National Nursing Workforce Minimum Dataset: Supply

2024 Revision

Background

The National Forum of State Nursing Workforce Centers initially produced a Minimum Dataset to guide the collection of nursing workforce supply data in 2009. The methodology used to develop the original MDS is described in a two-part series published in *Policy, Politics, & Nursing Practice*:

Nooney, J. G., Cleary, B. L., Moulton, P., Wiebusch, P. L., Murray, J. L., Yore, M., & Brunell, M. L. (2010). Toward Standardization (Part 1): Assessment of State and National Nursing Workforce Data Sources. *Policy, Politics, & Nursing Practice*, *11*(3), 173–183. https://doi.org/10.1177/1527154410390521

Moulton, P. L., Wiebusch, P. L., Cleary, B. L., Brunell, M. L., Napier, D. F., Bienemy, C., LeVasseur, S. A., & Cimiotti, J. P. (2012). Toward Standardization (Part 2): National Nursing Minimum Data Sets Consensus Building and Implementation Status. *Policy, Politics, & Nursing Practice*, *13*(3), 162–169. https://doi.org/10.1177/1527154412466920

The last revision of the Supply MDS was completed and released for public use in 2016.

2024 Revision

Guiding Priorities

Beginning in late 2023, a subcommittee of the Forum's research committee formed to begin a review of the Supply MDS with the intent to make necessary revisions. The revisions were guided by three priorities:

- Maximize states' adoption of the revisions by minimizing unnecessary changes.
    - The wording of suggested question stems was changed only to resolve inaccuracy or ambiguity.
    - Response options were added, deleted, or revised if they were confusing or inaccurate.

- Balance standardization and flexibility.
    - The MDS serves the dual purpose of guiding data collection at the state level AND providing standardization for data collection across states.
    - Response options on the MDS should focus on the *minimum information necessary* for a general understanding of workforce supply.

- Address issues that are important in the contemporary nursing workforce. This required the addition of several new variables related to:
  - Multistate licensure
  - Travel nurses
  - Telehealth
  - Nursing education student loan debt
  - Wellbeing

Method

The MDS sub-committee met several times between October 2023 and March 2024 to review and discuss changes to the MDS. The sub-committee reviewed the 2016 version of the MDS to evaluate the extent to which the MDS' variables adequately measured important characteristics of the nursing workforce. In addition to its own review, the subcommittee incorporated guidance from a joint subcommittee comprising members of the Forum's Research Committee and Justice, Equity, Diversity, and Inclusion Committee for revisions to the gender, and race and/or ethnicity variables.

Upon finalizing their recommended revisions, the MDS subcommittee presented its recommendations to the full Research Committee for additional discussion and feedback. That feedback was incorporated into the revision which was subsequently made available for public review and comment, approval by the Forum's Board of Directors, and ratification by the Forum's State Representative Subscribers.

Guidance for the Collection of Nursing Workforce Supply Data

Survey Development

The MDS is a tool that assists states in developing their own workforce supply surveys. The Forum recommends that states collect all the variables on the MDS. States should add any additional variables to their workforce supply survey instruments that are necessary to meet their specific informational priorities.

States may also wish to add response options to the variables on the MDS to capture more detailed information than the minimum response options do. The MDS contains variable specific guidance that prompts states to consider whether they want to modify each variable to collect additional information. **States are cautioned to ensure that any response options they add to a variable should be collapsible into the minimum response categories** for a variable to ensure that the state's data remain comparable to data collected by other states or national organizations.

The Health Workforce Technical Assistance Center maintains a national repository of workforce supply data collection instruments which states may find useful for developing their own surveys.

Sample & Frequency of Data Collection

The Forum recommends that states collect workforce supply data from all LPNs/LVNs, RNs, and APRNs at initial licensure and during license renewal. This method allows states to maintain a complete dataset for all nurses licensed in the state on an ongoing basis. If this is not possible, states should collect data from a representative/random sample of nurses at license renewal.

Participant Privacy and Data Security

There are some variables on the MDS that nurses may be reluctant to answer honestly if they believe their employer or regulatory body may see their responses. To protect the privacy and confidentiality of nurses, states should collect personally identifying data only when necessary.

States should also maintain sound data hygiene practices to ensure the security of workforce supply survey data. Entities that collect nursing workforce supply data should always adhere to their organizational data security and governance policies.

