A Comparison of Financial Performance, Organizational Characteristics and Management Strategy Among Rural and Urban Nursing Facilities

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ABSTRACT: *Despite efforts to deinstitutionalize long-term care, it is estimated that 43 percent of the elderly will use a nursing facility at some point. Whether sufficient nursing facility services will be available to rural elderly is debatable due to cutbacks in governmental expenditures and recent financial losses among nursing facilities. This paper explores the challenges confronting rural nursing facilities in maintaining their viability and strategies that might be considered to improve their longevity. A comparative analysis of 18 urban and 34 rural nursing facilities in New Mexico is used in identifying promising strategic adaptations available to rural facilities. Among other considerations, rural facilities should strive to enhance revenue streams, implement strict cost control measures, emphasize broader promotional tactics, and diversify services commensurate with the constraints of the communities and populations served.*

It has been estimated that 43 percent of all U.S. citizens who reach the age of 65 in 1990 will use a nursing facility at least once (Murtaugh, Kemper & Spillane, 1990). It is also predicted that 1.7 million Americans age 65 or older will enter a nursing facility by the year 2020. It is unclear how this demand will be met, whether noninstitutionalized forms of service delivery will influence the demand or how services will be paid for (Ray, Federpiel, Baugh & Dodds, 1987). Furthermore, the projections are inauspicious considering the growing reluctance of government to increase long-term care expenditures and the adverse financial performance of many nursing homes in recent years (Wagner, 1988). As a result, there may be insufficient capacity to handle the forecasted demand for nursing home care in the future.

The implications of the preceding projections for rural elderly are exacerbated for several reasons. First, it is presumed that rural areas are underserved with respect to nursing facilities (Wiener, 1987). If rural areas are served by fewer nursing facilities compared to urban areas, there could be an adverse effect on the rural elderly. Second, there is mixed evidence regarding the extent of informal or family

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support provided to the rural versus urban elderly (Coward & Cutler, 1989). Some studies indicate that the rural elderly possess strong family support systems, while other studies document few differences in rural and urban support systems (Lee, 1988; Lee & Cassidy, 1985). Rural elderly may need the benefits of informal/family support systems to cope with the lack of nursing facility services. Third, rural elderly tend to have a poorer health status than their urban counterparts (Dwyer, Lee, & Coard, 1990). Consequently, in coming years the demand for nursing facility services could continue to be higher in rural than urban areas.

The projections seemingly point to increased need for both institutional and noninstitutional services. Nonetheless, there is some question as to the availability of a sufficient institutional infrastructure for the rural elderly. Significant variations occur across geographic regions and states in nursing facility beds per capita (Rosenblatt & Moscovice, 1982). However, it is not known whether rural areas suffer more than urban areas in the availability of nursing facility beds in proportion to the elderly population. Another factor to consider is the availability of swing beds in rural hospitals (Richardson & Kovner, 1986; Shaughnessy, 1987). Swing beds offer rural hospitals an opportunity to raise occupancy and therefore may inhibit construction of new long-term facilities (Moscovice, 1989).

In view of the predictions for high nursing facility use among the elderly, rural areas' potential inability to meet this demand, and the adverse economic environment confronting rural health care facilities, the purpose of this study was to explore how rural nursing facilities can maintain their viability. A comparative analysis of rural and urban facilities was used to identify differences among organizational characteristics, management strategy, and financial performance that affect the long-term viability of nursing facilities.

Background

Rural health care facilities must effectively address the changing environmental factors that threaten their survival (Seavey & Berry, 1986). The process by which organizations adapt to external pressures or manage the effect of external pressures on performance has been termed "strategic adaptation" (Carter, 1990; Chakravarthy, 1982). For example, rural hospitals may implement specific structural and strategy changes that address the adverse influence of prospective payment and changes in medical practice (Ermann, 1990). Detailed literature reviews, conceptual models, and empirical studies of strategic adaptation by health care organizations have previously been completed (Fottler, 1987; Friedman & Shortell, 1988; Kimberly & Zajac, 1985; Shortell, Morrison, & Robbins, 1985; Weiner, Maxwell, Sapolsky, Dunn, & Hsiao, 1987; Zajac & Shortell, 1989). This literature suggests that health care organizations with responsive strategies (i.e., strategies that enable organizations to successfully adapt to environmental change/pressure) tend to perform more effectively than organizations that do not build responsive strategies (Smith & Piland, 1990).

In rural health care organizations, strategic adaptation research has primarily focused on hospitals. Research findings suggest that rural hospitals could improve their strategic planning (Buada, Pomeranz & Rosenberg, 1985) and strategy development functions (Mick & Morlock, 1990; Smith & Piland, 1990). Strategic planning is the process by which effective organizational strategies are formulated. Robinson and Pearce (1988) indicate that organizational performance is dependent on *both* strategic planning (i.e., the process by which mission, goals, and strategies are articulated) and strategy (i.e., the content or action plans resulting from the strategic planning process). Additional research on strategic planning and strategy development within a wide range of rural health care organizations is needed to confirm the generalizability of results derived from rural hospitals.

