CHAPTER 10

Early and Middle Childhood (EMC)

Lead Agencies

Administration for Children and Families
Centers for Disease Control and Prevention
Health Resources and Services Administration

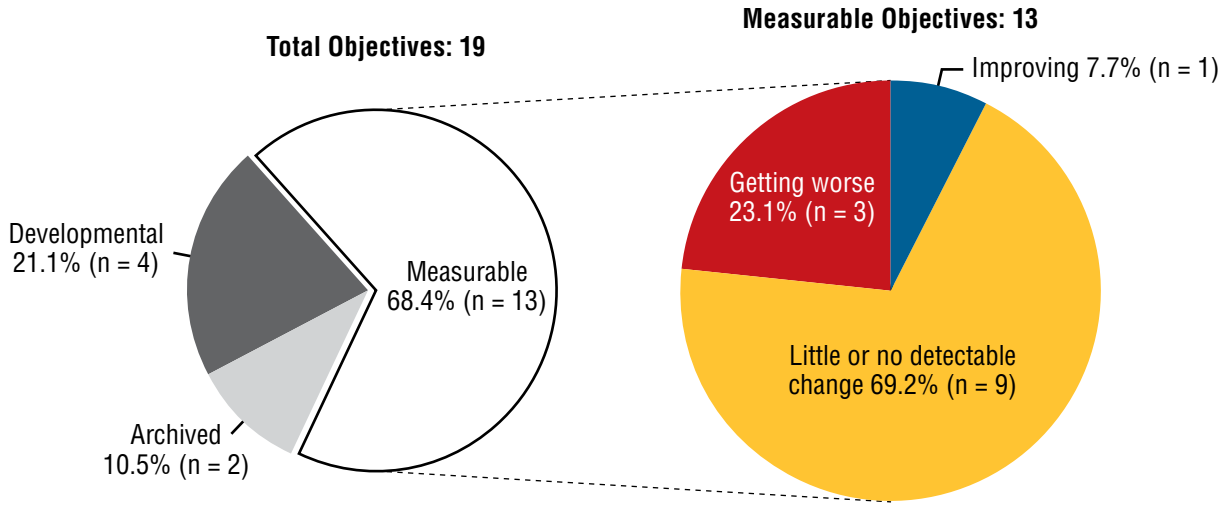
Contents

Goal: Document and track population-based measures of health and well-being for early and middle childhood populations over time in the United States.

This chapter includes objectives that monitor positive parenting and school health education standards. The Reader's Guide provides a step-by-step explanation of the content of this chapter, including criteria for highlighting objectives in the Selected Findings.[1]

Status of Objectives

Figure 10–1. Midcourse Status of the Early and Middle Childhood Objectives



Of the 19 objectives in the Early and Middle Childhood Topic Area, 2 objectives were archived,[2] 4 were developmental,[3] and 13 were measurable[4] (Figure 10–1, Table 10–1). The midcourse status of the measurable objectives (Table 10–2) was as follows:

- 1 objective was improving,[5]
- 9 objectives had demonstrated little or no detectable change,[6] and
- 3 objectives had gotten worse.[7]

Selected Findings

Positive Parenting

Two of the three objectives monitoring positive parenting activities demonstrated little or no detectable change, and one objective had improved at midcourse.

- There was little or no detectable change in the proportion of **children aged 6–17 who could share ideas with their parents and talk with them about things that mattered** (Table 10–2, EMC-2.2: 69.8% in 2007; 70.4% in 2011–2012).
  - » In 2011–2012, there were statistically significant disparities by sex, family income, and special healthcare needs status in the proportion of children aged 6–17 who could share ideas with their parents and talk with them about things that mattered (EMC-2.2). Disparities by race and ethnicity, geographic location, and health insurance status were not statistically significant (Table 10–3).
- There was little or no detectable change in the proportion of **children aged 0–5 whose family read to them every day** (Table 10–2, EMC-2.3: 47.8% in 2007; 47.9% in 2011–2012).
  - » The proportion of children aged 0–5 whose family read to them daily varied by state (Map 10–1, EMC-2.3). In 2011–2012, 22 states and the District of Columbia had achieved the national target.

» In 2011–2012, there were statistically significant disparities by race and ethnicity, family income, health insurance status, and special healthcare needs status in the proportion of children aged 0–5 whose family read to them daily (EMC-2.3). Disparities by sex and geographic location were not statistically significant (Table 10–3).

