

North Carolina Trends in Nursing: 1987 - 2006

Employment Characteristics

June, 2007

The North Carolina Center for Nursing

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This report examines the employment characteristics of the RN and LPN workforce in North Carolina over the 20 year period 1987 through 2006. The tables and graphs are based on data collected from each licensed nurse as part of the biennial license renewal process and the analyses are restricted to only those nurses who reported being employed in nursing positions within the state of North Carolina.

The way in which the current RN workforce in North Carolina is distributed over various employment settings is very similar to the national profile of registered nurses. In 2004, 56.2% of the national RN workforce was employed in hospital in-patient settings, 6.3% in nursing homes, 10.7% in community or public health facilities and 11.5% in a variety of ambulatory care settings.¹ In North Carolina in the year 2004, 55.4% of RNs were employed in hospitals, 6.0 % in nursing homes, 10.6% in community or public health agencies² and 7.6% in medical offices, HMOs, and insurance companies. Nationally, about 2.6% of the RN workforce was employed in nursing education or some other type of health education program in 2004. In North Carolina that year 1.9% were employed in nursing or medical education. Less than 10% of North Carolina's RN workforce were employed in the remaining areas of private duty (0.3%), industrial or manufacturing settings (0.6%), student health settings (1.0%) and all 'other' employment settings (7.3%). These proportions in North Carolina have changed very little, if at all, between 2004 and 2006.

The proportion of the RN workforce employed by hospitals was at its highest in the late 1980s and early 1990s (see the chart on Page 4) when it averaged about 63% annually. Beginning in 1995, that proportion fell sharply and continued to decline until 2000 when hospitals began to employ a larger share of the RN labor force again - from 51.1% in 2000 to 55.4% in 2004. In the past 2 years it has fallen slightly to 54.7% in 2006. The sharp decline in the proportion of the RN workforce employed in hospitals in the mid 1990s coincided with the strong ascension of managed care practices in the state, and the anticipation of lower patient census counts. As a result hospitals cut back on their RN staff levels and many RNs moved into community-based care settings such as home health or medical practices.

The way in which RNs are distributed in different types of positions has also changed over time, and reflects to some extent the changes that have occurred in practice settings. The number and proportion of RNs in staff or general duty positions remained fairly stable at around 60% from the late 1980s into the middle 1990s. The proportion of RNs in staff positions dropped from 59.5% in 1994 to 53.3% in 1996 and stayed at that level until 1999, in spite of an increase in absolute numbers in that role. Both advanced practice roles and ‘other’ roles were increasing during that time. (See Page 5 for the numbers.) Nurses in advanced practice include Nurse Practitioners (NPs), Nurse Midwives, Clinical Nurse Specialists (CNSs) and Certified RN Anesthetists (CRNAs). As a group, they made up 5% of the RN workforce in 1987 and grew in absolute numbers throughout the 1990s, but shrank as a proportion of the overall workforce (4.5% in 1993; 4.3% in 1997). Since that low point in 1997, advanced practice nurses have grown steadily to 6.1% of the total RN workforce in 2006. Of all advanced practice RNs in the workforce in 2006, NPs account for the largest segment (44.3%, n=2199), followed closely by CRNAs (32.5%, n=1612). CNSs make up 19.9% of this group (n=990), and Nurse Midwives account for 3.3% (n=165).

The number and proportion of RNs in administrative positions has changed very little over the past two decades, accounting for 3% of the total RN workforce in 1987 and 2.3% in 2006. RNs in supervisor or head nurse positions have increased in number over the years, but have declined as a proportion of the workforce – from 17.1% in 1987 to 11.6% in 2006. The largest area of growth in the RN workforce has been in ‘other’ types of positions, which speaks to the broadening of the workforce into new areas of practice and new roles.

Many people associate the nursing shortage of the late 1980s with the rapid increase in demand from hospitals for staff nurses. The analysis on Page 6 shows that while the great majority of staff nurses have always been and continue to be employed in hospitals, a growing proportion are now found in nursing homes, medical offices and community agencies. These trends reflect the changes in health care that have shifted a portion of patient care, and staff nurse employment with it, out of hospitals and into community settings. The sharp dip in the number of hospital staff RNs in the middle 1990s coincides with the managed care era in our state.

