Study of Turnover & Training in Indiana's Long-term Care Facilities

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Center for Aging & Community

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EXECUTIVE SUMMARY

Staff turnover is an issue of consistent concern in long-term care facilities, in both Indiana and across the nation, with implications that range from recruitment costs to everyday operational issues. Numerous studies have identified annual turnover rates of direct care staff in nursing homes as ranging from 47 to over 100 %. Factors that may be associated with or contribute to staff turnover include employee workload, compensation, and supervision. Subsequent to staff turnover, needs for training replacement staff and concerns about quality of care are evidenced.

These concerns led the Indiana State Department of Health (ISDH) to contract with the University of Indianapolis Center for Aging & Community (CAC) to examine turnover and staffing rates, training and relevant perceptions regarding the effects of turnover in Indiana's Medicare-certified nursing facilities. A survey of administrators at these facilities was conducted. From an initial sample of 507 facilities, a 38.5 % response rate was obtained. Survey questions segmented responding facilities by four characteristics:

- Type (for-profit, government, non-profit)
- Location (micropolitan, metropolitan, rural)
- Size (by certified beds – small, medium, large)
- Single site vs. multi-site

The survey also considered staffing changes and turnover at various levels within the facilities, including:

- CNA/QMA
- LPN
- RN
- Director of Nursing
- Facility Administrator

Findings suggest that turnover rates are higher than those reported in other states. In addition, facility directors reported ongoing training as part of their normative business practice. These findings, along with administrator perceptions of factors that are associated with turnover and its management, as well as recommendations for future steps are presented in this report.

INTRODUCTION

The Indiana State Department of Health (ISDH) contracted with the University of Indianapolis Center for Aging & Community (CAC) to conduct a study that would identify staff turnover rates in long-term care facilities operating within the State of Indiana. Turnover rates of direct care staff within the nursing home industry have been identified as a national problem (Committee on the Future Health Care Workforce for Older Americans, Institute of Medicine, 2008; Seavey, 2004). A recent review of the cost of frontline turnover in long-term care facilities conservatively estimated that the direct cost of turnover for each frontline worker in this industry is $2,500 (Seavey). This study also estimated that "the price paid by government payer sources for turnover in long-term care is… roughly $2.5 billion [annually]" (Seavey, 2004, pg. 6). Direct costs include, for example, job advertising, interviewing, testing, new employee orientation and new employee training. These costs produce a general "drag" on productivity, as they include lower levels of productivity of the departing employee, unproductive time caused by a disruption of the work team, and loss of productivity while the new employee becomes competent in their new job.

In addition to the direct costs associated with turnover, there are indirect costs. Indirect costs are not easily substantiated because they are not "out-of pocket" costs for the organization. As a result, indirect cost data is not easily obtained. However, estimated indirect costs would include loss of quality in care that may result in potential loss of future revenues to an organization through slower business growth. By implication, evidence of relationships between turnover and indirect costs, through reduced quality of care has been identified (Bostick, et al., 2006; Castle, Engberg & Men 2007; Hayes, et al., 2006). It is very likely, then, that the $2,500 figure estimating turnover cost per employee is a significant underestimation of the true cost of turnover.

Numerous studies consistently identify high turnover rates of staff in nursing homes (e.g., Castle, 2006, 2008; Castle & Engberg, 2005; Temple, Dobbs, & Andel, 2009). The turnover rate for nurse assistant (NA) positions has been noted to be more than 100% annually (Castle & Engberg, 2005), with certified nurse assistant turnover (CNA) at 71%, and registered nurse turnover (RN) at 47% (Harrington & Swan, 2003). However, ranges reported for these positions vary considerably (Bostick, Rantz, Flesner, & Riggs, 2006). Additionally, studies have identified factors that may be associated with or contribute to turnover. These factors include employee workload (e.g., Brannon, Barry, Kemper, Schreiner & Vasey, 2007; Edelstein & Seavey, 2009; Smith, Crow & Hartman, 2007), compensation (e.g., Edelstein & Seavey, 2009; Kash, Castle,

Naufal, & Hawes, 2006, Zeytinoglu, Denton, Davies, Baumann, Blythe, & Boos, 2006), and supervisory practices (e.g., Podsakoff, LePine, & LePine, 2007; Robinson & Pillemer, 2007).

Specifically, the factors with suggested relations to turnover include:

- Workload of direct care staff,
- Compensation (Wage rates and benefits),
- Supervision and supervisory practices (e.g., training provided and leadership/management style used),
- Organizational factors (e.g., size, type, location, level of resident occupancy), and
- Individual factors (e.g., organizational commitment, job satisfaction, individual demographics).

As most nursing homes rely heavily on both Medicare and Medicaid to finance their operations, the cost associated with turnover amounts to a hidden expense ultimately born by tax payers. Therefore, turnover in nursing homes has become a significant public policy issue (Seavey, 2004, pg 20). This issue has also arisen in part because high nursing turnover can bring drastic consequences, not only for an organization's financial well-being, but can impact the quality of care delivered to residents.

Based on results from a national survey conducted in 2004, Indiana is among the states with high turnover in nursing homes, for both direct care staff and supervisory positions (Castle, 2008). In this survey, estimated average annual turnover for nursing home staff within Indiana was 74% for NAs, 57% each for LPNs and RNs, 50% for directors of nursing (DoN) and 53% for nursing home administrators. In this national study, Indiana had higher rates of turnover than those obtained when using national data. For example, national estimates found turnover for NAs was at 64%, 43% for LPNs, 46% for RNs, 39% for DoN positions and 41% for nursing home administrators. The Castle study also examined quality of care and found that Indiana ranked below average. This finding becomes important as past research has found some relationships between quality and turnover, albeit the relationship has sometimes been found to be non-linear and is therefore complex and difficult to interpret (Bostick, Rantz, Flesner, & Riggs, 2006; Castle, 2008; Castle & Engberg, 2005; Castle, Engberg, & Men, 2007).

However, additional data about Indiana's high turnover in nursing homes is needed. The 2004 study by Castle was the only published source of data on turnover rates in Indiana which also described organizational characteristics. No published sources were located that investigated the relationship between turnover and quality using data from Indiana, nor has an association between turnover and supervisory

practices in nursing homes, such as training, been demonstrated. Therefore, the aims of this study were to investigate turnover rates and training practices in nursing homes in Indiana, as these issues may ultimately be associated with poorer health outcomes of residents (Castle, 2008).

Survey Goals

Survey research provides a relatively inexpensive method of obtaining specific information from a large population. This research method was considered the most appropriate way to obtain a "snapshot" of the current rate of turnover in the nursing home industry in Indiana.

The first goal of this survey was to investigate reported rates of turnover in Indiana's long-term care facilities. Of particular interest was an analysis of the relationship between organizational characteristics (e.g., the different categories and classifications of ownership) of facilities operating across the state and the rate of turnover they reported experiencing. Previous research has noted variations in turnover depending on the size of the facility, the ownership type, and the geographic location where the facility operates. Establishing a pattern of turnover within and across such categories could provide evidence for strategies and directions to minimize staff turnover. Resources could therefore be better allocated toward resolving the problem with a clearer understanding of where the problem is most prevalent.

A second goal of the study was to investigate training in Indiana's nursing home industry. Training is important to a study of turnover because of its significant contribution to the direct costs associated with turnover. Most direct costs of turnover are related to training and new employee orientation. For example, regulations for facilities accepting Medicare- or Medicaid payments require that at least 75 hours of approved training is directed toward nursing aides. Because this training must be provided under the general supervision of an experienced RN, the cost associated with the salary of the RN must be considered in addition to the salary of the new employees in training. Additionally, and as has been previously discussed, Castle and others have found some relationship between turnover and quality of care (Bostick, et al., 2006; Castle, Engberg & Men 2007; Hayes, et al., 2006). Undoubtedly, the quality and amount of training given to new employees is an important contributor to this relationship.

A final goal was to study the effect turnover has on facilities and steps taken to address turnover. The survey provides clear evidence that facilities in Indiana are taking proactive steps to lower their turnover or at least reduce its detrimental effects.

METHODS REVIEW

Survey Methods

Survey Development

The first step in pursuing the goals of this study was to develop survey items. Initially, members of the CAC team conducted a thorough review of the literature on nursing home turnover research. A number of well tested survey instruments with very similar goals were found in academic publications. Most of the instruments used in academic research were in the public domain, so use of the items was possible. Given such, through this literature review a pool of potential survey questions was developed. Following this, a series of three meetings were held with officials at the Indiana State Department of Health (ISDH). These meetings were designed to discuss similar surveys in the literature, methods of application, and to operationalize the state's goals for the study, so that the final survey could be developed. The first of these meetings was held mid-May 2009; the meetings continued on a bi-weekly basis through the month of June.