The higher visibility of rural hospitals and their role in emergency and urgent care may partially explain why prior research has focused predominantly on hospitals rather than other health providers. Additionally, rural hospitals are generally viewed as a cornerstone of local health systems and local economies. While these explanations may be true, it should be recognized that rural nursing facilities and other providers also make important contributions to local economies. They also are important ingredients in forging a continuum of health care in the rural setting. For these reasons, it is appropriate to expand the research on strategic adaptations beyond hospitals to nursing facilities and other rural health care organizations.

The theoretical models for strategy formulation and strategic planning examined in this study are primarily derived from nonhealth care organization

studies. Strategy options are conceptualized according to Porter's (1980) model of generic corporate strategies. According to the Porter framework, organizations can pursue one or several strategies—low cost, focus, and differentiation. Applying these strategies to rural nursing facilities, organizations can institute management control (to contain costs), service diversification (to focus on specific patient/customer groups), and promotion (to differentiate services from competitors). Strategic planning was conceptualized according to Ramanujam, Venkatraman, and Camillus' (1986) multidimensional framework that identifies seven dimensions underlying effective planning systems: system capability, use of planning techniques, degree of attention to internal facets, degree of attention to external facets, functional coverage, resources, and planning resistance.

Data and Methods

The sample population for this study included all rural (i.e., outside standard metropolitan statistical areas) and urban nursing facilities in New Mexico. Top administrators at the nursing facilities completed survey questionnaires. A total of 56 nursing facilities (90 percent response rate) returned the research instruments. Medicaid cost report data were also collected to calculate performance indicators for the facilities. The state agency responsible for regulating nursing facilities was able to provide only 52 audited reports for the 56 respondents. The final sample is comprised of 18 urban and 34 rural facilities. The sampling strategy was designed to gather performance, strategy, and strategic planning data on an entire state's system of nursing facilities with which urban comparisons could be made. A single-state study minimizes concern for interstate variability in regulatory, epidemiologic, market, reimbursement, and related environmental factors.

The most recently available audited Medicaid cost reports, filed by June 30, 1988, for this study covering fiscal years 1987 to 1988, were also obtained. Due to state budgetary limitations that influence agency staffing, report auditing often requires one year. The report data were used to calculate performance and structural measures. Under ideal conditions it would be preferable to obtain longitudinal measures of strategy, strategic planning, and performance because strategic management represents a long-term process. However, the research data provided the latest information available when the study was initiated.

Survey questionnaires were distributed to top administrators in late 1989 and early 1990. Respondents were asked to indicate the strategies and tactics they had emphasized since the beginning of fiscal year 1988. The questionnaire was formulated with the advice of several leading nursing facility administrators, who functioned as an advisory board. Pretesting resulted in only minimal word or phrase changes. (Copies of the survey questionnaire are available from the senior author.) Following pretesting, the questionnaires were distributed along with a letter of support from the New Mexico Health Care Association (the professional association for nursing facilities in New Mexico).

Measures.

Performance. Financial and utilization data from the Medicaid cost reports were incorporated when calculating several performance measures. Four fiscal performance areas were emphasized: revenues (i.e., gross revenue per patient day; patient care revenue per patient day), expenses (i.e., total expenses per patient day; facility expenses per patient day), personnel expenses (i.e., total nursing salaries per patient day; total staff salaries per patient day), and profitability (i.e., profit per patient day; net revenue per total revenue).

Organizational Characteristics. Although the specific effect of structure and process variables (i.e., organizational characteristics) on nursing facility performance remains clouded, the Medicaid cost reports and survey questionnaires provided data on the number of certified beds, total patient days, and Medicaid patient days; Medicaid patient mix (i.e., the percent of total patient days delivered to Medicaid patients); occupancy; ownership; chain membership; and length of administrator experience at the facility.

Strategy. Three strategy areas were measured, including operations control (i.e., a low-cost strategy), service emphasis (i.e., a focus strategy), and promotion (i.e., a differentiation strategy). Operations control was operationalized through 21 tactics that might be used to promote cost containment and instill operational efficiency (Shortell, Becker, & Neuhauser, 1976, 1980). Service emphasis incorporated 27 tactics that could potentially be used to expand the revenue sources and range of health-related services offered by a nursing facility (Freiman & Cromwell, 1987; Whitman, 1988). Promotional differentiation included 16 tactics that nursing facilities might adopt to market their services and

otherwise distinguish themselves from other providers (De Salvo, 1986; McDevitt, 1987).

