How well trained are nursing home administrators? Singh, Douglas A;Shi, Leiyu;Samuels, Michael E;Amidon, Roger L Hospital & Health Services Administration; Spring 1997; 42, 1; ProQuest Central

How Well Trained Are Nursing Home Administrators?

Douglas A. Singh, Ph.D., is Associate Professor, Health Care Management, Andrews University. Leiyu Shi, Dr.P.H., is Chair and Associate Professor, Department of Health Administration, School of Public Health, University of South Carolina. Michael E. Samuels, Dr.P.H., is Associate Professor, Department of Health Administration, School of Public Health, University of South Carolina. Roger L. Amidon, Ph.D., is Professor, Department of Health Administration, School of Public Health, University of South Carolina, and is a Faculty Associate of the College.

Summary

Nursing home administrators represent wide variations in academic training. General educational levels do not seem to affect administrative preparation in key domains of practice—specific academic fields of study are more relevant. Hence, sole emphasis on higher educational requirements for licensure appears to be a misdirected strategy for improving quality of care and enhancing management efficiencies in nursing homes. Educational paradigms studied have strengths and weaknesses in furnishing various job skills. These results are helpful in defining strategic actions for addressing both current deficiencies and future training needs. A specialized long-term care model that incorporates appropriate clinical and business skills is recommended. The roles of continuing education and executive educational offerings also need streamlining. These initiatives would require a joint effort from policymakers, academicians, and practitioners.

Please address correspondence and requests for reprints to Douglas A. Singh, Ph.D., Associate Professor, Health Care Management, School of Business, Andrews University, Berrien Springs, MI 49104.

Nursing homes in the United States are no exception to a changing health-care environment. More stringent federal and state regulations and procedures for monitoring compliance with those regulations, better informed and more demanding consumers, inadequate reimbursement from public sources, a growing trend toward managed care, and a rise in community-based alternatives to institutionalization have made the task of managing nursing homes more complex than ever before. Delivery of quality patient care, client satisfaction, human resource management, fiscal responsibility, and regulatory compliance have become increasingly more challenging. These transformations place a high priority on preparing well-qualified administrators who will be proficient in delivering quality services to a growing elderly population.

Based on responses to a survey questionnaire received from 129 administrators (75 percent of all practicing administrators in South Carolina), this study explores how well prepared nursing home administrators feel in key areas of job responsibility. The influence of various academic paradigms on preparation in key job requisites is pointed out. Implications and recommendations for improving existing training modules are discussed.

Licensure and Training Requirements

Training of nursing home administrators has largely been governed by licensing regulations. The states have been assigned the primary responsibility for specifying minimum qualifications for licensure, and in the absence of uniform standards, the requirements vary from state to state. Most states, however, use the national licensure examination, governed by the National Association of Boards of Examiners for Nursing Home Administrators (NAB), to test basic competencies among entry-level administrators (Brown 1987).

The national exam has been structured around six areas of job responsibility in which nursing home administrators are expected to be competent. These main functional areas of administrative responsibility, referred to as the domains of practice, are: patient care; personnel management; financial management; marketing and public relations; physical-resource management; and laws, regulatory codes, and governing boards (Hayez and Wilets 1986). The six domains, as initially established by means of a role delineation study, define the knowledge and skills "necessary to ensure the adequacy of the quality of care provided" in nursing homes (Schoon and Hayez 1987, p. 15). Since the domains of practice constitute the key areas of operational responsibility for nursing home administrators, these domains provide a logical frame of reference for evaluating the adequacy of the training received by administrators. Upgrading existing training programs and introduction of new training models must also be structured around the domains of practice.

Even though licensure of nursing home administrators dates back to the mid-1960s, regulations favoring a formal post-secondary academic degree are more recent. In 1977, only 6 percent of the states required a bachelor's degree. By 1987, it was required by 50 percent of the states (Allen 1990). The 1987 Omnibus Budget Reconciliation Act (OBRA-87) also established a bachelor's degree as the minimum national standard for licensure. The main intent behind higher educational standards was to address the problem of substandard care in many facilities. By 1994, however, the final administrative rules to ensure compliance with the new law had still not been implemented, and one-third of the states continued to require less than a bachelor's degree to license incoming administrators (NAB 1994).