- The proportion of **children aged 0–5 whose doctor had asked their parents about concerns regarding the child's development** (EMC-2.4) increased from 48.0% in 2007 to 51.8% in 2011–2012, moving toward its 2020 target (Table 10–2).
  - » The proportion of children aged 0–5 whose doctor had asked their parents about concerns regarding the child's development varied by state (Map 10–2, EMC-2.4). Twenty-seven states had achieved the national target in 2011–2012.
  - » In 2011–2012, there were statistically significant disparities by race and ethnicity, family income, health insurance status, and special healthcare needs status in the proportion of children aged 0–5 whose doctor asked their parents about concerns regarding the child's development (EMC-2.4). Disparities by sex and geographic location were not statistically significant (Table 10–3).

School Health Education Standards

Seven of the 10 objectives monitoring school health education standards demonstrated little or no detectable change, while 3 objectives had worsened at midcourse.

- Between 2006 and 2014, the proportion of **elementary schools requiring that cumulative health education instruction meet the U.S. National Health Education Standards** (EMC-4.3.1) decreased from 7.5% to 1.7%; and the proportion of **middle schools requiring that cumulative health education instruction meet the U.S. National Health Education Standards** (EMC-4.3.2) declined from 10.3% to 4.2%, moving away from their respective baselines and 2020 targets (Table 10–2).
- Between 2006 and 2014, the proportion of **health education classes taught by an instructor who had received professional development within the past 2 years related to teaching skills for behavioral development** (EMC-4.4) declined from 52.5% to 41.2%, moving away from the baseline and 2020 target (Table 10–2).

More Information

Readers interested in more detailed information about the objectives in this topic area are invited to visit the HealthyPeople.gov website, where extensive substantive and technical information is available:

- For the background and importance of the topic area, see: http://www.healthypeople.gov/2020/topics-objectives/topic/early-and-middle-childhood
- For data details for each objective, including definitions, numerators, denominators, calculations, and data limitations, see: http://www.healthypeople.gov/2020/topics-objectives/topic/early-and-middle-childhood/objectives
  Select an objective, then click on the "Data Details" icon.
- For objective data by population group (e.g., sex, race and ethnicity, or family income), including rates, percentages, or counts for multiple years, see: http://www.healthypeople.gov/2020/topics-objectives/topic/early-and-middle-childhood/objectives
  Select an objective, then click on the "Data2020" icon.
- Many other Healthy People objectives are related to the Early and Middle Childhood objectives. For a list, please see the Early and Middle Childhood objectives page: http://www.healthypeople.gov/2020/topics-objectives/topic/early-and-middle-childhood/objectives
  Scroll down to view related objectives.

Data for the measurable objectives in this chapter were from the following data sources:

- National Survey of Children's Health: http://childhealthdata.org/learn/NSCH
- School Health Policies and Practices Survey: http://www.cdc.gov/healthyyouth/data/shpps/index.htm

Footnotes

[1]The Technical Notes provide more information on Healthy People 2020 statistical methods and issues.

[2]**Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

[3]**Developmental** objectives did not have a national baseline value.

[4]**Measurable** objectives had a national baseline value.

[5]**Improving**—One of the following, as specified in the Midcourse Progress Table:
» Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was statistically significant.
» Movement was toward the target, standard errors were not available, and the objective had achieved 10% or more of the targeted change.

[6]**Little or no detectable change**—One of the following, as specified in the Midcourse Progress Table:
» Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was not statistically significant.
» Movement was toward the target, standard errors were not available, and the objective had achieved less than 10% of the targeted change.
» Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was not statistically significant.
» Movement was away from the baseline and target, standard errors were not available, and the objective had moved less than 10% relative to the baseline.
» There was no change between the baseline and the midcourse data point.

[7]**Getting worse**—One of the following, as specified in the Midcourse Progress Table:
» Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was statistically significant.
» Movement was away from the baseline and target, standard errors were not available, and the objective had moved 10% or more relative to the baseline.

Suggested Citation

National Center for Health Statistics. Chapter 10: Early and Middle Childhood. Healthy People 2020 Midcourse Review. Hyattsville, MD. 2016.

Table 10–1. Early and Middle Childhood Objectives

LEGEND

 Data for this objective are available in this chapter's Midcourse Progress Table.

 Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

 A state or county level map for this objective is available at the end of the chapter.

Not Applicable — Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
EMC-1	(Developmental) Increase the proportion of children who are ready for school in all five domains of healthy development: physical development, social-emotional development, approaches to learning, language, and cognitive development	(Potential) National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS	Not Applicable
EMC-2.1	(Archived) Increase the proportion of parents who report a close relationship with their child	(Potential) National Survey of Adoptive Parents (NSAP), ASPE; National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS	Not Applicable
EMC-2.2	Increase the proportion of parents who use positive communication with their child	National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS	
EMC-2.3	Increase the proportion of parents who read to their young child	National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS	
EMC-2.4	Increase the proportion of parents who receive information from their doctors or other health care professionals when they have a concern about their children's learning, development, or behavior	National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS	
EMC-2.5	(Archived) Increase the proportion of parents with children under the age of 3 years whose doctors or other health care professionals talk with them about positive parenting practices		Not Applicable
EMC-3	(Developmental) Reduce the proportion of children who have poor quality of sleep	(Potential) National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS	Not Applicable
EMC-4.1.1	Increase the proportion of elementary schools that require newly hired staff who teach required health education to have undergraduate or graduate training in health education	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EMC-4.1.2	Increase the proportion of middle schools that require newly hired staff who teach required health education to have undergraduate or graduate training in health education	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	

Table 10–1. Early and Middle Childhood Objectives—Continued

LEGEND

 Data for this objective are available in this chapter's Midcourse Progress Table.

 Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

 A state or county level map for this objective is available at the end of the chapter.

Not Applicable — Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
EMC-4.1.3	Increase the proportion of high schools that require newly hired staff who teach required health education to have undergraduate or graduate training in health education	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EMC-4.2.1	Increase the proportion of elementary schools that require newly hired staff who teach required health instruction to be certified, licensed, or endorsed by the State in health education	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EMC-4.2.2	Increase the proportion of middle schools that require newly hired staff who teach required health instruction to be certified, licensed, or endorsed by the State in health education	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EMC-4.2.3	Increase the proportion of high schools that require newly hired staff who teach required health instruction to be certified, licensed, or endorsed by the State in health education	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EMC-4.3.1	Increase the proportion of elementary schools that require cumulative instruction in health education that meet the US National Health Education Standards for elementary, middle, and senior high schools	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EMC-4.3.2	Increase the proportion of middle schools that require cumulative instruction in health education that meet the US National Health Education Standards for elementary, middle, and senior high schools	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EMC-4.3.3	Increase the proportion of high schools that require cumulative instruction in health education that meet the US National Health Education Standards for elementary, middle, and senior high schools	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EMC-4.4	Increase the proportion of required health education classes or courses with a teacher who has had professional development related to teaching personal and social skills for behavior change within the past 2 years	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	

Table 10–1. Early and Middle Childhood Objectives—Continued

LEGEND

 Data for this objective are available in this chapter's Midcourse Progress Table.

 Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

 A state or county level map for this objective is available at the end of the chapter.

Not Applicable Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
EMC-5.1	(Developmental) Increase the proportion of children aged 4–5 years diagnosed with ADHD who receive recommended behavioral treatment	(Potential) National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS	Not Applicable
EMC-5.2	(Developmental) Increase the proportion of children aged 6–17 years diagnosed with ADHD who receive recommended behavioral treatment, medication treatment, or both	(Potential) National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS	Not Applicable

Table 10–2. Midcourse Progress for Measurable[1] Early and Middle Childhood Objectives

LEGEND

Target met or exceeded[2,3] | Improving[4,5] | Little or no detectable change[6–10] | Getting worse[11,12] | Baseline only[13] | Informational[14]

