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The Closing Group: A Therapeutic Recreation Program

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Project title: The Closing Group: A Therapeutic Recreation Program

Name of Lead Nursing Home: Robinson Terrace

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Section 1: Goals, Objectives, Research Questions and or Hypothesis

"The Closing Group" project was a therapeutic recreation program developed for eight long - term care residents who had a diagnosis of dementia and an accompanying behavior issue that interfered with the resident's quality of life and/or the quality of life of others. The program was developed based on a solid understanding of the possible causes of agitation, the nursing home environment as it relates to behavior and the use of approaches that would optimize resident's quality of life. Its goals were to increase social interaction among participants, decrease psychotrophic and restraint use, and decrease participant's anxiety/agitation.

It was anticipated goals would be met by participation in the Closing Group. The key elements of the Closing Group were as follows:

- Participants were assisted to an environment that was less stimulating and calmer than that of the nursing home unit.
- The Closing Group was held Tuesday through Saturday during the hours of peak unit activity, i.e., 2:30pm to 4:30p.m.
- A staff to resident ratio of one staff to four residents was provided.
- Naomi Feil's principles of validation were used whenever possible when communicating with participants.
- Activity was resident driven and provided within a small group setting.
- Interest areas were provided as possible sources of activity.
- Restraint use was limited.
- Reasons for a specific behavior was explored and needs met.
- The Closing Group was an interdisciplinary effort.

Section II: Background and Rationale

A review of the resident census at the time of grant application, dated August 2001 indicated 53% of Robinson Terrace's residents had a dementia diagnosis. A more current census dated March 2005 revealed about 60% of the residents had some form of dementia. Residents presented with a variety of symptoms which is to be expected since the onset and course of dementia depends on the underlying cause and varies from one individual to another (Butler, et.al., 1998; Youngjohn, et.al., 1996; Zarit, et.al., 1998).

The manifestations of agitation such as wandering, hitting, kicking, grabbing, screaming, disrobing, perseveration, lack of impulse control, were observed in many of Robinson Terrace's nursing home residents who have a diagnosis of dementia Managing unpleasant behavior symptoms to the extent quality of life is not diminished for residents who are experiencing the symptom is an ongoing challenge. Antipsychotics, which often have unpleasant side effects and restraints, which are also unpleasant for the resident, are used as part of behavior management. Often symptoms are also disturbing to those who are near them. A special care unit for individuals with dementia would be the ideal. These units adhere to the concept people with dementia have specific needs that include appropriate levels of stimulation, a flexible, tolerant environment and use specific strategies to meet these needs (Minzer, et.al.1996). Robinson Terrace is unable to have a special care unit so a special program was designed to provide a higher quality of life for all residents and staff. Success at a weekly program led to the development of what became known as the Closing Group so named by one of the weekly group participants.

The cause of dementia is unknown but it is believed to be the result of both environmental and biological factors (Minzer, et.al. 1996). This formed the foundation of the Closing Group. Factors that precipitate agitation such as lack of exercise, lack of stimulation, fatigue, sundowning, reinforcement of negative behavior (Zayas, et.al.1996), fear, pain, loneliness, acute confusion or disorientation, hunger, boredom, high stimulation, frustration in inability to impart needs (Lake, et.al.1998) and unmet needs such as to be useful and productive, love and be loved and to express feelings (Feil 1993), were evaluated by Closing Group staff. The presenting symptom was assessed and needs met when possible in attempts to reduce unwanted behavior.

Specific environmental issues relate to agitation and anxiety. Continued management within an over stimulating and over demanding environment sustains these behaviors in many residents with dementia (Minzer, 1993). The time between 2:30p.m and 4:30p.m.can be chaotic. The typical nursing home environment during this time includes the stimulation of one shift leaving and another coming on duty. This is also the time frame a resident with dementia may show sundowning behaviors. Phones are ringing and safety alarms are being triggered. Staff may be calling a resident's name out and telling him/her to return to unit or turn around or to perform some other request the demented resident is unlikely to understand. The end result may be frustration on the part of the impaired resident, other residents, staff and visitors. Activities are offered to all residents but those residents with dementia have difficulties staying for any length of time. It is often difficult to include these residents in large group programs since the residents with dementia have a short attention span and try to leave the group. Residents who function at a higher level often become upset with the behaviors of residents with dementia. It should also be noted traditional activities tend to end at 3:30p.m., a time of peak unit activity.

