnesota	78.8	6.7	6.9	7.6
Mississippi	52.3	42.8	2.9	2.1
Missouri	76.9	13.7	4.8	4.5
Montana	79.9	1.0	4.5	14.6
Nebraska	74.5	4.7	15.9	4.9
Nevada	45.1	9.1	34.0	11.9
New Hampshire	90.2	1.3	4.4	4.1
New Jersey	51.5	14.7	23.2	10.5
New Mexico	30.8	2.3	53.0	14.0
New York	50.9	17.6	23.3	8.2
North Carolina	58.6	23.8	10.2	7.4
North Dakota	78.3	0.4	2.5	18.8
Ohio	76.1	14.1	3.8	6.0
Oklahoma	54.2	9.0	14.2	22.6
Oregon	70.0	2.4	17.5	10.2
Pennsylvania	74.2	12.6	9.3	4.0
Rhode Island	66.7	6.0	21.2	6.1
South Carolina	60.4	32.8	2.3	4.6
South Dakota	77.8	1.7	4.0	16.5
Tennessee	69.0	20.1	7.3	3.6
Texas	30.3	12.3	51.6	5.9
Utah	81.5	1.3	13.2	4.0
Vermont	92.3	1.7	2.0	4.0
Virginia	61.9	22.3	8.0	7.8
Washington	64.4	5.0	12.7	17.9
West Virginia	88.3	5.2	2.5	4.1
Wisconsin	76.6	7.9	9.6	5.8
Wyoming	81.8	1.9	11.7	4.6

Data: 2009 and 2010 Current Population Survey ASEC Supplement.  
 Source: Commonwealth Fund State Scorecard on Child Health System Performance, 2011.

**APPENDIX B1. State Scorecard Data Years and Databases**

	<b>Current Year</b>	<b>Database</b>
<b>Access &amp; Affordability</b>		
1. Children ages 0–18 insured	2008–2009	CPS ASEC
2. Parents ages 19–64 insured	2008–2009	CPS ASEC
3. Currently insured children whose health insurance coverage is adequate to meet needs	2007	NSCH
4. Average total premium for employer-based family coverage as percent of median income for family household (all members under age 65)	2009 (premiums)/ 2008–09 (household income)	MEPS-IC (premiums)/ CPS ASEC (household income)
<b>Prevention &amp; Treatment</b>		
5. Children with a medical home	2007	NSCH
6. Young children (ages 19–35 months) received all recommended doses of six key vaccines	2009	NIS
7. Children with a preventive medical care visit in the past year	2007	NSCH
8. Children ages 1–17 with a preventive dental care visit in the past year	2007	NSCH
9. Children ages 2–17 needing mental health treatment/counseling who received mental health care in the past year	2007	NSCH
10. Young children (ages 10 months–5 years) received standardized developmental screening during visit	2007	NSCH
11. Hospital admissions for pediatric asthma per 100,000 children ages 2–17	2006	HCUP
12. Children with special health care needs who had no problems receiving referrals when needed	2005–06	NS-CSHCN
13. Children with special health care needs whose families received all needed family support services	2005–06	NS-CSHCN
<b>Potential to Lead Healthy Lives</b>		
14. Infant mortality, deaths per 1,000 live births	2006	NVSS-I
15. Child mortality, deaths per 100,000 children ages 1–14	2007	NVSS-M
16. Young children (ages 4 months–5 years) at moderate/high risk for developmental or behavioral delays	2007	NSCH
17. Children ages 10–17 who are overweight or obese	2007	NSCH
18. Children ages 1–17 with oral health problems	2007	NSCH
19. High school students who currently smoked cigarettes	2009	YRBS
20. High school students not meeting recommended physical activity level	2009	YRBS

**Definition of Databases**

CPS ASEC = Annual Social and Economic Supplement to the Current Population Survey