Literature Review

Past research efforts to study the extent of job preparedness among nursing home administrators have been scanty. To our knowledge, no previous attempt has been made to study training of nursing home administrators in reference to the domains of practice. In an earlier report, Al-Assaf and colleagues (1992) pointed out that no relationship existed between how well nursing home administrators felt prepared for their jobs and their general levels of education.

The Association of University Programs in Health Administration (AUPHA) (see Infeld and Kress 1990) and authors such as Pratt (1993), Pisko (1986), Hiltner and Moore (1986) have provided some general guidelines for improving the overall training of nursing home administrators. None of these studies, however, pinpoint the specific domains that need strengthening either through further training of currently practicing administrators or through changes in academic curricula designed for training prospective administrators.

Methodology

Between March and June 1994, the authors surveyed all the practicing nursing home administrators in South Carolina. Of the 173 questionnaires mailed, 129 (75 percent) were returned after two additional mailings to the non-respondents and a telephone follow-up with those who did not respond to the mailings.

After pretesting the survey instrument, two additional domains, namely quality assurance and family relations, were included in the questionnaire. The additional two domains reflect recent areas of emphasis in the practice of nursing home administration. Incorporation of quality assurance into the new Medicare certification standards mandated under OBRA-87 reflects the growing emphasis being placed on defining and measuring quality in the delivery of healthcare services. Family relations has been named as a key specialty

knowledge area (Infeld and Kress 1995), which merits more attention (Pisko 1986). It is to be noted that addition of these domains only enhances this study; it does not in any way weaken the results.

Administrator characteristics used were age, highest education, major field of study, time elapsed since obtaining the highest academic credential, other academic qualifications, and years of experience as a nursing home administrator. Education was categorized as less than a bachelor's degree, bachelor's degree, and graduate degree. The wide variety of responses for the major field of academic specialization were categorized as: business administration (including management, finance, and public administration); allied business (economics, accounting, personnel management, and other administrative areas); nursing (RN and LPN); health administration (including long-term care administration); health services (pharmacy, social work, gerontology, dietetics, etc.); and miscellaneous (arts, sciences, humanities, law, etc.).

Administrators were asked to rate, on a four-point Likert scale, how well their formal education had prepared them in each of the eight domains of practice: 1 = unprepared, 2 = partially prepared, 3 = prepared, and 4 = well prepared.

Differences between male and female administrators were identified using *t*-tests and chi-square tests of independence. To find the correlates of professional preparation, multiple regression linear models were developed for each domain of practice. The respondents' ratings of preparation in each domain were used as the dependent variable in each model. Administrator characteristics were used as the independent variables.

Many administrators have other qualifications supplementing their main degree. In most cases, their major academic preparation and additional qualifications are in different fields of study. Consequently, a number of administrators have received a broader academic training than what is reflected in their highest educational credential. These additional qualifications were included in the regression models to better evaluate the influence of the specific fields of study on job preparation.

Results

Descriptive Results

Administrator Characteristics

Demographic and professional characteristics of nursing home administrators are presented in Table 1. The most common educational qualification is a bachelor's degree (held by 47.3 percent of the respondents). Graduate degrees are held by 21.7 percent of the administrators, and only 5.4 percent have no formal education beyond high school.