Respondents indicated the extent of emphasis given to each tactic on a seven-item interval scale (1 = no emphasis, 7 = much emphasis). A mid-scale response (i.e., 4.00) could be interpreted as a moderate amount of emphasis. This measurement approach has received support in prior studies (cf. Friedman & Shortell, 1989; Smith & Fottler, 1981). Reliability scores using Cronbach's coefficient alpha were 0.88 (operations control), 0.73 (service emphasis) and 0.81 (promotion).

Strategic Planning. Nursing facility planning was measured through seven dimensions defined and operationalized by Ramanujam, Venkatraman, and Camillus (1986). However, a seven-item interval scale was used in this study (compared to the five-item interval scale adopted by Ramanujam, Venkatraman, and Camillus) to maintain consistency with other survey scaling in the research instrument. The reliability score for the strategic planning responses was 0.93.

Analysis. The analytical approach adopted in this project was necessarily constrained by sample size despite the high response rate, which created a fairly complete data set for an entire state's nursing facilities. In view of this constraint, *t* tests were chosen as the preferred statistic to identify significant differences between rural and urban facilities in performance, characteristics, strategy, and strategic planning (Note 1). The primary limitation of this analytical strategy is the inability to draw causal inferences.

Nonetheless, the statistical approach documented significant differences between rural and urban nursing facilities on the main study variables. Future studies incorporating larger sample sizes could employ more sophisticated statistical analyses to confirm the results reported here and to add further insight into the determinants of the underlying differences between rural and urban nursing facilities.

Results

Financial Performance. The comparative differences between rural and urban nursing facilities on the financial performance indicators are shown in Table 1. Several statistically significant results surface

Table 1. Financial Performance in Rural and Urban Nursing Facilities.

	Rural Facilities[a]		Urban Facilities[b]		
Performance Indicators	Mean	Standard Deviation	Mean	Standard Deviation	*P*[c]
Revenue					
Gross revenue per patient day ($)	52.82	14.01	71.42	15.61	0.05
Patient care revenue per patient day ($)	50.49	7.36	51.50	12.46	0.72
Expenses					
Total expenses per patient day ($)	55.49	19.27	55.38	17.78	0.99
Facility expense per patient day ($)	12.08	11.91	17.55	24.70	0.29
Total nursing salaries per patient day ($)	14.97	4.77	14.77	2.46	0.87
Total staff salaries per patient day ($)	27.07	10.53	26.25	9.39	0.78
Profit					
Profit per patient day ($)	-2.67	9.61	16.04	47.00	0.03
Total profit margin (net revenue/total revenue)	-0.04	0.17	0.11	0.23	0.01

a. n = 34
b. n = 18
c. *P* value for *t* test

among the indicators. First, the average gross revenue per patient day in rural nursing facilities ($52.82) is considerably lower than the average gross revenue for urban nursing facilities ($71.42). The reasons for the $18.60 per patient day difference in revenue are not fully explained by the data in Table 1, but feasible explanations include higher proportions of private-pay patients, linkages with a continuum of care (e.g., retirement care) that supplement revenue, and extensive nonpatient care sources of revenue among the urban facilities. Whatever the causal factor, rural nursing facilities report lower gross revenues per patient day than urban facilities. Rural facilities, therefore, have less revenue to work with and must carefully control costs to ensure profit margins.

Additional insight on rural nursing facilities' revenue position is gained by examining patient care revenue per patient day. Rural nursing facilities ($50.49) and urban nursing facilities ($51.50) indicate very similar figures. These data suggest that urban facilities only earn an average of $.99 per day more in patient care than rural facilities. It is apparent that urban facilities have been better able to diversify their income sources than have rural facilities. Considering that the total expenses per patient day are relatively equal between rural ($55.49) and urban ($55.38) facilities, it is clear that rural nursing facilities face a significant fiscal challenge compared to their urban counterparts. Less revenue is available to cover expenses in the rural nursing facility. In fact, care expenses per patient day in rural facilities exceed revenues on average by $5.00 ($55.49 - $50.49). Urban facilities also generate higher expenses per patient day than patient care revenue ($55.38 - $51.50 = $3.88 on average), but nonpatient care revenues cover this difference.

Further analysis of the expense per patient day indicators in Table 1 do not suggest statistically significant differences for facility expenses, nursing salaries, or total staff salaries per patient day. Rural nursing facilities would have to lower expenses in these categories (per patient day) to overcome the gross revenue differential of the urban facilities. Such cost control may be difficult to achieve in rural communities due to transportation cost differentials

Table 2. Organizational Characteristics of Rural and Urban Nursing Facilities.

