

Nursing Home Quality in New York State

Patricia R. Loubeau Dr. PH.
Iona College
New Rochelle, NY
USA

[Key words: nursing homes, quality of care, competition]

Introduction:

Nursing homes in the United States (US) are essential components of the continuum of health care. About 2.9 million Americans live in nursing homes and an estimated one-half of women and one-third of men will spend some time in one during their lifetimes (Lueck, 2002). The average length of stay of current residents in U.S. nursing homes is 892 days (The National Nursing Home Survey: 1999 Summary).

New York State represents 4% of the total nursing homes and 6.8% of all nursing home beds in the United States (Health, United States, 2003). In New York, the 2000 statewide nursing home occupancy rate was 94.9% (NYAHS), well above the US nursing home occupancy rate of 87% (The National Nursing Home Survey: 1999 Summary). Average New York state nursing homes rates are one of the highest in the U.S. Based on the year 2003 nursing home cost reports, the average yearly cost of care in the northern metropolitan area is \$274 per day or \$100,010 per year and in

New York City the average cost is \$292 per day or \$106,580 per year

(<http://www.nyspltc.org/rates.html>).

There is widespread agreement that the chief objective of these homes is to provide high quality care. However, in a landmark 1986 study by the Institute of Medicine (IOM), *The Quality of Care in Nursing Homes*, it was found that residents of US nursing homes were being abused, neglected and given inadequate care. The IOM proposed sweeping reforms, most of which became law with the passage of the 1987 Nursing Home Reform Act, part of the Omnibus Budget Reconciliation Act 1987. This act established quality standards for nursing homes nationwide, established resident rights, and defined the state survey and certification process to enforce these standards. As a result of the passage of this Act, nursing homes undergo an annual certification process in order to measure their compliance with numerous quality standards. For example, for the first time, nursing homes nationwide were

required to have a registered nurse eight hours per day and twenty-four licensed nurse coverage per day.

In the United States, nursing homes receive Medicare and Medicaid payments for long term care only if they are certified by the state to be in substantial compliance with the Nursing Home Reform Act. The government pays for about 80% of the beds in the nation's homes. In New York State, the Department of Health is under contract with the federal government to conduct these certification surveys. The certification process requires states to conduct unannounced surveys, including resident interviews, at irregular intervals at least once every fifteen months. Facilities can be cited for failure to meet specific standards in 188 areas, each with varying degrees of scope and severity.

Background:

Ten years after the Passage of the 1987 Nursing Home Reform Act, a series of research studies and Senate hearings called attention to continued quality issues

attributed to weaknesses in federal and state survey and enforcement activities. At that time, the Clinton Administration proposed the 1998 Nursing Home Initiative. The Initiative included a series of proposed steps designed to improve enforcement of nursing home quality standards. These actions included staggering nursing home inspections to include weekends and evenings, inspecting homes that are more frequent offenders of standards, changing enforcement activities, and developing a database of nursing home information (now available as the Center for Medicare Services (CMS) Nursing Home Compare database) including a series of 15 quality indicators, that would be made available to the public. Since then, most of these initiatives have been implemented and the measures continue to be refined and tested for validity and reliability.

What key factors impacting U.S. nursing home quality have been identified in research studies? Items such as nursing home nursing staff levels, type of ownership, level of competition between nursing homes, government program reimbursement

rates, particularly payment by state Medicaid programs, and the public availability of nursing home quality “report cards” are all factors that can impact nursing home outcomes. Many of the results from these studies yield inconclusive or conflicting results. The findings are often inconsistent due to disparate methods of defining and measuring quality. As government data sets evolve and quality measures become more refined, the results of these studies may become more definitive.

Levels of nursing home staffing, particularly hours by nursing staff, have continually been identified as an important characteristic of nursing home quality. It is generally believed that more RNs are necessary to ensure the quality of care received by nursing home patients (Bowers, Esmond & Jacobson , 2000; Castle & Fogel, 1998; Davis, 1991; Dellefield, 2000; Harrington, Kovner, Mezey & Kayser-Jones, 2000; Johnson-Pawlson & Infeld, 1996). However, research into the link between nurse staffing hours and quality of care in nursing homes has produced inconsistent and contradictory results (Davis, 1991; Dellefield, 2000; Kovner Mezey

& Harrington, 2000; Sovie, 1996; Wunderlich, Sloan, & Davis, 1996). Such results may arise from differences in conceptual frameworks, methods, data, data quality, and adjustments for case-mix intensity (Weech-Maldonado Meret-Hanke Neff & Mor, 2004). Presently, nursing aides or assistants provide 80 to 90 percent of direct patient care in nursing homes, (Committee on Nursing Home Regulation, 1986).

