



**The Licensed Practical Nurse
Workforce in Pennsylvania
Supply and Demand**

Regional Report

Spring 2006

Pennsylvania

WORKFORCE INVESTMENT BOARD

Pennsylvania Center for Health Careers

901 North Seventh Street
Suite 103
Harrisburg, PA 17102

Telephone: 717-772-4966
Fax: 717-783-4660
www.paworkforce.state.pa.us

EXECUTIVE SUMMARY

This document is a supplement to the full report, *The Licensed Practical Nurse Workforce in Pennsylvania: Supply/Demand Report Summer 2005*, by the Pennsylvania Center for Health Careers. The purpose of both documents is to provide information concerning the Licensed Practical Nurse shortage in Pennsylvania. The full report, which details the scope of the imbalance, forecasts a statewide shortage of 4,100 Licensed Practical Nurses for 2010. Regional breakouts are presented in this supplemental report, targeting specific areas of the shortage. The highlights are as follows:

- The regional breakouts provided are by Pennsylvania Department of Health District (6 regions), Pennsylvania Workforce Investment Area (22 regions) and County (67 regions).
- The regional model operates similarly to the statewide model and projects the growing gap between the demand and supply of LPNs in most Pennsylvania regions.
- The 2010 shortage, percent shortage of 2010 demand, and percent of the statewide 2010 shortage are listed for each region. In addition, each region's nurse and population age demographics, economic health, population growth, and population per nurse are considered.
- Not surprisingly, those regions with the highest average age of nurses, percentage elderly population, and population growth will experience the worst shortages.
- The significant finding from the model is that the main source of the growing regional shortages is the inadequate number of new entries coming into the workforce to keep up with the increasing number of LPNs leaving the workforce (replacements). Furthermore, this shortage is compounded by constant industry growth and consistent employer vacancies.

TABLE OF CONTENTS

	Page
Executive Summary	
Overview	1
Regional Supply/Demand Model Introduction	1
Regional Supply/Demand Model Summary	2
Regional Analysis	3
Health District Analysis	4
Workforce Investment Area Analysis	14
County Analysis	31
Conclusion	33
Appendix A: Methodology for Supply/Demand Model	34
Appendix B: Source Data	36
Appendix C: Additional Source Data	39
Appendix D: Supply/Demand Working Group	40
Appendix E: Pennsylvania Center for Health Careers Leadership Council	41

OVERVIEW

A statewide shortage of 4,100 Licensed Practical Nurses is forecast for 2010. The statewide number details the scope of the imbalance and regional breakouts target specific areas of the shortage. The regional breakouts provided are by Pennsylvania Department of Health District (6 regions), Pennsylvania Workforce Investment Area (22 regions) and County (67 regions). The 2010 shortage, percent shortage of 2010 demand, and percent of the statewide 2010 shortage are listed for each region. In addition, each region's nurse and population age demographics, economic health, population growth, and population per nurse are considered.

The Health Districts, a grouping of eight to thirteen counties, provide the broadest measure of the nursing shortage across the state. The Workforce Investment Areas, a grouping of one to nine counties, provide a more targeted view of the state's nursing shortage. Finally, Counties provide the most detailed view of the shortage.

REGIONAL SUPPLY/DEMAND MODEL INTRODUCTION

The regional model operates similarly to the statewide model. It is a tool developed to project occupation specific data with respect to Licensed Practical Nurses in Pennsylvania, providing an estimate of the imbalance at the regional level based on projected 'replacement needs'. The resulting product is an estimation of the size of each region's nursing workforce in the future. The model uses information collected from a joint collaboration of Pennsylvania's Workforce Investment Board members, the Departments of Health, State and Labor & Industry, educators, industry experts and policy makers to arrive at the projection. It assumes the number of nurses commuting into the state to work equals the number of nurses commuting out of the state to work. Finally, this model rests on the research conducted by the findings of the Department of Health's SHIP Report March 2005.

The Model projects the growing disconnect between the demand and supply of LPNs in most Pennsylvania regions (Health District, Workforce Investment Area, and County).

REGIONAL SUPPLY/DEMAND MODEL SUMMARY

The model defines the supply of nurses as the aggregate of the number of current licensees employed in health care, nurses seeking employment, and nursing school graduates (new entries). The demand for nurses is defined as the total number of nurses employed in health care, employer vacancies, health care industry growth, and replacements due to retirements and separations from the profession. Historical data is used to forecast supply and demand variables. The essential relationship between new entries (new supply) and vacancies, growth, and replacements (collectively new demand) forms the foundation for this mathematical tool. Further, it places major emphasis on the replacement of LPNs. The resulting product is an estimation of the short and long-range imbalance between supply and demand at the regional level. The model uses information collected from a joint collaboration of Pennsylvania's Workforce Investment Board members, the Departments of Health, State and Labor & Industry, educators, industry experts and policy makers to arrive at the projection (the full methodology is covered in Appendix A).

In 2004, the components of demand change – Growth (Factor G – a constant), Replacements (Factor D – the result of a variable rate quantifying current LPNs departure from nursing applied to employment), the Unemployed change (Factor B – the result of a flat unemployment rate applied to employment) and Unfilled change (Factor F – the result of a flat vacancy rate applied to employment), were calculated and added to the previous year's shortage, resulting in new 2004 demand. Next, the sole component of supply change, New Entries (Factor C), was calculated, resulting in new 2004 supply. Finally, New Supply (new entries) was subtracted from New Demand (Previous shortage + Growth + Replacements + the Unemployed change + the Unfilled change), resulting in a new shortage for 2004. The same procedure was used for each subsequent year. As a result, it was found that the shortage grew worse in most regions each following year.

Each region's new entries were determined based on its share of statewide employment multiplied by the statewide number of new entries. This method was used in favor of tallying new entries by region because there was no way of knowing if graduates would work in the region of graduation.

Finally, unemployment is considered a constant with LPNs flowing into and out of the count for various reasons, making it unlikely that additional numbers of them would be available to enter the workforce.

REGIONAL ANALYSIS

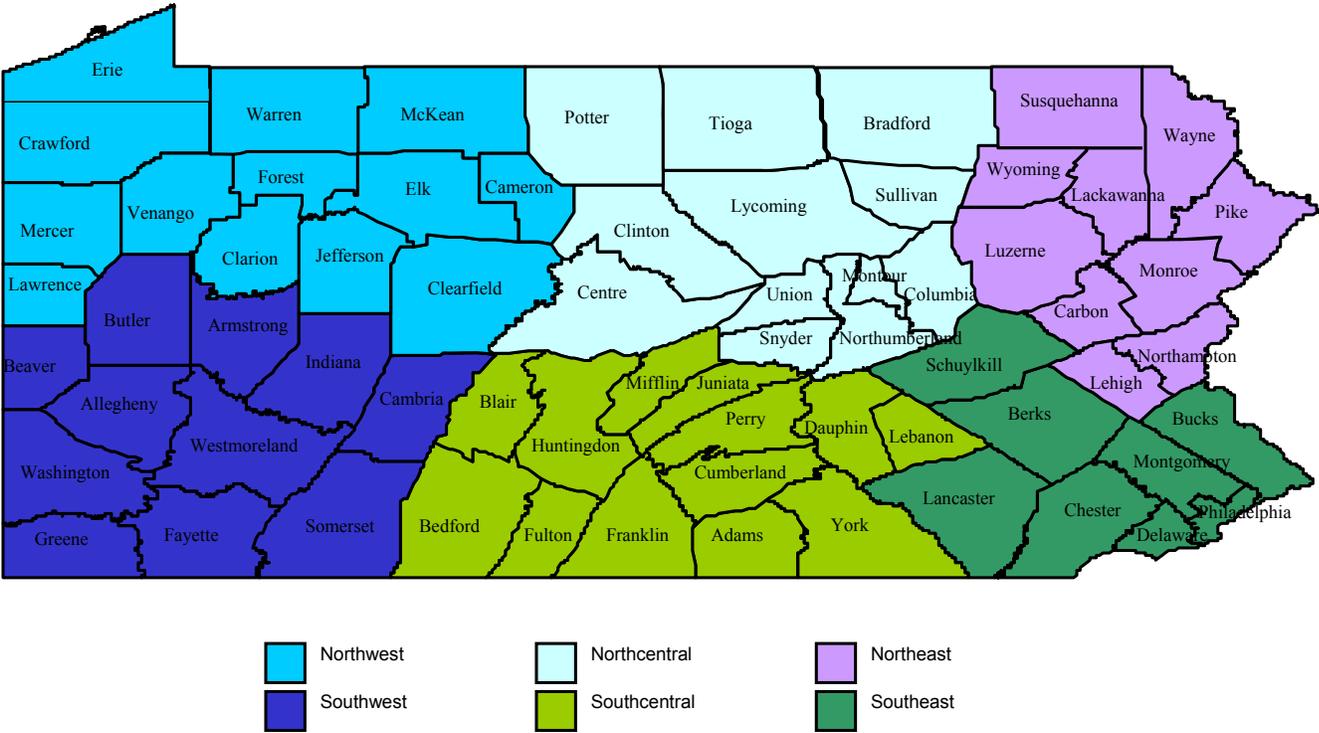
LPN shortages in the six Pennsylvania Department of Health Districts, twenty-two Workforce Investment Areas and sixty-seven Counties will be analyzed. The analysis will be based primarily on a region's 2010 shortage, percent shortage of 2010 demand, and percent of the statewide 2010 shortage. However, additional regional factors will be presented, which may help to identify vulnerable populations if the area experiences a shortage of nurses. The additional factors are:

- Average Age of LPNs – The higher the average age of a region's nurses, the sooner the nurses will be leaving the profession.
- Percentage of Nurses Age 50 and Over – An aging workforce requires more new entries.
- Unemployment Rate – The unemployed may delay health care until the critical stage.
- Per Capita Income – Because of the high cost of health care, low-income individuals may delay health care until crisis levels.
- Percentage Elderly - Those age 65 and over are in greater need of health care than those under age 65.
- Population Growth – A growing population needs more nurses.
- Population Per Nurse – A high ratio may signify an inadequate number of nurses to meet the health care demands of a region's population.

HEALTH DISTRICT ANALYSIS

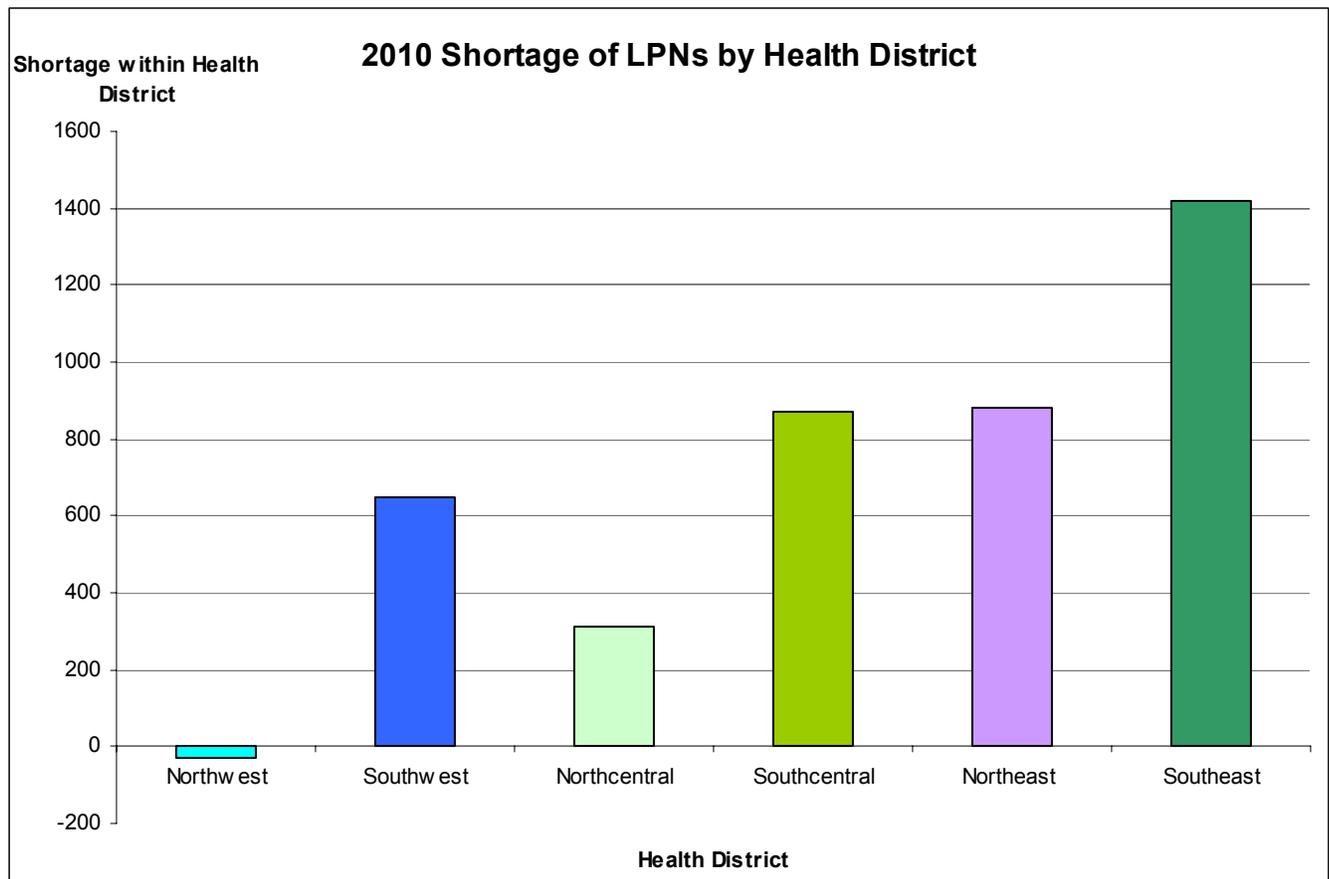
The six Pennsylvania Department of Health Districts provide the broadest measure of analysis.