Objective Description	Baseline Value (Year)	Midcourse Value (Year)	Target	Movement Toward Target[15]	Movement Away From Baseline[16]	Movement Statistically Significant[17]
[6] **EMC-2.2** Children who talk and share ideas with parents (percent, 6–17 years)	69.8% (2007)	70.4% (2011–2012)	76.8%	8.6%		No
[6] **EMC-2.3** Children whose family read to them every day (percent, 0–5 years)	47.8% (2007)	47.9% (2011–2012)	52.6%	2.1%		No
[4] **EMC-2.4** Children whose doctor asked their parents about concerns regarding the child's development (percent, 0–5 years)	48.0% (2007)	51.8% (2011–2012)	52.8%	79.2%		Yes
[6] **EMC-4.1.1** Elementary schools requiring newly hired staff who teach health topics to have training in health education (percent)	35.2% (2006)	36.2% (2014)	38.7%	28.6%		No
[8] **EMC-4.1.2** Middle schools requiring newly hired staff who teach health topics to have training in health education (percent)	56.9% (2006)	54.0% (2014)	62.6%		5.1%	No
[8] **EMC-4.1.3** High schools requiring newly hired staff who teach health topics to have training in health education (percent)	76.8% (2006)	70.6% (2014)	84.5%		8.1%	No
[8] **EMC-4.2.1** Elementary schools requiring newly hired staff who teach health topics to be certified in health education (percent)	32.5% (2006)	29.6% (2014)	35.8%		8.9%	No
[8] **EMC-4.2.2** Middle schools requiring newly hired staff who teach health topics to be certified in health education (percent)	50.7% (2006)	47.4% (2014)	55.8%		6.5%	No
[6] **EMC-4.2.3** High schools requiring newly hired staff who teach health topics to be certified in health education (percent)	72.8% (2006)	73.1% (2014)	80.1%	4.1%		No
[11] **EMC-4.3.1** Elementary schools requiring health education instruction to meet national standards for cumulative time (percent)	7.5% (2006)	1.7% (2014)	11.5%		77.3%	Yes
[11] **EMC-4.3.2** Middle schools requiring health education instruction to meet national standards for cumulative time (percent)	10.3% (2006)	4.2% (2014)	14.3%		59.2%	Yes
[8] **EMC-4.3.3** High schools requiring health education instruction to meet national standards for cumulative time (percent)	6.5% (2006)	5.5% (2014)	10.5%		15.4%	No
[11] **EMC-4.4** health education classes taught by a teacher who has had professional development related to teaching skills for behavior change in past 2 years (percent)	52.5% (2006)	41.2% (2014)	57.8%		21.5%	Yes

Table 10–2. Midcourse Progress for Measurable[1] Early and Middle Childhood Objectives—Continued

NOTES

See HealthyPeople.gov for all Healthy People 2020 data. The Technical Notes provide more information on the measures of progress.

FOOTNOTES

[1]**Measurable** objectives had a national baseline value.

Target met or exceeded:

[2]At baseline the target was not met or exceeded and the midcourse value was equal to or exceeded the target. (The percentage of targeted change achieved was equal to or greater than 100%.)

[3]The baseline and midcourse values were equal to or exceeded the target. (The percentage of targeted change achieved was not assessed.)

Improving:

[4]Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was statistically significant.

[5]Movement was toward the target, standard errors were not available, and the objective had achieved 10% or more of the targeted change.

Little or no detectable change:

[6]Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was not statistically significant.

[7]Movement was toward the target, standard errors were not available, and the objective had achieved less than 10% of the targeted change.

[8]Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was not statistically significant.

[9]Movement was away from the baseline and target, standard errors were not available, and the objective had moved less than 10% relative to the baseline.

[10]There was no change between the baseline and the midcourse data point.

Getting worse:

[11]Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was statistically significant.

[12]Movement was away from the baseline and target, standard errors were not available, and the objective had moved 10% or more relative to the baseline.

[13]**Baseline only:** The objective only had one data point, so progress toward target attainment could not be assessed.

[14]**Informational:** A target was not set for this objective, so progress toward target attainment could not be assessed.

FOOTNOTES—Continued

[15]For objectives that **moved toward** their targets, movement toward the target was measured as the percentage of targeted change achieved (unless the target was already met or exceeded at baseline):

$$\text{Percentage of targeted change achieved} = \frac{\text{Midcourse value} - \text{Baseline value}}{\text{HP2020 target} - \text{Baseline value}} \times 100$$

[16]For objectives that **moved away** from their baselines and targets, movement away from the baseline was measured as the magnitude of the percentage change from baseline:

$$\text{Magnitude of percentage change from baseline} = \frac{|\,\text{Midcourse value} - \text{Baseline value}\,|}{\text{Baseline value}} \times 100$$