The Closing Group project sought to eliminate these environmental factors that may enable a distressed reaction. Special attention was also given the physical environment where the group was held. Soft lighting and neutral colors and solid color flooring were chosen in keeping with Knopman's (et.al.1990) suggestion of using colors such as mauve, peach and blue. Bright, flashy colors are not soothing. Wall covering and carpets should be solid colors rather than abstract patterns and noisy patterns. Renovations to incorporate these suggestions were part of the Closing Group project.

The choices for activity presented during the group were given much thought. Beisgen (1989) discusses the attributes of life enhancing activities for individuals with dementia such as they should restore old roles, be adult, enjoyable, promote dignity, take advantage of retained skills, be meaningful and provide an opportunity to share knowledge. The Closing Group was committed to offering activity with these attributes in a setting that was as resident driven as possible rather than traditional nursing home activity that tends to be staff driven.

The quality of the interactions and manner of communicating with confused agitated residents was considered in program development. The Closing Group adopted Naomi Feil's (1993) alternative to reorienting demented residents. She calls her approach validation therapy and it is a way of communicating with people who have AD and related dementias. A group setting for the program was chosen. Yalom (1983) proposes that groups provide an instillation of hope and create a sense of family which was key in attempting to reach the program's goals. Feil (1993) points out that a group produces energy, prevents withdrawal, restores familiar social and work roles and creates cohesion from sharing pleasant activities with others. This was directly related to the goals it was hoped participants would reach by attending the Closing Group.

Section 111: Methods: Study design

To test our hypothesis, change in the following measures was assessed:

1. Decrease in both number of indicators and severity in the Cohen-Mansfield Agitation Inventory (CMAI). Measured initially and quarterly.
2. Improvement or stability in Mini-Mental State Examination (MMSE). Measured initially and quarterly.
3. Improvement or stability in the Global Deterioration Scale (GDS). Measured initially and quarterly.
4. A score on Cornell depression scale that was below expected score indicating depression. Measured initially and quarterly.
5. Reduction in anxiety/ distress and episodes of weepiness during attendance at the Closing Group. Logged daily on tracking sheets.
6. Reduced amount of time in restraints. Logged daily on daily tracking sheets.
7. Reduction in psychotropic medications both dosage amount and frequency. Administration was documented daily by medication nurse on medical record. Note: Medication records were reviewed on each participant for the time he/she was involved in the group. For the purpose of this study, antidepressants and antianxiety medications were eliminated from analysis. Antipsychotic medications tend to have more serious side effects in geriatric population and so were analyzed more closely. Seroquel and zyprexa were the two antipsychotics

given most frequently when an antipsychotic was ordered during the two - year project.

8. A post program family satisfaction survey and staff survey specific to the group was conducted at the end of the project.

Sample

Possible participants were selected from the nursing homes resident population. A review of the medical record was first completed. Individuals without a dementia diagnosis were eliminated. A cohort was then selected from the remaining group of residents who met the following criteria:

- MMSE score of 10-25
- Global Deterioration Scale rating of Severe
- Presented with a behavioral symptom(s) that interferes with daily functioning and requires frequent staff intervention per consensus of treatment team
- Participants will have a score of at least "1" and a severity of 5 on the Cohen-Mansfield Agitation Inventory (CMAI)
- Must be able to communicate basic needs and able to respond to stimulation.