An initial draft of the survey was developed from these meetings and piloted with a group of six representative nursing home administrators. After they completed the survey items, their feedback was obtained via telephone interviews. Based upon this feedback and further meetings with the ISDH, a final draft of the survey instrument was developed.

Description of the Survey

The final survey instrument included 45 items. Questions measured staffing and turnover for direct care staff and nursing facility administration (26 items), orientation and in-service training for direct care staff (8 items), specific characteristics describing specialty care units within the facility (3 items), administrator perceptions regarding turnover within their facility and methods used to reduce turnover (5 items), and items assessing respondent's experience as a nursing home administrator (3 items). As previous research on nursing home turnover typically analyzed the following position categories: Certified Nursing Assistants (CNA), Licensed Practical Nurse (LPN), Registered Nurse (RN), Director of Nursing (DoN) and Facility Administrator (Admin), the current study followed this convention. However, the following exception was made: the current survey also identified Qualified Medical Assistants and grouped this job title with CNAs. Items were developed to determine turnover for CNA/QMA, LPN, and RNs. Following the strategy provided by Castle and others (Castle, 2008; Castle & Engberg, 2005; Castle, Engberg, & Men, 2007), the

number of established Full Time Equivalents (FTE) for each of these positions was determined. Another item asked for the number of replacements hired in the last six months. This figure was multiplied times two and divided by the number of FTE's to estimate turnover for the year. Another set of questions asked about turnover for facility administrators and directors of nursing using a different strategy. Following the convention of previous research, survey items asked how many people had held administrative positions in the previous 3 years (Castle, 2006).

Items related to training consisted of a fairly comprehensive lists of topics included in orientation and in-service training. Participants were asked to check the items included in their training programs. The final set of items asked for perceptions of the facilities' quality of care and the primary factors affecting this care.

Survey Administration

The survey was sent via U.S. postal service to 507 Indiana nursing homes on July 3, 2009 with an announcement letter containing instructions and an addressed, postage-paid, return envelope. An announcement of the survey was sent via facsimile transmission three days later, timed to arrive on approximately the same day that the letters and surveys were received. All surveys included a tracking number, known only to the researchers. Via use of this number, it was possible to identify which facilities had not responded to the survey. Identification of non-responders then allowed for a follow-up announcement that was facsimiled two weeks later (i.e., on July 19, 2009) to nursing home administrators who had not responded to the initial mailing. All inquiries during this time were followed-up with telephone conversations and e-mails. A month after the initial mailing (beginning on August 2, 2009), a random selection of 100 non-responding facilities were contacted though follow-up phone calls to see if the survey had been received or if there were questions surrounding its completion. In response to any of the follow-up methods (i.e., phone calls, facsimiles, e-mails), surveys were re-sent when requested. Of the 195 surveys received, 142 came from the first mailing, while a second 47 surveys received were part of those sent subsequent to facility follow-up to a faxed announcement and 6 were unidentifiable (i.e., they were returned with the tracking number removed). When surveys were received, data was entered into an SPSS, version 16.0 database for analysis.

The use of a confidential identification number also allowed organizations to be "matched" with information obtained from the Nursing Home Compare (NHC) database (United States Department of Health and Human Services, 2009). For this report, the NHC file, "About the Organization" was used to

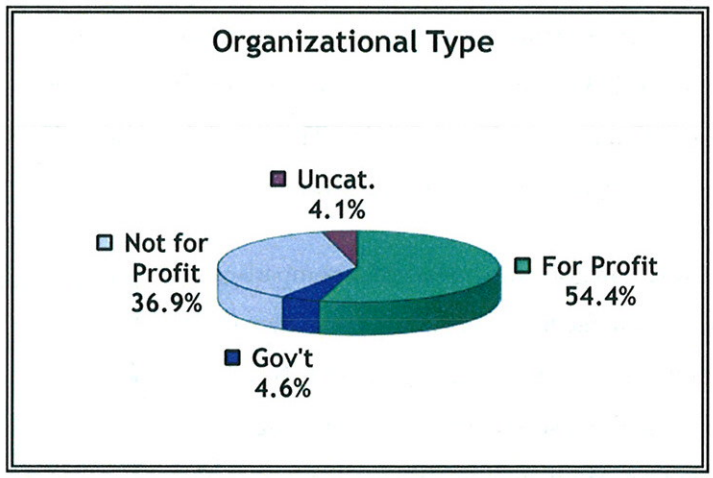
obtain organizational characteristics. The process of matching survey responses with NHC information therefore allowed facilities to be categorized without intrusive or identifying questioning on the actual survey. Specific NHC items used for this report included geographic location – county of operation, organizational type (i.e., non-profit versus profit versus government), organizational size (i.e., based upon number of certified beds), and organizational characteristics (i.e., single versus multi-unit operations).

FINDINGS & RECOMMENDATIONS

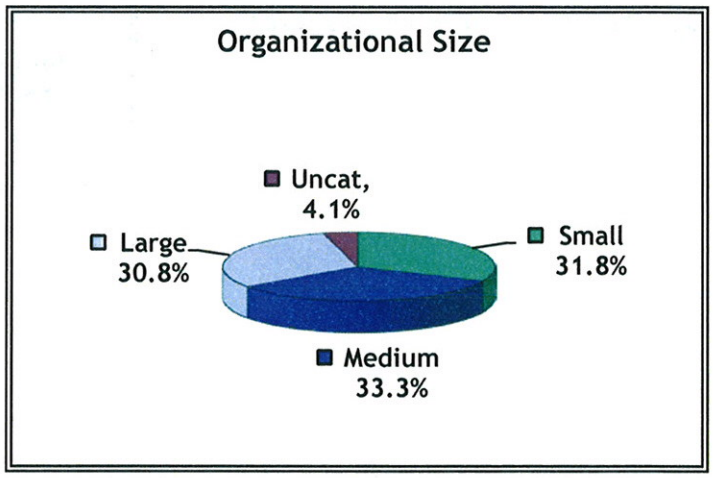
Survey Results

Of the 507 surveys initially mailed out, 195 were returned for a 38.5% response rate. As data was entered for analysis, facilities were matched with NHC data as described above. This allowed the facilities to be categorized by organization type (i.e. for-profit, not for-profit and governmental), size (i.e. small, medium or large), location (i.e. metropolitan, micropolitan/suburban, rural), and chain operation (i.e., single site versus multi-site facility).

Just over half (54.4%) of the respondents were from for-profit organizations (corporations, partnerships, or individual owners), and over a third (36.6%) were from non-profit organizations which included both church- and corporate-owned facilities. Less than one in 20 (4.6%) were from public (e.g., government) institutions. About the same number (4.1%) were uncategorized.[1]

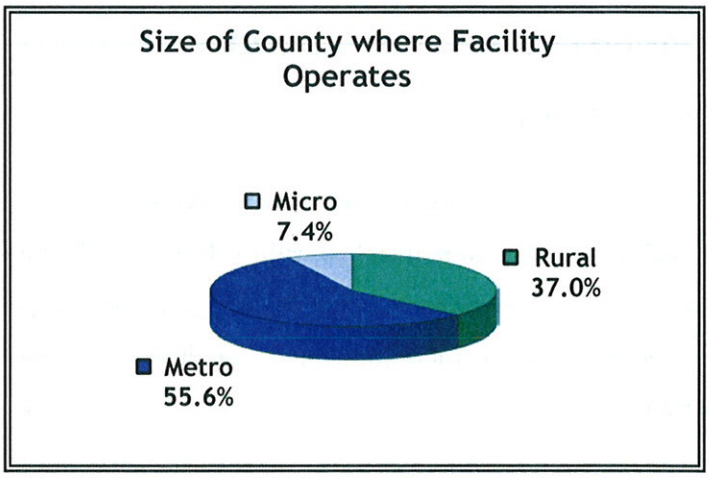


Responding facilities were divided roughly into three equal sized categories based upon size. Facilities with 0-70 certified beds were categorized as small, facilities with 71-110 certified beds were categorized as medium, and large facilities had 111 to 262 certified beds. Due to missing data, the remaining respondents (4.1%) were uncategorized.

