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TITLE: Multi-Family Group Intervention for OEF/OIF Traumatic Brain Injury Survivors
and their Families

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14. ABSTRACT The overall aim of this study is to evaluate the feasibility and preliminary efficacy of an intervention that adapts Dyck's civilian multi-family group treatment model (MFGT-TBI) for veterans with TBI and their families, to improve the health, mental health and quality of life for veterans and their families. To date, the investigators have adapted the Dyck et al. manual for use in our study and have also adapted workshop materials to be used during the psychoeducational workshop for the veterans and their family members. All study staff have been hired and trained at the multiple sites. In addition, the necessary regulatory materials have been processed, including protocol summaries and informed consent forms; and the assessment battery has been modified and finalized to include relevant measures, with time points modified accordingly. Study participants have been recruited in Durham and the Bronx and a tracking database has been created to facilitate recruitment. In Durham, four veterans and family members have been consented and assessed at baseline and have formed the first MFG, which has already had its workshop and first meeting. Durham is now recruiting for its second group. In the Bronx, five veterans and family members have been consented and assessed at baseline and their workshop has been held. Their first MFG group will take place on October 20, 2009.					
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Introduction

The overall aim of this study is to evaluate the feasibility and preliminary efficacy of an intervention that adapts a civilian multi-family group (MFG) treatment model for veterans with TBI and their families. A total of four MFGs will be established across three sites. Each MFG will include approximately 6-8 veterans and their caregivers.

Participating veterans will be assessed at four points during the course of the study: at baseline and at 3-month intervals during the 9-month treatment period. Expected outcomes for veterans include reductions in psychiatric symptoms and problem behaviors, and increases in community reintegration and quality of life. For caregivers, expected outcomes include reduction of distress, isolation and burden.

Research Accomplishments Associated with Statement of Work Aims/Tasks

Aim 1: To customize Multi-Family Group treatment (MFGT-TBI) to address the specific needs of veterans with TBI and their caregivers.

Tasks: (1) We will adapt the manual for MFGT-TBI used by Rodgers et al for use in the study population and settings. We will review educational material for patients and family members on TBI, and the most suitable selected or adapted for use during the intervention.

During the first 6 months, the investigators began to adapt Dyck et al.'s manual, used in his civilian TBI study, for veterans injured during OIF/OEF in combat. Although this task was initially slated for the first 6 months of study, in practice we have found that relevant information guiding adaptation emerges as the intervention itself has progressed. Changes to date have mainly been reflected in modifications to the Educational Workshop, in which all the families gather for the first time education about TBI, associated conditions, treatment and impact on families. Materials are presented mainly via powerpoint, with ample time for discussion and socializing. Specifically, the MFGT Educational Workshop was revised to incorporate material on the military experience, the pathophysiology and treatment of TBI associated with missile blasts, and comorbid conditions, such as post-traumatic stress disorder, substance abuse and depression. Drs. Robin Hurley and Katherine Taber provided state-of-the art educational materials on IED-related TBI for the workshops. Dr. Adrian Cristian, study Co-Principal Investigator and Director of Rehabilitation Medicine and the Polytrauma unit at the Bronx VAMC provided simplified materials on basic neuroanatomy and brain functions/dysfunctions (i.e. what dysfunction might result from an injury to a given area of the brain), common IED injuries and their sequelae, and functional limitations associated with combat-related TBI as experienced by the veterans and family members. Dr. Melissa Altman, a local expert in diagnosis and treatment of PTSD, gave a detailed, interactive presentation of the major symptoms of PTSD as experienced by veterans and family members, and the relational and functional problems created by the symptoms, especially if the PTSD behaviors were not understood as part of a disorder. These presentations from local experts were well-received by the veterans and their family members and the material from the Bronx workshop has been provided to Durham for use in their second workshop.

In addition to changes in the Workshop, the Joining session structure and contents was adapted to reflect changes in the patient population. In contrast to the civilian TBI survivors in the Dyck et al study, our veterans are relatively young (mean age = 34.11 ± 8.28 years in our study vs 39.3 ± 11.3 years in the Dyck study) and the family members are spouses or significant others vs. parents. Clinically, we have found that the younger age, combat and multiple deployment experience, comorbid PTSD (present in 77.77 % of our vets) and associated symptoms of emotional numbing, and often presence of young children in the household, leads to frequent marital tensions/dissatisfaction. Although not in the Dyck manual, we found that these tensions and conflicts needed to be addressed

and acknowledged, in order to be able to proceed with the traditional Joining exercises, e.g., enumerating strengths and weaknesses. In cases where the conflict was relatively mild and appeared related to common problems relating to TBI and the military experience, this involved simply helping the couple to identify and clarify these issues as issues in common with many vets to be addressed during problem-solving exercises in the group. In other cases where the degree of conflict was so high and/or not related to TBI, time-limited couples' therapy was felt to be needed in addition to the MFGT, as the MFGT structure does not allow for in-depth discussion of individual marital issues. This was worked out in supervisory sessions with Ms. Norell and with the PI and communicated to the couples by the clinicians during the joining sessions.

In future groups with OIF/OEF vets it would be appropriate to incorporate a marital satisfaction scale into the assessment. This issue is also relevant to the issue of therapist characteristics for this intervention with this population. At least one of the therapists should be experienced in couples' counseling as well as family psychoeducation. Fortunately, both the Bronx and Durham have an experienced couples' therapist as an MFGT co-leader. These changes, based on relatively recent observations are currently being incorporated into the manual. With respect to the post-workshop group sessions, based on Durham's initial experience, it appears that the pace of the intervention may need to be picked up. For example, the Dyck manual, based on the MacFarlane model for SMI, allocates the first two sessions for the group members to get to know each other, more generally in Session 1 and in relation to the TBI in Session 2. Problem solving begins in Session 3. However the Durham clinicians reported that their vets and families had explicitly said they were eager to get going with problem solving, and that the contents of both Sessions 1 and .2 had been well-covered in Session 1. Although the vets have some level of cognitive impairment, they are combat veterans and are action-oriented. They and their partners are relatively young in comparison to the group members in the Dyck et al. study. It was decided that it was a positive sign overall that the group members were eager to begin problem-solving, and it was decided to begin problem-solving with the caveat that the clinicians be attentive to signs that the group needed to slow down, if for example, solutions suggested to TBI-related problems appeared to reflect insufficient knowledge of the individual situations/limitations of the vet and family member elected for the problem-solving exercise in a given session. Because the vets are action-oriented, there may be a tendency to jump ahead, without fully understanding the problem and its context. The clinicians and Ms. Norrell will make this differentiation as the groups progress. Dr. Perlick, herself an experienced family and couples' therapist, is also attending the supervision to participate in discussions related to potential manual changes, to help guide and document these.

We have appended the Educational Workshops used in both sites, which differ somewhat, reflecting differences in local expertise.

(2) We will hire research assessors and train them to obtain informed consent and deliver all study instruments including neuropsychological assessment tools.

In addition to the site PI's and clinicians, research assistants at each of the three sites were recruited and hired. This required not only processing by the VA Foundation,

but processing the RA's as employees without compensation (WOC's) at each site. Training in administration of the neuropsychological measures for the research assistants was completed at all three sites by neuropsychologists serving as VA diagnosticians of TBI. In addition, the core study staff (PI's and research assistants) attended a web-based training in administration of the Columbia Suicide Severity Rating Scale conducted by Kelly Posner, Ph.D., and received certificates for their attendance.

The initial RA's hired in the Bronx and Durham left for personal reasons had to be replaced. In the Bronx, a project director from another study filled in temporarily. In New Jersey, the hiring of a clinician to replace the MFG clinician who left was delayed due to the lengthy credentialing process required, and a hiring freeze. However, in May 2009 a psychologist was recruited and hired to serve as the second clinician on the study. In the summer of 2009, new research assistants were recruited and hired at both Durham and the Bronx. All new RA's were trained on the study instruments and the neuropsychological battery.

(3) We will obtain regulatory review and approval for the study.

Protocol summaries, informed consent forms, and other required materials were prepared at each of the three study sites and submitted to the respective Internal Review Boards. The Bronx, Durham and New Jersey finalized approval from both the Internal Review Board and Research and Development Committees, and from the U.S. Army Medical Research and Materiel Command as well. Following the initial approval, amendments were submitted in order to add new personnel to the protocol and to refine the assessment battery to capture important outcomes. Quarterly Technical Progress reports for the first three quarters of the study were submitted to and approved by the USAMRMC. In addition, Continuing Review Documents were submitted to the USAMRMC in the beginning of October, 2009.

Aim 2: To evaluate the feasibility of MFGT-TBI within VA by establishing four MFGs.

Tasks: (1) A minimum of two clinicians per site will be trained to deliver MFGT-TBI, one of whom will have prior experience of managing patients with TBI.

A two-day training workshop in conducting the multi-family group therapy was held in November, 2008. Dr. Dennis Dyck and Ms. Norell (MFGT experts), and clinicians from Durham and New Jersey all convened in the Bronx for two days, as well as the PI and Bronx RA. The training was comprehensive, including role-playing of MFGT group members by the clinicians. It was also an opportunity for the study team to come together as a whole and develop a sense of cohesiveness. In May 2009, Ms. Norell, MFGT expert and supervisor, designed a three-part training protocol to train the new family clinician in NJ in the MFGT protocol. In addition, some of the other clinicians participated as well, as a 'refresher'. The training consisted of: 1) background reading; 2) one, two-hour and a second, one-hour teleconference training session in which the basic principles of MFGT were explained by Ms. Norell; 3) viewing a video demonstration of a

previously taped MFGT. This training was completed during the third quarter. In addition, at each site, clinicians from psychiatry and those with experience with TBI patients were trained.

(2) At each VISN 3 site, one MFG of 6-8 veterans and their family members will be established; at the VISN 6 site, two such MFGs will be established.

In the VISN 3 site at the Bronx, the investigators have established one multifamily group of five veterans and five family members, with an additional veteran being added before the first group meeting. Educational workshop materials will be delivered to and gone over with this veteran individually during the joining process. Since the Manual does permit the addition of group members during the course of the group, we are continuing to recruit for an additional veteran over the next several weeks. In the VISN 6 site, one group with five veterans and family members has been established, although one family relocated geographically and had to drop out. The investigators are currently recruiting, consenting and assessing for their second group, which has been planned to begin at the end of October, 2009. The NJHCS site in VISN 3 was unable to recruit any veterans and has withdrawn from the study. We will attempt to replace the group from the NJHCS site with a 4th group from VISN 3 either in the Bronx or an alternate facility.

In terms of feasibility, recruitment for this study has been more difficult than anticipated. The barriers relate: 1) to the characteristics of the study population itself; 2) to existing protocols for the clinical diagnosis and treatment of OIF/OEF vets within VA, and; 3) to the staffing and recruitment/diagnostic methods within the current protocol. Study Population: The initial IRB protocol required veterans who were informed of the study by their clinician to explain the study to first give written informed consent, and then describe the study to their family members (aided by a brochure) and obtain verbal consent from the family member himself, after which an appointment could be scheduled with research staff to answer the family's questions and obtain consent. However, even when the veterans were interested, due to their cognitive impairment, they were often unable to effectively explain the study to their family members. They were also reluctant to sign consent without knowing if their family member would be willing to attend. To address these issues, an amendment was submitted (and ultimately approved) that allowed the study's family clinicians to contact the family members with the veterans' verbal approval. The veterans' cognitive impairment also affected their ability to remember recruitment appointments with the study team, resulting in a very high proportion of missed appointments, despite reminders. In addition to the veterans' cognitive impairment, there are multiple practical/logistical challenges and life events that veterans and their family confront on a daily basis. Appointments were often difficult to schedule, as many veterans already had a large number of therapy, and rehab appointments scheduled, and found it difficult to add more. Veterans and their family members were also burdened by competing demands such as work, child care, and a relatively high frequency of negative life events such as legal problems/ court appearances, accidents/ injuries, miscarriage, and theft victim (to which many veterans

seem vulnerable). In order to help accommodate the family members, the study team added more evening appointments.

Diagnostic and Treatment of TBI at VA:

The study protocol relies on clinical diagnosis of TBI. While there is a mandatory screen for TBI within VA, procedures for following up on the screen, diagnosing and treatment/services for TBI are different within different facilities, and is frequently split between several services within a given facility: the OIF/OEF service, polytrauma/rehabilitation medicine, physiatry, or psychiatry for treatment of comorbid PTSD or depression. In the Bronx, for example all positive screens are followed up with a clinical diagnostic interview by Dr. Cristian or one of his colleagues and a careful history coupled with a mental status exam is employed to make the diagnosis. Those diagnosed with TBI will be treated in rehab medicine but may also be referred to other services for treatment of comorbid conditions such as PTSD, marital distress, depression or vocational counseling. Although we are fortunate in the Bronx and in Durham that the services cross-refer and communicate well, liaising with the relevant treatment teams/treators across services has added a considerable layer of complexity to recruitment, especially as the PI and study clinicians were based in psychiatry. It has taken many months to develop effective, ongoing referral/communication channels between services and these could still be improved (see below). The situation is similar in Durham, where, with post-deployment as the theme for the VISN 6 MIRECC there are positive working relationships between services treating the vets, nonetheless coordination or recruitment efforts by psychiatry with the services diagnosing and treating the vets is complex and time-consuming. In New Jersey, positive TBI screens were followed up by neuropsychological testing; however blast exposure and display of cognitive deficits was not considered diagnostic in the presence of comorbid PTSD or substance abuse, and these individuals were referred to psychiatry but not diagnosed with TBI. There is a large OIF/OEF service in NJHCS where veterans are seen by case managers but these veterans are not referred to other services.

Study Staffing and Recruitment/Diagnostic Protocols:

In view of the complexities of recruitment outlined above, and the amount of front-end work needed, fuller staffing is required for effective recruitment particularly if a larger program were to be mounted. A full-time, clinically trained, Ph.D. or advanced masters' research coordinator is needed at each facility to follow through on clinician referrals with the vet and family member, and to liaise between different services to maintain high visibility and generate a high rate of referrals. Ideally, this individual would be integrated into the treatment/diagnostic team and might even help with some follow-up of screens so they would be there when it counted. A research assistant is also needed for assessment, tracking referrals and generating reminder lists, making reminder phone calls, helping the project director prepare regulatory documents, enter data and so forth. The Dyck et al study was staffed by two full-time clinicians, a FT doctoral level project director and a FT research assistant. It would also be helpful to standardize methods for diagnosis across sites, and ideal to have study staff assist in the follow-up to positive screens. Finally direct outreach to family members i.e. through mail to all OIF/OEF vets at a facility (without identifying the vet as someone with TBI) would be

helpful as there are many steps before a research staff member can even describe the study to family members.

In conclusion, while there is much enthusiasm for the MFG among current participants and clinicians, feasibility could be significantly enhanced in the future with some modifications in protocol/study staffing.

(3) The supervisor for clinicians will rate their competence and fidelity to the MFG model.

The supervision is ongoing for both the Durham and Bronx groups. In Durham, sessions have been taped and are being sent from Durham in encrypted form, so that adherence and fidelity can be rated. In the Bronx, two veterans have refused to be taped, so process notes will be used as a replacement. The study team hopes to address this problem regarding taping once the group coalesces. (The first group session is scheduled for October 20th, 2009). After the first 2-3 sessions, the clinicians will re-address the issue of taping to see if the group members feel comfortable with the taping process, so that sessions can be taped and adherence and fidelity can be recorded. We can use the problem-solving approach to address the need to establish adherence/competence.

(4) We will use data from written evaluations by veterans and family members and data from focus groups debriefing clinicians after the first two post-workshop phases to make modifications if needed.

The study has not yet reached this stage.

Aim 3: To evaluate MFGT-TBI's efficacy in reducing psychiatric symptoms and problem behaviors and increasing community reintegration and quality of life among veterans with TBI, and reducing caregivers' distress, isolation and burden.

Tasks: (1) All participants will be interviewed using standardized measures at baseline, immediately after the one- day workshop, and then at three three-monthly intervals until the end of the intervention.

All veteran and family participants (N = 18) were interviewed using standardized measures at baseline and will be re-assessed a three-monthly interviews until the end of the intervention and three months after the completion of the intervention. The assessment immediately after the one-day workshop has been discontinued. This was done in part due to concerns about validity of the data arising from too-frequent repetition, little or no expectation that significant change would occur following the joining and introductory workshop, and the wish to reduce participant burden.

In addition, several additional relevant measures were added to the assessment battery. Specifically, these measures included: the Columbia Suicide Severity Risk Scale (Posner et al., 2007), used to measure suicide risk; a modified version of the Patient's Health Questionnaire (Spitzer et al., 1999), used to measure presence of Major

Depressive Disorder, Anxiety Disorders and Alcohol Use; the SF-36 (Ware et al., 1992), used to measure veteran and family Member physical and emotional health; the 4-item Perceived Criticism Scale (Hooley & Teasdale, 1989), used to measure perceived criticism; and the Family Empowerment Scale (Koren et al., 1992), used to measure family empowerment. There was also a deletion of the Life Satisfaction scales of the and the substitution of these more sensitive measures: the Heinrichs-Carpenter Quality of Life Scale Intrapsychic foundations subscale (Heinrichs, Hanlon & Carpenter, 1984); the Ways of Coping (avoidance and emotion-focused subscales) (Scazufca & Kupier, 1999); and the abbreviated Duke Social Support Scale (Koenig et al., 1993). Lastly, two brief measures, the Life Events Checklist (Gray et al., 2004) and the Pittsburgh Sleep Quality Index (Buysse et al., 1989) were also added by the investigators as additional, relevant measures.

(2) Qualitative data will be obtained from focus groups separately of each of veterans, family members and clinicians at the end of the intervention.

The study has not yet reached this stage.

Key Research Accomplishments

- **Recruitment of MFG clinicians willing to donate time at 3 sites**
- **Recruitment and processing of appointments for Research Assistants at 3 sites**
- **Submission and approval of research protocol to IRB and R & D committees at the Bronx VAMC, NJHCS and Durham**
- **Review and refinement of assessment protocol**
- **Submission and approval for amendments to IRB protocol to add new, relevant research measure and new staff**
- **Organizing and conducting 2-day training workshop in MFGT with expert consultants Dennis Dyck and Diane Norrell in the Bronx, NY. Attendees from Durham and NJHCS.**
- **Development of recruitment channels, including liaising with multiple services and providers at 3 sites.**
- **Development of recruitment and participant tracking database and reports in Access (consultant hours subsidized by VISN 3 MIRECC)**
- **Recruitment and consenting of 9 veterans and 9 family members to date**
- **Baseline assessment of 9 veterans and 9 family members to date**
- **Modification of Joining Sessions and Educational Workshop to meet needs of OIF-OEF veterans and family members**
- **Weekly administrative and supervisory meeting (2 meetings/week)**
- **Conduct Joining sessions for 9 families (2 groups)**
- **Conduct Educational workshop for 9 families (2 groups)**
- **Begin adherence ratings**
- **Begin MFG group meetings**

Reportable Outcomes

Reportable outcomes to date are minimal, as the groups have just begun. Nonetheless descriptions of the study and baseline data were accepted for presentation at conferences as noted below.

K. Straits-Troster, D. Perlick, A. Kline, D. Norell, D. Dyck, & J. Strauss. *Adaptation of Multi-Family Group Treatment for Veterans with Traumatic Brain Injury and their Families*. Poster accepted for presentation at the International Society for Traumatic Stress Studies 25th annual meeting, Atlanta, GA. (Nov. 2009) (See Appendix 1 for abstract)

Perlick, D., Cristian, A., Straits Troster, K., Kline, A. (Aug 2009). *Multifamily group intervention for OIF/OEF traumatic brain injury survivors and their family members*. Poster accepted for presentation at Military Health Research Forum (MHRF), Kansas City, MO. (See Appendix 1 for poster and presentation)

Conclusion

The major results to date relate to the composition of the two MFGT's which helps us evaluate the characteristics of veterans and families that agree to participate in this relatively long-term treatment. We discuss first, characteristics of veterans that are comparable for the Bronx and Durham, then those which differ to some degree between sites, though not significantly as the numbers are too small to evaluate statistical significance. We then discuss characteristics of family members using the same format.

Veterans-Sociodemographic Characteristics: Overall (see Table 1-appendices), veterans are in their early to mid 30's and are all male. Most (8/9) are currently married or cohabiting or were married in the past and have had 2-3 deployments. However veterans from the Bronx are more ethnically diverse than those from Durham, with only 20% Caucasian vs. 100% from Durham. Vets from Durham are also more often working: 100% are employed FT or PT vs. only 20% in the Bronx. Differences in employment status may be explained by a longer time since last deployment in DVAMC (4 years in Durham vs. 1 in the Bronx) and a higher level of education in Durham (75 vs. 20% have some education beyond grade 12).