The established cohort list was then reviewed with the treatment team and eight eligible residents were selected. New England Independent Review Board (NEIRB) approval was obtained and then informed consent was obtained from either the Durable Power of Attorney for Health Care, court appointed legal guardian, or next of kin. Residents were not approached for review of consent form due to the nature of their dementia diagnosis and cognitive impairment. Resident consent was given on a daily basis when they were asked if they wished to be with the group. Residents sometimes became too ill to participate or died. Another participant was chosen based on the above criteria. There were eight participants at all times in the group. Sixteen residents in total during the two-year project were enrolled in the project. Thirteen were in the group long enough to have gathered sufficient data for comparison.

To protect confidentiality, a list was made with participant names and each assigned ID # that was used. This was kept in a locked file with consent forms. For daily tracking sheets, the resident name and ID # was included. Once the information was

compiled and it was transferred to collection forms that contain only the ID #, and the tracking sheet was destroyed.

Adverse reactions directly related to the Closing Group intervention were not anticipated and there were none. If, however, a participant had found the group setting distressing to him/her, the resident would have been assisted to the unit, given 1:1 until calm and returned to his/her baseline. This resident would be invited back to the group when the symptom was absent as long as selection criteria were still met. Residents were discharged from the study, if they become terminally ill, medically unstable or if the progression of the disease made participation in the program not beneficial. Discharged residents were provided with alternative activity per facility policy.

Section IV: Results including description of analyses and reporting of relevant statistics Note: This section was completed by Dr. Jen-Ting Wang.

MMSE, GDS, CDS, and CMAI, were assessed initially and quarterly after participation in the program. We used the initial score (pre-score) and the median of the quarterly scores (the post-scores) for each scale. Since there were only 13 participated residents in the group, nonparametric tests were performed on the differences of the scores of participants, and no distribution assumptions for the tests were required.

Hypotheses and results:

(a) Ho: The median of the MMSE post-scores was the same as the pre-score.
H_1: The median of the MMSE post-scores was different from the pre-score.

The participants had a median of initial MMSE score of 9.0, the median of the medians of the post-scores was 6.0, and the median of the score differences was 0.0. With a small sample of nine participants who had nonzero differences, the Wilcoxon Signed Ranks Test yielded a p-value of .374, which indicated no significant differences on the MMSE scores. (Table 1)

(b) Ho: The median of the GDS post-scores was the same as the pre-score.
H_1: The median of the GDS post-scores was different from the pre-score.

The participants had a median of initial GDS score of 6.0, which was the same as the median of the medians of the later scores. The median of the score differences was 0.0. With a valid sample of five participants who had nonzero differences, the Wilcoxon Signed Ranks Test resulted in a p-value of .059, which indicated no significant change of GDS scores at a 5% significance level. (Table 1)

(c) Ho: The median of the CDS post-scores was the same as the pre-score.

H_1: The median of the CDS post-scores was different from the pre-score.

The participants had a median of initial GDS score of 5.0, which was the same as the median of the medians of the later scores. The median of the score differences was .5. With a valid sample of 12 participants who had nonzero differences, the Wilcoxon Signed Ranks Test gave a p-value of .906, which also indicated no significant change of CDS scores. (Table 1)

(d) Ho: The probability of the median post-score (for one behavior) in CMAI equal zero was the same as the probability of score greater than zero.
H_1: The probability of the median post-score equal zero is greater than the probability of median score greater than zero.

Since the scores are of ordinal scale, performing the Binomial Test for each of the 36 behaviors, we found that most of the behaviors had p-values < .05, which suggested that the median post-score equals zero, while some behaviors such as "repetitive", "noises", "attention", "verbal aggression", "bossy", "fidget", "wander", and "temper outburst" had a median post-score greater than zero. According to the Wilcoxon Signed Ranks Test, there were no significant differences between the initial scores and the median post-scores, except for "screaming" and "complaining" with respective p-values .047 and .030. It was shown that the residents had a considerably less "screaming" and "complaining" while participated in the closing group than they did initially. The overall mean score difference (pre-score minus post-score) for all participants was .126 and the median was 0. Using the Wilcoxon Signed Ranks Test for the hypothesis that the median score difference was greater than zero, we obtained the p-value of .013, showing a significant overall CMAI score decrease at a 5% level. (Table 2)

