

Exhibit B3 Measuring Change Over Time

One of the main goals of this report is to assess how state long-term services and supports (LTSS) systems improved or declined between the *2017 Scorecard* and the *2020 Scorecard*. However, state ranks at the dimension and overall levels should not be directly compared between the current *Scorecard* and prior *Scorecards*. There are significant changes in the methodology and indicator sets, so changes in rank may not reflect actual changes in relative performance. Tables B3.1 and B3.2 below show a comparison of the indicators and policy categories between the *2017* and *2020 Scorecards*.

TABLE B3.1 Comparison of Indicator Sets for the *2017* and *2020 LTSS State Scorecards*

Dimension	2017 Scorecard Indicator	2020 Scorecard Indicator	Reference Year Data Available?	Change from 2017 Scorecard
Affordability and Access	Nursing Home Cost	Nursing Home Cost	Yes	
	Home Care Cost	Home Care Cost	Yes	
	Long-Term Care Insurance	Long-Term Care Insurance	Yes	Revised Definition
	Low-Income PWD with Medicaid	Low-Income PWD with Medicaid	Yes	
	PWD with Medicaid LTSS	PWD with Medicaid LTSS	Yes	Revised Definition
	ADRC/NWD Functions	ADRC/NWD Functions	Yes	
Choice of Setting and Provider	Medicaid LTSS Balance: Spending	Medicaid LTSS Balance: Spending	Yes	
	Medicaid LTSS Balance: New Users	Medicaid LTSS Balance: Users	Yes	Replaced Indicator
	Participant Direction	Self-Direction	No	
	Home Health Aide Supply	Home Health Aide Supply	Yes	
	Assisted Living Supply	Assisted Living Supply	Yes	
		Adult Day Services Supply	Yes	New Indicator
Quality of Life and Quality of Care	Subsidized Housing Opportunities	Subsidized Housing Opportunities	Yes	
	PWD Rate of Employment	PWD Rate of Employment	Yes	
	Nursing Home Pressure Sores	Nursing Home Residents with Pressure Sores	No	Revised Definition
	Nursing Home Antipsychotic Use	Nursing Home Antipsychotic Use	Yes	
	HCBS Quality Benchmarking	No	New Indicator	
Effective Transitions	Nursing Home Low Care Needs	Nursing Home Residents with Low Care Needs	No	Revised Definition
	Home Health Hospital Admissions	Home Health Hospital Admissions	Yes	Revised Definition
	Nursing Home Hospital Admissions	Nursing Home Hospital Admissions	Yes	
	Burdensome Transitions	Burdensome Transitions	Yes	Revised Definition
	Long Nursing Home Stays	Successful Discharge to Community	No	Replaced Indicator
	Transitions Back to Community			

Notes: Policies in the Support for Family Caregivers dimension are shown in Table B3.2 below. Even when the indicator is unchanged, the *2020 Scorecard* reference year data may not exactly match the *2017 Scorecard* current year data. Different years of data, data updates, or additional information since the production of the *2017 Scorecard* may result in some differences.

TABLE B3.2 Comparison of Policies Included in the Support for Family Caregivers Dimension for the 2017 and 2020 LTSS State Scorecards

Category	2017 Scorecard Policy	2020 Scorecard Policy
Supporting Working Caregivers	Family Responsibility Protected Classification	Family Responsibility Protected Classification
	Exceeds Federal FMLA	Exceeds Federal FMLA
	Paid Family Leave and Sick Days	Paid Family Leave
		Mandatory Paid Sick Days
	Flexible Sick Days	
	Unemployment Insurance	Unemployment Insurance
Person- and Family-Centered Care	Spousal Impoverishment Protections	Spousal Impoverishment Protections
	Caregiver Assessment	Caregiver Assessment
	CARE Act Legislation	CARE Act Legislation
Nurse Delegation and Scope of Practice	Nursing Tasks Able to be Delegated	Nursing Tasks Able to be Delegated
	Nurse Practitioner Scope of Practice	Nurse Practitioner Scope of Practice
Transportation Policies	Protection from Increases in Liability or Rates	Volunteer Driver Protection
	Exempt from Livery Laws	
	Volunteer Driver Investment	
	Statewide Coordinating Council	
	Medicaid Non-Medical Transportation	

Notes: Reference year data are available for all policies included in the 2020 Scorecard. Scoring algorithms have changed between the 2017 and 2020 Scorecards for many policies; policy, category, and overall composite scores should not be compared between Scorecards.