	Rural Facilities[a]		Urban Facilities[b]		
Organizational Characteristics	Mean	Standard Deviation	Mean	Standard Deviation	*P*[c]
Capacity					
Number of certified beds	84.00	36.00	111.00	44.00	0.02
Number of patient days (000s)	25.50	12.60	32.30	9.50	0.05
Number of Medicaid patient days (000s)	18.50	9.50	18.30	7.20	0.92
Medicaid patient mix[d]	0.72	0.18	0.59	0.24	0.03
Occupancy	0.85	0.16	0.83	0.16	0.71
Corporate factors					
Ownership[e]	0.38	0.49	0.22	0.43	0.25
Chain membership[f]	0.79	0.41	0.89	0.32	0.40
Administrator's experience[g]	2.79	2.89	3.44	3.31	0.47

a. n = 34
b. n = 18
c. *P* value for *t* test
d. Total Medicaid patient days/total patient days
e. 1 = for-profit; 2 = not-for-profit
f. 1 = chain member; 0 = not a chain member
g. Number of years of administrative experience at the facility

(for supplies) and pressure to offer competitive (relative to settings) salaries for nursing staff.

The interplay of the revenue and expense indicators is ultimately apparent in the profit margin indicators in Table 1. Rural nursing facilities report an average loss of $2.67 per patient day, compared to the urban facilities' average profit per patient day of $16.04. The profit differences between rural and urban facilities are statistically significant at the .03 level. However, the practical implications for rural nursing facilities are devastating. On average, they lose more money than they make in providing services. These results are repeated for total profit margin. Rural nursing facilities lose an average of 4 percent of every dollar of revenue. The average urban nursing facility earns 11 percent on total revenue.

Organizational Characteristics. Table 2 reports various organizational characteristics for rural and urban nursing facilities. The data indicate that rural facilities have a statistically significant smaller number of certified beds (mean = 84) compared to urban facilities (mean = 111). Consequently, rural facilities may have more limited opportunities to capitalize on economies of scale due to their smaller scope of operations. As might be anticipated, due to the difference in number of certified beds, rural nursing facilities also report delivering fewer total patient days than urban facilities.

Rural nursing facilities provide an equivalent number (but disproportionate percentage) of Medicaid patient days as do urban facilities. As Table 2 indicates, this results in a statistically higher Medicaid patient mix for rural facilities compared to urban facilities. The average rural nursing facility reports that 72 percent of its patients are Medicaid enrollees, while the average urban facility reports that 59 percent of its patients are on Medicaid. The implication is that urban facilities may encounter a more favorable reimbursement base because of the potential to serve lucrative private-pay or third-party insured patients.

Although there is no statistically significant difference, it is notable to observe the high occupancy rates for the rural (85%) and urban (83%) nursing facilities. The low standard deviations for these indicators suggest that nursing facilities are able to maintain relatively stable occupancy levels. This result may have substantial fiscal benefit because operations planning is facilitated. The other indicators reported in Table 2 do not show any statistically significant differences between rural and urban facilities. Thirty-eight percent of rural facilities are operated forprofit and 79 percent are members of chain organizations. Finally, the average administrator of a rural facility has been at the facility 2.8 years, while the average urban administrator has been at the facility 3.4 years.

Operations Control Strategy. Given the lower gross revenues and equivalent expense and occupancy profiles of rural nursing facilities (compared to urban facilities), it is expected that several differences will surface in the facilities' adaptive strategies. Table 3 provides data on operations-control (i.e., operations management) tactics reported by the rural and urban facilities. Overall, only three of the 21 operations-control tactics used by rural nursing facilities are statistically different from urban facilities. The impression left is that rural and urban facilities tend to emphasize similar operations-control tactics. This may be one factor explaining why rural nursing facilities achieve substandard fiscal performance compared to urban facilities. There is a need to exercise greater cost control in rural nursing facilities due to less gross revenue. Nonetheless, rural and urban facilities report relatively equivalent emphasis on operations-control tactics.

There are three points of departure between rural and urban nursing facilities in their emphasis on operations-control tactics. Urban facilities emphasize recruiting better nurses' aides (mean = 6.00) and developing strategies to minimize staff turnover (mean = 5.94) to a greater extent than rural facilities (mean = 5.83 and 4.82, respectively). Nonetheless, nurse aide recruitment and control staff turnover do receive considerable emphasis in rural facilities. The only other operations-control tactic for which a statistically significant difference (at the 0.10 level) is observed involves comparative pricing. Rural nursing facilities report greater emphasis on comparative pricing than urban facilities. Consequently, rural nursing facilities are more likely to seek lower cost items when procuring housekeeping, nursing, food, or other pertinent supplies.

Another noteworthy finding in Table 3 is the comprehensive emphasis given to the operations-control strategy. More than 80 percent of all operations control tactics have a mean score of 4.00 or higher (i.e., moderate or higher emphasis) among the rural and urban nursing facilities. It appears that nursing facility administrators are attempting to exercise extensive control over operations. In rural facilities alone, 48 percent of the tactics in Table 3

have a mean score of 5.00 or higher. The impression is that rural nursing facility administrators are attempting to gain control over factors that ultimately influence costs. By monitoring staff work hours/staffing expenses, undertaking comparative pricing in supplies procurement, minimizing nursing overtime expenses, minimizing nursing registry use, controlling inventory (of drugs, food supplies and nursing supplies), recruiting better personnel, improving billing practices, and recruiting better

Table 3. Operations Control Strategy in Rural and Urban Nursing Facilities.

