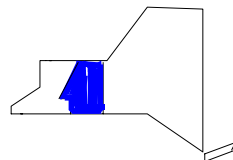


# HEALTHCARE WORKFORCE STUDY OF THE FINGER LAKES REGION



Finger Lakes Health Systems Agency  
1150 University Avenue  
Rochester, New York 14607  
February, 2006

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## Technical Notes:

- The survey responses of nursing homes and adult day health care (ADHC) programs were combined for analysis.
- The survey responses of public health departments, certified home health agencies (CHHAs) and long term home health care (LTHHC) programs were combined for analysis.
- The *healthcare workforce* analyzed for this study does NOT include administrators or executives, nor does it include individuals involved in janitorial, kitchen, or security work.
- *Specialty Diagnostic and Treatment Centers* (Specialty D & T) are centers that deal with a specific population (e.g. Cerebral Palsy Rochester or AIDS Rochester) or centers that provide special services (e.g. Planned Parenthood).
- *Selected Providers* include: Hospitals; Nursing Homes/ADHC; Public Health/CHHA/LTHHC; Specialty D & T; and Ambulatory Surgery Centers. The survey responses of these provider types were weighted to establish estimates of the total workforce by provider group.
- The vacancy and turnover rates for the FLSHA region are determined using the *selected providers*.
- *Technicians vs. Technologists*: Technicians are defined as specialists with an education suited to jobs that require specific expert knowledge in their field. Their education includes a one to two year program stressing practical skill building. On the other hand, technologists have a more advanced, four year degree in their field, which provides them with advanced knowledge in areas such as data interpretation, problem solving and project management.
- In some instances, health systems included both hospitals and nursing homes in their survey responses. When these numbers could not be separated, they were included with the totals for the Hospital provider type.

Figure 1.

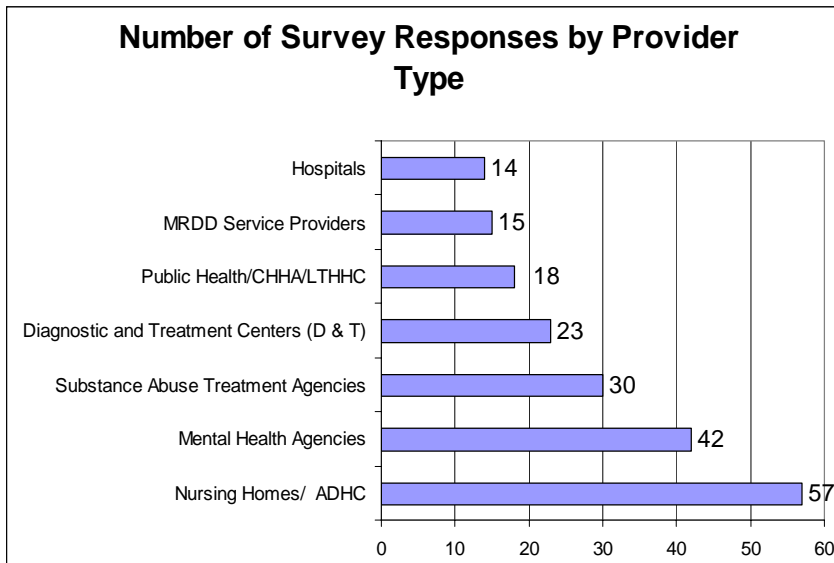
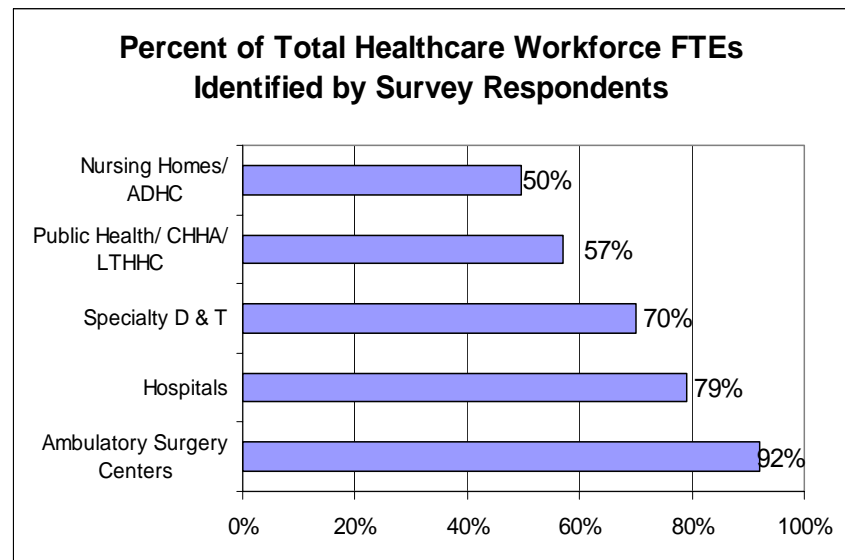


Figure 2.



In 2005, the Finger Lakes Health System Agency (FLSHA) conducted a personnel survey to determine the supply of the healthcare workforce in the FLHSA region. <sup>1</sup>

The survey response rate varied both by provider type and by geographic location. Responses from Nursing Homes/ADHC, Public Health/CHHA/LTHHC, Specialty D & Ts, Hospitals, and Ambulatory Surgery Centers were weighted to establish estimates of the regional workforce for each of these provider groups. The following provider-based and sub-area data sets include these provider types alone, which are referred to as *selected providers*.

Responses from MRDD providers, Mental Health/Substance Abuse Agencies, and Diagnostic and Treatment Centers were NOT adjusted in this manner. Therefore, all data from these provider types is BASED ON INFORMATION FROM SURVEY RESPONDENTS ALONE, and can NOT be used to establish region-wide trends.

<sup>1</sup>The FLHSA region includes: Chemung, Livingston, Monroe, Ontario, Schuyler, Seneca, Steuben, Wayne and Yates Counties.

Figure 3.

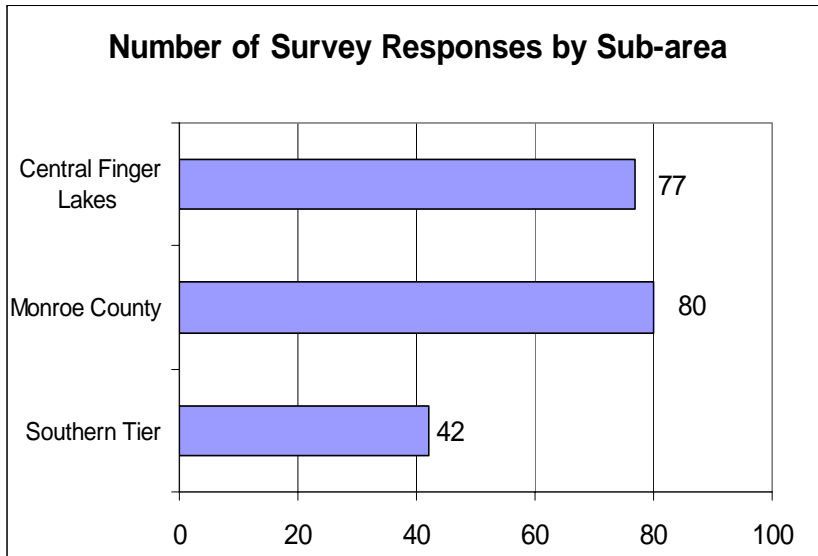
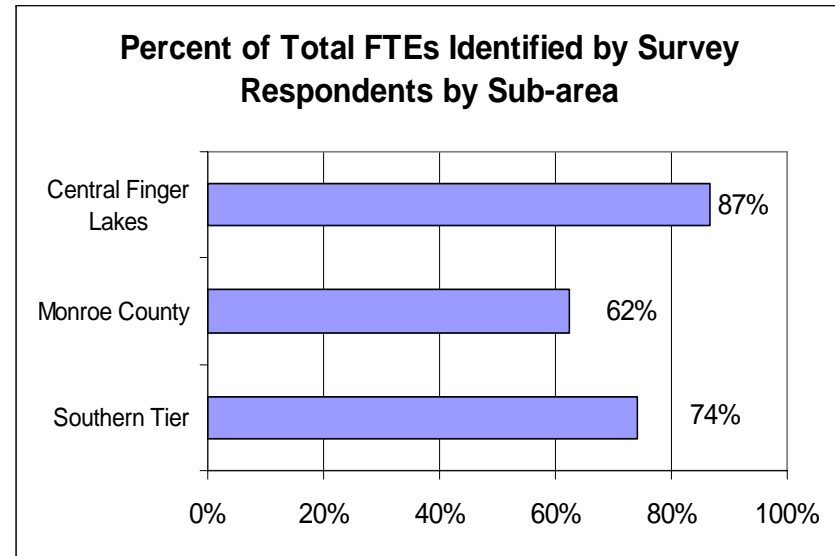


Figure 4.

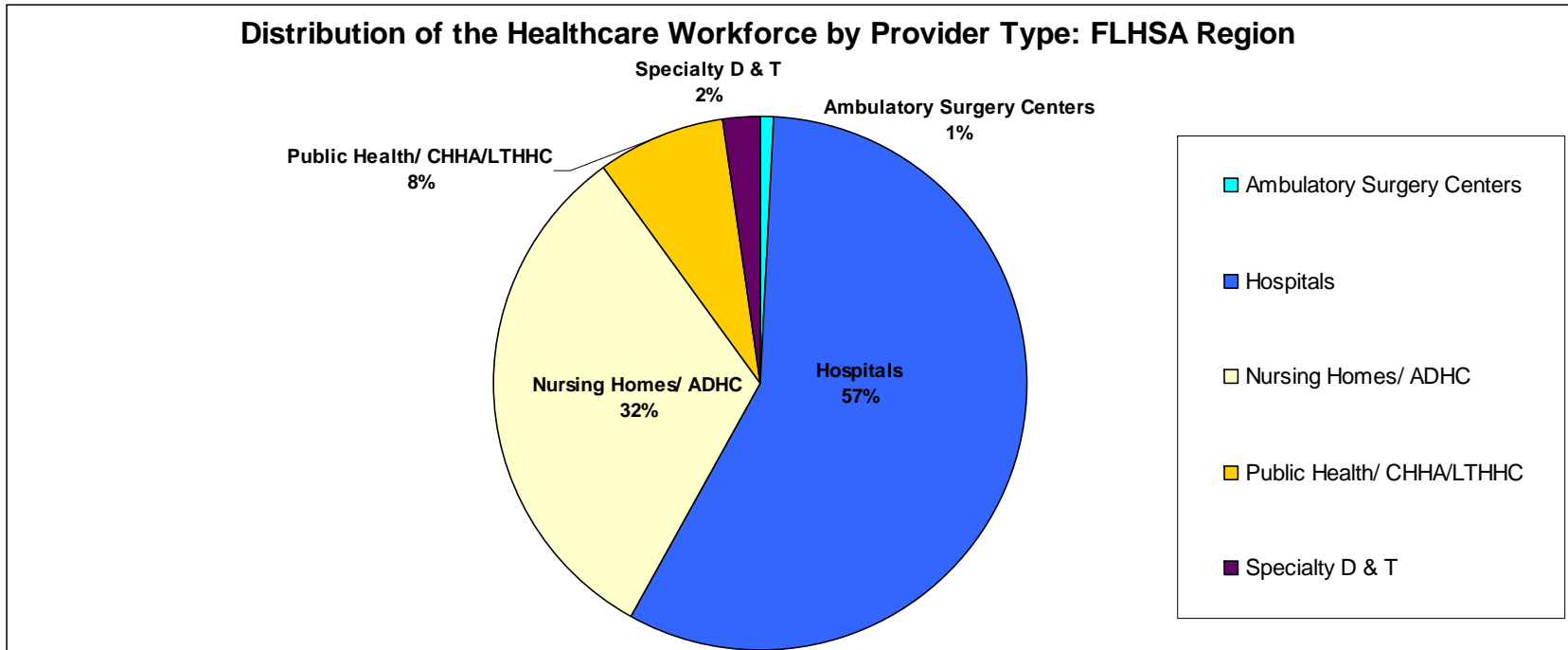


The FLHSA region has been divided into three sub-areas for analysis:

- **Monroe County:** This sub-area includes the city of Rochester and surrounding suburbs. Monroe County has a total population of 735,343 individuals, accounting for 58% of the FLHSA regional population.
- **Central Finger Lakes** includes: Livingston, Ontario, Seneca, Wayne and Yates Counties. It has a total population of 316,280 individuals, accounting for 25% of the FLHSA regional population.
- **Southern Tier** includes: Chemung, Schuyler and Steuben Counties. It has a total population of 209,020 individuals, accounting for 17% of the FLHSA regional population.

While the greatest number of survey responses came from Monroe County, the Central Finger Lakes identified the largest percentage of their healthcare workforce through survey responses.

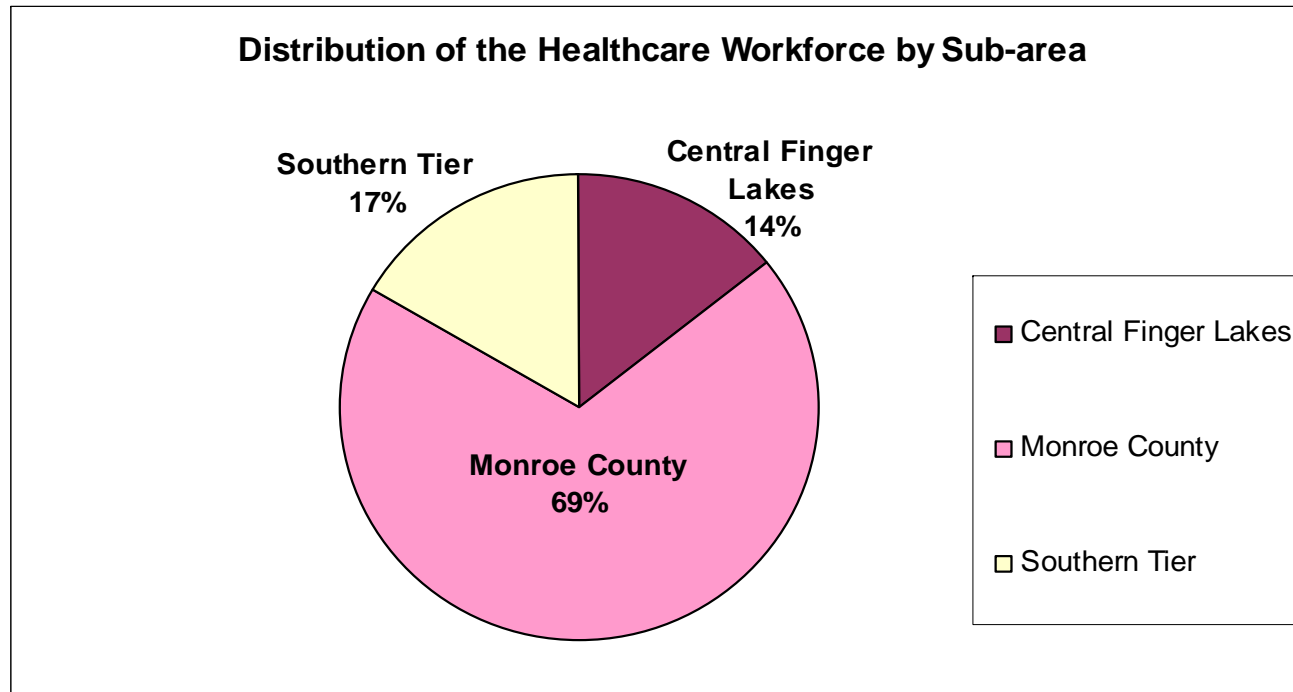
Figure 5.



In the FLHSA region, hospitals employ an estimated 18,314 individuals, accounting for 13,390 staff FTEs. While hospitals utilize the largest portion of the workforce in the FLHSA region, they have decreased their staffing levels by 3.5% between 2000 and 2004, eliminating nearly 650 positions.<sup>2</sup>

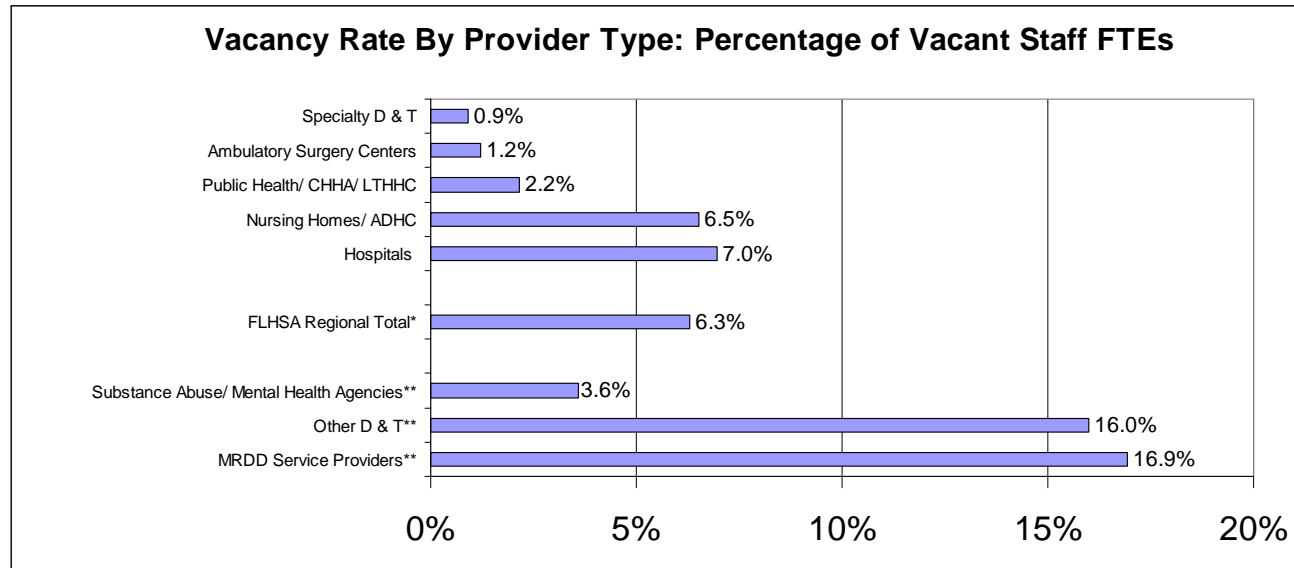
<sup>2</sup>The Center for Healthcare Workforce Studies, "The Healthcare Workforce in New York State, 2004: Trends in the Supply and Demand for Health Workers." May, 2005

Figure 6.



A disproportionate share of the reported healthcare workforce in the FLHSA region works in Monroe County (69%), compared with the Southern Tier, whose reported percentage of the healthcare workforce (17%) is identical to its percentage of the FLHSA regional population (17%).

**Figure 7.**



Among the provider types for which we have a full data set, hospitals and nursing homes have similar vacancy rates at 7.0% and 6.5% respectively. This amounts to a combined 1,500 vacant FTEs. In contrast, specialty diagnostic and treatment centers have the lowest vacancy rate at 0.9%.

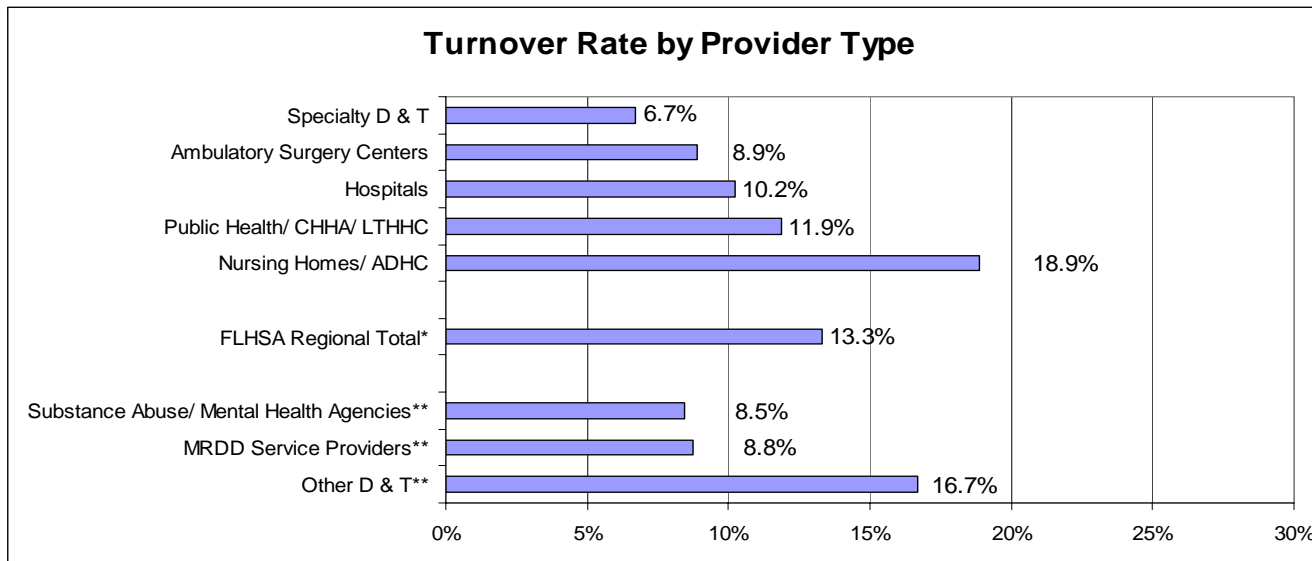
While the 16.9% vacancy rate reported by MRDD Service Providers only reflects the staffing patterns of survey respondents, national studies consistently demonstrate high vacancy rates for these provider types. For example, a recent study found vacancy rates ranging from 40-75% among direct care staff at MRDD Agencies.

