

*Taking The  
Long View*

*A Forum of State Nursing  
Workforce Centers*

*Towards Standardization: Assessment of State  
Nurse Workforce Data Collection  
Practices and Development of  
National Nursing Workforce Minimum Datasets*

*Jennifer G. Nooney, PhD*

*Associate Director: Research, Florida Center for Nursing*

*Research Lead, Minimum Dataset Project*

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## *Introduction to the Problem*

### Why Collect Nurse Workforce Data?

- Forecast nurse supply and demand
  - Quantity and qualities needed
- Identify predictors of workforce attrition
- Design solutions for imbalances in labor supply and demand
- Evaluate interventions designed to correct imbalances
  - Increase supply
  - Decrease demand

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## *Introduction to the Problem*

### Why Do We Care?

- Well researched link between appropriate staffing and nurse-sensitive patient outcomes
- Nursing shortages are presumed to affect facility staffing and access to care



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## *The Nurse Data Trifecta*

### Nurse Supply Data

- licensure and nurse survey data

### Nurse Demand Data

- employer/staffing data
- census/population data
- utilization data

### Nursing Education Data

- nursing program surveys

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## *Existing Data: The Problem*

National nurse supply data only available every four years via NSSRN

- state-level samples are small and may be unreliable
- data are old when they become publically available
- rapidly changing nurse supply landscape requires more frequent data collection

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## *Existing Data: The Problem*

National nurse employer/staffing data

- must be cobbled together from multiple sources (AHA, other trade associations)
- measures and frequency vary widely

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## *Existing Data: The Problem*

### National education data

- multiple sources, varying measures
  - AACN: BSN and higher
  - NLN: All program types
  - SREB: Regional data for the southeast only
- probably closest to the goal of population-level data collection for the measures workforce planners need
- data sharing improving

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## *Existing Data: The Problem*

State-level supply, demand, and education data

- exhaustive, population-level data
- concepts and measures vary

Why do the states have such great data?

- regulatory agencies can mandate information collection
- onus largely on states to deal with nursing shortages through state funding
- state agencies dedicated to workforce planning

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## *Solution: States Submit to National Databases*

A national repository of state-level data would allow:

- more accurate national forecasting
- more timely assessment of funding decisions and interventions
- better state-to-state, state-to-region, and state-to-nation benchmarking

But first, standard data definitions must be adopted across the country.

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## *Towards Standardization*

1995: Colleagues in Caring Minimum Supply Dataset

June, 2008: National Forum of State Nursing  
Workforce Centers Meeting in Denver, CO

- Identified the problem as a priority
- Established a subcommittee to assess current data collection practices
- Set a goal of producing *minimum datasets*, the set of core data elements needed for our work

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## *Towards Standardization*

November, 2008: The project design was finalized through a contract between the Center to Champion Nursing in America and the Florida Center for Nursing (acting on behalf of the Forum)

- Three additional states invited to participate via CCNA State Education Capacity Teams

A total of 31 states participated in one or more phases of the project

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## *Assessment of Data Collection Practices*

July-December, 2008: States submitted surveys and codebooks for assessment of then-current data collection practices

