Inventory of State Health Workforce Data Collection

HWTAC
Health Workforce Technical Assistance Center

Center for Health Workforce Studies
School of Public Health
University at Albany, State University of New York

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SUGGESTED CITATION

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BACKGROUND

The Health Workforce Technical Assistance Center (HWTAC), under a cooperative agreement with the National Center for Health Workforce Analysis (NCHWA), provides technical assistance to states and organizations engaged in health workforce planning. In the last decade, there has been growing interest in developing health workforce data collection and monitoring systems in states. This is especially the case today, as health reform initiatives are implemented in nearly every state. In response to this interest, HWTAC is conducting a survey of states to learn more about their health workforce data collection and analysis efforts. This report describes findings to date from a survey about data collection on health workforce supply and demand, and the educational pipeline in specific U.S. states. For more detailed information about health workforce data collection activities taking place around the country, including contact information for the organizations responsible for collecting the data, please visit the HWTAC website at www.healthworkforceta.org.

METHODS

An online survey about health workforce data collection in U.S. states was developed in the fall of 2014 and pilot tested in early 2015. Invitations to complete the on-line survey were sent to all primary care offices, state nursing workforce centers, and other groups believed to be engaged in health workforce data collection. HWTAC staff followed up with non-respondents. The survey is ongoing and the state inventory is continually being updated as more responses are received.

FINDINGS

Since the survey was launched, 40 organizations in 32 states have responded, indicating that they collect health workforce data. This number is expected to grow as organizations continue to respond to the survey. All responding organizations reported collecting health workforce supply data (eg, demographic educational and practice characteristics of health professionals). Fewer organizations reported collecting data on health workforce demand (eg, employer recruitment and retention difficulties) or the health workforce educational pipeline (eg, graduation rates and trainee/graduate characteristics). This report summarizes key findings from the survey related to data collection efforts in these 3 areas.

Health Workforce Supply Data

Organizations in 32 states collect health workforce supply data.