Veterans—Clinical and Coping: With respect to clinical and affective/coping characteristics, all vets from both sites were well above the cut-off score of 16 on the CES-D (depressive symptoms) scale and also above the more conservative cut-off of 20. Somewhat surprisingly, none of the BVAMC and only 50% of the DVAMC vets met criteria for a mood disorder on the PHQ. All vets screened negative for suicide risk on the CSS-RS. About 80% of the sample scored positive for PTSD on the PCL, but only a minority (20-25%) met criteria for anxiety disorder on the PHQ. More vets from Durham screened positive for ETOH abuse than in the Bronx (75% vs. 0%). In terms of anger, vets in both samples reported between .5 to 1.0 s.d. more suppressed anger and less attempt at anger control than college students. In terms of expressed anger, Durham vets as a group reported expressing over 1 s.d. more anger than college students, while Bronx vets reported displaying somewhat less as a group.

Veterans-Neurocognitive Status: Although vets at both sites scored well above the cut-off of 20 on the Mini-mental status exam, vets in the Bronx displayed more signs of cognitive impairment, perhaps related to their shorter latency to the last deployment. On a list learning and recognition memory task (CVLT), Bronx vets scored between 1 and 1.5 s.d.'s below the mean on most measures whereas Durham vets scored less than .5 s.d. below the mean. The difference was most striking for recognition memory where Bronx vets scored 3 s.d.'s below the mean vs. .38 below for Durham vets. Similarly, on both Trails A and B, which assesses speed of processing, Bronx vets scored in the moderately impaired range whereas Durham vets scored within normal limits. On the WAIS II, vets from both sites performed within normal limits (i.e. within 1 s.d. of the mean) on the Similarities and Number-letter sequencing subtests, but Bronx vets performed about 2 s.d. below the mean of the Digit Symbol subtest.

Family Members-Sociodemographic Characteristics: Most family members at both sites were in their early 30's, were female and lived with the veteran. In the Bronx, 80% were partners or spouses and one was a sister. In Durham half were partners, with one sibling and one daughter. At both sites close to half were employed full or part-time. Ethnicity was consistent with that reported for veterans above. In the Bronx, family members were more frequently educated past 12th grade than veterans, while in Durham family members were less often educated beyond 12th grade than veterans.

Family Members—Clinical and Coping: Family members at both sites reported burden scores above the mean for a sample of family members of patients diagnosed with Alzheimer's disease. Family members in the Bronx reported less suppressed anger and more expressed anger than both the normative sample and than family members in Durham, by about 1 s.d., however families at both sites reported equal attempts to control anger as that reported by the normative sample. 40% of families in the Bronx and 75% in Durham reported CES-D scores above the cut-off for depression, however the total CES-D score in Durham was more than twice as much as the mean score in the Bronx which was below the cut-off. However no caregiver at either site screened positive for suicide risk. In the Bronx no caregiver screened positive for a mood or anxiety disorder or etoh abuse on the PHQ, while about two-thirds in Durham reported mood or anxiety disorders and one-third screened positive for etoh abuse. Overall, family members in Durham reported a somewhat higher level of psychological distress than those in the Bronx, while both were equally burdened.

In summary, our results to date demonstrate: 1) It is feasible if challenging to engage OIF/OEF veterans with TBI in a multi-family group; 2) veterans and family members both report significant symptoms of distress and difficulties coping that can be productively addressed using the problem-solving methodology of the MFGT.

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Appendix 1 : Data and Presentations

Table 1: Demographic and Clinical Characteristics: Veterans

<i>Veteran Variable</i>	Bronx (N=5) %(N) or Mean $\pm$ SD	Durham (N=4) %(N) or Mean $\pm$ SD	Both Sites Combined (N=9) %(N) or Mean $\pm$ SD
Demographic Variables			
Age (years)	32.0 $\pm$ 7.17	36.8 $\pm$ 9.9	34.11 $\pm$ 8.28
Gender			
Male	100 (5)	100 (5)	100 (9)
Female	0 (0)	0 (0)	0 (0)
Ethnicity			
African-American	20.0 (1)	0 (0)	11.1 (1)
Caucasian	20.0 (1)	100 (4)	55.6 (5)
Hispanic	60.0 (3)	0 (4)	33.3 (3)
Marital status			
Married/cohabitating	80.0 (4)	50.0 (2)	66.67 (6)
Divorced/widowed/separated	0 (0)	50.0 (2)	22.22 (2)
Never married	20.0 (1)	0 (0)	11.11 (1)
Employment status			
Full Time	1 (20)	50 (2)	33.33 (3)
Part time	0 (0)	50 (2)	22.22 (2)
Retired	0 (0)	0 (0)	0 (0)
Unemployed	40 (2)	0 (0)	22.22 (2)
Student	20 (1)	0 (0)	11.11 (1)
Disability	20 (1)	0 (0)	11.11 (1)
Highest grade attained			
12	80 (4)	25 (1)	55.55 (5)
Post 12	20 (1)	75 (3)	44.44 (4)
Time since last deployment (yrs)	1 $\pm$ 0	4 $\pm$.82	4 $\pm$.82
Number of deployments	2.0 $\pm$.71	2.5 $\pm$ 1.29	2.22 $\pm$.97

<i>Veteran Variable</i>	Bronx (N=5) %(N) or Mean $\pm$ SD	Durham (N=4) %(N) or Mean $\pm$ SD	Both Sites Combined (N=9) %(N) or Mean $\pm$ SD
Clinical Variables			
Mini-mental status score	28 $\pm$ 1.22	29.0 $\pm$ 1.15	28.44 $\pm$ 1.24
AXD Total Score	29.8 $\pm$ 11.54	40.25 $\pm$ 18.75	34.44 $\pm$ 15.13
AX/In (suppressed anger)	20.0 $\pm$ 4.18	21.25 $\pm$ 6.5	20.56 $\pm$ 5.00
AX/Out (expressed anger)	14.6 $\pm$ 3.21	21.75 $\pm$ 5.62	17.78 $\pm$ 5.59
AX/Con (attempted control)	20.8 $\pm$ 5.45	18.75 $\pm$ 9.43	19.89 $\pm$ 7.03
CESD (Depression) score	28.0 $\pm$ 10.07	27.0 $\pm$ 6.48	27.56 $\pm$ 8.17
Above Cutoff (>16)	100 (5)	100 (4)	100 (9)
PHQ – positive screen for:			
Mood Disorder	100 (5)	50 (2)	77.77 (7)
Anxiety disorder	20 (1)	25 (1)	22.22 (2)
Alcohol Abuse	0 (0)	75 (3)	33.33 (3)
Columbia Suicide Severity Rating			
Positive screen	0 (0)	0 (0)	0 (0)
PCL (PTSD) score	54.4 $\pm$ 10.31	48.25 $\pm$ 12.28	51.67 $\pm$ 10.97
Above Cutoff (>50)	80 (4)	75 (3)	77.77 (7)
CVLT scores (stand)			
Short delay free recall	-0.88 $\pm$ 1.31	-0.13 $\pm$ 1.18	-1 $\pm$ 1.49
Short delay cued recall	-1.13 $\pm$ 1.11	-0.25 $\pm$ 0.87	-0.69 $\pm$ 1.03
Long delay free recall	-1.5 $\pm$ 1.35	-0.75 $\pm$ 0.50	-1.13 $\pm$ 1.03
Long delay cued recall	-1.38 $\pm$ 1.11	-0.5 $\pm$ 0.82	-0.94 $\pm$ 1.02
Long term yes/ no recognition	-3 $\pm$ 1.63	-0.38 $\pm$ 1.03	-1.69 $\pm$ 1.89
Trails A (sec)	48.75 $\pm$ 16.09	24.5 $\pm$ 6.86	36.63 $\pm$ 17.30
Trails B (sec)	123 $\pm$ 34.82	78.75 $\pm$ 13.28	100.88 $\pm$ 33.98
WAIS III Similarities (scaled)	8 $\pm$ 2.16	7.5 $\pm$ 1.29	7.75 $\pm$ 1.67
WAIS III Digit Symbol	4.25 $\pm$ 0.96	8.75 $\pm$ 3.77	6.5 $\pm$ 3.51
WAIS III Number- Letter seq	10.75 $\pm$ 5.56	7.5 $\pm$ 0.58	9.13 $\pm$ 4.05

Table 2: Demographic and Clinical Characteristics: Family members

<i>Family Member Variable</i>	Bronx %(N) or Mean $\pm$ SD (N=5)	Durham %(N) or Mean $\pm$ SD (N=4)	Both Sites Combined (N=9) %(N) or Mean $\pm$ SD
Demographic Variables			
Age (years)	32.2 $\pm$ 11.26	30.25 $\pm$ 12.69	31.33 $\pm$ 2.13
Gender			
Male	0 (0)	25 (1)	11.11 (1)
Female	100 (5)	75 (3)	88.88 (8)
Ethnicity			
African-American	20 (1)	0 (0)	11.11 (4)
Caucasian	0 (0)	100 (4)	44.44 (4)
Hispanic	80 (4)	0 (0)	44.44 (4)
Relationship to veteran			
Partner/ Spouse	80 (4)	50 (2)	66.66 (6)
Sibling	20 (1)	25 (1)	22.22 (2)
Son/Daughter	0 (0)	25 (1)	11.11 (1)
Lives with veteran			
Yes	100 (5)	75 (3)	88.88 (8)
No	0 (0)	25 (1)	11.11 (1)
Marital Status			
Married/ cohabitating	80 (4)	50 (2)	66.66 (6)
Divorced/ widowed/ separated	0 (0)	0 (0)	0 (0)
Never Married	20 (1)	50 (2)	33.33 (3)
Employment Status			
Full Time	40 (2)	0 (0)	22.22 (2)
Part time	0 (0)	50 (2)	22.22 (2)
Retired	0 (0)	0 (0)	0 (0)
Student	20 (1)	0 (0)	11.11 (1)

<i>Family Member Variable</i>	Bronx %(N) or Mean $\pm$ SD (N=5)	Durham %(N) or Mean $\pm$ SD (N=5)	Both Sites Combined (N = 9) %(N) or Mean $\pm$ SD
Disability	0 (0)	50 (2)	0 (0)
Highest grade attained			
12	60 (3)	50 (2)	55.55 (5)
Post 12	40 (2)	50 (2)	44.44 (4)
Relationship pre/postdates TBI			
Pre	40 (2)	25 (1)	33.33 (3)
Post	20 (1)	25 (1)	22.22 (2)
N/A	40 (2)	50 (2)	44.44 (4)
Clinical Variables			
Caregiver burden score	26.4 $\pm$ 22.28	27 $\pm$ 15.49	26.67 $\pm$ 18.39
AXD Total Score	27.2 $\pm$ 5.36	26.5 $\pm$ 4.80	26.89 $\pm$ 4.81
AX/In (suppressed anger)	14 $\pm$ 2.12	17.75 $\pm$ 4.43	15.67 $\pm$ 3.67
AX/Out (expressed anger)	17 $\pm$ 2.74	14.75 $\pm$ 3.77	16 $\pm$ 3.24
AX/Con (attempted control)	20.2 $\pm$ 4.49	22 $\pm$ 4 3.65	21 $\pm$ 4
CESD score	13.8 $\pm$ 13.4	27.3 $\pm$ 12.8	19.8 $\pm$ 14.2
Above Cutoff (>16)	40 (2)	75 (3)	55.55 (5)
PHQ – positive screen for:			
Mood disorder	0 (0)	66.7 (2)	25 (2)
Anxiety disorder	0 (0)	66.7 (2)	25 (2)
Alcohol Abuse	0 (0)	33.3 (1)	12.5 (1)
Columbia Suicide Severity			
Positive screen	0 (0)	0 (0)	0 (0)

BRONX - Veteran Data

ID #	1	6	10	13	15	Mean	SD	Range
marital status	separated	single	married	married	single			
work status (FT, PT, not working)	disability	unemployed	unemployed	student	unemployed			
time since last deployment (years)	1	1	1	1	1	1		3-5
# deployments	1	2	2	2	3	2	0.707107	1-3
gender	M	M	M	M	M			
age	30	26	43	26	35	32	7.17635	26-43
race/ethnicity	hispanic	hispanic	white	hispanic	black			
highest grade attained	12	12	16	12	12	12.8	1.788854	12-16
referral source	Clinician	Clinician	Clinician	Clinician	Clinician			
Mini-mental status score	28	26	29	28	29	28	1.224745	28-29
AXD score								
AX In	22	19	18	15	26	20	4.1833	15-26
AX Out	15	12	13	13	20	14.6	3.209361	12-20
AX Controlled	19	16	25	28	16	20.8	5.449771	16-28
AX Total	34	31	22	16	46	29.8	11.54123	16-46
CES-D total score	32	33	17	18	40	28	10.07472	17-40
PHQ - positive SCREEN for:								
mood disorder	yes	yes	yes	yes	yes			
anxiety disorder	no	no	no	no	yes			
Alcohol abuse	no	no	no	no	no			
PCL score	59	54	38	66	55	54.4	10.31019	38-66
CVLT (Stand Scores):								
short delay free recall total correct	-3	-2	-2.5	0		-1.875	1.314978	-3- 0
short delay cued recall total correct	-1.5	-0.5	-2.5	0		-1.125	1.108678	-2.5 - 0
long term delay free	-2	-2	-2.5	0.5		-1.5	1.354006	-2.5- 0.5

delayed recall cued	-2	-1	-2.5	0		-1.375	1.108678	-2.5 - 0
long term delay yes/no recognition (hits)	-3	-3	-5	-1		-3	1.632993	-5 - (-1)
Trails A (sec)	43	45	72	35		48.75	16.09089	35-72
Trails B (sec)	127	90	170	105		123	34.82336	90-170
WAIS III (Scaled Scores):								
WAIS Digit Symbol	4	5	3	5		4.25	0.957427	3-5
WAIS Letter-Number Sequencing	19	8	7	9		10.75	5.560276	7-19
WAIS III Similarities	9	8	10	5		8	2.160247	5-10

DURHAM - Veteran Data

ID #	1	2	3	4	Mean	SD	Range
marital status	married	divorced	married	divorced			
work status (FT, PT, not working)	FT	PT	FT	PT			
time since last deployment (years)	3	4	5	4	4	0.81649 7	3-5
# deployments	1	4	2	3	2.5	1.29099 4	1-4
gender	M	M	M	M			
age	26	43	47	31	36.75	9.87842 8	26-47
race/ethnicity	white	white	white	white			
highest grade attained	12	14	16	14	14	1.63299 3	12-16
referral source	OEF/OIF	polytrauma	research	research			
Mini-mental status score	30	30	28	28	29	1.15470 1	28-30
AXD :							
AX In	22	27	24	12	21.25	6.5	12-27
AX Out	29	23	16	19	21.75	5.61990 5	16-29
AX Controlled	12	12	19	32	18.75	9.42956 3	12-32
AX Total	55	54	37	15	40.25	18.7505 6	15-55
CES-D total score	20	33	32	23	27	6.48074 1	20-33
PHQ - positive SCREEN for:							
mood disorder	no	yes	yes	no			

anxiety disorder	no	yes	no	no			
Alcohol abuse	yes	yes	yes	no			
CSSRS (pos/neg)	neg	neg	neg	neg			
PCL score	38	64	52	39	48.25	12.2848 1	38-64
CVLT (Stand Scores):							
short delay free recall total correct	1.5	-1	-1	0	-0.125	1.18145 4	-1 - 0
short delay cued recall total correct	1	-0.5	-1	-0.5	-0.25	0.86602 5	-1 - 1
long term delay free	0	-1	-1	-1	-0.75	0.5	-1 - 0
delayed recall cued	0.5	-0.5	-1.5	-0.5	-0.5	0.81649 7	-1.5 - 0.5
long term delay yes/no recognition	0.5	-1.5	-1	0.5	-0.375	1.03077 6	-1.5 - 0.5
Trails A (sec)	16	29	31	22	24.5	6.85565 5	22-31
Trails B (sec)	73	97	66	79	78.75	13.2759 2	66-97
WAIS III (Scaled Scores):							
WAIS Digit Symbol	12	5	6	12	8.75	3.77491 7	5-12
WAIS Letter-Number Sequencing	8	8	7	7	7.5	0.57735	7-8
WAIS III Similarities	9	8	6	7	7.5	1.29099 4	6-9

BRONX – Famil

ID #	1	6	10	13	15	Mean	SD	Range
relationship to veteran	partner	sister	spouse	spouse	fiance			
lives with veteran (y/n)	yes	yes	yes	yes	yes			
marital status	cohabitating	single	married	married	cohabitating			
work status	FT	student	not working	unemployed	FT			
highest grade attained	16	12	13	8	12	12.2	2.863564	12-16
age	42	18	43	23	35	32.2	11.25611	18-43

race/ethnicity	hispanic	hispanic	hispanic	hispanic	black			
gender	F	F	F	F	F			
relationship pre/postdates TBI	post	pre	N/A	pre	N/A			
Caregiver burden score	56	0	22	13	41	26.4	22.27779	0-56
AXD score								
AX In	12	15	14	12	17	14	2.12132	12-17
AX Out	19	17	13	20	16	17	2.738613	13-20
AX Controlled	17	28	20	18	18	20.2	4.494441	17-28
AX Total	32	20	23	30	31	27.2	5.357238	20-32
PHQ - positive SCREEN for:								
mood disorder	no	no	no	no	no			
anxiety disorder	no	no	no	no	no			
Alcohol abuse	no	no	no	no	no			
CES-D total score	29	0	2	12	26	13.8	13.34916	0-29
CSSRS (pos/neg)	neg	neg	neg	neg	neg			

DURHAM - Family Member Data

ID #	1	2	3	4	Mean	SD	Range
relationship to veteran	spouse	daughter	spouse	brother			
lives with veteran (y/n)	yes	yes	yes	no			
marital status	married	single	married	single			

work status (FT, PT, not working)	not working	PT	PT	not working			
highest grade attained	12	14	12	13	12.75	0.95743	12-14
age	23	22	49	27	30.25	12.6853	22-49
race/ethnicity	white	white	white	white			
gender	F	F	F	M			
relationship pre/postdates TBI	post	N/A	pre	N/A			
Caregiver burden score	13	21	49	25	27	15.4919	13-49
AXD score							
AX In	15	13	21	22	17.75	4.42531	13-22
AX Out	16	19	14	10	14.75	3.77492	10-19
AX Controlled	26	18	20	24	22	3.65148	18-26
AX Total	21	30	31	24	26.5	4.79583	21-31
PHQ - positive SCREEN for:							
mood disorder	no		yes	yes			
anxiety disorder	no		yes	yes			
Alcohol abuse	no		no	yes			
CES-D total score	12	23	42	32	27.25	12.79	12-42
CSSRS (pos/neg)	neg	neg	neg	neg			

Multi-Family Group Intervention for OIF/OEF Traumatic Brain Injury Survivors and Their Families

Deborah Perlick, PhD, Adrian Cristian, MD, Kristy-Straits Troster, Ph.D Anna Kline, Ph.D

The overall aim of the program is to improve the health, mental health and quality of life for OIF/ OEF veterans with TBI and their families.

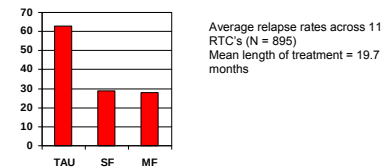
BACKGROUND

Multi-family Group Therapy for OIF/OEF Veterans with TBI: Rationale

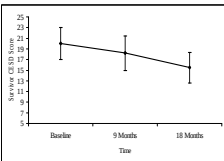
- 22+% of surviving soldiers combat wounded in Iraq and Afghanistan are estimated to have traumatic brain injury (TBI)
- Survivors face physical, cognitive, behavioral and emotional problems affecting community re-integration.
- Survivors' spouses, parents and children face long-lasting changes to family life and their roles within the family
- Family psychoeducation (FPE) studies have demonstrated greater recovery for consumers with family treatment as compared to individual treatment or treatment as usual.
- Multi-family group therapy (MFG), a form FPE developed by MacFarlane (1996), improves outcomes through family support and sharing and has potential utility for OIF/ OEF veterans.

MFG, like other forms of FPE, have been found to be associated with improved outcomes in SMI.

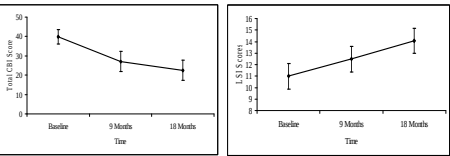
Impact of Single-Family, Multi-Family, and Combined Approaches on Relapse Rate of Major Outcome Trials



MacFarlane, W. R., Dixon, L., Lukens, E., & Lucksted, A. (2003). Family psychoeducation and schizophrenia: a review of the literature. *Journal of Marital and Family Therapy*, 29(2), 223.



Caregiver Data Burden Satis faction



Rogers, M., Strode, A., Norell, D., Short, R., Becker, B., & Dyck, D.G.; Am. J of Phys. Med and Rehab.

Our study will adapt Rogers' (2007) civilian TBI model for TBI sustained through combat.

The overall goals of this study are:

Aim 1: To use MFG to address the needs of OIF/ OEF veterans with TBI and their family members.