Table 1	
Characteristics of Male and Female Nursing Home Administrators	

	Males $N = 54$	Females $N = 75$	$ \begin{array}{c} \text{All} \\ N = 129 \end{array} $	p-values
Age ¹	45.0	45.7	45.4	.6983
Experience ¹	11.4	7.4	9.1	$.003^{3}$
Education ²	11.4		3.1	$.000^4$
< Bachelor's	11.1%	45.3%	31.0%	.000
Bachelor's	59.3%	38.7%	47.3%	
Graduate	29.6%	16.0%	21.7%	
Major Field of Study ²	29.070	10.070	21.770	$.000^{4}$
<bachelor's< td=""><td></td><td></td><td></td><td>.000</td></bachelor's<>				.000
	1.9%	8.0%	5,4%	
High School				
Business Adm.	3.7%	2.7%	3.1%	
Allied Business	0	1.3%	0.8%	
Nursing	0	26.7%	15.5%	
Health Adm.	0	0	0	
Health Services	0	2.7%	1.6%	
Miscellaneous	5.6%	4.0%	4.7%	
Bachelor's				
Business Adm.	29.6%	9.3%	17.8%	
Allied Business	5.6%	2.7%	3.9%	
Nursing	1.9%	4.0%	3.1%	
Health Adm.	5.6%	2.7%	3.9%	
Health Services	3.7%	5.3%	4.7%	
Miscellaneous	13.0%	14.7%	14.0%	
Graduate				
Business Adm.	7.4%	1.3%	3.9%	
Allied Business	1.9%	1.3%	1.6%	
Nursing	0	0	0	
Health Adm.	7.4%	8.0%	7.8%	
Health Services	1.9%	4.0%	3.1%	
Miscellaneous	11.1%	1.3%	5.4%	
Highest Education	11.170	1.570	5.470	
High School	1.9%	8.0%	5.4%	.1284
Business Adm.	40.7%	13.3%	24.8%	$.000^4$
			6.2%	
Allied Business	7.4%	5.3%		.6304
Nursing	1.9%	30.7%	18.6%	.0004
Health Adm.	13.0%	10.7%	11.6%	.6884
Health Services	5.6%	12.0%	9.3%	.2144
Miscellaneous	29.6%	20.0%	24.0%	.2074

¹vears

The most common fields of training are business administration (24.8 percent), miscellaneous (24.0 percent), nursing (18.6 percent), and health administration (11.6 percent), in that order. Among administrators who have more than a high school education, 32.8 percent have additional academic

²proportion of administrators in each category

³t-test

⁴chi-square test of independence

qualifications. A large proportion (92 percent) of these administrators have their main concentration and additional qualifications in different academic fields. Over half of the administrators had received their formal education more than 15 years ago.

The number of females exceed the number of males in the sample by a ratio of 1.4 to 1. Compared to females, males have a mean of four years of additional experience (t = 3.03; p = .003) and have higher levels of formal education ($\chi^2 = 17.36$; df = 2; p = .000). Male and female administrators have acquired different sets of skills through their academic training ($\chi^2 = 26.12$; df = 5; p = .000). Males more commonly have pursued a business degree (40.7 percent of males compared to 13.3 percent of females). Females have more commonly pursued training in nursing (30.7 percent of females compared to 1.9 percent of males).

Adequacy of preparation

Mean self-ratings are shown in Table 2. Based on their formal education, the nursing home administrators in the sample consider themselves adequately prepared (mean rating ≈ 3.0) in the domains of personnel management (mean rating = 2.99), patient care (mean rating = 2.95), and family relations (mean score = 2.92). Over two-thirds feel adequately prepared (self-ratings of 3 and 4) in each of these domains (Table 3, Figure 1).

Domains in which administrators feel the least prepared are physical resource management (mean rating = 2.56) and laws/regulations/governing boards (mean rating = 2.61) (Table 2). Also, the least number feel adequately prepared in physical resource management (52.1 percent feel prepared), followed by financial management (54.1 percent feel prepared) (Table 3, Figure 1).

Male and female administrators expressed significant differences about their skill levels in patient care (t = -2.87; p = .005), financial management

Table 2
Differences in Mean Ratings for Self-Perceived Preparation Between Male and Female Administrators

Domains of Practice	Males	Females	All	p-values
Patient care	2.63	3.19	2.95	.005
Personnel management	3.10	2.91	2.99	.226
Financial management	3.15	2.37	2.70	.000
Marketing/public relations	2.87	2.59	2.70	.085
Physical resource management	2.81	2.38	2.56	.008
Laws/regulations/governing boards	2.73	2.51	2.61	.239
Quality assurance	2.63	2.70	2.67	.711
Family relations	2.88	2.94	2.92	.754

Rating values: 1 = unprepared; 2 = partially prepared; 3 = prepared; 4 = well-prepared

 $\begin{tabular}{ll} Table 3 \\ Proportion of Male and Female Administrators Who Feel Adequately Prepared in the Domains of Practice \\ \end{tabular}$