Over the past two decades, LPNs in North Carolina have experienced major changes in the location of employment opportunities. In 1987, 46.9% of the LPNs in North Carolina worked in hospitals and 20.8% in nursing homes. In 2006 those proportions were 14.4% in hospitals and 36.8% in nursing homes. LPNs have also found other employment settings as hospital employment has declined. The proportion of the LPN workforce found in medical offices has risen slightly from 13.7% in 1985 to 16% in 2006 (see Page 7). The largest growth area has been in community agencies such as health departments, mental health facilities,

hospice and home care where the numbers have almost quadrupled from 2.4% of the total LPN workforce in 1987 to 9.5% in 2006. The shift in employment settings for LPNs is also reflected in the clinical practice areas they report (see Page 9). In 2006, 34% of employed LPNs reported their practice area as geriatrics or gerontology.

The increasing specialization which has occurred in nursing, as in all other health professions over the past 20 years, is reflected in the steady decline since 1987 in the proportion of RNs (43% in that year) who report medical /surgical nursing as their primary clinical practice area. By October, 2006, med/surg practice still comprised the single largest clinical identity, but now it accounts for only 10.5% of the RN workforce, followed by critical care (7.1%), pre- and post-operative nursing (6.3%), obstetrics/gynecology (6.1%), geriatrics (5.7%), community care (e.g. public health and home health/hospice) 5.4%, and emergency care (5.0%). The remaining categories each account for less than 5% of the total RN workforce. The data table on Page 8 shows how the RN workforce has been distributed over various clinical practice areas since 1987. Readers should be aware that the table presents response categories that were in use on the RN license renewal forms prior to 1999 for the sake of comparability over time. A more expansive list of categories went into use in 1999 and is used in the chart at the top of Page 8 which profiles the 2006 RN workforce. Clinical practice area information was not collected at all for LPNs before 1999, therefore only five years of trend data are available for LPNs (see Page 9). The chart on that page profiles the more detailed clinical practice areas of the 2006 LPN workforce.

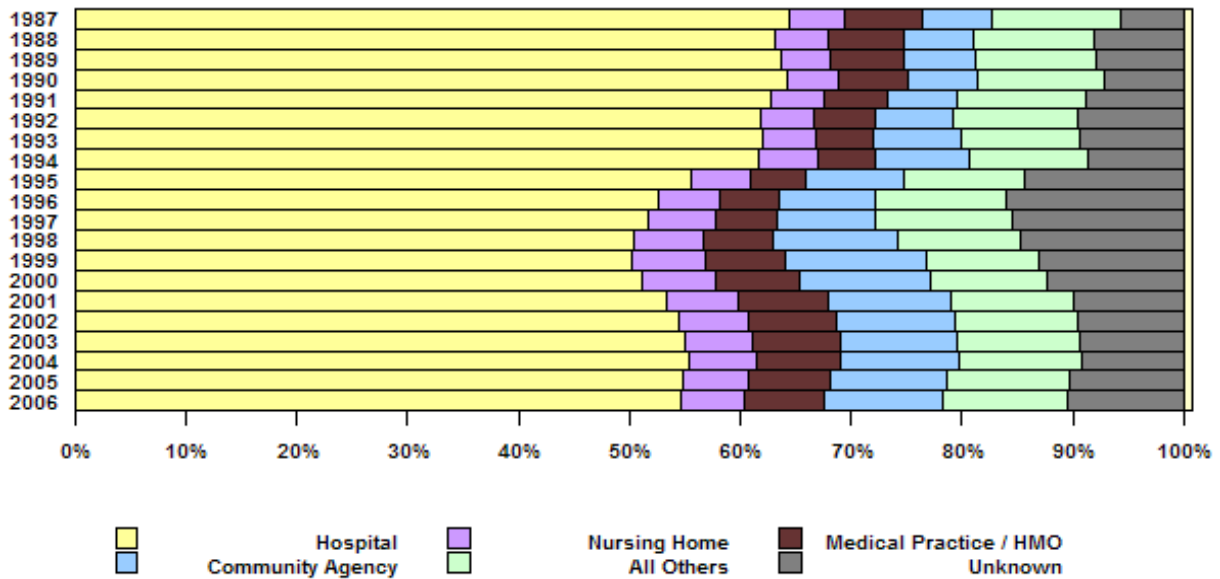
Endnotes

¹ The Registered Nurse Population: Findings from the March 2004 National Sample Survey of Registered Nurses. June, 2006. Bureau of Health Professions, Health Resources and Services Administration, U.S. Department of Health and Human Services.