Furthermore, the overall changes of CMAI scores for each participant were assessed. For each behavior item in CMAI, the median of post-scores was calculated to compare with the initial score. Then the Binomial Test was used to the hypothesis that there was a notable overall change for each participant. Among the 13 participants, two had significant decreases (left-tailed p-values = .0021 and .0313) and two had a significant increase (right-tailed p-values = .0384 and .0012) at a 5% level, while the rest of them had no significant changes. (Table 3)

(e) Ho: Group participation has no effect on participants' distress/anxiety, i.e., the probability of no distress (score 0) is the same as the probability of some distress (score above 0).
H_1: Group participation has a reduced effect on participants' distress/anxiety, i.e., the probability of no distress is greater than the probability of some distress.
and
Ho: Group participation has no effect on participants' weepiness, i.e., the probability of weepiness (score 0) not occur is the same as the probability of some weepiness occurred (score above 0).

H_1: Group participation has a reduced effect on participants' weepiness, i.e., the probability of weepiness not occur was greater than the probability of some weepiness occurred.

The daily recorded data for all participants (n>2000) were used in the Binomial Test resulted a p-value <.001 for the both hypotheses, which indicated that both distress/anxiety and weepiness hardly occurred during group participation. (Table 4)

(f) Ho: The probability of more frequent interaction (score 3 or 4) occurred in group was the same as the probability of less frequent interaction (score below 3).
H_1: The probability of more interaction occurred in group is greater than the probability of less interaction occurred.

and

Ho: The probability of more frequent participation (score 3 or 4) occurred in group is the same as the probability of less frequent participation occurred (score below 3).
H_1: The probability of more frequent participation in group occurred is greater than the probability of less frequent participation.

By inspection of the data, it did not show that frequent interactions occurred. In fact, it showed otherwise. (Table 4)

The resulted p-value of the Binomial Test was .036, indicating that more participation occurred during the group but not significantly at 1% level. (Table 4)

(g) Ho: The proportions of man-days using and not using restraints were the same.
H1: The proportions of man-days using and not using restraints were not the same.

According to the data, 680 man-days out of 1253, i.e., 54% were kept under restraints, while 46% were not. With a p-value of .003 from the Binomial Test, it did not support a statistical significance of restraint reduction during the participation. However, practically, the evidence that near half of the man-days did not require restraints has shown the positive effect on the restraint reduction.

(h) Ho: Psychotropic medications have reduced both dosage amount and frequency.
H_1: Psychotropic medications have not reduced both dosage amount and frequency.

To simultaneously consider the medication dosage amount and frequency, we combined the monthly dosages and frequencies of the two medications, Seroquel and Zyprexa, and calculated the daily mean medication usage for each month and each participant. The above hypotheses were rephrased as the following:

Ho: The daily mean medication usage has no linear relationship with the months of participation in the program.

H_1: The daily mean medication usage has have a negative linear relationship with the months of participation in the program, i.e., the longer the participation, the less the medications.

Since the mean medication usages and the number of months of ratio scale, the Pearson correlation coefficient, r, for the daily mean dosage and the number of months of participation in the program was calculated. The resulting r was .114 with p-value of .195 (n=130) indicating that the mean medications had no significant linear relationship with the lengths of time. That is, there was not enough evidence to show significant reduction in the medications.

Table 1: Descriptive Statistics and Test for Median Assessment Score Differences* (n=13)

	MMSE	GDS	CDS
Median of Initial scores	9.0	6.0	5.0
Median of Post-scores	6.0	6.0	5.0
Median of Differences*	0.0	0.0	-0.5
Signed Ranks Test	p-value=.374 (n = 9)	p-value=.059 (n = 5)	p-value=.906 (n = 12)

*Difference= the median of the pre-scores minus the post-scores

Table 2: Binomial Test for Median Post-Scores of Behaviors in CMAI (n=13)