HCUP = Healthcare Cost and Utilization Project

MEPS-IC = Medical Expenditure Panel Survey-Insurance Component

NIS = National Immunization Survey

NSCH = National Survey of Children’s Health

NS-CSHCN = National Survey of Children with Special Health Care Needs

NVSS-I = National Vital Statistics System, Linked Birth and Infant Death Data

NVSS-M = National Vital Statistics System, Mortality Data

YRBS = Youth Risk Behavior Survey

APPENDIX B2. State Scorecard Indicator Descriptions

- 1 **Children ages 0–18 insured:** Employee Benefits Research Institute analysis of Current Population Survey ASEC Supplement (U.S. Census Bureau, 2009, 2010).
- 2 **Parents ages 19–64 insured:** Employee Benefits Research Institute analysis of Current Population Survey ASEC Supplement (U.S. Census Bureau, 2009, 2010).
- 3 **Currently insured children whose health insurance coverage is adequate to meet needs:** Percent of children ages 0–17 who were currently insured and parents responded that the child’s health insurance: usually or always offers benefits or covers services that meet child’s needs; usually or always allows child to see health care providers he/she needs; and that out-of-pocket costs are usually or always reasonable (including no out-of-pocket costs). For more information, see [www.nschdata.org](http://www.nschdata.org). Data from the National Survey of Children’s Health, assembled by the Child and Adolescent Health Measurement Initiative (CAHMI 2009).
- 4 **Average total premium for employer-based family coverage as percent of median income for family household (all members under age 65):** Average total premiums for employer-based family health insurance plans—Medical Expenditure Panel Survey-Insurance Component (AHRQ, MEPS-IC, 2009); Median incomes for family households (all members under age 65)—Columbia University Mailman School of Public Health analysis of Current Population Survey ASEC Supplement (U.S. Census Bureau, 2009, 2010).
- 5 **Children with a medical home:** Percent of children ages 0–17 who received health care that meets criteria of having a medical home: child had a personal doctor/nurse; had a usual source for sick care; received family-centered care from all health care providers; had no problems getting needed referrals; and received effective care coordination when needed. For more information, see [www.nschdata.org](http://www.nschdata.org). Data from the National Survey of Children’s Health, assembled by the Child and Adolescent Health Measurement Initiative (CAHMI 2009).
- 6 **Young children (ages 19–35 months) received all recommended doses of six key vaccines:** Percent of children ages 19–35 months who received 4+ doses of diphtheria, tetanus, and acellular pertussis (DTap); 3+ doses of poliovirus vaccine; 1+ doses of measles-mumps-rubella (MMR) vaccine;  $\geq 2$  or  $\geq 3$  doses of Haemophilus influenzae type b (Hib) vaccine for the primary series, depending on brand type; 3+ doses of hepatitis B vaccine (HepB), and 1+ doses of varicella vaccine. Data from the National Immunization Survey (NCHS, NIS 2009).
- 7 **Children with a preventive medical care visit in the past year:** Percent of children ages 0–17 who saw a health care professional for preventive medical care one or more times in the past year. Data from the National Survey of Children’s Health, assembled by the Child and Adolescent Health Measurement Initiative (CAHMI 2009).
- 8 **Children ages 1–17 with a preventive dental care visit in the past year:** Percent of children ages 1–17 who saw a dentist for preventive dental care one or more times in the past year. Data from the National Survey of Children’s Health, assembled by the Child and Adolescent Health Measurement Initiative (CAHMI 2009).
- 9 **Children ages 2–17 needing mental health treatment/counseling who received mental health care in the past year:** Percent of children ages 2–17 who had any kind of emotional, developmental, or behavioral problem that required treatment or counseling and who received treatment from a mental health professional (as defined) during the past year. For more information, see [www.nschdata.org](http://www.nschdata.org). Data from National Survey of Children’s Health, assembled by the Child and Adolescent Health Measurement Initiative (CAHMI 2009).
- 10 **Young children (ages 10 months–5 years) received standardized developmental screening during visit:** Percent of children ages 10 months–5 years who had a health care visit in the past year and parents completed a questionnaire about specific concerns and observations they had about their child’s development, communication or social behavior. The questionnaire was required to cover aspects of language or social development as appropriate for the child’s age. For more information, see [www.nschdata.org](http://www.nschdata.org). Data from the National Survey of Children’s Health, assembled by the Child and Adolescent Health Measurement Initiative (CAHMI 2009).