Source: The Developmental Disabilities Network, "Recruitment and Retention of Direct Support Staff in Programs Serving People with Developmental Disabilities in New Mexico." 2002.

\*The FLHSA Regional Total includes data from Specialty D and Ts; Ambulatory Surgery Centers, Public Health/CHHA/LTHHC, Nursing Homes/ADHC, and Hospitals.

\*\*These rates are based solely on information provided by survey respondents, and are NOT region-wide trends.

**Figure 8.**



The turnover rate for healthcare providers in the FLHSA region (13.3%) falls well below the turnover rate for the national healthcare workforce (19%).<sup>3</sup> However, this number varies widely by sector with nursing homes experiencing the highest rates of turnover (19%) and specialty diagnostic and treatment centers experiencing the lowest rates of turnover (6.7%).

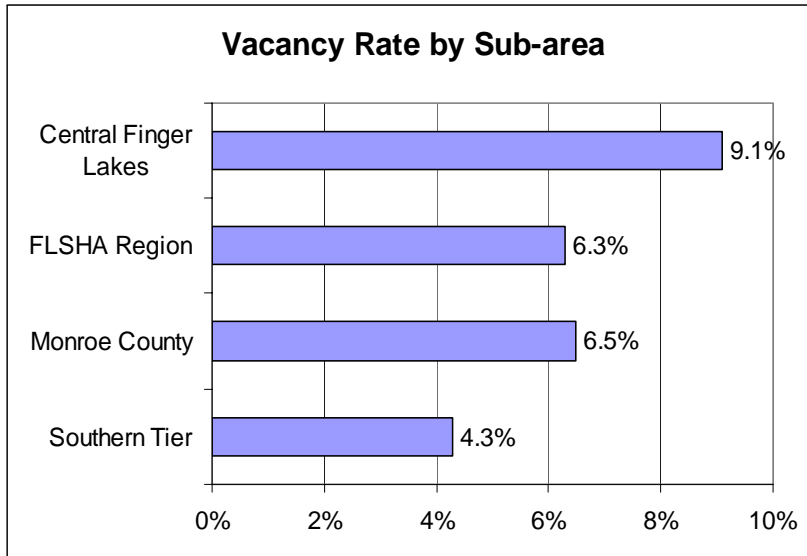
Turnover is calculated as:  $(\# \text{ of Separations}) / (\# \text{ of Employed Individuals} + \# \text{ of Separations})$

\*The FLHSA Regional Total includes data from Specialty D and Ts; Ambulatory Surgery Centers, Public Health/CHHA/LTHHC, Nursing Homes/ADHC, and Hospitals.

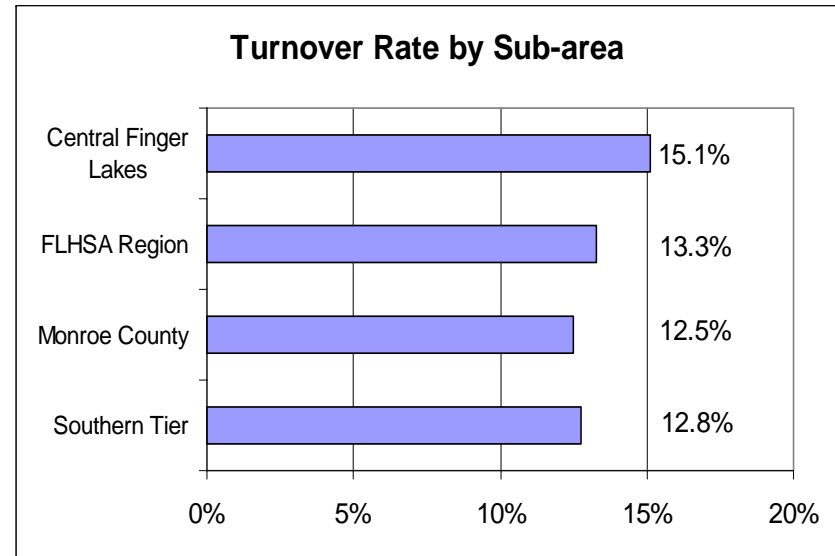
\*\*These rates are based solely on information provided by survey respondents, and are NOT region-wide trends.

<sup>3</sup>U.S. Bureau of Labor Statistics, November 2005.

**Figure 9.**



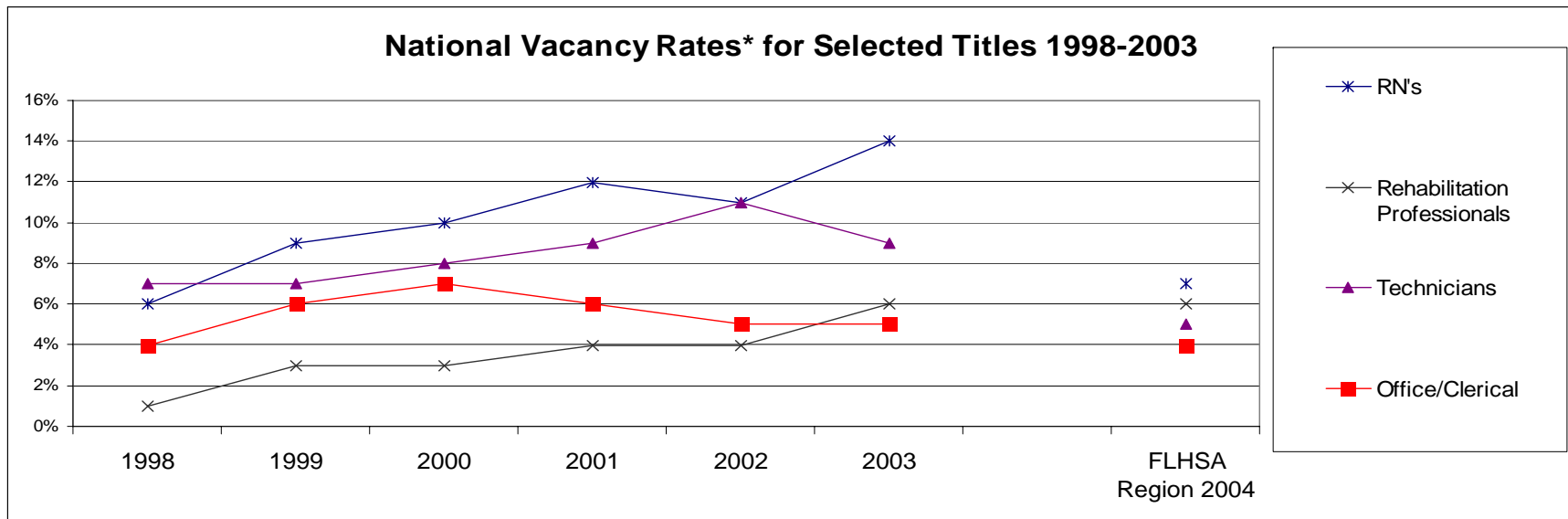
**Figure 10.**



From a geographic perspective, the Central Finger Lakes sub-area has the highest vacancy rate (9.1%) accounting for nearly 450 vacant staff FTEs. The Southern Tier, on the other hand, has the lowest sub-area vacancy rate, at 4.3%.

Sub-area turnover rates are relatively similar, with the Central Finger Lakes experiencing a turnover rate of 15.1% on the high end, and Monroe County experiencing a 12.5% turnover rate on the low end. Again, these rates fall below the national average (19%).

Figure 11.



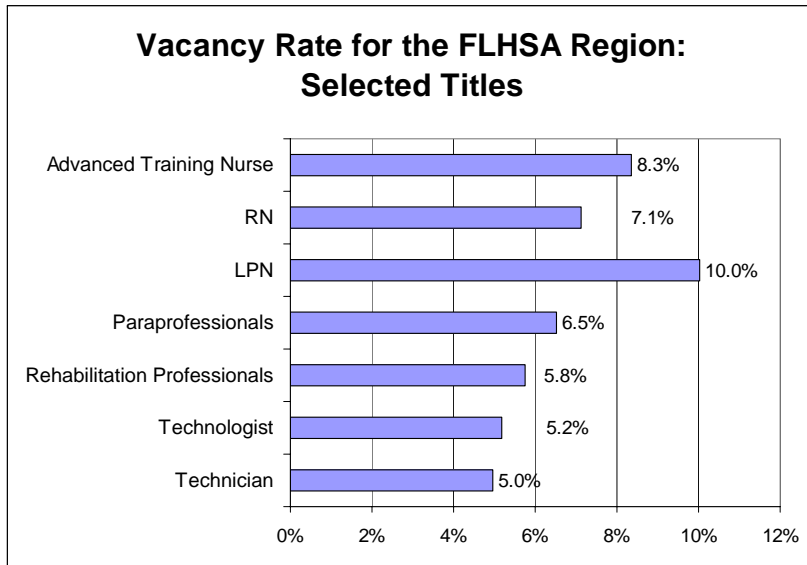
When compared with national trends, the FLHSA region appears to be fairing well in its recruitment of healthcare professionals. Regional employers are particularly successful at recruiting registered nurses and technicians. While national vacancy rates for registered nurses and technicians are 14% and 9% respectively, regional employers experience rates half that size.

\*National Vacancy Rates include vacancies reported at private physician's offices, which were not collected as part of the FLHSA data set.

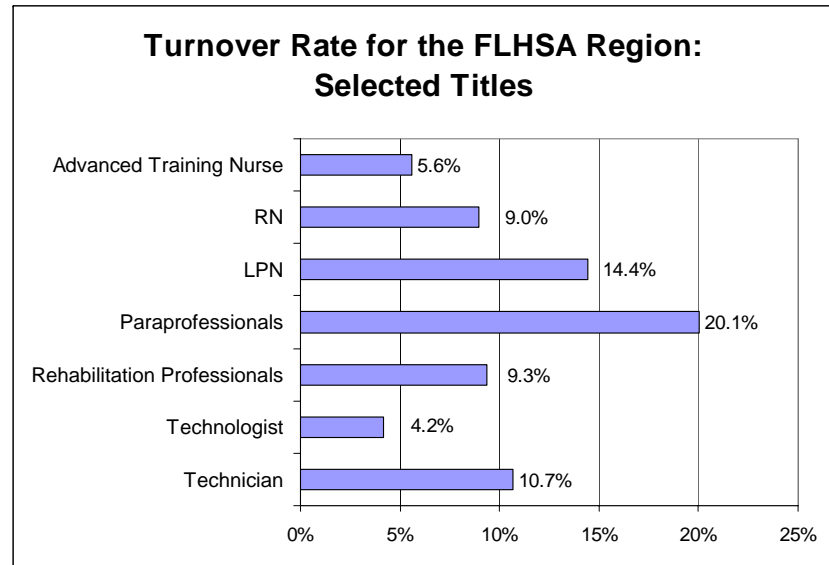
Source: U.S. Bureau of Labor Statistics.