PA Department of Health District

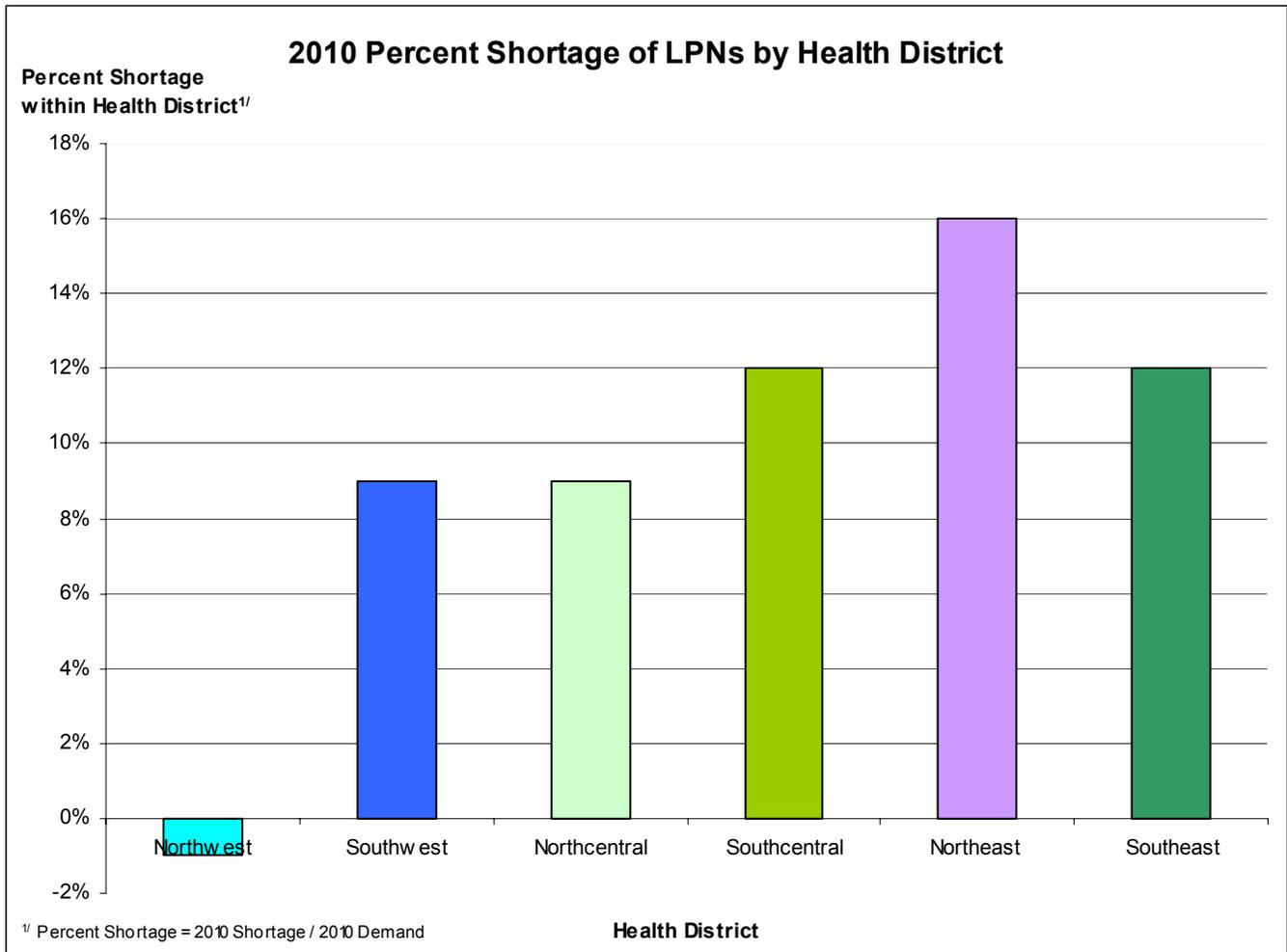


Health District Data

Key	Health District	2010 Shortage	Percent Shortage of 2010 Demand
	Northwest	-30	-1%
	Southwest	650	9%
	Northcentral	310	9%
	Southcentral	870	12%
	Northeast	880	16%
	Southeast	1,420	12%
	Statewide	4,100	

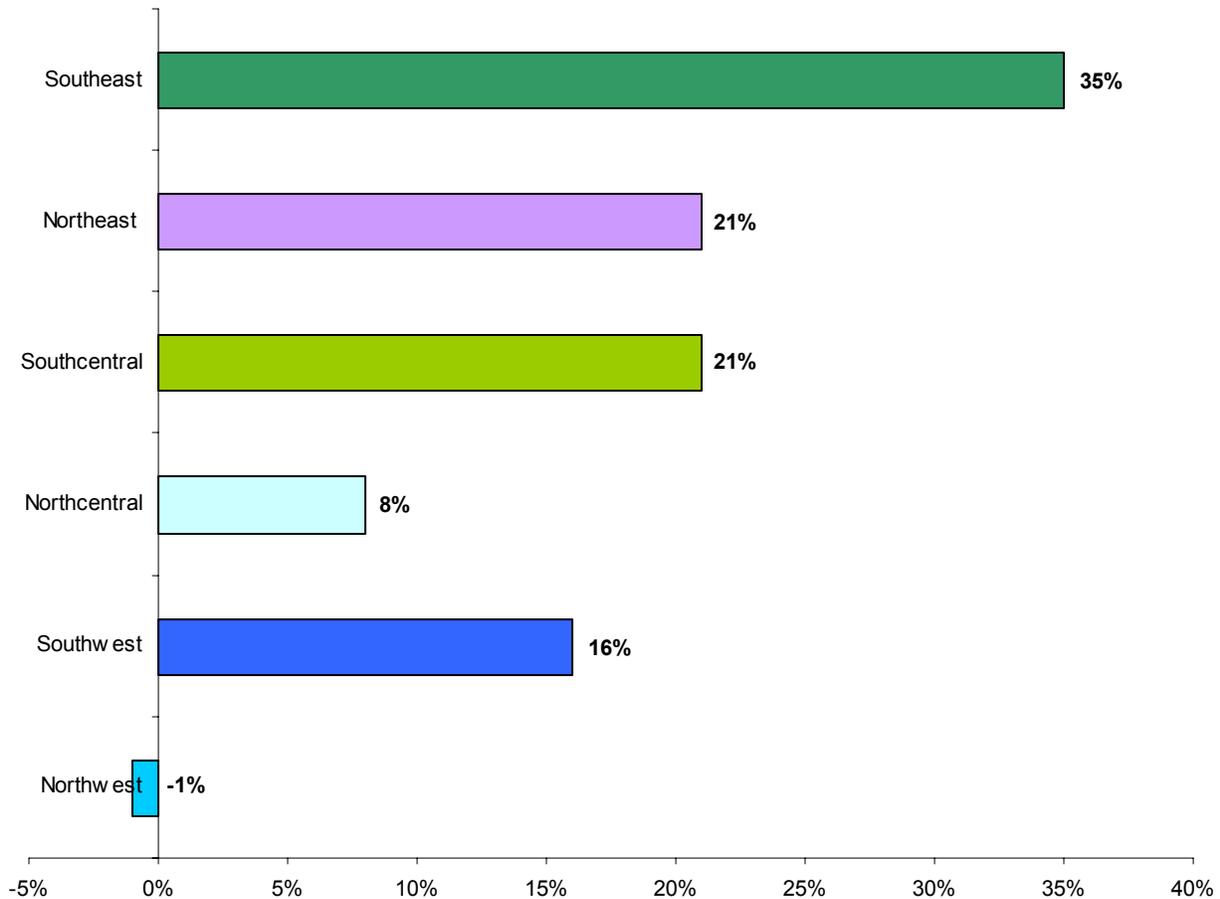


- The Southeast Health District has the largest nursing shortage in 2010 (1,420) and the Northwest Health District is the only district that has a nursing surplus in 2010 (30)
- The southern half of the state has a larger nursing shortage in 2010 (2,940) than the northern half of the state (1,160)
- The eastern region of the state has a greater nursing shortage in 2010 (2,300) than either the central (1,180) or western (620) regions of the state.



- The Northeast Health District has the highest percent shortage of 2010 nursing demand (16%)
- The Northwest Health District has a 2010 nursing demand surplus (1%)
- The eastern health districts have a higher percent shortage of 2010 nursing demand (13%) than either the central (11%) or western (6%) health districts

Each Health District's Percentage of the 2010 Statewide LPN Shortage^{1/}



^{1/} Health District's 2010 Shortage / Statewide 2010 Shortage

Percent of Statewide LPN Shortage

- The Northwest Health District is the only district not to have a share of the 2010 statewide shortage.
- The Southcentral Health District has a 21 percent share of the 2010 statewide nursing shortage, but only a 12 percent shortage of 2010 demand within the district
- The Northcentral Health District has a 9 percent shortage of 2010 nursing demand within the district, but only a 8 percent share of the 2010 statewide nursing shortage
- The Southeast Health District has the largest percent share of the 2010 statewide nursing shortage (35%)

Health District Models

Northwest Health District (Cameron, Clarion, Clearfield, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango, Warren Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	3,480	3,440	3,400	3,430	3,460	3,490	3,520	3,550
Unemployed Seeking Employment in Health Care in PA (B)	200	180	170	160	160	160	160	160
New Entries (C)	130	130	190	200	200	200	200	200
Replacements (D) 1.67% to 3.43% + Career Development	180	170	160	170	170	170	180	180
NET SUPPLY* = A+B+C-D	3,630	3,580	3,600	3,620	3,660	3,680	3,710	3,740
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	3,480	3,480	3,480	3,480	3,480	3,480	3,470	3,470
Unfilled Vacancies at 6.7% (F)	210	230	230	230	230	230	240	240
Growth (G)	0	0	0	0	0	0	0	0
NET DEMAND* (ND) = E + F + G	3,690	3,700	3,700	3,700	3,700	3,700	3,710	3,710
SHORTAGE (NS – ND)	-60	-120	-100	-80	-40	-20	0	30
PROJECTED SHORTAGE	-2%	-3%	-3%	-2%	-1%	-1%	0%	1%

*Totals may not add due to rounding

Notes (for detailed calculations, please refer to the 'Methodology Section in the Appendix):

- 'Employed' in base year is equated to the number of licensed LPNs in health care working in the region. Next year's Employment = Previous year Employment + New Entries - Replacements.
- 'Unemployed Seeking Health Care Employment' in the region is considered a part of the 'supply'. The Unemployed are the result of a constant unemployment rate multiplied by Employment.
- 'New Entries' are the percentage of graduates who will pass the LPN licensure exam and seek health care employment.
- 'Replacements' (used often interchangeably with Separations) summarize movements of workers into and out of an occupation. This information was from the Pennsylvania Department of Health's SHIP Report March 2005. The survey question 'Intent to Remain in Nursing (within 0-5 & 6-10 years)' in conjunction with the answer to the survey question on 'career development' courses that the LPNs were involved were deemed to be a fair indication of the future replacements that would be required in the nursing workforce; however to avoid overestimation and also to take into account the gradually aging LPN workforce, the Replacement Rate (RR) was graduated over the years and the attrition rate of the LPNs in RN-BS and RN-AS career development programs were taken into account.

The Model placed major emphasis on the 'Replacement Rate' of LPNs. Though the SHIP Report March 2005 was used to arrive at the Replacement Rate (RR) calculation, care was taken at every level to benchmark the calculation with the available RR from the Center for Workforce Information and Analysis (CWIA). The beginning RR calculation in the selected scenario coincided with the net replacement projections published by CWIA; in view of the fact that CWIA replacement data are described as providing a **minimum measure of training needs**, the methodology developed using the SHIP Report March 2005 with CWIA data as a benchmark or standard is occupation-specific and it captures the impact of demographic and behavioral changes of the LPN population in Pennsylvania.

- 'Employed' in base year is equated to the number of licensed LPNs in health care working in the region. Next year's Employment = Previous year's Employment + Growth.
- The estimated number of 'Unfilled' positions was based on a survey of health care provider occupational vacancy rates in selected regions of Pennsylvania completed in 2004 conducted by the Center for Workforce Information and Analysis (CWIA); survey results showed a 6.7 percent vacancy rate for LPNs in Pennsylvania. The vacancy report was analyzed and a methodology was developed to ensure that the number estimated did not duplicate replacements and included all industries that LPNs in health care were working (the survey from CWIA covered only 81.8 percent of all industries employing LPNs).
- The forecasted 'Growth' in employment was added to the prior year's total demand in the region and was based on the CWIA 2002 – 2012 projections.