Adequate numbers of nurse's aides in nursing homes has also been shown to have an impact on quality of nursing home care. (Garland Oyabu & Gipson, 1988; Bowers Esmond & Jacobson, 2000). A recent study by Schnelle, Simmons, Harrington, Cadogan, Garcia and Bates-Jensen (2004) examined twenty-one nursing homes in California and the effect of staffing statistics on care processes. They found differences in quality between homes that report the highest level (upper decile) and the remaining homes. Additional factors such as nursing home case mix and appropriate levels of staffing, nursing staff turnover, job satisfaction, and access to training and administrative support of nursing staff activities may have an impact on

retention of nurses and quality of nursing home care (Anderson, Issel & McDaniel, 1997; Coward Hogan & Duncan, 1995; Kovner Mezey & Harrington, 2000; Rublee, 1986; Halbur 1986). As a result of the findings of the Institute of Medicine study, Sovie (1996) stresses the need for a call to action to generate and support research that will answer critical questions about the relationship of nursing care to quality patient outcomes.

Type of nursing home ownership is also an important factor to consider in evaluating facility quality of care. Studies in this area have also produced mixed results. Some studies (Frank & Salkever, 1994) have shown no significant quality differences on a variety of measures between for-profit and not-for profit nursing homes, while other studies suggest that for-profit facilities deliver poorer care, compared with nonprofit and public facilities (Kanda & Mezey, 1991; Harrington, Woolhandler, Mullan, Carrillo, & Himmelstein, 1991; Aaronson, Zinn, & Rosko, 1994; Spector, Selden, & Cohen, 1998; Davis, 1991). Under certain conditions, it has

been demonstrated by Hirth (1998) that nonprofit nursing home status can serve as a credible signal of quality.

The availability of governmental quality “report cards” may also have an impact on consumer and residents’ perceptions of nursing home quality. Health care report cards publicly report information about physicians, hospitals, nursing home, and health plan quality. One goal of these report cards is to help patients select high quality providers. Experience with report cards in other areas of the US health care system suggests that nursing home quality reports may have a role to play in informing consumers’ choices and providing incentives for quality improvement. A recent study by Mukamel and Spector (2003) suggests that nursing home quality reports may be helpful to consumers, but their impact may be limited by the accuracy of the indicators and the ability of consumers to comprehend the information presented. A study of resident, family and administrator expectations for service quality in nursing homes also showed significant differences between resident and

administrators' expectations on all dimensions of quality (Duffy, Duffy, & Kilbourne, 2001). These expectations of quality may also impact the likelihood of nursing home resident transfers. A recent study of nursing homes in Maine, Mississippi, New York and Ohio by Hirth, Banaszak-Holl, Fries and Turenne (2004) has shown that residents are more likely to transfer out of nursing homes with low quality of care. A study by Stevenson (2005) found that the number of nursing home consumer complaints was significantly predictive of quality care deficiencies identified at survey inspection.

Within the New York State nursing home market, recent studies have indicated a slight decline in statewide nursing home occupancy rates, combined with an increase in more subacute patients, leading to reduced lengths of stay (NYAHS, 2004). National occupancy data point to similar trends. These conditions may have increased the turnover of nursing home residents and the administrative complexity of nursing home markets, leading to significantly increased nursing home administrator turnover within the State during the late 1980s and early 1990s (Angelilli, Gifford,

Shah & Mor, 2001). A series of in-state nursing home quality initiatives were instituted in 2001 in conjunction with the Island Peer Review Organization (IPRO), Medicare's Quality Improvement Organization in New York. In 2004, new data released by CMS indicated that nursing homes in New York State have improved their quality of care provided to residents since 2002 based on an examination of three quality measures: controlling chronic pain, controlling short-stay pain and use of physical restraints (IPRO, 2004). C. Bradley, the chief medical officer for IPRO details that in the areas of improvement of pain management and use of physical restraints, nursing homes working with IPRO are showing significant improvement and exceed national average. In other areas, New York State nursing homes are in poorer condition than homes elsewhere in the country. A recent study by the Long Term Care Community Coalition found that nurse staffing levels in New York nursing homes fall below the national average (Baker, 2005).