² Note that the definition of the 'community agency' category as it relates to employment setting has changed over time. Prior to 1997, the NC license renewal form contained the phrase 'Community Based Agency' as one option for nurses to describe their employment setting. The other category options were: hospital, nursing home, school of nursing, private duty, school, industry, physician/dentist office, or other. Beginning in 1997, the employment setting categories were expanded to improve our understanding of the nursing workforce. The new categories split hospital into two categories: in-patient and out-patient. The community based agency category was dropped in favor of three new categories: public clinic/health department; mental health facility; and home care/hospice which were thought to capture most of what had been previously reported as community based agencies. The other categories used in the new format include: long term care; solo or group medical practice; HMO or insurance company; student health site; industry/manufacturing site; private duty; school of Nursing or Medicine; and other.

The data tables in this report that contain information about the distribution of nurses over various employment settings in multiple years combine the hospital in-patient and hospital out-patient choices under the single category of Hospital. The counts for HMO/ insurance company and solo or group medical practice are combined under the heading Medical Office/HMO, and the heading Community Agencies contain the counts from the categories home care/hospice; public clinic/health department; and mental health facility. These definitional changes affect the numbers reported for the years 1998 and later.

Distribution of the RN Workforce Across Employment Settings in North Carolina

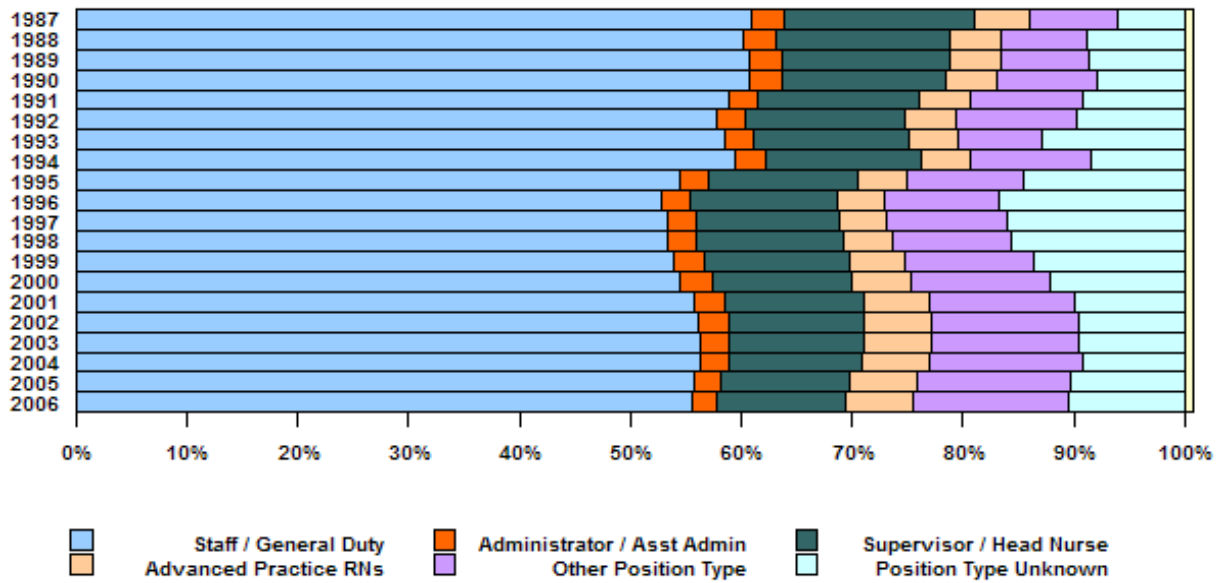


Year	Hospital	Nursing Home	Medical Practice / HMO	Community Agency	All Others	Setting Unknown	Total RN Workforce
1987	24,992	1,982	2,690	2,488	4,503	2,183	38,838
1988	26,345	2,019	2,821	2,650	4,513	3,366	41,714
1989	28,005	2,023	2,907	2,809	4,805	3,470	44,019
1990	29,483	2,110	2,868	2,874	5,255	3,318	45,908
1991	30,567	2,281	2,810	3,007	5,684	4,293	48,642
1992	31,816	2,463	2,774	3,611	5,774	4,922	51,360
1993	34,162	2,695	2,841	4,392	5,861	5,147	55,098
1994	35,314	3,099	2,913	4,916	6,116	4,923	57,281
1995	33,616	3,285	3,022	5,263	6,652	8,664	60,502
1996	33,120	3,498	3,333	5,523	7,403	10,107	62,984
1997	34,190	3,941	3,740	5,803	8,119	10,241	66,034
1998	34,378	4,289	4,268	7,630	7,637	9,964	68,166
1999	35,293	4,669	5,004	8,913	7,182	9,157	70,218
2000	36,777	4,825	5,388	8,494	7,634	8,784	71,902
2001	38,461	4,770	5,752	8,049	8,027	7,125	72,184
2002	41,089	4,837	5,913	8,078	8,383	7,200	75,500
2003	41,943	4,717	5,974	8,055	8,416	7,197	76,302
2004	43,244	4,721	5,957	8,263	8,663	7,158	78,006
2005	43,897	4,632	5,924	8,381	8,871	8,269	79,974
2006	44,462	4,566	5,923	8,665	9,140	8,552	81,308

Note: "Community Agency" includes home care, public health, and mental health agencies. The "All Others" category includes schools of nursing, private duty, student health sites, industry and manufacturing, self-employment (for years 1987 – 1992).

Data source: RN license renewal data collected by the NC Board of Nursing.