Aim 2: To evaluate the feasibility and efficacy of MFG for OIF/ OEF veterans with TBI and their family members.

Components of MFG for TBI

- Education about TBI
- Support for affected veterans and families
- Practical problem-solving approach to management of TBI and related conditions

METHOD

Format of MFG

- Joining: two or three sessions with individual TBI survivors and families.
- Educational Workshop: one-day educational workshop with all the TBI survivors and families.
- Multi-Family Group Meetings: once every two weeks for 9 to 12 months, with all the TBI survivors and families. Group meetings are led by the family clinicians. Group meetings provide education, support, practical guidelines and solutions to everyday problems.

Structure of MFG Meetings

- | | |
|-------------------------------|------------|
| Structure | |
| • Initial Socializing | 15 minutes |
| • Go Around | 25 minutes |
| • Select a problem to work on | 5 minutes |
| • Solving a problem | 40 minutes |
| • Final Socializing | 5 minutes |

Inclusion/Exclusion Criteria for Survivors

Inclusion:

- Able to participate in psychometric testing and procedures to be enrolled in the study.
- At least one family member willing to participate.
- TBI sustained during OEF/OIF era.
- Capable of providing written informed consent.

Exclusion:

- Significant cognitive impairment (MMS <20).

Inclusion/Exclusion Criteria for Caregivers

Inclusion:

Family members must meet at least 3 of the following 5 criteria;

- Is a spouse or parent
- Has the most frequent contact
- Helps support the veteran financially
- Is contacted in case of emergency
- Has been involved in veteran's treatment

Exclusion:

- Under the age of 18.
- Has any current medical condition that would impact participation or jeopardize the caregiver role
- Baseline participation in another caregiver counseling program.

RESULTS

Outcome Domains: Veterans

Increase:

- Psychosocial reintegration
- Social support
- Quality of life
- Coping efficacy (problem vs. emotion-focused)
- Self-reported health
- Anger management

Decrease:

- Depressive symptoms
- PTSD symptoms
- Perceived criticism

Outcome Domains: Families

Increase:

- Family empowerment
- Social support
- Coping efficacy (problem vs. emotion-focused)
- Self-reported health
- Anger management

Decrease:

- Caregiver burden
- Depressive symptoms
- Perceived criticism

CONCLUSION

This study has the potential to develop an intervention that can be widely disseminated to improve quality of life for OIF/ OEF veterans and their families.

Appendix 2: MFGT Materials for Adapted Protocol

Abstract for International Society for Traumatic Stress Studies 25th annual meeting

K. Straits-Troster, D. Perlick, A. Kline, D. Norell, D. Dyck, & J. Strauss. *Adaptation of Multi-Family Group Treatment for Veterans with Traumatic Brain Injury and their Families.*

Over 320,000 recent combat veterans are estimated to have traumatic brain injury (TBI), and more than half of these also report symptoms of depression or posttraumatic stress disorder (RAND, 2008). The long-term effects of TBI are still poorly understood, but family life and social reintegration are known to be impacted. The Multi-Family Group (MFG) treatment model has been shown to be effective for families dealing with schizophrenia and more recently, civilian TBI. A new multi-site study underway in Durham, NC, Orange, NJ and the Bronx, NY (coordinating site) has adapted the MFG model to provide TBI education, enhance problem-solving skills and reduce distress and social isolation among veterans injured during military deployment and their family members. Following 2-3 meetings with a clinician, enrolled veterans and a family member will participate in a psychoeducational workshop with several other families. Structured biweekly support group meetings are provided for 9 months. Assessments at baseline, 3-month intervals and 3-6 months post treatment will be conducted and help determine the feasibility and preliminary efficacy of MFG for veterans with TBI and their families.

Multifamily Group Treatment Manual for Traumatic Brain Injury among OIF/OEF Veterans

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more about the importance of family education and support.

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I. INTRODUCTION

Introduction

Traumatic brain injury has a significant and long standing impact upon the injured person as well as their family. Traumatic brain injury creates disabilities that can dramatically alter the fabric of family life. The ripple of impact spreads from the affected individual through the immediate family and into the social network that surrounds the family.

At least 22% of surviving soldiers combat wounded in Iraq and Afghanistan are estimated to have traumatic brain injury (TBI); the true proportion may be higher due to delayed diagnosis of some cases of closed head injury [1]. Survivors face a variety of physical, cognitive, behavioral, personality and emotional problems, with consequent barriers to productive living and community reintegration [2]. As a result, their spouses, parents and children face long lasting changes to family life and their roles within the family [3,4]. As increasing numbers of TBI survivors enroll in VA health care, it is incumbent on professional caregivers to collaborate with the patient's informal support system. Encouragement by family and friends may be a key motivator for the individual to become a productive and integrated community member. On the other hand, family discord is associated with poor therapeutic alliance between patients and providers, which in turn predicts lower rates of return to productivity such as employment, education or homemaking [5]. Last, helping informal caregivers to help the survivor may enhance the effectiveness of VA health services, for example through transfer to the home environment of cognitive remediation techniques and assistance with medication adherence.

Collaboration between formal and informal caregivers requires that informal caregivers be empowered with the education, skills, and support to manage the process from injury to recovery. Although little research exists on the development of effective and reproducible treatment strategies for families affected by TBI [6, 7, 8], two very recent studies suggest Multi Family Group (MFG) treatment may be effective for people who have sustained TBI as civilians [9, 10]. MFG treatment was originally developed for families affected by schizophrenia, and has been shown to be effective at reducing relapse and rehospitalization for this group as well as caregiver burden; this together with the similarities between schizophrenia and TBI make MFG treatment an obvious candidate for TBI. Below, we summarize what is known about the impact of TBI on caregivers and other family members, and present the rationale for adapting MFG treatment for TBI (MFGT-TBI) for veterans and their families. Last, we outline the system of care for TBI in the VA and specifically at the strategically chosen study sites, where we propose to assess the feasibility and preliminary efficacy of MFGT-TBI for improving the mental health and quality of life of veterans and their family caregivers.

Social support systems can be a significant source of strength in coping with the injury and managing stress. There is a clear need for methods that help the patient and family

adjust and cope with the consequences of such injuries. However, studying effective strategies for support and management have been difficult because the family structure is a vital ecosystem with many environmental forces at play at any given instant.

Although researchers have identified early signs of at-risk families, effective intervention and treatment strategies are wanting. Nonetheless, many families cope admirably, surviving the physical, emotional and economic burdens of an acutely disabled family member with relatively small impact on the fabric of family life, and a remarkable show of durable resourcefulness. Other families, often with seemingly similar resources, buckle under resulting in divorce, social isolation and health issues. Behavioral problems, more often than physical limitations, seem to cause the most challenges. As with many other crises, significant economic disruption aggravates all coping abilities. Unfortunately, economic strains are the rule rather than the exception in many families of the newly disabled.

To date, individual or single-family counseling formats remain the standard of care. Very few third party payers will cover group therapy sessions for families of disabled individuals, and even formal psychotherapy is often unavailable or not reimbursed for the disabled member, let alone caregivers.

Multi-family Group (MFG) treatment is a psychoeducational management strategy originally developed by William McFarlane and colleagues to assist families and patients with schizophrenia to improve their coping and illness management skills. [2] The process is a structured interactive format consisting of social, educational, and supportive sessions provided by two clinicians with six to eight families and their disabled members over a period of months to several years. The MFG intervention has a strong educational component, and contains an interactive and real-world problem solving component. Group sessions occur on a frequent, often bi-weekly basis. The intervention has been rigorously tested in the management of persons with schizophrenia and found to be effective in managing symptoms, reducing adverse events (hospitalizations, relapse) and improving functioning. It has also been successfully used in pediatric cancer patients, and in several other chronic medical illnesses. Multi-family group intervention provides a direct and personal psychoeducational approach to the individual and his or her family. It is neither a medical nor a traditional educational/didactic or psychiatric approach. It requires that clinicians work with families and patients to share professional expertise, personal experiences and information. It uses a formal problem solving format that assists in practical assistance to current patient and family issues. The psycho-educational strategy for managing schizophrenia was derived from work previously reported by Goldstein and associates; Falloon and colleagues; Anderson, Hogarty and coworkers; and Leff and associates. [3-6] Specific treatment interventions implemented by multiple family group clinicians were designed to:

- Engage key members of the family
- Provide information about the disease and the treatment process using a standardized videotape, lectures and written guidelines for coping
- Intervene early in incipient relapse

- Provide ongoing support and formal clinical problem solving for at least nine months
- Expand the family and social network

McFarlane's Multi-family Group Psychoeducation format has proven to be more effective and efficient than single-family psycho-education and support groups. [7] The MFG model retains the collaborative alliance and problem solving emphasis of the earlier models, but expands the social network components. Research in schizophrenia indicates that relative to standard care, MFG participants experience significantly less relapse and negative symptoms than do controls receiving standard outpatient services. Research findings by Dyck and colleagues indicate that MFG reduces psychiatric hospitalization costs without increasing outpatient service utilization.[8]

Since TBI has management challenges in common with schizophrenia, MFG, with some adaptation, appears to have excellent potential for exportation as a model of cost-effective health care for individuals with TBI and their families. The medical, behavioral and social consequences of schizophrenia are fairly unique. Nevertheless, there are significant aspects in common with traumatic brain injury.

Traumatic brain injury and schizophrenia occur most frequently in males, with highest prevalence in younger age groups, thus altering vocational options for them into the career process. While recovery is a reality, both groups carry considerable probability of long-term functional disability. Both involve significant medical ambiguity at onset regarding prognosis. Further, in both, the family unit is most often recruited to assist in living arrangements including immediate personal and caregiving support. These families may well be under an added economic strain through the loss of a breadwinner and also through potential removal from the workforce of a family caregiver.[9] Both share a risk of social isolation, both face the potential social stigma of having a disabled family member, and both must alter family dynamics to facilitate support for the disabled individual.[10]

The disabilities posed by the brain injury often place responsibilities upon family members for assistance with mobility needs, personal hygiene, self-care, and may also impose economic burdens upon the family unit. The burden is particularly difficult for the spouse, and the spousal relationship is very important to long term successful coping.[11]

More than one third of cases of traumatic spinal cord injury (SCI) are associated with a concomitant traumatic brain injury.[12, 13] Taken alone, the spinal cord injury requires adaptation to impairments of motor function, sensory function and thus often has life-long implications for mobility, self-care and social and vocational function. Obviously, when both spinal injury and brain injury are present in the same patient, deficits are compounded and the family burden increases substantially, as judgment and decision making deficits dramatically increase the probability of secondary SCI complications.

The significant impact of TBI upon the family, the on-going need for medical information, combined with the recognition that social support improvement has been associated with health status improvement in chronic neurological problems has provided the impetus to adapt the MFG intervention to TBI.[14] MFG provides families and the patients with opportunities in social support, learning from each other by sharing experiences at various stages of the injury journey, as well as assist in the reduction of the incidence of secondary complications.

In traumatic brain injury, behavioral approaches have been shown to positively affect psychological outcomes. In recent studies, a cognitive behavioral intervention, given during the acute rehabilitative stay of neurologically injured patients, yielded benefits that persisted for a period of at least two years following rehabilitation. In these studies, cognitive behavioral intervention recipients required fewer hospital re-admissions, used fewer drugs and reported higher levels of adjustment with less depression when compared to untreated control patients. [15-18] In the past 20 years, researchers have compiled a substantial body of work on the impact of behavioral interventions upon brain injury patients. The interventions offered have typically been delivered by clinicians, yet relatively few have actively incorporated the involvement of families of affected individuals over a sustained period of time. In a rare study where families were involved, researchers at the University of Washington (1992) used behavioral therapy interventions related to anger management, teaching patients and their families' active intervention principles to reduce anger control problems. Successful carry-over was noted when subjects were followed over a period of months.[19] The MFG intervention, carefully adapted to TBI, has the potential to make a significant contribution to the treatment of patients and their families in the months following TBI.

This treatment manual is based upon the work of McFarlane and colleagues, with adaptations based upon the work of Dyck and coworkers.[8, 20-23] It strives to create a methodology for adaptation of the MFG model to patients with traumatic brain injury and their families. It describes the steps in forming and working with a Multi-family Psychoeducation Group. However, this manual is intended to be augmented by training and on-going supervision. As well, nothing can substitute for experience in working with patients and their families.

For many clinicians, conducting psychoeducational groups, as described in this manual, may be quite different than their normal clinical interactions with patients and families. The process, although structured, requires the clinician to socialize and share personal experiences more than many have previously done. Rather than maintaining "psychological distance," the clinician's role is an active and interactive one, leading families in a highly participative instructional dialogue and problem solving process. Clinicians are asked to balance directing and listening in these roles.

There are four stages in the implementation of the treatment program:

1. Joining with individual patients and families'
2. Conducting an educational workshop for families;

3. Promoting healthy adaptation to injury, reducing secondary complications and facilitating early identification of potential medical or psychological issues through interactive problem solving attended by both patients and families; and
4. Encouraging and facilitating social, vocational and community re-integration through the use of problem solving groups attended by both patients and families.

Each of these stages will be described in detail in the following chapters. To assist clinicians in adopting this new approach, the manual is designed to be a handbook of how to accomplish each step. Examples are included where appropriate.

II. JOINING WITH THE PATIENT AND THEIR FAMILY

Introduction

Joining means to connect, build rapport, convey empathy and establish a collegial alliance with patients and families. In the Multi-family Group Psychoeducation (MFG) model, joining with patients and families is the first stage of the MFG intervention. Joining continues throughout the families' involvement, and is especially important in the beginning. There are a number of components included in each joining session, but the overarching goal of joining is to develop a strong relationship between the clinician and family, and between the clinician and the patient. Building a strong, collaborative and respectful relationship through the joining process is an essential element of the model.

Most families begin the MFG process after the patient has just experienced hospitalization, rehabilitation and re-entry into the home. In the original model of the MFG intervention, the joining phase is comprised of three sessions with each family and three sessions with each patient. A successful modification in working with persons with traumatic brain injury and their families has been to facilitate joint sessions in which the family and patient meet together with the clinician at least for part of the sessions. This may be necessary because of the patient's need for family support and cognitive cueing. We have learned that it is important not to over-stimulate the patient through lengthy or complex discussions and therefore, briefer separate meetings with the patient may be called for. It is important for the clinician to join with the patient as well as the family to establish that he or she is there as much to help the patient as the family.

Meetings with the patient and the family begin as soon as possible after hospitalization. This prompt attention is both needed and reassuring. The goal is to establish the clinician as an advocate and resource for both the patient and the family. The two clinicians who will eventually co-lead the multi-family group divide the responsibility: each joins with half the patients and their families. The sessions occur within three-four weeks of the educational workshop, generally one hour for families and approximately 30 minutes for patients if the sessions are held separately.

a. Family Joining Sessions

Whether the joining sessions are facilitated separately with families and patients or together, they follow a clear sequence of important steps:

Family Session 1:

The clinician begins by socializing with the family for 15 minutes about such things as traffic, getting to the meeting, weather, or recent holidays. The goal is for the family and

the clinician to get to know each other as people apart from the injury and to establish that the clinician will behave as a colleague and an advocate. It also helps everyone to relax. After 15 minutes of socializing, the clinician inquires about the medical history of the patient. Next, the clinician introduces the Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis. SWOT analysis is a way to analyze these four quadrants within the family and how they affect success of reaching a goal. Together, the clinician and the family identify strengths, weaknesses, opportunities and threats for persons with traumatic brain injury in general. After discussing the areas that are common to most people dealing with a brain injury, the clinician will discuss the concepts of individual differences in patients and in families.

Following the discussion of individual differences, the clinician then describes the Multi-family Group Psychoeducation process in which five to eight families will meet every-other-week for one and a half hours for the established number of months. The last five minutes are spent socializing to reinforce the building of relationship and the importance of normal daily life.

Family Session 2:

The clinician socializes with the family for 15 minutes at the beginning of the session. The clinician reviews the SWOT and assists the family in completing a SWOT assessment related to the patient and the primary family member.

At the end of this process, the clinician invites the family to consider between now and the next session additional items that could be included on the SWOT. Next, the clinician inquires about the family's social support network and generational history using two formal techniques; an ecomap and a genogram. An ecomap is a diagram of the family within its social context and includes a genogram, a diagram of the family's generational configuration.[24] The ecomap helps to organize data on the supports and stresses in the family environment while the genogram organizes data on the major figures in the patients' interpersonal environment. Both techniques provide additional information and understanding related to the patient and family's support resources. Finally, a flyer describing the upcoming educational workshop is provided for the family to share with others. The session ends with five minutes of socialization.

Family Session 3:

The session begins with 15 minutes of socializing with the family. The clinician reviews the SWOT analysis with the family and any additional information is added. The clinician asks about the family's experiences in living with the injury; what challenges they face in coping on a daily basis and how they have experienced the health care system. The clinician prepares the family for the regular meetings of the multi-family group that will follow the educational workshop. The clinician inquires about the family's experience with groups and what concerns they might have, including confidentiality, shyness and feeling pressured to speak in the workshop or group meetings. The family is assured that they need contribute only as much as they wish. The

clinician briefly describes how the group will proceed and what other families have gained from similar groups, particularly new and workable solutions to difficult problems in coping. Additional sessions may be scheduled as needed. Extra sessions should be scheduled if the educational workshop is to be held more than two or three weeks from the third joining session.

b. Patient Joining Sessions

As previously indicated, joining sessions with the patient may be conducted separately from the family or conjointly. If the meetings are held separately, they may be shorter and less structured than those with the family. The main goal is to allow the patient to become acquainted with the clinician and to see him or her as an interested, empathetic person who will act as the patient's advisor and advocate. The general structure described for the family joining sessions will be followed for the patient joining sessions.

c. Clinicians' Role

From the first meeting the clinician is active in guiding the conversation. An important aspect of joining is providing concrete help and being available to patients and families. This kind of involvement shows that the clinician will be acting as a colleague and can be trusted. A warm, low-key, quietly confident manner tends to be the most successful approach. However the clinician demonstrates control of the sessions and structures them from the beginning. Structure helps the patients and families to feel less anxious as well as assists the patient cognitively. Within the structure, the clinician also answers questions and gives recommendations; if needed. Some family members may on occasion quarrel or monopolize discussions or make repetitive complaints. This non-productive kind of communication can be interrupted and redirected by the clinician by acknowledging the person's frustration and worry about the situation.

The clinician keeps his or her manner positive, informal and collegial. During joining sessions and throughout all the stages of treatment, the clinician needs to be confident in what he or she knows about the injury and also respectful of the family's knowledge and experiences. If the clinician does not know the answer to a question, he or she acknowledges this and assures the family that the information will be sought out. In this model, the clinician emphasizes successful coping and resources. Families also need the opportunity to express their feelings of loss, frustration, anger, despair, hopelessness and guilt. The clinician validates the expression of these feelings without probing for them. When they are left unexpressed they can form a barrier to a family's finding the energy to learn new ways to manage.

Whenever relevant during the joining stage, the clinician shares information about TBI with the family. In this model, the clinician is open and forthcoming about whom he or she is as a person. The clinician also takes an interest in each member of the family apart from their involvement with the injury. One way this principle is realized during joining is through the socializing built into each session and continued in the multi-family groups.

Whenever a crisis occurs during this period for either the patient or family, the clinician deals with it as soon as possible. The clinician can use a crisis as an opportunity to demonstrate willingness to help, especially in concrete ways.

It is important for clinicians to receive supportive supervision beginning with the preparation for contacting families. For many clinicians, the techniques described will be new and challenging (i.e. to learn new ways of forming alliances and conducting sessions). It can also be difficult to hear about the experiences and emotional pain the families must endure. Supervision can be helpful in dealing with these challenges when conducted with the same positive, supportive, collegial tone that clinicians use with patients.

III. EDUCATIONAL WORKSHOP

After families have participated in two to three joining sessions they are provided with an all-day educational workshop by the clinicians, commonly held on a weekend day. The purpose of the workshop is to present information on the nature of TBI and effective ways of managing the disabilities and challenges associated with TBI. The leaders continue to behave in an open, collegial manner. This manner creates an atmosphere in which families can comfortably ask questions and discover one another's similar experiences and problems.

The two clinicians who lead the multi-family group conduct the workshop. Other members of the multidisciplinary team such as nursing, physiatry, therapy and case management may be invited to participate as well, offering not only an enriched curriculum but an opportunity for families to interact with other members of the rehabilitation team. This is the first time families meet the other members of the multi-family group and the family clinician with whom they did not yet join.

Some clinicians may be unaccustomed to organizing and presenting factual information to a group. It is necessary for clinicians to prepare and review the materials in advance of the workshop. Practicing presentations with colleagues increases confidence and provides an opportunity to receive comments on clarity, manner, rate of speech, etc. Anticipating the kinds of questions that families may ask and rehearsing responses also increases preparedness. Clinicians report that the more often they conduct workshops, the easier and more manageable they become. In some rehabilitation settings, educational materials are already available to patients and families. The rehabilitation team may already have developed a curriculum which can then be easily adapted to the educational workshop.