Finger Lakes Health Systems Agency, February 2006

**Figure 12.**



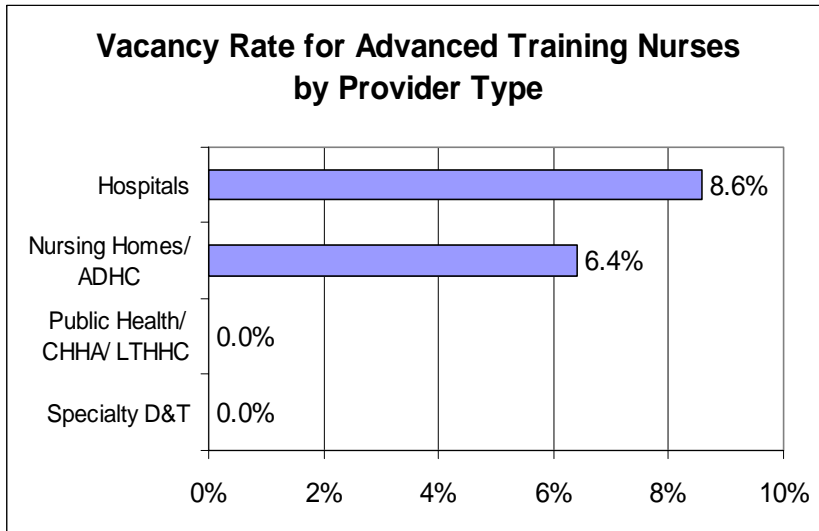
**Figure 13.**



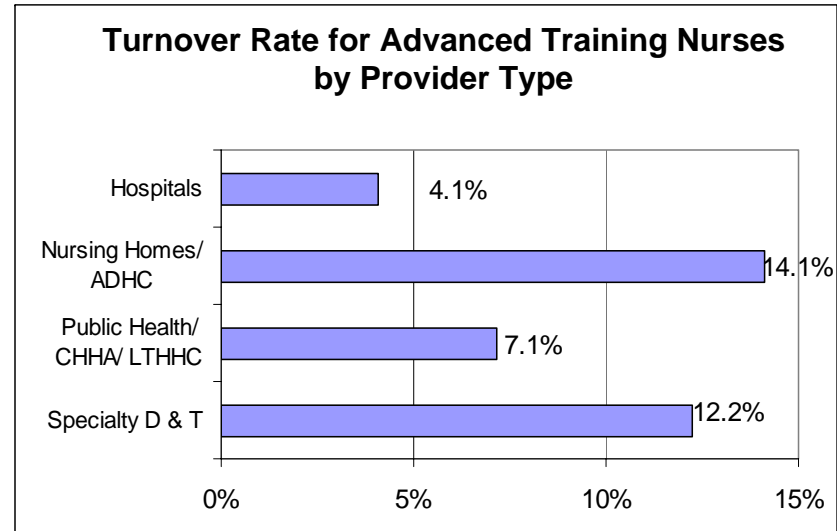
Licensed Practical Nurses have the highest vacancy rate in the FLHSA region (10%), followed by Advanced Training Nurses (8.3%) and Registered Nurses (7.1%). Technicians experience the lowest vacancy rate in the FLHSA region.

Paraprofessionals have by far, the highest turnover rate (20.1%) compared with other healthcare titles in the FLHSA region. Technologists experience the lowest turnover rate, at 4.2%.

**Figure 14.**



**Figure 15.**

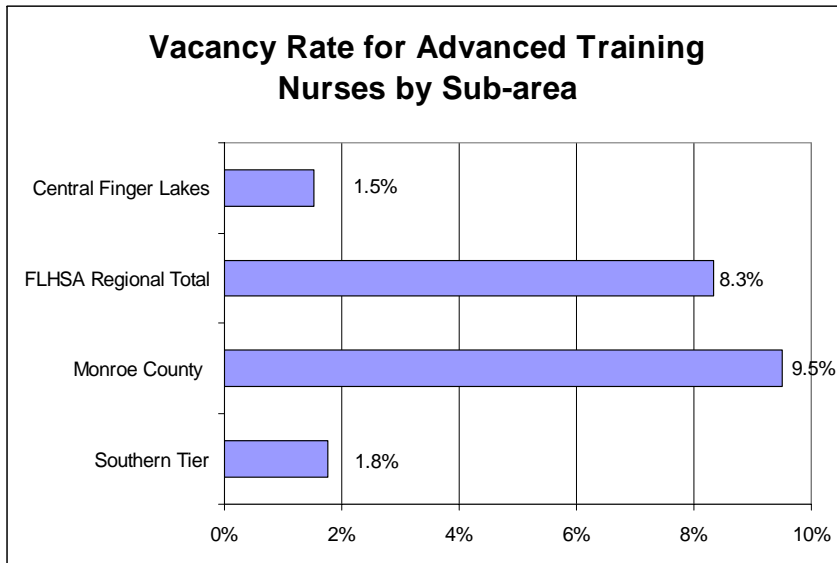


*Advanced Training Nurses* include Certified Nurse Midwives, Nurse Anesthetist, Nurse Educators, Nurse Practitioners and Physician Assistants.

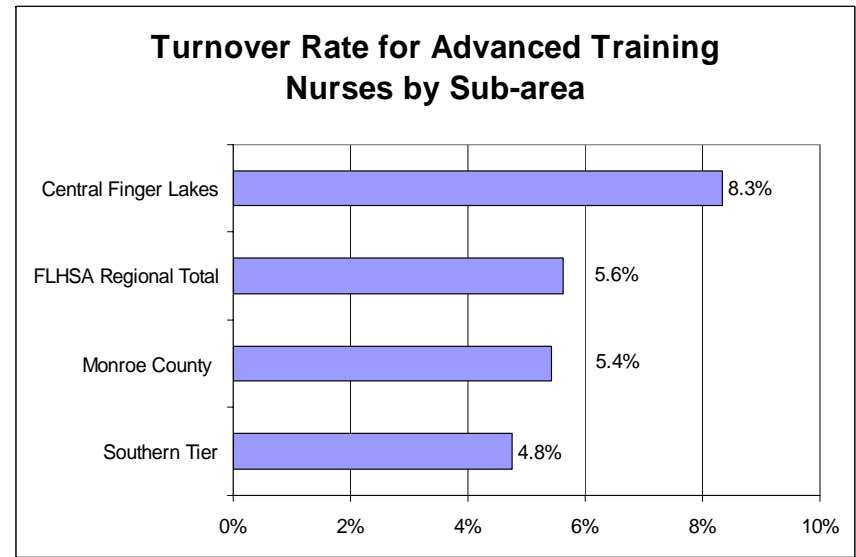
Advanced Training Nurses make up just under 3% of the regional workforce accounting for 756 total staff FTEs.

Hospitals and nursing homes have the highest vacancy rates for advanced training nurses, with 60 vacant staff FTEs. Nursing homes also experience the highest turnover rates for advanced training nurses (14.1%), while hospitals experience the lowest (4.1%).

**Figure 16.**



**Figure 17.**



In an analysis of the region's sub-areas, Monroe County has a significantly higher vacancy rate among advanced training nurses (9.5%) compared with both the Southern Tier (1.8%) and the Central Finger Lakes (1.5%).

The highest turnover rates for advanced training nurses occurs in the Central Finger Lakes (8.3%), the lowest occurs in the Southern Tier (4.8%).

Figure 18.

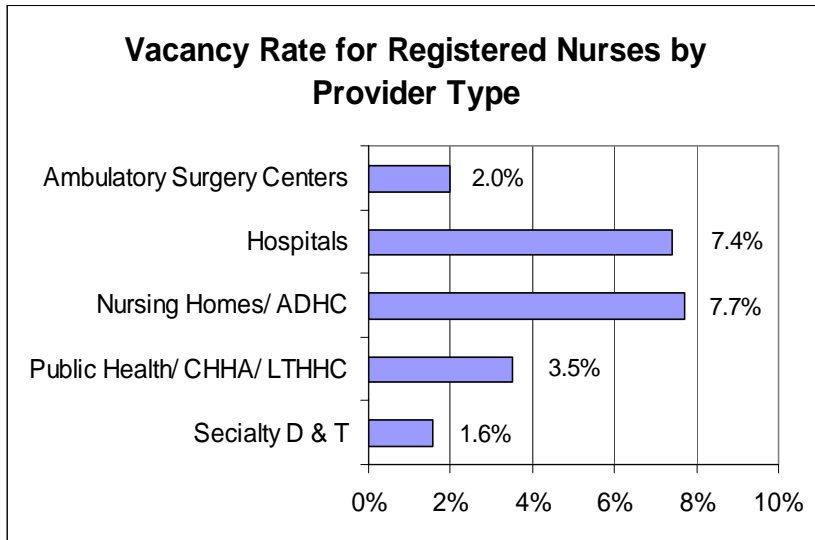
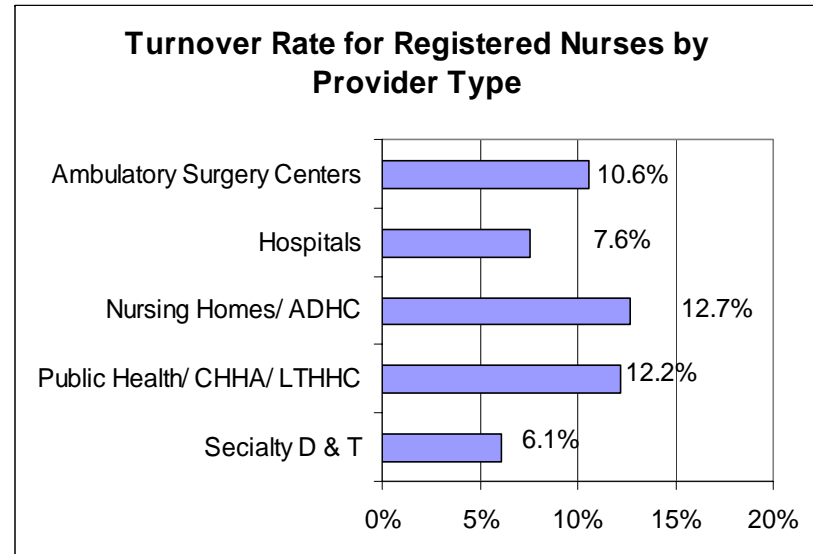


Figure 19.