Distribution of the RN Workforce Across Position Types in North Carolina

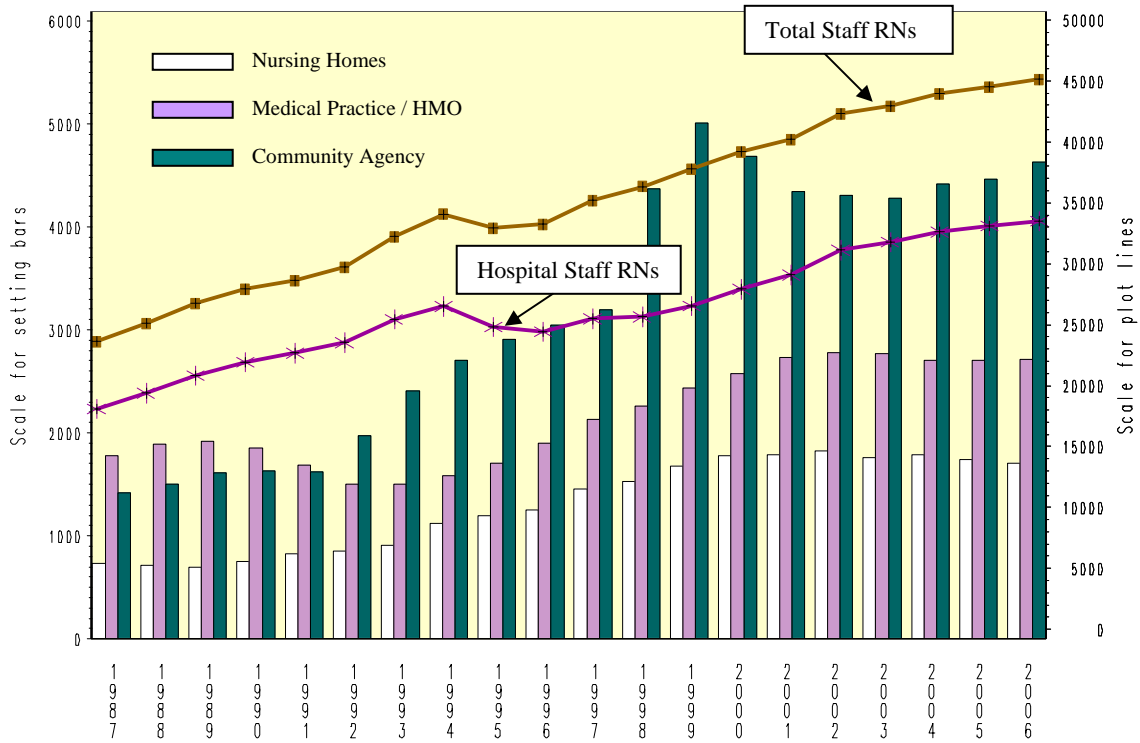


Year	Staff or General Duty RNs	Administrators or Assistant Administrators	Supervisors / Head Nurses	Advanced Practice RNs	Other Position Types	Position Type Unknown	Total RN Workforce
1987	23,653	1,158	6,638	1,959	3,058	2,372	38,838
1988	25,136	1,183	6,541	1,965	3,250	3,639	41,714
1989	26,780	1,259	6,694	1,986	3,524	3,776	44,019
1990	27,905	1,300	6,831	2,091	4,161	3,620	45,908
1991	28,624	1,321	7,091	2,239	4,918	4,449	48,642
1992	29,721	1,321	7,375	2,331	5,634	4,978	51,360
1993	32,227	1,421	7,798	2,447	4,132	7,073	55,098
1994	34,072	1,548	8,055	2,574	6,189	4,843	57,281
1995	32,933	1,578	8,201	2,634	6,344	8,812	60,502
1996	33,249	1,632	8,345	2,657	6,597	10,504	62,984
1997	35,211	1,724	8,517	2,850	7,137	10,595	66,034
1998	36,349	1,853	8,941	3,124	7,292	10,607	68,166
1999	37,801	2,053	9,179	3,471	8,158	9,556	70,218
2000	39,215	2,088	9,074	3,745	9,084	8,696	71,902
2001	40,239	2,079	9,001	4,198	9,528	7,139	72,184
2002	42,330	2,079	9,278	4,519	10,077	7,217	75,500
2003	42,926	2,086	9,230	4,631	10,216	7,213	76,302
2004	43,965	2,038	9,358	4,762	10,723	7,160	78,006
2005	44,536	1,927	9,383	4,804	11,055	8,269	79,974
2006	45,139	1,881	9,393	4,966	11,377	8,552	81,308

Note: The APRN category includes Nurse Practitioners, Nurse Midwives, Clinical Nurse Specialists and Certified RN Anesthetists. The 'other' category includes instructors (both academic and non-academic), consultants, and those who chose the 'other' category.

