Career Paths of Geriatric Nurse Practitioners Employed in Nursing Homes

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Synopsis

The career paths of geriatric nurse practitioners (GNPs) trained with support from the W. K. Kellogg Foundation through the Mountain States Health Corporation (MSHC) were studied. Under this program, GNPs were recruited from sponsoring nursing homes and returned to GNP positions in the sponsoring facilities following training. Training was carried out under a continuing education model offered through six university-based schools of nursing.

Questionnaires were sent to the 111 GNPs trained. Of the 102 respondents, 97 provided complete information about past and present education, work experience, and job functions. The GNPs were women with a median age of 45 years, and they were employed in rural settings in the western United States. More than 45 percent of the nurses had at least a baccalaureate degree at the time of GNP training.

The GNPs remained employed in long-term care positions that implemented the practitioner role. The median length of GNP employment in their first jobs after training was more than 4.5 years. The resignation rate from this first position was 1.66 resignations for each 10 years of GNP employment. Job changes were likely to be attributed to organizational changes with subsequent positions shifting toward a diversification of the GNP role. The study demonstrates the success of the MSHC program in introducing and retaining GNPs in nursing homes.

CARE FOR THE ELDERLY will create demands for health care personnel in the coming decades. A recent report has estimated increased demands for nursing personnel providing health care for the elderly in nursing homes and in community and public health settings (*1*). These projections are made because of a declining pool of applicants for nursing programs and fewer men and women choosing nursing as a career (*2*).

There is a special need for registered nurses whose specialized practice is in the area of geriatrics. There are currently about 750 geriatric nurse specialists in the United States compared with a projected need for 25,000 geriatric nurse specialists in the year 2020 (*3*).

Geriatric Nurse Practitioner

The geriatric nurse practitioner (GNP) is one such nurse specialist employed in long-term care. While the role of nurse practitioner originated around 1965, the GNP has emerged only in the past decade. Within long-term care settings, the GNP functions as a primary health care provider, performing medical management as well as a broad range of activities which include consultation referral, assessment diagnosis, therapy, and preventive health care (*4,5*).

The preparation of GNPs has been conducted under two distinct models: continuing education and graduate education. Previous works have de-

scribed each of these educational models in some detail (*6,7*). Continuing education programs have been instrumental in preparing nurses for employment with underserved populations, for example, the elderly and rural populations (*7*). GNPs trained through continuing education programs have been more involved in direct patient care management (*8*). Academic preparation through graduate programs has prepared the GNP for faculty positions and clinical research positions, as well as for clinical practice.

Several studies described the benefits of GNPs to nursing home residents. In an early study, the functional outcome measures for nursing home residents were significantly greater for services from teams that included a nurse practitioner than for those residents receiving only physicians' services (*9*). This same study showed savings that offset the costs of providing combined care. In a study of the Urban Medical Group in Boston, similar savings were observed as a result of improved care (*10*). A recent study of the academic nursing home—an integrated program of care, research, and education as found in the Sepulveda Veterans Administration Nursing Home Care Unit—demonstrated that care provided by GNPs, working with an interdisciplinary team, significantly reduced transfers to acute care hospitals and improved resident's functional status and satisfaction (*11*).

The benefits of the GNP in providing long-term care services, along with projections for increased demands for nurse specialists in geriatrics, evince the need for the preparation and retention of GNPs. This paper describes the career patterns of nurses trained through continuing education for the GNP role in nursing homes and explores patterns of retention in long-term care.

Retention of GNPs in Long-Term Care

No previous studies have explored the question of retention of GNPs in long-term care and the factors that predict retention. The few studies that assessed the retention of personnel in long-term care have limited their investigations to nonprofessional staff and nursing personnel excluding GNPs. An early study of the effects of nursing home conditions on job retention among nursing personnel concluded that differences in personnel benefits accounted for the differential retention between nursing personnel in proprietary and nonproprietary homes (*12*). Cotler and Kane (*13*) looked at issues attracting nurses to work in nursing homes and factors associated with job change. A high level of satisfaction was found among nurses employed in skilled nursing facilities (SNF) compared with nurses employed in other settings. The nurses employed in SNFs were no more likely to report an intention to quit their jobs than hospital nurses.