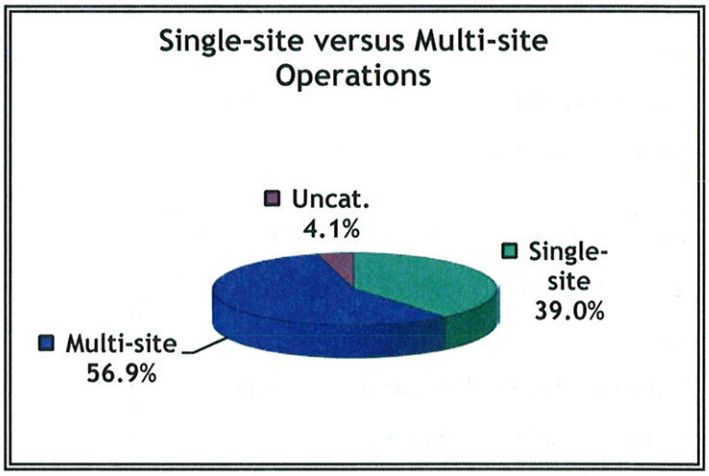


Variation based upon the population density of the county where a facility is located has been noted as important to turnover

[1] Facilities (n = 8) were classified as uncategorized if they were not listed in the NHC database (n = 2) or if the survey was returned without the tracking number assigned (n = 6).



analysis, as facilities in rural areas have lower turnover rates than urban organizations. The U.S. Census Bureau provides a classification based upon the number and size of population clusters in a given county. Metropolitan areas must have at least one urbanized area of 50,000 or more inhabitants. Micropolitan, also known as suburban areas, have at least one urban cluster of 10,000 inhabitants but less than 50,000 inhabitants in the county. Rural counties are counties not meeting one of these two criteria. Just over one third (37.0%) of the responding facilities were located in rural counties and over half (55.6%) were located in metropolitan counties. The remaining respondents (7.4%) were located in micropolitan areas. Seventy-five percent of the 92 counties within the state were included in the surveys returned.



A final categorization allowed a comparison of single-site facilities versus sites that are part of multi-site organizational operations. Nearly 40% of the respondents were from single-site facilities. Multi-site facilities made up over half of the respondents (56.9%). Again, 4.1% of the responding facilities were uncategorized.

Representation of Categories in Response Sample

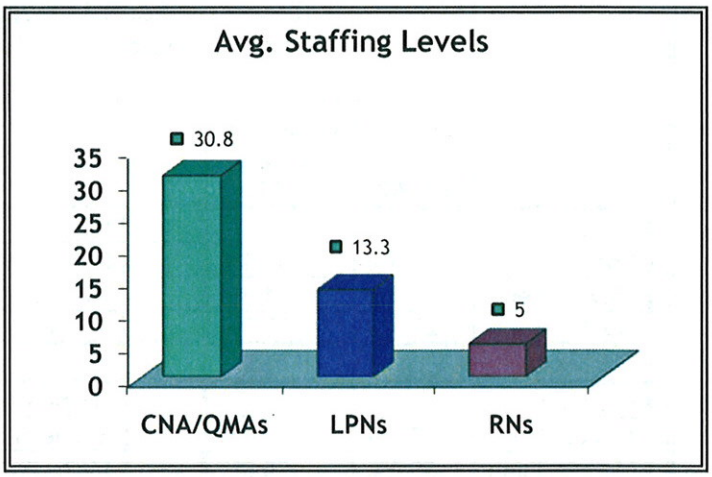
Response Sample Representation of Total Population of Nursing Facilities

	Total Pop. N=502	Response Sample n=195		Total Pop. N=502	Response Sample n=195
Type			Size		
For-profit	68.9%	54.4%	0-70 beds	33.5%	31.8%
Government	4.0%	4.6%	71-110 beds	32.7%	33.3%
Not for-profit	27.1%	36.9%	111 and over beds	33.9%	30.8%
Location			Single vs. multi		
Micropolitan	7.2%	7.4%	Single site	31.9%	39.0%
Metropolotan	56.4%	55.6%	Multi site	68.1%	56.9%
Rural	36.5%	37.0%			

The table above analyzes the representativeness of respondents to facilities identified on the nursing home compare (NHC) website. Information garnered from the NHC website listed 502 facilities operating within the state of IN and served as the foundation for identifying potential respondents in the current survey. The percentage of responding facilities was compared to the percentage of all nursing facilities by category of classification (i.e., size of facility, type of facility, size of county where facility operates, and multi- versus single- site organizational operations). By and large, with a few exceptions, the percentages were similar. The exceptions would then indicate a certain level of caution that needs to be taken in interpreting results. The table above indicates that for-profit organizations were somewhat under-represented in the sample with 54.4% of the returned samples being from for-profit which is less than the 68.9% of all 502 facilities in Indiana that were for-profit organizations. On the other hand non-profit facilities were over-represented by just over 10%. Non-profit organizations were 36.9% of the sample, compared to 27.1% of all 502 facilities that were non-profit. Likewise, multi-site facilities were also under-represented. They included just 56.9% of the response sample compared to 68.1% of the total population of facilities which were multi-site. Naturally, single-site facilities were over-represented by 39.0% compared to 31.9% of the total number of facilities being single-site.

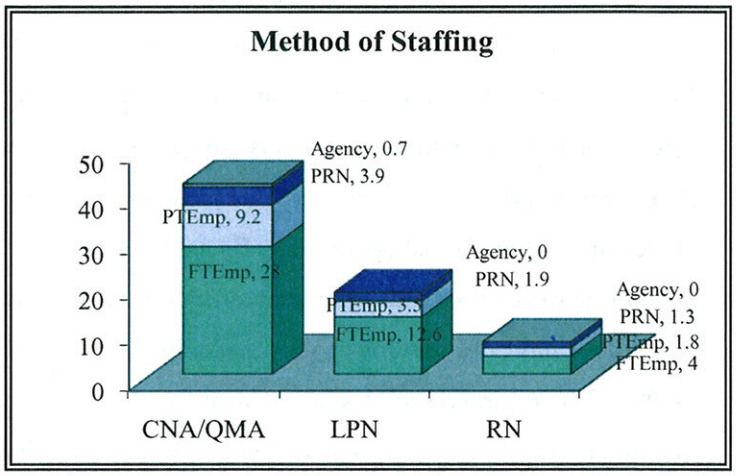
Average Staffing Levels

Survey questions analyzed staffing levels in the nursing home facilities. Survey respondents were asked to determine the number of full time equivalent (FTE) positions across all shifts for each category of health care professional. A comparison of the average number of CNA/QMAs, LPNs, and RNs provided an important perspective on nursing home supervision levels. Overall, facilities reported an average of 30.8 CNA/QMAs, 13.3 LPNs and 5.0 RNs. These figures indicated an average staffing ratio per facility of 2.6 CNA/QMAs for each LPN, 3.8 LPNs for each RN and 12.2 lower level health care workers (CNA/QMAs and LPNs) for each RN.



Method of Staffing

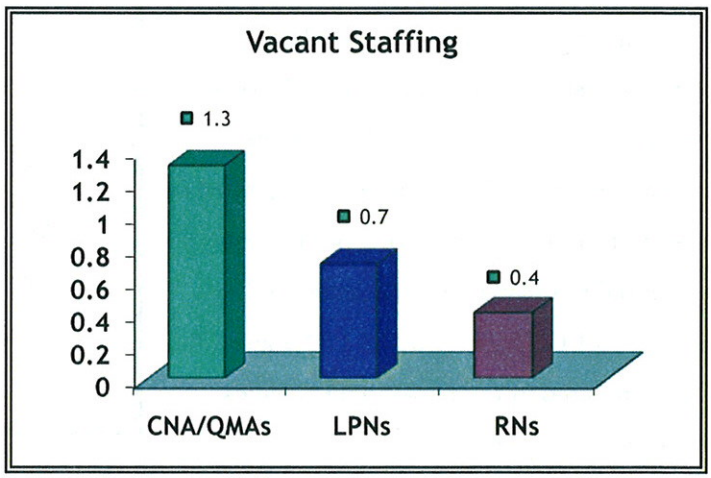
Nursing home facilities use various staffing methods to fill positions. The survey asked participants to report how many positions in each staffing level were filled by full time employees (FTEmp), part time employees (PTEmp), as needed employees (PRN), and staffing agencies (Agency). Facilities staffed their CNA/QMA positions on average using 28.0 FTEmps, 9.2 PTEs, 3.9 PRNs and 0.7 Agency personnel.[2] LPN positions were staffed on average with 12.6 FTEmps, 3.5 PTEs, and 1.9 PRNs. Participants did not indicate that any Agency staffing was used to fill LPN positions. RN positions were staffed on average with 4.0 FTEmp, 1.8 PTE and 1.3 PRNs. As with LPNs, agencies were not used to fill RN positions.



[2] Caution is recommended in interpreting results from estimates of PRN and Agency personnel in this section due to the proportion of missing responses.