Figure 1. States Where Health Workforce Supply Data Collection Has Been Reported
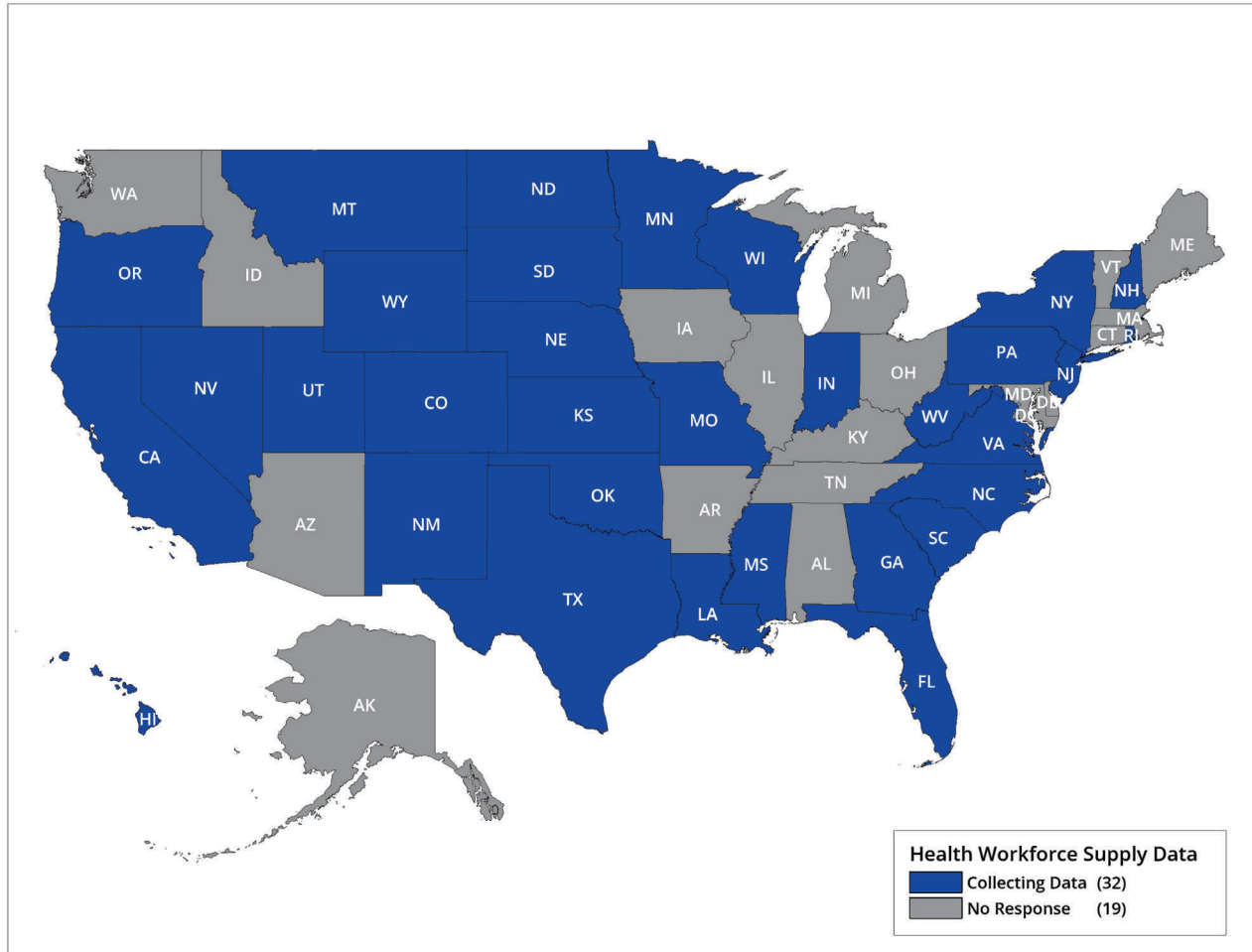
State level health workforce supply data collection are most likely to target physicians [27 states], nurse practitioners (NPs) [23 states], dentists [22 states], and registered nurses (RNs) [22 states].
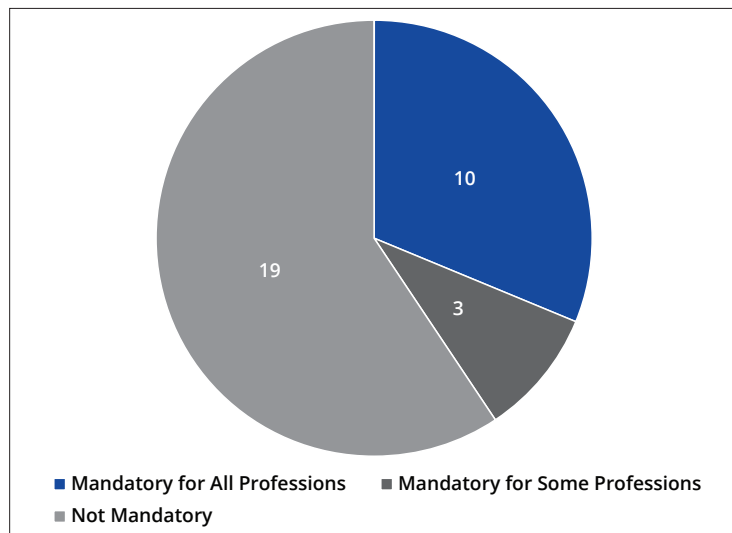
Table 1. Health Workforce Supply Data Collection by State and Profession