Change in performance can be directly measured at the indicator level. Baseline year data (typically 3 years prior to the most current data) are available for 21 of the 26 indicators in the Scorecard. For these 21 indicators, the Scorecard reports both current data and baseline data, and identifies meaningful change (either positive or negative). Note that the period of time covered by the data varies by indicator. Some measures have significant data lag, so the change measured in the 2020 Scorecard may have occurred prior to the publication of the 2017 Scorecard.

To aid in the interpretation of indicator-level change, appendix data tables show current and baseline values for each trended indicator, and also indicate the magnitude of changes by a green check mark for a substantial improvement, a red X for a substantial decline, and a black two-headed arrow for little or no change.

For count- or ratio-scaled data, usually indicators of the form (number of elements)/(population subgroup), a threshold of 10 or 20 percent change in the ratio was used. For example, if a state had a baseline rate of 40 long-term care insurance policies in effect per 1,000 people ages 40 and older in 2015, a ratio of 36 or lower in 2018 would be classified as a decline, and a ratio of 44 or higher would be classified as an improvement. A ratio of 37 through 43 would be classified as “little or no change” so as not to highlight small changes in the data that may not reflect meaningful change.

For percentage data, a threshold of 10 or 20 percent change in the odds was used in order for meaningful change to be possible for any starting value, and for the indication of change to be the same whether the indicator is expressed in a positive or negative way. The odds (or odds ratio) is the ratio of the probability of something happening (or the proportion of the sample in which something is true) to the probability of it not happening, or more generally, $Odds = P/(1 - P)$, where P is the proportion, percentage, or probability. For example, a percentage of 20 percent corresponds to an odds of $20\%/80\% = 0.25$, and a percentage of 60 percent corresponds to an odds of $60\%/40\% = 1.5$.

The Support for Family Caregivers dimension comprises 12 policy areas grouped into 4 categories. A threshold of 0.2 points of linear change (current value – reference year value) was used to indicate change at the category level. Since some policies are scored against national minimum and maximum values, there could be a slight change in score even if state policy is unchanged. A small threshold of 0.2 points was used so as not to indicate meaningful change without an actual change in state policy.

Table B3.3 below shows the threshold used to indicate substantial improvement for each indicator. Indicators based on survey data that may have uncorrelated sampling errors use a 20 percent threshold instead of 10 percent (as do the two estimated Medicaid LTSS user measures) to reduce the likelihood that random variation is classified as a significant change.

TABLE B3.3 Thresholds and Type of Change for Identifying Substantial Change

Indicator	Threshold	Type of Change
Affordability and Access Dimension		
Nursing Home Cost	+/-10%	Ratio
Home Care Cost	+/-10%	Ratio
Long-Term Care Insurance	+/-10%	Ratio
Low-Income PWD with Medicaid	+/-20%	Odds Ratio
PWD with Medicaid LTSS	+/-20%	Odds Ratio
ADRC/NWD Functions	+/-10%	Odds Ratio
Choice of Setting and Provider		
Medicaid LTSS Balance: Spending	+/-10%	Odds Ratio
Medicaid LTSS Balance: Users	+/-20%	Odds Ratio
Home Health Aide Supply	+/-20%	Ratio
Assisted Living Supply	+/-20%	Ratio
Adult Day Services Supply	+/-20%	Ratio
Subsidized Housing Opportunities	+/-10%	Odds Ratio
Quality of Life and Quality of Care		
PWD Rate of Employment	+/-20%	Odds Ratio
Nursing Home Antipsychotic Use	+/-10%	Odds Ratio
Support for Family Caregivers		
Supporting Working Family Caregivers	+/-0.2	Linear
Person- and Family-Centered Care	+/-0.2	Linear
Nurse Delegation and Scope of Practice	+/-0.2	Linear
Transportation Policies	+/-0.2	Linear
Effective Transitions		
Home Health Hospital Admissions	+/-10%	Odds Ratio
Nursing Home Hospital Admissions	+/-10%	Odds Ratio
Burdensome Transitions	+/-10%	Odds Ratio