OBJECTIVE:

The objective of this study is to compare nursing homes in a large sector of New York State (7 counties) that meet varying levels of quality and isolate those factors that influence this quality. Specifically, the study will examine the relationship between nursing home staffing and nursing home deficiencies to test the hypothesis that fewer staff hours would be associated with higher numbers of deficiencies. The study also looks at the influence of bed size, competition, chain memberships and ownership status on quality.

Methods:

The sample consisted of 186 nursing homes in seven counties (Westchester, Rockland, Bronx, Manhattan, Dutchess, Richmond, and Kings) in New York State. This number represents 27.5% of all nursing homes and 34.8% of all nursing home beds in New York State (Health, United States, 2003). Two nursing homes were excluded from the analysis because they represented highly selective patient populations and the RN staffing variable was in excess of four

standard deviations from the mean. This reduced the analytic sample to 184 nursing homes. Data was obtained from the New York State Department of Health web site (www.health.state.ny.us) and the Medicare website (www.medicare.gov). These uniformly reported data provided for valid comparisons across nursing homes. The Department of Health website contains information on the rating the facility received in its last inspection report, as well as information on facility services, ownership status, state health code deficiencies, and location. The Medicare website contains demographic data as well as information on hours of care per resident per day. The level of area competition was calculated by determining the number of nursing homes within five miles of the zip code of each nursing home.

The dependent variable is nursing home quality as measured by three separate variables: facility rating by the state department of health, total number of state health code deficiencies, and a composite level of harm variable. According to

Davis (1991) deficiencies, certification ratings, and compliance rates function as composite quality indicators. Facility rating indicates the rating, the facility received on its last inspection. The ratings are as follows: in compliance, substantial compliance, corrections needed, significant corrections needed, significant jeopardy and substandard quality of care. The definitions of these ratings are as follows:

- In Compliance - Facility is compliant with all requirements. No deficiencies identified during the survey.
- Substantial Compliance - Facility has very minimal deficiencies that are unlikely to cause harm to residents.
- Corrections Needed - Facility has deficiencies that have the potential to cause harm or compromise the resident's ability to maintain or improve health status.

- Significant Corrections Needed - Facility has deficiencies that have caused actual harm or compromised the resident's ability to maintain or improve health status.
- Substandard Quality of Care - Facility has deficiencies identified in critical care and services areas that are provided by the nursing home.
- Immediate Jeopardy - Facility has deficiencies that have caused or are likely to cause serious harm, injury, impairment, or death if not immediately rectified (www.health.state.ny.us).

The second quality variable is the number of state health code deficiencies and is represented by the raw number of deficiencies each facility incurred as a result of an inspection visit.

The third quality variable is the composite level of harm variable. This variable computes the total level of harm each deficiency has brought to the number

of residents for all the deficiencies cited during the visit. Level of harm of each deficiency depends on whether the deficiency puts a resident in immediate jeopardy, and whether the deficiency is an isolated incident, part of a pattern, or widespread throughout the facility.

The impact of a violation in any area on the quality of resident care varies with the severity of the violation. For example, food contamination has a much more serious effect on resident health than a minor violation of kitchen hygiene.

Collected data also included information on the following nursing home characteristics: number of beds, type of ownership, information on staffing hours per resident, level of competition, whether the facility is free standing or part of an integrated delivery system, and if the facility is certified by Medicare or Medicaid or both. Definitions of the study variables are presented in Table 1. All of the surveys for the nursing homes in the study were conducted between May 1999 and November 2003. Descriptive statistics are presented in Table 2 and 3 and study facility

characteristics compared to all U.S. nursing homes are presented in Table 4. In general, homes in the study tend to be weighted more heavily towards independent homes in the voluntary sector.