The most recent assessment of personnel retention is limited to all licensed nursing personnel employed in long-term care (*3*). The National Nursing Home Survey (NNHS) included a sample survey of 2,672 nurses employed in nursing homes in the 48 contiguous States. Forty-five factors important to job retention were analyzed through the Nursing Staff Questionnaire. Among the factors analyzed, the benefits provided by the nursing home and salary-related factors were judged as most critical to retention. Consistent with an earlier study (*12*), retention was highest among nurses employed in nonprofit (government owned) facilities, but no specific findings are presented for geriatric nurse specialists of GNPs.

Project Description

GNP training under Mountain States Health Corporation. Between 1976 and 1986, with funding from the W. K. Kellogg Foundation, Mountain States Health Corporation (MSHC) in Boise, ID, recruited nurses employed by nursing homes for training as GNPs and continued employment in their sponsoring long-term care institutions (*14*).

As a condition for acceptance into the GNP training program, each nurse was required to have a sponsoring facility; generally, this facility was the nurse's place of employment. Most of the sponsoring long-term care facilities were located in the western States. Following training, the sponsoring facility agreed to hire the trainee for a minimum of 18 months as a GNP. Finally, the nurse must have had a designated physician preceptor.

The recruited nurses were trained under a continuing education model. Enloe's (*15*) basic curriculum model for the training of the GNPs differentiates two phases of training: a didactic phase and a preceptor phase. The didactic phase, which was conducted at the school of nursing, lasted 4 months and provided the skills needed to deliver primary health care to nursing home residents. Learning during this phase built upon the nurses' previous experiences and the current level of knowledge they brought into the program. The latter half of the didactic phase provided the theoretical framework for development of the GNP role.

The preceptor phase, the final 8 months of training, permitted the synthesis of theoretical knowledge and the integration of nursing and medical care. The trainees worked in their sponsoring nursing homes developing the GNP role. At least a half day a week was spent in direct contact with the clinical preceptor, while the nurse practitioner managed a case load of the physician's patients. The nursing faculty maintained regular contact with students during this phase.

Background. The work history survey reported in this paper is one component of a larger project to evaluate the use of GNPs in nursing homes (*16*). The implementation of the GNP role in nursing homes has been described elsewhere (*17*). This study includes the subsample of GNPs from the complete evaluation and extends the sample to include all those trained under the Kellogg-funded auspices.

This paper details the work history and career paths of 97 GNPs trained with the aid of MSHC, including 29 of the 30 GNPs in the larger evaluation of the effect of GNPs on nursing home care. The retention of GNPs in long-term care is addressed by these questions:

- What characterizes the recruited nurses at entry to the GNP programs?
- How long do GNPs remain employed in long-term care?
- What factors are associated with continued employment in long-term care?
- What factors are associated with implementation of the GNP role in a long-term care setting?

Methods

Through the fall of 1986, 111 GNPs had been trained with support from the W. K. Kellogg Foundation through the MSHC project. A work history questionnaire was mailed to each of the nurses on the roster. The questionnaire was composed of a nearly equal number of open- and closed-ended items. Information was elicited about the GNP's past and present education and work experience. Of the 111 GNPs, 102 (response rate 93 percent) returned completed questionnaires in the self-addressed stamped envelope that was provided.