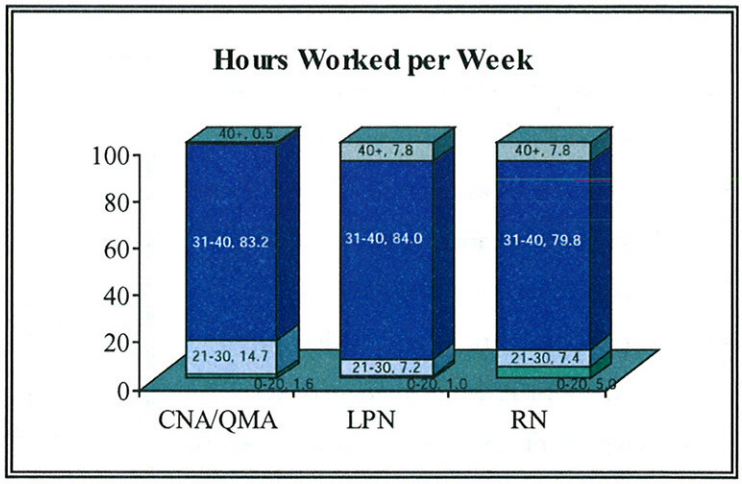
Vacant Staffing

Participants were asked about the number of positions that were currently unfilled or were vacant at the time of the survey. They reported on average that there were 1.3 CNA/QMA positions open, 0.7 LPN positions open and 0.4 RN positions open.



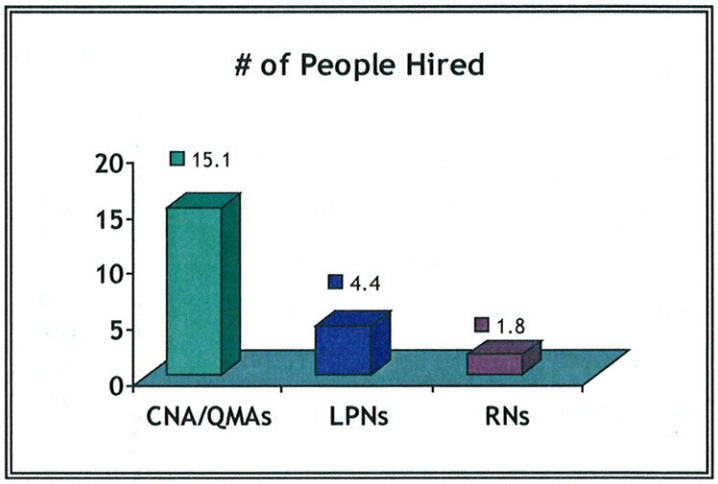
Hours Worked per Week

Respondents provided information about the average number hours worked per week for each position. An average of 1.6% of the CNA/QMAs worked from 0-20 hours per week, 14.7% worked 21-30 hours per week, 83.2% worked 31-40 hours per week, and 0.5% worked over 40 hours per week. Only 1.0% of LPNs worked 0-20 hours per week, 7.2% worked 21-30 hours per week, 83.9% worked 31-40 hours per week, and 7.8% worked over 40 hours per week. In contrast, 5.0% of the RNS worked 0-20 hours per week, 7.4% worked 21-30 hours per week, 79.8% worked 31-40 hours per week, and 7.8% worked over 40 hours per week.



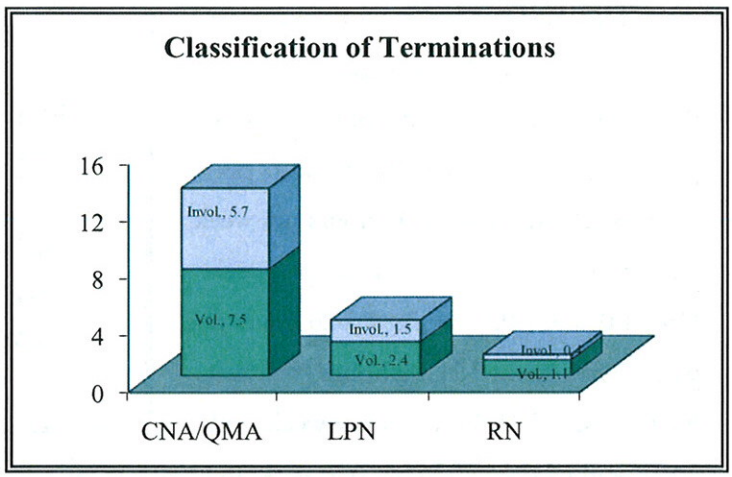
Number of Staff Hired

The number of people hired in the last six months is a statistic used in the calculation of annual turnover rates. It can also indicate instances where positions are not being filled as a result of turnover. Therefore, participants were asked to provide this information. On average, 15.1 CNA/QMAs, 4.4 LPNs and 1.8 RNs were hired in the responding facilities within this time period.



Number of Terminations

Terminations during the last six months were classified as either voluntary or involuntary. For CNA/QMA an average of 7.5 persons left on a voluntary basis and 5.7 left involuntarily. For LPNs, an average of 2.4 persons reportedly left voluntarily and 1.5 left involuntarily. For RNs, an average of 1.1 persons reportedly left voluntarily and 0.4 left involuntarily.



Turnover analysis for frontline health care workers

The first goal of the study was to investigate turnover of health care workers and administrators in nursing home facilities. As expected, turnover rates were relatively high for the frontline health providers. The CNA/QMA category experienced a nearly total annual turnover rate (98.1%). Two out of three LPN's (67.0%) positions were replaced each year and nearly three out of four RNs (74.1%) were replaced each year.

Turnover Rates for Nursing Positions

CNA/QMA	LPN	RN
98.1%	67.0%	74.1%

When turnover rates were broken down by organizational type, modest differences emerged as compared to overall turnover rates. For-profit facilities had higher than average turnover (111.0%) for CNA/QMAs and RNs (78.2%), but average turnover for LPNs (67.1%). While turnover is high for non-profits as well, it was somewhat lower than average for all three positions. Government run facilities had modestly lower than average turnover for CNA/QMAs (76.7%) and RNs (63.6%), but higher than average turnover for LPNs (80.1%).

Turnover by Organizational Type

	CNA/QMA 98.1	LPN 67.0	RN 74.1
Profit	111.0% n=102	67.1% n=102	78.2% n=102
Non-Profit	84.6% n=71	64.1% n=68	71.0% n=65
Gov't	76.7% n=9	80.1% n=9	63.6% n=9

Turnover rates for small, medium, and large organizations also showed differences when compared to the average turnover rates. Though still high, small organizations had lower than average turnover rates for all three positions. (CAN/QMA=96.2%, LPN=59.5%, and RN=68.4%) In contrast, medium organizations experienced slightly higher than average turnover rates for all three positions (CAN/QMA=107.7%, LPN=73.7%, and RN=76.2%). Large organizations experienced slightly lower than average turnover rates for CNA/QMA (92.6%) and RNs (79.8%), but average turnover rates for LPNs (66.1%).

Turnover by Organizational Size

	CNA/QMA 98.1	LPN 67.0	RN 74.1
Small	96.2% n=60	59.5% n=58	68.4% n=58
Medium	107.7% n=63	73.7% n=62	76.2% n=62
Large	92.6% n=59	66.1% n=58	79.8% n=56

Notable differences in turnover rates compared to overall rates are also seen across organizations located in different sized communities. Turnover was lower than average for all three positions in rural areas (CNA/QMA=92.8%, LPN=53.1% and RN=69.5%). The turnover rate in micropolitan organizations was notably lower than average for CNA/QMAs (41.0%) and RNs (51.3), but slightly above average for LPNs (71.3%). Turnover in metropolitan areas was slightly below average for CNA/QMAs (96.6%) but above average for LPNs (71.0%) and RNs (80.4%). However, it should be noted that the number of micropolitan facilities was small, so may be influenced more greatly by measurement variance.

Turnover by Type of Location where Operating

	CNA/QMA 98.1	LPN 67.0	RN 74.1
Rural	92.8% n=66	53.1% n=63	69.5% n=62
Micro	41.0% n=14	51.3% n=14	71.3% n=13
Metro	96.6% n=104	71.0% n=103	80.4% n=102

Turnover Rates Single-Site vrs Multiple-Site

	CNA/QMA 98.1	LPN 67.0	RN 74.1
Single-Site	91.5% n=72	57.9% n=72	66.7% n=72
Multiple-Site	103.9% n=110	72.5% n=106	80.6% n=102

One of the most consistent patterns in turnover rates was found when comparing single-site versus multiple-site organizations. In all frontline health care positions, turnover rates were notably lower for single-site organizations than for multiple-site organizations. Turnover for CNA/QMAs was 12.4% lower for single-site versus multiple-site (91.5% versus 103.9%). Turnover for LPNs was 14.6% lower for single-site versus multiple-site facilities (57.9% versus 72.5%), and turnover for RNs was 13.9% lower for single-site versus multiple-site facilities (66.7% versus 80.6%).

Average Number of Top Facility Administrators & DoNs for the Past 3 Years

Top Admins	DoNs
2.5 Range=1-9 n=175	2.8 Range=1-11 n=169

<u>Turnover analysis for administrators</u>

Calculation of turnover for administrators has commonly been approached differently than turnover for frontline health care providers. Since fewer incumbents are involved, turnover rates for top facility administrators (Admin) and directors of nursing (DoN) are analyzed by simply determining the number of people who have held the position in the recent past (i.e., the last 3 years). Following this convention, on average, responding facilities had 2.5 top

administrators in the previous 3 years and 2.8 DoNs in the previous 3 years. Interestingly, the range in the number of Administrators is from 1 to 9 and the range for DoNs is from 1 to 11 overall, indicating extremely high turnover in some organizations.

