
EVALUATION

Was all of the effort put forth by the design team, consultants and the staff and residents of Alexian Village effective in creating a truly therapeutic environment? This chapter provides a brief evaluation of the facility testing the three main goals of the design which were created by the staff and residents of Alexian Village. A variety of studies were conducted to test goals of whether the new facility had a non-institutional/residential environment. Did the new facility promote resident independence and create a higher quality of life for its residents? Did the new facility increase staff efficiency?

SOURCES OF INFORMATION

Information for this evaluation was compiled from a variety of sources. Behavioral mapping was conducted in both the old health center and the new health center to determine the effects of the new building on the resident population. Resident behavior was observed and recorded for its location in both the old and new building to understand behavioral changes due to the different environments. A typical day was mapped from seven in the morning to six in the evening. Behaviors were grouped as either positive/constructive or negative behaviors.

Positive behaviors were more active or responsive such as talking, television viewing, watching or waiting. Negative behaviors included null (unresponsive to activity around them), null but responsive to stimuli, or stereotypic dementia related behavior (repetitive motions or sounds, calling out, talking to oneself, rocking or cradling head in hands).

Alexian continually evaluates the facility in order to try to improve the fit between the staff, residents and the setting. A survey of staff members was conducted one year after the project was completed to see if any improvement could be made. Alexian is also required by law to keep records of incidents and records on the resident population. These records provided comparative data on the resident population before and after moving in to the new facility. One such record is the incident report for the health center comparing the frequency of incidents before and after moving into the new building. For this comparison, incident reports for the first, second and the third quarters of 1991 and 1992 are presented. The 1991 report is for the old Health Center which had 60 beds, whereas the 1992 one is for the new building which has 87 beds. The fourth quarter is not presented to allow one time period for residents to adjust to the new building.

Residents and their families were interviewed to obtain their opinions about the new facility. A focused interview with residents was conducted in July 1993 to solicit residents personal experiences in the new Health Care Center and the old health center. Additionally, telephone interviews were undertaken in August of 1993 to obtain family member's

opinions about the new health center. These studies and records provided information about how well the new design is working.

RESIDENTIAL ENVIRONMENT

A great deal of effort was put forth to provide a non-institutional or more residential type environment. This type of environment was hypothesized to encourage more normal behavior patterns. During the focus group interview with the residents and during the telephone interviews respondents were asked whether the new health center resembled a hospital, hotel or a home. The majority of the responses from residents indicated the new building resembled a hotel. The main reasons mentioned were (1) many people and many services, (2) everyone is taken care of, and (3) the cleanliness of the building. Not a single resident or family member felt the facility was hospital like. However, only two of the twenty-five residents who participated felt the facility was home-like. These responses indicated that the facility is not perceived of as a home but more of a full service hotel. Therefore, Alexian has been able to maintain a non-institutional appearance for its residents and their family members to the extent possible in such a controlled environment. However, with all of the services available residents identify the environment as more of a hotel. This identity with a hotel was also evident in the behavior mapping research.

After moving into the new building resident behavioral patterns of space use became more residential in character (See table 5.1). Rooms are used similar to apartments with less idle time spent in the activity/din-

ing room. The dining room has become less chaotic with more social behavior occurring during meal times. In the old health center residents were observed the majority of the time in the dining room/activity room (45.00%) while bedroom observations were less (31.2%). After moving to the new building, residents spend more time in their bedrooms (44.05%) than in the dining room (23.83%). The new dining room is only used for eating; Accordingly, its frequency of use has dropped significantly. Second-floor new health center residents were observed 59.2% of the time in their bedrooms while third floor residents were observed 28.9% of the time. Third floor residents spend less time in their rooms than second floor residents which should be expected for wandering demented patients. However, overall, bedroom usage increased with the larger more private rooms.