Clinicians attempt to create a classroom atmosphere so that this first meeting of group members is quite structured and as free of social tension as possible. Chairs are set up in rows facing the front and the leaders use blackboards, charts, slides or other audiovisual aids. Family members each receive a folder containing printed information, diagrams, references, and other aids that can be followed throughout the day. Refreshments are supplied throughout the all-day workshop, including morning coffee, lunch, and afternoon snacks. A variety of beverages are served and there is no smoking in the meeting room. Refreshment breaks provide an informal setting for spontaneous socializing. The group leaders act as hosts and hostesses during these interludes.

After coffee and a light snack, the leaders identify themselves and explain the day's agenda. They also provide a rationale for the workshop, i.e., "This workshop is only one step of our treatment program. After the workshop, we will be meeting together as a group of families, including patients, on a regular basis and we will continue to provide

relevant information and assistance to you. We have found that working together with patients, families and the MFG team in a program similar to this has resulted in decreased uncertainty and new useful information for patients and families. We will answer as many questions as possible in this workshop today. If we cannot answer something, we will find someone who knows the information and get back to you.”

The leaders then repeat their names and their position and ask the rest of the group to give their names, including any other staff members attending. The leaders begin with a presentation of the neuroanatomy and the effects of a traumatic brain injury. There is a great deal of information to be covered in the workshop, so it is important to stick to the agenda and to keep track of the time. Sometimes families will ask good questions that may lead to long discussions. Because it is likely that questions will be answered by the content covered later in the day, clinicians may ask families to save certain detailed questions until after the appropriate section is presented. Discussions can be continued, either after the workshop or during a meeting of the multi-family group. The staff remains with the families during lunch, sharing in this more informal time.

The leaders ask which methods family members have used to cope with and manage the changes in their family member. Here, too, the clinicians normalize the answers by acknowledging that many other families have described these same responses and that they are logical responses to situations in general. Family members report such things as: attempting to reason with the patient; ignoring the situation; centering all family life on the patient; and watchful attention to the patient’s condition. Leaders can ask how these have been helpful and suggest that while they are natural and useful responses to an illness like pneumonia, they may not prove as successful with TBI. Clinicians point out that they will be discussing alternative methods of coping with the injury using the Family Guidelines (listed below), which are based on the specific effects of TBI on the patient and the families.

Then there is a discussion of the Family Guidelines. Each person will have a copy of the Guidelines to refer to as the leaders go over them, one by one. Clinicians take turns reading a guideline, connecting it to the biological information discussed in the morning and asking family members for their reactions, questions, and experiences. It is helpful to illustrate the guidelines with generalized examples based on the kinds of problems described by families during joining sessions. This is the first time family members have heard the guidelines explained formally as they relate to coping strategies. The clinicians should make every effort to be clear and use concrete examples. A tone of hopefulness is used as the new ideas are introduced. Copies of the Family Guidelines are distributed at the workshop with the suggestion that they be posted on the refrigerator.

FAMILY GUIDELINES

A list of things everyone can do to help make life run more smoothly:

STRUCTURE THE ENVIRONMENT FOR SUCCESS. Whether it is the amount of stimulation, the time of day, access to specific items or the routine, plan ahead to

optimize success. For example, if the patient gets tired in the late afternoon, you would not want to schedule appointments or activities that require him/her to participate at a high level during that time. This is setting everyone up for failure.

PATIENCE AND MORE PATIENCE. Everything is slower and takes more time than before the injury. Basic everyday tasks that were done automatically before now take extra time and effort. Plan for it and expect it. That will decrease your frustration. Let the patient do as much as he/she is capable of doing for him/herself.

IT DOESN'T HAVE TO BE PRETTY IF IT WORKS. Many things are different than before the injury. This is a time to look at small successes and improvements in independence--not perfection. It is more important to modify tasks or ways of getting the task accomplished than to have it done exactly the way it was before. Gaining independence is much more important to the patient than doing something a certain way, even if it takes more time or the patient struggles in completing a task (i.e., tying shoelaces).

DON'T PERSONALIZE BEHAVIORS. For the most part, the behavior of persons with brain injury is not specifically intended to irritate or upset others. The nature of the injury results in deficits that cause behaviors that can be irritating to family members. For example, when a patient asks the same question over and over. This behavior is not intended to irritate the caregiver rather it reflects a short term memory problem. The patient doesn't know that they keep asking the question over and over because their brain is unable to store the answer.

GET HELP WHEN YOU NEED IT. Brain injury often results in a roller coaster of emotional, financial and health concerns. Very few families can go through this type of experience without help on multiple fronts. However, when patients get home, many of the resources become scarce. This is a long haul for a spouse and family. You need help to get over the multiple bumps in the road that will occur. Resources for help can include your physician, case manager, brain injury association, local mental health organizations, other families, etc.

GET OUT AND PLAY. This guideline is both for the patient and the family/caregivers. You have to get out and have some fun and time for yourself. You can have fun together but you also need time away from each other. Patients need support in establishing social circles and leisure activities. Families need this for overall physical and emotional health. Prior to the injury, the families' members had a mix of together and alone time, which needs to be re-established to restore balance.

MAINTAIN ROLES IN THE FAMILY. In times of crisis, the family often drops routines and gets what ever needs to be done completed. In brain injury, when a spouse or parent is the person injured it is not uncommon to have a child modify their role and step into a role of responsibility. This may work well in the short term; however, as time passes it is necessary for all involved to re-establish family roles, as soon as possible. Although the patient may have some behavior problems or deficits that make the parent

role difficult without supervision, that person should function in that role whenever possible. For example, because of short-term memory problems the patient is not safe without supervision therefore he/she can not be left alone. He/she cannot supervise children in the house. However, the patient may be able to read or listen to a story with the child, or help with daily chores around the house, etc. All parties involved will do best when the normal roles are re-established.

OUTLINE OF THE EDUCATIONAL WORKSHOP DAY

9:00 - 9:15 a.m.	Coffee and Informal Interaction
9:15 - 9:30 a.m.	Formal Introductions and Explanation of the Format for the Day
9:30 - 10:30 a.m.	Neuroanatomy Basics • What happens in TBI
10:30 - 10:45 a.m.	Coffee Break and Informal Discussion
10:45 - 12:00 a.m.	Treatment • Levels of care • Types of deficits (Physical, Cognitive, Emotional, Communication, Social) • Therapy, Medications
12:00 - 1:00 p.m.	Lunch and Informal Discussion
1:00 - 3.00 p.m.	The Family and Adjustment • Typical and Normal Family Responses to the New Life • Family Guidelines and their Application
3:00-3:15 p.m.	Break
3:15 - 4:00 p.m.	MFG Structure • Questions Regarding Specific Problems • Wrap up • Informal Interaction

IV. FIRST MEETING OF THE MULTI-FAMILY PSYCHOEDUCATION GROUP: “GETTING TO KNOW EACH OTHER”

After the joining sessions and the educational workshop, the Multi-family Psychoeducation Group meets for the first time. The patient has participated in joining sessions but typically has not attended the workshop. The patient and their family have been prepared to meet with five to eight other families for one and one half hour meetings every other week for a predetermined number of months. Refreshments are provided by the clinicians to allow relaxed interactions before and during the group.

The goal of the first group is for clinicians and family members to get to know each other in the best possible light. Everyone will be working together for a number of months, and it is important to begin to feel comfortable with one another. It is very helpful during this first group meeting to think of it being similar to any group of people who are just meeting each other for the first time. In such a group people tend to put their best foot forward. The clinician acts like a good host or hostess and guides the conversation to topics of general interest, such as: how people travel to the group, where people live, what kind of work people do both inside and outside the home, hobbies, how people like to spend their leisure time, and what plans people have for holidays or vacations. Serious topics may be discussed as long as they have nothing to do with the injury.

The clinicians begin by introducing themselves. Then the clinicians welcome the entire group, and remind them of the format of future groups. For example, the clinician might begin in this way: “This is our first meeting. We’re going to be meeting every-other-week on Mondays from 5:00 p.m. to 6:30 p.m. We will be working together on solving every day problems, to help to prevent setbacks and to design small steps towards making life a bit easier and less stressful”.

The clinician continues by setting the agenda for this particular group. He or she might say: “Tonight we will be focusing on getting to know each other. Since we will be working together for a long time we need to start to get acquainted. What we will do during this meeting is to go around the room and each of us will say something about ourselves. We will talk one person at a time; everyone will have a turn. In case we run out of time, we can finish next week. It is normal under these circumstances to want to talk about the injury and the problems it presents. However, we want you to hold that until the next group meeting. Tonight, we would like to talk more about the rest of life. I will start by telling you about myself.”

In telling something about herself or himself, the clinician needs to keep in mind that the families will closely follow the clinician's example. It is therefore important that the clinician cover as many areas of life as possible. As a general rule, it is recommended that each clinician share information for five-seven minutes. Although this may seem like a long time it is important to role model a variety of topics about oneself and an openness toward the group.

Sharing personal information may be a departure from the clinician's usual way of conducting groups. However, it is essential since this approach relies heavily on establishing a collegial relationship between families and clinicians. Clinicians often find it useful to rehearse with each other what they will say at this stage.

For example, a clinician might say: "As I mentioned earlier my name is Rosemary Hawkins. I am married and have two children. They are Danny, who is three years old, and Alice, who is seven. Alice is in second grade at Thompson Elementary. She really likes her teacher so far. My husband and I were worried about her reading at first, but now she's doing pretty well. Danny is in preschool three mornings a week. I love to see the projects he brings home. Last week it was a collage of colorful leaves to show what autumn looks like. He was very proud of it, and I must admit, so was I." "I am a therapist and I work 20 hours a week at the rehabilitation institute. When I'm not working--and when I have the time--I enjoy some of my hobbies. I like to cook, especially Italian recipes like lasagna and baked ziti. My husband and I both like to listen to music at home. We mostly like jazz. We don't go to movies as much as we did before the kids were born, but we do rent videos about once a week. We like to take the kids on short trips on the weekends especially camping and hiking. I also am interested in photography and love to organize my photos into scrapbooks for the kids. There are two things I would like to do more of: reading and exercising. It seems like I never have time for those. But I'm signing up for an aerobics class next month at the YWCA, so maybe that will help. The whole family is excited about Thanksgiving coming up. We always go to my parents' house; they live in Seattle which is where I was born and raised. Everyone pitches in and helps with the cooking. I'll probably make the pies. I have two older brothers and one younger sister. Everyone tries to make it home for the holidays so we can catch-up on each others' lives."

Then the clinician turns to the next person and continues around the circle, thanking each one after his or her contribution. The second clinician sits halfway around the circle, and takes his or her turn in sequence, reinforcing the first clinician's modeling of sharing personal information.

Usually the family members follow the clinician's lead. However, the clinician needs to interrupt when: a) a family member speaks for someone else, or b) a family member follows the natural impulse to talk about the injury and its problems. The clinician can restate the purpose and format of this particular group. For example, the clinician might say: "Right now I'd really like to hear about you." or "It's natural to want to talk about the injury and we'll be getting to that in the next session. For now I'd like us to first get to know each other as people."

In situations where a family member offers a minimal amount of information about him or herself, the clinician asks questions to invite the person to elaborate and give more details. The group will then get a fuller picture of each person's life. For example, the clinician may ask whether the person likes to watch TV (which shows?), read, follow the news, cook (what favorite recipes?), eat out (what restaurants?), listen to music, go to the movies, follow sports (which teams?), do crafts, take walks (where?), belong to organizations, go to church, volunteer, garden.

The clinicians use opportunities to point out common interests in the group, and help the group members to see similarities among themselves. There are also opportunities to highlight different approaches to things. The group meeting benefits from humor and a light touch.

Since each clinician has joined with only half of the families present, he or she can use this group as an opportunity to get to know the rest of the families and patients in the group.

If family members are shy about speaking, the clinician can acknowledge the difficulty in talking in a group while pointing out that with time and familiarity, talking usually gets easier. The meeting ends with the clinicians thanking everyone for coming and reminding everyone the date, time and place of the next meeting.

V. SECOND MEETING OF THE MULTI-FAMILY PSYCHOEDUCATION GROUP: “HOW TRAUMATIC BRAIN INJURY HAS CHANGED OUR LIVES”

The clinicians have joined with the patients and families, conducted a full-day educational workshop for the families, and have met with patients and families together in the first meeting of the multi-family group. The goal of the second meeting of the multi-family group is to talk about how the injury has affected everyone’s lives.

Both clinicians welcome members to the group as they arrive and direct them to the refreshments. To start the group, one clinician outlines the agenda for the meeting. He or she begins by saying, “I am happy to see everyone here tonight. Last week we spent time beginning to get to know each other. Let’s begin by socializing for about 15 minutes. That’ll give us a way to catch-up since the last meeting. Then we’ll talk about how the injury has affected each of our lives.” The clinician begins the socializing with a comment or question unrelated to the injury, such as “I really enjoyed the Fall Festival this year. Did anyone else see the huge pumpkin exhibit?”

It is important to socialize for 15 minutes. For an example of initial socializing, see Chapter II. The clinicians encourage participation by modeling, pointing out connections between people and topics, and asking questions. Side conversations, interrupting, monopolizing and speaking for others are discouraged with positive supporting remarks, such as “It’s hard for me to hear when more than one person is talking,” or “That’s interesting; I wonder if Mr. Smith has something to say about this,” or “Your wife says she thinks you’re over the flu; how long were you sick?”

After socializing the clinicians move explicitly to the topic for this meeting. One of them might say, “As I mentioned earlier, we will talk tonight about how the injury has affected all of our lives. I’ll start by telling you about my experience.” As in the first group, the families will closely follow the clinician’s example and as in the first group, the clinicians talk for 5-7 minutes. Again, although this may seem lengthy, it does model the kind of depth of discussion that is desired.

It is helpful to share as much as possible about relevant professional and personal experiences. From the professional side, clinicians can describe how they became interested in the field, and how they have been affected by treating the injury, including both frustrations and feelings of accomplishment. From the personal side, the clinicians may talk about any family members or friends who may have experienced an injury or a patient they were close to. It is important to model talking about the feelings stirred up by these experiences, especially the feelings that families commonly have but are reluctant

to express. Examples of common feelings are: anxiety, confusion, fear, guilt, embarrassment, frustration, anger, sadness and mourning. It is also important to express some hope about new treatment approaches in rehabilitation. If clinicians feel uncomfortable talking about their own experience, it is useful to practice what they will say with a colleague. For example, a clinician might say: “My work is very much involved with working with TBI. I have been a therapist at the rehabilitation institute for the past five years working with persons with traumatic brain injury. From a more personal side, I have had the experience of a friend having a traumatic brain injury. Gene and I were best friends in high school. I remember feeling shocked when I heard he had been in a car accident. I felt sad and somewhat uncomfortable to see him. I suppose this experience is one of the reasons that I started to work in this field.”

When the clinician finishes, she or he pauses, and then turns to the person in the next chair. “How has it been for you? How has the injury affected your life?” The first clinician goes halfway around the circle. The second takes over until everyone has had a chance to speak.

Some individuals may find it difficult to talk about their experiences. It can be helpful to ask questions about how things are different since the injury, how has the injury affected their plans, and what they might be doing now if the injury had not occurred. People can say as much or as little as they wish.

After each account of an experience, the clinician thanks the group member for participating. She/he may point out that other group members have had similar experiences and responses. This group meeting may be the first time some families realize that they are not alone, and comments such as “I’m not the only one who went through this,” may be voiced.

In comparison to the first group meeting, the tone of the second meeting is usually a bit more somber. The mood is usually one of sadness and mourning, with some anger and frustration. Many patients and families take this opportunity to express dissatisfaction with the health care system. If this happens the clinicians validate the experiences that give rise to these feelings. It is important not to gloss over the reactions and to elicit concrete and specific details about their complaints. Of course, it is important to not let this discussion dominate the session.

If group members begin to talk about specific problems that they want to solve immediately, the clinician helps them to return to the agenda of the meeting. The clinician might say, “I can see that is a problem that has been bothering you a lot. We’ll be working on solving specific problems starting in the next meeting, so I would like you to keep that problem in mind. For now, though, let’s talk more about how the injury has affected your life.” It is also appropriate to make a brief suggestion using a guideline or to offer to meet with someone after the meeting if it seems like a crisis.

It usually takes at least an hour for everyone to have an opportunity to speak. If time runs out, set aside a portion of the next group to allow the rest of the members to tell about their experiences and feelings.

At the end of the group, the clinicians thank everyone for their participation and summarize that everyone has had some very difficult experiences. If appropriate, they summarize the feelings shared by several people in the group. They also remind group members that during the next meeting everyone will be working on solving problems similar to the ones raised during this meeting.

Five to ten minutes are set aside for socializing at the end of the group. The clinician might ask if people are anticipating any problems with traffic on the way home; what plans people may have for the upcoming weekend or if any one is taking a trip or has special upcoming plans.

VI. PROBLEM SOLVING MEETINGS OF THE MULTI-FAMILY PSYCHOEDUCATION GROUP

d. Introduction and Preparation for Group

After the joining sessions, educational workshop and first two meetings of the multi-family group (“Getting to Know Each Other” and “How Traumatic Brain Injury has Changed Our Lives”), then all remaining group meetings are centered on solving problems. The format of a 90 minute problem solving group is:

Initial Socializing	(15 minutes)
Go-Round	(30 minutes)
Selecting a Problem to Work On	(5 minutes)
Solving a Problem	(35 minutes)
Final Socializing	(5 minutes)

Each of these steps will be discussed in detail in this chapter.

A meeting of the co-leaders scheduled thirty minutes prior to each group is advisable. They review several questions:

- In what phase of rehabilitation is each patient?
- What problems and events are likely to have occurred since the last group?
- What problem was used for problem solving during the last group, and what might be expected to have happened?
- Which families have solved problems in the last several groups and which families have not?
- From present knowledge, what problem would be best to focus on?
- Are any absences expected?

In the beginning phase it may be helpful for clinicians to plan a division of tasks, such as who will lead the socializing, the go-round and the problem solving. These tasks are rotated, especially during the first six-months of the group. The clinicians make sure that the room and equipment are prepared, and check the video equipment (picture, sound, microphone, on-screen clock) if the session is being taped for supervision. Other equipment such as chalkboard or conference pad, pencils and paper, copies of the guidelines, and an outline of the problem solving steps are also useful. The clinicians round-out the circle and bring chairs close enough so that people can communicate easily. Any extra chairs are removed. Clinicians sit across from each other during the meeting. An adaptation that may be necessary is the use of a table (preferably round or square) if patients are using wheelchairs so they have some means of support for refreshments. Other recommendations include:

- Refreshments are set out, and group members are told where smoking is allowed.
- The clinicians make sure that the meeting will not be interrupted by such things as telephone calls or people walking through the room, except for emergencies.
- The session starts on time. Latecomers are greeted briefly by a clinician and told what has gone on up to that point, and then the group resumes the discussion where it was interrupted.

A. Initial Socializing

Every meeting starts with 15 minutes of social conversation. This underscores the collegial relationship among injured persons, family members, and clinicians. In addition, it allows group members to exercise social skills that may have diminished as a consequence of the isolation that is often a social effect of the injury. Clinicians can use this time to demonstrate their interest in the events of people's lives that have nothing to do with the injury. This emphasis reinforces group members' sense of competence and mastery. For further discussion, please see Chapter II. The conversation can be light or serious, as long as there is a place for humor.

At the beginning of each meeting during the first few months, one clinician reminds everyone of the agenda. Either clinician may begin the socializing section by saying something such as, "Let's catch up on what's been going on in the last few weeks," and, if need be, takes the initiative in introducing a topic of conversation.

The content is kept light. The clinicians model the kind of small talk that they would like to hear from the group. Good openings include talk about holidays, weather, food, children, hobbies, movies, sports, TV or local events. Complaints and criticisms about the patient are deflected, ignored, or reframed. The clinicians divert problem discussion by saying something like "We really want to hear about that, and we will get to it in the go-round stage. That's when we focus more on problem areas."

The clinicians attempt to balance participation among group members. It is ideal if everyone says something during socializing. Members should be encouraged to participate but should not be pushed if they appear too uncomfortable. Also, one group member should not dominate the discussion. Group members are encouraged to talk to each other directly without starting side conversations and to respond in socially appropriate ways. The clinicians stop any side conversations and avoid being drawn into them. For example, the clinician may say "Excuse me, I'd really like to hear what you're saying, but I can only hear one person at a time." The clinicians limit interruptions and speak for others, for example, the clinician might say, "Can you hold that thought for just a minute?" or "Joe, your father says you think that's OK--does he read you correctly?"

The clinicians are careful to spend 15 minutes socializing, and postpone talk about problem areas until the go-round stage. The socializing begins on time, regardless of late

arrivals. The clinician is explicit when he or she is moving to the go-round section. The best transition from socialization to the go-round is to bring everyone up to date on members who are absent. Then the clinician can say, "Now it is time to start the go-round section of the group. This is the time when we hear about problems and issues connected with the injury and focus on the areas of significance that we have listed on the poster on the wall."