Average Number of Facility Administrators & DoNs for Past 3 Years by Agency Types

	Top Admin	DoNs
Profit	2.5 Range=1-9 Median=2 n=84	2.9 Range=1-11 Median=3 n=81
Non-Profit	2.4 Range=1-7 Median=2 n=54	2.5 Range=1-6 Median=2 n=53
Gov't	2.0 Range=1-5 Median=2 n=7	2.0 Range=1-5 Median=1 n=7

Average Number of Facility Administrators & DoNs for Past 3 Years by Facility Size

	Top Admin	DoNs
Small	2.2 Range=1-6 Median=2 n= 56	2.3 Range=1-6 Median=2 n= 55
Medium	2.7 Range=1-9 Median=2 n= 59	2.8 Range=1-11 Median=2 n= 54
Large	2.4 Range=1-7 Median=2 n= 52	3.1 Range=1-8 Median=3 n= 52

Again deviations from overall averages are found for the different organizational categories. In comparison to for-profit (2.5) and non-profit (2.4) facilities, government (2.0) facilities had lower numbers of top administrators for the past 3 years. This same pattern is found for DoNs working in different agency types. For-profit (2.9) and non-profits (2.5) facilities had higher numbers of DoNs for the past 3 years than did government facilities (2.0). It should be noted that since only nine government facilities responded to the survey, caution should be used in interpreting data in this category due to the small sample and potential influence of error variance.

There were more top administrators holding that position in medium-sized facilities (2.7) in the last three years than small (2.2) or large (2.4) facilities. The pattern for the number of DoNs was, however, somewhat different based upon the size of the organization. Large facilities (3.1) had the greatest number of DoNs in the last 3 years, followed closely by medium-sized facilities (2.8). Again, the number of DoNs holding that position was smallest in small organizations (2.3).

There were more top administrators holding that position in facilities located in metropolitan counties (2.8) in the last three years than in micro county (2.4) or rural county (2.4) facilities. Facilities located in metropolitan and micropolitan counties had the same number of DoNs (2.9) for the past 3 years. Facilities located in rural counties had a somewhat smaller average number of DoNs (2.6) in the past 3 years.

More top administrators held that position in multi-site organizations (2.7) than single-site organizations (1.9). The pattern held for DoNs, with 3.0 in multi-site organizations and 2.2 in single-site organizations.

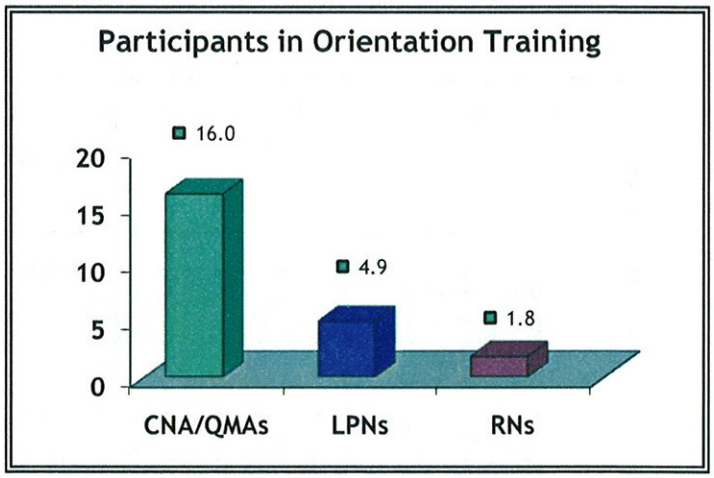
Average Number of Facility Administrators & DoNs for Past 3 Years by Location of Operation

	Top Admin	DoNs
Rural	2.4 Range=1-9 Median=2 n=64	2.6 Range=1-8 Median=2 n=63
Micropolitan	2.4 Range=1-5 Median=3 n=14	2.9 Range=1-7 Median=2.5 n=14
Metropolitan	2.8 Range=1-7 Median=2 n=91	2.9 Range=1-11 Median=2 n=86

Average Number of Facility Administrators & DoNs for Past 3 Years Single-Site versus Multi-Site

	Top Admin	DoNs
Single-Site	1.9 Range=1-6 Median=1 n=51	2.2 Range=1-6 Median=2 n=50
Multi-Site	2.7 Range=1-9 Median=2 n=94	3.0 Range=1-11 Median=3 n=91

Training

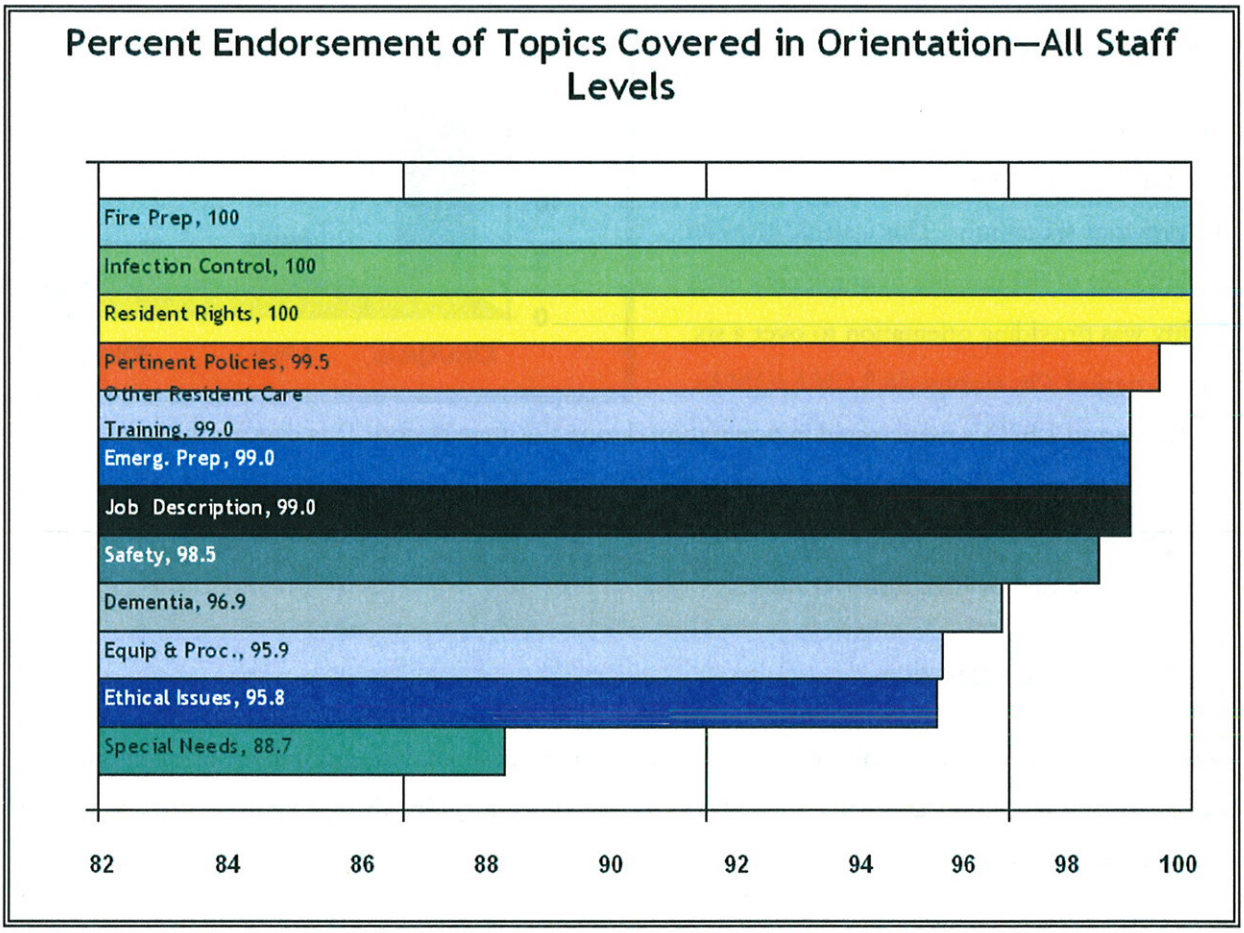


Number in orientation training

Participants were asked to report how many new hires participated in orientation training in the previous six months. This statistic gives an overall view of the number of employees each facility was providing orientation to over a six month period. On average 16.9 CNA/QMAs, 4.9 LPNs and 1.8 RNs participated in orientation during this time period. This data implies that on average, facilities were providing orientation to approximately twice this number of employees per year or every 12 months (e.g., 32 CNA/QMAs, 10 LPNs, and 4 RNs). It provides evidence concerning the burden of orientation caused by high turnover rates.