*Registered Nurses* include Infection Control Nurses, Patient Educators, Public Health Nurses, Registered Nurses, and Staff Education and Development Nurses.

Registered nurses (RNs) made up 25.6% of the reported FLHSA regional workforce, accounting for 6,656 total staff FTEs.

Hospitals and nursing homes have the highest vacancy rates for RNs in the FLHSA region, at 7.4% and 7.7% respectively. This accounts for 440 vacant staff FTEs in these two settings alone.

Public Health/CHHA/LTHHC (12.2%) and Nursing Homes (12.7%) have the highest turnover rates for RNs in the FLHSA region. While neither equals the national average for RN turnover at 15%, these high turnover rates represent a significant cost to the regional health system. The annual cost of RN turnover in the Finger Lakes Region is \$14 million\*, the highest of all healthcare professionals.

\*The cost of turnover is reported to be 50% of an employee's annual salary. For this analysis, the total cost of RN turnover was calculated by multiplying the estimated income for RN's in the FLHSA Region, as reported by the U.S. Bureau of Labor Statistics, by the regional total of RN separations, and dividing by two.

Source: U.S. Bureau of Labor Statistics, November 2005.

Figure 20.

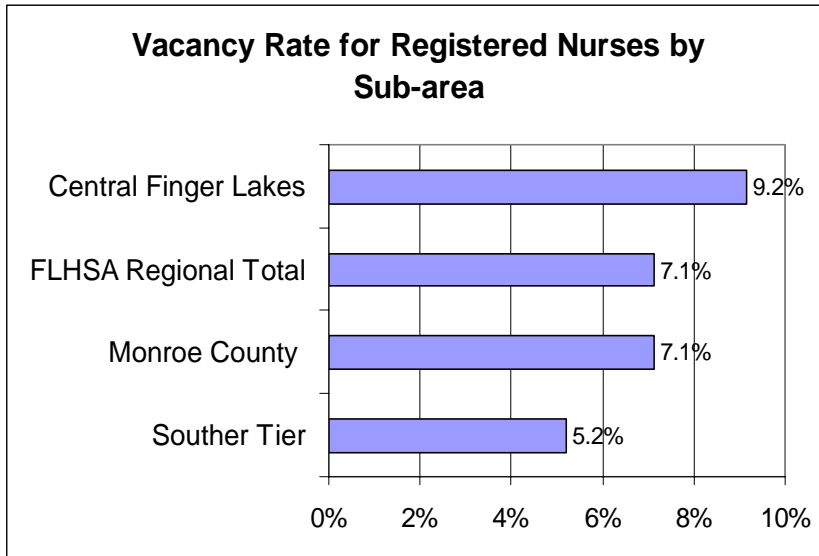
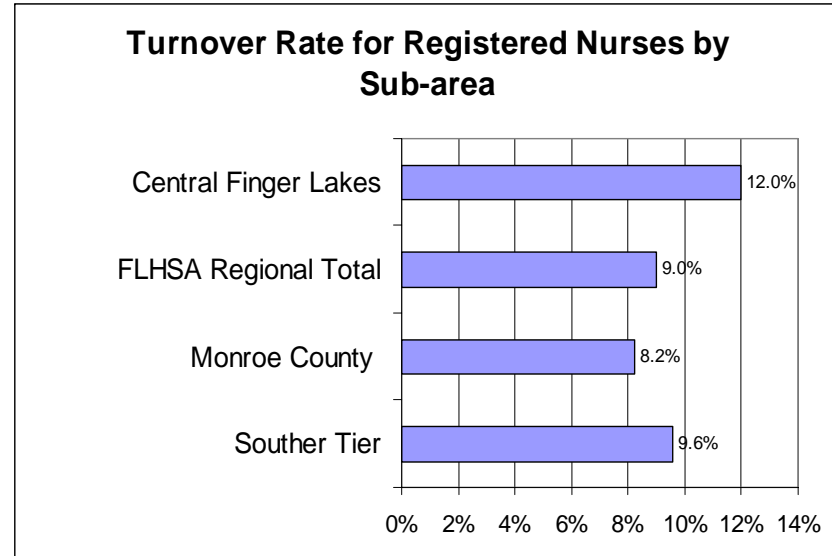


Figure 21.



The vacancy rates for RNs in the FLHSA region range from 5.2% to 9.2%, the lowest occurring in the Southern Tier, and the highest occurring in the Central Finger Lakes sub-area.

The Central Finger Lakes also experiences the highest rates of turnover among their RN workforce (12.0%).

Figure 22.

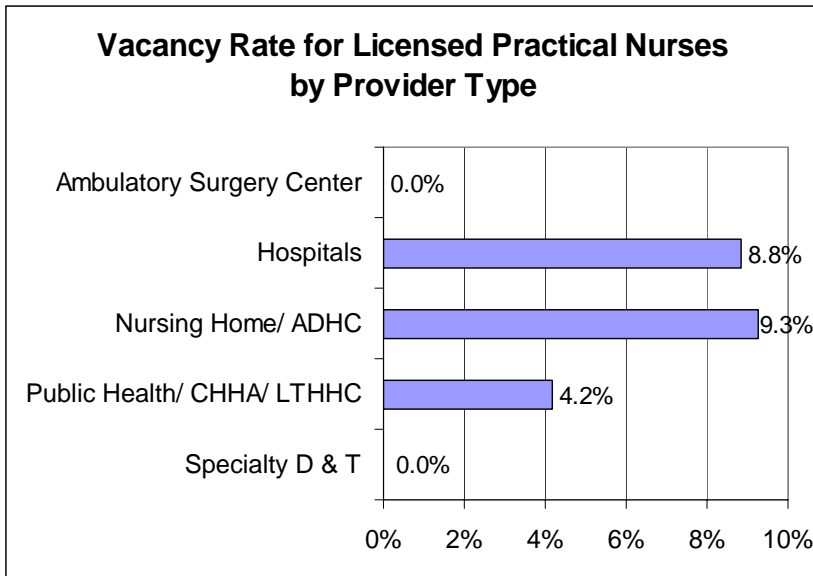
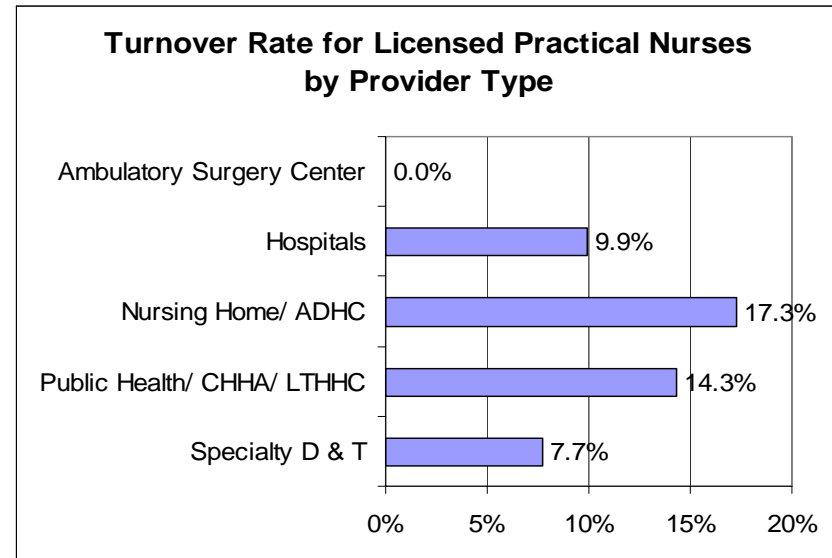


Figure 23.



Licensed Practical Nurses (LPNs) account for 10.5% of the reported healthcare workforce, with 2,753 total staff FTEs.

As with the other nursing titles, hospitals (8.8%) and nursing homes (9.3%) have the highest vacancy rates in the region for LPNs, resulting in nearly 250 vacant staff FTEs.

LPN turnover is high when compared with other nursing titles in the FLHSA region, particularly among those working in nursing homes (17.3%) and the public/home health industry (14.3%). However, it is difficult to determine the percentage of LPNs that turn over due to continuing education, and thus advancement to RN status. A national survey of RNs revealed that 26% worked as LPNs immediately prior to earning their RN degree. The estimated total cost of LPN turnover for the regional health system is \$5.6 million annually, the third highest of all healthcare professionals.

Figure 24.

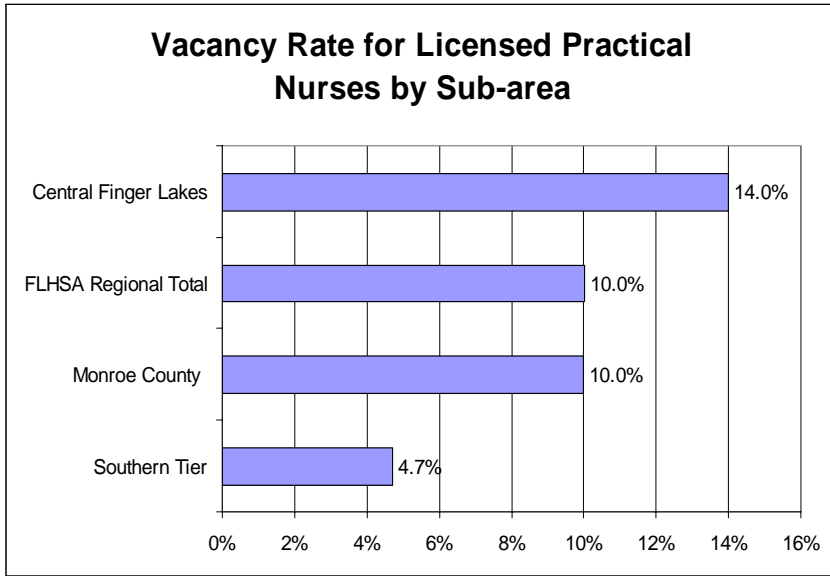
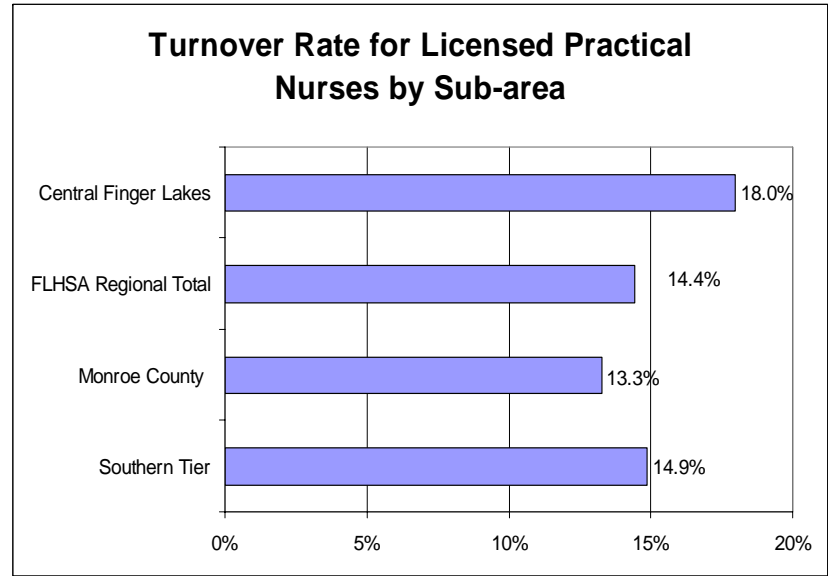