	Proportion of Administrators					
Domains of Practice	Males	Females	All			
Patient care	58.5%	72.4%	66.7%			
Personnel management	80.8%	67.2%	72.9%			
Financial management	78.9%	35.7%	54.1%			
Marketing/public relations	63.4%	54.3%	58.2%			
Physical resource management	63.5%	43.5%	52.1%			
Laws/regulations/governing boards	67.3%	55.7%	60.7%			
Quality assurance	55.8%	61.4%	59.0%			
Family relations	71.1%	71.5%	71.3%			

Adequate preparation is indicated by responses as "prepared" (rating = 3) or "well-prepared" (rating = 4)

(t=4.80; p=.000), and physical resource management (t=2.69; p=.008). Compared to 72.4 percent of females, 58.5 percent of males feel adequately prepared in patient care. However, 78.9 percent of males compared to only 35.7 percent of females feel adequately prepared in financial management. In physical resource management, 63.5 percent of males and 43.5 percent of females feel adequately prepared.

Gauging from the number of respondents expressing unpreparedness, laws/regulations/governing boards appears to be the most deficient area because the greatest number of administrators (18.9 percent) reported that they were unprepared in this domain (Table 4, Figure 2). Other domains in which administrators feel unprepared are patient care (14.2 percent feel unprepared), quality assurance (13.1 percent feel unprepared), family relations (13.1 percent feel unprepared), and physical resource management (11.6 percent feel unprepared).

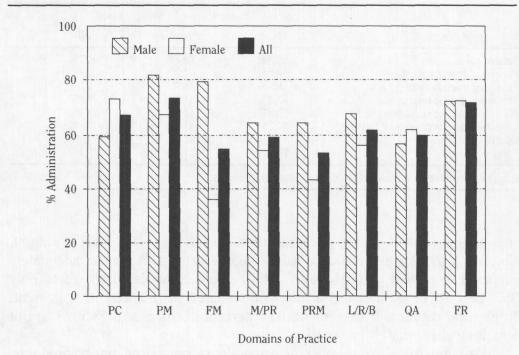
Males mostly feel unprepared in patient care (19.6 percent) and family relations (17.3 percent). In the remaining domains, more females than males indicated inadequate preparation.

Influence of Academic Training on Preparation

General levels of education do not show a significant correlation with preparation in any of the domains of practice. The specific academic fields in which administrators have specialized appear to be more relevant.

The regression models (Table 5) for laws/regulations/governing boards and family relations are statistically insignificant (p>.10), and cannot be used for drawing any meaningful conclusions. The model for personnel management is considered marginally significant (p=.08). In the remaining five domains, significant (p<.05) training models for administrative preparation were obtained.

Figure 1 Percentage of Male and Female Administrators Who Feel Adequately Prepared in the Domains of Practice



A degree in business administration, which is most common among male administrators, is positively associated with preparation in financial management, but does not appear significant for the other business-oriented domains, such as personnel management, marketing/public relations, and physical resource management. Training in allied business fields (economics, accounting, and certain specialized administrative areas other than healthcare administration) is positively associated with skills in personnel management, but it is negatively associated with patient care management.

Training in nursing, which is most common among female administrators, shows the largest number of significant associations. It is positively correlated with preparation in clinical domains (patient care and quality assurance), but negatively correlated with most business-oriented domains (financial management, marketing/public relations, and physical-resource management).

Positive associations between health administration and the domains of personnel management, financial management, and quality assurance suggest that training in health administration may furnish more balanced skills in clinical coordination and business management relevant to nursing home

Table 4
Proportion of Male and Female Administrators Who Feel Unprepared in the Domains of Practice

	Proportion of Administrators					
Domains of Practice	Males	Females	All			
Patient care	19.6%	10.1%	14.2%			
Personnel management	1.9%	4.3%	3.3%			
Financial management	3.8%	14.3%	9.8%			
Marketing/public relations	5.8%	10.0%	8.2%			
Physical resource management	7.7%	14.5%	11.6%			
Laws/regulations/governing boards	13.5%	22.9%	18.9%			
Quality assurance	9.6%	15.7%	13.1%			
Family relations	17.3%	10.0%	13.1%			

administration. This academic model, however, also does not seem to address some of the key domains.