Topics covered in orientation

Survey respondents were asked to report the training topics covered during employee orientation. All participants in the survey endorsed orientation training which included fire preparation, infection control, and resident rights.



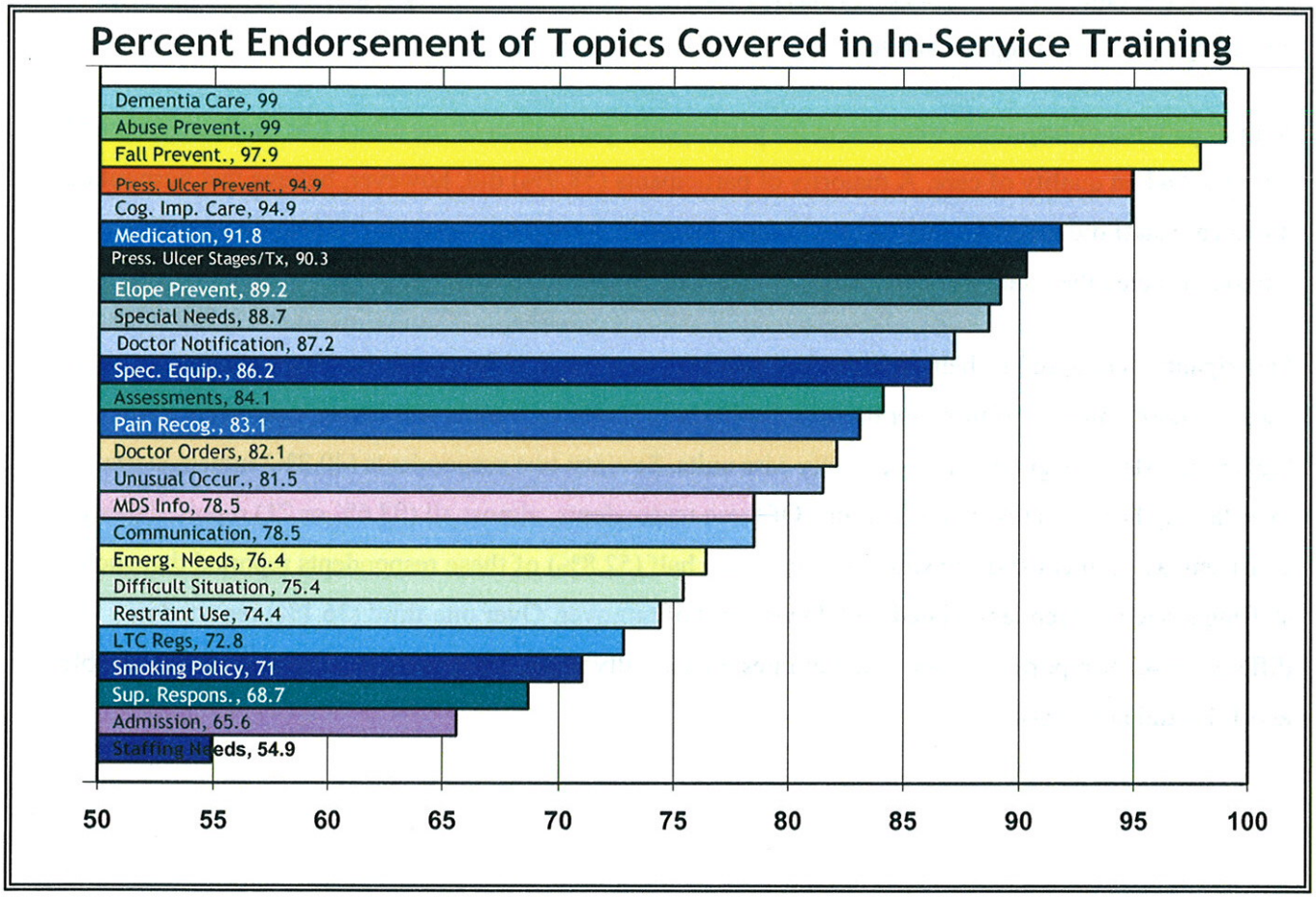
A high percentage (i.e., range of 95% to 99.5%) of the participants indicated that orientation training included topics related to ethical issues (95.8%), equipment and procedures (95.9%), dementia issues (96.9%), safety (98.5%), job descriptions (99.0%), emergency preparation (99.0%), pertinent facility policies (99.5%) and other resident care training (99.0%). There was only one topic identified by survey respondents as being offered in orientation training less than 95% of the time. This topic was special needs. However, almost 9 in 10 of the participants indicated it was part of their orientation training (88.7%).

Hours of Orientation Training

Responses to the question asking for the total number of hours orientation training was offered were highly varied. Although the average number of hours in orientation training was 46.2 hours for CNA/QMAs, the range of time this training occurred was 3.5 to 432 hours. Orientation hours for LPNs was 55.8 hours, with a range of 0 to 320 hours, and 53.6 hours for RNs with a range of 0 to 320 hours.

Topics covered in in-service training

Participants were offered a list of 25 topics often included in annual in-service training for health care professionals working in nursing home facilities. Seven of the topics, dementia care, abuse prevention, fall prevention, pressure ulcer prevention, cognitive impairment care, medication, and pressure ulcer care were included in in-service training at more than 90% of the responding facilities. Another 15 topics were included at more than 70% of responding facilities, with only three topics covered at less than 70% (staffing needs, admission, and supervisor responsibilities).



Perceptions of Relationships of Turnover and Quality of Care

Factors related to quality of care

Participants were asked to indicate their perceptions of important factors affecting quality of care in their industry. Less than half of the participants (47.5%) agreed that recruitment strategies used for direct care staff were a factor in quality of care. However, a smaller percentage (35.0%) disagreed and less than 1 in 5 (17.5%) were undecided.

Factors Related to Quality of Care

	Recruitment	Retention	Turnover	Burnout
Disagree	35.0%	36.5%	36.5%	23.8%
Undecided	17.5%	15.8%	15.6%	17.3%
Agree	47.5%	47.6%	47.5%	58.9%

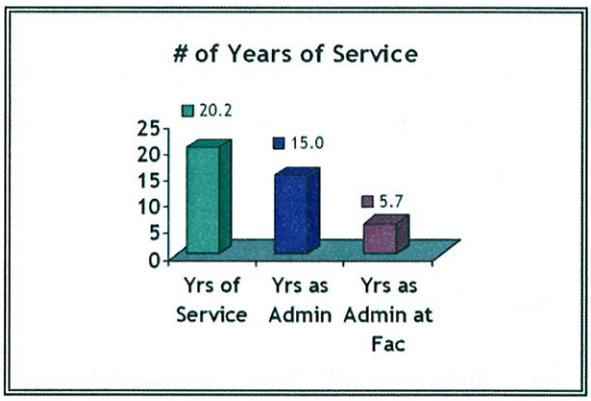
Similar patterns of responses were found for participants' perception of the effect that staff retention and turnover had on quality of care. A majority of participants (58.9%) did, however, believe that burnout of direct care staff did affect quality of care in their facilities. Less than a quarter (23.8%) disagreed that burnout affected the quality of care, and less than 1 in 5 were undecided (17.3%).

Participants were asked if their facilities had specialty care units, if consistent staffing assignments were used on those units and if turnover on their facility's specialty care units was lower, equivalent to or higher than staff assigned to non-specialty care units. Seventy-two respondents (40.2%) indicated that their facility has specialty care programs. Of these respondents, almost all (98.6% or 71) reported using consistent assignment staffing strategies. Just over half (52.8%) of these respondents reported that such staffing strategies were associated with lower rates of turnover. Over one-third (36.1%) reported no difference, 4.2% reported higher turnover rates on specialty units, 5.6% indicated this was not applicable and 1.4% did not respond.

Strategies for Reducing Staff Turnover

An open ended question asked participants to describe measures used in their facility to reduce staff turnover. Many participants (109) described examples of strategies used in their facilities. These responses were categorized by the researchers. A total of 54 of the 109 responses were categorized as "maintain positive relationships and an open door policy." Examples in this category included instituting employee morale programs, giving positive feedback, mentoring new staff, improving recognition programs and celebrating compliments received by the staff from residents. This category, by far, had the highest number of responses. The category with the next highest responses was "enhance compensation and benefits." A total of 13 responses were included under this category. Examples in this category included higher wages, bonuses, tuition reimbursement and flexible work schedules. Other strategies for reducing turnover included items related to offering consistent staffing assignments and improving recruitment and selection.