Southwest Health District (Allegheny, Armstrong, Beaver, Butler, Cambria, Fayette, Greene, Indiana, Somerset, Washington, Westmoreland Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	6,530	6,330	6,170	6,150	6,140	6,140	6,150	6,150
Unemployed Seeking Employment in Health Care in PA (B)	420	390	360	340	340	340	340	340
New Entries (C)	250	250	370	380	380	380	380	380
Replacements (D) 2.25% to 4.18% + Career Development	450	410	380	390	390	380	380	370
NET SUPPLY* = A+B+C-D	6,740	6,560	6,510	6,480	6,480	6,480	6,490	6,500
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	6,530	6,550	6,580	6,600	6,620	6,640	6,660	6,690
Unfilled Vacancies at 6.7% (F)	400	420	420	420	420	420	440	440
Growth (G)	20	20	20	20	20	20	20	20
NET DEMAND* (ND) = E + F + G	6,960	7,000	7,020	7,040	7,060	7,090	7,130	7,150
SHORTAGE (NS – ND)	-220	-440	-510	-560	-580	-610	-640	-650
PROJECTED SHORTAGE	-3%	-6%	-7%	-8%	-8%	-9%	-9%	-9%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Northcentral Health District (Bradford, Centre, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga, Union Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	2,910	2,870	2,840	2,870	2,900	2,930	2,950	2,980
Unemployed Seeking Employment in Health Care in PA (B)	100	90	90	80	80	80	80	80
New Entries (C)	110	110	160	170	170	170	170	170
Replacements (D) 1.68% to 3.69% + Career Development	150	140	130	140	140	140	140	150
NET SUPPLY* = A+B+C-D	2,970	2,930	2,960	2,980	3,010	3,040	3,060	3,090
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	2,910	2,950	2,980	3,020	3,060	3,090	3,130	3,160
Unfilled Vacancies at 6.7% (F)	180	190	190	190	190	190	200	200
Growth (G)	40	40	40	40	40	40	40	40
NET DEMAND* (ND) = E + F + G	3,130	3,170	3,210	3,240	3,280	3,320	3,360	3,400
SHORTAGE (NS – ND)	-160	-240	-250	-260	-270	-280	-300	-310
PROJECTED SHORTAGE	-5%	-8%	-8%	-8%	-8%	-8%	-9%	-9%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Southcentral Health District (Adams, Bedford, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lebanon, Mifflin, Perry, York Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	5,990	5,890	5,810	5,850	5,890	5,930	5,970	6,010
Unemployed Seeking Employment in Health Care in PA (B)	210	190	180	170	170	170	170	170
New Entries (C)	230	230	330	350	350	350	350	350
Replacements (D) 1.79% to 3.59% + Career Development	330	310	300	310	310	310	310	310
NET SUPPLY* = A+B+C-D	6,100	6,000	6,030	6,060	6,100	6,140	6,170	6,210
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	5,990	6,080	6,160	6,250	6,340	6,420	6,510	6,590
Unfilled Vacancies at 6.7% (F)	370	390	390	390	390	390	410	410
Growth (G)	90	90	90	90	90	90	90	90
NET DEMAND* (ND) = E + F + G	6,450	6,550	6,640	6,720	6,810	6,890	7,000	7,080
SHORTAGE (NS – ND)	-350	-550	-610	-660	-710	-750	-830	-870
PROJECTED SHORTAGE	-5%	-8%	-9%	-10%	-10%	-11%	-12%	-12%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Northeast Health District (Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Susquehanna, Wayne, Wyoming Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	4,740	4,640	4,540	4,520	4,490	4,460	4,420	4,380
Unemployed Seeking Employment in Health Care in PA (B)	210	190	180	170	170	170	170	170
New Entries (C)	180	180	260	280	280	280	280	280
Replacements (D) 1.88% to 4.98% + Career Development	280	280	280	310	310	320	320	320
NET SUPPLY* = A+B+C-D	4,850	4,730	4,700	4,660	4,620	4,590	4,550	4,510
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	4,740	4,780	4,820	4,860	4,900	4,950	4,990	5,030
Unfilled Vacancies at 6.7% (F)	290	310	310	310	310	310	320	320
Growth (G)	40	40	40	40	40	40	40	40
NET DEMAND* (ND) = E + F + G	5,070	5,130	5,170	5,210	5,250	5,290	5,350	5,390
SHORTAGE (NS – ND)	-220	-400	-470	-550	-630	-700	-800	-880
PROJECTED SHORTAGE	-4%	-8%	-9%	-11%	-12%	-13%	-15%	-16%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Southeast Health District (Berks, Bucks, Chester, Delaware, Lancaster, Montgomery, Philadelphia, Schuylkill Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	10,350	10,130	9,950	9,980	10,020	10,050	10,090	10,130
Unemployed Seeking Employment in Health Care in PA (B)	470	440	410	380	380	380	380	380
New Entries (C)	400	400	580	610	610	610	610	610
Replacements (D) 1.91% to 3.89% + Career Development	610	580	540	570	570	570	570	570
NET SUPPLY* = A+B+C-D	10,600	10,390	10,400	10,400	10,440	10,470	10,510	10,550
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	10,350	10,460	10,580	10,690	10,810	10,920	11,040	11,150
Unfilled Vacancies at 6.7% (F)	640	670	670	670	670	670	700	700
Growth (G)	120	120	120	120	120	120	120	120
NET DEMAND* (ND) = E + F + G	11,100	11,250	11,360	11,480	11,590	11,710	11,850	11,970
SHORTAGE (NS – ND)	-500	-860	-960	-1,080	-1,150	-1,240	-1,340	-1,420
PROJECTED SHORTAGE	-5%	-8%	-8%	-9%	-10%	-11%	-11%	-12%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

The following chart shows ten quantitative measures used to analyze a region.

Health District	Shortage ^{1/}	Percent Shortage within Region ^{1/}	Percent of Statewide Shortage ^{1/}	Nurse Ave. Age	Nurses Over 50	Unemp. Rate	Per Capita Income	Percent Elderly	Population Growth	Population per Nurse
Northwest	-30	-1%	-1%	46.4	39%	7.1%	16,620	17.5%	-1.5%	318
Southwest	650	9%	16%	47.1	44%	6.0%	17,620	17.2%	-0.7%	377
Northcentral	310	9%	8%	45.7	37%	5.2%	16,970	16.2%	0.2%	244
Southcentral	870	12%	21%	45.1	38%	5.2%	18,430	15.4%	2.5%	288
Northeast	880	16%	21%	47.9	45%	5.6%	18,850	16.0%	4.6%	494
Southeast	1,420	12%	35%	47.6	45%	4.8%	23,800	14.5%	2.3%	452
District Average	680	10%	17%	46.6	41%	5.7%	18,720	16.1%	1.2%	362

^{1/} In 2010.

Northwest Health District

The Northwest Health District has the highest percentage of the elderly in its population, the highest unemployment rate and lowest per capita income. However, the region has a slight surplus of nurses. The age of the area's nurses is slightly below average and its population growth is the slowest of any region in the state. The district's population per nurse ratio is the third best in the state.

Southwest Health District

The Southwest Health District has an above average proportion of the elderly in its population. The region's unemployment rate is the second highest of any region and its per capita income is below average. In contrast, the region's percent shortage of 2010 demand is among the lowest of any region. The area's population growth is the second slowest in the state. The district's remaining indicators are close to the mean.

Northcentral Health District

The Northcentral Health District has a small shortage size, a low percent shortage of 2010 demand and the best population per nurse ratio in the state. The region has a lower than average nurse age, lower than average proportion of nurses over 50, and slow population growth. In addition, the area has the smallest share of the statewide shortage. The region's unemployment rate is low, but its per capita income is the second lowest in the state. The district's proportion of the elderly in its population is at the mean.

Southcentral Health District

The Southcentral Health District has an above average shortage size, percent shortage of 2010 demand and share of the 2010 statewide shortage. The area's population growth is the second highest of any district. However, the region's average age of nurses is the lowest in the state. Furthermore, the district's percentage of nurses over 50, population per nurse, and

percentage elderly population are among the lowest in the state. The district has a low unemployment rate and its per capita income is at the mean.

Northeast Health District

The Northeast Health District has the highest population per nurse ratio, average age of nurses, and percent shortage of 2010 demand in the state. The region has a high proportion of older nurses in the workforce, strong population growth, and the second highest shortage size of any district. In addition, the district has an above average share of the 2010 statewide shortage. The area's unemployment rate, per capita income, and percentage elderly are close to the mean.

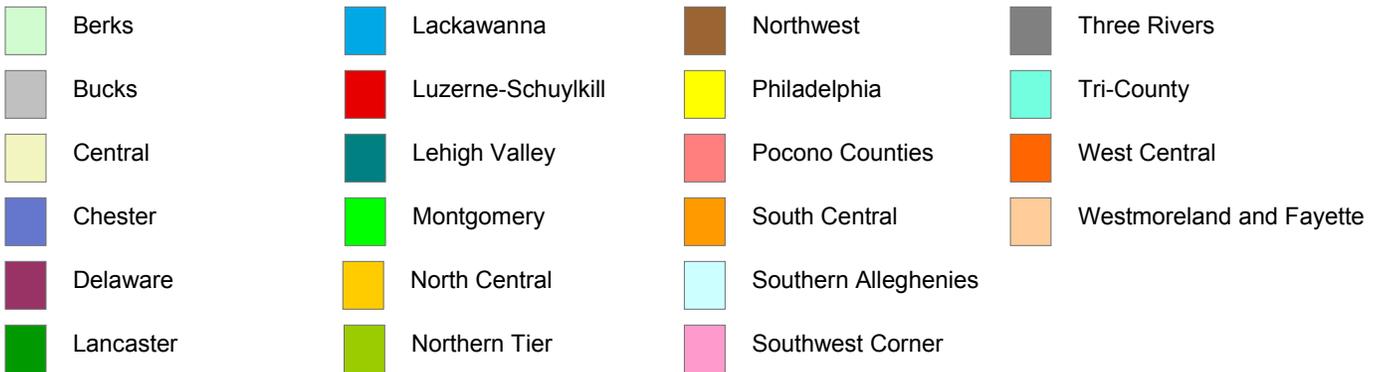
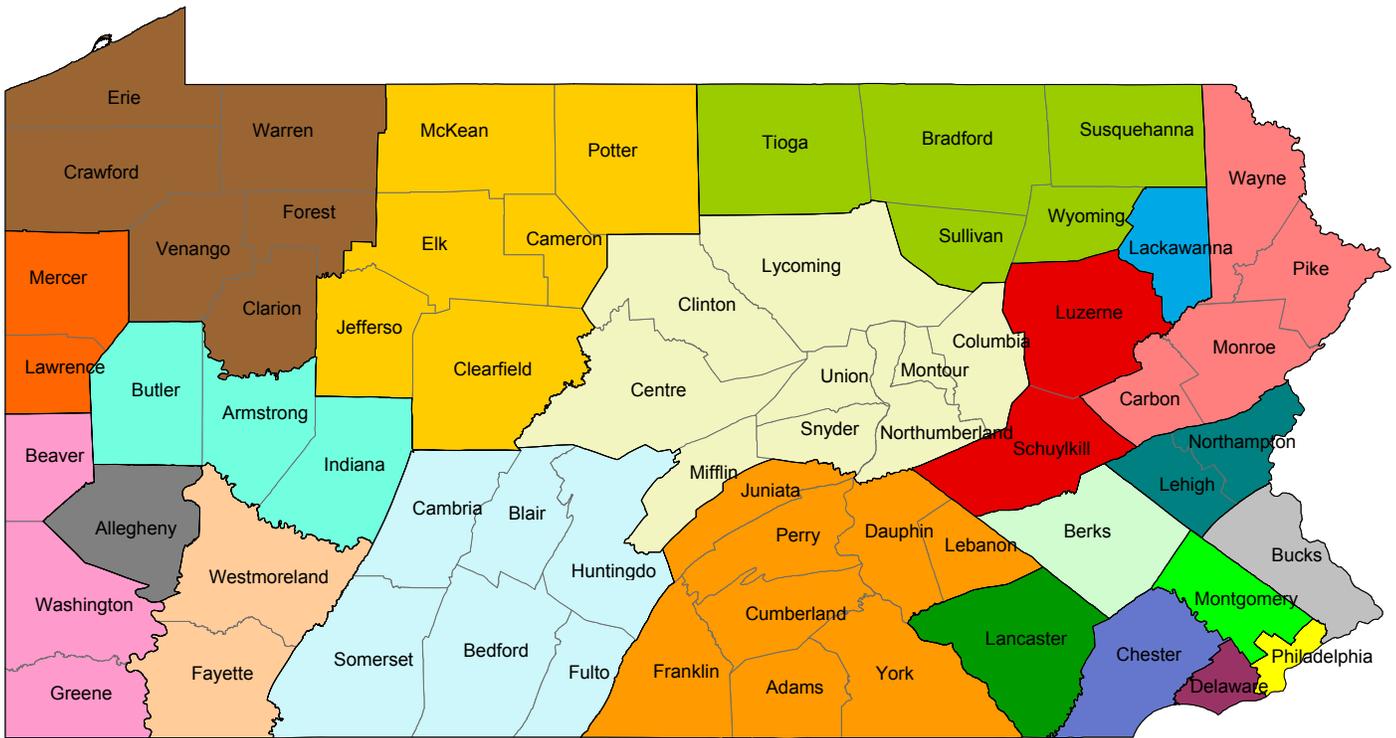
Southeast Health District

The Southeast Health District has the largest shortage size and the largest share of the 2010 statewide shortage of any district. The region has the highest percentage of nurses over 50 in the state and the second highest average nurse age. The area's population growth and percent shortage of 2010 demand are above average. The district's population per nurse ratio is the second highest of any region. However, the region's economy is by far the strongest in the state and it has the lowest proportion of the elderly.