Behavior	# of Equal 0 (Post-Score)	P-value (Post-Score)	Mean (Difference**)	P-value (Difference)
Repetitive	8	0.2905	0.077	0.472
Relevant	10	0.0461*	0.182	0.358
Non Relevant	11	0.0112*	0.583	0.140
Noises	9	0.1334	-0.231	0.819
Screaming	10	0.0461*	0.808	0.047*
Complaining	10	0.0461*	0.731	0.030*
Attention	6	0.7095	0.462	0.312
Negative	10	0.0461*	0.077	0.708
Verbal Aggression	7	0.5000	-0.115	0.705
Spitting	12	0.0017*	-0.192	0.977
Bossy	7	0.5000	-0.231	0.845
Verbal Sexual Advances	12	0.0017*	-0.077	0.977

Physical Sexual Advances	12	0.0017*	-0.039	0.977
Fidget	5	0.2905	0.269	0.439
Wander	6	0.5000	0.385	0.242
Outside	13	0.0001*	0	N/A
Inappropriate Dressing	11	0.0112*	0.231	0.428
Repetitious Mannerisms	10	0.0461*	0.308	0.394
Inappropriate Handling	13	0.0001*	0	N/A
Grab/Snatch	10	0.0461*	-0.231	0.819
Hoard	13	0.0001*	0.308	0.500
Hiding	13	0.0001*	0	N/A
Strange Movement	12	0.0017*	-0.154	0.814
Temper Outburst	7	0.5000	-0.154	0.735
Hitting	13	0.0001*	0.077	0.500
Kicking	13	0.0001*	0	N/A
Throwing	13	0.0001*	0	N/A
Tearing	13	0.0001*	0	N/A
Grab/Cling	11	0.0112*	0.538	0.343
Pushing	12	0.0017*	0.077	0.500
Biting	13	0.0001*	0	N/A
Scratching	13	0.0001*	0	N/A
Hurt Self	13	0.0001*	0	N/A
Hurt Others	13	0.0001*	0.077	0.500
Intentional Falls	13	0.0001*	0	N/A
Eat/Drink Non-food	13	0.0001*	0.769	0.091
Overall	N/A	N/A	0.126	0.013*

*: Significant at 5% level.
**: Difference= pre-score minus post-score

Table 3: Sign Test of Overall CMAI Difference for Individuals

Participant	# of Below 0	# of Equal 0	# of Above 0	P-value
1	3	27	6	.2539
2	12	20	4	.0384*
3	0	31	5	.0313**
4	4	28	4	.6367
5	2	28	6	.1445
6	15	19	2	.0012*
7	2	33	1	.8750
8	2	20	14	.0021**
9	2	28	6	.1445
10	4	28	4	.6367
11	5	28	3	.8555
12	0	34	2	.2500
13	0	34	2	.2500

*: Significant increase at 5% level
**: Significant decrease at 5% level

Table 4: Binomial Tests for Distress, Weepiness, Interaction, and Participation (frequency in man-days)

	# of 0*	# of Above 0	# of Below 3	# of 3 or 4	Total	P-value
Distress	2053	363			2416	<.001
Weepiness	2350	66			2416	<.001
Interaction			1331	1085	2416	<.001
Participation			1163	1252	2415	.036

*Scores: 0 = did not occur, 1 = rarely occurred, 2 = occasionally occurred, 3 =frequently occurred, and 4 = always occurred.

Note: The remainder of report was completed by Laraine Putman, RN, LMSW. Qualitative methods involved both solicited and unsolicited comments about the effectiveness of the Closing Group. One of the most touching unsolicited commentaries on the possible success of the group came from one participant's obituary. This lady attended daily for several months. Her daughter recognized the impact the group had on her mother's quality of life by noting in her obituary…."while at Robinson Terrace (Oma) participated in the Closing Group" (The Daily Star April 20, 2004). This was considered important enough to be included along with impressive community involvement over her lifetime.

Another meaningful, unsolicited comment came from a lady who was always looking for "her people". She left her homeland of Nova Scotia at a young age to attend nursing school in NYC and remained in the US. She now experiences confusion associated with her dementia diagnosis. Each day she searched for "her people". She would ask any one she saw to help her find them. Knowing her background the treatment team was fairly certain she wanted to return to the nurturing love of her family. It was evident the Closing Group was meeting this need when she started referring to group attendance as going to be with "her people".