Years of Service



Finally, participants were asked to report their years of employment in the nursing home industry, years as a nursing home administrator and years as either an administrator or Director of Nursing at their current facility. The average number of years of service in the industry was 20.2; with a range of 0.5 to 47.0 years. Fifty percent of the respondents had worked in the industry twenty years or more. The average number of years as a nursing home administrator was 15.0; with a range of 0.0 (just began working in the position) to 39 years. Half of the respondents had been an administrator for at least 10.5 years. The average number of years at their current facility was 5.7; with a range of 0.0 to 31.0 years. Half of those answering this question had been at their facility more than 2.5 years.

CONCLUSIONS

The results of this study show that staff turnover in Indiana nursing homes is higher than what has been previously reported for each of the direct care categories in Indiana and higher than reported national averages. For example, in one nationwide study based upon over 8,000 facilities, a turnover rate of 64% for Nurses' Assistants was reported. A comparable classification of CNA/QMA in the current survey indicated a turnover rate of 98%. This same nationwide study reported LPN turnover of 43% and RN turnover of 46% versus 67% and 74% respectively for this survey. Evidence, therefore, was provided in this study that indicated high Indiana health care worker turnover, at least in the current sample. In addition, turnover was generally higher in for-profit and multi-site facilities, particularly for CAN/QMAs and RNs. There were also patterns of turnover suggested, with larger organizations having higher levels of turnover than smaller ones. There was also a trend for rural organizations to have lower levels of turnover, particularly for LPNs and RNs.

It was also evidenced in the current sample that facilities are providing training on many appropriate topics, both as part of new employee orientation and also during annual in-service training. Facility administrators and managers are actively implementing a variety of measures to address turnover in their facilities.

NEXT STEPS

This study focused on verifying the rates of turnover and the level of training in nursing home facilities in Indiana. The study was not, however designed to provide a comprehensive analysis of the specific causes of turnover. An analysis of the causes of turnover warrants further attention. It is likely that many solutions aimed at reducing turnover are structural and closely related to labor costs and staffing. Structural changes are closely related to government and insurance reimbursement issues are, in turn, related to governmental policy, Medicare and Medicaid reimbursements, as well as market forces in the industry.

The study indirectly offered qualitative data about the causes of turnover in the question about measures facilities have adopted to reduce turnover. As mentioned above, half of the strategies adopted to reduce turnover related to leadership and personnel management issues. Mentoring, participation in care

planning and morale programs are attempts to improve management and leadership function within the facilities. Education and training in leadership and practices in human resource development and management may be a cost-effective solution to reducing turnover.

Identifying cost effective training methodologies is another critical next step based upon the results of this study. Lack of competency in direct care workers is a logical result of high staff turnover in an industry requiring a high level of critical knowledge and skills. Instability in the work force places a particular burden on experienced health care workers at all levels. Facilities typically rely on experienced workers to provide on-the-job training of new staff workers. Thus, experienced workers' regular duties may be compromised as they attempt to devote ever increasing time and effort to training a steady stream of new employees. Undoubtedly, the training they provide is compromised as well.

One possible solution to this problem may be found in the greater use of high quality, standardized training with valid assessment techniques to insure that learning has taken place. Intranet- and internet-based training uses multimedia techniques and automatic grading systems and have been found to be very effective in training basic skills and knowledge required in lower-skill level workforces. Recent innovations in this technology have introduced very low cost methods of developing and instituting highly specialized training and assessment. The administrative resources required to manage this training technology are also very low. Along with lower costs, such highly effective instruction has the potential to greatly alleviate the dependence on incumbents to provide basic on-the-job training to new staff members. The utility of technology's use in the health care industry generally, and long-term care nursing homes in particular begs further exploration. The potential cost savings in training and improvement in direct care worker competency is very high.

APPENDICES

- Bibliography
- Survey
- Author Biographies

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Survey Instrument

(See following pages)

July 6, 2009

Dear _____

The Indiana State Department of Health (ISDH) is funding a survey to measure staffing needs and turnover in Indiana nursing homes. Staff turnover is a major workforce issue because high turnover can have drastic consequences on availability of services, quality of care, and training costs.

A review of literature indicates that no studies have been performed investigating the relationship between turnover and quality using data within the state. Further, evidence on the association between turnover and supervisory practices in nursing homes, such as training, does not exist within Indiana. The aims of this study are to investigate staffing, turnover rates and training practices in nursing homes in Indiana. Our goal is to identify areas where the state may be able to provide training assistance towards meeting the staffing needs of facilities.

You are being asked to participate in this important survey of licensed Indiana nursing homes. This survey is being conducted by the University of Indianapolis Center for Aging & Community. The survey was mailed to you on July 3, 2009, so you will be receiving it soon. When you receive this document, you will also receive a postage paid envelope to return it to the University. The University will be analyzing the information received and reporting it to the state in aggregate form.

Your responses will provide us with an accurate representation of staffing and turnover in Indiana nursing homes. This is one of several surveys you may receive over the summer addressing staff retention issues. The Provider Associations are also conducting studies on related issues. We encourage you to complete all surveys you receive to help ISDH and the Provider Associations better meet the needs of those we serve.

Thank you for your participation. For more information about the University of Indianapolis Center for Aging & Community, please visit www.uindy.edu/cac. If you have specific questions about this project, please contact Dr. Jacqueline Remondet Wall at jwall@uindy.edu or Jennifer Bachman at bachmanj@uindy.edu .

Terry Whitson
Assistant Commissioner
Indiana State Department of Health

Ellen Miller, Ph.D
Executive Director
Center for Aging & Community
University of Indianapolis

Nursing Home Staffing & Training Study

Indiana State Department of Health

University of Indianapolis, Center for Aging & Community

FACILITY NUMBER _____ (for tracking purposes only)

The following questions apply to current staffing levels within your facility.

Certified Nursing Aides & Qualified Medication Aides (CNA/QMA)

1. **How many full time equivalent (FTE) CNA & QMA *positions* do you currently have in your facility?**
   _____ # of FTE CNA/QMA Positions

2. **How many *people* are used to fill CNA/QMA positions in each of the following staffing categories?**
   _____Full Time ____Part Time
   _____PRN _____Agency Staffing
   _____Other:_____

3. **How many CNA/QMA FTE positions are currently vacant (unfilled)?**
   _____# of Positions Open

4. **What percentage of CNA/QMA hours worked are on overtime pay?**
   _____% Hrs. are OT

5. **On average, how many hours do people in CNA/QMA positions work per week *(circle the estimated range)*?**

   0-10 11-15 16-20 21-25 26-30 31-35 36-40 Over 40

6. **How many people did you hire for CNA/QMA positions during the last 6 months (January 1, 2009-June 30, 2009)?**
   _____ # Hired in the last 6 months

7. **How many CNA/QMA terminations occurred during the last 6 months (January 1 – June 30, 2009)?**
   _____# of Voluntary terminations
   _____# of Involuntary terminations
   _____# of Total terminations

8. **What percentage of the CNA/QMA terminations occurred during their probationary period (1st 90 days)?**
   _____% Voluntary terminations
   _____% Involuntary terminations
   _____% Total terminations

Licensed Practical Nurse (LPN)

9. **How many full time equivalent (FTE) LPN *positions* do you currently have in your facility?**
   _____ # of FTE LPNs Positions

10. **How many *people* are used to fill LPN positions in each of the following staffing categories?**
    _____Full Time _____Part Time
    _____PRN _____Agency Staffing
    _____Other:_____

11. **How many LPN FTE positions are currently vacant (unfilled)?**
    _____# of Positions Open

12. **What percentage of LPN hours worked are on overtime pay?**
    _____% Hrs. are OT

13. **On average, how many hours do people in LPN positions work per week *(circle the estimated range)*?**

    0-10 11-15 16-20 21-25 26-30 31-35 36-40 Over 40

14. **How many people did you hire for LPN positions during the last 6 months (January 1, 2009-June 30, 2009)?** _____ # Hired in the last 6 months

15. How many LPN terminations occurred during the last 6 months (January 1 – June 30, 2009)?

_____# of Voluntary terminations
_____# of Involuntary terminations
_____# of Total terminations

16. What percentage of the LPN terminations occurred during their probationary period (1st 90 days)?

_____% Voluntary terminations
_____% Involuntary terminations
_____% Total terminations

Registered Nurse (RN)

17. How many full time equivalent (FTE) RN *positions* do you currently have in your facility?

_____ # of FTE RNs Positions

18. How many *people* are used to fill RN positions in each of the following staffing categories?

_____Full Time _____Part Time
_____PRN _____Agency Staffing
_____Other:_____

19. How many RN FTE positions are currently vacant (unfilled)?

_____# of Positions Open

20. What percentage of RN hours worked are on overtime pay?

_____% Hrs. are OT

21. On average, how many hours do people in RN positions work per week *(circle the estimated range)*?

0-10 11-15 16-20 21-25 26-30 31-35 36-40 Over 40

22. How many people did you hire for RN positions during the last 6 months (January 1, 2009-June 30, 2009)?

_____ # Hired in the last 6 months

23. How many RN terminations occurred during the last 6 months? (January 1 – June 30, 2009)?

_____# of Voluntary terminations
_____# of Involuntary terminations
_____# of Total terminations

24. What percentage of the RN terminations occurred during their probationary period (1st 90 days)?

_____% Voluntary terminations
_____% Involuntary terminations
_____% Total terminations

Orientation Training and In-service Training for Nursing Staff

25. How many CNA/QMAs participated in orientation training *between January 1, 2009 and June 30, 2009*?

_____ # of Training Participants

26. How many hours of training do CNA/QMAs receive as part of orientation?

_____ Hrs

27. **How many LPNs participated in orientation training *between January 1, 2009 and June 30, 2009*?** _____ # of Training Participants

28. How many hours of training do LPNs receive as part of orientation?

_____ Hrs

29. How many RNs participated in orientation training *between January 1, 2009 and June 30, 2009*?

_____ # of RN Training Participants

30. How many hours of training do RNs receive as part of orientation?

_____ Hrs

31. Which of the following topics are covered in your facility's orientation training for each of the three levels of staff? Please check all that apply.