WORKFORCE INVESTMENT AREA ANALYSIS

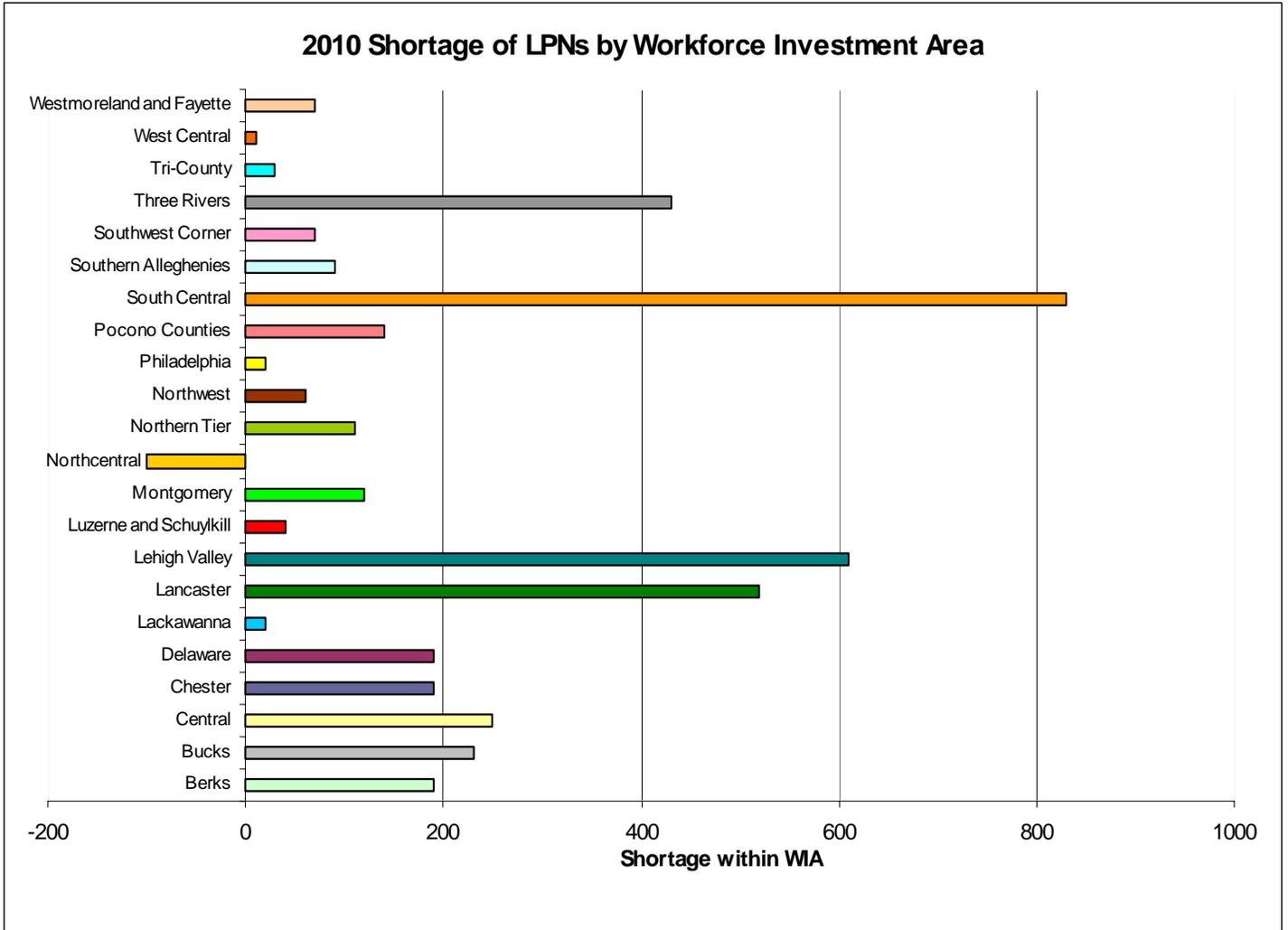
The twenty-two Pennsylvania Workforce Investment Areas (WIA) provide a more detailed measure of analysis.

Pennsylvania Workforce Investment Areas



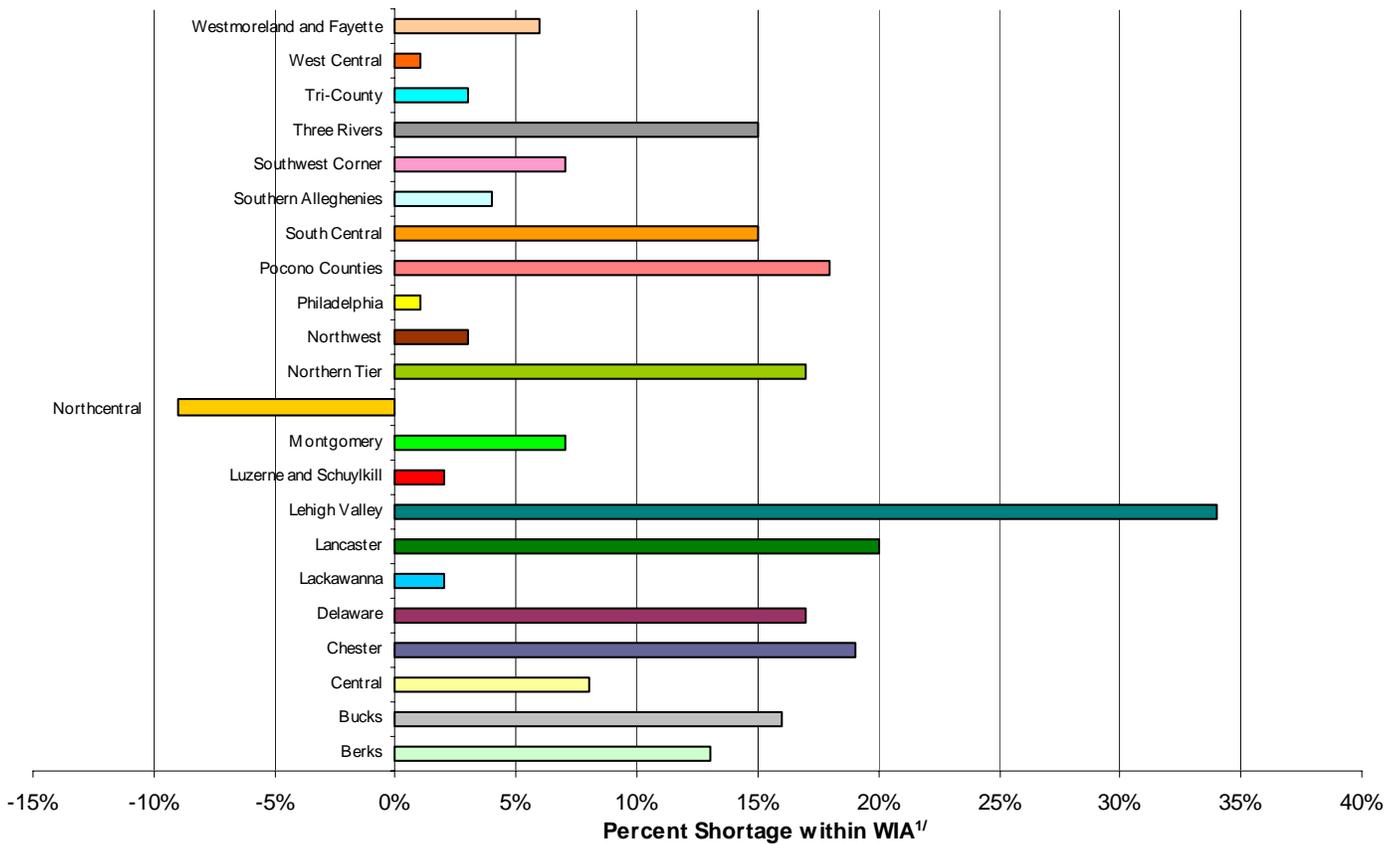
Workforce Investment Area Data

Key	Workforce Investment Area	2010 Shortage	Percent Shortage of 2010 Demand
	Berks	190	13%
	Bucks	230	16%
	Central	250	8%
	Chester	190	19%
	Delaware	190	17%
	Lackawanna	20	2%
	Lancaster	520	20%
	Lehigh Valley	610	34%
	Luzerne and Schuylkill	40	2%
	Montgomery	120	7%
	Northcentral	-100	-9%
	Northern Tier	110	17%
	Northwest	60	3%
	Philadelphia	20	1%
	Pocono Counties	140	18%
	South Central	840	15%
	Southern Alleghenies	90	4%
	Southwest Corner	70	7%
	Three Rivers	430	15%
	Tri-County	30	3%
	West Central	10	1%
	Westmoreland and Fayette	70	6%
	Statewide	4,100	



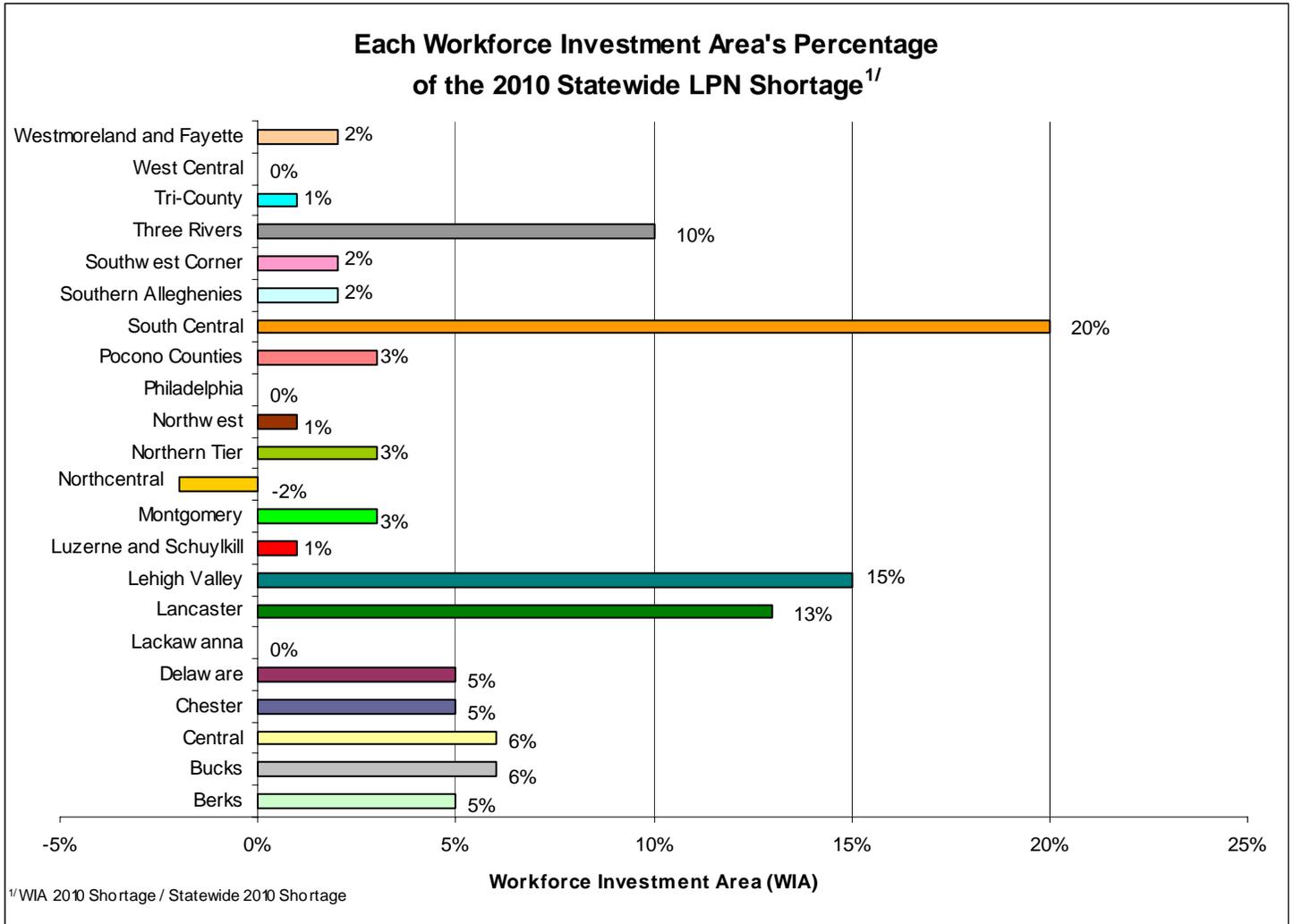
- The South Central Workforce Investment Area (WIA) has the largest nursing shortage in 2010 (830)
- The Northcentral Workforce Investment Area has a surplus of nurses in 2010 (100)