State	CRNA	DEN	DH	LPN	MDW	NP	PA	PHA	PHY	PSY	PT	RN	SW	OTH
California			✓		✓	✓			✓			✓		
Colorado	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
Florida	✓			✓	✓	✓						✓		
Georgia							✓		✓					
Hawaii							✓		✓					
Indiana	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kansas		✓			✓	✓	✓		✓					
Louisiana	✓				✓	✓						✓		✓
Minnesota	✓	✓	✓	✓	✓	✓	✓		✓		✓		✓	✓
Mississippi	✓	✓	✓	✓	✓	✓	✓		✓			✓		
Missouri		✓				✓			✓					
Montana		✓							✓	✓			✓	
Nebraska	✓	✓			✓	✓	✓	✓	✓	✓	✓			✓
Nevada	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
New Hampshire									✓					✓
New Jersey	✓			✓	✓	✓						✓		
New Mexico	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
New York		✓	✓		✓	✓	✓		✓			✓		
North Carolina		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
North Dakota	✓			✓	✓	✓						✓		
Oklahoma		✓							✓					
Oregon	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pennsylvania		✓	✓	✓			✓		✓			✓		
Rhode Island		✓	✓						✓			✓		
South Carolina	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
South Dakota	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓		
Texas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Utah	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Virginia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
West Virginia	✓													
Wisconsin				✓			✓		✓			✓		
Wyoming		✓	✓	✓		✓			✓	✓		✓	✓	✓
Total	18	22	17	19	20	23	20	12	27	12	12	22	11	15

CRNA: Certified Registered Nurse Anesthetists.	PHA: Pharmacists.
DEN: Dentists.	PHY: Physicians.
DH: Dental Hygienists.	PSY: Psychologists.
LPN: Licensed Practical Nurses.	PT: Physical Therapists.
MDW: Nurse Midwives/Midwives.	RN: Registered Nurses.
NP: Nurse Practitioners.	SW: Social Workers.
PA: Physician Assistants.	OTH: Other Health Professions.

In 13 states health workforce data collection is mandatory. In 10 of those states, data collection is mandatory for all of the professions for which data are collected. In 3 states data collection is mandatory for a subset of professions for which data are collected (Missouri, New York, and Wisconsin.)

Figure 2. Mandatory and Voluntary Health Workforce Supply Data Collection

Data collection is most likely to be mandatory for the following professions: RNs [9 states], NPs [9 states], physicians [8 states], midwives [8 states], licensed practical nurses (LPNs) [8 states], and certified registered nurse anesthetists [8 states].

Table 2. Mandatory Health Workforce Supply Data Collection by State and Profession

State	CRNA	DEN	DH	LPN	MDW	NP	PA	PHA	PHY	PSY	PT	RN	SW	OTH
Louisiana	✓				✓	✓						✓		✓
Mississippi	✓	✓	✓	✓	✓	✓	✓		✓			✓		
Missouri									✓					
New Hampshire									✓					✓
New Mexico	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
New York						✓								
North Carolina		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
North Dakota	✓			✓	✓	✓						✓		
Oregon	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
South Carolina	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
Texas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
West Virginia	✓													
Wisconsin				✓								✓		
Total	8	6	6	8	8	9	6	5	8	4	5	9	3	7

In 26 states health workforce supply data are collected on a regular basis at the time of licensing/ relicensing. In most of these states health workforce supply data are only collected through a survey that is part of the licensing/relicensing process. However, a few states report different data collection strategies for different professions. Eight states report using a recurring survey that is not part of the licensing/relicensing process.

Table 3. Health Workforce Supply Data Collection Strategies by State

State	A survey that is part of the licensing process	A survey that is not part of the licensing process	Telephone interviews	In-person interviews
California	✓	✓		
Colorado	✓	✓		
Florida	✓			
Hawaii	✓			
Georgia	✓			
Indiana	✓			
Kansas	✓		✓	
Louisiana	✓			
Minnesota	✓			
Mississippi	✓			
Missouri	✓			
Montana	✓	✓	✓	✓
Nebraska		✓		
Nevada	✓			
New Hampshire	✓			
New Jersey	✓			
New Mexico	✓			
New York	✓			
North Carolina	✓			
North Dakota	✓			
Oklahoma		✓		
Oregon	✓			
Pennsylvania	✓			
Rhode Island		✓		
South Carolina	✓			
South Dakota	✓			
Texas	✓			
Utah		✓		
Virginia	✓			
West Virginia		✓		
Wisconsin	✓			
Wyoming			✓	
Total	26	8	3	1