B. The Go-Round

The section of the group meeting following the socializing period is the go-round. It has two goals: checking on the current concerns of each family about the injury; and selecting a single problem for the problem-solving section of the session. The families' concerns tend to fall into two areas:

- a) Factors which might lead to a setback; or
- b) Issues having to do with the next step in rehabilitation.

The clinicians need to get enough information to determine the nature of each family's concern. Four to five minutes are allotted to each family, so that this section of the meeting takes no more than twenty five to thirty minutes.

The clinicians begin the go-round by turning to the family who solved a problem in the previous meeting. The family is asked, "How did it go with the solution we settled on last time?" The clinicians briefly review the implementation steps and praise the family for their efforts. If the experimental solution or some other option tried by the family seems to have helped, the family is praised again. All the group members are thanked for their participation in problem solving and the clinicians point out any specific suggestions made by other families that contributed to a solution. The clinician inquires as to whether the family would like to continue to use this solution when this particular problem may arise in the future. If the family indicates that it is a viable long term solution, the clinician makes note of this and continues to ask about the use of the solution in subsequent meetings when relevant.

If the solution did not seem to help, the clinicians review the steps in greater detail, looking for factors they might have overlooked, such as life events, taking on too much, other demands on the family, or proceeding too quickly. When solutions don't work, families tend to assume that it is their fault, that they have done something wrong. To counter this assumption, clinicians explicitly take responsibility for any failure of the solution. Possible statements might be, "I'm sorry, I didn't realize that we were going too quickly" or "I forgot to take into account the employer's reaction when we were developing this solution." It is important to relieve the family of any burden associated with failure of a solution. Then the clinicians may suggest an alternative solution to help the family to proceed in dealing with the situation. This suggestion may come from the list generated in the previous meeting or it may arise from the review of the implementation steps.

After checking in with the first family, the clinicians move on to the next family. They inquire explicitly about specific areas of concern for that family, such as medication

compliance, and medical issues. Usually there is a spokesperson for each family, but it is useful to check in briefly with all family members if time permits. In the go-round the clinician both looks for and inquires about evidence of any setbacks using the SWOT list generated for each patient and family during the joining sessions. They also listen for any changes or problems with:

- Safety in the home: e.g., smoking in bed, aggressive behaviors
- Medication compliance
- Drugs and alcohol
- Managing one's activities of daily living
- Life events: family celebrations, moving, deaths or other losses
- Behavioral issues
- Other rehabilitation activities: changes in program, therapists, financial aid
- Disagreement among family members
- Conflict with a guideline from the educational workshop: e.g., going too fast, expecting too much

Frequently families will spontaneously indicate potential management complications or setbacks without attaching significance to it. The clinician must be sure to inquire further into this situation at this point.

When a problem or change has been identified, the clinician first acknowledges any feelings family members may have expressed such as: anxiety, satisfaction, discouragement, amusement or frustration. Then, after all the families have had a chance to report, the clinicians briefly and openly discuss each family's situation in turn with each other. They have several options. They may make a suggestion based on:

- 1) The appropriate biological information or guidelines (as outlined in the educational workshop);
- 2) Offer to intervene directly with the treatment system (medications, rehabilitation programs, residences, etc.);
- 3) Suggest that the family observe the situation and contact the clinician before the next meeting if the situation continues, or
- 4) Decide that the situation be used for problem solving at this meeting.

If a patient is known to have difficulty with medication compliance or substance abuse, it is crucial that the clinicians ask him or her about it directly if the information is not volunteered. It should not be assumed that all is well when the subject is not mentioned. The clinician might ask, for example, "John, have you been using any drugs or alcohol in the past couple of weeks?" and follow with specific questions about when, where, with whom, how much, what was the effect (positive and negative), did he take his medication that day, etc.

C. Selecting a Problem to Solve

The clinicians conclude the go-round by thanking everyone for letting them know how things have been going. The clinicians begin to discuss which problem needs to be worked on in this session. They confer openly in deciding which problem to solve. The selection of a problem usually takes just a few minutes. It is desirable to rotate the problem solving among the families so that each family gets an opportunity to work on one of their own problems approximately every six meetings. All families benefit from the problem chosen, since they have struggled with or will struggle with a similar problem themselves.

As mentioned in the description of the go-round, Section B, the clinicians must be alert to two major areas of concern:

- 1) Factors leading to a setback
- 2) Issues having to do with the next step of rehabilitation

The clinicians need to consider carefully any report of actual or potential management complications. As mentioned earlier, areas of particular significance are:

- Safety in the home
- Medication compliance
- Drugs and alcohol
- Managing activities of daily living
- Life events
- Behavioral issues
- Other rehabilitation activities
- Disagreement among family members
- Conflict with a family guideline

The clinicians use their judgment when the group presents more than one problem which requires immediate attention. In order to decide which problem to work on, the clinicians ask detailed questions such as: how long the problem has existed, what has been tried so far, past consequences of similar situations and time pressure for the problem to be solved.

When the clinicians decide not to work on a particular problem in the meeting, there are several options:

- a) Give a direct suggestion and ask the family to report on how that suggestion works at the next meeting,
- b) In a crisis, offer to meet outside the group, and
- c) Refer to any past solutions that may apply.

There are other considerations to address at this phase of the group. When a patient or other family member attends the group for the first time, problem-solving with that family at that session is unadvisable. The clinicians keep in mind what phase of recovery

each patient is in. As time goes by, the clinicians will notice a shift from problems related to the management of complications to problems related to accomplishing the next step in the rehabilitation process. There may be a problem that a family does not wish to address in a particular meeting. They may be ready to do so at another meeting. This should be respected. Table 1.1 provides examples of common problems experienced by patients with traumatic brain injury and their families which can make excellent problem-solvings.

TABLE: 1.1 Examples of Common Problem-Solvings	
Ways to structure for success	Keeping a job
How to use time in a meaningful way	Managing memory loss
Managing stress	Maintaining oneself in independent living
Coping with: depression, anger, frustration, loss	Learning how to travel
Coping with holiday stress	Resuming family roles (father, mother, wife)
Substance usage: positive and negative effects	Resolving conflicts with family members
How to work successfully with a vocational program	Issues with effects and side effects of prescribed medications
Finding and using community resources	Ways to communicate effectively with peers, family members etc.
Conflict with a Family Guideline	
How to reenter the workforce	

D. Solving a Problem

After the socializing, the go-round, and the selection of a problem or goal, the clinicians then lead the group in formal problem solving, using a six step process based on brainstorming methods from organizational and business practices, adopted by Falloon and colleagues in their work with persons with mental illnesses.[7] Approximately thirty-five minutes are allowed to complete this process.

The goals and rationale of problem solving in a group will have been described to the family in the educational workshop and reviewed at the third group meeting. The goal of formal problem solving in a multi-family psychoeducation group is to help families to use the information about traumatic brain injury and the guidelines that follow from this information. Using a structured approach follows directly from several Family Guidelines: patience and more patience; structure the environment for success; don't personalize behaviors; and maintain roles in the family. This model also draws on the experience of the other families, who contribute more ideas, options and solutions than one family alone could. An advantage of using this approach is that it breaks down problems into a manageable form, so that a solution can be implemented incrementally and thereby more successfully. Experiencing success in small steps gives the patient and the family a sense of momentum and hope that change is possible.

To use formal problem solving, one clinician leads the group through the six steps. The other clinician ensures group participation and suggests additional solutions. The clinicians choose someone to write down the six steps of the problem solving process.

This recorder can be a clinician, a family member, or a patient. Initially it is helpful for the clinician to assume the role of recorder in order to role model for other members. The proceedings can be recorded on a chalkboard or a note pad or both. The board has the advantage of being visible by all. The note pad can be used to make copies as needed. Whichever method of recording is selected, the clinicians and the family should have a copy to keep.

After a recorder is chosen, the clinicians carefully follow each of the following steps of formal problem solving:

- Step 1. Define the problem or goal. (Family & clinicians);
- Step 2. List all possible solutions. (All MFG members);
- Step 3. Discuss first advantages and then disadvantages of each in turn. (Family & clinicians, MFG members);
- Step 4. Choose the solution that best fits the situation. (Family);
- Step 5. Plan how to carry out this solution. (Family & clinicians); and
- Step 6. Review implementation. (Clinicians).

Each step is important and will be covered below in detail. Both clinicians carefully track the process to make sure all the steps are completed and in the proper sequence. A problem-solving worksheet is included in the Appendix of this manual.

Step 1: Define the Problem

The overall goal of this step is to narrow the definition of the problem or goal so that it can lead to practical solutions. The clinicians need to acquire information in order to reach a definition of the problem. The clinicians question family members, gathering relevant details. The definition must be one to which every present family member agrees. It is very helpful to elicit each person's view of the problem and what they desire as an outcome.

The clinicians return to the problem raised in the go-round. The clinicians ask additional questions about the situation from the perspective of how it relates to either the management of complications or to the next step in rehabilitation. When considering the management of complications, it is important to review medication compliance, drug and alcohol use, life events, difficulties with agencies providing services, disagreement within the family, and conflict with a guideline. The following questions are often helpful. Some may have been asked in the go-round.

- When did you first notice the problem?
- When does it occur?
- How often does it occur?
- Does it occur with certain people or under certain conditions?
- Is it occurring more or less frequently than when it was first noted?
- Who is affected by the problem, and how?
- What has been tried to alleviate the problem in the past? What was helpful?
- With what activities does the problem interfere?

When a problem has been defined in a way that is acceptable to each member of the family, the clinician asks the recorder to write it down and read it back to the group.

When considering the next step in rehabilitation, the clinicians review behavioral issues, social-vocational activity, the patient's and family's goals, and characteristic reactions to higher levels of activity.

Step 2: List All Possible Solutions.

The clinician asks the group members for suggestions of solutions to the problem. The object is to get ideas about how the problem might be solved or how the goal might be achieved. The more possible solutions, the more likely there will be one that will address the problem or goal well. This step is open to all members of the group, and it is desirable for each family to contribute a possible solution.

The clinicians might begin by saying, "Now that we have defined the problem or goal, let's hear from everyone in the group about possible solutions. This is a time for brainstorming. All ideas are taken seriously and recorded, even if a suggestion seems a bit ridiculous; be as imaginative as possible. Then we will discuss the advantages and disadvantages of each one." At this time, the recorder is asked to write down each suggestion. An attempt is made to generate seven or eight suggestions.

When group members are first learning this model, they may want to discuss the advantages and disadvantages as each suggestion is made. The clinicians need to delay this discussion until the list of solutions is complete. This is to forestall premature rejection of proposed solutions, which in itself inhibits the creativity of other group members. The clinician may say, "Thank you for your suggestion, and we will get to discussing the advantages and disadvantages in the next step. For now, we're focusing on gathering everyone's ideas."

The clinicians contribute their ideas without dominating during Step 2. They can insure that both sides of any disagreement are represented in the solutions list so all viewpoints on the situation will be discussed. The families themselves usually come up with the most creative solutions and the ones most likely to succeed. The families also benefit from helping each other in this step. When all the families have contributed suggestions, and when it seems that the most relevant solutions have been covered, the clinicians thank everyone for their contributions.

Step 3: Discuss the Advantages and Disadvantages of Each Possible Solution.

When considering the advantages and disadvantages of possible solutions, the clinician takes into account the strengths and weaknesses in the SWOT analysis.

After the possible solutions have been listed, the clinicians move on to discuss first the advantages and then the disadvantages of each solution. The clinician asks the recorder to

read each solution aloud, and then asks the group, “What are the main advantages of this solution?” After the advantages are counted (check mark for each one), the clinician then asks, “What are the disadvantages of this solution?” Advantages are always identified first, and there must always be at least one advantage and at least one disadvantage for each solution.

Sometimes group members want to stop the problem solving process as soon as they discuss a solution that they feel has a strong advantage. The clinician reminds them that all suggestions will be discussed in turn before one is chosen in case the best idea comes at the end of the list. Sometimes group members may jump ahead to planning the implementation of a solution before it has been selected. The clinicians remind them that after a solution has been chosen, the group will focus in detail on how a solution can best be carried out.

Step 4: Choose a Best Solution.

The clinicians review the solutions aloud and identify which three or four solutions have the most advantages and least disadvantages. The family whose problem or goal is being worked on is asked which of these solutions or any other solution suits them best. Although the problem solving process is done by the group, it is the family with the specific problem or goal who is most involved and who will be carrying out the solution.

Step 5: Plan How to Carry Out a Solution.

The clinicians help the group break down the solution into manageable steps. Once again, it is the family with the problem or goal who makes the final decisions. The family members are the ones who have the biggest investment in the solution working and they are usually the ones who take the most responsibility. However, group members can often be helpful in making reminder phone calls, giving rides, accompanying someone to an appointment, providing names of helpful agencies or people.

The clinicians help the group to be as specific as possible in each step of implementation by asking such questions as: “What needs to happen first?” “Who will be doing that step?” “When will that step happen?” “Where will people meet for that step?”. The clinicians also help to trouble-shoot things that might go wrong and formulate back-up plans.

When the steps of implementation have been specified as much as possible, the clinicians ask the recorder to read back the steps. The family and the clinicians both keep copies of the problem solving record. The clinicians thank everyone in the group for their hard work and help.

Step 6: Review Implementation.

In the go-round of the next group meeting, the clinicians ask how the implementation went. What steps did the family complete? What went well? What did not go so well?

The clinicians praise the family and any others involved for their efforts and point out any progress made. If relevant, the clinicians might suggest how to continue with the implementation, how to use a back-up plan, how to use an alternative solution. Sometimes the clinicians might suggest “taking a break” from working on the particular problem or goal. (See the go-round description for full details and examples of what clinicians might say.)

E. Closing Socializing

After completing the problem solving process, the group spends five minutes socializing. The goal is to help people relax and think again about topics not related to the illness. The clinicians might say, “Everyone did a great job tonight. Now we’d like to spend the last five minutes just talking together. What are people’s plans for the weekend? Is anyone doing anything special after the group tonight?”

Time can pass very quickly in group meetings. It can be tempting to continue solving problems or achieving goals to the last minute. It is extremely important, however, not to omit this five minutes of socializing at the end. When group members end on a social note, they are more likely to return to the next meeting and more likely to want to work together again on problems.

VII. SOCIAL, EDUCATIONAL & VOCATIONAL REINTEGRATION

The problem-solving groups continue to meet regularly. Over time, there is a shift from solving problems related to the management of complications to those related to the next step of rehabilitation. For example, there are more problems raised about how the patient can meet potential friends or dates or how the patient can find a job that is suited to their abilities and interests. At this time it is particularly important for clinicians to remind the patient, their families, and themselves to pace themselves and to remember the guideline “Patience and more Patience”.

There is also a change in how these later sessions are conducted. The group members are more active, and the sessions are essentially led by the patients and families rather than clinicians. Families and patients give more suggestions and offer to help each other, and communicate and socialize outside the meetings.

Social and vocational programs are explored as possible solutions to the problems raised during this stage of treatment. However, in some groups families actively provide job leads or social opportunities for patients in the group. The patient often finds this extremely helpful. The clinicians help make optimal use of the social network of the multi-family group and help follow up leads that are generated in the group. As in other stages of treatment, it is important to base plans for the patient on his/her unique circumstances and progress in rehabilitation.

It is important to move forward in one area at a time. It may be necessary to cut back on some activity temporarily to allow for new activities. For instance, some household chores may be dropped to make time for more rest during the period of adjustment to a new job or program, or going out to the movies with families or friends. Setbacks may appear briefly when patients are trying new levels of activity. If they continue, the care plan can be reviewed, and the activity modified.

VIII. OTHER FAMILY BENEFITS

Group Validation

A benefit that families and patients gain from their participation in multi-family group psychoeducation is a sense of validation of their experience by other families in similar circumstances. Validation and understanding provides families and patients with an appreciation that they are not alone, that others who have journeyed through a similar experience can be a tremendous resource to them. Ultimately, this sense of commonality can cause some families and patients to develop a natural network of support that continues after the completion of the group. This again needs to be encouraged by the clinicians.

Sharing Coping Strategies

The ability to share different coping strategies that families and patients have found to be effective is an important aspect of multi-family groups. There is a significant amount of variation in the extent to which families have tried different strategies for coping with common problems. Families and patients learn from each other and need to be encouraged to share coping strategies and their benefits with each other. One means to accomplish this is through the problem solving process. Solutions generated by the entire group will encourage families to share coping strategies they have successfully used to manage this particular problem and later through the discussion of advantages and disadvantages of what the positive or negative results of their efforts were. Families value the knowledge and experience of those families and patients who have had more time in rehabilitation. This exchange of ideas can create a sense of hope and motivation for those less experienced families.

Communication Between Families

It is not uncommon for a member of one family to be able to communicate more effectively with a member from another family. Cross-family communication can be a powerful means of helping members understand the issues being addressed without the emotional charged discussion which may occur within their own family or may be willing to accept recommendations by a non-family member more readily than by their own parent or spouse. Clinicians take advantage of these benefits by encouraging these types of interactions.

IX. NEW MEMBERS

If the multi-family group is going to be facilitated as an open ended group with patients and families invited in as they are completing rehabilitation or hospitalization, then care needs to be taken with how to best integrate new members into the group. The entry of new members is a significant change for everyone. It is important to be aware of the anxiety that may be generated by this change and create more opportunities for socialization. Changing the format slightly to include more socialization time may be useful or having a meal or snack together in which people have an opportunity to socialize more informally can be of assistance.

Clinicians may find the following points useful when integrating new members:

- New members should have had at least three joining meetings and have attended the educational workshop before they join the group.
- Two to three new families enter the group at the same time when possible.
- When new members attend the group for the first time, the clinicians introduce themselves and ask others in the group to briefly introduce themselves.
- The clinicians remind the group that “When we first met as a group, we all told a little about ourselves and our hobbies; the kinds of things we like to do, and what our interests are.
- One clinician starts by telling something about him or herself in a low key and friendly manner. He or she then asks the new members to tell something about themselves briefly.
- The clinicians briefly review the format of the group (socializing; go-round; problem solving) and then start right in. “Let’s begin our socializing now.”
- When a patient attends for the first time, the clinicians pay close attention to any cues suggesting discomfort or anxiety. They avoid making him or her the focus of attention, despite the temptation to focus on the various issues that maybe troubling the patient and/or family.

X. GENERAL POINTS

Experience in facilitating Multi-family Group Psychoeducation has enabled us to identify a number of issues that usually develop over the span of a group and some of the techniques and approaches to deal with these issues. The following recommendations may be of use.

Late Arrivals

When a group member arrives late for a meeting, the clinicians acknowledge the member's arrival, state briefly the stage of the group, and turn their attention back to the group. The flow of the group is not interrupted. If the person arrives after the go-round, the clinicians check up on his or her concerns after the group is over or at the end of the go-round if time allows. If late arrival becomes a pattern for a particular member or family it is beneficial to assess with them reasons for the difficulty in arriving on time as well as remind them that being late is disruptive to other members and diminishes their ability to receive full benefit of the multi-family group experience.

Meetings with Small Attendance

Meetings with small attendance can be challenging, however if this is the situation, time can be saved in the go-round portion of the meeting allowing for extra time on problem solving. It is a good idea to call all members before each meeting to remind them of the time and place as well as follow up with absent members. During a telephone call to absent members, one can find out if they need help to get to the next meeting and to remind them they were missed by the group members. Developing a three to six month calendar outlining the dates of the group can also assist as a reminder and cue for members.

Violence and Suicidal Thinking

Threats of violence or suicide are dealt with immediately. The clinicians take charge and direct families about what to do.

Group Interaction

There are a few general guidelines for communication and interactions within the group which tends to support an open and engaging process:

- The clinicians model the behaviors they desire from the group members by their own example.

- The clinicians are careful in choosing language that is positive and acknowledging in nature rather than critical and blaming and reframe comments from other members into positive affirming messages.
- The clinicians share equally in the leadership responsibilities of the group.
- The clinicians are careful not to speak for patients or family members.
- Whenever appropriate, families are encouraged to talk to other families as much as possible.
- The clinicians encourage the patients to participate, without pressing them to do so.
- The clinicians discourage all side conversations.
- The clinicians follow the structure and timelines of the Multi-family Group Psychoeducation model.

Use of the Family Guidelines

Clinicians explain guidelines to patients at the earliest possible time, depending upon the patient's phase of rehabilitation. Sometimes this happens during a joining session. Incorporating the family guidelines either as a problem solving issue (i.e. how to use patience and more patience; how to structure the environment for success; realistic goals to work on) or as an advantage in the advantage and disadvantage section of the problem solving can assist the patients and families in specific examples of how the guidelines can be effectively utilized.

Familiarizing the patient's physiatrist with the guidelines can encourage the physiatrist to reinforce them with the patient and the family as well as make use of them in treatment with the patient.