[17]Statistical significance was tested when the objective had a target and at least two data points, standard errors of the data were available, and a normal distribution could be assumed. Statistical significance of the percentage of targeted change achieved or the magnitude of the percentage change from baseline was assessed at the 0.05 level using a normal one-sided test

DATA SOURCES

EMC-2.2	National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS
EMC-2.3	National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS
EMC-2.4	National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS
EMC-4.1.1	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP
EMC-4.1.2	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP
EMC-4.1.3	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP
EMC-4.2.1	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP
EMC-4.2.2	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP
EMC-4.2.3	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP
EMC-4.3.1	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP
EMC-4.3.2	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP
EMC-4.3.3	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP
EMC-4.4	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP

Table 10–3. Midcourse Health Disparities[1] for Population-based Early and Middle Childhood Objectives

Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios[2,3] for selected characteristics at the midcourse data point

LEGEND

At the midcourse data point

- Group with the most favorable (least adverse) rate
- Group with the least favorable (most adverse) rate
- Data are available, but this group did not have the highest or lowest rate.
- Data are not available for this group because the data were statistically unreliable, not collected, or not analyzed.

Population-based Objectives	Characteristics and Groups																														
	Sex			Race and Ethnicity								Family Income[4]						Location			Health Insurance				Special Healthcare Needs		
	Male	Female	**Summary Disparity Ratio[2]**	American Indian or Alaska Native	Asian	Native Hawaiian or other Pacific Islander	Two or more races	Hispanic or Latino	Black, not Hispanic	White, not Hispanic	**Summary Disparity Ratio[3]**	Poor	Near-poor	Middle	Near-high	High	**Summary Disparity Ratio[3]**	Metropolitan	Nonmetropolitan	**Summary Disparity Ratio[2]**	Private	Public	Uninsured	**Summary Disparity Ratio[3]**	Yes	No	**Summary Disparity Ratio[2]**
EMC-2.2 Children who talk and share ideas with parents (percent, 6–17 years) (2011–2012)			1.035*	a	a	a	a				1.120				b		1.035*			1.012				1.041			1.157*
EMC-2.3 Children whose family read to them every day (percent, 0–5 years) (2011–2012)			1.009	a	a	a	a				1.321*				b		1.357*			1.008				1.472*			1.105*
EMC-2.4 Children whose doctor asked their parents about concerns regarding the child's development (percent, 0–5 years) (2011–2012)			1.016	a	a		a				1.301*				b		1.167*			1.039				1.361*			1.293*

NOTES

See HealthyPeople.gov for all Healthy People 2020 data. The Technical Notes provide more information on the measures of disparities.

FOOTNOTES

[1]**Health disparities** were assessed among population groups within specified demographic characteristics (sex, race and ethnicity, educational attainment, etc.). This assessment did not include objectives that were not population-based, such as those based on states, worksites, or those monitoring the number of events.

[2]When there were only two groups (e.g., male and female), the **summary disparity ratio** was the ratio of the higher to the lower rate.

[3]When there were three or more groups (e.g., white non-Hispanic, black non-Hispanic, Hispanic) and the most favorable rate (R_b) was the highest rate, the **summary disparity ratio** was calculated as R_b / R_a, where R_a = the average of the rates for all other groups. When there were three or more groups and the most favorable rate was the lowest rate, the summary rate ratio was calculated as R_a / R_b.

FOOTNOTES—Continued

[4]Unless otherwise footnoted, the poor, near-poor, middle, near-high, and high income groups are for persons whose family incomes were less than 100%, 100%–199%, 200%–399%, 400%–599%, and at or above 600% of the poverty threshold, respectively.

*The summary disparity ratio was significantly greater than 1.000. Statistical significance was assessed at the 0.05 level using a normal one-sided test on the natural logarithm scale.

[a]Data do not include persons of Hispanic origin.