Not only has space usage change after moving to the new building, but the distribution of behavior in rooms has changed to a more characteristic residential behavior. Private and disruptive behaviors now take place more in the bedrooms. In the Old Health Center, sleeping occurred 50% out of the total instances this behavior was observed in the dining room. Stereotypic behavior occurred 73% in the dining room. The distributions for these behaviors by room changed in the new health center dining room—sleeping (6.5% average, 2nd floor-6% & 3rd floor-7%), and stereotypic behavior (10% average, 2nd floor-0% & 3rd floor-20%). The use of the dining room as a single purpose space has evidently had a positive effect upon the resident population. These figures indicate the calmer environment of the dining room may have

aided in reducing stereotypic behavior during meal times. Since the room is used for the single purpose of dining three times a day, sleeping behavior have decreased, accordingly.

Behavior also changed after the move to the larger bedrooms in the new health center. Residents in the old health center were observed in their bedrooms sleeping 36% out of the total instances this behavior was observed. Residents were engaged in stereotypic behavior 9% of the times observed and talking 34%. In the new health center residents both second and third floor residents were observed an average of 73% (2nd floor-87% & 3rd floor-59%) times sleeping. Stereotypic behavior was observed an average of 60% (2nd floor-86% & 3rd floor-34%) of the time and talking 43% (2nd floor-58% & 3rd floor-28%). Previously a great deal of talking behavior occurred in the dining room (46%) while now talking behavior has spread out to the rooms decreasing the dining room as the primary social space (26% average, 2nd floor-22% & 3rd floor-30%). Television viewing (16.05%) is a more frequent behavior for residents in the new Health Center than in the old Health Center (10.2%). The smaller rooms of the old center would only allow one television set per room which was difficult for a roommate situation. Larger rooms allow residents more choice and privacy for television viewing. Residents on the second floor clearly used their bedrooms for private behaviors such as sleeping, as well as, a space for more social encounters with visitors. These figures indicate that more private bedrooms are associated with a greater variety of behavior, for the isolated to the very social.

A residential character was also intended to be implied by de-emphasizing the nurses station and creating cluster living rooms. With the nursing station not being in prominent view, fewer residents gather in the area. In the old health center residents were observed in the area 3.6% of the times observed while the new has an average of 2.5%. One family member felt that the less prominent station was much better for both staff and residents because it contributed to a less chaotic environment.

The Cluster living rooms were also an important part of creating a residential environment. However, Cluster living rooms are not used very frequently by residents except the one cluster with a television set. Cluster living rooms are used less by second floor residents but greater by third floor residents. This is possibly due to the more wandering nature of third floor residents. This is also because staff tend to place demented residents in front of the television on the third floor. Although these spaces may not be used frequently they were mentioned by family members and residents as important spaces during the interviews. One resident who participated in the group interview felt these living rooms made the place a home. The administration also felt that cluster living room usage would increase when more events were planned in these areas. A new activity director was recently hired with plans to encourage cluster living room usage.

Table 5.1 Frequency of Space Usage

	Old HC	New HC Avg	2nd Floor New HC	3rd Floor New HC
Bedroom	31.2%	44.05%	59.2%	28.9%
Bedroom Corridor	5.6%	5.15%	4.6%	5.7%
Dining Room	45.0%	23.83%	27.3%	20.4%
Cluster Living Room	-	5.8%	3.3%	8.3%
TV Room	12.0%	16.4%	3.1%	29.7%
Nursing Area	3.6%	2.05%	1.3 %	2.8%
Other	2.5%	2.75%	1.3%	4.2%

The responses and the studies indicate that the new health center is a less-institutional environment. Not only do residents identify with the new facility as a hotel but there patterns of use are more akin to a hotel. Social behavior has spread through-out the facility instead of a confusing single purpose day room. Residents are also performing more private type behaviors in there bedrooms and not in public areas. However, this section would not be complete without photos of the cluster living rooms and semi-private room which provide an indication of the ambiance Alexian has achieved. (See Figure 5.1, 5.2, 5.3, & 5.4) These photos would not be found in nursing homes of the past. Since a comparative study of institutional images vs the new health center was not conducted as part of this research, it is impossible to provide empirical data that supports the non-institutional image of Alexian. However, there is a clear difference between a traditional facility and Alexian.