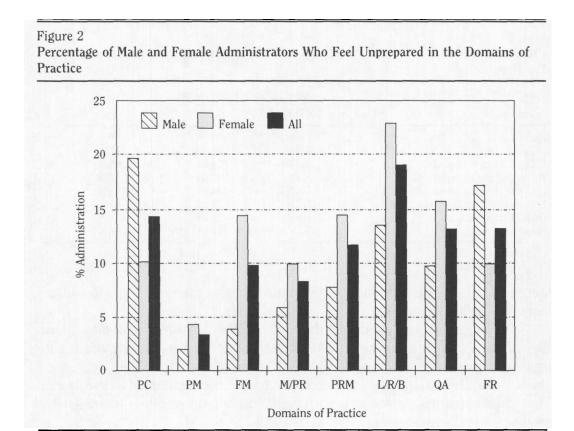
When age is also included in the model, time elapsed since obtaining the educational credentials seems to negatively influence perceptions about adequacy in financial management. Similarly, experience is negatively correlated with preparation in quality assurance, given that age is included in the model. Age is also positively associated with skills in physical resource management and personnel management.

Two of the training models studied, namely health services (pharmacy, social work, gerontology, dietetics, etc.), and miscellaneous (arts, sciences, humanities, law, etc.) show no influence, either positive or negative, on any of the job-related skills. Also, domains not positively addressed by any of the training paradigms are marketing/public relations, physical resource management, laws/regulations/governing boards, and family relations.

Discussion

Even though 69 percent of the nursing home administrators in the sample hold bachelor's and higher degrees, a college degree in itself seems inadequate for furnishing job-related skills. This conclusion corroborates the earlier finding of Al-Assaf, Taylor, and Langston (1992). The results have important implications for regulatory initiatives that have primarily emphasized higher levels of general education as a means for improving quality of services in nursing homes. Results of this study suggest that policies that only emphasize higher educational credentials are unlikely to improve either the quality of patient care or the efficiency of overall management in nursing homes.

Clinical coordination skills aimed at improving the quality of care are better acquired through formal training in nursing. There is additional evidence



that facilities run by administrators who have acquired formal training in nursing receive fewer deficiencies on annual certification inspections (Singh et al. 1996). Because certification inspections measure compliance in several service areas—including nursing, dietary services, social services, cleanliness, plant maintenance, safety, and recreational programs—administrators having a nursing background seem to do a better overall job in providing quality services. However, nursing education alone would leave serious weaknesses in businessrelated skills.

It is not surprising that business administration and health administration programs are strong in providing financial management skills. A general business model, however, seems irrelevant for the other domains in nursing home administration. A more specialized health administration model seems to furnish additional administrative and clinical skills and appears to be notably superior among the various educational paradigms studied.

Since nursing home administrators are required to perform a broad range of management tasks, no single paradigm appears to adequately furnish all the main skills nursing home administrators need for maximum effectiveness. Our results suggest that a specially tailored model in long-term care administration,

Table 5
Correlates of Self-Perceived Job Preparation

Multiple Regression Models

Dependent Variables: Self-perceived scores in the domains of practice

Independent Variables: age, educational level, number of years since graduation, experience, and fields of study (business administration, allied business, nursing, health administration, health services, miscellaneous)

	PC	PM	FM	M/PR	PRM	L/R/B	QA	FR
N	111	113	113	113	112	113	112	113
Adj. R ²	.30	.06	.33	.12	.11	.01	.14	.01
F	5.8	1.7	6.6	2.5	2.4	1.1	2.8	1.2
<i>p</i> -value	.000	.080	.000	.009	.012	.367	.004	.322
Age	.00	.35***	.38***	.09	.28**	.17	.31**	08
Educational level	11	24	13	.01	.04	06	03	.01
Years since graduation	03	13	27**	03	.10	.00	.05	.08
Experience	08	.06	.02	07	.03	21	23**	06
Major Fields of Study								
Business Adm.	17	.14	.26**	04	.06	05	.07	13
Allied Business	21**	.18*	.09	.02	16	.11	03	18
Nursing	.39***	16	49***	41***	28**	06	.24**	.11
Health Adm.	02	.28**	.25**	.14	.18	.22	.26**	.01
Health Services	.09	.05	.05	.02	04	.03	.09	.01
Miscellaneous	.09	.07	11	.07	05	.03	.14	.14

Note: The table shows standardized (beta) regression coefficients.