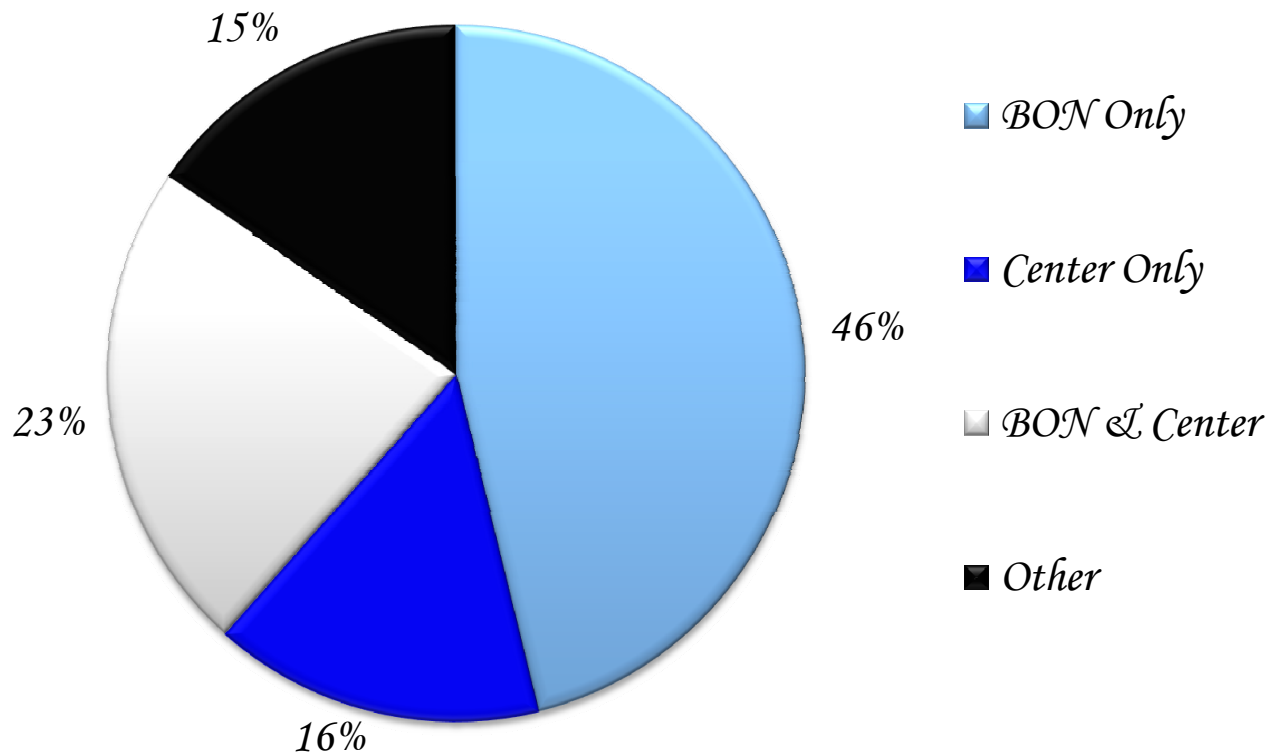
Analysis includes 26 states submitting one or more surveys/codebooks:

- 100% provided supply surveys
- 58% provided demand surveys
- 81% provided education surveys

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## *Nurse Supply Data Collection*



*Participants in Data Collection & Analysis*

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## *Nurse Supply: Demographics*

<b>Variables</b>	<b>Percentage of States Collecting</b>
Age/Date of birth	84.6%
Race/Ethnicity	80.8%
Gender	76.9%
Residential Address	69.2%
Secondary Languages Spoken	38.5%
Marital Status	23.1%

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## *Employment Characteristics (Most Common)*

<b>Variables</b>	<b>Percentage of States Collecting</b>
Primary Employment Setting	92.3%
Employment Address	80.8%
Hours/week in Primary Nsg Position	76.9%
Primary Employment Situation	65.4%
Primary Employment Status	65.4%
Primary Employment Specialty	61.5%
Primary Employment Position	57.7%