Results

Characteristics at entry. The MSHC GNPs were women with a median age of 45 years—a range of 29–65 years. The following table shows the age distribution in 10-year intervals:

Age group at entry	*Number of GNPs*	*Percent*
25–34 years	17	16.7
35–44 years	29	28.4
45–54 years	39	38.2
55 years and older	17	17.7
Total	102	100.0

The respondents were likely to have entered the GNP training programs at least 5 years after their basic RN preparation. This first level of preparation is referred to as their basic-entry education and defines the fundamental level of education qualifying the graduate for licensure as a registered nurse.

The MSHC GNPs received their training through one of six university-based programs. All but eight of the nurses were trained within the four nurse practitioner programs in the western United States.

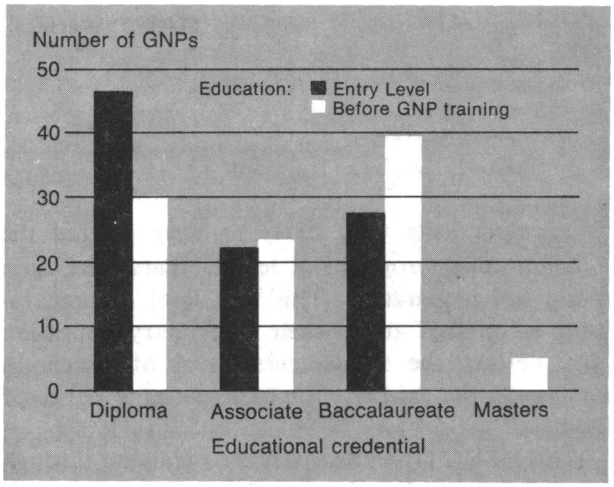
Institution	*Number of GNPs trained*	*Percent*
University of Arizona	24	23.5
University of California-San Francisco	16	15.7
University of Colorado	34	33.3
Cornell University	2	2.0
State University of New York	6	5.9
University of Washington	20	19.6
Total	102	100.0

The largest group received their training through the University of Colorado. The two university programs located in the eastern United States were among the first GNP programs to be established nationally; consequently, graduates from these programs were among the first group of nurses trained through the MSHC program.

The basic-entry preparation of the nurses immediately before RN licensure was nonbaccalaureate. This earlier training occurred in hospital-based diploma programs and associate of arts degree programs. Nearly half of the respondents reported preparation at a diploma level before RN licensure. However, the educational level at the time of GNP training showed a trend toward increased professional credentialing. By entrance to GNP training, slightly more than 45 percent of the nurses had at least a baccalaureate degree (fig. 1).

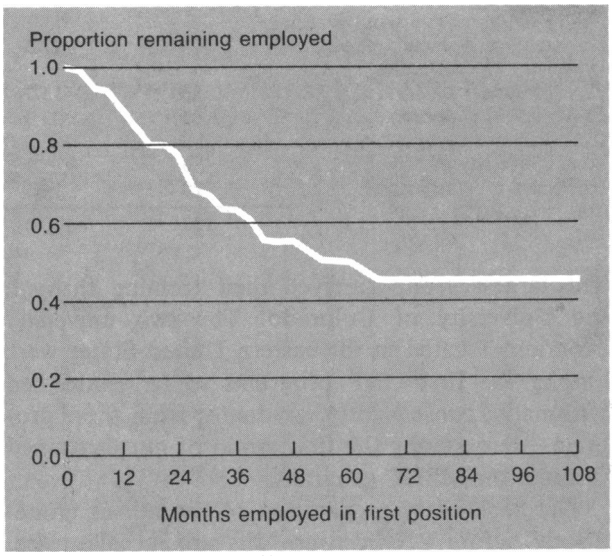
Certification for advanced practice in nursing is offered through the American Nurses' Association (ANA). To earn national certification as a GNP, the nurse must have graduated from an approved training program that prepares her for advanced

Figure 1. Educational credential at entry into the nursing profession and before GNP training of nurses in the Mountain States Health Corporation project



NOTE: GNP = geriatric nurse practitioner.

