

## 2019 Index Release

### *Key Changes from the April 2018 Release*

This document delineates key differences between the 2019 Release of the National Health Security Preparedness Index and the previous release in April 2018. While we discuss some aspects of the Index methodology here, one should refer to the [2018 Index Methodology Release](#) for a more detailed discussion of the Index's structure, composition, and methodology.

The Index tracks the nation's progress in preparing for, responding to, and recovering from disasters and other large-scale emergencies that pose risks to health and well-being in the United States. Because health security is a responsibility shared by many different stakeholders in government and society, the Index combines measures from multiple sources and perspectives to offer a broad view of the health protections in place for the nation as a whole and for each U.S. state.

Each state and the District of Columbia (DC) has an overall Index score that, theoretically, can range from zero to 10. This score is determined by how well a state performs on 129 factors or item measures. An example of an item measure is the number of physicians and surgeons per 100,000 in the state. Some measures vary significantly across the states and DC, with some scoring high and others low. A select number of measures, however, do not vary across the states—that is, all states score uniformly high or satisfy the requirements of the measure. An example is the U.S. Centers for Disease Control and Prevention's (CDC's) Behavioral Risk Factor Surveillance System (BRFSS), a critically important annual survey of a state's population to estimate individual health behaviors, practices, and outcomes. Since all 50 states and DC participate in BRFSS, this item measure—along with 18 others—has achieved the status of foundational measure. We distinguish between variable item measures and foundational measures, which are by definition constants, because we treat them differently when calculating Index scores. All item measures are grouped into categories such as health security surveillance, healthcare delivery, and other areas that we refer to as domains and subdomains.

In total, the 2019 Index release has 129 measures derived from more than 60 different sources. These measures are organized into six domains and 19 subdomains. Index values are calculated for six years, 50 states, and DC, for each subdomain, domain, and an overall Index score.

## KEY CHANGES FROM 2018 RELEASE

### Total Index Measures:

The total number of Index measures decreased from 140 in 2018 to 129 in 2019, including both Item measures and Foundational measures:

	2018 Release	2019 Release
Item Measures	121	110
Foundational Measures	19	19
<b>Total Measures</b>	<b>140</b>	<b>129</b>

### Key Changes to Index Measures from 2018 Release:

The changed measures are listed on the following pages, grouped by the [Index Domains and Subdomains](#) including:

- Two existing measures (M906 and M907) were moved from the Healthcare Delivery domain/Hospital and Physician Services subdomain to the Incident & Information Management domain/Information Management subdomain.
- Nine item measures (M53B, M1001, M349, M350U, M350R, M303B, M23NH, M23PC, and M23A) are NEW in the 2019 release and were not included in the 2018 release; data for these measures were added for all six years 2013 to 2018 as available.
- Twenty measures (M149, M222, M303, M315, M333, M335, M50, M51, M52, M53, M61, M62, M63, M65, M66, M67, M69, M70, M71, and M72) that were included in the 2018 release were REMOVED from the 2019 release because updated data are no longer being collected.

### Methodology:

All methodological changes implemented for the 2016, 2017, and 2018 Index continue in the 2019 Index and are described in detail in the [2018 Index Methodology Release](#) including:

- Normalization of each measure to a standard 10-point scale;
- Weighting of each measure based on expert panel ratings;
- Imputation for missing values;
- Longitudinal comparisons for measures for six years of data (increased from five years in 2018 Index); and
- Confidence Intervals for national summary measures.

**Table 2. Measure Changes from 2018 Index**

Domain Description	Sub-Domain Description	Item Name	Item Description	Status
Community Planning & Engagement Coordination	Children & Other At-Risk Populations	M52	State requires all licensed child-care providers to have a disaster plan for children with disabilities and those with access and functional needs	R
Community Planning & Engagement Coordination	Children & Other At-Risk Populations	M53	State has a hazard response plan for all K-12 schools	R
Community Planning & Engagement Coordination	Children & Other At-Risk Populations	M50	State requires that all child-care providers have a plan for family-child reunification during a disaster	R
Community Planning & Engagement Coordination	Children & Other At-Risk Populations	M51	State requires that all child-care providers have a plan for evacuating and safely moving children to an alternate site during a disaster	R
Community Planning & Engagement Coordination	Children & Other At-Risk Populations	M53B	Did not go to school because they felt unsafe (percent)	A
Incident & Information Management	Incident Management	M70	CDC assessment score (0-100) of state health department dispensing plan for prophylaxis or disease fighting materiel from the CDC's Strategic National Stockpile	R
Incident & Information Management	Incident Management	M71	CDC assessment score (0-100) of state health department coordination plan with hospitals and alternate facilities to procure medical materiel in an emergency	R
Incident & Information Management	Incident Management	M333	State has a disaster preparedness plan for animals including livestock and pets	R
Incident & Information Management	Incident Management	M72	CDC assessment score (0-100) of state health department emergency response training, exercise, and evaluation plans' compliance with guidelines set forth by the Homeland Security Exercise and Evaluation Program	R
Incident & Information Management	Incident Management	M335	State has statewide and/or county emergency response team(s) for animals including livestock and pets	R