Table 1

Variable Definitions

<u>Variable</u>	<u>Definition</u>
Beds	Number of certified beds in the facility.
Services	Number of services the facility provides.
Deficiencies	Number of deficiencies the facility has received during its last inspection.
Composite Level of Harm	Tallies the total number of points the facility has received in Level of Harm for the deficiencies cited in their last inspection.
Competition	Number of nursing homes within five miles of the zip code of each home.
Nursing Staff Hours	Number of nursing staff hours per resident per day.
Registered Nurse Hours	Total number of Registered Nurse staffing hours per resident day.
Licensed Practical Nurse Hours	Total number of Licensed Practical Nurse staffing hours per resident per day.
Certified Nurse Assistant Hours	Total number of Certified Nurse Assistant hours per resident per day.

Table 2

Variables

Means and Standard Deviations

(N=184)

<u>Variable</u>	<u>Mean</u>	<u>Standard Deviation</u>
Beds	230.00	147.00
Services	2.50	1.27
Deficiencies	3.70	3.28
Composite Level of Harm	7.00	6.33
Competition	27.00	19.00
Nursing Staff Hours	3.50	1.22
RN Hours	0.62	0.32
LPN Hours	0.57	0.24
CNA Hours	2.30	1.07

Table 3

2002 Nursing Home Occupancy Rates

New York County	County Geriatric Bed Occupancy
Bronx	96.2%
Dutchess	92.4%
Kings	94.9%
Manhattan	97.5%
Richmond	96.2%
Rockland	95.0%
Westchester	89.6%
Statewide	94.9%

2001 occupancy rate for all U.S. nursing homes was 82.5 percent - Health, United States, 2003.

Table 4

Facility Characteristics

Comparison of Study Nursing Homes with United States Nursing Homes.

<u>Facility Characteristics</u>	<u>Study Homes</u>	<u>United States (1999)*</u>
Ownership		
Proprietary.....	37.6%	66.5%
Voluntary nonprofit.....	48.4%	28.7%
Government and Other.....	12.9%	6.7%
Certification		
Certified		
by Medicare and Medicaid.....	99%	81.8%
by Medicare only.....	0.5%	3.5%
by Medicaid only.....	0.5%	12.0%
not certified.....	0.0%	2.8%
Affiliation		
Chain.....	6.5%	59.9%
Independent.....	92.5%	39.8%

* Jones A. The National Nursing Home Survey: 1999 Summary. National Center for Health Statistics. Vital Health Statistics. 13(152), 2002.

In order to insure maximum reliability and validity, the authors examined the variables for normality. With the exception of the two excluded homes, one hundred percent of the nursing homes had complete data on all study variables and were included in the analysis of this study.

Limitations:

Due to reliance on secondary data, the study was limited to analyzing only the available variables. While the set of variables used is important, it does not contain all potentially important variables. Further, a study of this type did not include risk-adjusted variables. The study was limited to New York State long-term care facilities, and ones located in a large metropolitan statistical measurement area, so generalizations should be made cautiously. New York State nursing homes tend to be more heavily weighted towards independent homes in the nonprofit sector as compared to those in the United States in general. Finally, the data used for this analysis are cross-sectional rather than longitudinal, so that causal antecedents cannot be established.

Principal Findings:

At the time of survey, of the 184 nursing homes in the study, 73 homes were found to be in compliance with the state health code, 2 homes were found to be in substantial compliance, 79 homes had corrections that were needed, and 1 home was in immediate jeopardy of losing its license to operate. Table 5 lists the average number of health deficiencies per home in the study compared to NY State and the U.S.

Table 5

Inspection Results

Average Number of Health Deficiencies in the study – 3.7

Average Number of Health Deficiencies in New York – 4.0*

Average Number of Health Deficiencies in the U.S. – 7.0*

*<http://www.medicare.gov/nhcompare> (accessed 11/17/04)

Contrary to studies in other states (Schnelle, Simmons, Harrington, Cadogan, & Bates-Jensen, 2004) and the general consensus of policy makers and professional organizations, the highest staffed nursing homes did not provide better care than all other homes as measured by their ability to meet state health code standards. This finding remained constant if the staffing variable was measured in terms of RN care, LPN care, CNA care, or total nursing staff hours per resident per day.

