# RESEARCH SNAPSHOT: DATA SOURCES AND METHODS FOR COUNTING NURSE PRACTITIONERS (NPS) IN THE U.S.

American Association of NURSE PRACTITIONERS®

## Introduction

Although there is broad agreement that the number of NPs is increasing, different organizations produce estimates that vary widely. This research snapshot compares the NP counts from the American Association of Nurse Practitioners® (AANP) and the Bureau of Labor Statistics (BLS), two commonly cited sources. The snapshot also describes how AANP constructs its NP count as of 2025.

## Comparison of NP Counts from AANP and BLS

**Table 1** shows AANP and BLS estimates since 2020. AANP's counts are significantly larger than BLS estimates for 2025 and earlier. AANP is transitioning to alternate year counts and skipped 2024.

**Table 1: Recent NP Counts from AANP and BLS**

| Year | AANP | BLS |
|---|---|---|
| 2025 | 461,246 | 323,040 |
| 2024 | NA | 307,390 |
| 2023 | 431,410 | 280,140 |
| 2022 | 385,358 | 258,230 |
| 2021 | 355,069 | 234,690 |
| 2020 | 325,242 | 211,280 |

Note: The table lists AANP's counts by the year the source data were extracted, rather than the year the count was completed. AANP previously published counts by the year the count was completed (for example, labeling 431,410 as the 2024 count).

## Reasons for Differences Between AANP and BLS Estimates

The main reason for the difference between AANP and BLS estimates in a given year, as shown in the first row of **Table 2**, is that the AANP count includes all actively licensed NPs, regardless of role, while the BLS estimates the number of NPs working in patient care who are employed. Put simply, AANP focuses on licensed NPs and BLS focuses on clinically employed NPs.

Other drivers of the difference are the exclusion criteria, time period and analytic method. The BLS approach excludes some NPs who are included in the AANP count, and BLS uses information from older years in its estimation models, which may depress the estimate slightly. Differences in analytic method could also factor in: the AANP count may be inflated if not deduplicated perfectly and the BLS estimate may be deflated if employers don't count employees perfectly.

**Table 2: Comparison of AANP and BLS Methods**

| Year | AANP | BLS |
|---|---|---|
| **Who is counted?** | Licensed NPs, working in both patient care and other roles, like research and administration | Employed NPs whose jobs match the occupation description in the Office of Management and Budget's Standard Occupational Classification system[1] |
| **Who is excluded?** | Inactive licenses (e.g., retired, suspended) | Self-employed NPs, independent contractors, practice owners, active-duty military, unpaid NPs, retired NPs and NPs not working in patient care (e.g., those whose primary job is teaching are counted as teachers or faculty) |
| **Time period** | Current year | Rolling average of last three years, with more weighting on most recent year |
| **Analytic method** | Deduplicated census of active licenses | Complex model using the Occupational Employment and Wage Statistics survey and sampled employers' counts of NP workforce |

[1] 29-1170 Nurse Practitioners: *Diagnose and treat acute, episodic, or chronic illness, independently or as part of a healthcare team. May focus on health promotion and disease prevention. May order, perform, or interpret diagnostic tests such as lab work and x rays. May prescribe medication. Must be registered nurses who have specialized graduate education.*

## Other Sources of NP Counts

The National Plan and Provider Enumeration System (NPPES) is maintained by the Centers for Medicare & Medicaid Services (CMS) and workforce reports from the Health Resources and Services Administration (HRSA). The NPPES is a registry of National Provider Identifier (NPI) numbers. Most NPs have NPIs, but the NPPES includes NPIs for providers who are not actively practicing. CMS gives providers a mechanism to deactivate their NPIs when they are no longer needed, but there is no fixed deadline (CMS 2025). HRSA's NP workforce estimates are based on its National Sample Survey of Registered Nurses. HRSA surveys a nationally representative sample of registered nurses, including NPs, and extrapolates estimates from this sample. For example, HRSA estimated that there were 346,632 NPs in 2022, closer to the AANP count than the BLS estimate (HRSA 2024).

## Overview of AANP Count Methodology

AANP's count is based on licensure data from boards of nursing for all states and Washington, D.C. The primary analytic challenge involved in processing licensure data is that many NPs are licensed in more than one state and records must be deduplicated across states.

Prior to 2025, AANP deduplicated licensed NPs at the individual level by comparing names and license numbers with AANP's historical records, after cleaning the data and dropping inactive licenses. Historical records were based on AANP member data and previous NP counts. We then conducted web searches to identify and deduplicate licenses that did not have a match in historical records. Finally, we used an algorithm that matched NPs to states using a tiered strategy that prioritized address matches in the historical records.

For 2025, AANP innovated a processing method that involves deduplicating at the state level. After cleaning the data, we drop from each state's records all NPs whose address is not in that state. We tested this method by comparing estimates that were deduplicated at the state level and individual level for both 2022 and 2023 and found that differences in the resulting counts were within 1% for each year.

Although there is some potential loss of precision with state-level deduplication, this method also avoids overreliance on historical member data that could be outdated, and assignment to states is based on current licensure data rather than historical records. However, two methodological challenges remain. One is that some boards of nursing do not provide state of residence, and others do not provide clear labeling of NPs. To address these challenges we developed an Application Programming Interface (API) that web-scraped state of residence and certification information.

## Sources:


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