The most frequent supply variables collected are demographic characteristics (30 states), practice characteristics (30 states), and educational backgrounds (26 states). 25 states report collecting data on health professionals in all three of these categories.
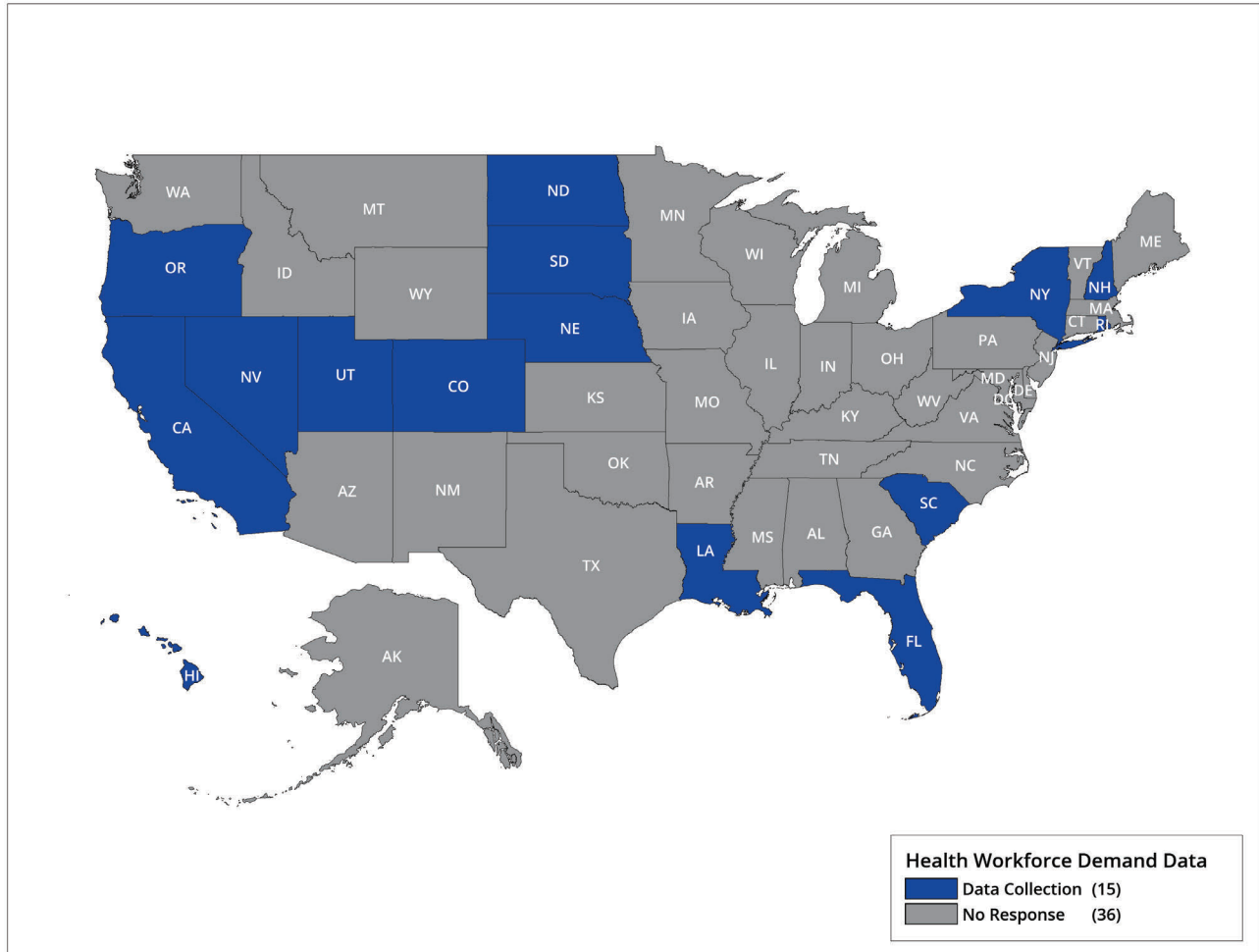
Table 4. Health Workforce Supply Data Collection by State and Type of Data