In response to financial pressures, nursing homes often increase their reliance on less experienced licensed practical nurses and certified nurse assistants to provide care and reduce RN staffing. This study suggests that there are no quality differences based on staffing. Research into the link between staffing structures and the quality of care in nursing homes continues to produce inconsistent and contradictory results. It is postulated that actual raw numbers of staffing hours may mask a more refined variable of the actual competency of the care providers. Nationally, estimates of nursing staff turnover ranged from 48% to 86% in non-profit nursing homes compared to only 20 to 30% in non-profit hospitals (Serrow, Conwart, Chen, & Speake, 1993). It is well known among nursing home administrators that New York State is no exception to the high turnover among nursing home employees. Further, many nursing home employees may be part-time or per-diem employees. While the actual number of care hours

provided may be satisfactory or even high, the care may be provided by relatively new and inexperienced personnel. These factors would logically lead to greater errors and or production of nursing home care deficiencies. Seniority levels of nursing home staffing would need to be examined in order to validate this supposition.

Further the study did not measure resident acuity variables that may explain and refine the kind and amount of care needed. Direct measures of resident sickness severity are particularly important for this purpose. It is well known that nursing homes have discretionary admission rates for various classes of patients depending on physical limitations, conditions, or payor status. Patient acuity levels can vary significantly among like sized homes.

Interestingly, a study by Stevenson (2005) noted that while consumer complaints were consistently and significantly associated with standard survey quality of care deficiencies (for example, pressure sores), the presence of serious deficiencies, and nurse aide staffing, complaints were not significantly associated with nurse staffing.

There were significant differences between the amount of competition for nursing home care and the quality of care. Paradoxically, all three measures of quality were negatively associated with higher levels of competition. It is conceivable that areas with high concentration of nursing homes may lead to higher levels of staff turnover, as the opportunity for employment

at a competing institution is readily available. Although, there is some debate over the effects of employee turnover on an organization (Halbur & Fears, 1986) a low rate is generally seen as desirable because it increases continuity of care (Garland Oyabu & Gipson, 1988). Higher levels and numbers of nursing home deficiencies may be attributed to higher staff turnover rates as well as higher nursing home administrator turnover, which would not necessarily be reflected in nursing care hours. In other words, nursing care hours may be high but the tenure of the employees may be short and thus relatively inexperienced. Another possible explanation is that the nursing homes located in certain counties such as the Bronx tended to have a greater degree of competition, as well as a higher proportion of Medicaid patients than in other areas. Medicaid patients in general, tend to be sicker than non-Medicaid patients. The work in nursing homes is emotionally and physically demanding and the pay scales allowed within the constraints of Medicaid reimbursement are quite low. Most staff members are paid at lower levels than their acute care counterparts. The result is high turnover rates. It is well-known that excessive turnover of staff, heavy use of part time staff, and the use of float or agency personnel compromise quality care.

Another possible explanation for the findings is that while the vast majority of deficiencies relate to outcome and process measurements directly related to resident care, some

deficiencies relate to categories such as record keeping, administrative procedures, and or personnel policies. While all deficiencies relate ultimately to the quality of care, nurse staffing may have a strong effect of the former but not on the later.

Controlling for case mix would be an important step in further assessing the impact of staffing on quality. Case mix relates to quality in that demands on staff (both numbers and quality) are highly related to the needs of patients. A home with a high case mix index would require higher levels of staffing than a similarly sized home with higher functioning patients. At the risk of oversimplification a facility with a large number of residents who are using the facility for recovery and rehabilitation following an acute hospital stay will require less care than an equal number of residents with multiple chronic conditions and cognitive and functional impairments.

The debate pitting for-profit against nonprofit health care facilities has raged in the US for nearly three decades. A natural inclination is to believe that non-profit healthcare organizations are considered more trustworthy because the concept of profit contradicts the trust relationships required to encourage the provision of high quality care. Ownership can provide a signal to consumers that quality will be delivered in non-profit homes (often affiliated with charitable organizations) as they are less willing to compromise care for the sake of profit. This

analysis revealed no differences between the quality variables in for-profit, nonprofit, and governmental nursing homes. This finding is contrary to a large national study of 1998 nursing homes data performed by Harrington, Woolhandler, Mullon, Carillo, and Himmelstein (2002). It would be expected that for profit ownership of nursing homes would lead to lower quality as staffing expenses would be minimized in order to provide returns to investors. Nursing home characteristics such as the type of ownership and whether the home belonged to a multi-facility system chain as well as the size and number of services provided had no relationship with the quality provided. In order to meet minimal state requirements, for profit homes may have been required to provide minimal staffing levels and meet state health code standards in order to assure operability.