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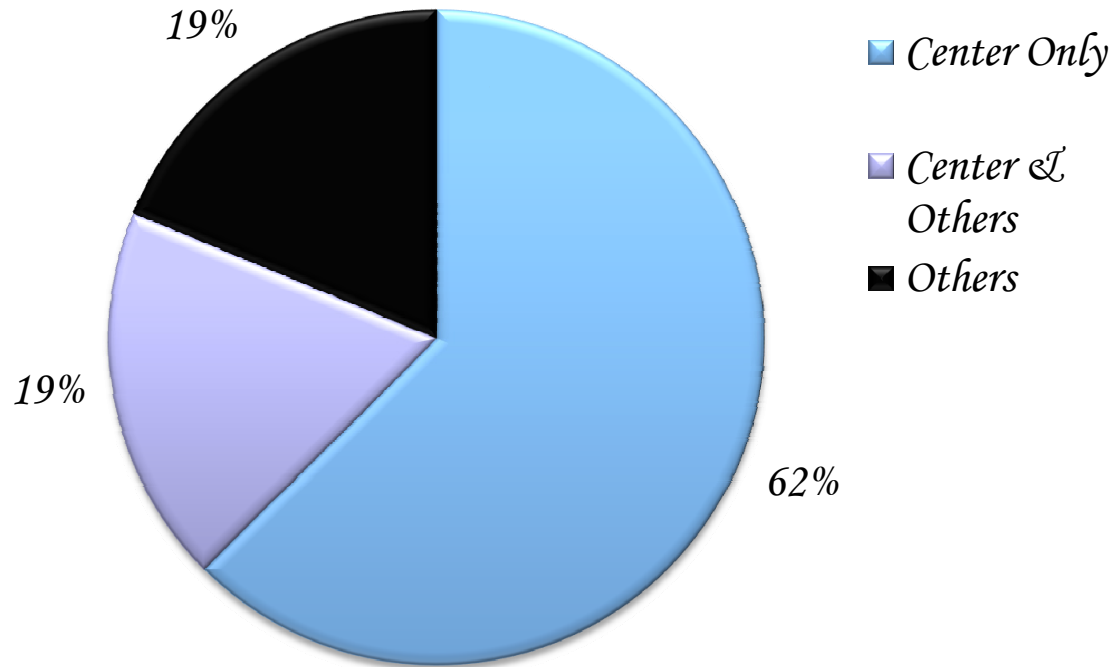
*Educational Preparation (Most Common)*

<b>Variables</b>	<b>Percentage of States Collecting</b>
Highest Level of Education	80.8%
Entry Degree in Nursing	80.8%
Location of RN education completion	50.0%
Current/Future Enrollment/Additional degrees	50.0%
Credentials/Certifications	50.0%

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## *Nurse Demand Data Collection*



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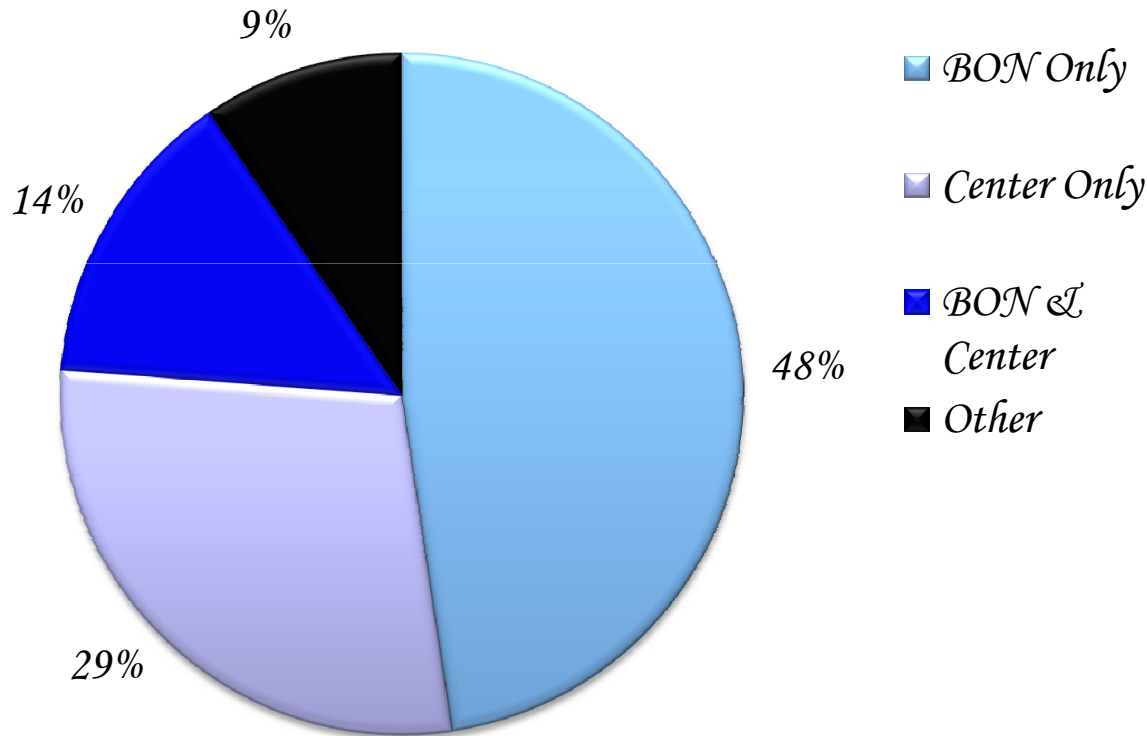
## *Demand Data Collected (Most Common)*