Citing the MDS

Entities that use or reference the MDS in the development of their workforce supply surveys and associated reports should cite the MDS using the following recommended citation:

National Forum of State Nursing Workforce Centers (2024). *National Nursing Workforce Minimum Dataset: Supply, 2024 Revision*. URL TBD

Essential Elements

Beginning with the original version, the Supply MDS has included a subset of variables identified as the Essential Elements. The Essential Elements comprise a subset of the MDS that states should prioritize if collecting the entire MDS is not possible.

In the 2024 revision, the Forum is updating its approach to the Essential Elements. The variables on the MDS are grouped by the characteristics of the workforce that they measure. States should prioritize the inclusion of variables from the MDS on their workforce supply surveys based on the information they need in order to address their specific workforce development priorities.

At minimum, states are encouraged to collect all of the variables in groups 1 and 2. Clicking the linked numbers in the "Variable Group" column in the table below will take you to the corresponding section in the MDS.

Variable Group	Useful for Addressing Workforce Questions Related to:
1 Licensure, Employment Status, Practice Location	• Estimating the number of nurses working in your state • Determining how the workforce is geographically distributed
2 Variables Needed for Projections	• Workforce projections (in combination with Group 1 variables) • Short-term retention
3 Demographics & Education	• Workforce diversity and representation • Educational attainment
4 Employment & Practice Characteristics	• How much nurses work (number of jobs, number of hours per week) • Practice characteristics including setting, specialty, and role • Nurses who work in multiple states or across jurisdictional borders as travelers or via telehealth
5 Wellbeing	• Nursing student loan debt burden • Nursing wellbeing
6 Nurses Not Working in a Nursing Role	• Reasons for not working in nursing • Plans to rejoin the workforce

Group 1: Variables Needed to Estimate the Current Size of the Nursing Workforce in a Specific Geographic Area

Variable #	Variable Name	Minimum Response Categories	Additional Guidance
1	Active Nursing License(s) Held Example question: What type of active license(s) do you currently hold?	a. LPN/LVN b. RN c. APRN	➤ If data are being collected at the state level, include the name of the state in which the data are being collected in the question stem.
2	Multistate Licensure Example question: Do you hold an active multistate license?	a. Yes b. No	➤ Item 11 asks for respondents' primary state of residence which should be a multistate license holder's home state. Alternatively, a separate question may be added to specifically collect data about the issuing state for the multistate license.
3	Advance Practice Registered Nurse Certification Example question: Which of the following APRN roles are you licensed to practice in [state]?	a. Certified Nurse Practitioner b. Clinical Nurse Specialist c. Certified Registered Nurse Anesthetist d. Certified Nurse Midwife e. None/Not Licensed as an APRN	➤ The question stem should be modified to reflect the collecting state's specific regulatory language related to APRN licensure. ➤ If the data are being collected as part of a national sample/study, the question ask about APRN licensure in the geographic area of interest.
4	Employment Status Example question: What is your current employment status?	a. Actively working in a position related to nursing or requires a nursing license b. Actively working in a field other than nursing c. Not working/unable to work/retired	➤ The question instructions should clarify how a respondent is to answer if they have a nursing job AND a non-nursing job. ➤ An additional variable could be added to ask whether the *requires* a nursing license.
5	Employment Location Example question: Where is your primary place of nursing employment located?	a. [List of Counties in Your State] b. Other U.S. State or Territory c. Foreign Country	➤ Though the response options recommend counties, data should be collected at the *smallest* geographic area of interest (e.g., region, county/parish, zip code, etc.). ➤ If data are being collected from a national sample, response options should be a list of U.S. states and territories.

Group 2: Variables Needed to Estimate/Project the Future Size of the Nursing Workforce in a Specific Geographic Area (plus Group 1)

Variable #	Variable Name	Minimum Response Categories	Additional Guidance
6	Birth Year Example question: In what year were you born?	Collect via open-ended text field	None
7	Year of Initial Licensure Example question: In what year were you first licensed in any U.S. state or territory?	Collect via open-ended text field	➢ If there are plans to do a nursing workforce projection, consider adding a variable that asks for *initial licensure in your state*. Some projection models use that variable to calculate workforce entrances.
8	Intent to Leave the Workforce in the Next 12 Months Example question: Do you plan to stop practicing nursing in [state] within the next 12 months?	a. Yes b. No	➢ States may wish to modify this variable to collect data on the reasons that nurses are planning to leave the workforce (e.g., retirement, relocation, change of profession, burnout, etc.). ➢ If the data are being collected as part of a national sample/study, "U.S." should be included in the question stem.