2010 Percent Shortage of LPNs by Workforce Investment Area



^{1/}Percent Shortage = 2010 Shortage / 2010 Demand

- The Lehigh Valley Workforce Investment Area has the highest percent shortage of 2010 nursing demand (34%)
- The Northcentral Workforce Investment Area has a percent surplus of nurses in 2010 (9%)



- The Southcentral Workforce Investment Area has a 20 percent share of the 2010 statewide nursing shortage, but only a 15 percent shortage of 2010 demand within the WIA
- The Pocono Counties Workforce Investment Area has a 18 percent shortage of 2010 nursing demand within the WIA, but only a 3 percent share of the 2010 statewide nursing shortage
- The Southcentral Workforce Investment Area has the largest percent share of the 2010 statewide nursing shortage (20%)

Workforce Investment Area Models

Berks Workforce Investment Area (Berks County)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	1,290	1,270	1,250	1,260	1,270	1,270	1,280	1,280
Unemployed Seeking Employment in Health Care in PA (B)	40	40	30	30	30	30	30	30
New Entries (C)	50	50	70	80	80	80	80	80
Replacements (D) 1.71% to 4.61% + Career Development	70	70	70	70	70	70	70	70
NET SUPPLY* = A+B+C-D	1,310	1,290	1,290	1,300	1,300	1,310	1,310	1,310
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	1,290	1,310	1,320	1,340	1,350	1,370	1,380	1,390
Unfilled Vacancies at 6.7% (F)	80	80	80	80	80	80	90	90
Growth (G)	10	10	10	10	10	10	10	10
NET DEMAND* (ND) = E + F + G	1,390	1,400	1,420	1,430	1,450	1,460	1,480	1,500
SHORTAGE (NS – ND)	-80	-110	-130	-130	-150	-150	-170	-190
PROJECTED SHORTAGE	-6%	-8%	-9%	-9%	-10%	-10%	-11%	-13%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Bucks Workforce Investment Area (Bucks County)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	1,170	1,140	1,110	1,110	1,110	1,110	1,110	1,120
Unemployed Seeking Employment in Health Care in PA (B)	70	70	60	60	60	60	60	60
New Entries (C)	40	40	70	70	70	70	70	70
Replacements (D) 2.05% to 4.73% + Career Development	70	70	60	70	70	70	70	70
NET SUPPLY* = A+B+C-D	1,210	1,180	1,170	1,170	1,170	1,170	1,170	1,170
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	1,170	1,180	1,200	1,220	1,240	1,260	1,280	1,300
Unfilled Vacancies at 6.7% (F)	70	80	80	80	80	80	80	80
Growth (G)	20	20	20	20	20	20	20	20
NET DEMAND* (ND) = E + F + G	1,260	1,280	1,300	1,320	1,340	1,360	1,380	1,400
SHORTAGE (NS – ND)	-50	-100	-130	-150	-170	-190	-210	-230
PROJECTED SHORTAGE	-4%	-8%	-10%	-11%	-13%	-14%	-15%	-16%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Central Workforce Investment Area (Centre, Clinton, Columbia, Lycoming, Mifflin, Montour, Northumberland, Snyder, Union Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	2,830	2,810	2,790	2,820	2,850	2,880	2,910	2,940
Unemployed Seeking Employment in Health Care in PA (B)	100	100	90	80	80	80	80	80
New Entries (C)	110	110	160	170	170	170	170	170
Replacements (D) 1.56% to 3.85% + Career Development	130	130	120	130	140	140	140	140
NET SUPPLY* = A+B+C-D	2,910	2,880	2,910	2,940	2,970	3,000	3,030	3,050
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	2,830	2,870	2,900	2,940	2,970	3,010	3,040	3,080
Unfilled Vacancies at 6.7% (F)	170	180	180	180	180	180	190	190
Growth (G)	30	30	30	30	30	30	30	30
NET DEMAND* (ND) = E + F + G	3,040	3,090	3,120	3,160	3,190	3,230	3,270	3,300
SHORTAGE (NS – ND)	-130	-210	-210	-220	-220	-230	-240	-250
PROJECTED SHORTAGE	-4%	-7%	-7%	-7%	-7%	-7%	-7%	-8%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Chester Workforce Investment Area (Chester County)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	820	800	790	790	790	790	790	790
Unemployed Seeking Employment in Health Care in PA (B)	30	20	20	20	20	20	20	20
New Entries (C)	30	30	50	50	50	50	50	50
Replacements (D) 2.07% to 4.81% + Career Development	50	50	50	50	50	50	50	50
NET SUPPLY* = A+B+C-D	830	810	810	810	810	810	810	810
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	820	840	850	870	880	900	910	920
Unfilled Vacancies at 6.7% (F)	50	50	50	50	50	50	60	60
Growth (G)	10	10	10	10	10	10	10	10
NET DEMAND* (ND) = E + F + G	890	900	920	930	950	960	980	1,000
SHORTAGE (NS – ND)	-60	-90	-110	-120	-140	-150	-170	-190
PROJECTED SHORTAGE	-7%	-10%	-12%	-13%	-15%	-16%	-17%	-19%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Delaware Workforce Investment Area (Delaware County)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	930	910	890	890	890	890	890	890
Unemployed Seeking Employment in Health Care in PA (B)	50	40	40	40	40	40	40	40
New Entries (C)	40	40	50	50	50	50	50	50
Replacements (D) 2.04% to 4.83% % + Career Development	60	60	50	50	50	50	50	50
NET SUPPLY* = A+B+C-D	960	930	930	930	930	930	930	930
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	930	950	960	980	1,000	1,010	1,030	1,040
Unfilled Vacancies at 6.7% (F)	60	60	60	60	60	60	60	60
Growth (G)	20	20	20	20	20	20	20	20
NET DEMAND* (ND) = E + F + G	1,010	1,020	1,040	1,060	1,070	1,090	1,110	1,120
SHORTAGE (NS – ND)	-50	-90	-110	-130	-140	-160	-180	-190
PROJECTED SHORTAGE	-5%	-9%	-11%	-12%	-13%	-15%	-16%	-17%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Lackawanna Workforce Investment Area (Lackawanna County)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	1,120	1,100	1,090	1,100	1,110	1,120	1,130	1,130
Unemployed Seeking Employment in Health Care in PA (B)	30	30	30	30	30	30	30	30
New Entries (C)	40	40	60	70	70	70	70	70
Replacements (D) 1.92% to 4.65%	60	60	50	60	60	60	60	60
NET SUPPLY* = A+B+C-D	1,140	1,120	1,130	1,140	1,140	1,150	1,160	1,170
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120
Unfilled Vacancies at 4.9% (F)	70	70	70	70	70	70	80	80
Growth (G)	0	0	0	0	0	0	0	0
NET DEMAND* (ND) = E + F + G	1,190	1,190	1,190	1,190	1,190	1,190	1,190	1,190
SHORTAGE (NS – ND)	-50	-70	-60	-50	-50	-40	-30	-20
PROJECTED SHORTAGE	-4%	-6%	-5%	-4%	-4%	-3%	-3%	-2%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Lancaster Workforce Investment Area (Lancaster County)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	2,030	1,990	1,970	1,980	2,000	2,010	2,020	2,030
Unemployed Seeking Employment in Health Care in PA (B)	70	70	60	60	60	60	60	60
New Entries (C)	80	80	110	120	120	120	120	120
Replacements (D) 1.72% to 4.29% % + Career Development	110	100	100	110	110	110	110	110
NET SUPPLY* = A+B+C-D	2,070	2,030	2,040	2,050	2,070	2,080	2,090	2,100
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	2,030	2,080	2,140	2,200	2,250	2,310	2,370	2,430
Unfilled Vacancies at 6.7% (F)	130	130	130	130	130	130	140	140
Growth (G)	60	60	60	60	60	60	60	60
NET DEMAND* (ND) = E + F + G	2,210	2,270	2,330	2,390	2,440	2,500	2,560	2,620
SHORTAGE (NS – ND)	-140	-240	-290	-340	-370	-420	-470	-520
PROJECTED SHORTAGE	-6%	-11%	-12%	-14%	-15%	-17%	-18%	-20%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Lehigh Valley Workforce Investment Area (Lehigh, Northampton Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	1,560	1,520	1,460	1,420	1,370	1,310	1,260	1,200
Unemployed Seeking Employment in Health Care in PA (B)	40	40	30	30	30	30	30	30
New Entries (C)	60	60	90	90	90	90	90	90
Replacements (D) 1.97% to 4.63%	100	120	130	140	150	150	150	150
NET SUPPLY* = A+B+C-D	1,560	1,490	1,450	1,400	1,350	1,290	1,230	1,180
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	1,560	1,580	1,590	1,610	1,620	1,640	1,650	1,670
Unfilled Vacancies at 4.9% (F)	100	100	100	100	100	100	110	110
Growth (G)	10	10	10	10	10	10	10	10
NET DEMAND* (ND) = E + F + G	1,670	1,690	1,710	1,720	1,740	1,750	1,770	1,790
SHORTAGE (NS – ND)	-110	-200	-260	-320	-390	-460	-540	-610
PROJECTED SHORTAGE	-7%	-12%	-15%	-19%	-22%	-26%	-31%	-34%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Luzerne and Schuylkill Workforce Investment Area (Luzerne, Schuylkill Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	1,950	1,920	1,900	1,920	1,940	1,950	1,970	1,990
Unemployed Seeking Employment in Health Care in PA (B)	130	120	110	100	100	100	100	100
New Entries (C)	70	70	110	110	110	110	110	110
Replacements (D) 2.32% to 4.76%	100	100	90	100	100	100	100	100
NET SUPPLY* = A+B+C-D	2,050	2,020	2,030	2,040	2,060	2,070	2,090	2,110
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	1,950	1,960	1,970	1,980	1,990	1,990	2,000	2,010
Unfilled Vacancies at 4.9% (F)	120	130	130	130	130	130	130	130
Growth (G)	10	10	10	10	10	10	10	10
NET DEMAND* (ND) = E + F + G	2,080	2,090	2,100	2,110	2,120	2,130	2,140	2,150
SHORTAGE (NS – ND)	-30	-70	-70	-70	-60	-60	-50	-40
PROJECTED SHORTAGE	-1%	-3%	-3%	-3%	-3%	-3%	-2%	-2%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Montgomery Workforce Investment Area (Montgomery County)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	1,500	1,470	1,450	1,460	1,470	1,480	1,490	1,500
Unemployed Seeking Employment in Health Care in PA (B)	50	50	50	40	40	40	40	40
New Entries (C)	60	60	80	90	90	90	90	90
Replacements (D) 2.00% to 5.12%	80	80	70	80	80	80	80	80
NET SUPPLY* = A+B+C-D	1,520	1,500	1,500	1,510	1,520	1,530	1,540	1,550
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	1,500	1,510	1,510	1,520	1,530	1,540	1,550	1,560
Unfilled Vacancies at 4.9% (F)	90	100	100	100	100	100	100	100
Growth (G)	10	10	10	10	10	10	10	10
NET DEMAND* (ND) = E + F + G	1,600	1,610	1,620	1,630	1,640	1,650	1,660	1,670
SHORTAGE (NS – ND)	-80	-110	-120	-120	-120	-120	-120	-120
PROJECTED SHORTAGE	-5%	-7%						

