Workforce Dashboard Methods and Technical Notes

How is the data for the Workforce Dashboard collected?

The Department of Health's Primary Care Office (PCO) surveys health care professionals renewing their licenses. The surveys are designed to collect information on the characteristics and distribution of the health care professional workforce in the commonwealth.

The surveys are conducted online and because they are connected to the licensure renewal process, the data captured does not include first-time licensees or most individuals in training.

Data Analysis

Data analysis has been completed on valid surveys returned for each health care profession type. Surveys without a valid license number, duplicate responses, and surveys with inactive or expired license numbers were removed.

Not all individuals complete each survey question, and the extent of non-response (missing) data varies. Non-response to questions can cause a bias in the survey results. It can affect how well the response data represents the population being surveyed. Therefore, exercise caution when interpreting the response data and descriptive findings presented.

Counts and Response Rates

A reasonable estimate of the size and characteristics of the entire population of renewing Health care professionals can be obtained by applying the response rate to the counts reported. The calculation is as follows:

Count ÷ response rate = estimated population of license renewals

For example, to estimate the number of female dentists who relicensed in Pennsylvania, divide the
number of female survey respondents (1,968) by the response rate (80.1%), thus estimating 2,457 total female dentists relicensed in Pennsylvania.

$$1,968 \div 0.801 = 2,457$$

This method does not include an adjustment for items with missing values, thus yielding a conservative, or low, estimate.

The information presented in this dashboard, unless noted, is based upon actual response counts.
Not all questions were answered by all respondents; therefore, the number of responses may vary for each question.

The survey questions used for health care professionals have changed over the different survey

years, resulting in differences in the data collected.

Data Supression

Dashboard data should only be used for aggregate statistical reporting and analysis. The data and reports available on the dashboard are for public use and do not include personal information that would identify health care professionals.

For similar reasons counts will not be displayed when under 5, and rates, ratios, and percentages will not be shown when based on counts less than 10.

Suppression within the dashboard protects the identities of individuals, and insures reasonable data quality.

ND (Count) = Not displayed when count is under 5 to avoid the potential identification of individual cases within certain geographic areas.

ND (Rate, Lower Bound and Upper Bound) = Not displayed when count < 10. Rates based on small numbers are considered unreliable for analysis.

Years included for the Health Care Workforce Dashboard

Dashboard data for each health care profession type begins with the following years and will continue to be updated with new surveys.

Physician – 2016
Physician Assistant – 2016
Registered Nurse – 2016/2017
Licensed Practical Nurse – 2016
Dentist – 2017
Dental Hygienist – 2017
Nursing Education – 2019

Past *Pulse of Pennsylvania* Reports

Previously created *Pulse of Pennsylvania* Reports are available in the Department of Health's E-Library (pa.gov) (https://www.health.pa.gov/topics/Pages/E-Library.aspx).

Considerations

The Survey Respondents

The data collected for this dashboard is based on self-reported answers to the Pennsylvania Department of Health's health care workforce surveys. Prior to release, every effort is made to design these surveys efficiently. The PCO staff rely on the kindness and cooperation of respondents – the health care professionals who voluntarily complete these surveys at time of relicensure. A common way to reduce respondent burden is to employ skip logic within the surveys.

What is Skip Logic?

Skip logic is a feature that changes what question or page a respondent sees next based on how they answer the current question. Skip logic creates a custom path through the survey that varies based on a respondent's answers. The health care workforce surveys employ skip logic to streamline the question-and-answer process, and to reduce the overall effort needed to complete the surveys. However, due to these skip patterns, some data summaries display high counts in the category of "Not Applicable (N/A)." This reflects respondents who did not answer some questions by design.

The Survey Target Population

Pennsylvania's licensed health care professionals are only exposed to the Department of Health's health care workforce surveys during relicensure. First year licensees are excluded. Therefore, please use caution when drawing inferences about all of Pennsylvania's licensed health care professionals from this data that excludes first-year licensees.

Licensed and Practicing in Pennsylvania

It is important to note that not all of Pennsylvania's licensed health care professionals reside or practice in Pennsylvania. Some professionals maintain their Pennsylvania licensure while living and practicing exclusively in other states. Others reside in bordering states while practicing in Pennsylvania. Survey response data, however, generally reflects those professionals who reside and practice in Pennsylvania. Nonetheless, please use caution when developing inferences about professionals practicing in Pennsylvania based on survey response data that is collected from all relicensing practitioners.

Survey Responses

Some of the health care workforce survey questions only allow one response, whereas others allow more than one response. When multiple answer options are provided, it produces data summaries in which the overall count total exceeds the total number of survey respondents.

Dashboard Footnotes
General Footnotes

1. N/A = Practitioners who indicated they are not actively practicing, or practicing out of state, or failed to provide the Pennsylvania county in which they are practicing.
2. Gender - Other selection includes all genders selected which were not Male, Female, or Prefer not to say.
3. Clear all - reverts to default view.
4. No selection - same as selecting all.

Physician 2016 Dashboard Footnote

3. The information displayed for 2016 is based on partial data collection. In 2016, participants chose between completing questionnaires electronically and by hardcopy. However, the information displayed here is based only on the survey responses obtained electronically.

Starting in 2018, surveys were collected electronically only.

Dashboard Descriptive Text

a. A primary care physician is a specialist in: (1) family/general practice medicine, or (2) general internal medicine, or (3) pediatrics, or (4) Obstetrics & Gynecology, or (5) Gynecology Only.