Data source: RN license renewal data collected by the NC Board of Nursing

Distribution of Staff RNs Across Employment Settings in North Carolina

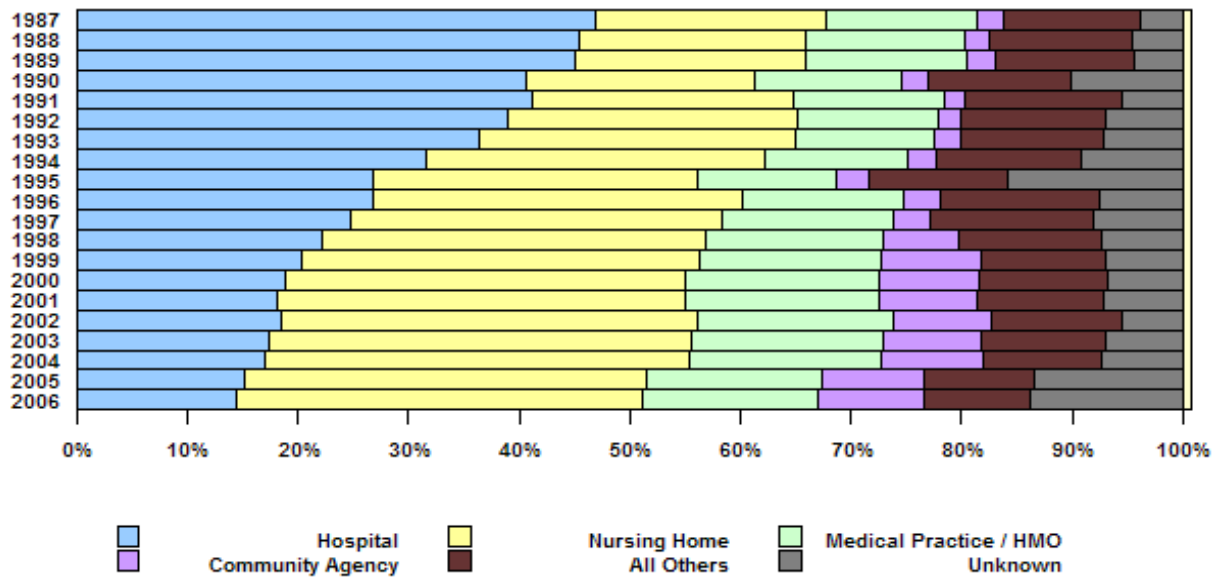


Year	Hospital	Nursing Home	Medical Practice / HMO	Community Agency	All Others	Total Staff RNs
1987	18,085	737	1,775	1,415	1,641	23,653
1988	19,405	714	1,886	1,505	1,626	25,136
1989	20,823	695	1,921	1,615	1,726	26,780
1990	21,929	749	1,849	1,626	1,752	27,905
1991	22,678	821	1,684	1,619	1,822	28,624
1992	23,537	857	1,499	1,969	1,859	29,721
1993	25,465	904	1,497	2,406	1,955	32,227
1994	26,514	1,121	1,587	2,702	2,148	34,072
1995	24,836	1,191	1,702	2,907	2,297	32,933
1996	24,457	1,250	1,903	3,043	2,596	33,249
1997	25,512	1,453	2,128	3,195	2,923	35,211
1998	25,635	1,529	2,259	4,370	2,556	36,349
1999	26,534	1,681	2,440	5,004	2,142	37,801
2000	27,936	1,780	2,570	4,683	2,246	39,215
2001	29,106	1,790	2,735	4,342	2,266	40,239
2002	31,114	1,823	2,780	4,304	2,309	42,330
2003	31,800	1,759	2,768	4,273	2,326	42,926
2004	32,623	1,787	2,707	4,412	2,436	43,965
2005	33,117	1,738	2,700	4,461	2,520	44,536
2006	33,520	1,702	2,711	4,630	2,576	45,139

Note: "Community Agency" includes home care, public health and mental health agencies. The "All Others" category includes schools of nursing, private duty, student health sites, industry and manufacturing, self-employment (for years 1987-1992) and staff RNs for whom employment setting is unknown.