	Rural Facilities[a]		Urban Facilities[b]		
Operations Control Tactics	Mean[c]	Standard Deviation	Mean[c]	Standard Deviation	*P*[d]
Inventory/supplies control					
Initiated/expanded use of centralized, group or bulk purchasing	4.65	2.01	4.28	2.11	0.54
Tightened inventory control—drugs	5.47	1.46	5.06	1.66	0.36
Tightened inventory control—food supplies	5.35	1.39	5.44	1.50	0.83
Tightened inventory control—nursing supplies	5.18	1.31	5.72	1.36	0.17
Expanded comparative pricing (e.g., in procurement of housekeeping and food supplies)	5.38	1.10	4.61	1.88	0.07
Staff skills/management					
Upgraded capabilities of department heads (e.g., financial skills)	4.74	1.58	4.83	1.51	0.83
Recruited better nurse aides	5.83	1.22	6.00	1.03	0.01
Developed strategies to minimize staff turnover	4.82	1.42	5.94	1.59	0.01
Improved the staff performance appraisal process	4.44	1.71	4.89	1.32	0.34
Recruited better nursing personnel	5.29	1.36	5.83	1.15	0.16
Minimized use of nursing registry/agency	5.32	1.49	4.61	1.82	0.14
Rewarded department head for achieving budget objectives	3.7	1.66	4.28	2.11	0.14
Minimized overtime wages of nursing staff	5.32	1.49	4.61	1.82	0.14
Expanded inservice education to non-nursing staff	4.74	1.33	4.33	1.97	0.39
Monitored staff work hours and staffing expenses	6.06	1.41	5.89	1.08	0.66
Managerial efficiencies					
Obtained assistance for critical problems from corporate office	4.85	1.76	4.00	1.85	0.11
Improved billing practices	5.32	1.59	5.32	1.24	0.98
Replaced subcontracts with in-house service (e.g., laundry and linen)	2.71	2.13	2.39	1.91	0.60
Minimized expenditures on external consultants	4.00	1.76	3.67	1.53	0.50
Interorganizational management					
Initiated/expanded shared services	3.29	1.85	2.61	1.58	0.19
Expanded contract services with an outside or separate organization (e.g., PT, accounting)	3.62	1.97	3.33	2.14	0.63

a. n = 34
b. n = 18
c. Respondents indicated the extent of emphasis given to each tactic on a seven-item interval scale (1 = no emphasis; 7 = much emphasis).
d. *P* value for *t* test.

nurse aides, rural nursing facilities have defined a specific action plan to influence fiscal performance.

Service Emphasis. Table 4 provides insight on the service tactics receiving emphasis in rural and urban nursing facilities. Service diversification has become a prevalent strategy among health care organizations as a means to expand the revenue base.

Table 4. Service Emphasis in Rural and Urban Nursing Facilities.

	Rural Facilities[a]		Urban Facilities[b]		
Service Tactics	Mean[c]	Standard Deviation	Mean[c]	Standard Deviation	*P*[d]
Diversified services					
Hospice care	1.79	1.47	2.89	2.00	0.03
Residential care	2.85	2.39	2.17	2.07	0.31
Respite care	2.82	1.99	3.33	2.14	0.40
Adult day care	2.12	1.89	1.33	0.84	0.10
Home health care	1.85	1.69	1.78	1.80	0.88
Life care	1.38	1.05	1.33	1.41	0.89
Alzheimer unit	2.06	2.01	2.94	2.39	0.16
AIDS care	1.56	1.31	1.22	0.55	0.26
Dental services	3.35	1.77	3.28	1.71	0.88
Specialized services for target age groups (e.g., children or teens)	1.56	0.93	1.72	1.81	0.67
Specialty mental health services	1.97	1.62	1.50	1.04	0.27
Heavy care/subacute care	1.80	1.39	3.00	2.40	0.03
Nonelderly trauma victim care	1.77	1.62	2.28	1.74	0.29
Bed configurations					
Added personal care beds	1.82	1.99	1.67	1.94	0.79
Added intermediate care beds	2.15	2.22	2.67	2.66	0.46
Added skilled nursing beds	1.82	1.96	3.11	2.47	0.05
Deleted personal care beds	1.18	1.03	1.33	1.41	0.65
Deleted intermediate care beds	1.00	0.00	1.22	0.94	0.99
Deleted skilled care beds	1.18	1.03	2.67	2.47	0.00
Specialized Therapies					
Rehabilitative therapies	4.15	2.11	5.89	1.49	0.00
Infusion therapy	1.85	1.76	2.33	1.97	0.37
Head trauma/spinal cord injury care	1.21	0.91	2.11	2.00	0.03
Chemical dependency unit	1.09	0.51	1.33	1.41	0.37
Work-related injury care	2.27	1.94	1.78	1.52	0.36
Developmental disability care	1.77	1.79	1.50	1.10	0.57
Interorganizational services					
Joint venture with other providers (e.g., hospitals)	1.50	1.08	2.17	2.12	0.14
Managed care plan involvement	4.62	2.19	4.89	2.08	0.67

a. n = 34
b. n = 18
c. Respondents indicated the extent of emphasis given to each tactic on a seven-item interval scale (1 = no emphasis; 7 = much emphasis).
d. *P* value for *t* test.