Redirecting Interruptions

It is not uncommon for family members to speak for an injured member. An important intervention is redirecting interruptions by reminding all members that everyone needs the opportunity to speak and finish their thoughts and comments without interruption even though it may take time. Reinforcing the guideline of "patience and more patience" can assist. This redirection over time can assist injured members in feeling validated for their contributions and their participation in social interactions as well as afford them opportunities in communication and social discourse.

Generic Problem Solving

Developing a problem solving that is shared by most families can be useful to do in the early phases of the group as a means of developing group cohesion or diminish individual family anxiety related to being the focus of a problem solving. At times such as holidays, most families may be dealing with similar issues such as how to structure the holidays for success or how to be consistently patient. If that is the case, developing a problem solving that may be utilized by all the families can be helpful. This can be accomplished by either focusing the problem solving on a specific issue of one family or finding the common

issue and problem solving for all families and inviting each family to choose one solution and create a specific plan. One needs to be cautious to not use generic problem solvings as common practice as this method is not nearly as effective as individual family problem solvings. There is less opportunity to develop a specific plan or a means of assessing the success of that plan. When used sparingly, it can be effective.

Exiting and Entering of Group Leaders

Because multi-family groups tend to be lengthy in duration, it is not uncommon for group leaders to leave the group. These departures can be emotionally difficult for some members therefore clinicians need to carefully plan for this transition paying attention to the emotional responses of the group. Generally identifying a replacement who has been well trained for this type of group a number of weeks in advance of the clinician's departure can be of great benefit. During the last two or three sessions of the group, the departing clinician and the new clinician are both present for the sessions with the departing clinician assuming a less active role while the incoming clinician becomes more active. Offering some type of ritual in the form of a going away celebration in which group members and the clinician have an opportunity to express their sentiments and appreciation is recommended.

Problem Solvings with Intractable Family Disagreements

The solving of problems within this model assumes that families are attending the group because they want help in dealing with the problems and issues they are facing currently. Generally this means that families can agree on a proposed definition of the problem. Sometimes however this does not occur. In this circumstance when families do disagree about what the problem is, it can be useful to address the secondary problem, or the tension that occurs from the disagreement itself. One might explore the ways that families can respectfully disagree so that they are not in constant conflict.

As might be expected, one of the most common topics for disagreements are those between the injured member and family regarding lifestyle decisions on the part of the injured person that may place them at physical risk. In these situations, the clinicians frame all positions as having credibility and validity and empathy is expressed for the anxiety and frustration accompanying each position.

The clinicians do not take sides or attempt to adjudicate the conflict. Rather the focus is upon how the family can manage the disagreement without interfering with the rehabilitation process. The potential solutions address the consequences of the disagreement rather than the positions that generate more conflict. Solutions that have practical effects are useful, for example; finding ways to compromise, taking timeouts, or limiting the discussion around the conflict. Family members need to have an opportunity to make comments in the advantages and disadvantages section and be actively involved in developing and committing to trying the plan. The results can be surprisingly positive, with all family members expressing some willingness to approach the situation differently, at least temporarily.

Transferring of Group Facilitation from Clinicians to Group Members

After the group has been meeting for a number of months, the clinicians may be able to transfer some of the facilitation responsibilities to group members who demonstrate a sense of leadership and are comfortable in this role. Initiating socialization, leading the go-round, identifying issues for a problem solving and facilitating the problem solving all can be successfully done by group members. The role of the clinicians at this point becomes one of support and guidance as well as embracing those opportunities to interject information and comments that may be missed by a group member. Clinicians must take care that the desired structure of the group is not compromised by this shift in leadership. The transfer of facilitation generally is most successful after a significant amount of time and repetition of the group structure.

There are useful benefits in teaching group members the skills needed in facilitation. If the system of care can only provide a multi-family group for a limited time with professional involvement, then this transfer of knowledge and skills can extend the life of the group. The group may be able to carry on as an independent support group creating a valuable network for patients and families.

Group Termination

As is the situation for any therapeutic intervention that is coming to closure, some form of celebration is recommended. Sharing in meals encourages a sense of community, supports a natural means of socializing and marks transitions for people. Recognition of patients and families progress is also of value at this time.

XI. SUMMARY

This manual has described a method for conducting Multi-family Group Psychoeducation with persons with traumatic brain injury and their families. It is modeled on the work of McFarlane and colleagues with psychiatrically disabled patients and their families.

The manual can serve as an effective model for engaging families and patients in support of each other, education related to traumatic brain injury and developing increased coping and management strategies during the process of rehabilitation. It is an individualized method in which patients can progress at their own unique pace yet offers its members opportunities in social engagement and support. Families and patients have reported that their experience in multi-family groups has significantly assisted them in their transition back into the community and their adjustment to a new way of life.

Most clinicians who have led multi-family groups have described the experience as gratifying due to the witnessing of change and growth by both patients and families and the opportunity to engage with group members in a more naturalistic manner. Our hope is that this manual will enable other professionals to develop and implement similar groups to assist patients and families with the distinct challenges of living and dealing with the effects of brain trauma.

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APPENDIX

SOLVING PROBLEMS AND ACHIEVING GOALS¹

STEP 1: WHAT IS THE PROBLEM/GOAL

Talk about the problem/goal, listen carefully, ask questions, get everybody's opinion. Then write down exactly what the problem/goal is.

STEP 2: LIST ALL POSSIBLE SOLUTIONS

Put down all ideas, even bad ones. Get everybody to come up with at least one possible solution. List the solutions without discussion at this stage.

STEP 3: DISCUSS EACH POSSIBLE SOLUTION

Quickly go down the list of possible solutions and discuss the main advantages and disadvantages of each one.

STEP 4: CHOOSE THE "BEST" SOLUTION

Choose the solution that can be carried out most easily to solve the problem.

STEP 5: PLAN HOW TO CARRY OUT THE BEST SOLUTION

Resources needed. Major pitfalls to overcome. Practice difficult steps. Time for review.

Step 1)

Step 2)

Step 3)

¹ Problem-Solving Worksheet excerpted from Falloon, et al., 1988.

Step 4)

STEP 6: REVIEW IMPLEMENTATION AND PRAISE ALL EFFORTS

Focus on achievement first. Review plan. Revise as necessary.

Presentation for Military Health Research Forum

Slide 1

**Multi-Family Group
Intervention for OIF/OEF
Traumatic Brain Injury
Survivors and Their
Families**

PI - Deborah Perlick, PhD, VISN 3 MIRECC
Co-PI - Adrian Cristian, MD Bronx VAMC
Site PI - Kristy-Straits Troster, Ph.D (Durham)
Site PI - Anna Kline, Ph.D (NJMHCs)

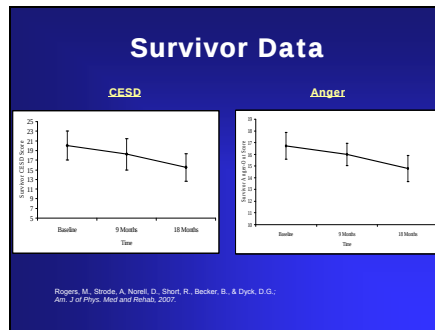
Funded by Department of Defense W81XWH-08-2-0054

Slide 2

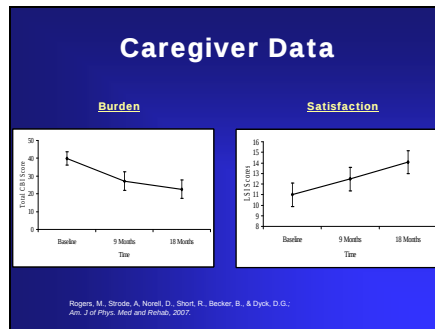
**Multi-family Group Therapy for OIF/OEF
Veterans with TBI: Rationale**

- 22+% of surviving soldiers combat wounded in Iraq and Afghanistan are estimated to have traumatic brain injury
- Survivors face physical, cognitive, behavioral and emotional problems affecting community re-integration
- Survivors' spouses, parents and children face long-lasting changes to family life and their roles within the family
- Multi-family group therapy, developed by MacFarlane (1996) for SMI, has been adapted for civilian TBI and shown to improve outcomes for both survivors and family members (Rogers et al., 2007)

Slide 3



Slide 4



Slide 5

Aims

Overall aim of the program is to improve the health, mental health and quality of life for OIF/ OEF veterans with TBI and their families.

Aim 1: To use MFG to address the needs of OIF/ OEF veterans with TBI and their family members.

Aim 2: To evaluate the feasibility and efficacy of MFG for OIF/ OEF veterans with TBI and their family members.

Slide 6

Hypotheses

Hypothesis 1: Veterans will experience a decrease in symptoms of depression and anger and an increase in life satisfaction, community integration, and quality of life.

Hypothesis 2: Family caregivers will report a decrease in burden, symptoms of depression and anger, and an increase in social support, quality of life and use of more adaptive (i.e., problem-focused) coping strategies.

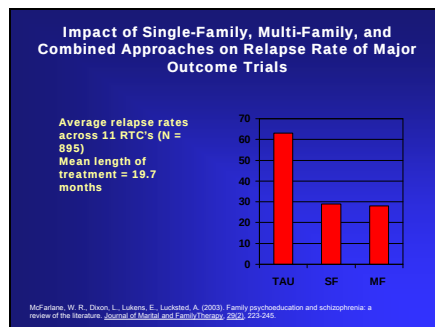
Slide 7

Why Family Psychoeducation?

Meta-analyses of family psychoeducation studies have demonstrated greater recovery for consumers with SMI with family treatment as compared to individual treatment or treatment as usual.

- *FPE reduced relapse rate by 20% over 12 months (Pitschel-Walz et al, 2001- 25 studies)*
- *FPE reduced risk of hospitalization by 48.8% over 12 months (Pilling et al, 2002- 33 studies)*

Slide 8



Slide 9

What is MFG for TBI?

- Education about TBI
- Support for affected veterans and families
- Practical problem-solving approach to management of TBI and related conditions

Learning to problem solve in groups helps families decrease feelings of isolation and allows for the opportunity to learn from others.

Slide 10

Inclusion/Exclusion Criteria for Survivors

<u>Inclusion:</u>	<u>Exclusion:</u>
• Able to participate in psychometric testing and procedures to be enrolled in the study. • At least one family member willing to participate. • TBI sustained during OEF/OIF era. • Capable of providing written informed consent.	• Significant cognitive impairment (MMS <20).

Slide 11

Inclusion/Exclusion Criteria for Caregivers

<u>Inclusion:</u> <i>Family members must meet at least 3 of the following 5 criteria;</i>	<u>Exclusion:</u>
• Is a spouse or parent • Has the most frequent contact • Helps support the veteran financially • Is contacted in case of emergency • Has been involved in veteran's treatment	• Under the age of 18. • Has any current medical condition that would impact participation or jeopardize the caregiver role • Baseline participation in another caregiver counseling program.

Slide 12

Phase in MFG

- **Joining:** two or three sessions with individual TBI survivors and families.
- **Educational Workshop:** one-day educational workshop with all the TBI survivors and families.
- **Multi-Family Group Meetings:** once every two weeks for 9 to 12 months, with all the TBI survivors and families. Group meetings are led by the family clinicians. Group meetings provide education, support, practical guidelines and solutions to everyday problems.

Slide 13

Problem Solving in MFG Meetings

Structure

- Initial Socializing 15 minutes
- Go Around 25 minutes
- Select a problem to work on 5 minutes
- Solving a problem 40 minutes
- Final Socializing 5 minutes

Slide 14

Outcome Domains: Veterans

<u>Increase:</u>	<u>Decrease:</u>
• Psychosocial reintegration	• Depressive symptoms
• Social support	• PTSD symptoms
• Quality of life	• Perceived criticism
• Coping efficacy (problem vs. emotion-focused)	
• Self-reported health	
• Anger management	

Slide 15

Outcome Domains: Families

<u>Increase:</u>	<u>Decrease:</u>
• Family empowerment • Social support • Coping efficacy (problem vs. emotion-focused) • Self-reported health • Anger management	• Caregiver burden • Depressive symptoms • Perceived criticism

Appendix 2: MFGT Materials for Adapted Protocol

Educational workshop – Bronx (Part I)

Slide 1

**Multi - Family Group
Educational Workshop For
Veterans with Traumatic Brain
Injury and Their Family
Members**

Bronx VAMC
Deborah Perlick, Ph.D., P.I.
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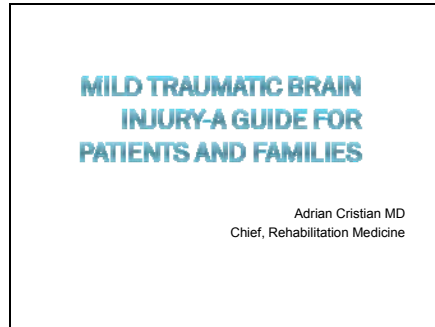
Slide 2

Educational Workshop Agenda

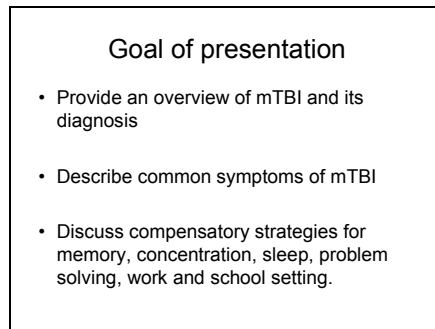
- 4:30 PM – 5:00 Light Dinner and Informal Interaction
- 5:00 PM – 5:15 Welcome, Introductions and plan for the evening
- 5:15 PM – 6:00 What are the impacts of TBI on Veterans and families? Cause and Treatment TBI and associated problems.
- 6:00 PM – 6:15 Break
- 6:15 PM – 7:00 Multi Family Group Educational what it is and it can help
- 7:00 – 7:15 Discussion, Closing



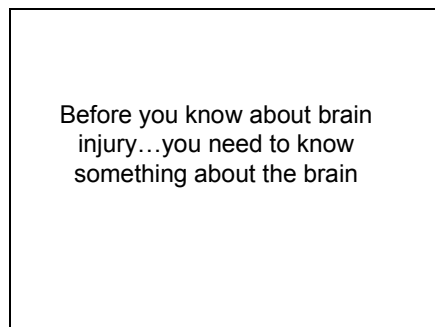
Slide 3



Slide 4



Slide 5



Slide 6

Frontal Lobe



Particularly susceptible to injury.

"Executive functions"

- focus, organization,
- Problem Solving
- Decision making, judgment
- Emotion/behavior control

Injury to frontal lobe leads to concrete thinking, difficulty completing tasks, dis-inhibition, fatigue, decreased motivation and apathy

Slide 7

Temporal Lobe



- Behavior
- New memories
- Behavioral problems include aggression, irritability
- Right temporal lobe:
 - responsible for visual memory
- Left temporal lobe:
 - responsible for verbal memory, language and naming.
- The temporal lobes are a common site of injury.

Slide 8

Parietal Lobe



- Sensory information
- **Right Lobe:**
 - processing visual-spatial information
 - Damage: getting lost
- **Left Lobe:**
 - Language function
 - Damage: difficulty understanding spoken and /or written word

Slide 9

Occipital Lobe



- Visual information
- Damage is associated with
 - Loss of vision
 - Blindness
 - Inability to recognize objects

Slide 10

Cerebellum



- Important in coordinated movements and balance
- Damage can lead to
 - balance problems in walking
 - Poor coordination of arms and legs
 - Tremors

Slide 11

Inside the skull



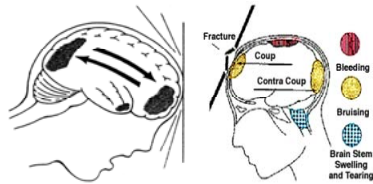
- Inside the skull there are lots of sharp contours that can cause damage- especially to the frontal and temporal lobes.

Slide 12

WHAT TYPES OF INJURIES DOES THE BRAIN SUSTAIN IN TBI?

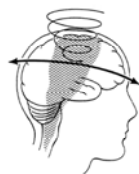
Slide 13

Focal Injuries



Slide 14

Diffuse Axonal Injury (DAI)



- *Rotational*
- Acceleration-Deceleration Injuries
- Shearing of nerve tracts in brain
- Hard to detect with MRI

Slide 15

Blast Injuries

Slide 16

Impact of TBI on daily activities

- Difficulty to understand what others are saying
- Difficulty following fast-paced conversations
- Difficulty remembering what others have said.
- Difficulty interpreting facial expressions, body language
- Difficulty using an appropriate tone of voice.

Slide 17

Symptoms of mTBI

- Headaches
- Dizziness
- Balance Problems
- Vision
 - Double Vision
 - Eyes sensitive to light
 - Difficulty reading
- Ringing in ears
- Sleep problems
- Relationship problems
 - Family, coworkers

Slide 18

Symptoms of mTBI

- Memory loss
- Difficulty focusing and concentrating
- Difficulty starting and completing projects
- Problems with decision making
- Managing emotions
- Social withdrawal
- Apathy
- Fatigue

Slide 19

Some Conditions that commonly associated with mTBI

- Post-traumatic Stress Disorder (PTSD)
- Depression
- Anxiety
- Insomnia
- Musculoskeletal Pain
- Substance Abuse
 - Alcoholism
- Problems at work and school.
- Social problems
 - Family, Work, Friends

Slide 20

Interaction between cognitive impairments and behavior



Slide 21

Musculoskeletal Injuries

- Neck pain
- Low back pain
- Shoulder pain
- Knee injuries

Slide 22

Diagnosing mTBI

- History (detective work)
 - Was there an event that could have injured the brain? (i.e blast, car accident, blow to the head?)
 - Was there loss of consciousness? How long?
 - Was there altered level of consciousness (i.e dazed, buzzed, confused...) How long?
 - Was there amnesia around the event?
 - Have there been symptoms? (i.e memory loss)
 - Was there a history of brain injury in the past?

Slide 23

Diagnosis mTBI-challenges

- Veteran may not remember the event.
- Significant delay in time from the event to the diagnosis
- Multiple exposures (i.e blasts)

Slide 24

Diagnosing mTBI

- Physical Examination
 - Orientation to name, place, date and time
 - Naming and language
 - Memory-short term and long term
 - Concentration
 - Abstract thought
 - Repetition
 - Neurological exam

Slide 25

Diagnosing mTBI

MRI

- Neuro-imaging- MRI of brain,
- Neuro-psychological evaluation

Slide 26

Diagnosis of mTBI

- Diagnosis may be made soon after the event
- Sometimes it can be several weeks, months or years following the event
- "Downward spiral" before diagnosis is made
 - (deterioration in school, work, family life)

Slide 27

Diagnosis of mTBI

- Event
- Loss of consciousness or altered consciousness
 - <30 minutes
- Amnesia: <24 hours
- Persistent symptoms

Slide 28

Treatment of mTBI

- Note: Most symptoms improve with time
- Medications for memory and concentration
- Teaching of compensatory strategies.
- Use of devices-palm pilot, voice recorder.
- Speech pathology-communication disorders
- Neuropsychology
- Physical Therapy
- Mental health-psychologists, psychiatrists

Slide 29

Impact of TBI on daily activities

- Difficulty to understand what others are saying
- Difficulty following fast-paced conversations
- Difficulty remembering what others have said.
- Difficulty interpreting facial expressions, body language
- Difficulty using an appropriate tone of voice.

Slide 30

Strategies to improve Memory

- Daily planner/organizer
 - Small notebook
 - Palm pilot
 - Voice recorder
- “To Do Checklist” (i.e shopping list)
 - Check it 2-3 times per day and update it.
- Complete one task at a time
- Frequent “mental breaks”
- Work in quiet area

Slide 31

Strategies to improve Memory

- “Small basket”-keep important items in it
 - Wallet, keys, cell phone...
- Put up signs around home
- Minimize clutter
- “Link” new information with something known.
- Repeat 3 times the new information
 - New name in conversation
- Use associations (name/face)

Slide 32

Strategies to improve Concentration

- Complete tasks when most alert (i.e morning)
- Earplugs and headphones to reduce distractions.
- Work in quiet environment
- Write down distracting thoughts

Slide 33

Problem Solving

- Identify needs
- Define the problem...be SPECIFIC and OBJECTIVE!
- Focus on the PROBLEM, not the PERSON
- Make few reasonable requests
- DON'T THREATEN and avoid BLAMING
- Good eye contact, speak clearly
- Be a Good Listener
 - Ask questions for clarification
 - Acknowledge the other person's point of view.
- Look for compromise (i.e meet them halfway)

Slide 34

Strategies for Problem Solving

- Understanding the situation from the points of view of everyone involved.
- Ask for advice from a trustworthy source.
- List all possible solutions and their advantages and disadvantages.
- Rate solutions (0-10 scale) for importance and feasibility

Slide 35

Strategies for improving sleep

- Bedroom should be soothing and relaxing place.
- Go to bed at same time every night
- Don't watch the clock
- Use earplugs to minimize unwanted sounds

Slide 36

Strategies for improving sleep

- Empty bowel and bladder before going to sleep.
- Exercise on a regular basis, but not before going to sleep.
- Don't drink caffeine or alcohol or smoke at least 6 hours before bedtime.