Figure 2. Survival curve for percentage of GNPs remaining in first position after training



NOTE: GNP = geriatric nurse practitioner.

practice and passed a written certifying examination. Sixty-one percent of the nurses were certified through ANA as geriatric nurse practitioners at the time the questionnaire was completed.

Employment career. Although 100 of the 102 nurses (98 percent) were employed at the time the questionnaire was mailed, only 95 began employment within their sponsors' facility following graduation. Among the GNPs who did not begin work in the sponsoring facility immediately upon graduation, two returned to teaching positions that they had held before GNP training. For the remaining nurses, no reason was given for not assuming a GNP position in the sponsoring facility.

Of the 102 GNPs, 97 returned completed questionnaires providing information on personal background and employment history. The careers of these 97 GNPs are studied using two approaches. The first involved a longitudinal view of the employment duration of the GNPs. Adjustments were made for differences in the months each GNP was eligible for employment. The analysis focused on the proportion of eligible GNPs still employed after varying durations of time.

The second strategy took a series of cross-sectional views of GNPs' employment following training. Here the analysis looked at the proportion of eligible nurses employed at yearly intervals after graduation from GNP training. The specific analysis for both the cross-sectional and longitudinal approaches are discussed subsequently.

Length of employment in long-term care. Because recent graduates of GNP training programs necessarily have short GNP employment histories, whereas early graduates of GNP programs have accrued as many as 10 years of GNP employment, comparisons adjust for differences in employment eligibility among the GNPs.

The 97 nurses experienced a total of 56 job changes during their GNP careers. When they completed the questionnaire, 58 GNPs reported continued employment in the position they had taken immediately following training. Of the remaining 39 nurses, 26 reported a single position change following GNP training; 10 nurses reported two changes; 2 reported three changes; and 1 reported four changes.

Since most of the GNPs' job experiences occurred in the first and second positions following GNP training, resignation rates were computed on the basis of resignations from their first position, that is, employment with their sponsoring facility. The resignation rates from the first position following GNP training were computed using standard life table techniques.

After computing the months employed during the first position, each GNP was classified as either continuing employment in the first GNP position or as resigning from the first GNP position. The resignation rate is expressed as the number of resignations from the first position for each month employed. The 39 resignations across 2,818 total months employed in the first position yields a rate of 0.014 resignations for each month employed in

the first position. This rate can be expressed as between one and two resignations for each 10 years of employment in the first position following GNP training.

A survival curve representing job retention in the first GNP position was constructed using the Kaplan-Meier method (*18*). The curve shows the proportion of eligible GNPs still employed after so many months of employment (fig. 2). Based on this curve, the median length of employment for the first position was slightly more than 4.5 years, well beyond the 18 months of continued employment agreed to at recruitment by the sponsoring facility.

Continuation of employment in long-term care. The total months of potential employment was computed from GNP graduation through the survey date. The resultant number of months was used as the denominator in the calculation of the proportion of months employed. The numerator was the total months of reported employment after GNP training. As a whole, the nurses were employed for 95.5 percent of the eligible months.

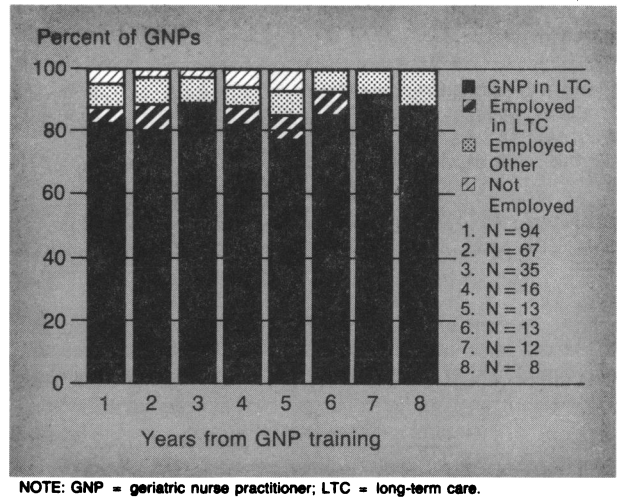
Using reported place of employment and comments regarding the job title and job duties, GNP employment was judged as either in long-term care or outside long-term care. For this analysis, no differentiation has been made between long-term care in the community and in an institution. All but six of the GNPs were classified as employed in long-term care, although not all were in nursing homes.