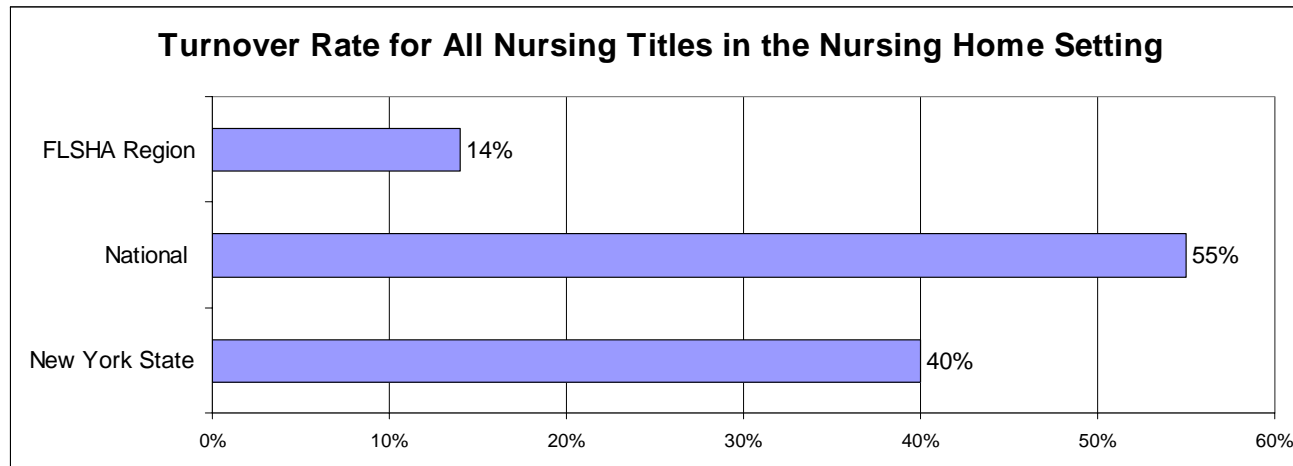
Figure 25.



Similar to RNs, the Central Finger Lakes has the highest vacancy rate for LPN positions (14%), while the Southern Tier has the lowest (4.7%).

The Central Finger Lakes also has the highest rate of turnover among LPNs at 18%.

**Figure 26.**



Nursing homes in the FLHSA region are relatively successful in retaining their nursing workforce, with a turnover rate of 9%. This is significantly lower than other nursing homes in New York State and across the country, which experience turnover rates of 40% and 55% respectively\*.

\*Please note that the national and state data were collected in 2002 and include Nurse Administrators, RNs, LPNs, and Nurse Aides.

Source: *ACHA Survey of Nursing Home Vacancy and Turnover in Nursing Homes*, February, 2003.

Figure 27.

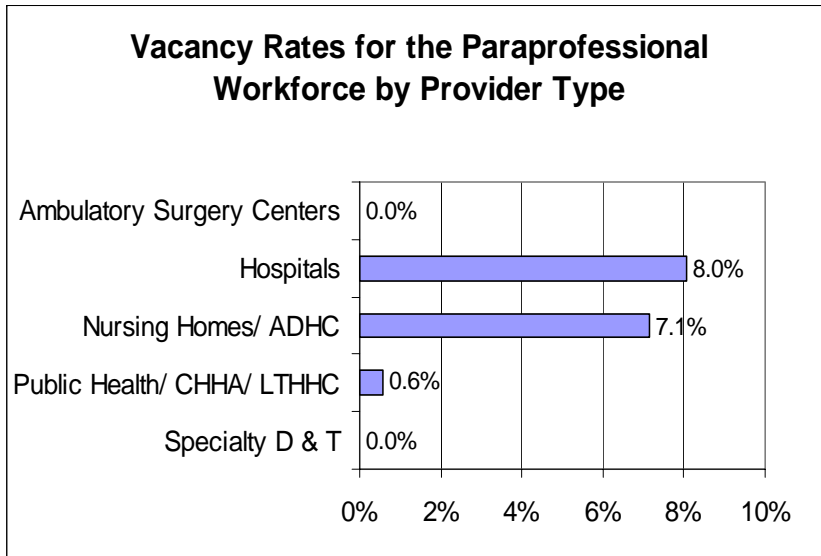
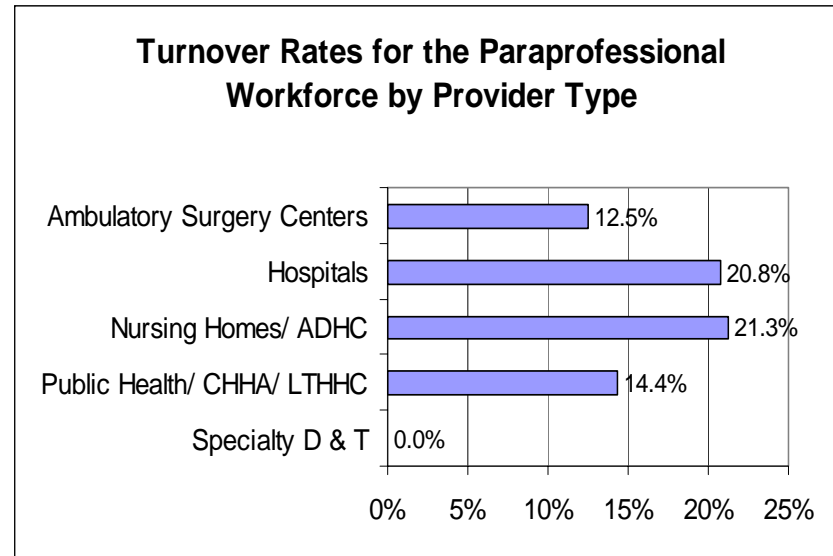


Figure 28.



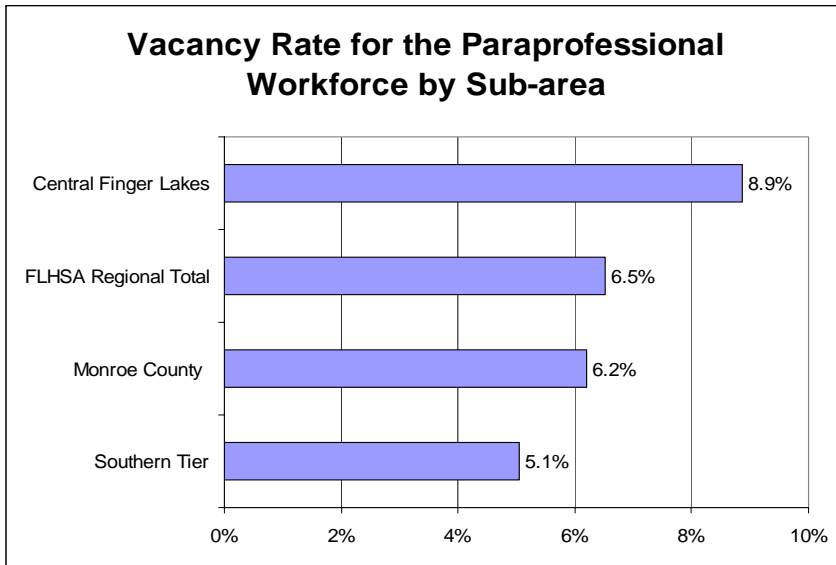
The *Paraprofessional Workforce* includes home health aides, nurse aides, patient care technicians and personal care aides.

The paraprofessional workforces represents the second largest segment (22.6%) of reported healthcare workforce, with 5,897 total staff FTEs.

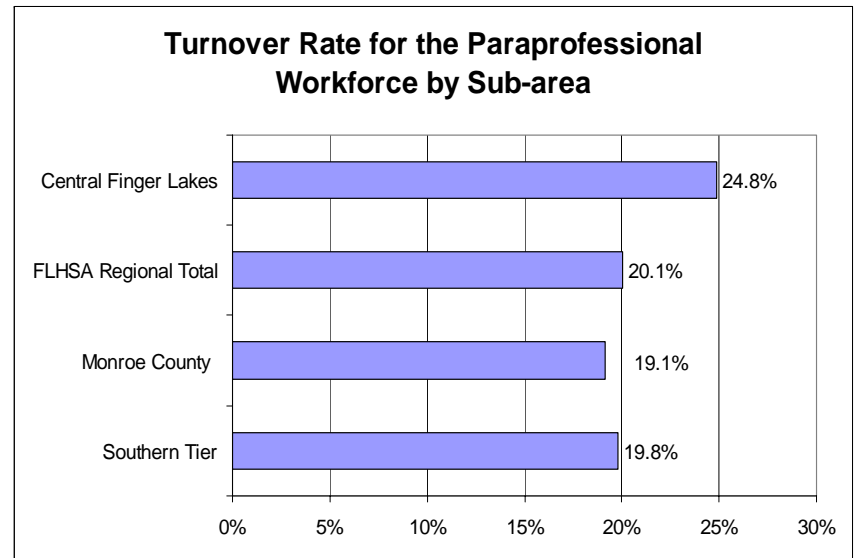
Again, hospitals and nursing homes experience the highest vacancy rates among their paraprofessional workforce, resulting in 400 vacant staff FTEs.

In both the hospital and nursing home setting, paraprofessionals experience the highest rates of turnover compared with the rest of the healthcare workforce. Low vacancy rates combined with high turnover rates clearly illustrate the constant churning of paraprofessionals within and between provider types.

**Figure 29.**



**Figure 30.**



The Central Finger Lakes has the highest vacancy rate in the FLHSA region for healthcare paraprofessionals at 8.9%. This is 2.4 percentage points higher than the regional total, and nearly 4 percentage points higher than the Southern Tier.