Further, anecdotal data of for profit homes in the New York area indicates that they tend to be smaller "mom and pop" operations that tend to have more stable staff and ownership. This theory is confirmed by the lower than average number of "chain owned" homes in the study.

Further, it has been hypothesized that facility size (number of beds) should be positively associated with quality because the efficiency of operation for larger homes ostensibly attract higher quality personnel and foster wider scope of services. The mean number of beds in the study was 230. There was no significant relationship between size and quality. It is possible that

size is not an appropriate indicator of economies of scale. Economies of scale exist when long-run average costs decline as output increases. As such, patient days may be a better measure of size. As such, occupancy would be an important consideration in size-quality relations.

Conclusions:

The discussion in this article suggest that while state nursing home standards may protect the nursing home residents from poor quality care homes in the study showed no relationship between nursing staffing levels and quality variables. The conclusions are limited to a sample of nursing homes in New York State and the inability to control for staff tenure and case mix.

Future studies should expand the number of homes studied and more importantly the variables studied in an effort to more comprehensively delineate the effects of staffing on quality. The lack of influence of the staffing variables leads to the hypothesis that staffing stability and tenure may be important in influencing quality. This is an important area for future research. Finally, the findings of this study indicate that type of ownership and size had no relationship with quality.

References

- Lueck, S. (2002). Nursing Homes Are Now Graded by Government ---Medicare Web Site Lists Data on Bed Sores and Staff Levels; How to Pick a Quality Facility. Wall Street Journal. Retrieved November 13, 2002, from www.proquest.com
- Jones, A. (2002). The National Nursing Home Survey: 1999 summary. National Center for Health Statistics. *Vital Health Statistics* 13 (152).
- Health, United States. (2003). Table 110. *Nursing Homes, beds, occupancy, and residents, according to geographic division and State: United States, 1995-2001*. P. 303.
- Nursing Home Capacity in New York State: Evidence Strongly Indicates No More Beds are Needed (2000). NYAHS. Retrieved April 14, 2004, from: http://www.nyahsa.org/documents/index_cfm?document
- Estimated Average NYS Nursing Home Rates. Retrieved August 31, 2005 from The Official Home Page of the New York State Partnership for Long-Term Care website: <http://www.nyspltc.org/rates.html>
- Wunderlich, G.S., Sloan, F.A. & Davis, C.K. *Nursing Staff in Hospitals and Nursing Homes: Is It Adequate?* Washington, DC: National Academy Press, 1996.
- Bowers, B.J., Esmond, S., & Jacobson, N. (2000) The relationship between staffing and quality in long-term care facilities: exploring the views of nurse aides. *Journal of Nursing Care Quality*, 14(4), 55-64.
- Castle, N.G. & Fogel, B. Characteristics of nursing homes that are restraint free. *The Gerontologist* 38(2): 181-188.
- Davis, M.A. (1991) On Nursing Home Quality: A Review and Analysis. *Medical Care Review* 48(2): 129-166.
- Dellefield, M.E. PhD, RN. (2000) Nursing homes and quality indicators. *Journal of Gerontological Nursing*, 15-27.