One gentleman referred to the Closing Group as his apartment. Another said he was going to his living room. A female participant would say she was going to her meeting, assigning it a term that meant to her this was something important. Participants were observed on a daily basis sitting in comfortable recliners within the circle of the group looking relaxed, without distress.

Six out of sixteen families responded to a post program family satisfaction survey. One daughter expressed her own relief that her mother's anxiety was reduced at a particular difficult time of day. She felt the group helped her mother remember a happier time. One family member suggested more than one group a day should be offered and staff on all units should be made aware of the interventions used in the Closing group. A significant other noted it was worthwhile and helpful for his friend. One family member stated the quiet setting with controlled stimulus was pleasant. Two family members felt group was moderately helpful at increasing socialization and reducing distress. A low response is noted. The survey sample of family/ significant others is low, i.e., 16. It is speculated that out of the 16 several had family members (participants) who may have been transferred. Some participants passed away possibly making a response uncomfortable. It is also speculated some may not have thought the group helpful and saw no reason to reply. Note: The survey sample is greater than the statistical sample. Out of 16 participants overall, 13 were with the program for at least one quarter making statistical analysis possible.

Twelve key staff were surveyed post program. Six nurse managers, one evening supervisors, three recreational staff and two social workers were asked an open ended question about the group: What were your observations about the Closing Group? All

who responded indicated that residents who were anxious before the group were calmer on return although this was not the observation when the program first started. All reported the units were quieter during the 2:30p.m. to 4:30pm. time frame. There were less disruptions and it was easier to do documentation. Recreational staff noted activities had fewer disruptions now those who were offered the group had a more needs appropriate group. Recreational staff stated other residents offered fewer complaints since activities were calmer. One staff member who was also a family member appreciated that her grandfather used grandmother's attendance at the group as a means to end his visit on a less guilty, more positive note.

The nurse managers who were surveyed stated they would have liked to have seen more residents benefit from this type of intervention. They suggest it would have been beneficial to offer the program to resident on an as needed basis and also to have a larger group or two such groups.

Daily tracking sheets that quantitatively looked at participant's participation also qualitatively tracked activity preference. Activity was not highly organized but rather involved staff offering residents several choices until something seemed to engage their interest. Through this survey it was noted they consistently chose to be in a circle arrangement. Participants enjoyed music daily either listening to singing or making music. Yarn rolling was a favorite activity for the ladies and resulted in increase resident to resident interaction. Balloon toss was enjoyed almost daily. This fostered interaction but also provided physical exercise. Physical contact through hand holding, using hand cream, giving hugs and backrubs were well received by residents. Visits from Ginger, one staff person's dog, was consistently enjoyed. Other activities offered and enjoyed were looking at magazines and picture albums, nail care, making grocery lists, sponge painting. Some form of reminiscing such as poetry from childhood, favorite recipes or holiday celebrations was enjoyed almost daily. Participants were noted to sometimes share painful memories and others would try to comforting the one upset. Staff witnessed conversations that made no sense to staff but involved participants connecting to each other. Two ladies of German decent enjoyed ladies speaking native their native language. Activities of less interest were noted to be sorting or folding activity and most games.

V: Strengths and limitations including barriers encountered and how they were overcome

The strengths of the Closing Group were as follows:

- It was an interdisciplinary project. Administration, Social work, Nursing, Dietary and Engineering Departments had some part in the development and ongoing running of the project.

- Recreational Director, Kathy Weisenbarger was committed to the goals and voluntarily monitored the program in absence of Project Director.

- It was/is an inexpensive intervention. No costly equipment is necessary.

- A Closing Group type of program can be replicated quickly and easily.

- There was a smooth transition from the end of the grant to a regular, scheduled recreational program.

- The project persevered. In spite of opposition, the Closing Group kept to its original schedule for the most part. As a result of this perseverance, it became an accepted part of programming.