Data source: RN license renewal data collected by the NC Board of Nursing.

Distribution of the LPN Workforce Across Employment Settings in North Carolina



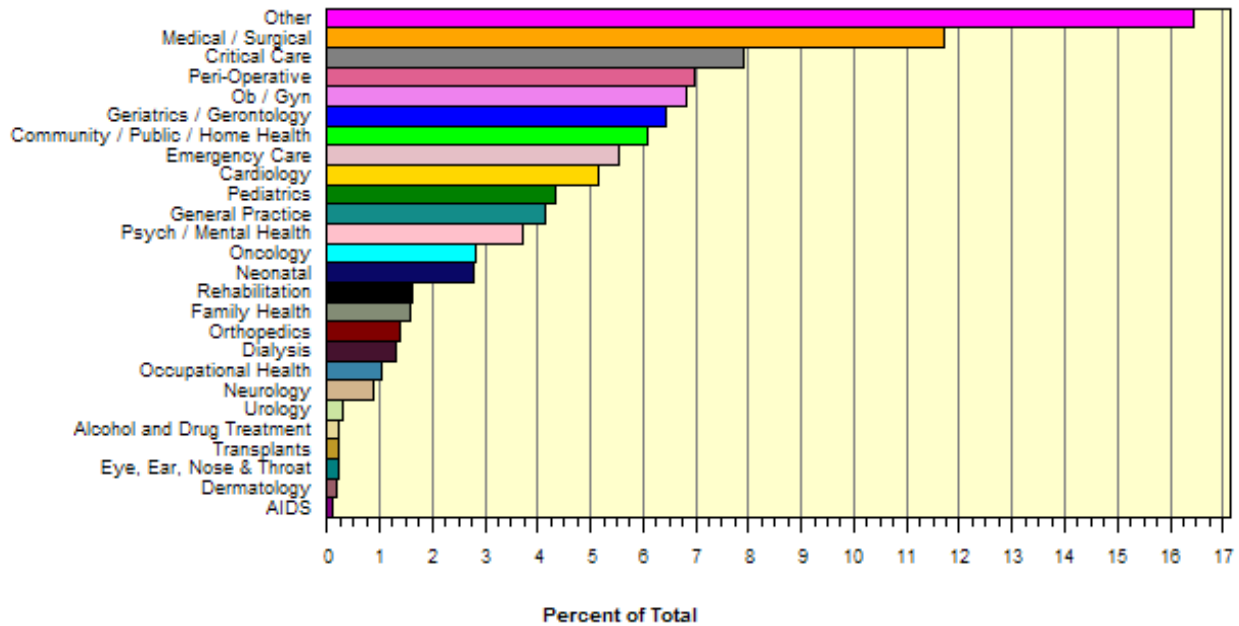
Year	Hospital	Nursing Home	Medical Practice / HMO	Community Agencies	All Others	Setting Unknown	Total LPN Workforce
1987	6,177	2,737	1,803	315	1,639	501	13,172
1988	6,088	2,767	1,930	295	1,737	610	13,427
1989	6,262	2,893	2,009	359	1,741	613	13,877
1990	6,151	3,151	2,021	339	1,981	1,519	15,162
1991	6,079	3,466	2,011	265	2,101	813	14,735
1992	5,884	3,953	1,936	307	1,966	1,065	15,111
1993	5,698	4,479	1,963	370	2,040	1,106	15,656
1994	5,102	4,958	2,080	446	2,113	1,476	16,175
1995	4,428	4,874	2,080	488	2,074	2,617	16,561
1996	3,968	4,951	2,162	495	2,123	1,119	14,818
1997	3,779	5,139	2,386	509	2,264	1,226	15,303
1998	3,390	5,311	2,480	1,024	1,990	1,117	15,312
1999	3,142	5,536	2,542	1,388	1,745	1,060	15,413
2000	2,905	5,548	2,709	1,384	1,777	1,045	15,368
2001	2,827	5,722	2,740	1,379	1,771	1,115	15,554
2002	2,865	5,852	2,756	1,384	1,816	856	15,529
2003	2,728	5,943	2,723	1,376	1,740	1,100	15,610
2004	2,643	6,008	2,703	1,442	1,650	1,148	15,594
2005	2,499	5,977	2,641	1,513	1,637	2,208	16,475
2006	2,406	6,158	2,676	1,592	1,622	2,296	16,750