State	Demographic Characteristics	Education Background	Practice Characteristics	Other
California	✓	✓	✓	
Colorado	✓	✓	✓	✓
Florida	✓	✓	✓	
Georgia	✓		✓	
Hawaii	✓			
Indiana	✓	✓	✓	
Kansas	✓	✓	✓	
Louisiana	✓	✓	✓	
Minnesota	✓	✓	✓	✓
Mississippi	✓	✓	✓	
Missouri	✓	✓	✓	
Montana	✓	✓	✓	
Nebraska	✓	✓	✓	✓
Nevada	✓		✓	
New Hampshire	✓	✓	✓	✓
New Jersey	✓	✓	✓	
New Mexico	✓	✓	✓	
New York	✓	✓	✓	
North Carolina	✓	✓	✓	
North Dakota	✓	✓	✓	✓
Oklahoma	✓		✓	
Oregon	✓	✓	✓	✓
Pennsylvania	✓	✓	✓	
Rhode Island			✓	✓
South Carolina	✓	✓	✓	
South Dakota	✓			
Texas	✓	✓	✓	
Utah	✓	✓	✓	
Virginia	✓	✓	✓	✓
West Virginia		✓	✓	
Wisconsin	✓	✓	✓	
Wyoming	✓	✓	✓	
Total	30	26	30	8

Health Workforce Demand Data

Organizations in 15 states collect health workforce demand data.

Figure 3. States Where Health Workforce Demand Data Collection Has Been Reported

Health workforce demand data collection most frequently targets RNs (10 states), physicians (9 states), NPs (9 states), and LPNs (9 states).

Health workforce demand data is collected on a regular basis in 14 states.

Table 5. Health Workforce Demand Data Collection by State and Profession

State	CRNA	DEN	DH	LPN	MDW	NP	PA	PHA	PHY	PSY	PT	RN	SW	OTH
California	✓			✓	✓	✓	✓	✓				✓	✓	
Colorado		✓							✓					
Florida	✓			✓	✓	✓						✓		
Hawaii							✓		✓					
Louisiana	✓			✓	✓	✓						✓		
Nebraska							✓	✓	✓		✓			✓
Nevada	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
New Hampshire									✓					
New York	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
North Dakota	✓			✓	✓	✓						✓		
Oregon	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
Rhode Island									✓					
South Carolina				✓	✓	✓						✓		✓
South Dakota	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓		
Utah												✓		
Total	8	5	4	9	8	9	7	6	9	2	5	10	3	5

Health workforce demand data are most likely to be collected for hospitals (10 states) and nursing homes (8 states).

Table 6. Health Workforce Demand Data Collection by State and Setting

State	Community Health Centers	Home Health Agencies	Hospitals	Nursing Homes	Other
California			✓		
Colorado	✓				
Florida		✓	✓	✓	✓
Hawaii					✓
Louisiana		✓	✓	✓	
Nebraska					✓
Nevada			✓		✓
New Hampshire	✓	✓	✓	✓	
New York	✓	✓	✓	✓	
North Dakota			✓	✓	✓
Oregon		✓	✓	✓	✓
Rhode Island	✓			✓	✓
South Carolina			✓		
South Dakota					✓
Utah	✓	✓	✓	✓	
Total	5	6	10	8	8