**Table 2. Measure Changes from 2018 Index**

Domain Description	Sub-Domain Description	Item Name	Item Description	Status
Incident & Information Management	Information Management	M906	Percent of hospitals in the state that have demonstrated meaningful use of certified electronic health record technology (CEHRT). This includes the demonstration of meaningful use through either the Medicare or Medicaid EHR Incentive Programs. Critical Access hospitals are facilities with no more than 25 beds and located in a rural area further than 35 miles from the nearest hospital, and/or are located in a mountainous region.	T
Incident & Information Management	Information Management	M907	Percent of office-based medical doctors and doctors of osteopathy in the state that have demonstrated meaningful use of certified electronic health record technology (CEHRT). This includes the demonstration of meaningful use through either the Medicare or Medicaid EHR Incentive Programs.	T
Incident & Information Management	Information Management	M1001	Enhanced 911 Call Center Capability. The percentage of 911 call centers in the state that are Enhanced 911 call centers.	A
Healthcare Delivery	Prehospital Care	M349	State has adopted EMS Personnel Licensure Interstate CompAct (REPLICA) legislation	A
Healthcare Delivery	Prehospital Care	M350U	Ambulance Response Times (Urban Areas). The length of time between EMS notification and arrival at a motor vehicle crash (MVC).	A
Healthcare Delivery	Prehospital Care	M350R	Ambulance Response Times (Rural Areas). The length of time between EMS notification and arrival at a MVC.	A
Healthcare Delivery	Hospital and Physician Services	M149	Number of staffed hospital beds per 100,000 population in the state	R
Healthcare Delivery	Long-Term Care	M303	State requires written disaster plans for long-term care and nursing home facilities	R

**Table 2. Measure Changes from 2018 Index**

Domain Description	Sub-Domain Description	Item Name	Item Description	Status
Healthcare Delivery	Long-Term Care	M303B	Number of nursing home deficiencies (evacuation plan deficiencies or emergency planning deficiencies) per 100 nursing homes in the state (expressed as quintiles)	A
Healthcare Delivery	Long-Term Care	M23NH	Number of disease outbreaks in nursing homes or assisted living facilities per 1,000 certified nursing home residents in a state	A
Healthcare Delivery	Mental & Behavioral Healthcare	M315	Percent of hospitals in the state providing chaplaincy/pastoral care services	R
Countermeasure Management	Medical Materiel Management, Distribution, & Dispensing	M61	CDC assessment score (0-100) of a state's ability to manage the CDC's Strategic National Stockpile (SNS) assets, including updated staffing, call-down exercises, Incident Command System integration, testing, and notification of volunteers	R
Countermeasure Management	Medical Materiel Management, Distribution, & Dispensing	M62	CDC assessment score (0-100) of a state's ability to request the CDC's SNS assets from local authorities, including the level of completeness and utility of state plans and procedures	R
Countermeasure Management	Medical Materiel Management, Distribution, & Dispensing	M63	CDC assessment score (0-100) of a state's tactical communications plan for the CDC's SNS usage	R
Countermeasure Management	Medical Materiel Management, Distribution, & Dispensing	M65	CDC assessment score (0-100) of a state's security planning for the CDC's SNS assets, including coordination of medical countermeasures dispensing, management, and mass prophylaxis	R
Countermeasure Management	Medical Materiel Management, Distribution, & Dispensing	M66	CDC assessment score (0-100) of a state's ability to receive, stage, and store (RSS) the CDC's SNS materiel, including plans and procedures developed to coordinate all logistics for the SNS	R
Countermeasure Management	Medical Materiel Management, Distribution, & Dispensing	M67	CDC assessment score (0-100) of a state's controlling inventory procedure to track the CDC's SNS materiel, including an Inventory Management System	R