Figure 5.1 Cluster Living Room of the New Health Center (1)



Figure 5.2 Cluster Living Room of the New Health Center (2)



Figure 5.3 L-Shape Resident Room of the New Health Center

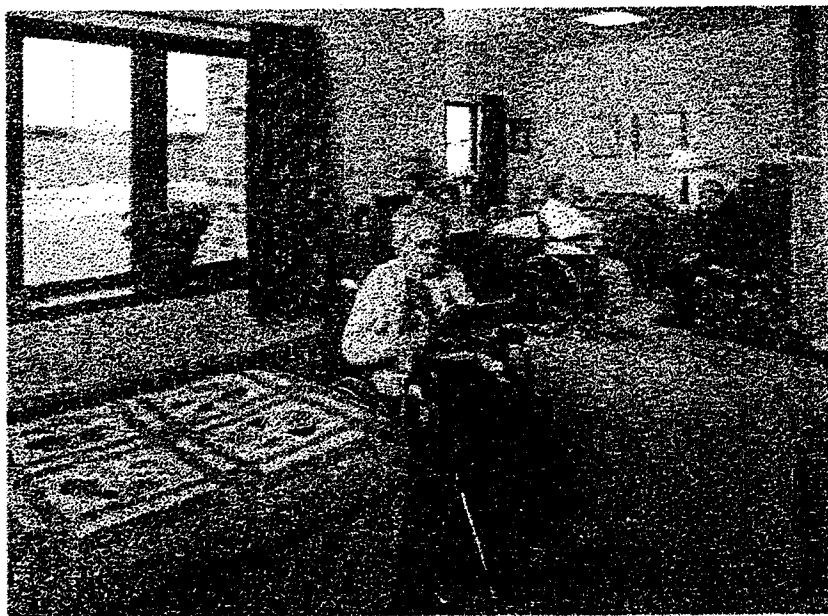


Figure 5.4 Hallway in the Old Health Center



RESIDENT INDEPENDENCE

The new health center was designed to provide a better quality of life for its residents by promoting resident independence. Extra square footage was added to promote independent locomotion in a wheelchair as well as other features which promoted independent activities of daily living.

A comparison of the typical behaviors observed in the old and New Health Center reveals more instances of positive/active behaviors. Residents in the New Health Center were observed more frequently talking, watching TV, watching or waiting, and less time in behaviors categorized as negative. (See Table 5.2).

Table 5.2 Frequency of Behaviors Comparison

	Old HC	New HC Avg	2nd Floor New HC	3rd Floor New HC
Talking	5.3%	8%	9.2%	6.8%
Eating	13.4%	12.65%	14.0%	11.3%
Read/Write	1.9%	3.1%	5.0%	1.2%
TV	10.2%	16.05%	14.9%	17.2%
Watching / Waiting	14.3%	15.6%	14.9%	16.3%
Circulate	6.1%	8.85%	2.7%	10.0%
Pacing	21.3%	-	-	1.7%
Sleeping	16.8%	12.8%	12.1%	13.5%
Stereotypic	5.7%	2.9%	.2%	5.1%
Null	7.2%	6.3%	6.0%	6.6%
Null/ Responsive	2.6%	2.2%	2.0%	2.4%

Another indicator of a better quality of life is comparing the frequency of incidents. Residents in the Old Health Center (3.08 incidents per bed) did have a higher frequency of incidents than those in the New Health Center (2.34 per bed) (Table 5.3). Specifically, the residents of the New Health Center had more afternoon and evening shift incidents, whereas those of the Old Health Center had more days and night shifts incidents. All types of incidents decreased except for falls. The number of bathroom incidents decreased greatly with the larger bathrooms. Overall incidents also have less significant effects on the resident.