However, evidence is mixed on the efficacy of service diversification (Clement, 1987, 1988). Nursing facility adoption of a service diversification strategy is rather limited, judging by the results in Table 4. The only tactics receiving more than a moderate amount of emphasis by rural and urban nursing facilities are rehabilitative therapies and managed care plan involvement. In both instances, urban facilities report higher emphasis on these tactics than that reported by rural facilities.

About 90 percent of the service tactics listed in Table 4 are not extensively emphasized by either rural or urban facilities. Nonetheless, there are some statistically significant differences between the two facility samples regarding service emphasis. Urban nursing facilities report greater emphasis on hospice care, adding skilled nursing beds, deleting skilled nursing beds, rehabilitative therapies, head trauma/spinal cord injury care, and heavy care/subacute care than rural nursing facilities. The difference in emphasis for these services is statistically significant at the .05 level. However, the practical distinctions in emphasis must also be considered because so few of these services receive much attention from either rural or urban facilities. The nursing facilities do not appear to be extensively involved in service diversification.

Promotional Strategy. Promoting organizational services through various marketing strategies has become a widespread phenomenon among health care providers. Promotion is often instigated to capture new customer groups, alter the consumer mix, periodically underscore public visibility, introduce new services, and respond to competitive forces. The results presented in Table 5 suggest that both rural and urban nursing facilities are actively engaged in promoting services. With mean occupancy levels at 85 percent, this finding is somewhat unexpected. Apparently, nursing facilities face an environment that necessitates promotional strategies to ensure fiscal viability.

According to the data in Table 5, rural nursing facilities emphasize improved relations with hospital discharge planners (mean = 5.82), newspaper or billboard advertising (mean = 4.00), cultivating physician relations (mean = 5.47), developing patient brochures (mean = 4.21), developing relations with local senior citizen groups (mean = 5.09), involving physicians in organizational decisions (mean = 4.62), changing facility appearance (mean = 4.29), training staff in interpersonal skills (mean = 4.03), and using news releases to promote facility features and programs (mean = 4.50). It should be noted that the most emphasized tactics—improving relations with discharge planners, physicians, and senior citizen groups—require networking (for the most part) by the administrators.

Several statistically significant differences are observed between rural and urban nursing facilities for promotional strategy emphasis with urban facilities reporting higher emphasis on the tactics than rural facilities. Urban facilities emphasize developing working relations with the ombudsman program (mean = 5.78), developing working relations with the state agency on aging and the office of senior affairs (mean = 5.06), and training staff in interpersonal skills (mean = 5.06). Surprisingly, rural facilities indicate less emphasis on developing relations with the ombudsman program (mean = 3.88) and developing working relations with the state agency on aging (mean = 3.41). It is possible that geographic distance from the state capitol hinders rural facilities from emphasizing these tactics to the same extent as urban facilities.

Strategic Planning. Strategic management of nursing facilities involves setting long-run strategic plans with the capacity to address significant environmental threats and to establish conditions by which financial performance benefits. Table 6 reports findings on planning system development in rural and urban nursing facilities. Administrators are able to develop seven aspects of their strategic planning systems. They can cultivate the planning system's capability to anticipate crises, respond to external events, identify opportunities, identify problems, motivate staff, generate ideas, and communicate expectations. Use of planning techniques such as financial models and computer reports can be expanded. The planning system can be reconfigured to give more attention to internal aspects (e.g., prior financial performance, facility appearance, and equipment needs) and external aspects (e.g., economic conditions, Medicaid trends, reimbursement trends, patient preferences, medical practice changes, competitive trends, and past performance trends) affecting financial performance.

Administrators can further develop their planning systems by emphasizing functional coverage, which includes how plans attempt to exploit strengths, eliminate weaknesses, and improve past performance in specific functional areas (e.g., nursing, housekeeping, dietary). Strategic planning can be

improved by devoting more resources to planning, such as administrator time spent on planning, involvement of department heads, and use of outside consultants. Finally, Table 6 indicates that administrators can manage resistance to their planning system by promoting acceptance of plans among staff and board members.

The data in Table 6 suggest that both rural and urban nursing facilities have extensively developed their planning systems. Every planning system dimensions score is above the mean of 5.00. There is substantial similarity between rural and urban nursing facilities in the emphasis given to each dimension. However, urban facilities give more emphasis to developing their planning system's capability than do rural facilities. The findings in Table 6 imply that nursing facilities are sensitive to building a planning process that facilitates establishing organizational direction and achieving performance targets (e.g., financial goals).

