

Wisconsin Registered Nurse Supply and Demand Forecast Results 2022-2040 Long-Term Occupational Projections



The figure and table numbers on this poster are displayed as they appear in the full report. The report can be found here:

Background

The first comprehensive survey in Wisconsin was administered to all RNs in 2010, and this data was used in the first Supply and Demand report. The model has been updated numerous times using the consecutive RN surveys. The 2022-2040 report provides the original demographically driven model and two alternative projections models for supply that were first developed in the previous 2020-2040 forecast report.

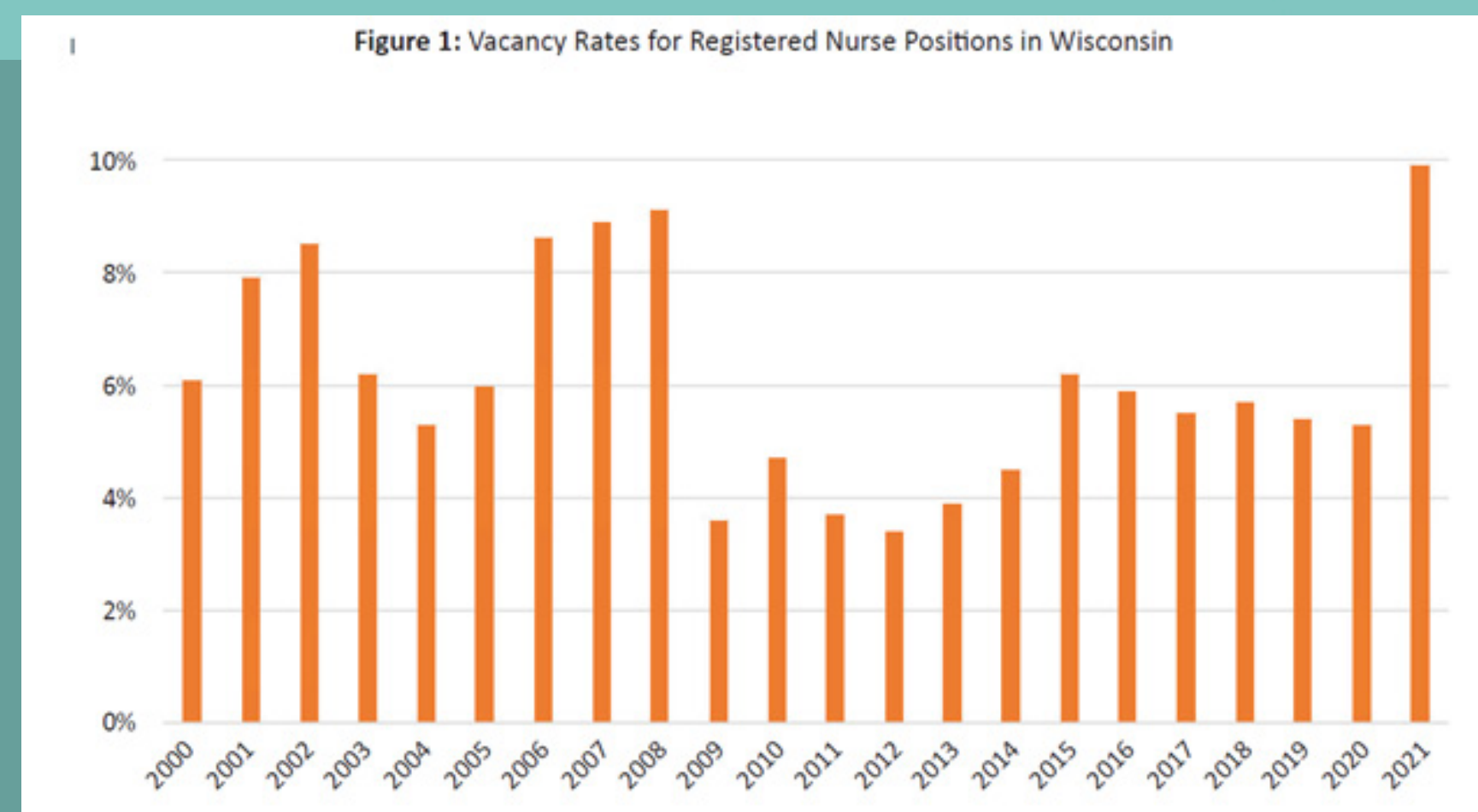
Assumptions

- There is currently a shortage of nurses and demographic challenges are intensifying.
- The need for healthcare will increase as baby-boomers age.
- Wisconsin projected population and labor force growth between 2022 and 2040:
 - Population: +4.65%
 - Residents 65 and older: +22.1%
 - Labor force: +0.50%

Challenging the Equilibrium Assumption and Quantifying the Shortage

Evidence indicates that there is currently a shortage of RNs. The workforce has faced temporary shortages in the past, but the current shortage is considered different than previous shortages. Trends of an aging nursing population and limited supply to fill vacancies are some of the unique characteristics that bring a new dimension to an old problem.

- Factors used to determine nursing shortage:
 - Vacancy rates
 - Unemployment Rates
 - Review of available evidence and collaboration with subject matter experts.
- Vacancy rates were used to quantify the current gap for modeling purposes.
- The shortage was quantified as 4.3% [difference between the 2021 vacancy rate (9.9%) and the baseline point (5.6%)].