Slide 37

Strategies for dealing with family members

- Identify anger "emotional triggers"
- STOP...do a Reality Check
 - Understanding of the situation
 - Other person's point of view
 - My behavior vs. expected behavior
 - Get feedback on behavior
 - Role play appropriate behavior (expected behavior)
- Walk away....count to 100!

Slide 38

Work Setting

- Focus on one task at a time
- Work in a quiet environment
- Prioritize your work
- Make sure that you understand what is being asked of you to complete.
 - Ask for clarification and feedback from your supervisor.
 - Write down instructions
 - Practice them with friend or family member
 - "Rehearse" your work routine
 - Let your supervisor know if you are feeling overwhelmed.
 - Irritability may be a sign of sensory stimulus overload!

Slide 39

School Setting

- Be realistic with the number of classes/semester
- Ask for special accommodations
 - More time for tests, papers, note-taking in class...
 - Pace yourself
- Use organizers (PDA, cell phone, notebook)

Slide 40

Instructions for family members

- Talk in even, calm and non-judgmental tone
- Provide clarification of the situation
- Repeat several times if necessary
- You are the reference point for the family member
 - Don't escalate the situation.
- Give feedback to family member with TBI
 - Appropriate behavior
 - Appropriate speech volume, body language

Slide 41

Instructions for family members

- “Role Play”
 - Identifying emotional triggers
 - Provide feedback on appropriate behavior
 - Practice appropriate response to situation (including speech volume, tone, body language...)
- Be very concrete and specific when giving instructions
- Monitor for depression, suicidal thoughts, alcoholism and drug abuse.

Slide 42

Advice for family members

- Understand the cause and symptoms of mTBI.
- Allow ample time for communication
- Repetition is often necessary
- Be calm and use an even tone of voice
- You are the reference point for the person with TBI.
- Pace yourself and take good care of yourself.

Slide 43

Alcohol and Drugs

Avoid use of alcohol and drugs

- Make it harder for the brain to heal
- Cause harm to the body.
- Cause Addiction
- Cause problems with family, friends and co-workers
- Worsen feelings of depression and anxiety
- Increase risk of additional brain injuries

Slide 44

Minimize risk of another TBI

- Avoid high risk behavior
 - Contact sports
 - Motorcycle and bicycle riding
 - Skiing, skating and snowboarding
 - Use helmet whenever indicated.
 - Use seat belts in car
 - Get tested for ability to drive safely before driving!
 - Driving is very complex activity!

Slide 45

Impact of TBI on daily activities

- Difficulty to understand what others are saying
- Difficulty following fast-paced conversations
- Difficulty remembering what others have said.
- Difficulty interpreting facial expressions, body language
- Difficulty using an appropriate tone of voice.

Slide 46

References

- 1. "Recovering from Traumatic Brain Injury-service member and family handbook" –Channing-Bete
- 2. TBI Patient handbook-developed by Bronx VA TBI team.

Slide 47

BREAK

Slide 48

What is MFG and how could it help veterans and families affected by TBI?



Bronx VAMC Study Personnel

Deborah Perlick, Ph.D., P.I.
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Elizabeth Bonuck, L.C.S.W., MFG Clinician
Saniha Makhzoumi, Research Assistant
Carla Kalvin, Research Coordinator

Kristy—3 site study

Slide 49

What is MFG for TBI



MFG provides:

- Education about TBI and related issues, such as PTSD, depression and general readjustment
- Support for affected veterans and families
- Practical problem-solving approach to management of TBI and related conditions
- MFG happens in a Multi-Family Group format

Slide 50

Multi-Family Group Format

- Two half-day educational workshops at the beginning of the program.
- Ongoing support and problem solving experiences, provided in bi-weekly group meetings.
- Groups meet for 6 to 9 months.



Slide 51

Multi-Family Group Content

- Education is provided about the biological nature of TBI and management of related conditions
- Survivors of TBI and their families are assisted in improving coping, problem-solving skills, and communication
- Family educators are partners in management of TBI, associated problems and goal setting

Slide 52

Phases of MFG

- Joining: two or three sessions with individual TBI survivors and families.
- Educational Workshop: Two half-day educational workshops with all the TBI survivors and families.
- Multi-Family Group Meetings: once every two weeks for 6 to 9 months, with all the TBI survivors and families. Group meetings are led by the family clinicians. Group meetings provide education, support, practical guidelines and solutions to everyday problems.

Slide 53

What is the role of MFG clinician?

- Work collaboratively with clients and families.
- Assume the role of educator, family partner, and trainer-coach.
- Teach families and clients to use the problem-solving method to deal with injury-related behaviors.



Slide 54

Why participate in MFG for Traumatic Brain Injury?

- Survivors of TBI and their families need education and support for major lifestyle changes.
- The recovery of TBI survivors is greatly affected by their families.
- Many survivors of TBI and their families would benefit by obtaining more information about day to day management of TBI-related conditions

Slide 55

Why Participate in MFG for Traumatic Brain Injury?

- Learning in a multi-family group format provides an opportunity to learn from others
- Families report that the multi-family group format reduces their feelings of isolation by connecting with other families and professionals with expertise in this area

Slide 56

How could MFG help Veterans and Families Cope with TBI?

Goal

– Provide education and support



Strategy

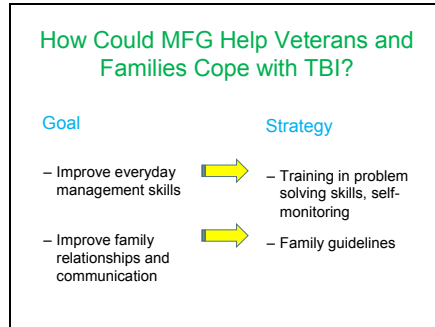
– Education and information in a group format

– Improve formal and informal support



– Joining, expanding social network (clinicians and other VETs and families)

Slide 57



Slide 58

MFG works for other medical conditions!

- Preliminary evidence for improved outcomes with civilian TBI and spinal cord injury

Slide 59

The Spokane MFG Study for Civilian TBI and Spinal Cord Injury

- Unique Features:
 - Intervention development study
 - Pre versus Post Design
 - St. Luke's rehab
 - 27 survivors; 28 caregivers
 - MFG-trained clinicians
 - Outcomes of MFG for TBI, SCI
 - Outcomes for survivors & caregivers

(Becker & Dyck; NIDRR; H13352 2006)

Slide 60

Multiple-Family Group Treatment for TBI and Spinal Cord Injury: Intervention Development and Preliminary Outcomes

- Survivors reported a decrease in depressive symptoms and anger expression and an increase in life satisfaction
- Family caregivers reported a significant reduction in burden.

Slide 61

Multiple-Family Group Treatment for TBI and Spinal Cord Injury: Intervention Development and Preliminary Outcomes (cont.)

- Themes that emerged from qualitative analyses included:
 - Normalization of the care giving experience
 - Importance of socialization-improvement in a variety of coping skills
 - Education about the injuries

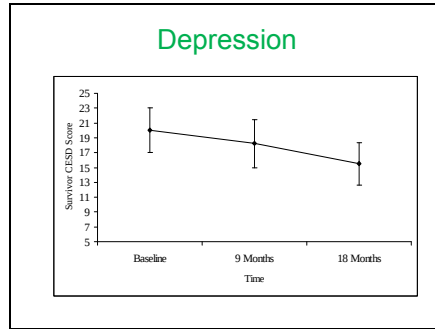
Rogers, M., Strode, A., Norell, D., Short, R., Becker, B., & Dyck, D.G.;
Am. J of Phys. Med and Rehab, 2007.

Slide 62

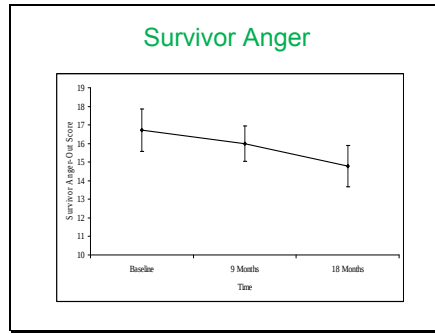
Demographics of Participants

Variable	Survivor		Caregiver	
	Percent	Mean(SD)	Percent	Mean(SD)
Age		39.3 (11.3)		47.0 (11.1)
Duration of Injury (years)		6.4 (10.7)		
Gender				
Male	77.8		14.3	
Ethnicity				
Caucasian	100		92.9	
Relationship to Survivor				
Spouse/Live in			60.7	
Parent			17.9	
All other			21.4	

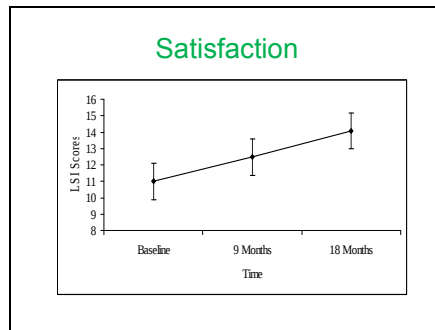
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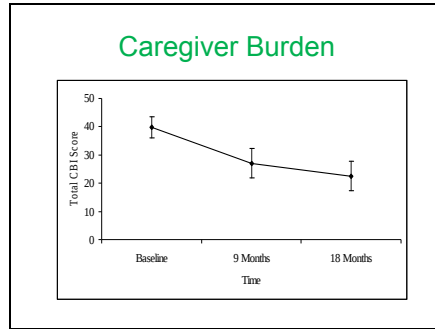
Slide 64



Slide 65



Slide 66



Slide 67

- ### MFG Focus Group Highlights
- Learned to be a better listener
 - Sessions gave participants a sense of friendship, support and bonding
 - "Group gave me a sense of family that I had not felt for years"

Slide 68

- ### MFG Focus Group Highlights
- Presented a new perspective on injuries and caretaking responsibilities
 - Gained a greater understanding of and compassion for the injured person and why he/she acts in certain ways

Slide 69

MFG Focus Group Highlights

Examples of solutions from the problem-solving sessions

- Better coping with the holidays
- Specific information on rehabilitation
- Learned to control temper
- Signed into a detox clinic
- Found a new doctor
- Re-established contact with children

Slide 70

Other Highlights

- Two survivors formed a strong friendship and business relationship
- One survivor gained confidence to take on leadership role at the Brain Injury Association

Slide 71

Discussion/ Further Questions

Slide 72

End of Workshop 1

Next workshop—Tuesday

October 6th, 2009

4:30 PM – 7:00

Educational workshop – Bronx (Part II)

Slide 1

Multi - Family Group Educational Workshop For Veterans with Traumatic Brain Injury and Their Family Members

Bronx VAMC
Deborah Perlick, Ph.D., P.I.
Adrian Cristian, M.D., Co-P.I.
Noelle Berger, Ph.D.,
Investigator and MFG Clinician
Elizabeth Bonuck, L.C.S.W.,
MFG Clinician

Slide 2

Educational Workshop Agenda

- 4:30 PM – 5:00 Welcome, Light Dinner and Informal Interaction
- 5:00 PM – 5:10 Review--Why Participate in MFG?
- 5:10 PM – 5:40 Family Adjustment Issues
- 5:40 PM – 5:50 Break
- 5:50 PM – 6:30 Family Guidelines
- 6:30 PM – 6:45 Structure of Multi Family Group Education and Problem Solving Meetings
- 6:45 PM – 7:00 Discussion, Closing



Slide 3

Why Participate in MFG for TBI?

- Survivors of TBI and their families need education and support for major lifestyle changes.
- The recovery of TBI survivors is greatly affected by their families.
- Many survivors of TBI and their families would benefit by obtaining more information about day to day management of TBI-related conditions.

Slide 4

Why Participate in MFG for TBI?

- Learning in a multi-family group format provides an opportunity to learn from others.
- Families report that the multi-family group format reduces their feelings of isolation by connecting with other families and professionals with expertise in this area.

Slide 5

How Can MFG Help Veterans and Families Cope with TBI?

Goal		Strategy
– Provide education and support	➡	– Education and information in a group format
– Improve formal and informal support	➡	– Joining, expanding social network

Slide 6

How Can MFG help Veterans and Families Cope with TBI?

Goal		Strategy
– Improve everyday management skills	➡	– Training in problem solving skills, self-monitoring
– Improve family relationships and communication	➡	– Family guidelines

Slide 7

“The Price of Freedom is not Free”

PTSD AND FAMILIES:
Supporting Veterans, Recent Returnees,
and Active Duty Personnel and
Their Families

Melissa Altman
Tramontin

Mary

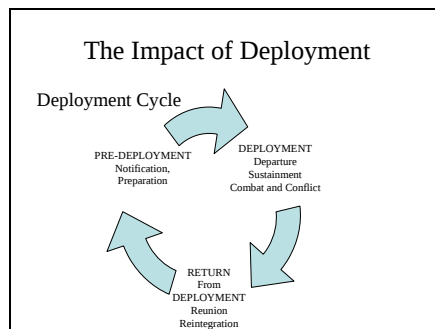
October 6th, 2009

Slide 8

Mental Health Issues and Military Deployment:
Understanding and Helping Returning Service Members

- This presentation will cover:
 - The Deployment Cycle
 - Recognizing PTSD in Returning Veterans
 - PTSD and the Family: Impact and Coping
 - PTSD/TBI
 - PTSD Treatments

Slide 9



Slide 10

The Deployment Cycle

- Pre-deployment: from notification to departure
 - “Ramping up” period preceding actual deployment, soldiers are often preoccupied with training for the upcoming mission and preparing equipment, can last from 2 weeks to 2 months
- Deployment: from departure to return
 - Covers the period when the soldier is away from his or her family, often working in dangerous and stressful environments, typically 10-15 months
- Post-Deployment/Homecoming: preparation for the return home and reunification with family/community
 - In the past, this was seen as the terminal phase of the cycle, however today many soldiers and families are faced with the stress of preparing for multiple deployments soon after reunion

Slide 11

Military Culture 101

- **Soldier Battlemind** is the Soldier's inner strength to face fear and adversity in combat with courage, eg: motto: "Armor for your Mind."
- **B** = buddies (cohesion)
- **A** = accountability
- **T** = targeted
- **T** = tactical Awareness
- **L** = lethally Armed
- **E** = emotional Control
- **M** = mission and OPSEC
- **I** = individual Responsibility
- **N** = non-Defensive (combat)
- **D** = discipline and Ordering

Slide 12

Family Stress Associated with Military Combat Deployments: Deployment

- Concern over well-being
- Adjusting to being alone
- Taking on new duties
- Feeling isolated
- Lack of familiarity with military culture
- Financial hardship
- Child care
- Managing children's reactions
- Limited certainty or control
- If relocated---separation from friends and family.
- Feeling forgotten, abandoned or unappreciated for sacrifice

Slide 13

Post Deployment Reunion and Reintegration

- Reunion can be very stressful for service members and families:
 - Expectations
 - Changed roles/responsibilities
 - Lack of time
 - Deployment vs. Home
 - Extended family
 - Health/Mental health problems

Slide 14

Family Stress Associated with Military Combat Deployments: Post-Deployment

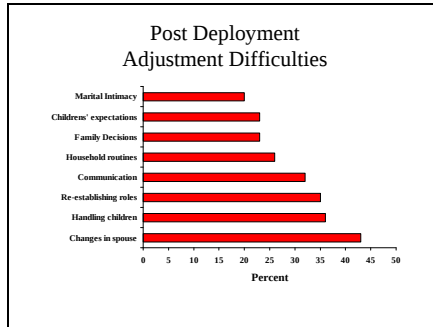
- Deployment experience has changed both service members and their families
- New routines are foreign to the returnee
- Altered relationships
- Changes in children, new parenting roles
- Permanent injuries/disability
- Understanding benefits and services
- Service members more bonded to their units
- Service members not sure what to discuss
- Concern about future deployments

Slide 15

Post-Deployment Adjustment

- **Soldier Battlemind** is the Soldier's inner strength to face fear and adversity in combat with courage, eg: motto: "Armor for your Mind."
- **Buddies** (cohesion) vs. Withdrawal
- **Accountability** vs. Controlling Behavior
- **Targeted** vs. Inappropriate Aggression
- **Tactical Awareness** vs. Hypervigilance
- **Lethally Armed** vs. "Locked and Loaded" at home
- **Emotional Control** vs. Detachment
- **Mission** and OPSEC vs. Secretiveness
- **Individual Responsibility** vs. Guilt
- **Non-Defensive** (combat) vs. Aggressive Driving
- **Discipline** and Ordering vs. Conflict

Slide 16



Slide 17

Summary

- Military Families are impacted by the stress of deployment.
- Stressors occur throughout the deployment cycle.
- Preparation and support for service member and family are important.
- Impact of injury (physical or emotional) can complicate reintegration.

Slide 18

Common Stress Reactions

- Coming home mentally is a process that may take weeks or months
- Transition from the war zone will be an ongoing daily, and gradual process
- Body is still in "Battlemind" i.e. Flight or Fight Response Stage
- Re-experiencing, hyper arousal, avoidance
- Reprogramming safety
- Its normal to have intrusive memories after returning from a highly stressful combat area
- The reaction to reminders often lessens over time

Slide 19

Impact of the Injury on the Family

- Remember: The injured service member is part of a family .
- Recovery will happen in the context of that family:
 - Family offers support
 - Family must adjust to injury
- Injury may cause disruptions in family :
 - May require the family moving with associated changes in neighborhoods, schools and peer/social groups
 - May cause changes in family constellation and roles
 - Possible loss of AD military status and/or military community
- Injury can cause disruptions in parenting:
 - Change in disciplinary style, emotional support or availability
 - Change in personality or cognitive ability
- Should monitor ALL family members for changes in functional status over time .

Slide 20

Posttraumatic Stress Disorder (PTSD)

- Posttraumatic stress disorder is among the most common diagnoses made by the Veterans Health Administration. Of the approximately 300,000 veterans from Operations Enduring and Iraqi Freedom who have accessed VA health care, **nearly 20 percent –60,000 veterans- have received a preliminary diagnosis of PTSD.**

Slide 21

Re-experiencing

- Recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions
- Recurrent distressing dreams of the event
- Acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur upon awakening or when intoxicated)

Slide 22

Avoidance

- Avoid thoughts, feelings, conversations associated with trauma
- Avoid activities, places, or people that arouse recollections of the trauma
- Inability to recall details of the trauma
- Decreased interest in activities
- Feeling detached from others
- Restricted range of affect

Slide 23

Arousal

- Difficulty falling or staying asleep
- Irritability or outburst of anger
- Difficulty concentrating
- Hyper vigilance
- Exaggerated startle response

Slide 24

TRAUMA

- Trauma
- Re-experience
- Avoidance
- Unable to function
- Month or more of symptoms
- Arousal increased

Slide 25

DREAMS

- Disinterest in usual activities
- Re-experience
- Event preceding symptoms
- Avoidance
- Month or more of symptoms
- Sympathetic arousal

Slide 26

Stigma

- “I was trying to be the tough marine I was trained to be-not to talk about problems, not to cry. I imprisoned myself in my own mind”

Slide 27

Co morbidities

- Major depressive disorder
- Panic Disorder
- Substance Abuse
- Traumatic Brain Injury
- Increased health complaints, health service utilization, morbidity, and mortality

Slide 28

**Psychological Injury:
Impact of PTSD on Families**

- **PTSD can impact directly on intimate relationships:**
 - Direct effects – impact on relationship.
 - Indirect effects – impact on relationship skills.
 - Impact of PTSD on perception of relationship.
- **PTSD can impact the spouse/partner:**
 - Direct effects – impact of PTSD symptoms.
 - Indirect effects – impact of added stress.
- **PTSD can impact on children:**
 - Direct effects – impact on child development/adjustment.
 - Indirect effects – impact on parenting skills.

Slide 29

**PTSD Reactions & Family Impact;
Interactive Exercise**

- NIGHTMARES
- AVOIDANCE
- EMOTIONAL NUMBING/DISTANCING
- HYPERAROUSAL
- ANGER/IRRITABILITY

Slide 30

PTSD/TBI: Overlapping Symptoms

- Sleep disturbances/insomnia/fatigue
- Irritability/anger/aggression
- Problems thinking and remembering
- Changes in personality/mood swings
- Withdrawal from social, work, family activities
- Hypersensitivity to noise

Slide 31

PTSD/TBI: Distinctive Symptoms

- Concussion:
- Headaches
- Dizziness/vertigo/balance problems
- Reduced alcohol tolerance
- Sensitivity to light
- PTSD:
- Flashback/ intrusive memories
- Increased startle response
- Hypervigilance, physiological arousal
- Nightmares, night terrors

Slide 32

What's a Family to Do: Coping Tips

- Awareness first:
 - Acknowledge the changes
 - Get the facts about PTSD
- Actions next:
 - Ask your veteran how you can be helpful
 - Learn about your veteran's treatment
 - Get your own support
 - Become a communication expert
 - Encourage "opening up" at their own pace
- Attitudes:
 - Patience—this is a process
 - Reintroduce the spirit of "we" and team

Slide 33

The Family and Adjustment

Typical and Normal Family Responses to This
New Life

Slide 34

Common Family Responses: Loss, Grief, and Adjustment

- Denial
- Anxiety
- Fear
- Guilt
- Embarrassment
- Frustration
- Anger
- Sadness

Slide 35

Loss, Grief, and Adjustment

- Loss of cognitive functioning or functional limitations
- Changes or losses in physical functioning
- Emotional changes in mood
- Loss of freedom, autonomy, personal control

Slide 36

Consequences of Loss

- Long term condition can affect one's mental health
- Impact on social roles
- Occupational changes

Slide 37

Consequences of Loss (cont.)