The Central Finger Lakes also has the highest rate of turnover among their paraprofessional workforce at 24.8%, compared with Monroe County, with the lowest turnover rate at 19.1%.

Figure 31.

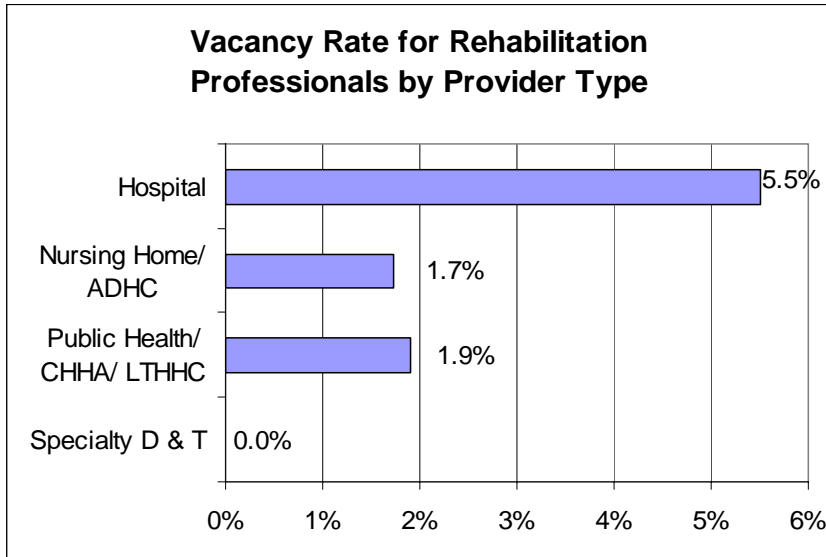
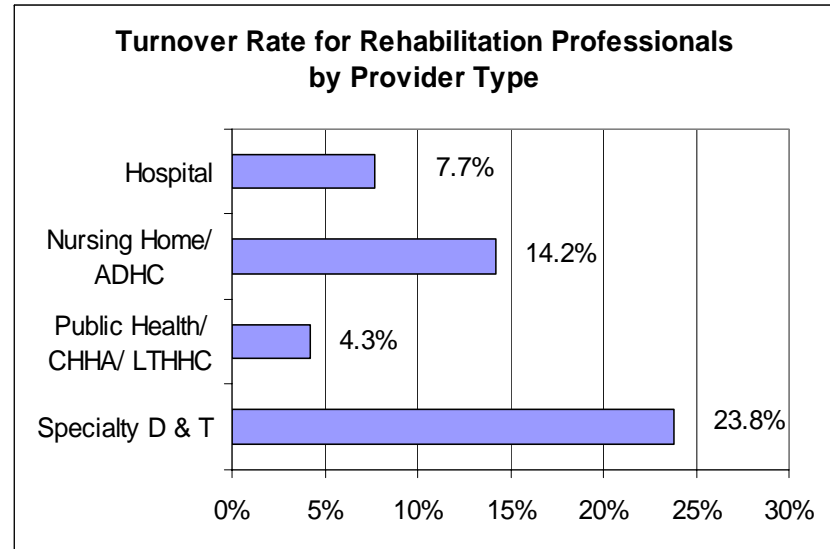


Figure 32.

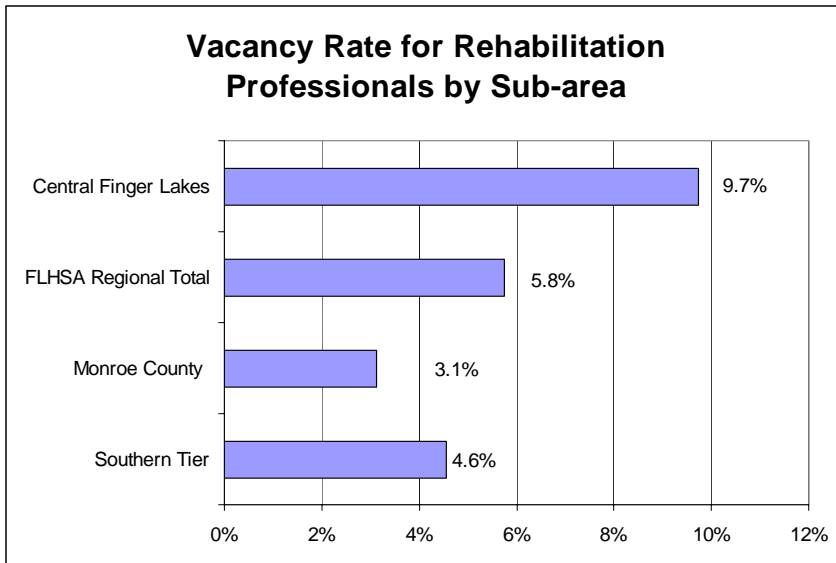


*Rehabilitation Professionals* include Physical and Occupational Therapists, Audiologists, Speech Therapists and Pathologists, and various assistants with certification in physical medicine.

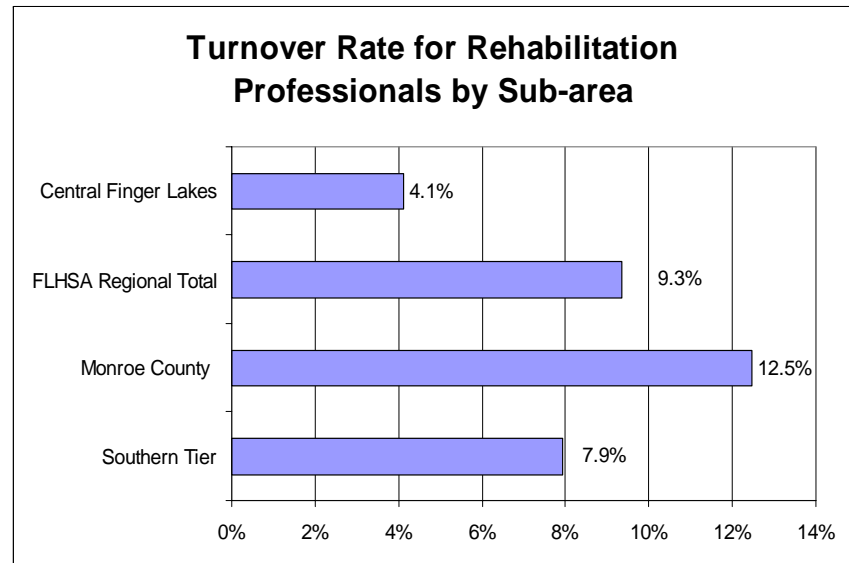
Rehabilitation Professionals make up 4.6% of the regional workforce, accounting for 1,203 total staff FTEs. The highest vacancy rates for rehabilitation professionals occur in the hospital setting (5.5%).

While specialty diagnostic and treatment centers reported 0 vacancies among their rehabilitation workforce, they experienced the highest rate of turnover (23.8%) in 2004, followed by nursing homes (14.2%).

**Figure 33.**



**Figure 34.**



The vacancy rate for rehabilitation professionals in the Central Finger Lakes (9.7%) is over twice the rate of both the Southern Tier (4.6%) and Monroe County (3.1%).

The Central Finger Lakes does, however, experience the lowest rate of turnover for rehabilitation professionals at 4.1%, compared with the highest rate, in Monroe County, at 12.5%.

Figure 35.

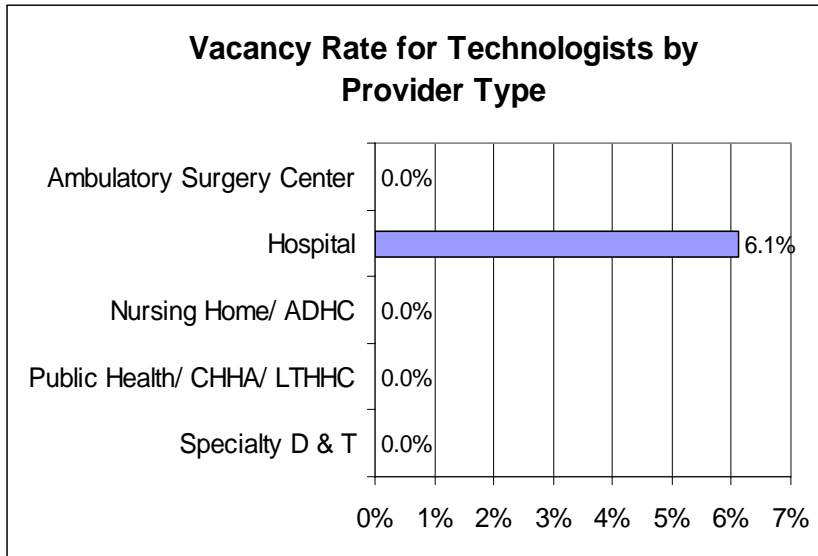
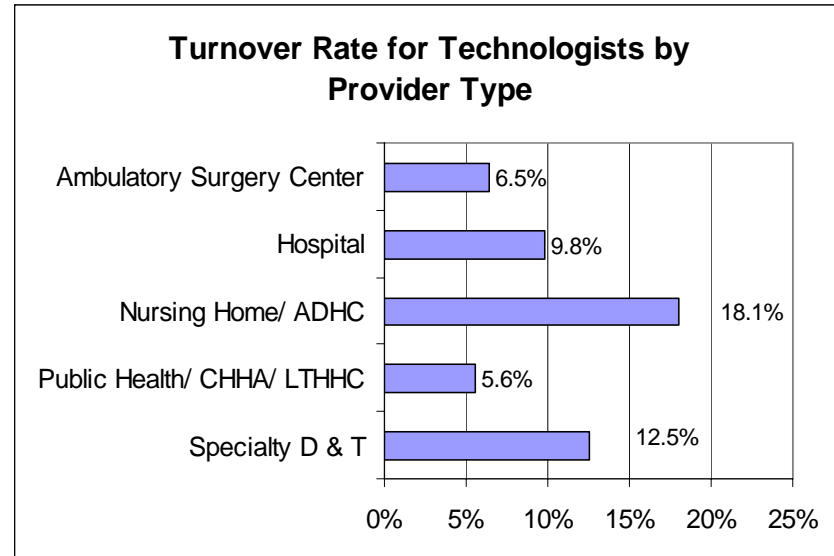


Figure 36.