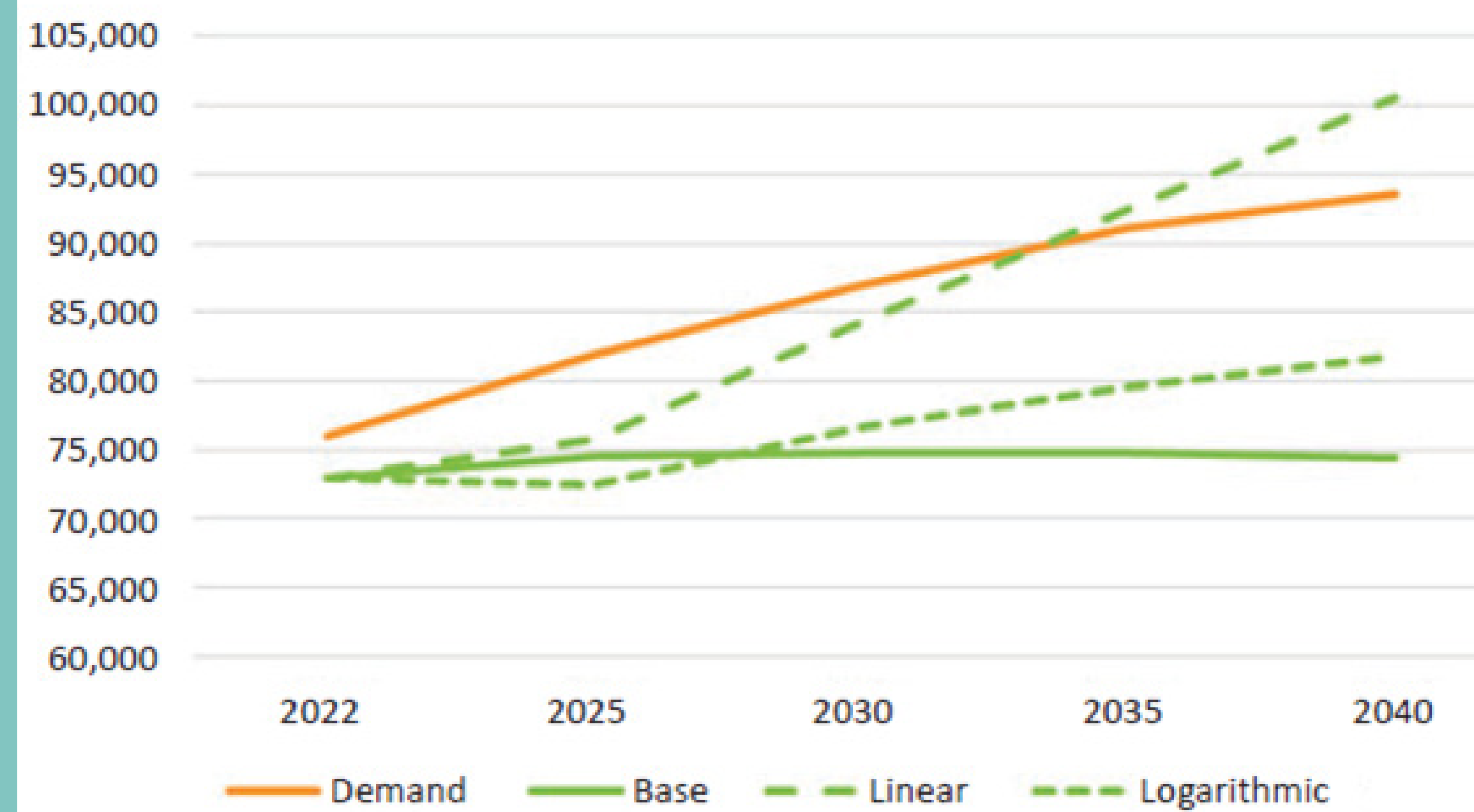
ACKNOWLEDGMENTS

We would like to thank the members of Wisconsin Health Workforce Data Collaborative for their commitment to comprehensive healthcare workforce planning. Our special thanks also go to all the nurses who completed the workforce survey making this work possible.

Modeling Results

The three alternative supply models show a wide range of outcomes (See Figure 6). The linear regression supply outcome of a surplus of RNs is highly unlikely due to demographic constraints. This model reflects past performance and captures efforts to increase capacity and fill nursing programs around the state that have been underway since the early 2000s. The demographic and logarithmic regression models both show flattening supply as demand steadily rises. The demographically driven base model provides a good status quo scenario if nothing changes going forward. The logarithmic model is likely the most realistic outlook because difficulty filling open job positions is not unique to nursing. It also shows a scenario in which the number of RNs continue to grow but at a slower rate than we've seen over the last decade.

Figure 6: RN Supply and Demand Projections: All Models



Models

Base Model

The demographically driven model assumes that the nursing workforce will follow the age demographics of the entire population. The base model projects a flat supply and rapidly increasing demand. The estimated gap would be 25.8% by 2040, more than 19,000 nurses.

	2022	2025	2030	2035	2040
Supply - No Change	72,882	74,559	74,804	74,795	74,387
Demand	76,016	81,862	86,989	91,126	93,578
Gap	-3,134	-7,303	-12,185	-16,331	-19,192
% Gap	-4.3%	-9.8%	-16.3%	-21.8%	-25.8%

Linear Regression Model

The linear regression model uses historical data and assumes growth will follow past trends. This is an optimistic outlook given demographic pressures constraining supply growth.

	2022	2025	2030	2035	2040
Supply	72,882	75,816	84,265	92,484	100,512
Demand	76,016	81,862	86,989	91,126	93,578
Gap	-3,134	-6,046	-2,724	1,358	6,934
% Gap	-4.3%	-8.0%	-3.2%	1.5%	6.9%