Group 3: Demographic & Education Variables

Variable #	Variable Name	Minimum Response Categories	Additional Guidance
9	Gender Example question: What is your sex?	a. Male b. Female c. Sex Not Listed Here d. Prefer Not to Answer	➢ "Other gender" is not recommended language as an alternative for "Gender not listed here." ➢ If permissible, the response set could include other gender identities (e.g., agender, gender nonbinary, transgender). For comparison to the MDS response options, additional categories would be counted in the "Gender Not Listed Here" category.
10	Race and/or Ethnicity Example question: What is your race and/or ethnicity?	a. American Indian or Alaska Native b. Asian c. Black or African American d. Hispanic or Latino e. Middle Eastern or North African f. Native Hawaiian or Pacific Islander g. White h. Race not listed here i. Prefer not to answer	General Guidance ➢ "Other race" is not recommended language as an alternative for "Race not listed here." Multiple Races ➢ The Race variable should be asked as a multiple select item on which respondents are able to select all applicable races. ➢ Individuals who identify themselves as belonging to two or more racial or ethnic groups can be recoded/reported as multiracial. Ethnic or Tribal Subcategories ➢ Response options may also include specific tribal or ethnic categories relevant to the population in the state where data are being collected. ➢ Tribal and ethnic categories should be categorized under their corresponding race categories prior to determining whether a respondent is multiracial.

11	Primary State of Residence Example question: What state do you live in?	a. [State] b. Other U.S. State or Territory c. Foreign Country	➢ Data should be collected at the *smallest* geographic area of interest (e.g., region, county/parish, zip code, etc.).
12	All Nursing Education Programs Completed Example question: Which of the following nursing education programs have you completed? Select all that apply.	a. Vocational/Practical Nursing Certificate (LPN/LVN) b. RN Diploma c. Associate Degree in Nursing (ADN) d. Baccalaureate Degree in Nursing (BSN) e. Master's Degree in Nursing (MSN) f. Doctor of Nursing Practice (DNP) g. PhD in Nursing or Doctor of Nursing Science (DNS)	➢ If a multiple-select question is not the preferred format, at least two single-select questions should be asked: level of nursing education that initially prepared a nurse for a *specific license* and highest level of nursing education completed.
13	Country of Initial Licensure Example question: In what country were you initially licensed as a nurse	a. U.S. State b. U.S. Territory c. Foreign Country	➢ Response options may be modified to include a list of U.S. states, U.S. territories, and/or foreign countries if states are interested in more detailed information about where their workforce was initially licensed. ➢ The recommended response set separates U.S. states from U.S. territories as Puerto Rico does not use the NCLEX to determine eligibility for initial licensure.
14	Highest Level of Non-Nursing Education Completed Example question: What is the highest degree you have completed in a field <u>other than nursing</u>?	a. Associate Degree b. Baccalaureate Degree c. Master's Degree d. Doctoral Degree e. None	None

Group 4: Employment and Practice Variables

Variable #	Variable Name	Minimum Response Categories	Additional Guidance
15	Number of Nursing Positions Held Example question: In how many nursing-related positions are you currently working?	a. 1 b. 2 c. 3 or more	None
16	Total Hours Worked Per Week Example question: About how many hours do you work in a typical week in your [primary/secondary] nursing position?	Collect via open-ended text field	➢ Should be asked separately for each of the primary and secondary nursing positions.
17	Position Classification Example question: Is your [primary/secondary] nursing position classified as:	a. Full-Time b. Part-Time c. Per Diem	➢ Should be asked separately for each of the primary and secondary nursing positions.
18	Employment Setting Example question: What best describes your [primary/secondary] practice setting?	a. Assisted Living Facility b. Community Health Center c. Correctional Facility d. Dialysis Center e. Government Agency f. Home Health g. Hospice h. Hospital i. Insurance Company j. Nursing Home/Extended Care k. Occupational Health l. Outpatient Clinic or Provider's Office m. Policy/Planning/Regulatory/Licensing Agency n. School Health Service o. School of Nursing p. Other	➢ Should be asked separately for each of the primary and secondary nursing positions. ➢ Consider allowing respondents to specify a setting when selecting "Other" depending on your interest in and ability to analyze the data.