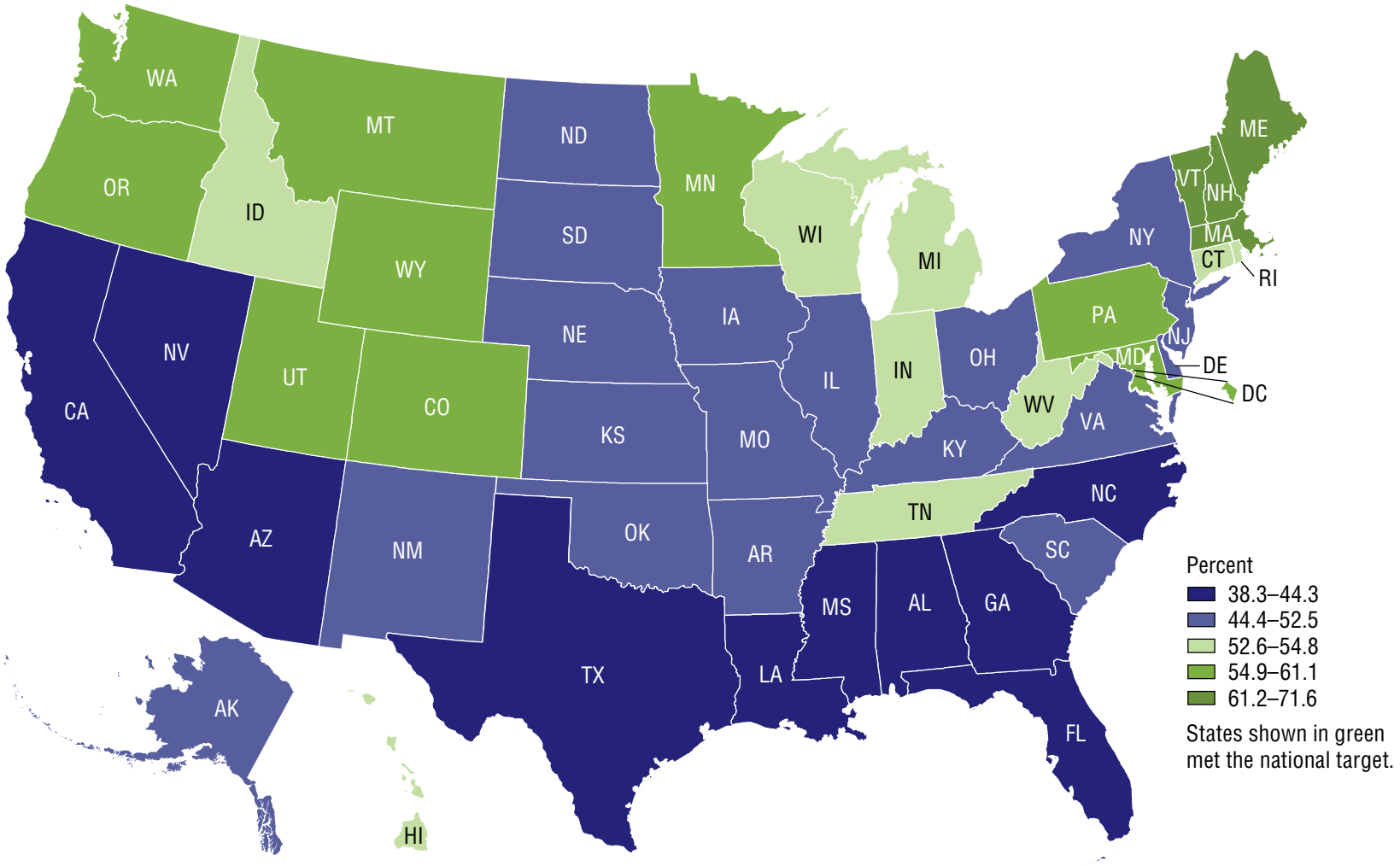
[b]Data are for persons whose family income was 400% or more of the poverty threshold.

DATA SOURCES

EMC-2.2	National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS
EMC-2.3	National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS
EMC-2.4	National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS

Map 10–1. Children (0–5 years) Whose Family Read to Them Every Day, by State: 2011–2012

Healthy People 2020 Objective EMC-2.3 ● National Target = 52.6% ● National Rate = 47.9%