Note: "Community Agencies" includes home health, public health, and mental health in years 1998 and later. "All Others" includes private duty, industry, and schools. Any LPN holding a valid RN license in a given year has been removed from the analysis.

Data source: LPN license renewal data collected by the NC Board of Nursing.

Primary Clinical Practice Areas of the RN Workforce in North Carolina

2006 RN Workforce



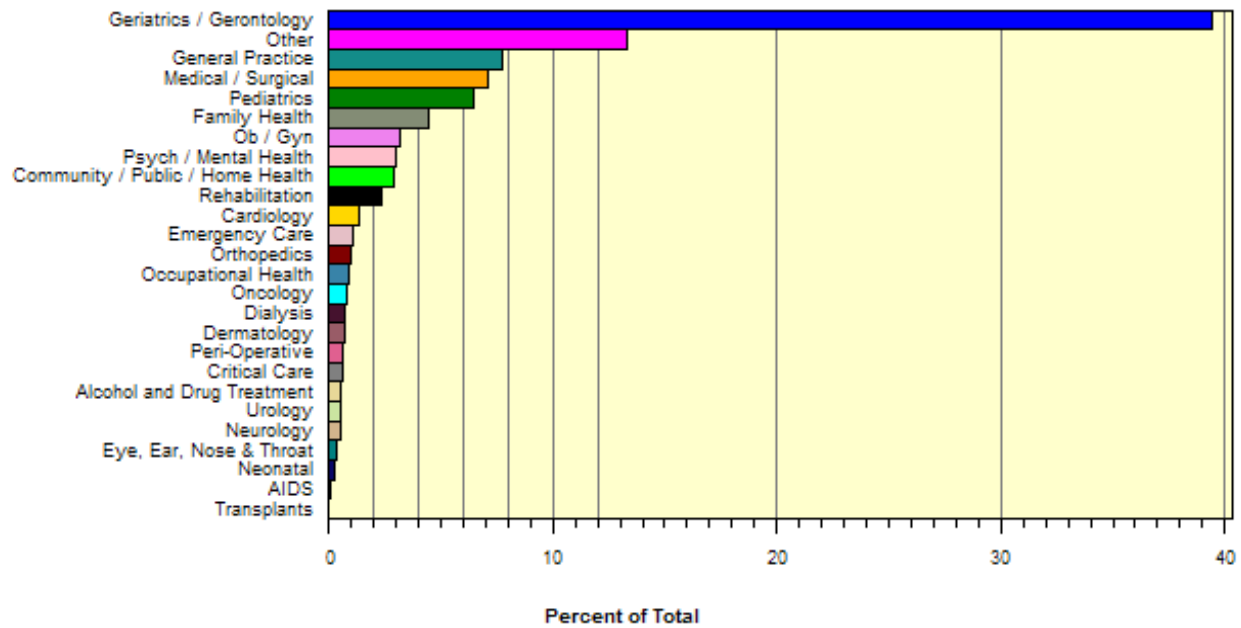
Year	Medical / Surgical	Ob / Gyn	Geriatrics / Gerontology	Community or Public or Home Health	Pediatrics	General Practice	Psych / Mental Health	Other Areas	Area Unknown
1987	16,715	2,940	2,264	2,883	2,437	5,088	2,176	1,826	2,509
1988	17,455	3,159	2,300	3,002	2,548	4,942	2,281	2,122	3,905
1989	17,913	3,367	2,357	3,204	2,670	4,869	2,471	3,057	4,111
1990	18,370	3,568	2,535	3,306	2,768	4,760	2,530	4,125	3,946
1991	16,316	3,750	2,775	3,333	2,566	3,772	2,547	8,472	5,111
1992	13,589	3,906	2,946	3,997	2,321	2,388	2,586	13,633	5,994
1993	14,538	4,118	3,190	4,921	2,298	2,190	2,690	14,931	6,222
1994	15,369	4,178	3,579	5,553	2,414	2,301	2,709	15,181	5,997
1995	13,729	4,059	3,680	6,090	2,519	2,573	2,639	14,960	10,253
1996	12,882	4,061	3,812	6,683	2,584	2,850	2,673	15,274	12,165
1997	13,282	4,173	4,292	7,229	2,678	3,102	2,772	16,284	12,222
1998	14,557	4,386	4,574	7,411	3,091	3,549	2,894	16,464	11,240
1999	11,131	4,484	4,924	5,817	2,930	3,226	2,831	25,116	9,759
2000	7,418	4,443	5,101	4,419	2,596	2,739	2,725	33,139	9,322
2001	7,521	4,585	4,954	4,280	2,742	2,795	2,739	34,823	7,745
2002	7,885	4,790	5,029	4,250	2,926	2,871	2,783	37,158	7,808