Table 5.3 Incident Report Summary: A Comparison

	Old Health Center (60 beds) Q1-Q3 (1991)	Frequency of Incidents per bed	New Health Center* (87 beds) Q1-Q3 (1992)	Frequency of incidents per bed
Total Frequency of Incidents	185	3.08**	204	2.34**
TYPE				
Wandering	30	0.50	29	0.33
Falls	91	1.52	139	1.60
Behavior	11	0.18	6	0.07
Skin (tear/bruise)	39	0.65	20	0.23
Other	15	0.25	18	0.21
LOCATION				
Room	54	0.90	86	0.99
Bath	54	0.90	29	0.33
Hall	6	0.01	14	0.16
Commons (DL/Lounge)	78	1.30	41	0.47
Other	7	0.12	33	0.38
SHIFT				
Days	70	1.17	71	0.82
PMs	35	0.58	114	1.31
Nights	39	0.65	22	0.25
EFFECT				
Significant	9	0.15	12	0.14
Moderate	68	1.13	43	0.49
None	107	1.78	149	1.71

*New Health Center was completed in August 1991

**may = > Total Frequency of Incidents

Other records kept by Alexian indicate the building has supported resident independence. Larger and more plentiful bathrooms have improved bladder continence by 16% and improved bowel continence by 9%. Residents locomotion has increased 9% since moving to the new building, with more space for independent wheelchair use. Residents are also depending less on staff assistance for basic hygiene. Dependence has been reduced by 9%. Accessible closets, medicine cabinets and sinks are having positive effects. Residents are also calmer in the less chaotic environment of Alexian which has reduced the use of antipsychotic drugs by 4%. The death rate has even decreased by 15% for residents which moved to the new facility.

One feature that was tried at Alexian did not prove to be very successful is promoting resident independence. The color coding of the different clusters was intended to provide a wayfinding cue. However interviews revealed that residents did not pay attention to the “color” but to “numbers” and “letters” in their ways of spatial orientation. Residents and family members felt that only familiarity with a space can improve one’s wayfinding ability. In fact most of the residents, staff, and family members were not aware that color coding took place. Most residents indicated that they did not get lost in the facility once they were familiar with the layout.

Residents have even made positive comments about the difference the new health center has made in their lives. One resident said, “The nicest thing is that I have choices again.” Another resident said, “I feel

better and my outlook is better.” There is overwhelming indication that designing for residents needs has improved resident independence in the new health center. Increased resident independence also goes a long way toward promoting the third goal of staff efficiency.

STAFF EFFICIENCY

Staff efficiency was also a critical goal for the design of the new building. A key part of staff efficiency is turnover and recruitment which requires extra time for training. Staff turnover in the new building has decreased by 13% since the new building opened. Recruiting staff for the new facility has improved. The nurse manager had to turn away 60 nurses who wanted to work in the new facility. Staff member were also surveyed for their opinions about the new building concerning staff efficiency. 98% of the staff responses indicated that the building was promoting staff efficiency. Only 2% of the staff responses indicated that the building was not performing well. The cluster linen and soiled linen closets were one key feature that staff enjoyed as well as the more private nursing station.

Responses for the open ended comments indicated the new building not only improved staff efficiency but also morale:

*I can spend less time getting supplies and more time helping people out
I feel like I'm more satisfied with my work because I don't have as many loose ends.
I just fell better when I come here
I enjoy coming to work
I appreciate my job more
It has lifted my morale and changed my attitude toward nursing homes
I wish all nursing homes were like this one.*

Clearly, Alexian Village has achieved its three goals for the health center. However, Alexian constantly reviews the setting to make changes in the building if they are necessary. Evaluations indicate only minor changes are a necessary that where overlooked during design or removed because the of the cost per bed cap. Alexian Village residents and staff are winners in the battle to create a therapeutic environment for the elderly.

Figure 5.5 A Comparison between Old and New Health Center

Old nursing station



New nursing station