<b>Variables</b>	<b>% of States</b>
Staffing Data: Counts of employed nurses and/or nursing FTEs	93.8%
Vacancy Data: Vacant positions and/or FTEs, self-reported vacancy rate	93.8%
Seperations and Turnover	93.8%
Recruitment Difficulty and Time to Fill Positions	87.5%
Nursing Budget Expenditures: Outside recruiting costs, temporary staffing, overtime	68.8%
Future Staffing Expectations	68.8%
Impact of Nursing Shortage	56.3%
Recruitment/Retention Strategies	50.0%

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## *Nurse Education Data Collection*



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*Program Capacity Variables Collected (Most  
Common)*

<b>Program Capacity Variables</b>	<b>Percentage of States Collecting</b>
Total enrollment	71.4%
Graduates	71.4%
Qualified applicants	57.1%
Admitted applicants	57.1%
Enrolled admits	47.6%

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## *Student Characteristics*

<b>Program Capacity Variables</b>	<b>Percentage of States Collecting</b>
Student Gender	47.6%
Student Race	47.6%
Previous licensure	33.3%
Student Age	28.6%
Full-time vs. Part-time	28.6%

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## *Faculty Characteristics and Demand*

<b>Program Capacity Variables</b>	<b>Percentage of States Collecting</b>
Full time Faculty	57.1%
Faculty Vacancy Info	57.1%
Part time Faculty	52.4%
Faculty Degrees	47.6%
Age	14.3%
Race/Ethnicity	9.5%
Gender	9.5%

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## *Data Assessment: Summary*

Many states adopted CIC minimum supply dataset in spirit, but most were missing significant elements of the dataset and nearly all had variations in wording.

Supply and education data were more commonly collected than was demand.

- BONs have regulatory authority for supply and education
- Demand data can be more expensive and less convenient to collect

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## *Data Assessment: Summary*

Data collection practices as of December 2008 would not facilitate building a national data warehouse based on state-level contributions.

Data Assessment phase of the project identified more (and less) commonly collected data elements – pointing toward critical data needs for all states.

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## *MDS Survey of States*

Purpose: identify the most critical items for *minimum* datasets

Instrument: all data elements from assessment phase were included

- respondents ranked each from 4=“critically important for our work” to 1=“not very important for our work”
  - two-dimensional ranking: forecasting, other policy issues

One survey per Forum subscriber or CCNA Education Capacity Team State

Items ranked according to results

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## *Drafting Workgroups*

Three groups of five members each for supply,  
demand, and education

Used Data Assessment and MDS Survey to identify  
elements for the MDS

Researched and selected best measurement  
approaches

Drafted initial datasets

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## *Minimum Dataset Summit*

Held March 25<sup>th</sup> and 26<sup>th</sup> 2009 in Biloxi, MS  
following the annual subscriber meeting of the  
National Forum

23 states represented

Discussed draft datasets item by item and agreed on  
revisions

Selected a group of expert evaluators to review  
revised drafts

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## *Public Comment Period*

Datasets released for public comment mid-May through mid-June 2009.