- The program was designed for 8 residents at one time. During the two year grant, a total of 16 residents were offered the Closing Group. However, many more people were affected in a positive manner by the existence of the group. Staff, other residents and family members enjoyed a more peaceful environment during the Closing Group hours.

- What was seen to work at Robinson Terrace has application in other settings such as the home and adult homes.

- Multiple measures were used to assess participant's status.

- Statistical analysis was completed by an outside source.

- Although the Closing Group had several staff changes, the same person was able to complete assessments.

The weakness were as follows:

- The project had several staffing changes. Several Recreational aides started and left. Outcome: Existing staff filled in but sometimes with difficulty. Staff were hired and trained but of course there was a learning curve for each new person. It is unclear how this affected reaching the project's goals.

  Cindi Lockrow, project assistant, started graduate studies. She had been the person responsible for completing assessments. Outcome: A schedule which involved flexibility on her part and project director's was worked out so she would be able to continue completing assessments.

  The project director left the position of Director of Resident and Family Services. Outcome: Kathy Weisenbarger monitored the day to day functioning of the group.

- Robinson Terrace is a rural facility without existing staff with research skills. Outcome: Dr. Barbara Denison became a friend to the project. Dr. Jenting Wang was hired to assist with statistical analysis of data.

- Extensive construction began on the facilities rehab unit making it impossible to complete renovations to the Great Room. Outcome: They will be completed after the main construction is completed.

- There was evidence staff support was lacking. Staff initially blamed the Closing Group for some resident's anxiety when returning to unit. There was several staff that became very undermining to the group's goals. Outcomes: Inservices were conducted in attempts to educate and problem solve. This didn't seem to relief the problem. Eventually, the administrator said, "Enough. " Staff were told the project was here to stay. This seemed to end the complaints.

- There were too many other variables in a two-year study of residents with dementia. Medications, illness and just the progression of disease could be responsible for changes. Outcomes: Multi variables were used for statistical analysis and qualitative measures were also considered.

- The sample was small. Outcome: It was hoped that statistical analysis was adjusted accordingly. Multiple measures were used in attempts to make up for small sample.

- The length of the study was in some ways too long. It was difficult to maintain enthusiasm for a two year period. One year may have been sufficient to collect data and draw some conclusions. A nursing home environment is not stagnant and in many ways wasn't the same facility at the end as it was in the beginning.

- Concept of resident driven activity seemed to be a difficult one for staff. Some expressed guilt because they weren't busy enough. They thought they should be doing more activities. Outcome: Frequent staff meetings were held and staff

were reassured they were doing their job when having only a light structure to the program.

- Some hands on care was needed. For instance, participants were transferred from wheel chairs to easy chairs and were given a light snack. Some staff were not familiar with good body mechanics or issues surrounding feeding a resident. Outcome: Staff education was provided as needed.

- Some staff were not familiar with Naomi Feils's validation therapy. Outcome: Ellen Lasoff, RN is a certified validation therapist and provided staff education.

Section VI: Conclusions

What is the answer to the result question?

"The Closing Group" project's goals were to increase social interactions among participants, decrease psychotrophic and restraint use, and decrease participant's anxiety/agitation.

MMSE, CDS, GDS data suggests participants remained stable in areas of cognitive status and mood. There were no significant differences on MMSE, CDS or GDS scales. When assessing individuals with dementia, stability over the course of two years would appear to be a positive outcome. However, the sample was small. The project started with eight residents and as one was discharged from the group another resident was added. It is possible the new resident functioned at a higher level than the one leaving. This would offset any changes either positive or negative. No conclusions can be made based on this data.

Based on analysis of data, the goal of decreasing anxiety/agitation may have been met. Anxiety /agitation and weepiness hardly occurred during the group. Occurrence was rated on a tracking sheet that was one developed for the purpose of the project and lacks validity and reliability. However, analysis of CMAI scores supports a significant overall decrease in agitation indicators. Scores were also considered on an individual basis. This analysis revealed two participants had an increase of agitation. The remainder had no significant changes, a desired outcome. This outcome could be due to the progression of disease, acute illness or medication changes. The level was so low, i.e., almost no

anxiety/agitation reported, that group attendance may have been partially responsible for low levels.