Across the 97 GNPs, 91.4 percent of the employment months were within long-term care. For the first 2 years after GNP training, 91.7 percent of the months of GNP employment were in a long-term care setting. For the intervals of 2 to 4 years and more than 4 years after GNP training, the percent of months employed in long-term care was 90.2 percent and 91.7 percent, respectively. Continued employment in long-term care settings remained a strong probability for the GNPs who left their first job after training.

Cross-sectional trends in employment. At each anniversary month following the completion of training, GNP employment status was evaluated. This permitted a cross-sectional picture of the GNPs on a year-to-year basis. At the end of each year, the following questions were asked:

- Had the GNP completed training and become eligible for employment?
- Was the GNP employed?

Figure 3. Employment status of GNPs training through Mountain States Health Corporation at each year following training



NOTE: GNP = geriatric nurse practitioner; LTC = long-term care.

- If the GNP was employed, was the employment in a long-term care setting?
- If the employment was in long-term care, was there evidence that she functioned as a GNP?

The proportion of eligible GNPs by employment status at each year following training is shown in figure 3. Among the GNPs eligible for employment, the proportion employed remained relatively constant and exceeded 92 percent throughout the years analyzed. Less than 10 percent of the GNPs reported employment outside of long-term care, for example, in nursing education and as clinical nurse specialists in a hospital. Finally, among the GNPs employed in long-term care, a high proportion reported being actively employed in the geriatric nurse practitioner role.

Reasons for leaving first GNP position. The 39 who resigned from their first GNP position were asked the reason for leaving. Their responses were classified into five broad categories, and the results are summarized in table 1. Organizational changes refer to changes within the employing institution that resulted in a dissolution of the GNP role. The transfer of nursing home ownership frequently led to this dissolution. Seeking promotions or better positions included responses such as increases in salary or taking positions with administrative-supervisory responsibilities, or "improved job opportunities." The category personal and family reasons for resignations was often characterized by a spouse's career relocation. In the category coded as "other," returning to school was the most frequently mentioned reason.

Table 1. Reasons for leaving first employment following geriatric nurse practitioner (GNP) training

GNP positions	GNP resignations	Percent
Organizational change	15	38.5
Promotion, better position	7	18.0
Personal-family reasons	7	18.0
Failed to meet expectations	5	12.8
Other	5	12.8
Total	39	100.0

Table 2. Percent of time employed in positions classified as full, partial, and no GNP role implementation, by months since completion of geriatric nurse practitioner (GNP) training

GNP role implementation	Months since GNP training			Total
	0–24	25–48	49 plus	
Full	53	45	41	49
Partial	36	45	52	41
None	11	10	7	10
Total	100 (2,009)	100 (814)	100 (680)	100

NOTE: In parenthesis are the number of months employed stratified on the basis of months from GNP training. Uncorrected chi-square with 4 degrees of freedom = 54.30; $P < .001$.

GNP role implementation. For the jobs following GNP preparation, positions were characterized according to the level that the GNP role was implemented. Using job title and duties as the principal criteria, positions were classified as full GNP role implementation, partial GNP role implementation, and no GNP role implementation.

GNP role implementation was defined on the basis of job title and duties as follows:

- full GNP implementation—GNP with neither supervisory nor administrative titles; only GNP duties reported;
- partial GNP implementation—GNP job title combined with either supervisory or administrative job title; some GNP duties reported along with supervisory or administrative duties;
- no GNP implementation—no GNP job title; no GNP duties reported.