Comments received from:

- NCSBN
- AACN
- NLN
- SREB
- HRSA model developers
- and many, many others

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## *Ratification*

Drafting workgroups revised the datasets based on public comments.

Datasets needed 2/3 vote of approval from National Forum subscriber states.

Datasets ratified in September 2009 and available on the National Forum's website at:

<http://www.nursingworkforcecenters.org/minimumdatasets.aspx>

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## *Nurse Supply Dataset Elements*

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Gender</li><li>• Race/ethnicity</li><li>• Year of birth</li><li>• Entry-level education</li><li>• Highest level of education</li><li>• License type</li><li>• Year of initial U.S. licensure</li><li>• Country of initial licensure</li><li>• License status</li><li>• Advanced Practice licensure/certification</li></ul> | <ul style="list-style-type: none"><li>• Employment status</li><li>• Reason for being unemployed (if applicable)</li><li>• Number of positions held</li><li>• Hours worked per week</li><li>• Employer's state and zip code</li><li>• Employment setting</li><li>• Employment position</li><li>• Employment specialty</li></ul> |
|--|--|

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## *Nurse Demand Dataset Elements\**

<ul style="list-style-type: none"><li>• Full-time equivalent (FTEs) filled</li><li>• FTE vacancies</li><li>• full-time workers employed (yr. average)</li><li>• part-time workers employed (yr. average)</li></ul>	<ul style="list-style-type: none"><li>• per diem workers employed (yr. average)</li><li>• Contract, agency, traveling FTEs</li><li>• Separations</li><li>• Projected one-year FTE growth</li></ul>
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\*to be collected from hospitals, nursing homes, home health agencies, and public health settings

\*to be collected by nurse type: CNA, LPN, RN, NP, CRNA, CNS, CNM

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## *Nursing Program Dataset Elements<sup>☆</sup>*

<ul style="list-style-type: none"><li>• Accreditation status</li><li>• New student seats</li><li>• Qualified applicants</li><li>• Admitted applicants</li><li>• New enrollees</li><li>• Graduates</li><li>• NCLEX pass rate</li><li>• Total enrollment</li><li>• Student gender</li></ul>	<ul style="list-style-type: none"><li>• Student race/ethnicity</li><li>• Student age</li><li>• Faculty counts</li><li>• Faculty vacancies</li><li>• Faculty education level</li><li>• Faculty gender</li><li>• Faculty race/ethnicity</li><li>• Faculty age</li></ul>
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\*to be collected from all LPN and RN education programs

\*student data collected by program type and track: LPN, Diploma, Generic ADN, Bridge ADN, Generic BSN, 2<sup>nd</sup> Degree BSN, RN-BSN, Entry-MSN, Post-licensure MSN, PhD, DNP, Other doctoral program

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*Where are we  
nine months later?*

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Hold for final data on adoption of datasets.

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Hold for final data on progress towards adoption.

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## *Barriers to Adoption*

Funding, funding, funding

- recession makes it difficult to propose costly changes
- adoption often depends on multiple entities, each with different funding challenges

Technology

- particularly for Supply and Education, web survey and data collection software can be problematic

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## *Adoption Facilitators*

Endorsement is widespread

- many states report general agreement that adoption should be a goal
- when funding/economy improves, adoption increases

National interest and recognition of the datasets

- Forum participation on data and forecasting panels
- Forum communication with national entities regarding possible collaboration to warehouse national dataset

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## *Priorities Moving Forward*

Facilitate state-level adoption of the datasets

- encourage national funders to help states
- serve as mentors if your state has successfully adopted
- share fixes for technological limitations

Continued discussions with national data collection entities

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*Questions? Comments? Discussion?*