- Harrington, C. Kovner, C., Mezey, M., & Kayser-Jones, J. (2000). Experts recommend minimum nurse staffing standards for nurse facilities in the United States. *Gerontologist*, 40 (1), 5-16.
- Johnson-Pawlson, J. & Infeld, D. (1996). Nurse staffing and quality of care in nursing facilities. *Journal of Gerontological Nursing* 22(8): 36-45.
- Kovner, C., Mezey, M., & Harrington, C. (2000). Research priorities for staffing, case mix, and quality of care in U.S. nursing homes. *Journal of Nursing Scholarship*, 32 (1), 77-81.
- Sovie, M.D. (1996). Nursing Staff in Hospitals and Nursing Homes: Is It Adequate? *Nursing Outlook* 44(2): 100-101.
- Weech-Maldonado, R.W., Hanke, L.M., Neff, M.C., & Mor, V. (2004). Nurse staffing patterns and quality of care in nursing homes. *Health Care Management Review*, 29 (2), 107-116.
- Garland, T.N., Oyabu, N., & Gipson, G.A., (1998). Stayers and leavers: A comparison of nurse assistants employed in nursing homes. *The Journal of Long Term Care Administration*, 16 (4), 23-29.
- Anderson, R.A., Issel, L.M., & McDaniel, R.R. Jr. (1997). Nursing staff turnover in nursing homes: a new look. *Public Administration Quarterly*, 21(1), 69-95.
- Coward, R.T., Hogan, T.L., & Duncan, P. (1995). Job satisfaction of nurses employed in rural and urban long-term care facilities. *Research in Nursing and Health*, 18, 271-284.
- Rublee, D.A. (1986). Predictors of employee turnover in nursing homes. *Journal of Long Term Care Administration*, 5-8.
- Halbur, B.T., & Fears, N.,(1986). Nursing personnel turnover rates turned over: potential positive effects on resident outcomes in nursing homes. *Gerontologist*, 26(1), 70-6.
- Frank, R.G., & Salkever. (1994). Nonprofit Organizations in the Health Sector. *Journal of Economic Perspectives*, 4, 129-144.

- Kanda, K., & Mezey, M. (1991). Registered nurse staffing in Pennsylvania nursing homes: comparison before and after implementation of Medicare's Prospective Payment System. *The Gerontologist* 31(3): 318-324.
- Harrington, C., Woolhandler, S., & Mullan, J., Carillo, H. & Himmelstein, D. (2001). Does investor ownership of nursing homes compromise the quality of care? *American Journal of Public Health*, 91 (9), 1452-55.
- Aaronson, W.E. Zinn, J.S. & Rosko, M.D. (1994) Do For-Profit and Not-for-Profit Nursing Homes Behave Differently? *The Gerontologist* 34(6):775-786
- Hirth, R.A. (1997) Consumer information and competition between nonprofit and for-profit nursing homes. *Journal of Health Economics*, 18, 219-240.
- Mukamel, D.B., & Spector, W.D. PhD. (2003). Quality report cards and nursing home quality. *Gerontologist*, 43, Special Issue II, 58-66.
- Duffy, J.A., Duffy, M., & Kilbourne, W. (1997) Cross National Perceived Service Quality in Long Term Care Facilities. *Journal of Aging Studies*, Vol.11, No.4, 327-336.
- Stevenson, D.G. (2005). Nursing home consumer complaints and their potential role in assessing quality of care. *Medical Care*, 43(2), 102-111.
- Hirth, R.A., Banaszak-Holl, J.C., & Fries, B.E. (2003/2004). Does Quality Influence Consumer Choice of Nursing Homes? Evidence from Nursing Home to Nursing Home Transfers. *Inquiry*, 40(4), 343-361.
- Angelelli, J., Gifford, D., Shah, A, & Mor, V. (2001). External threats and nursing home administrator turnover. *Health Care Management Review*, 26 (3), 52-62.
- New York's Nursing Home Residents Receive Higher Quality Of Care Today Than In 2002. Received February 14, 2005, from the IPRO website: <http://.company.ipro.org/index>

Baker, A. (2005) New York Said to be Lax Inspecting Nursing Homes. *New York Times*, May 16, 2005. ().

New York State Department of Health. Retrieved September 14, 2004, from the NYS Dept. Of Health website: <http://www.health.state.ny.us>

Medicare. Retrieved September 14, 2004, from the Medicare website: <http://www.medicare.gov>

Schnelle, J.F., Simmons, S.F., Harrington, C., Cadogan, M., Garcia, M. & Bates-Jensen, B. (2004). Relationship of nursing home staffing to quality. *Health Services Research*, 39(2), 225-226.

Serrow, W.J., Conwart, M., Chen, Y., & Speake, D.L. (1993). Health Care Corportization and the Employment Condition of Nurses. *Nursing Economics*. September-October: p. 279-291.