Levels of significance are indicated as: *** $p \le .01$; ** $p \le .05$; * $p \le .10$

PC = patient care; PM = personnel management; FM = financial management; M/PR = marketing/public relations; PRM = physical resource management; L/R/B = laws/regulations/governing boards; QA = quality assurance; FR = family relations.

borrowing specific strengths from the disciplines discussed above, and incorporating additional skill factors, would more successfully address the expanding need for well-trained nursing home administrators.

Implications and Recommendations

The overall educational qualifications of nursing home administrators have improved significantly from what they were a few years ago (see Al-Assaf, Taylor and Langston 1992 and Al-Assef, Wilson and Batchelor 1992 for earlier educational profiles). This improvement has come about in response to regulatory requirements (South Carolina has required a bachelor's degree since 1980), and perhaps also due to recognition by industry practitioners that anything less than a college degree was not adequate for the increasingly complex administrative responsibilities. However, since licensure policies provide the entry ticket to the profession, to a large extent they govern the type of skills future nursing home administrators are likely to have.

Unless the issue of training is addressed within the context of the domains considered necessary for practice, attempts at improving the quality of care and operational management of nursing homes are going to remain haphazard. Utilization of the domains must extend beyond their current function of defining the major components for the national licensure examination. They must be used for evaluating the content of existing training programs, for refining existing programs and developing new ones, for reforming licensure standards, and for further research into the training needs of administrators. Efforts in these areas would be more fruitful if they were deliberated jointly by policymakers, the NAB, researchers, academicians, and practitioners. Organizations representing the nursing home industry, such as the American Health Care Association and the American Association of Homes and Services for the Aging, and organizations having a vested interest in professional growth among practicing administrators, such as the American College of Health Care Administrators (ACHCA) and the American College of Healthcare Executives (ACHE), should actively participate in the process of standardization and training enhancement.

The following recommendations are offered to help improve future training of both aspiring and currently practicing administrators:

- Licensing policies must shift attention from requiring a bachelor's degree in any academic discipline to a more specific degree specially designed to furnish skills in long-term care administration.
- Academic programs in health administration, aimed at preparing students to specialize in long-term care administration, should provide increased emphasis in patient care, laws/regulations/governing boards, family relations, physical resource management, and marketing/public relations.
- The pivotal role of the nursing paradigm in furnishing skills in patient care suggests that programs in long-term care administration need to incorporate a strong component in gerontological nursing and clinical monitoring skills.
- Administrators trained as nurses appear to be better prepared to carry out the primary mission of a nursing facility, which is maintaining high standards of patient care. Such administrators would be highly desirable provided their deficiencies in business skills could be remedied through appropriate training. Executive educational offerings structured to provide skills in financial management, personnel management, marketing/public relations, and overall organizational management could fill this gap.

Continuing education credits are required for license renewal in most states as a means for maintaining up-to-date skills. However, continuing education could also be used as an avenue to improve skills that administrators feel were not given adequate attention in their basic education. To be effective, continuing education programs should be streamlined to offer more systematic remedial training focusing on the domains of practice.

Conclusion

Licensing standards requiring nonspecific educational credentials have resulted in wide variations in the types of training nursing home administrators have acquired. At the same time, the job of nursing home administrators has become more complex and specialized. In the pursuit of higher quality, some standardization has been achieved in defining the key skill domains. Although these domains have been adopted for testing prospective nursing home administrators, they do not appear to have been adequately incorporated into academic and professional training models.