Discussion

What are the implications of this study for rural nursing facilities and their ability to maintain fiscal

Table 5. Promotional Strategy in Rural and Urban Nursing Facilities.

	Rural Facilities[a]		Urban Facilities[b]		
Promotional Tactics	Mean[c]	Standard Deviation	Mean[c]	Standard Deviation	*P*[d]
Physician Relations					
Cultivated physician relations	5.47	1.38	4.94	1.63	0.22
Involved physicians in nursing facility's decision-making processes	4.62	1.81	4.67	1.85	0.93
Staff/facility enhancement					
Changed facility appearance	4.29	2.30	4.61	2.28	0.64
Staff training in interpersonal skills	4.03	1.59	5.06	1.43	0.03
Changed staff appearance and dress policies	3.56	1.88	4.33	2.14	0.18
External relations/networking					
Improved relations with hospital discharge planners	5.82	1.38	6.33	0.77	0.15
Developed working relations with ombudsman program	3.88	2.00	5.78	1.00	0.00
Developed working relations with state agency on aging/office of senior affairs	3.41	2.02	5.06	1.66	0.01
Developed relations with local senior citizen group	5.09	1.68	4.50	1.54	0.22
Marketing/advertising					
Television or radio advertising	3.12	2.09	3.39	2.22	0.67
Market studies or market research	2.53	1.85	3.06	1.92	0.34
Yellow pages advertising	3.97	1.83	4.28	1.36	0.54
Newspaper or billboard advertising	4.00	2.05	3.22	2.05	0.20
Developed new patient recruitment brochures	4.21	2.50	5.28	1.84	0.12
Retained marketing consultants (either from within a chain organization or from outside)	3.27	2.37	3.06	2.46	0.77
Used news releases to promote unique features or programs of facility	4.50	2.06	3.78	2.18	0.25

a. n = 34
b. n = 18
c. Respondents indicated the extent of emphasis given to each tactic on a seven-item interval scale (1 = no emphasis; 7 = much emphasis).
d. *P* value for *t* test.

viability? How do rural nursing facilities compare to urban facilities? Answers to these questions partially surfaced in this study. First, rural nursing facilities report a significantly lower gross revenue figure per patient day than do urban facilities, even though patient care revenues per patient day are virtually equal (Table 1). The implication of this finding is that rural nursing facilities are at a disadvantage for attaining fiscal well-being. There is less revenue per patient day in rural facilities and hence less margin. Rural facilities are challenged to control costs. Urban nursing facilities have higher revenues per patient day which help them cover total operating expenses and, therefore, place them in a more favorable fiscal position. The gross revenue disadvantage of rural nursing facilities becomes immediately apparent when examining comparative differences in profit per patient day and total profit margin.

Unless rural nursing facilities are able to generate comparatively higher charges and nonpatient care revenues, as do their urban counterparts, it is clear that rural facilities will continue to face an economically threatening environment. Strategies for raising nonpatient care revenue are diverse and may include philanthropic contributions, service diversification, multi-institutional affiliation, and similar efforts to enhance gross revenues. Rural facilities may be unable to attract more private-pay patients who can be charged a higher rate due to geographic isolation and a limited demographic and economic population base. However, generating large gross revenues is not the sole mechanism for improving fiscal performance. Attention must also focus on controlling expenses. As the data in Table 1 suggest, urban facilities report a total expense per patient day figure equivalent to rural facilities. When coupled with higher gross revenues, the result is a greater likelihood of achieving fiscal strength.

Second, few statistically significant differences were observed between rural and urban nursing facilities on organizational characteristics such as Medicaid patient days, occupancy, ownership, chain membership, and administrator experience. However, two important differences in organizational characteristics did emerge. Rural nursing facilities are smaller and serve a higher Medicaid payor mix (Table 2). Compared to urban facilities, rural nursing facilities may be less able to capitalize on economies of scale (due to a smaller number of licensed beds). Additionally, and perhaps more problematic, rural facilities serve a higher proportion of Medicaid patients. Urban facilities are in a position to attract more private-pay patients with the prospects for higher revenue (and charges) per patient day.

Table 6. Planning System Development in Rural and Urban Nursing Facilities.

	Rural Facilities[a]		Urban Facilities[b]		
Strategic Planning Dimension	Mean[c]	Standard Deviation	Mean[c]	Standard Deviation	*P*[d]
System capability	5.22	0.73	5.71	0.63	0.03
Use of planning techniques	5.03	1.28	5.60	0.91	0.10
Attention to internal facets	5.52	0.98	5.57	0.92	0.85
Attention to external facets	5.08	0.98	5.41	0.96	0.25
Functional coverage	5.07	0.94	5.37	0.87	0.25
Resources devoted to planning	5.19	1.08	5.33	0.95	0.63
Resistance to planning	5.32	1.47	5.36	1.37	0.93

a. n = 34
b. n = 18
c. Respondents indicated the extent of emphasis given to each dimension on the extent of change in each dimension on a seven-item interval scal (1 = no emphasis; 7 = much emphasis).
d. *P* value for *t* test.