The most frequently collected demand data are on vacancies (11 states), recruitment difficulty (10 states), and turnover (9 states). In 4 states, information is also collected on retention difficulties.
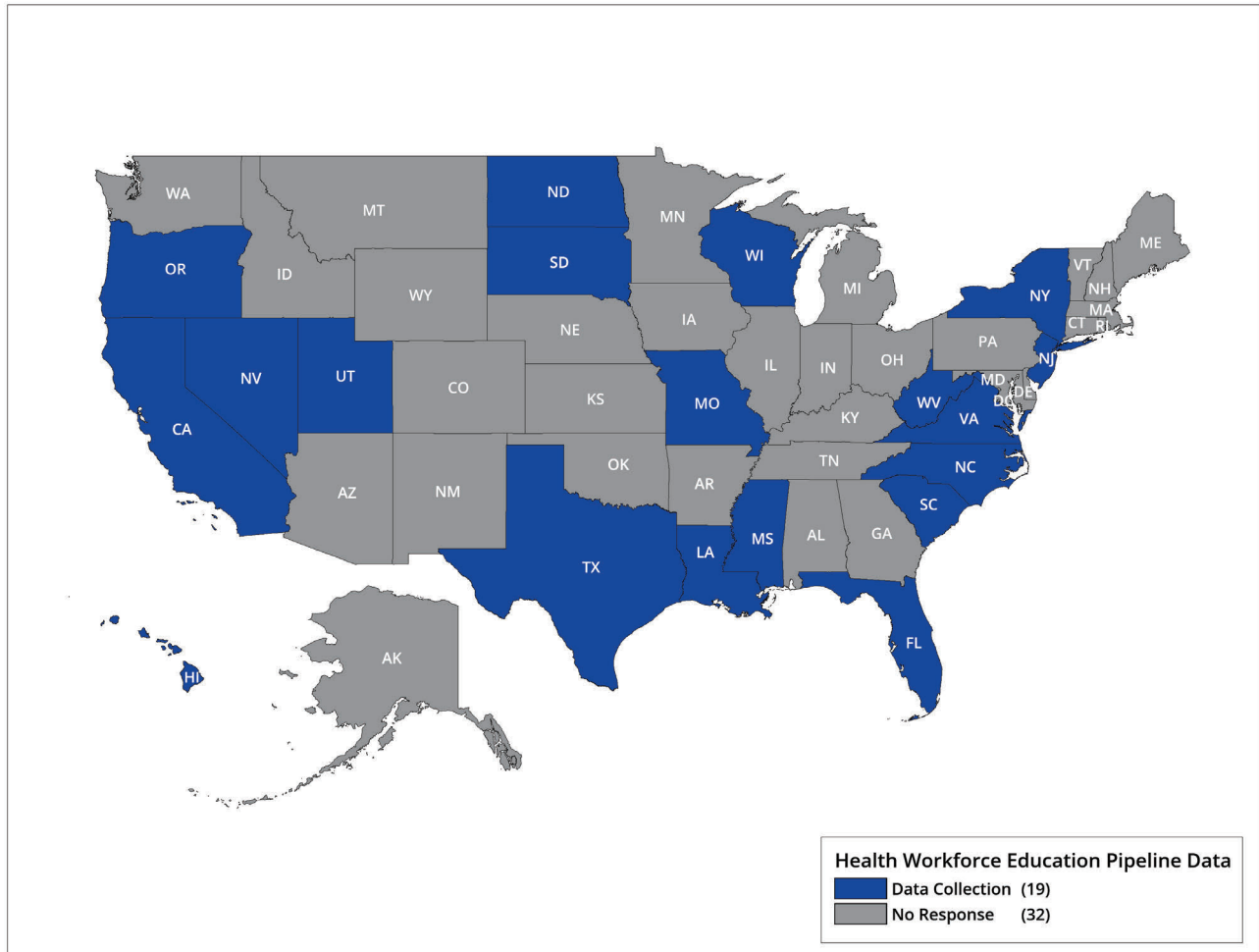
Table 7. Health Workforce Demand Data Collection by State and Type of Data

State	Vacancies	Turnover	Recruitment Difficulty	Retention Difficulty	Other
California	✓	✓	✓		
Colorado	✓	✓	✓	✓	
Florida	✓	✓	✓		✓
Hawaii					✓
Louisiana	✓	✓	✓		
Nebraska	✓		✓		
Nevada	✓	✓	✓	✓	
New Hampshire					✓
New York	✓	✓	✓	✓	✓
North Dakota	✓	✓	✓		
Oregon	✓	✓	✓		
Rhode Island					✓
South Carolina	✓				✓
South Dakota					✓
Utah	✓	✓	✓	✓	
Total	11	9	10	4	7

Health Workforce Educational Pipeline Data

Organizations in 19 states collect information about the health workforce educational pipeline.