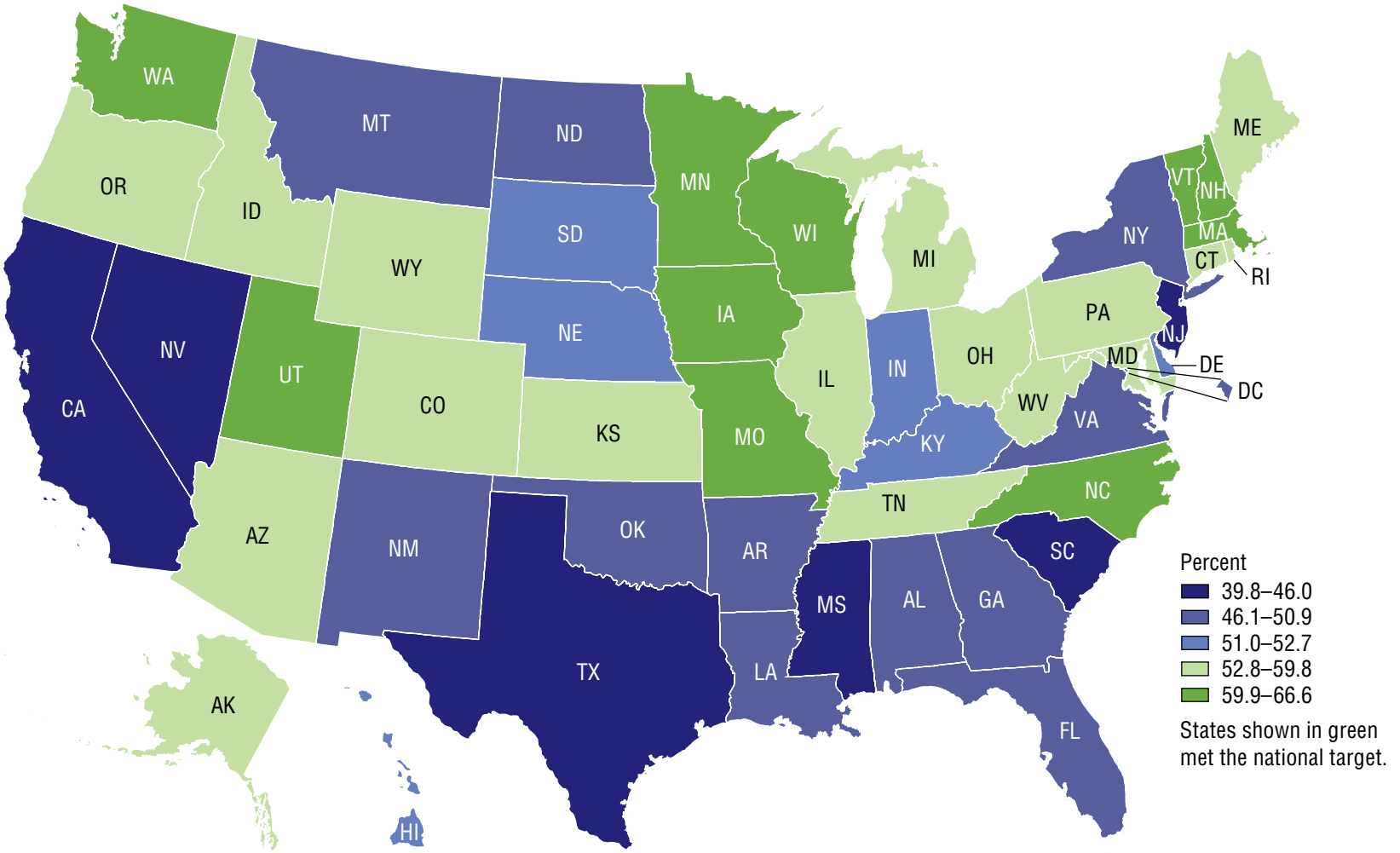


NOTES: Data are for children aged 5 years and under whose parents reported that someone in their family read to the child every day in the past week. Data are displayed by a modified Jenks classification for U.S. states which creates categories that minimize within-group variation and maximize between-group variation. The Technical Notes provide more information on the data and methods.

DATA SOURCE: National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS

Map 10–2. Children (0–5 years) Whose Doctor Asked Their Parents About Concerns Regarding the Child's Development, by State: 2011–2012

Healthy People 2020 Objective EMC-2.4 ● National Target = 52.8% ● National Rate = 51.8%



NOTES: Data are for children aged 5 years and under who visited or used a health service in the past 12 months and whose parents reported that their child's doctor or other health care professional gave them specific information to address their concerns about the child's learning, development, or behavior. Data are displayed by a modified Jenks classification for U.S. states which creates categories that minimize within-group variation and maximize between-group variation. The Technical Notes provide more information on the data and methods.

DATA SOURCE: National Survey of Children's Health (NSCH), HRSA/MCHB and CDC/NCHS