19	Position Title Example question: Which of these is closest to your [primary/secondary] job title?	a. Consultant b. Nurse Researcher c. Nurse Executive d. Nurse Manager e. Nurse Faculty/Clinical Educator f. Advanced Practice Registered Nurse g. Staff Nurse h. Case Manager i. Other – Health Related j. Other – Not Health Related	➢ Should be asked separately for each of the primary and secondary nursing positions. ➢ Consider allowing respondents to specify a position title when selecting "Other" depending on your interest in and ability to analyze the data.
20	Practice Specialty Example question: What best describes your practice specialty in your [primary/secondary] nursing position?	a. Adult health b. Anesthesia c. Cardiology d. Community e. Critical Care f. Emergency/Trauma g. Family Health h. Geriatric/Gerontology i. Home Health j. Maternal-Child/Obstetrics k. Medical-Surgical l. Neonatal m. Nephrology n. Occupational health o. Oncology p. Palliative Care/Hospice q. Pediatrics r. Perioperative s. Mental/Behavioral Health t. Public Health u. Rehabilitation v. School Health w. Women's Health x. Other Clinical Specialty y. Other Non-Clinical Specialty	➢ Should be asked separately for each of the primary and secondary nursing positions. ➢ Consider allowing respondents to specify a practice specialty when selecting "Other" depending on your interest in and ability to analyze the data.

| 21 | Direct Patient Care

Example question:
Do you spend most (more than half) of your time in your [primary/secondary] nursing position providing direct patient care? | a. Yes
b. No | ➢ Should be asked separately for each of the primary and secondary nursing positions.

➢ Additional response options may be added to identify what percentage of the time a nurse spends providing direct patient care. A category for 0% should be included so responses are codable to the "No" option on the minimum response set. |
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| 22 | Telehealth

Example question:
In your [primary/secondary] nursing position, do you provide any amount of nursing care via telehealth?

"Telehealth" includes the delivery of nursing care to any patient who is not in the same location as you via computer, phone, or other technology. | a. Yes
b. No | ➢ Should be asked for the primary and secondary nursing positions.

➢ Additional response options may be added to identify the percentage of time a nurse spends providing nursing care by telehealth. A response category for 0% should be included so responses are codable to the "No" option on the minimum response set. |
| 23 | Travel Nursing

Example question:
In your [primary/secondary] nursing position, do you work as a travel nurse? | a. Yes
b. No | ➢ Should be asked for the primary and secondary nursing positions. |

Group 5: Wellbeing-Related Variables

24	Student Loan Debt Taken for Nursing School Example question: How much student loan money did you borrow to go to nursing school?	a. None b. Less than $10,000 c. $10,000 to less than $20,000 d. $20,000 to less than $30,000 e. $30,000 to less than $40,000 f. $40,000 to less than $50,000 g. $50,000 to less than $60,000 h. $60,000 to less than $70,000 i. 70,000 to less than $80,000 j. $80,000 to less than $90,000 k. $90,000 to less than 100,000 l. $100,000 or more	➤ This variable is designed to identify the total student loan impact of nursing school. Additional questions may be added to ask about the impact of the cost of nursing education (e.g., percentage of income spent on student loan payments each month).
25	Wellbeing	The following resources link to commonly used measures of wellbeing, stress, professional quality of life, and/or burnout. Note that many of these measures are licensed and require a fee for use or are behind journal paywalls. ▪ Maslach Burnout Inventory ▪ Nursing Stress Scale/Expanded Nursing Stress Scale ▪ Professional Quality of Life Measure ▪ Burnout Syndrome Assessment Scale for Nurses The following resources link to national data sources that include data related nursing wellbeing and/or burnout. ▪ 2022 National Nursing Workforce Survey ▪ American Nurses Foundation Pulse on the Nation's Nurses: Three Year Assessment	➤ Because there are many measures of aspects of nursing wellbeing, states must individually determine how they want to measure wellbeing. They may choose to use a validated measure of wellbeing, burnout, stress, etc. Or they may wish to model their questions after variables in a national data source which can be used as point of comparison for the state. A future revision of the Supply MDS may provide more specific guidance on this variable.

Group 6: Variables for Nurses Who are Not Working in a Nursing Role

Variable #	Variable Name	Minimum Response Categories	Additional Guidance
26	Reason for Not Working Example question: Why are you not currently working in a nursing-related position?	a. Taking care of home and family b. Disabled c. Unable to find job that meets salary requirements d. Currently enrolled in school e. Difficulty finding a nursing position f. Dissatisfied with nursing/burned out g. Retired h. Other reason	None
27	Seeking Work as a Nurse Example question: Are you currently seeking work as a nurse?	a. Yes b. No	None