*Totals may not add due to rounding

Same footnotes as Northwest Health District

North Central Workforce Investment Area (Cameron, Clearfield, Elk, Jefferson, McKean, Potter Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	1,130	1,110	1,110	1,120	1,130	1,140	1,160	1,170
Unemployed Seeking Employment in Health Care in PA (B)	50	40	40	40	40	40	40	40
New Entries (C)	40	40	60	70	70	70	70	70
Replacements (D) 1.55% to 3.96%	50	50	50	50	50	50	50	60
NET SUPPLY* = A+B+C-D	1,160	1,150	1,160	1,170	1,180	1,200	1,210	1,220
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	1,130	1,120	1,100	1,090	1,080	1,070	1,060	1,050
Unfilled Vacancies at 4.9% (F)	70	70	70	70	70	70	80	80
Growth (G)	-10	-10	-10	-10	-10	-10	-10	-10
NET DEMAND* (ND) = E + F + G	1,180	1,180	1,170	1,160	1,150	1,140	1,130	1,120
SHORTAGE (NS – ND)	-20	-30	-10	10	30	60	80	100
PROJECTED SHORTAGE	-2%	-3%	-1%	1%	3%	5%	7%	9%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Northern Tier Workforce Investment Area (Bradford, Sullivan, Susquehanna, Tioga, Wyoming Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	530	520	510	510	510	510	510	520
Unemployed Seeking Employment in Health Care in PA (B)	20	20	20	10	10	10	10	10
New Entries (C)	20	20	30	30	30	30	30	30
Replacements (D) 2.21% to 4.51%	40	30	30	30	30	30	30	30
NET SUPPLY* = A+B+C-D	540	520	520	520	520	530	530	530
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	530	540	550	560	570	580	590	600
Unfilled Vacancies at 4.9% (F)	30	30	30	30	30	30	40	40
Growth (G)	10	10	10	10	10	10	10	10
NET DEMAND* (ND) = E + F + G	580	590	590	600	610	620	630	640
SHORTAGE (NS – ND)	-40	-70	-70	-80	-90	-90	-100	-110
PROJECTED SHORTAGE	-7%	-12%	-12%	-13%	-15%	-15%	-16%	-17%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Northwest Workforce Investment Area (Clarion, Crawford, Erie, Forest, Venango, Warren Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	1,680	1,660	1,640	1,660	1,680	1,690	1,710	1,720
Unemployed Seeking Employment in Health Care in PA (B)	80	80	70	70	70	70	70	70
New Entries (C)	60	60	90	100	100	100	100	100
Replacements (D) 2.03% to 4.51%	80	80	80	80	80	80	80	90
NET SUPPLY* = A+B+C-D	1,740	1,720	1,730	1,740	1,760	1,770	1,790	1,800
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	1,680	1,680	1,690	1,700	1,710	1,720	1,730	1,740
Unfilled Vacancies at 4.9% (F)	100	110	110	110	110	110	110	110
Growth (G)	10	10	10	10	10	10	10	10
NET DEMAND* (ND) = E + F + G	1,790	1,800	1,810	1,820	1,830	1,840	1,850	1,860
SHORTAGE (NS – ND)	-50	-80	-80	-80	-70	-70	-60	-60
PROJECTED SHORTAGE	-3%	-4%	-4%	-4%	-4%	-4%	-3%	-3%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Philadelphia Workforce Investment Area (Philadelphia County)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	2,000	1,940	1,890	1,890	1,880	1,880	1,880	1,880
Unemployed Seeking Employment in Health Care in PA (B)	120	110	110	100	100	100	100	100
New Entries (C)	80	80	110	120	120	120	120	120
Replacements (D) 1.77% to 4.27%	140	130	120	120	120	120	120	120
NET SUPPLY* = A+B+C-D	2,060	2,010	1,990	1,980	1,980	1,980	1,980	1,980
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	2,000	1,980	1,970	1,950	1,930	1,910	1,900	1,880
Unfilled Vacancies at 4.9% (F)	120	130	130	130	130	130	140	140
Growth (G)	-20	-20	-20	-20	-20	-20	-20	-20
NET DEMAND* (ND) = E + F + G	2,110	2,100	2,080	2,060	2,040	2,030	2,010	2,000
SHORTAGE (NS – ND)	-50	-90	-90	-80	-60	-50	-30	-20
PROJECTED SHORTAGE	-2%	-4%	-4%	-4%	-3%	-2%	-1%	-1%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Pocono Counties Workforce Investment Area (Carbon, Monroe, Pike, Wayne Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	570	560	550	560	560	570	570	570
Unemployed Seeking Employment in Health Care in PA (B)	50	50	40	40	40	40	40	40
New Entries (C)	20	20	30	30	30	30	30	30
Replacements (D) 1.96% to 4.70%	30	30	30	30	30	30	30	30
NET SUPPLY* = A+B+C-D	610	600	600	600	610	610	610	620
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	570	590	610	620	640	660	680	700
Unfilled Vacancies at 4.9% (F)	40	40	40	40	40	40	40	40
Growth (G)	20	20	20	20	20	20	20	20
NET DEMAND* (ND) = E + F + G	620	640	660	680	700	720	740	760
SHORTAGE (NS – ND)	-10	-40	-60	-80	-90	-110	-130	-140
PROJECTED SHORTAGE	-2%	-6%	-9%	-12%	-13%	-15%	-18%	-18%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

South Central Workforce Investment Area (Adams, Cumberland, Dauphin, Franklin, Juniata, Lebanon, Perry, York Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	4,590	4,510	4,440	4,460	4,490	4,510	4,540	4,560
Unemployed Seeking Employment in Health Care in PA (B)	150	140	130	120	120	120	120	120
New Entries (C)	180	180	260	270	270	270	270	270
Replacements (D) 2.145% to 4.75%	260	250	230	240	240	240	240	250
NET SUPPLY* = A+B+C-D	4,660	4,580	4,590	4,610	4,640	4,660	4,690	4,710
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	4,590	4,670	4,750	4,830	4,910	4,990	5,070	5,150
Unfilled Vacancies at 4.9% (F)	280	300	300	300	300	300	310	310
Growth (G)	80	80	80	80	80	80	80	80
NET DEMAND* (ND) = E + F + G	4,960	5,050	5,130	5,210	5,290	5,370	5,470	5,550
SHORTAGE (NS – ND)	-300	-470	-540	-600	-650	-710	-780	-840
PROJECTED SHORTAGE	-6%	-9%	-11%	-12%	-12%	-13%	-14%	-15%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Southern Alleghenies Workforce Investment Area (Bedford, Blair, Cambria, Fulton, Huntingdon, Somerset Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	2,200	2,150	2,120	2,130	2,140	2,150	2,170	2,180
Unemployed Seeking Employment in Health Care in PA (B)	120	110	110	100	100	100	100	100
New Entries (C)	80	80	120	130	130	130	130	130
Replacements (D) 1.95% to 4.32%	130	120	110	120	120	120	120	120
NET SUPPLY* = A+B+C-D	2,280	2,230	2,230	2,240	2,250	2,260	2,280	2,290
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	2,200	2,210	2,210	2,210	2,210	2,220	2,220	2,220
Unfilled Vacancies at 4.9% (F)	140	140	140	140	140	140	150	150
Growth (G)	0	0	0	0	0	0	0	0
NET DEMAND* (ND) = E + F + G	2,340	2,350	2,350	2,360	2,360	2,360	2,370	2,380
SHORTAGE (NS – ND)	-60	-120	-120	-120	-110	-100	-90	-90
PROJECTED SHORTAGE	-3%	-5%	-5%	-5%	-5%	-4%	-4%	-4%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Southwest Corner Workforce Investment Area (Beaver, Greene, Washington Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	900	880	860	860	860	860	850	850
Unemployed Seeking Employment in Health Care in PA (B)	70	70	60	60	60	60	60	60
New Entries (C)	30	30	50	50	50	50	50	50
Replacements (D) 2.37% to 4.89%	60	50	50	50	50	50	50	50
NET SUPPLY* = A+B+C-D	950	920	920	910	910	910	910	910
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	900	900	900	900	910	910	910	920
Unfilled Vacancies at 4.9% (F)	60	60	60	60	60	60	60	60
Growth (G)	0	0	0	0	0	0	0	0
NET DEMAND* (ND) = E + F + G	950	960	960	970	970	970	980	980
SHORTAGE (NS – ND)	0	-40	-40	-60	-60	-60	-70	-70
PROJECTED SHORTAGE	0%	-4%	-4%	-6%	-6%	-6%	-7%	-7%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Three Rivers Workforce Investment Area (Allegheny County)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	2,590	2,490	2,410	2,390	2,380	2,370	2,360	2,360
Unemployed Seeking Employment in Health Care in PA (B)	130	120	110	100	100	100	100	100
New Entries (C)	100	100	140	150	150	150	150	150
Replacements (D) 2.24% to 4.79%	200	180	160	170	160	160	160	150
NET SUPPLY* = A+B+C-D	2,620	2,530	2,500	2,480	2,470	2,470	2,470	2,460
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	2,590	2,600	2,620	2,630	2,650	2,670	2,680	2,700
Unfilled Vacancies at 4.9% (F)	160	170	170	170	170	170	170	170
Growth (G)	20	20	20	20	20	20	20	20
NET DEMAND* (ND) = E + F + G	2,760	2,790	2,800	2,820	2,830	2,850	2,870	2,890
SHORTAGE (NS – ND)	-140	-260	-300	-340	-360	-380	-400	-430
PROJECTED SHORTAGE	-5%	-9%	-11%	-12%	-13%	-13%	-14%	-15%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Tri-County Workforce Investment Area (Armstrong, Butler, Indiana Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	920	900	880	890	890	900	900	910
Unemployed Seeking Employment in Health Care in PA (B)	60	60	50	50	50	50	50	50
New Entries (C)	40	40	50	50	50	50	50	50
Replacements (D) 1.98% to 4.42%	50	50	50	50	50	50	50	50
NET SUPPLY* = A+B+C-D	960	940	940	940	950	950	960	960
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	920	920	920	920	920	920	930	930
Unfilled Vacancies at 4.9% (F)	60	60	60	60	60	60	60	60
Growth (G)	0	0	0	0	0	0	0	0
NET DEMAND* (ND) = E + F + G	980	980	980	980	980	990	990	990
SHORTAGE (NS – ND)	-20	-40	-40	-40	-30	-40	-30	-30
PROJECTED SHORTAGE	-2%	-4%	-4%	-4%	-3%	-4%	-3%	-3%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

West Central Workforce Investment Area (Lawrence, Mercer Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	730	710	700	700	700	700	710	710
Unemployed Seeking Employment in Health Care in PA (B)	70	60	60	60	60	60	60	60
New Entries (C)	30	30	40	40	40	40	40	40
Replacements (D) 1.79% to 4.44%	50	40	40	40	40	40	40	40
NET SUPPLY* = A+B+C-D	780	760	760	760	760	760	770	770
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	730	730	730	730	730	730	730	730
Unfilled Vacancies at 4.9% (F)	50	50	50	50	50	50	50	50
Growth (G)	0	0	0	0	0	0	0	0
NET DEMAND* (ND) = E + F + G	770	780	780	780	780	780	780	780
SHORTAGE (NS – ND)	10	-20	-20	-20	-20	-20	-10	-10
PROJECTED SHORTAGE	1%	-3%	-3%	-3%	-3%	-3%	-1%	-1%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

Westmoreland and Fayette Workforce Investment Area (Westmoreland, Fayette Counties)

LICENSED PRACTICAL NURSE SUPPLY IN HEALTHCARE								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (A)	1,050	1,010	980	980	980	980	980	980
Unemployed Seeking Employment in Health Care in PA (B)	80	70	70	60	60	60	60	60
New Entries (C)	40	40	60	60	60	60	60	60
Replacements (D) 2.49% to 4.90%	80	70	60	60	60	60	60	60
NET SUPPLY* = A+B+C-D	1,090	1,060	1,050	1,040	1,040	1,040	1,050	1,050
LICENSED PRACTICAL NURSE DEMAND IN HEALTHCARE (Projected Employment)								
Variable	2003	2004	2005	2006	2007	2008	2009	2010
Employment In Health Care in PA (E)	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050
Unfilled Vacancies at 4.9% (F)	60	70	70	70	70	70	70	70
Growth (G)	0	0	0	0	0	0	0	0
NET DEMAND* (ND) = E + F + G	1,110	1,120	1,120	1,120	1,120	1,120	1,120	1,120
SHORTAGE (NS – ND)	-20	-60	-70	-80	-80	-80	-70	-70
PROJECTED SHORTAGE	-2%	-5%	-6%	-7%	-7%	-7%	-6%	-6%

*Totals may not add due to rounding

Same footnotes as Northwest Health District

The following chart shows ten quantitative measures that can be used to analyze the Workforce Investment Areas.

Workforce Investment Area	Shortage ^{1/}	Percent Shortage within Region ^{1/}	Percent of Statewide Shortage ^{1/}	Nurse Ave. Age	Nurses Over 50	Unemp. Rate	Per Capita Income	Percent Elderly	Pop. Growth	Pop. per Nurse
Berks	190	13%	5%	47.2	41.9%	5.4%	21,230	14.5%	4.8%	295
Bucks	230	16%	6%	48.7	46.5%	4.2%	27,430	12.8%	3.3%	508
Central	250	8%	6%	44.8	33.9%	5.2%	17,110	15.7%	0.4%	213
Chester	190	19%	5%	48.2	47.6%	3.3%	31,630	11.9%	7.4%	553
Delaware	190	17%	5%	49.2	53.9%	4.4%	25,040	14.9%	0.8%	580
Lackawanna	20	2%	0%	46.9	41.0%	5.2%	18,710	18.8%	-1.6%	185
Lancaster	520	20%	13%	45.6	40.9%	3.4%	20,400	14.2%	3.5%	234
Lehigh Valley	610	34%	15%	48.9	52.5%	4.7%	21,650	15.3%	5.2%	388
Luzerne and Schuylkill	40	2%	1%	45.8	39.3%	6.6%	17,730	19.1%	-1.8%	226
Montgomery	120	7%	3%	48.3	46.7%	3.8%	30,900	14.8%	3.2%	506
Northcentral	-100	-9%	-2%	47.6	39.7%	7.1%	16,530	17.6%	-2.1%	414
Northern Tier	110	17%	3%	47.8	45.0%	5.9%	16,600	16.8%	-0.3%	351
Northwest	60	3%	1%	45.5	36.9%	7.3%	16,420	16.9%	-0.9%	243
Philadelphia	20	1%	0%	48.9	48.2%	6.8%	16,510	13.5%	-3.1%	716
Pocono Counties	140	18%	3%	46.8	38.5%	5.9%	18,590	15.5%	9.9%	699
South Central	840	15%	20%	45.3	39.8%	4.1%	19,900	14.7%	3.7%	319
Southern Alleghenies	90	4%	2%	45.7	39.4%	7.0%	16,010	17.0%	-0.1%	240
Southwest Corner	70	7%	2%	47.7	45.7%	5.8%	17,770	16.9%	-0.5%	428
Three Rivers	430	15%	10%	49.5	54.0%	4.4%	22,490	17.3%	-2.4%	481
Tri-County	30	3%	1%	45.4	38.5%	6.1%	17,270	15.7%	0.6%	358
West Central	10	1%	0%	47.7	47.9%	5.7%	17,240	18.3%	-0.9%	283
Westmoreland and Fayette	70	6%	2%	47.4	47.4%	6.3%	17,470	18.1%	-1.2%	455
WIA Average	190	10%	5%	47.2	44%	5.4%	20,210	15.9%	1.3%	394

^{1/} In 2010.