☐ Job description
___CNA/QMA ___LPN ___RN

☐ Resident Rights
___CNA/QMA ___LPN ___RN

☐ Infection Control
___CNA/QMA ___LPN ___RN

☐ Safety & Accident Prevention
___CNA/QMA ___LPN ___RN

☐ Specific Equipment & Procedure for Job Duties
___CNA/QMA ___LPN ___RN

☐ Pertinent Facility Policies
___CNA/QMA ___LPN ___RN

☐ Ethical Consideration & Confidentiality
___CNA/QMA ___LPN ___RN

☐ Fire Preparedness
___CNA/QMA ___LPN ___RN

☐ All Hazards/Emergency Preparedness
___CNA/QMA ___LPN ___RN

☐ Needs of Specialized Population Served
___CNA/QMA ___LPN ___RN

☐ Dementia care
___CNA/QMA ___LPN ___RN

☐ Other Resident Care Training:
CNA/QMA_____

LPN_____

RN_____

32. During last year, which of the following topics did you make available to staff as part of in-service training?

- ☐ Needs of Specialized Residents
- ☐ Care of Cognitively Impaired
- ☐ Usage of Special Equipment
- ☐ Abuse Prevention
- ☐ Pressure Ulcer Prevention
- ☐ Falls/Accident Prevention
- ☐ Pain Recognition
- ☐ Restraint Usage
- ☐ Elopement Prevention/Missing Residents
- ☐ Communication with Residents/ Families/Staff
- ☐ Dementia Care
- ☐ Smoking Policy
- ☐ Dealing with Difficult Situations
- ☐ Admission Duties
- ☐ Medication Procedure
- ☐ LTC Regulation
- ☐ Physician Orders
- ☐ Supervisory Responsibilities
- ☐ MDS Information
- ☐ Physician Notification
- ☐ Assessments/Treatment Duties
- ☐ Staffing Requirements/Needs
- ☐ Pressure Ulcer Stages/Treatment
- ☐ Investigation of Unusual Occurrence
- ☐ Emergency Supplies/Medication Needs

Administrative Positions

33. Not including you, how many administrators have worked at your facility during the past 3 years?

_____Temporary or interim administrators (who were ***not*** later made permanent)

_____Full time, permanent administrators

_____Total number of administrators (temporary, interim and full time)

34. Not including the current Director of Nursing (DON), how many persons have held a DON position at your facility during the past 3 years?

_____Temporary or interim DON (who were ***not*** later made permanent)

_____Full time, permanent DON

_____Total number of DONs (temporary, interim and full time)

Turnover for Specialty Care Units

35. Does your facility have a dementia or other specialty care unit?

☐ My facility has a dementia care unit.

☐ Other than dementia care, my facility has the following specialty care units:

_____ _____

_____ _____

☐ My facility does not have a dementia or other type of specialty care unit.

36. For specialty care units, does your facility use consistent assignment staffing strategies?

☐ Yes
☐ No

37. What is the relationship between turnover on specialty-care and non-specialty care units in your facility?

☐ Higher turnover in specialty care units
☐ Lower turnover in specialty care units
☐ No difference in turnover
☐ Not applicable

Your Personal Responses

The following items ask about your thoughts on factors related to the quality of care provided in your facility.

38. The ability to recruit capable direct-care staff negatively affects quality of care in my facility.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

39. The ability to retain capable direct-care staff negatively affects quality of care in my facility.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

40. Burnout among direct care staff negatively affects quality of care in my facility.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

41. Turnover of direct-care staff negatively affects quality of care in my facility.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

42. List any effective measures you have introduced to reduce staff turnover.

_____

_____

43. How long have you worked in the nursing home industry?

_____ years

44. How long have you been a nursing home administrator?
_____ years

45. How long have you been a nursing home administrator at this facility?
_____ years

Thank you very much for your participation.

Author Biographies

Jennifer Bachman, M.Ed. is the Senior Projects Director for the Center for Aging & Community, bringing with her 25 years experience leading organizational change and management of non-profits. Her role at the CAC is to secure funding and manage statewide projects that build the capacity of organizations and businesses that work with and advocate for older adults. Prior to joining CAC, Bachman worked for the Alzheimer's Association of Greater Indiana where she managed programs and outreach and also developed research projects that led to national presentations. Bachman earned her master's degree in organizational development from the University of Massachusetts and her bachelor's in sociology from Dickinson College.

Wen-Pin Chang, Ph.D., OTR currently holds the rank of Assistant Professor, College of Health Sciences, University of Indianapolis. He obtained his Bachelor's degree in Occupational Therapy from Kaohsiung Medical University, Taiwan. He earned his MS degree in Occupational Therapy and PhD degree in Education and Human Resource Studies with emphasis in Occupational Therapy from Colorado State University. His areas of interests include electrophysiological (EEG/ERP) research and applied research methods/statistics. He has presented his work at various national and international conferences and published research manuscripts and abstracts.

Ellen W. Miller, Ph.D., PT is the Executive Director of the Center for Aging & Community at the University of Indianapolis and holds the University's DeHaan Endowed Chair in Gerontology. Miller has been with the Center since its inception in 2001, taking on her current role in 2005. As Executive Director, Dr. Miller works to advance the Center's role as educator, consultant, convener and collaborator on issues important to older adults. The Center focuses on establishing effective partnerships between the community and academia, using the expertise of the University to assist with and drive initiatives and research that will solve real world problems and improve the quality of life for older adults. Dr. Miller has also led the Center to a prominent role in gerontology education and training, and has established partnerships with local, state and national aging network organizations.

David G. Wall, Ph.D. currently serves as an internal consultant, developing and delivering multimedia and computer-based training programs for industry. He has recently served as adjunct faculty at the

University of Indianapolis, where he taught in the School of Psychological Sciences and the School for Adult Learning. He has designed and instructed web-based, web-enhanced and face-to-face courses in industrial psychology, organizational leadership, human resources management, and methods/statistics; which capitalize on his experience in industry and his work as a consultant. His organizational consulting experience has been broad, as he has facilitated labor negotiations, developed and implemented systems to select, train, and evaluate employees, designed and implemented employee surveys to assess morale and developed team-based and performance improvement initiatives. He is an OSHA certified trainer in general industry. He obtained a bachelor's degree in industrial engineering from Oklahoma State University. His doctorate degree in industrial/organizational psychology comes from the University of Tulsa, where his dissertation focused on leadership and organizational life cycles.

Jacqueline Remondet Wall, Ph.D., HSPP, CRC currently holds the rank of Associate Professor at the School of Psychological Sciences, University of Indianapolis. In addition to teaching, she serves as the Research Coordinator for the School of Psychological Sciences and the Director of Undergraduate Programs in Psychology. Licensed to practice psychology in the state of Indiana, she is also a certified rehabilitation counselor. Her areas of expertise lie within the realm of training and evaluation, and Dr. Wall's evaluation work has been with a variety of organizations, including those in higher education, human services, health care and industry. Her work has focused on project conceptualization and implementation, and has included survey and scale development, large-scale data analysis, quality improvement initiatives, and outcome evaluation. Her current research interests include assessment of individuals and adaptation and functioning after life change and in late life. Dr. Wall has numerous publications and presentations; she has served as a guest editor for a number of publications and is currently on the editorial board of *Psychological Services*. She received a doctorate degree in industrial/ organizational psychology, where her dissertation work surveyed older employees, assessing their perceptions of control and how this related to their self-assessed work functioning and emotional health. She has also completed a post-doctoral respecialization in clinical psychology and a NIDRR/NIH post-doctoral fellowship with an emphasis in neuropsychology and rehabilitation psychology.