Training in the key domains can be best accomplished through a variety of strategic efforts, which should target both licensed and license-seeking candidates. Interpretation of the results within the context of the domains of practice specific to long-term care administration point to a need for specialized academic programs in long-term care administration. Therefore, health administration offerings need to provide specialization options, integrating a balanced focus on all the domains in long-term care administration. Specialized training in long-term care should include gerontological nursing as a key pedagogic component. Nurses who are motivated to pursue long-term care administration as a career should be provided training opportunities through well-structured executive programs. Continuing education offerings in the meantime can fill some of the gaps, provided the programs are appropriately structured around the domains that practicing nursing home administrators feel deficient in.

Policymakers and academicians need to initiate changes now in order to meet future anticipated demand for well-trained administrators due to the changing demographics in our society. Achievement of such objectives would require coordinated efforts from the various stakeholders.

In addition to basic college education, several states require some further coursework in long-term care, although the extent of such coursework is limited in scope and duration. Other licensure requirements may include an administrative internship (also referred to as a practicum or administrator-intraining) with an experienced preceptor. Also, some of the large nursing home corporations conduct internal training programs for their own administrators.

The impact of these additional training avenues could not be evaluated in this study.

Because this study is based on data from a single state, it has some inherent limitations in that respect. The educational makeup of administrators in other states is likely to be somewhat different depending on the licensure requirements in each state. However, because the practice of nursing home administration itself does not vary, strengths and weaknesses of each educational paradigm would be generalizable.

Acknowledgments

This study was supported by a grant from the Department of Health and Human Services, Bureau of Health Professions, Health Resources and Services Administration. The authors also wish to thank all the administrators in South Carolina who took the time to respond to make this study possible.

References

- Al-Assaf, A. F., T. L. Taylor, and R. Langston. 1992. "Management Preparedness Criteria: A Study of Nursing Home Administrators." *Health Care Supervisor* 10 (3): 12–27.
- Al-Assef, A. F., C. N. Wilson, and D. M. Batchelor. 1992. "Do Nursing Home Administrators Need More Training?" *Nursing Homes* 41 (6) 29–32.
- Allen, J. E. 1990. "National Standards for the Licensure of Nursing Home Administrators; What Should Be Sought?" *The Gerontologist* 30 (5): 650–57.
- Brown, G. D. 1987. "The Role Delineation Study: Implications for Professional Certification." *The Journal of Long-Term Care Administration* 15 (3): 19–21.
- Hayez, S. K., and I. Wilets. 1986. "A Report on the Role Delineation Study for the National Association of Boards of Examiners for Nursing Home Administrators Licensing Examination." (Available from The Professional Examination Service, 475 Riverside Drive, New York, NY 10115).
- Hiltner, J., and J. R. Moore. 1986. "The Training of Nursing Home Administrators: a University-facility Experience." *The Journal of Long-Term Care Administration* 14 (2): 19–22.
- Infeld, D. L., and J. R. Kress. 1990. "Management Excellence: Agenda for the 1990s." The Journal of Long-Term Care Administration 18 (1): 4–9.
- ———. 1995. Cases in Long-Term Care Management—Volume II: Leadership Challenges in Managing Change. Ann Arbor, MI: Health Administration Press/AUPHA Press.
- National Association of Boards of Examiners for Nursing Home Administrators. 1994. U.S. Colleges and Universities Offering a Curriculum in Long-Term Care Administration and State Board Licensure Requirements for Nursing Home Administrators. Washington, D.C.: NAB.
- Omnibus Budget Reconciliation Act (OBRA). 1987. U.S. Congress, Public Law 100-203.

- Pisko, L. 1986. "Long-Term Care Administrators: Meeting Their Educational Needs." *Dimensions in Health Service* 63 (8): 23–24, 26.
- Pratt, J. R. 1993. "Management Skills for Tomorrow's Nursing Home Administrator." *Nursing Homes* 42 (3): 6–8.
- Schoon, C. G., and S. K. Hayez. 1987. "The Entry-Level Role of Nursing Home Administrators." *The Journal of Long-Term Care Administration* 15 (3): 15–19.
- Singh, D. A., R. L. Amidon, Leiyu Shi, and M. E. Samuels. 1996. "Predictors of Quality of Care in Nursing Facilities." *Journal of Long-Term Care Administration* 24 (3): 18–22, in press.

This article, submitted to the Journal October 4, 1995, was revised and accepted for publication July 23, 1996.