The implications for rural nursing facilities are twofold. Rural facilities must hone their operations to maximize efficiency and to overcome the disadvantage of a smaller scope of operations (relative to urban facilities) (Note 2). In this sense, rural nursing facilities offer a highly challenging managerial environment because there is less freedom (i.e., revenue) to let costs escalate. Rural facilities must also establish means of attracting private-pay, third-party insured, and other patients with the ability to pay higher charges (e.g., post-operative patients with temporary stays). However, achieving this goal requires that additional value be offered for the higher charges. Given their rural location and population base, this strategy may be extremely difficult to implement. Furthermore, efforts to attract higher paying patients could generate higher costs. Consequently, careful planning should precede implementation.

Third, from a strategy standpoint, rural and urban nursing facilities did not report many differences. With respect to the operations control strategy (Table 3), it is clear that both rural and urban nursing facilities are making every effort to control costs. The reverse can be said for the service emphasis strategy (Table 4). Neither rural nor urban facilities have emphasized service expansion except for rehabilitation care and managed care plans. Nursing facilities seem to be content with a relatively narrow definition of their business; they follow a strict focus strategy.

Fourth, major differences between rural and urban facilities are found in the promotional strategies that allow the organizations to differentiate their services. As the results in Table 5 imply, both rural and urban nursing facilities actively emphasize a wide range of promotional tactics. However, urban facilities especially concentrate on developing working relations with the state ombudsman program, developing relations with the agency on aging and the office of senior affairs, and training staff in interpersonal skills. Rural facilities may have placed less emphasis on relations with the ombudsman and seniors programs because of their geographic distance from these offices. Whatever the reason, rural facilities could consider the greater promotional activities of urban facilities and the potential gain in attracting patients with the ability to pay higher charges.

Fifth, both rural and urban nursing facilities report extensively developed planning systems (Table 6). Urban facilities tend to emphasize system capability (i.e., the ability to anticipate crises and identify opportunities) compared to rural facilities. However, the average New Mexico nursing facility, whether rural or urban, emphasizes strategic planning.

Considering the issue of strategic adaptation, the results suggest that rural nursing facilities could be doing more in the way of developing distinctive strategies. The typical New Mexico nursing facility emphasizes operation control (i.e., low cost) and promotional (i.e., service differentiation) strategies. Neither set of facilities underscores service emphasis strategies. Nonetheless, rural facilities are at a distinct disadvantage in gross revenue and profit per patient day. Strategic adaptation theory suggests that rural facilities should be developing a broader range of service emphasis if they expect to achieve fiscal viability commensurate with that of urban nursing facilities.

Given the results of this study, what are the directions for future research? First, studies that incorporate larger sample sizes and include a more diverse representation of states are appropriate. This would confirm the generalizability of results from New Mexico nursing facilities. Second, it is essential that strategic adaptation research be undertaken in a wider variety of rural health facilities and compared to urban counterparts. Such efforts would help to confirm the external validity of strategic adaptation theory and delineate the variability between rural and urban organizations in coping with external pressures. Third, controls should be instituted for a wider variety of contextual variables. Population income, demographics, epidemiology issues (e.g., severity of illness on entering a nursing facility) and similar contextual differences between rural and urban settings could be controlled for in larger studies. Finally, the role of nursing facilities in a viable rural health system should be more clearly delineated. Nursing facilities are primarily viewed from a long-term care perspective. Given changes in reimbursement policy and medical practice, the rural nursing facility of the future might play a larger role, assuming that it could strategically adapt to the evolving rural context.

Notes

1. Contextual factors such as median family income of the population served, proportion of the population likely to need services, and rural/urban location may explain differences in

nursing facility performance, organizational characteristics, strategy, and strategic planning. A bivariate analysis does not necessarily control for these contextual factors. As a result, a multiple regression model was used to further explore the impact of contextual factors on the primary study variables. The independent variables included median family income and percent of the population older than 65 years (in the county of each nursing facility studied) as well as a rural/urban dummy variable (i.e., 1 = rural, 0 = urban). The dependent variables included performance, organizational characteristics, strategy, and strategic planning variables. Results of the multiple regression analysis did not provide significant additional insight into systematic differences between rural and urban nursing facilities. Consequently, *t* tests were used as the main analytical tool.

2. It should be noted that an alternative implication can be considered. Rural facilities may have already gravitated to the optimal level of efficiency given the incentive structure of Medicaid. Under a reimbursement system that penalizes managers for cost savings, limited incentives may exist for cutting costs more deeply. Such extra efforts could, in effect, be punished due to the structure of the reimbursement system.

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