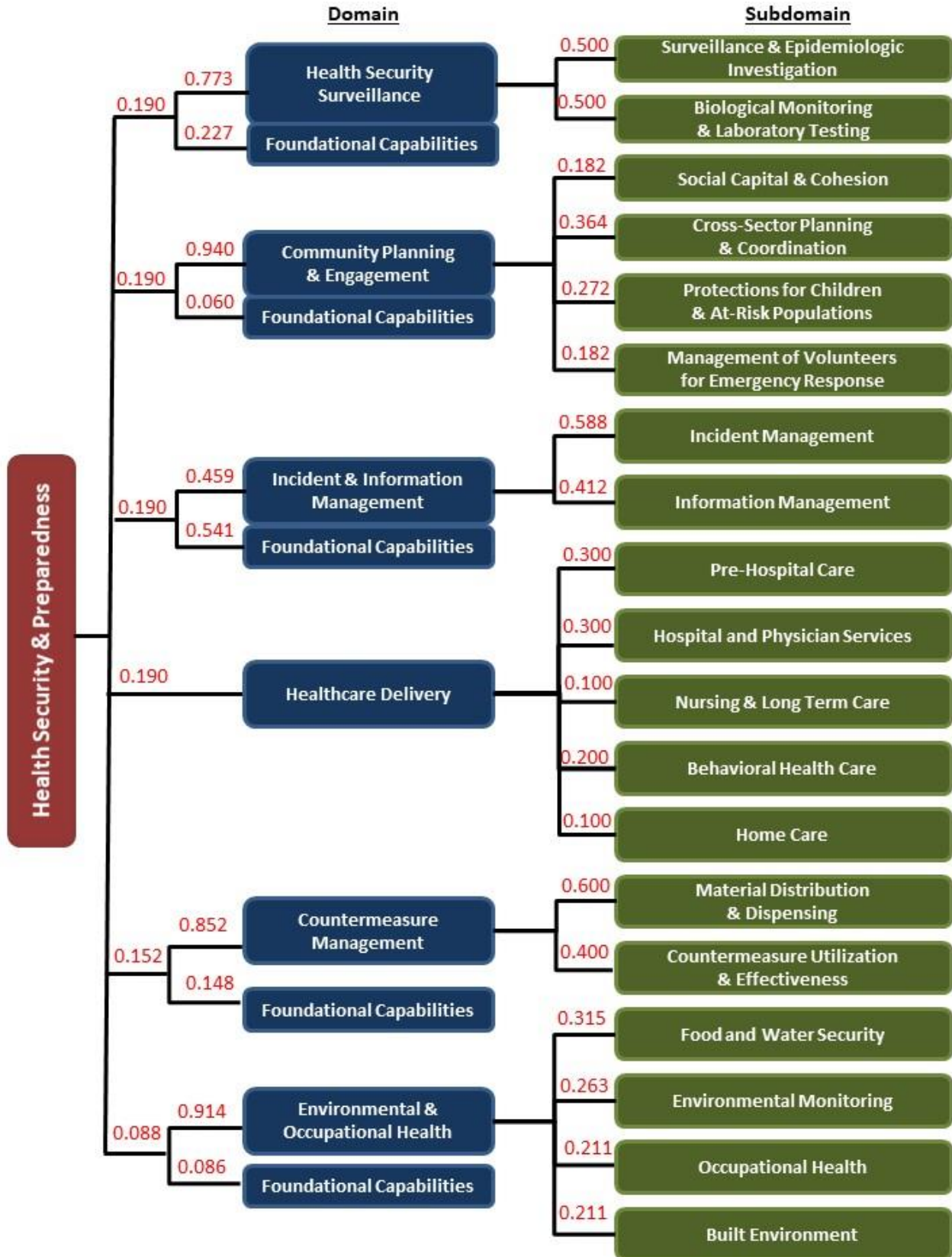
**Table 2. Measure Changes from 2018 Index**

Domain Description	Sub-Domain Description	Item Name	Item Description	Status
Countermeasure Management	Medical Materiel Management, Distribution, & Dispensing	M69	CDC assessment score (0-100) of a state’s distribution plans and procedures for physical delivery of the CDC’s SNS assets from the receipt, stage, and store (RSS) facility to dispensing sites	R
Environmental & Occupational Health	Food & Water Security	M23PC	Number of foodborne illness outbreaks reported to CDC by state and local public health departments for which a causative infectious agent is confirmed (per 1 million population)	A
Environmental & Occupational Health	Environmental Monitoring	M23A	Number of disease outbreaks in a state due to animal contact per 1 million population	A

*Note: The status letters indicate Added (A), Removed (R), or Moved to a different subdomain (T).*

**UPDATES TO THE INDEX WEIGHTING**

We used an expert panel methodology to derive weights for the new item measures—listed in Table 2 above—that are identified as new measures in the 2019 Index release. Adopting the same approach that was used for the 2016, 2017, and 2018 Index releases, an online multi-stage Delphi process was used (refer to the [2018 Index Methodology Release](#) for details). The expert panel comprises subject matter experts who were identified through a nomination process and reviews of the preparedness scientific and professional literature. In total, 283 experts were identified and invited to participate in the item measure assessment, with 129 experts participating (46 percent). The iterative Delphi assessment of individual measures was conducted from Feb. 11-March 6, 2019. The final weights used in Index calculations are shown in the figure on the following page.



NOTE: numbers indicate Delphi expert panel weights

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