Figure 4. States in which Health Workforce Educational Pipeline Data Are Collected

Health Workforce Education Pipeline Data
- Data Collection (19)
- No Response (32)

Health workforce educational pipeline data are most likely to be collected for RNs (13 states), physicians (11 states), and LPNs (10 states).

Educational pipeline data collection is recurring in 17 states.

Table 8. Health Workforce Education Pipeline Data Collection by State and Profession

State	CRNA	DEN	DH	LPN	MDW	NP	PA	PHA	PHY	PSY	PT	RN	SW	OTH
California	✓				✓	✓						✓		
Florida	✓			✓	✓	✓						✓		
Hawaii									✓					
Louisiana	✓				✓	✓						✓		
Mississippi		✓							✓					
Missouri									✓					
Nevada	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
New Jersey				✓								✓		
New York									✓			✓		
North Carolina									✓					
North Dakota	✓			✓		✓						✓		
Oregon		✓	✓				✓	✓	✓	✓	✓		✓	✓
South Carolina		✓	✓	✓		✓	✓	✓	✓		✓	✓		✓
South Dakota	✓	✓	✓	✓		✓	✓	✓	✓			✓	✓	
Texas	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓		
Utah	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓		
Virginia				✓								✓		
West Virginia									✓					✓
Wisconsin				✓		✓			✓			✓		
Total	8	7	4	10	6	9	7	6	11	4	6	13	2	4

Health Workforce Technical Assistance Center

Educational pipeline data are collected from education programs in 15 states and from individuals in training in 7 states.

Information is most likely collected about graduation rates (17 states), enrollment rates (15 states) and the demographic characteristics of trainees (13 states). In a few states data are collected about trainees' post-graduation plans (4 states) and job market experiences (1 state).

Table 9. Health Workforce Education Pipeline Data Collection by State and Type of Data

State	Graduation Rates	Enrollment Rates	Demographic Characteristics	Job Market Experiences	Graduation Plans	Other
California	✓	✓	✓			
Florida	✓	✓	✓			✓
Hawaii	✓					
Louisiana	✓	✓	✓			
Mississippi	✓	✓	✓			
Missouri	✓	✓	✓			
Nebraska						✓
Nevada	✓	✓	✓	✓	✓	
New Jersey	✓	✓	✓			
New York	✓	✓	✓	✓	✓	
North Carolina						✓
North Dakota	✓	✓	✓			
Oregon	✓	✓	✓			
South Carolina	✓	✓				
South Dakota	✓					
Texas						✓
Utah	✓	✓	✓			
Virginia	✓	✓	✓			✓
West Virginia	✓	✓			✓	✓
Wisconsin	✓	✓	✓		✓	
Total	17	15	13	2	4	6

DISCUSSION

The Health Workforce Data Collection Inventory is an ongoing project. To date 40 organizations in 32 states have reported collecting health workforce data. The majority of organizations that are collecting data are state agencies and universities, nursing centers, and AHECs. Of the 18 states where no responses have been received, it is anticipated that some organizations are collecting data and others are planning to launch data collection efforts.

Every survey respondent to date indicated that they collect health workforce supply data (40); fewer organizations report collecting health workforce demand data (15) and education pipeline data (19). While in some states there are efforts to collect health workforce data on a wide array of health professions, the most likely professions are physicians and licensed nursing professions (eg, NPs, RNs, and LPNs).

CONCLUSION

In order for health reform initiatives to succeed, there is an urgent need to better understand the supply and distribution of a state's health workforce. Lack of relevant and timely data on the health workforce is a significant barrier to the development of effective health workforce programs and policies to support improvements in the health care delivery system. Expanded, prompt collection of data about the health workforce is essential.

There is growing interest and activity among states to collect the health workforce data needed to inform effective health workforce planning. This HWTAC initiative aims to describe and routinely update workforce data collection efforts underway in states. The inventory is designed to be a resource for states, where they can learn from each other about best practices in data collection.