2003	8,023	4,933	4,920	4,187	3,018	2,788	2,765	37,955	7,713
2004	8,268	4,984	4,861	4,219	3,114	2,882	2,820	39,489	7,369
2005	8,417	4,955	4,711	4,285	3,176	2,965	2,793	40,395	8,277
2006	8,531	4,950	4,668	4,426	3,163	3,010	2,711	41,297	8,552

Note: Beginning with 1999 license renewals, the category list was expanded substantially. This change in the way the data was collected results in a substantial increase in the percentage of RNs assigned to the 'other' category in the table above. The full range of clinical area categories named by the 2006 RN workforce is presented in the graph.

Data source: RN license renewal data collected by the NC Board of Nursing.

Primary Clinical Practice Areas of the LPN Workforce in North Carolina

2006 LPN Workforce



Year	Geriatrics / Gerontology	General Practice	Medical / Surgical	Pediatrics	Ob / Gyn	Psych / Mental Health	Community or Public or Home Health	Other Areas	Area Unknown
2000	5,459	1,287	1,132	819	525	479	388	3,934	1,345
2001	5,486	1,286	1,090	871	531	474	413	3,974	1,429
2002	5,578	1,243	1,176	901	523	463	383	4,108	1,154
2003	5,647	1,143	1,128	910	494	453	385	4,081	1,369
2004	5,612	1,148	1,118	886	476	441	385	4,249	1,279
2005	5,587	1,115	1,056	910	463	426	375	4,329	2,214
2006	5,701	1,125	1,028	930	460	431	414	4,365	2,296

Note: 2000 was the first year that all licensed LPNs had an opportunity to report their clinical practice area.

Data source: Annual LPN license renewal data collected by the NC Board of Nursing. Any LPN holding a valid RN license has been removed from the analysis.