PENNSYLVANIA COUNTY ANALYSIS

The sixty-seven Pennsylvania counties provide the most detailed measure of analysis.

The following chart shows ten quantitative measures that can be used to analyze the Counties.

County	Shortage	Percent Shortage within Region	Percent of Statewide Shortage	Nurse Average Age	Nurses Over 50	Unemp. Rate	Per Capita Income	Percent Elderly	Pop. Growth	Pop. per Nurse
Adams	60	14%	1%	45.9	38%	3.9%	18,580	13.8%	7.7%	264
Allegheny	460	16%	11%	49.5	54%	4.4%	22,490	17.3%	-2.4%	481
Armstrong	0	0%	0%	43.9	35%	7.1%	15,710	17.9%	-1.4%	406
Beaver	30	8%	1%	49.4	53%	5.5%	18,400	18.3%	-1.5%	498
Bedford	0	0%	0%	46.7	44%	7.4%	16,320	16.9%	0.5%	414
Berks	200	13%	5%	47.2	42%	5.4%	21,230	14.5%	4.8%	295
Blair	30	4%	1%	46.0	43%	5.4%	16,740	17.3%	-1.3%	175
Bradford	70	24%	2%	45.5	42%	5.3%	17,150	15.9%	-0.3%	261
Bucks	240	17%	6%	48.7	47%	4.2%	27,430	12.8%	3.3%	508
Butler	40	8%	1%	46.9	44%	4.6%	20,790	14.3%	3.8%	401
Cambria	60	8%	1%	47.2	45%	6.9%	16,060	19.3%	-2.7%	204
Cameron	0	0%	0%	52.0	33%	8.8%	15,970	19.6%	-5.4%	1283
Carbon	30	12%	1%	46.5	38%	7.1%	17,060	17.7%	4.1%	278
Centre	60	10%	1%	45.0	36%	3.0%	18,020	10.4%	3.5%	278
Chester	200	20%	5%	48.2	48%	3.3%	31,630	11.9%	7.4%	553
Clarion	-10	-4%	0%	42.1	22%	5.0%	15,240	15.5%	-1.5%	170
Clearfield	-60	-13%	-1%	45.1	34%	7.9%	16,010	17.1%	-0.6%	165
Clinton	20	13%	0%	47.0	41%	6.8%	15,750	16.8%	-1.1%	282
Columbia	30	10%	1%	45.4	37%	6.1%	16,970	16.1%	1.3%	238
Crawford	0	0%	0%	44.9	38%	6.9%	16,870	15.4%	-0.5%	277
Cumberland	180	20%	4%	45.7	38%	3.0%	23,610	15.0%	3.6%	303
Dauphin	180	20%	4%	47.2	47%	3.8%	22,130	14.2%	0.6%	348
Delaware	210	19%	5%	49.2	54%	4.4%	25,040	14.9%	0.8%	580
Elk	0	0%	0%	46.8	40%	7.5%	18,170	18.0%	-3.0%	284
Erie	70	10%	2%	47.3	43%	6.3%	17,930	14.2%	0.5%	427
Fayette	-10	-3%	0%	45.7	41%	7.4%	15,270	17.9%	-2.0%	403
Forest	0	0%	0%	46.8	40%	14.2%	14,340	21.9%	1.0%	158
Franklin	110	16%	3%	44.4	35%	4.4%	19,340	16.6%	4.3%	225
Fulton	0	0%	0%	43.9	35%	6.4%	16,410	15.0%	2.7%	249
Greene	10	8%	0%	46.6	37%	6.3%	14,960	15.0%	-1.3%	351
Huntington	0	0%	0%	43.1	28%	8.9%	15,380	15.1%	0.9%	196
Indiana	-10	-3%	0%	45.3	37%	6.7%	15,310	15.0%	-0.6%	266
Jefferson	-30	-13%	-1%	45.5	39%	6.8%	16,190	17.8%	0.0%	181

County	Shortage	Percent Shortage within Region	Percent of Statewide Shortage	Nurse Average Age	Nurses Over 50	Unemp. Rate	Per Capita Income	Percent Elderly	Pop. Growth	Pop. per Nurse
Juniata	0	0%	0%	44.4	43%	5.3%	16,140	15.8%	2.5%	285
Lackawanna	30	3%	1%	46.9	41%	5.2%	18,710	18.8%	-1.6%	185
Lancaster	560	21%	14%	45.6	41%	3.4%	20,400	14.2%	3.5%	234
Lawrence	-30	-11%	-1%	47.7	50%	6.3%	16,840	18.8%	-1.3%	319
Lebanon	130	17%	3%	46.2	45%	3.4%	19,770	16.5%	3.5%	188
Lehigh	190	19%	5%	49.2	51%	4.7%	21,900	15.5%	4.5%	365
Luzerne	70	5%	2%	47.0	43%	5.9%	18,230	19.0%	-1.8%	224
Lycoming	50	9%	1%	46.8	44%	5.9%	17,220	16.2%	-1.3%	244
McKean	-10	-5%	0%	46.0	41%	5.9%	16,780	16.8%	-2.7%	198
Mercer	40	8%	1%	47.7	45%	5.1%	17,640	17.8%	-0.4%	246
Mifflin	10	3%	0%	44.1	31%	7.0%	15,550	17.7%	-0.6%	156
Monroe	80	25%	2%	47.2	41%	6.5%	20,010	11.8%	14.6%	630
Montgomery	130	8%	3%	48.3	47%	3.8%	30,900	14.8%	3.2%	506
Montour	40	12%	1%	44.7	30%	3.6%	19,300	17.3%	-0.9%	64
Northampton	130	17%	3%	48.6	54%	4.7%	21,400	15.1%	5.8%	412
Northumberland	30	6%	1%	44.5	31%	6.1%	16,490	18.7%	-1.8%	193
Perry	10	13%	0%	43.5	35%	4.3%	18,550	12.3%	2.4%	663
Philadelphia	20	1%	0%	48.9	48%	6.8%	16,510	13.5%	-3.1%	716
Pike	10	25%	0%	46.3	37%	4.4%	20,320	14.7%	16.9%	1453
Potter	0	0%	0%	50.1	52%	5.4%	16,070	16.5%	-0.7%	373
Schuylkill	-20	-3%	0%	44.6	36%	7.2%	17,230	19.2%	-1.8%	227
Snyder	20	13%	0%	43.1	31%	4.1%	16,760	14.2%	1.5%	278
Somerset	0	0%	0%	47.4	41%	6.7%	15,180	18.2%	-0.6%	199
Sullivan	10	20%	0%	47.6	50%	6.3%	16,440	22.0%	-2.2%	172
Susquehanna	20	22%	0%	51.4	53%	6.5%	16,440	15.6%	-0.5%	546
Tioga	0	0%	0%	45.8	28%	6.1%	15,550	16.4%	1.2%	369
Union	20	8%	0%	42.5	25%	3.8%	17,920	13.5%	2.6%	183
Venango	-20	-7%	0%	44.6	35%	5.8%	16,250	17.0%	-2.2%	194
Warren	20	10%	0%	47.3	43%	5.8%	17,860	17.2%	-2.9%	233
Washington	40	8%	1%	47.1	47%	5.5%	19,940	17.3%	1.4%	435
Wayne	30	23%	1%	47.0	38%	5.5%	16,980	17.8%	3.9%	435
Westmoreland	80	11%	2%	49.0	54%	5.2%	19,670	18.2%	-0.4%	507
Wyoming	20	25%	0%	48.8	51%	5.3%	17,450	13.9%	0.3%	408
York	230	13%	6%	45.4	38%	4.5%	21,090	13.6%	5.2%	273
County Average	60	8%	1%	46.5	41%	5.7%	18,390	16.2%	1.1%	351

CONCLUSION

One of the significant findings from the model is that the main source of the growing shortage is the inadequate number of new entries coming into the workforce to keep up with the increasing number of LPNs leaving the workforce (replacements). Furthermore, this shortage is compounded by constant industry growth and consistent employer vacancies.

Based on the above, a LPN shortage is forecast for most Pennsylvania Health Districts, Workforce Investment Areas, and Counties, totaling 4,100 statewide by 2010.

A critical component that will exacerbate this shortage is the demographic make-up of the nursing and general population in Pennsylvania. Both are aging and compose a significant proportion of their respective populations. An aging workforce requires more graduates to replace retiring workers. An aging population requires more health care. Collectively these forces will worsen the nursing shortage as the leading edge of the baby boom generation reaches retirement age in 2011.

Predicting nursing workforce imbalances across Pennsylvania's regions requires examination of global and other profession-specific factors such as future changes in licensure requirement. Consideration must also be placed on the impact of future market, legislative and regulatory factors that affect health care professions. Such marketplace issues could cause a major impact on the imbalance figures for nurses and as such, the calculated data would need to be adjusted periodically to maintain a dynamic projection model.

APPENDIX A: METHODOLOGY FOR SUPPLY/DEMAND MODEL

METHODOLOGY

(Tables referred to in the calculations below are from the SHIP Report March2005, refer to Appendix B)

Supply

Employed = (County Employed in Healthcare from Table 1 / Total Employed in Healthcare from Table 1) X 2003 Statewide Employed in Healthcare. Individual county employments are additivity adjusted to the Statewide Employed in Healthcare total. Counties are added together for each PA Health District or WIA.

Next year's Employed = Previous year Employment + New Entries – Replacements

Unemployed = (County Unemployed Seeking Health Care Employment from Table 2 / Total Unemployed Seeking Healthcare Employment from Table 2) X 2003 Statewide Unemployed Seeking Healthcare Employment. Individual county unemployments are additivity adjusted to The Statewide Unemployed Seeking Health Care Employment total. Counties are added together for each PA Health District or WIA.

New Entries = (County Employed in Healthcare from Table 1 / Total Employed in Healthcare from Table 1) X 2003 Statewide New Entries. Individual county new entries are additivity adjusted to the Statewide New Entries total. Counties are added together for each PA Health District or WIA.

Replacements Calculations are based on County Supply Employment multiplied by the Replacement Rate (RR).

The Licensure Renewal Survey results (Table 3) reported nurses intent to leave within the next five years nurses and intent to leave within the next ten years by county. Since the responding nurses expressed their intent to leave the profession over a period of time, a gradual increase from the current replacement rate (0-5 years) to the projected replacement rate (6-10 years) in 2010 is assumed. A beginning rate and an annual increase is calculated for each county. Counties are summed to WIAs. The beginning rate is then validated by the net annual replacement projections rate by WIA published by CWIA. Individual county replacements are additivity adjusted to the Statewide Replacement total to account for those nurses in career development programs. Counties are added together for each PA Health District or WIA.

Demand

Employed = (County Employed in Healthcare from Table 1 / Total Employed in Healthcare from Table 1) X 2003 Statewide Employed in Healthcare. Individual county employments are additivity adjusted to the Statewide Employed in Healthcare total. Counties are added together for each PA Health District or WIA.

Next year's Employed = Previous year Employment + Growth

Unfilled = (County Employed in Healthcare from Table 1 / Total Employed in Healthcare from Table 1) X 2003 Statewide Unfilled. Individual county unfilled are additivity adjusted to the Statewide Unfilled total. Counties are added together for each PA Health District or WIA.

Growth

Average annual growth by WIA was obtained from the Center for Workforce Information and Analysis' Occupational Employment Projections 2010. Individual WIAs percentage growths from the 2010 projections were applied to the 2012 statewide growth forecast (300). Individual county growths are broken out of WIA growth by employment and then additivity adjusted to the Statewide Growth total. Counties are added together for each PA Health District or WIA.