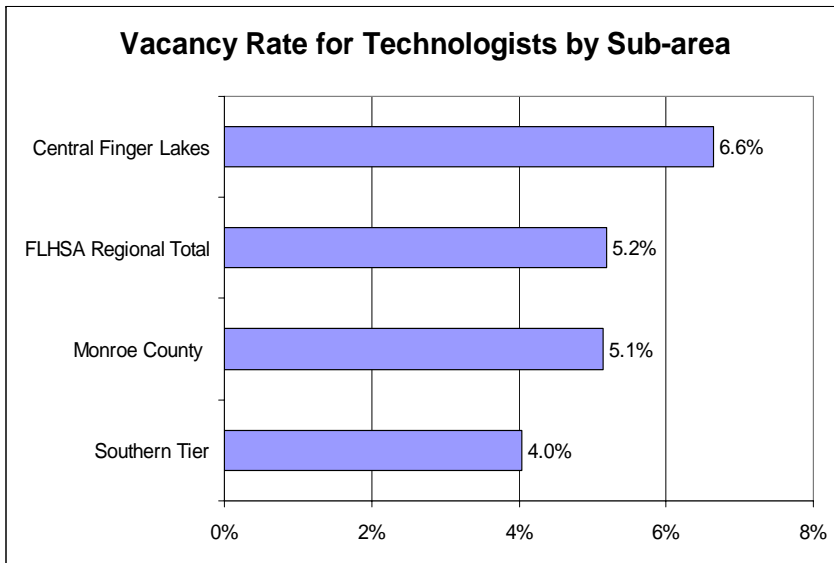


*Technologists* include Lab Technologists, Imaging Technologists and Medical Support Technologists (eg. Surgical or Cardiovascular Technologists).

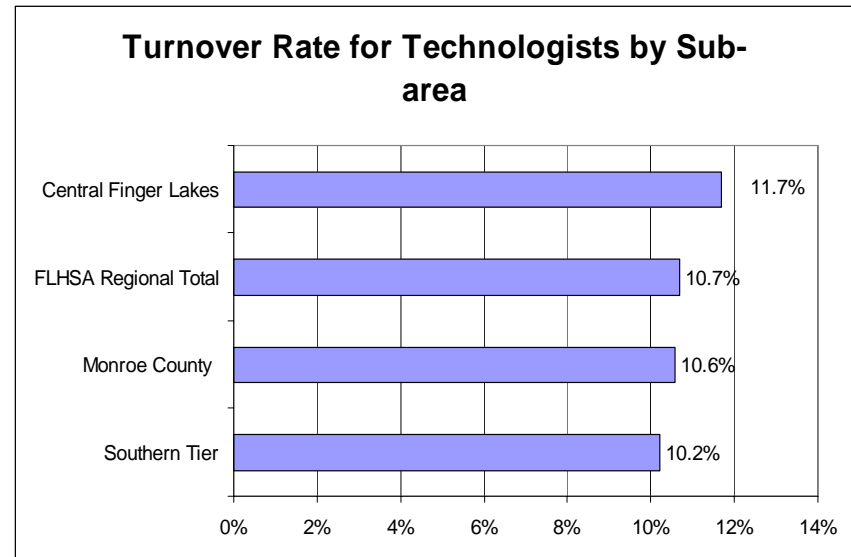
Technologists make up nearly 5% of the reported regional workforce, accounting for 1,289 total staff FTEs.

Vacancies for technologist positions were only reported in the hospital setting. In contrast, all provider types experienced some turnover of their technologist workforce, with nursing homes experiencing the highest turnover rates (18.1%) and home health providers experiencing the lowest (5.6%).

**Figure 37.**



**Figure 38.**



The vacancy rate for technologists is highest in the Central Finger Lakes at 6.6%, compared with the Southern Tier, which has the lowest regional vacancy rate at 4%.

The turnover rates for technologists throughout the region are relatively similar, with just over 1 percentage point separating the highest (Central Finger Lakes: 11.7%) and the lowest (Southern Tier: 10.2%).

Figure 39.

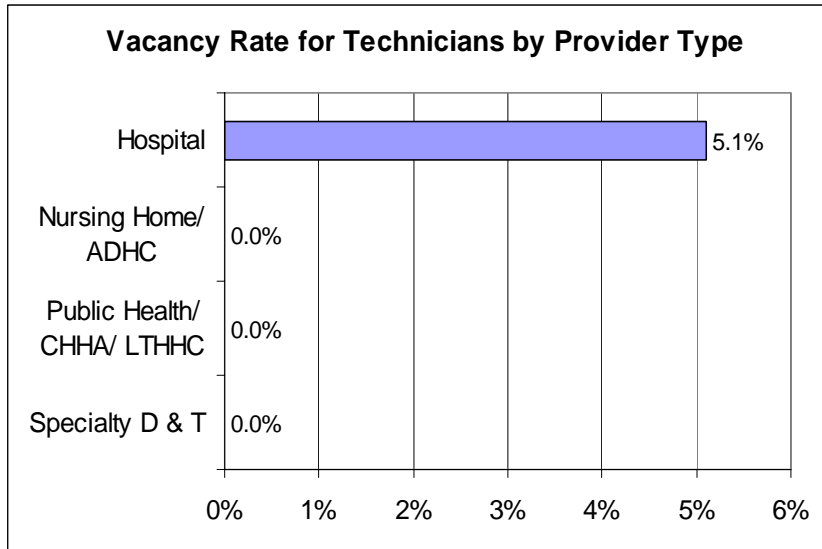
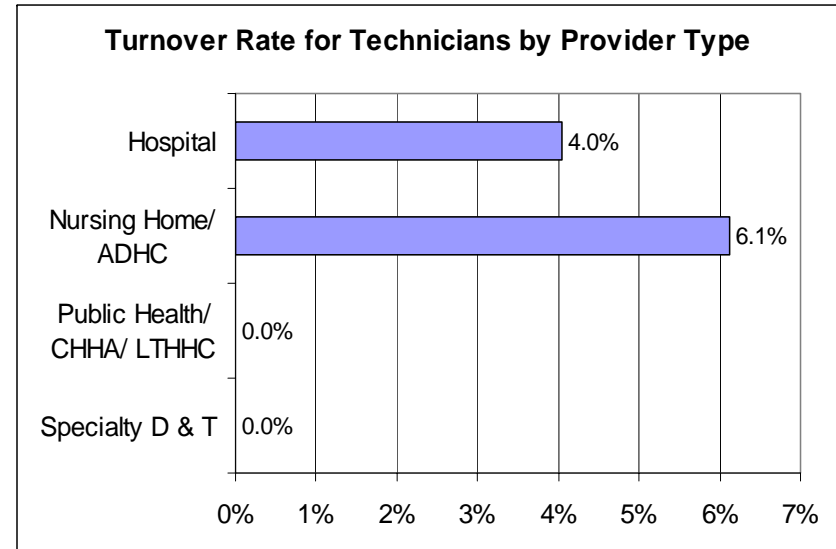


Figure 40.



*Technicians* include Lab Technicians, Imaging Technicians and Therapy Technicians.

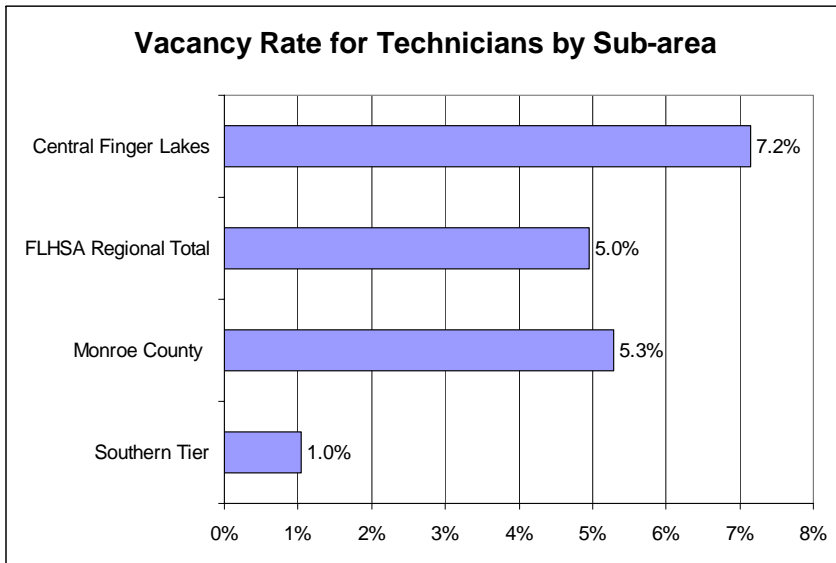
Technicians make up 3.9% of the reported healthcare workforce, accounting for 1020 total staff FTEs.

Similar to technologists, the only provider types reporting technician vacancies are hospitals. The difficulty that hospitals experience in recruiting technicians is a national trend. 68% of hospitals across the country have reported difficulty recruiting imaging technicians and 46% have reported difficulty recruiting lab technicians.

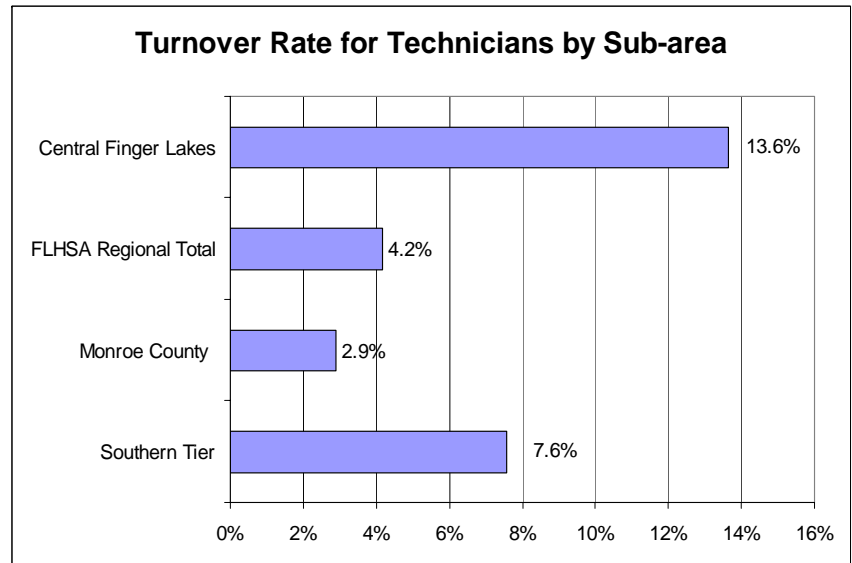
While nursing homes reported 0 technician vacancies, they experience the highest turnover of technicians in the region with a 6.1% turnover rate.

Source: Salsberg, E. Milbank Quarterly. "Making Sense of the System: How States Can Use Health Workforce Policies to Increase Access and Improve Quality of Care," 2003.

**Figure 41.**



**Figure 42.**



Both Monroe County and the Central Finger Lakes experience vacancy rates for technician positions higher than the regional average (5%), with rates of 5.3% and 7.2% respectively.

The Central Finger Lakes' 13.6% turnover rate for technicians is nearly double the turnover rate in the Southern Tier (7.6%) and is three times the FLHSA regional turnover rate (4.2%).