- 11 **Hospital admissions for pediatric asthma per 100,000 children ages 2–17:** Data from the Healthcare Cost and Utilization Project (HCUP) databases and AHRQ Quality Indicators, version 3.1. State estimates are from the State Inpatient Databases (SID), and not all states participate in HCUP. Estimates for the total U.S. are from the Nationwide Inpatient Sample. (AHRQ, HCUP-SID 2006). Reported in *National Healthcare Quality Report* (AHRQ 2009).
- 12 **Children with special health care needs who had no problems receiving referrals when needed:** Percent of children with special health care needs ages 0–17 who needed a referral to see other doctors or receive services during the past year and had no problem getting referrals. For more information, see [www.cshcndata.org](http://www.cshcndata.org). Data from the National Survey of Children with Special Health Care Needs, assembled by the Child and Adolescent Health Measurement Initiative (CAHMI 2008).
- 13 **Children with special health care needs whose families received all needed family support services:** Percent of children with special health care needs ages 0–17 who received all needed services which include respite care, family genetic counseling, and family mental health care or counseling. All services are those needed due to child’s medical, behavioral or other health conditions. For more information, see [www.cshcndata.org](http://www.cshcndata.org). Data from the National Survey of Children with Special Health Care Needs, assembled by the Child and Adolescent Health Measurement Initiative (CAHMI 2008).
- 14 **Infant mortality, deaths per 1,000 live births:** Data from the National Vital Statistics System–Linked Birth and Infant Death Data (NCHS, NVSS n.d.), reported in *National Vital Statistics Reports*, Volume 58, Number 17, April 30, 2010.
- 15 **Child mortality, deaths per 100,000 children ages 1–14:** Data from the National Vital Statistics System Multiple Cause-of-Death Mortality Data (NCHS, NVSS n.d.), assembled by the National KIDS COUNT Program (The Annie Casey Foundation, 2010).
- 16 **Young children (ages 4 months–5 years) at moderate/high risk for developmental or behavioral delays:** Percent of children ages 4 months–5 years whose risk for delay in learning, development, or behavior is moderate or high. Level of risk is based on a set of questions asking parents if they have concerns about their child’s development as appropriate for the child’s age. These parental concerns were identified by the Maternal and Child Health Bureau as predictive of a child’s risk for delays based on the standardized screening tool, Parents Evaluation of Developmental Status (PEDS). The National Survey of Children’s Health uses a non-clinical version of the PEDS. If parents replied “a little” or “a lot” they qualified as having a concern. Those with 2 or more predictive concerns, which are given more weight than non-predictive concerns, were considered as “high risk”; 1 concern, as “moderate risk.” For more information, see [www.nschdata.org](http://www.nschdata.org). Data from the National Survey of Children’s Health, assembled by the Child and Adolescent Health Measurement Initiative (CAHMI 2009).
- 17 **Children (ages 10–17) who are overweight or obese:** Overweight is defined as an age- and gender-specific body mass index (BMI-for-age) between the 85<sup>th</sup> and 94<sup>th</sup> percentile of the CDC growth charts. Obese is defined as a BMI-for-age at or above the 95<sup>th</sup> percentile. BMI was calculated based on parent-reported height and weight. For more information, see [www.nschdata.org](http://www.nschdata.org). Data from the National Survey of Children’s Health, assembled by the Child and Adolescent Health Measurement Initiative (CAHMI 2009).
- 18 **Children ages 1–17 with oral health problems:** Percent of children ages 1–17 who had at least one of the following oral health problems in the past six months: a toothache, decayed teeth/cavities, broken teeth, or bleeding gums. For more information, see [www.nschdata.org](http://www.nschdata.org). Data from the National Survey of Children’s Health, assembled by the Child and Adolescent Health Measurement Initiative (CAHMI 2009).

- 19 **High school students who currently smoked cigarettes:** Percent of high school students who smoke cigarettes on at least 1 day during the 30 days before the survey. Results are not available from every state because some states do not participate in the Youth Risk Behavior Survey and some states that do participate do not achieve a high enough overall response rate to receive weighted results. Data from the Youth Risk Behavior Survey (CDC, 2010).
- 20 **High school students not meeting recommended physical activity level:** Percent of high school students who were not physically active at least 60 minutes/day on 5 or more days (doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey). Results are not available from every state because some states do not participate in the Youth Risk Behavior Survey and some states that do participate do not achieve a high enough overall response rate to receive weighted results. Data from the Youth Risk Behavior Survey (CDC, 2010).



**APPENDIX B3. Complete References for Data Sources**

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## FURTHER READING

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*Realizing Health Reform's Potential: How the Affordable Care Act Will Strengthen Primary Care and Benefit Patients, Providers, and Payers* (Jan. 2011). M. K. Abrams, R. Nuzum, S. Mika, and G. Lawlor.

*State Trends in Premiums and Deductibles, 2003–2009: How Building on the Affordable Care Act Will Help Stem the Tide of Rising Costs and Eroding Benefits* (Dec. 2010). C. Schoen, K. Stremikis, S. K. H. How, and S. R. Collins.

*How to Develop a Statewide System to Link Families with Community Resources: A Manual for Replication of the Help Me Grow System* (Sept. 2010). P. Dworkin, J. Bogin, M. Carey et al.

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*Mirror, Mirror on the Wall: How the Performance of the U.S. Health Care System Compares Internationally, 2010 Update* (June 2010). K. Davis, C. Schoen, and K. Stremikis.

*Colorado Children's Healthcare Access Program: Helping Pediatric Practices Become Medical Homes for Low-Income Children* (June 2010). S. Silow-Carroll.

"The Children's Health Insurance Program Reauthorization Act: Progress After One Year," *States in Action*, May/June 2010. S. Silow-Carroll, G. Moody, and D. Rodin.

*Evidence-Based Health Care for Children: What Are We Missing?* (April 2010). R. D. Sege and E. De Vos.

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