The goal of reduction in use of restraints may also have been met at least during the time participants attended the Closing Group. The binomial test performed on the data did not support a statistical significance in restraint reduction. However, as it was pointed out previously in this report, nearly half of the participants did not require restraints. This is a positive outcome that could be related to participation. Restraint reduction is closely related to the previously discussed goal of reduced anxiety/agitation. Staff were more comfortable eliminating a restraint during the time of the Closing Group noting less anxiety/agitation. Other factors could have been responsible for a decrease in restraint use such as progression of dementia, acute illness or addition of medication. Any conclusion about restraints is made with caution.

The data analysis does not support that the goal of increasing social interaction was met. More interactions occurred but not at a significant level. This comes as a surprise since participants were observed having many pleasant interactions. The difference lies in who they were observed interacting with and what the tracking sheets were recording. The tracking sheet looked at interactions with peers not with staff. This is probably where the interaction occurred. A person with dementia often doesn't reach out and engage others yet responds positively when approached by another person. Participant's hearing and vision limitations could also be factors in limiting interactions with peers. The instrument used to track interactions was one developed for the specific use of the project and so at this point lacks validity and reliability. A conclusion based on the statistical analysis isn't possible at this time.

Analysis of medication data suggests there was not enough evidence to show significant reduction in the anti-psychotic medications seroquel and zyprexa. Again small sample size was a factor in making any conclusions. Residents with dementia can be at the same stage of illness yet varying in need for medication. It could also be speculated that this suggests there was little or no carry over with any positive results of reduced anxiety/agitation i.e., medication was required.

Summary

Firm conclusions concerning goals being met or not met can not be made based on statistical analysis. The progressive nature of dementia, acute physical illness, small sample size, lack of validity and reliability of tracking sheets and staff changes were among the variables that affected data. Further study using larger samples and better measures is needed before strong statistical conclusions can be made.

Qualitative data can not be ignored. It suggests the Closing Group may have partially met goals related to decreased anxiety/ agitation and increased interaction. The consensus of the treatment team was it made enough of a difference in the participants anxiety/agitation, the quality of life of other residents, and the quality of life on the units during the Closing Group hours that the group never stopped even after funding ended. The formal project ended June 1 2005. The next day Recreational Services took full ownership and incorporated a Closing Group type of program into their daily schedule. This was a big accomplishment. The Closing Group project made a statement: small groups with resident driven activity better meet the needs of residents with dementia and those without dementia.

Plans for dissemination

It is our plan to target the grass roots people in nursing homes working with those with dementia. We believe a big part of the Closing Group format includes ideas that have application for caregivers in the community and adult homes. Keeping this in mind the following is our dissemination plan:

- Robinson Terrace will offer presentation at our facility and invite nursing, recreational and social work staff from area nursing homes and adult homes. Caregivers from the community and agencies providing home care would be included.
- The Leatherstocking Alzheimer's Association will be approached about being part of their spring workshop.
- Presenting at the Recreational Directors annual meeting will be explored.
- Presenting the project and results to nursing students at Delhi College will be explored.

- An article will be submitted for publication in one of the following journals: Provider, Alzheimer's Disease Quarterly or other media read regularly by nursing home staff.
- An article will be prepared for the local newspaper, The Daily Star.

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Dr. Barbara Denison acted as friend to the project and helped develop statistical plan.

Pam Harmon, Administrator was responsible for the group's budget and assisted with problem solving.

Cindi Lockrow, Project Assistant completed assessments, organized data and worked hands on with the group until spring of 2005.

Aimmee Vroman, Director of Resident and Family Services together with Kathy Weisenbarger developed the weekly Closing Group.

Dr. Jen-ting Wang assisted with statistical analysis.

Kathy Weisenbarger, Activities Director monitored the group on a daily basis often being the second staff person for the group. Her staff also filled in during staffing problems.