Logarithmic Regression Model

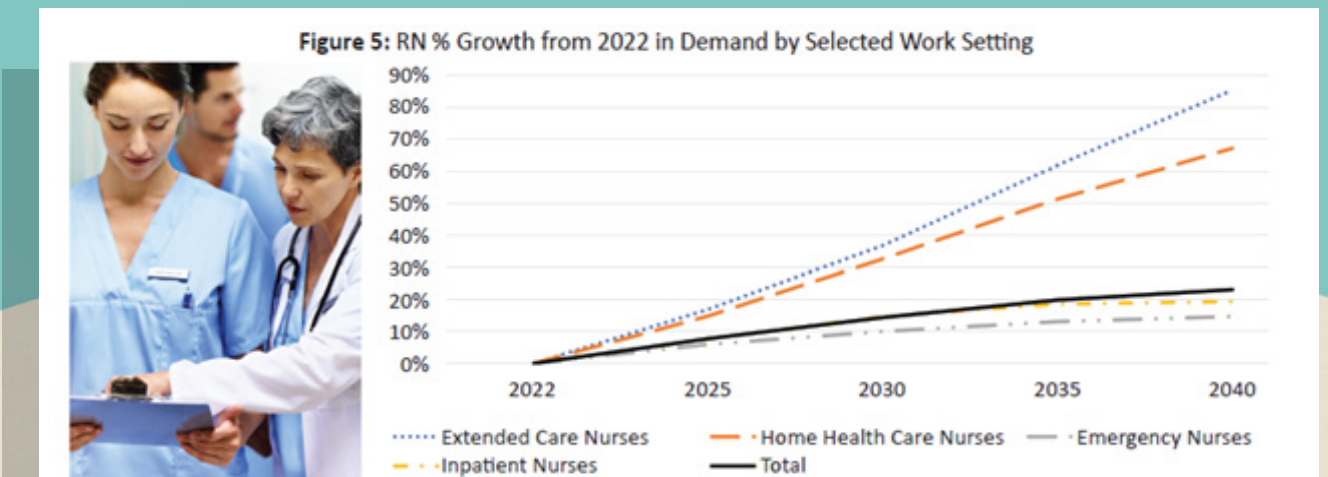
The logarithmic regression uses historical data and assumes continued growth but at a decreasing rate. This model projects a less drastic shortage than the original demographically driven model. The estimated gap would be of 11,800 nurses (14.5%) by 2040.

	2022	2025	2030	2035	2040
Supply	72,882	72,499	76,568	79,554	81,732
Demand	76,016	81,862	86,989	91,126	93,578
Gap	-3,134	-9,364	-10,421	-11,572	-11,846
% Gap	-4.3%	-12.9%	-13.6%	-14.5%	-14.5%

Demand Growth by Setting

Projected demand growth by setting is consistent with an aging population.

- Overall demand growth: +23% by 2040
 - Extended Care: +85%
 - Home Healthcare: + 67%



	2022	2025	2030	2035	2040
Extended Care Nurses	5,471	16.9%	36.9%	61.9%	85.5%
Home Health Care Nurses	3,477	14.9%	32.6%	51.4%	67.1%
Emergency Nurses	9,717	5.9%	10.0%	13.1%	14.6%
Inpatient Nurses	26,803	7.6%	14.6%	18.6%	19.4%
Ambulatory Nurses in Hospitals	1,918	6.4%	12.2%	16.1%	18.0%
Ambulatory Nurses (Free Standing)	19,062	6.1%	10.0%	12.8%	13.8%
Public Health Nurses	2,778	5.3%	8.2%	9.9%	10.2%
Other Nurses	4,746	5.3%	8.2%	9.9%	10.2%
Educators	2,045	5.3%	8.2%	9.9%	10.2%
Total	76,016	7.7%	14.4%	19.9%	23.1%

Final Discussion

Looking to the future, the hard truth is this: the nursing shortage is a crisis in the making, and to avert it, we must see it and treat it as such. The demographic challenges will continue to strain the system. Proactive steps need to be taken to address these challenges in a way that maintains or improves public health and patient care. While no one can predict with certainty the severity of the persistent nursing shortage, it is imperative that we take steps to address the challenges and ensure a quality healthcare system, one that provides good patient care and safeguards public health.

Workforce quantity is the main challenge facing Wisconsin's economic future. Demographic challenges are not unique to nursing.

- If trends continue, the state is facing a 120,000 workforce shortage by 2031 based on projections by the Office of Economic Advisors.

There will not be a single solution that alleviates the current and future challenges. Solutions will need to address supply and demand for nurses.

Supply side solutions:

- Fill existing nursing programs and continue to expand educational capacity (attracting students and having enough qualified instructors).
- Retain existing nurses.

Demand side solutions:

- Leverage technology to free up more time for caregiving or reduce the amount of time patients are under direct care.
- Reduce the number of patients by improving the overall health of the population.

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