Typical GNP functions were identified in promotional material distributed by MSHC as taking admitting histories and doing physicals, management of common acute and chronic health problems, family and patient counseling, patient teaching, and geriatric inservice. Almost half of the GNP employment months were classified as full role implementation. GNP roles were classified as partial for 41 percent of the GNP employment months. For the remaining 10 percent, no GNP role implementation was identified. As elapsed time since GNP training increased, role implementation shifted from full to partial implementation (table 2).

Factors associated with retention in long-term care and GNP role. Factors associated with (*a*) the proportion of a GNP career spent in long-term care and (*b*) the proportion of the GNP's career in full role implementation were analyzed. The factors considered included age (less than 45 years and more than or equal to 45 years); entry-level education (baccalaureate versus nonbaccalaureate); education level at entry to the GNP program (bacccalaureate versus nonbaccalaureate); ANA GNP certification; and share of pre-GNP training spent in long-term care (less than 50 percent and more than or equal to 50 percent). The only positive association that was statistically significant was between the proportion of experience in long-term care before GNP training and the proportion of GNP career spent in long-term care (chi-square = 16.22, 1 degree of freedom, *P*-value $< .001$).

Since the sponsoring facilities had agreed to hire the GNPs for 18 months following their training, time from GNP training may have acted as a potential bias in associations with retention. The analysis was therefore repeated, controlling for length of time since GNP training (classified as less than or equal to 24 months or greater than 25 months). Again, the only statistical significance occurs between proportion of months of pre-GNP experience in long-term care and the proportion of months following GNP training employed in long-term care.

Discussion

This study suggests that the continuing education model of GNP training successfully produced a cohort of nurses who stayed in nursing homes and long-term care settings. With career maturation, there was a trend toward increased diversification of duties accompanying job changes and promotions in the facilities employing GNPs. With position changes, the GNPs were more likely to take on supervisory or administrative responsibilities while continuing to carry out some GNP functions.

In a study by Kane and coauthors (*17*), barriers to the implementation of the GNP role for a subset of these GNPs were identified. Although this study

was unable to make similar statements regarding the barriers to GNP role implementation for the extended sample, our work has suggested that changes in nursing home ownership may reduce the retention of GNPs in these facilities. Organizational change was the reason most frequently cited in our study for terminating GNP employment.

The retention experience of these GNPs was much higher than that of general nursing personnel employed by nursing homes. From the 1984 National Sample Survey of Registered Nurses, the 1-year retention of all RNs employed in nursing homes was 72.7 percent. The 1-year retention experience of MSHC GNPs employed in long-term care has exceeded 90 percent. A significant proportion of the GNPs prepared through MSHC were reintroduced into long-term care settings and remained employed there following the promissory posttraining 18-month employment.

Future research in retention of GNPs needs to identify relevant factors associated with increased retention among those employed in long-term care. Among the variables unexplored in this study were institutional characteristics of GNP employment including wages and benefits and the accompanying personal and professional attitudes of the GNPs. The available data did not provide detailed information about the institutional circumstances contributing to stability of employment.

Current trends in nursing education suggest that the master's degree has emerged as the dominant route for nurse practitioner education (*5*). As fewer GNPs are trained through continuing education programs, GNP employment and retention in nursing homes may decline. Can nursing homes attract and retain GNPs trained in higher degree programs? Will the supply of masters-prepared GNPs willing to work in nursing homes increase to meet the projected growth in nursing home demand? These are important policy questions for the future.

Many of the nurses trained through MSHC are personally and professionally bound to their place of residence. Following training, most of the GNPs were employed by their sponsoring facility. These GNPs have apparently met a significant need in the sponsoring facilities, as well as the needs for specialized health manpower over the past decade. While the graduate credential is essential to professional nursing practice, the question remains: Will graduate programs be capable of providing the necessary pool of nurse specialists required for future employment in long-term care in both this and the next century?

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