APPENDIX B: SOURCE DATA

The following information in tables 1-3 are from the PA Department of Health's Nurse License Renewal Survey (State Health Improvement Plan: Special Report on the Characteristics of the Licensed Practical Nurse Population in Pennsylvania, Volume 2, March 2005):

Table 1: Employed in Health Care in Pennsylvania 2004

County*	Employed in Healthcare		County*	Employed in Healthcare
Adams	225		Lackawanna	698
Allegheny	1,613		Lancaster	1,264
Armstrong	100		Lawrence	155
Beaver	208		Lebanon	401
Bedford	73		Lehigh	554
Berks	806		Luzerne	837
Blair	447		Lycoming	296
Bradford	152		McKean	139
Bucks	727		Mercer	300
Butler	275		Mifflin	178
Cambria	443		Monroe	151
Cameron	3		Montgomery	934
Carbon	121		Montour	176
Centre	313		Northampton	421
Chester	513		Northumberland	289
Clarion	144		Perry	40
Clearfield	301		Philadelphia	1,249
Clinton	82		Pike	19
Columbia	164		Potter	31
Crawford	195		Schuylkill	380
Cumberland	453		Snyder	82
Dauphin	456		Somerset	234
Delaware	581		Sullivan	24
Elk	75		Susquehanna	49
Erie	401		Tioga	67
Fayette	209		Union	140
Forest	20		Venango	171
Franklin	360		Warren	114
Fulton	37		Washington	284
Greene	67		Wayne	63
Huntingdon	140		Westmoreland	445
Indiana	197		Wyoming	41
Jefferson	153		York	882
Juniata	47		Total	21,209

*County of Employment

Table 2: Unemployment Status of LPNs Residing in Pennsylvania 2004

County*	Unemployed Seeking Health Care Employment		County*	Unemployed Seeking Health Care Employment
Adams	5		Lackawanna	21
Allegheny	86		Lancaster	47
Armstrong	13		Lawrence	30
Beaver	23		Lebanon	17
Bedford	4		Lehigh	13
Berks	25		Luzerne	53
Blair	16		Lycoming	11
Bradford	4		McKean	6
Bucks	47		Mercer	16
Butler	13		Mifflin	8
Cambria	30		Monroe	6
Cameron	1		Montgomery	35
Carbon	14		Montour	4
Centre	6		Northampton	13
Chester	17		Northumberland	16
Clarion	8		Perry	3
Clearfield	16		Philadelphia	82
Clinton	2		Pike	4
Columbia	9		Potter	0
Crawford	7		Schuylkill	32
Cumberland	14		Snyder	4
Dauphin	8		Somerset	22
Delaware	32		Sullivan	0
Elk	2		Susquehanna	1
Erie	26		Tioga	3
Fayette	24		Union	7
Forest	0		Venango	11
Franklin	16		Warren	2
Fulton	0		Washington	17
Greene	7		Wayne	10
Huntingdon	9		Westmoreland	28
Indiana	15		Wyoming	4
Jefferson	7		York	36
Juniata	3		Total	1,071

*County of Unemployment

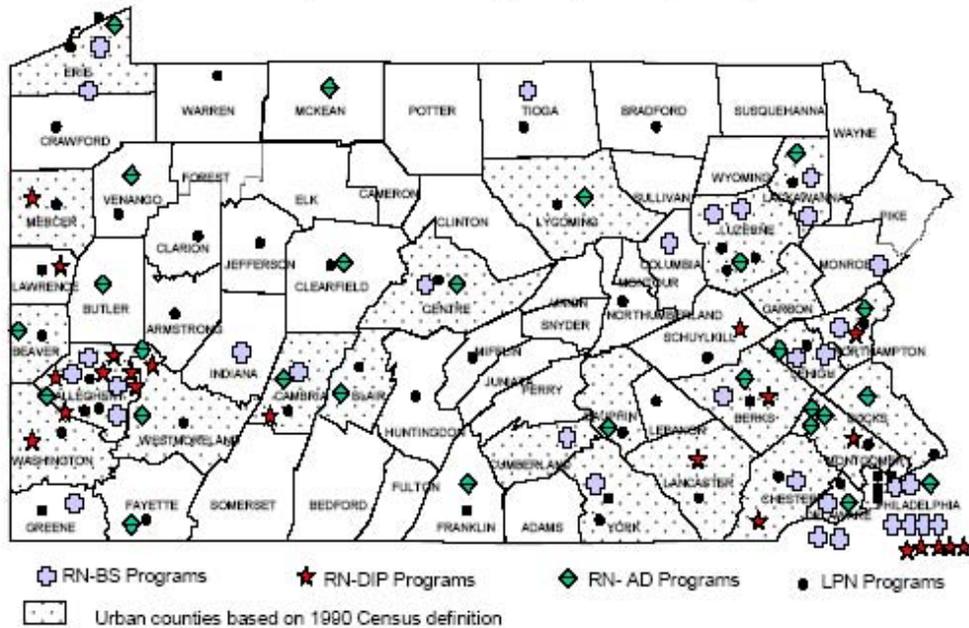
Table 3: Years LPNs Employed in Health Care in Pennsylvania Plan to Remain in Nursing 2004

County*	0-5 Years		6-10 Years		Total	County*	0-5 Years		6-10 Years		Total
	Number	Percent	Number	Percent			Number	Percent	Number	Percent	
Adams	34	15.6%	54	24.8%	218	Lackawanna	114	16.7%	165	24.2%	683
Allegheny	394	24.7%	408	25.6%	1,594	Lancaster	216	17.4%	307	24.8%	1,238
Armstrong	19	19.2%	21	21.2%	99	Lawrence	20	12.7%	48	30.6%	157
Beaver	41	20.7%	64	32.3%	198	Lebanon	78	19.8%	92	23.4%	394
Bedford	13	1803%	9	12.7%	71	Lehigh	115	21.5%	161	30.0%	536
Berks	136	17.3%	222	28.2%	788	Luzerne	144	17.5%	206	25.0%	824
Blair	78	17.6%	106	23.9%	443	Lycoming	45	15.5%	67	23.0%	291
Bradford	38	24.8%	32	20.9%	153	McKean	24	17.9%	31	23.1%	134
Bucks	146	20.5%	191	26.8%	713	Mercer	72	24.2%	60	20.2%	297
Butler	56	21.5%	62	23.8%	261	Mifflin	20	11.6%	41	23.7%	173
Cambria	97	22.4%	104	24.0%	433	Monroe	29	20.0%	33	22.8%	145
Cameron	1	33.3%	1	33.3%	3	Montgomery	166	18.1%	211	23.0%	918
Carbon	11	9.2%	32	26.7%	120	Montour	29	16.9%	43	25.0%	172
Centre	53	17.1%	58	18.7%	310	Northampton	89	21.8%	115	28.1%	409
Chester	104	20.2%	144	28.0%	514	Northumberland	40	14.4%	66	23.8%	277
Clarion	16	11.2%	33	23.1%	143	Perry	8	21.1%	8	21.1%	38
Clearfield	40	13.3%	68	22.7%	300	Philadelphia	281	22.3%	327	26.0%	1,260
Clinton	13	16.3%	17	21.3%	80	Pike	3	17.6%	8	47.1%	17
Columbia	28	17.4%	33	20.5%	161	Potter	6	19.4%	10	32.3%	31
Crawford	20	10.4%	54	28.1%	192	Schuylkill	55	15.1%	67	18.4%	365
Cumberland	99	22.1%	101	22.6%	447	Snyder	12	14.6%	26	31.7%	82
Dauphin	85	19.1%	128	28.7%	446	Somerset	44	19.1%	46	20.0%	230
Delaware	117	20.5%	159	27.8%	571	Sullivan	5	20.8%	6	25.0%	24
Elk	14	19.4%	16	22.2%	72	Susquehanna	12	26.1%	12	26.1%	46
Erie	86	21.7%	97	24.4%	397	Tioga	6	9.2%	10	15.4%	65
Fayette	40	20.0%	38	19.0%	200	Union	22	16.5%	21	15.8%	133
Forest	4	20.0%	3	15.0%	20	Venango	18	10.7%	34	20.2%	168
Franklin	65	18.2%	83	23.2%	358	Warren	18	15.7%	31	27.0%	115
Fulton	6	16.7%	9	25.0%	36	Washington	52	18.9%	84	30.5%	275
Greene	14	21.9%	13	20.3%	64	Wayne	14	22.2%	18	28.6%	63
Huntingdon	24	17.5%	22	16.1%	137	Westmoreland	109	25.2%	107	24.7%	433
Indiana	28	14.2%	50	25.4%	197	Wyoming	10	25.6%	12	30.8%	39
Jefferson	23	15.1%	25	16.4%	152	York	143	16.7%	194	22.7%	856
Juniata	3	6.4%	14	29.8%	47	Total	3965	19.0%	5138	24.7%	20,826

*County of Employment

APPENDIX C: ADDITIONAL SOURCE DATA

Figure 1: Nursing Education Programs, Pennsylvania, 2003



Source: Pennsylvania Department of State, Bureau of Professional and Occupational Affairs, State Board of Nursing.

**Table 2
Number of Nursing Education Programs by Program Type,
Pennsylvania, 1995-2003**

Program Type	1995 ⁺	1996 ⁺	1997	1998	1999 ⁺	2000	2001	2002	2003 ^{**}
RN									
RN-BS	30	31	31	31	32	33	34	33	33
RN-DIP	30	30	28	26	25	24	24	23	22
RN-AD	24	23	23	22	22	22	22	22	22
Total	84	84	82	79	79	79	80	78	77
LPN									
Community College	7	7	7	7	7	7	9	8	10
Hospital-Based	2	2	2	2	2	3	3	2	3
Vo-Tech School	41	41	40	38	36	37	34	32	35
Total	50	50	49	47	45	47	46	42	48

⁺ Changes to previously published data in the April 2003 *Report on the Status of Nursing Education Programs in Pennsylvania* reflect updated data provided by the State Board of Nursing.

^{**} There were 22 RN-DIP programs in 2003. One program submitted two separate reports for two program sites. The data in this Report were based on 23 program reports submitted by 22 programs.

APPENDIX D: SUPPLY/DEMAND WORKING GROUP

Chair:

NAME	ORGANIZATION
Scott Sheely	Executive Director, Lancaster County Workforce Investment Board

Members:

Karen Feinstein	President, Jewish Healthcare Foundation
Joe Welsh	Executive Director, Life Sciences Career Alliance
Rosemarie Greco	Director, Governor’s Office of Healthcare Reform
Joe May	Bureau Director, PA Department of Health Bureau of Health Planning
Marina Matthew	Public Health Program Director, PA Department of Health Bureau of Health Planning
Laurette Keiser	PA State Board of Nursing
Michelle Memmi	Director of Health Market Research Hospital and Healthsystem Association of PA (HAP)
Gloria Donnelly	Dean, Drexel University, College of Nursing and Health Professions
Dr. David Smith	Professor, Temple University
Pat Barbarowicz	Vice President for Planning and Marketing, Summit Health
Christine Alichnie	President, Pennsylvania Higher Education Nursing Schools Association (PHENSA)

Staff:

Fred Dedrick	Executive Director, PA Workforce Investment Board
Mary Marshall	Director for Planning and Research, PA Workforce Investment Board
Ed Legge	Department of Labor and Industry Center for Workforce Information and Analysis
Tim McElhinny	Department of Labor and Industry Center for Workforce Information and Analysis
Sue Mukherjee	Department of Labor and Industry Center for Workforce Information and Analysis

**APPENDIX E: PENNSYLVANIA CENTER FOR HEALTH CAREERS
LEADERSHIP COUNCIL**

Chairs

Name	Title	Organization
Eileen Connelly	Executive Director	SEIU PA State Council
Kathleen Malloy, Ph.D	Vice President for Health Professions	Community College of Allegheny County
Gerald Miller	CEO	Crozer-Keystone Health System

Members

Name	Title	Organization
Edward C. Albee	Senior Vice President	Lancaster General
Michele Campbell	Executive Director	PA State Nurses Association
Jacqueline L. Cullen	Executive Director	PA Association of Vocational Administrators
Mark Davis	Policy Director	Paraprofessional Health Care Institute
Jacqueline Dunbar-Jacob	Dean	University of Pittsburgh School of Nursing
Bruce Edwards	Vice President	Heritage Valley Health System
Patricia A. Epple	Executive Director	PA Pharmacists Association
Karen Feinstein	President	Jewish Health Care Foundation
Rosemarie Greco	Director	PA Office of Health Care Reform
Kevin Hefty	Nursing Home Team Coordinator	District 1199P/SEIU
Michael Hershock	President and CEO	PHEAA Foundation
Vicki M. Hoak	Executive Director	PA HomeCare Association
Dr. Calvin Johnson	Secretary	PA Department of Health

Members, continued

Name	Title	Organization
Patty Knecht	Director of Practical Nursing	Center for Arts and Technology - Brandywine Campus
Bill Meenan	Vice President	Beverly Enterprises
Basil L. Merenda	Commissioner	PA Department of State, Bureau of Professional and Occupational Affairs
Paula Milone-Nuzzo	Director	Penn State School of Nursing
Henry Nicholas	Co-Chair	Philadelphia Hospital & Health Care Association Training and Upgrading Fund, District 1199C
Louise Reich	Senior Vice President	Pinnacle Health System
Alan G. Rosenbloom	President and CEO	PA Health Care Association
Carolyn Scanlan	President and CEO	The Hospital & Healthsystem Association of Pennsylvania
Scott Sheely	Executive Director	Lancaster Workforce Investment Board
Joseph Welsh	Executive Director	Life Sciences Career Alliance

Staff

Name	Title	Organization
Fred Dedrick	Executive Director	PA Workforce Investment Board
Mary Marshall	Director, Planning and Research	PA Workforce Investment Board



Pennsylvania

WORKFORCE INVESTMENT BOARD

Pennsylvania Center for Health Careers

901 North Seventh Street
Suite 103
Harrisburg, PA 17102

Telephone: 717-772-4966
Fax: 717-783-4660
www.paworkforce.state.pa.us