- Impact on economic status
- Change of the vision of one's future, goals, values
- Affects one's self image, self esteem

Slide 38

Loss for Family Members

- Loss of some aspects of role as a spouse or mother or father or sibling as assume role as caregiver
- Relationships with friends, co-workers and other family members may change.

Slide 39

Loss for Family Members (cont.)

- Experience similar emotional responses as the family member with the injury
 - Anger
 - Frustration
 - Impatience
 - Sadness

Slide 40

Grief

- Denial
- Anger
- Bargaining
- Depression
- Acceptance

Slide 41

Adjustment

- We all have our own time tables for adjusting to this new life
- We all have our own set of coping behaviors to assist us with the adjustment
 - Some focus on the meaning of what happened
 - Some focus on taking action, building support, finding success
 - Some focus on feelings, release feelings and accept the situation
 - Use of a combination of coping behaviors

Slide 42

Coping



- Cope with loss and change.
- Realize that your feelings are a common, normal response to your experience.
- Recognize there is a natural tendency to worry and focus on what is not working, on the negative.
- Master the art of patience (mindfulness, distress tolerance)

Slide 43

Coping with TBI

- Learn to focus on your accomplishments, strengths, and resources.
- Redefine the meaning of the injury, one's life.
- Think about the future you want and the best ways to get there.

Slide 44

Self Care for Family Members

- The injury affects the whole family.
- Family members need to learn and respect their own limits.
- Family members need to learn when to ask for help and where to get it.

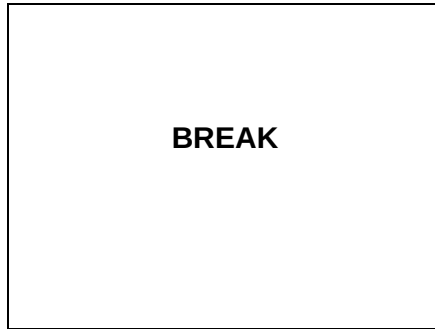


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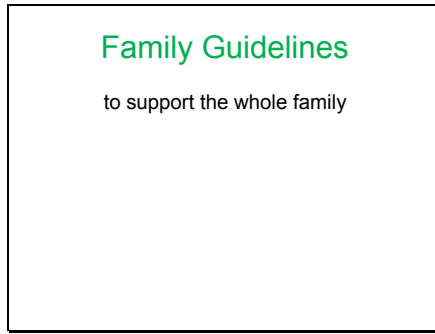
Support Information

- MIRECC Post-Deployment Mental Health: www.mirecc.va.gov/visn6
- The Brain Injury Association of America: <http://www.biausa.org/Pages/home.html>
- Traumatic Brain Injury Resource Guide: <http://www.neuroskills.com>
- TBI Home Peer Support Website: <http://tbihome.org/>
- The Perspectives Network: <http://www.tbi.org/>
- Traumatic Brain Injury Central: <http://www.mssm.edu/tbinet>

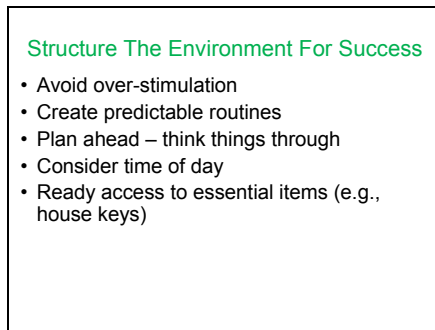
Slide 46



Slide 47



Slide 48



Slide 49

Patience and More Patience

- Everything is slower and takes more time than before the injury.
- Basic everyday tasks that were done automatically before now take extra effort and time.
- Plan for it and expect it. That will decrease your frustration.
- Survivors should do as much as they are capable of doing for themselves.

Slide 50

It Doesn't Have To Be Pretty If It Works

- Many things are different than before the injury. This is a time to look at small successes and improvements.
- It is more important to modify a task than to have it done exactly the way it was before.
- Gaining independence is much more important to the survivor than doing something a certain way.

Slide 51

Don't Personalize Behaviors

- The behaviors that exist with brain injury are not specifically intended to irritate or upset others.
- The nature of the injury results in deficits that cause behaviors that can be irritating, such as a short term memory deficit.
- Survivors don't know that they keep asking a question over and over because their brain doesn't store the answer.

Slide 52

Get Help When You Need It

- This type of injury results in a roller coaster of emotional, financial and health concerns.
- No one can go through this type of experience without help on multiple fronts.
- Resources for help can include your physician, case manager, brain injury association, local mental health organizations, etc.

Slide 53

Get Out And Play

- For physical and emotional health, it helps to get out and have some fun and time for yourself.
- You can have fun together but you also need time away from each other.
- The TBI survivor may need support in establishing social circles and leisure activities.
- Prior to the injury, family members had a mix of together and alone time, which needs to be re-established.

Slide 54

Maintain Roles In The Family

- TBI may require shifts in familiar roles or routines.
- When a spouse or parent is the TBI survivor, it is not uncommon to have a child step into a role of responsibility.
- In the long run, TBI survivors who are parents need to function in the role of parent as much as possible.
- Everyone does better when the normal roles are re-established.

Slide 55

Go Slow

- Recovery takes time. Rest is important. Things will get better in their own time.

Give 'em Space

- Time out is important for everyone. It's okay to offer. It's okay to refuse.

Slide 56

Keep It Cool

- Enthusiasm is normal. Tone it down. Disagreement is normal. Tone it down too.

Keep It Simple

- Say what you have to say clearly, calmly, and positively.

Slide 57

Lower Expectations, Temporarily

- Compare month to month rather than year to year.
- Use your own personal yardstick by comparing yourself to yourself over time. Notice your own changes.
- Having realistic expectations which may be lower for a while will help you feel less stress.

Slide 58

Structure of The Multiple Family Group Problem solving meetings

Slide 59

Problem Solving MFG Meetings

Structure

- Initial Socializing 15 minutes
- Go Around 25 minutes
- Select a problem to work on 5 minutes
- Solving a problem 40 minutes
- Final Socializing 5 minutes

Slide 60

Initial Socializing

- 15 minutes of social conversation at the beginning and 5 minutes at the end of each session
- A time to network with others
- Opportunity to learn about other members lives
- Time of humor
- Content is kept light
- Small talk

Slide 61

Go Around

- Review the last couple of week's events
- What has been going well related to the family guidelines and in general
- What could be better related to the family guidelines and in general



Slide 62

Formal Problem Solving

- STEP 1 
 - Define the problem or issue (family & clinicians)
- STEP 2 
 - List all possible solutions (All MFG members)
- STEP 3 
 - Discuss advantages and then

Slide 63

Formal Problem Solving

- STEP 4 
 - Choose the solution that best fits the situation (family)
- STEP 5 
 - Plan how to carry out the solution (family and clinician)
- STEP 6 
 - Review implementation (clinicians)

Slide 64

Final Socializing

- We always end on a social and positive note

Slide 65

The Current Program, Wrap-Up, Q & A

Kristy Straits-Troster, PhD
Joy E. Close, LCSW
Trygve Dolber, BS
Natia Hamilton, B.A.

Slide 66

Multi-family group for Traumatic Brain Injury Survivors and their Families: the Current Project

P.I. Deborah Perlick, Coordinating Site P.I., Associate Director
for Family Intervention & Assessment, VISN 3 MIRECC;
Bronx, NY

Co-P.I. Kristy-Straits Troster, Durham NC Site

MFG Clinical training and supervision consultants:
Dennis Dyck and Diane Norell, Washington State University

Funded by Department of Defense, 2008

Slide 67

Aims

Overall aim of the program is to improve the health, mental health and quality of life for veterans with TBI and their families.

- Aim 1: To adapt MFG to address the needs of veterans with TBI and their family members.
- Aim 2: To evaluate the feasibility and efficacy of MFG for veterans with TBI and their family members.

Slide 68

Two Study Sites:

- James J. Peters VAMC, Bronx, NY
 - Poly-trauma network site for the NY/New Jersey Region; treats veterans from VISN 3; MIRECC
- Durham, VAMC; North Carolina
 - Mental health clinic for veterans returning from OIF/OEF; expertise in post-deployment, MI and TBI

Slide 69

Methods and Strategy

- Sample (n = 32 patients; and 32 family caregivers)
 - Patients inclusion and exclusion criteria
 - Family Caregiver inclusion and exclusion criteria
- Implementation
 - Adaptation of the MFG Treatment Manual
 - Therapist training and supervision plan
 - Treatment Implementation

Slide 70

Methods and Strategy (cont.)

- Operational Procedures
 - Recruitment
 - Diagnostic Assessment
- Project Assessment Plan
 - Quantitative (family, Veterans) at baseline, 0, 3, 6, 9 months post workshop
 - Qualitative (post interviews with patients, family members, clinicians)

Slide 71

Questions??

Slide 72

Deciding On a Meeting Time

- When are we meeting?
- Where are we meeting?
- Who will be able to attend?
- How often are we meeting?
- What is the agenda for the next meeting?

Workshop – Durham (Part I)

Slide 1

Multi - Family Group Educational Workshop For Veterans with Traumatic Brain Injury and Their Family Members

Durham VAMC
Bronx VAMC
Orange NJ VAMC

Slide 2

Educational Workshop Agenda

- 4:00 PM – 4:30 Light Dinner and Informal Interaction
- 4:30 PM – 4:40 Welcome, Introductions and plan for the evening
- 4:40 PM – 4:45 What are the impacts of TBI on Veterans and families?
- 4:45 PM – 5:30 Blast Injuries, TBI and Neurobiology: What is known?
- 5:30 PM – 5:45 Break
- 5:45 PM – 6:00 How are Medications used in the treatment of TBI?
- 6:00 PM – 6:15 Multi Family Group Education---what it is and it can help
- 6:15 PM – 6:30 Discussion, Closing

Slide 3

What are the Realities Facing
Veterans and their Families?

Kristy Straits-Troster,
Ph.D.
MFG Clinician, P.I.

Slide 4

OEF/OIF Realities

- Spouses, parents and children face long lasting changes to family life and their roles within the family
- Multiple deployments are the norm
 - With more deployments the greater the risk of injury

Slide 5

What are the Realities Facing
Veterans and their Families?

Dr. Paul Howell
Physiatrist, Physical
Medicine and
Rehabilitation

Slide 6

OIF/OEF Realities

- TBI is the 'signature wound' of these wars
 - 22% of surviving soldiers combat wounded in Iraq and Afghanistan are estimated to have suffered a brain injury
- A significant number of TBI injured Veterans have experienced blast injuries
- Many also suffer from trauma

Slide 7

What are common causes of TBI?

- Motor vehicle accidents
- Assaults
- Sports-related accidents
- Falls
- **Explosions**

Slide 8

What are the injuries?

Most Common Primary Injuries:

- Subdural hemorrhage
- Contusion
- Diffuse axonal injury

Most Common Secondary Injuries:

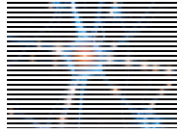
- Excitotoxicity
- Edema
- Ischemia



Slide 9

Blast Related Traumatic Brain Injury: What is Known?

- Prevalence of blast injuries
- What is known, not known regarding mechanisms



(from Taber, Warden & Hurley, J. Neurop. Clin. Neurosc. 2006)

Slide 10

Prevalence of Blast Injuries

- 88% of military personnel treated at medical unit in Iraq had been injured by an explosive device or mortar
- 47% of these injuries involved the head
- 97% of injuries to a Marine unit in Iraq were due to explosions---53% involved the head.

Slide 11

Types of Blast Injuries

- Primary injuries occur as a result of blast wave-induced changes in atmospheric pressure
- Secondary injuries occur from objects put in motion by the blast hitting people
- Tertiary injuries occur from people being put into motion by the blast

Slide 12

How does Primary Blast Injury Occur?

- Shear and stress waves could potentially directly injure the brain
 - Concussion, hemorrhage, edema, diffuse axonal injury; formation of gas emboli leading to infarction
 - Evidence is limited. The commonly used neuro-pathological marker for TBI (focal axonal swelling) may seriously underestimate the magnitude of the injury
 - The vulnerability of the human brain to primary blast injury is controversial and an area of active research

Slide 13

Severity of TBI

Mild:

Altered/loss of consciousness <30 minutes
Post traumatic amnesia < 24 hours

Moderate:

Altered/loss of consciousness <6 hours
Post traumatic amnesia < 7 days

Severe:

Altered/loss of consciousness >6 hours
Post traumatic amnesia > 7 days

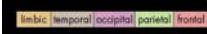


Slide 14

Intro to the Brain – Divisions

Slide 15

Intro to the Brain – Divisions



limbic | temporal | occipital | parietal | frontal

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Slide 16

Intro to the Brain – Functions

Left Hemisphere



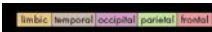
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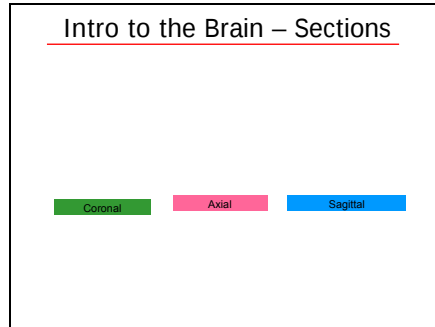
Intro to the Brain – Functions (cont.)

Right Hemisphere

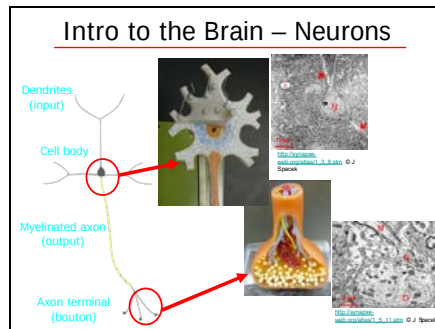


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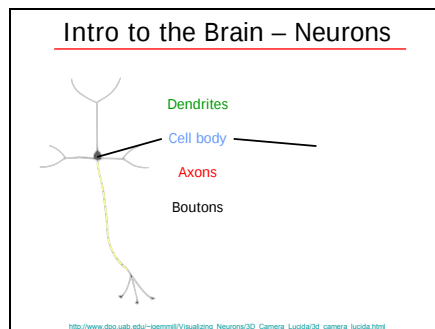
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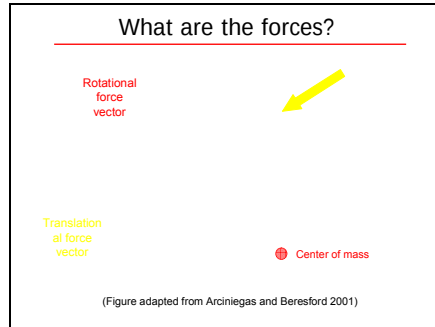
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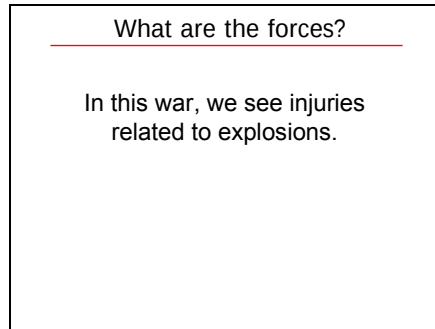
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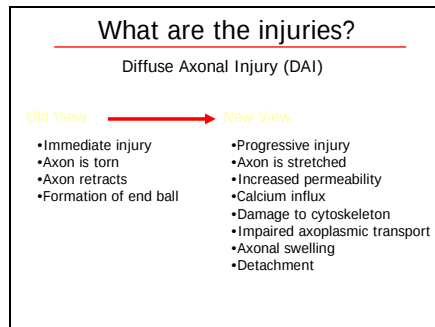
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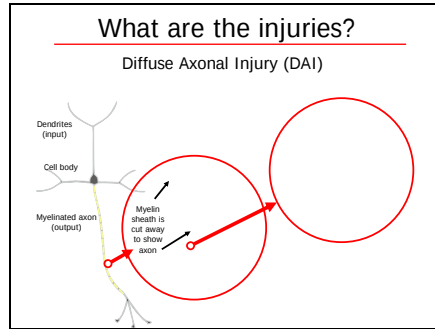
Slide 22



Slide 23



Slide 24



Slide 25

Mild TBI - Challenges

Diagnosis

- Neuroimaging
- Neurobehavioral testing
- Self-report

A small illustration shows a person's hand on a computer keyboard. A semi-transparent brain scan image is overlaid on the screen, showing internal structures.

Slide 26

Mild TBI - Challenges

Slide 27

Mild TBI - Challenges

PTSD and TBI: Common symptoms

- Decreased concentration
- Agitation/irritability
- Insomnia
- Social isolation/detachment
- Impaired memory
- Affect and Mood disturbances

Slide 28

What are the injuries?

Diffuse Axonal Injury (DAI)

Old View	→	New View
• Immediate injury • Axon is torn • Axon retracts • Formation of end ball		• Progressive injury • Axon is stretched • Increased permeability • Calcium influx • Damage to cytoskeleton • Impaired axoplasmic transport • Axonal swelling • Detachment

Slide 29

What we don't know....

- Is combat-related injury similar to or different from civilian TBI?
- When are the deficits permanent?
- Is there change in judgment/skill after mild combat-related TBI? If so, for how long?
- Can we use the sports-related TBI literature as a guide?
- What are the best assessment strategies/tools for the immediate and long-term evaluation?
- What are the best acute and longer term treatment protocols?
- What is the prognosis?

Slide 30

Adjustment Issues

(Schmitter & Edgecombe, 2007)

- Disability from injury happens suddenly and traumatically
- Person can often remember how they were before the brain injury and this can bring on many emotional and social changes
- Person's, spouse, family and friends can also recall what the person was like before the injury and may have trouble changing or adjusting their expectations of the brain

Slide 31

It's Complicated!

- No two injuries are exactly the same
- The effects of brain injury are complex and can vary greatly from person to person
- There is no set formula for treatment or the accommodations needed for the person with brain injury
- Injured persons may show marked discrepancy in their abilities
- The effects of brain injury depend on such factors as cause, location, and severity

Slide 32

Other common problems that often accompany TBI?

- Drinking or drug problems
- Feelings of hopelessness, shame, or despair
- Employment problems
- Relationships problems including divorce and violence
- Physical symptoms
- Trauma

Slide 33

Treatment of TBI: How can Medications Help?

Slide 34

Pharmacotherapy Options for TBI

- Antipsychotics
- Antidepressants
- Anticonvulsants
- Buspirone
- Stimulants
- Cholinergics
- Beta Blockers

Slide 35

Role of Antipsychotics in TBI

- Treatment of hallucinations and delusions.
- Management of aggression and agitation resulting from hallucinations and delusions.

Slide 36

Role of Antidepressants in TBI

- Treatment of depression
- Treatment of Anxiety
- Treatment of emotional lability (mood swings)
- Management of aggression and agitation in TBI patients with an underlying depression or anxiety disorder

Note: SSRIs are the preferred treatment for depression after TBI because of their mild side effect profile!

Slide 37

Role of Anticonvulsants in TBI

- Treatment of posttraumatic seizures in patients with TBI
- Management of aggression and agitation in TBI patients with an underlying depression or anxiety disorder

Note: All anticonvulsants produce some cognitive impairment at therapeutic doses; Gabapentin and Lamotrigine may do so less!

Slide 38

Buspirone for Aggression in TBI

- Onset of effects may take several weeks
- Side effects are dizziness, nausea, light-headedness

Slide 39

Role of Stimulants in TBI

- Treatment of diminished motivation and fatigue
- May improve neuronal recovery after brain injury
- Improve affective continence
- Increase arousal

Slide 40

Role of Beta Blockers in TBI

- Propranolol has been reported to reduce the intensity of aggressive episodes in patients with severe TBI
- Major side effects include decreased blood pressure and heart rate, rarely may lead to depression

Slide 41

General Principles of Pharmacotherapy for TBI

- Start low go slow
- Adequate therapeutic trial
- Continuous reassessment
- Monitor drug-drug interactions
- Include counseling for the caregiver and acknowledge the client

Slide 42

What is MFG and how could it help
veterans and families affected by TBI?

Deborah Perlick, Ph.D.
Kristy Straits-Troster, Ph.D.
Anna Kline, Ph.D.

Slide 43

What is MFG for TBI?

MFG provides:

- Education about TBI and related issues, such as PTSD, depression and general readjustment
- Support for affected veterans and families
- Practical problem-solving approach to management of TBI and related conditions
- MFG happens in a Multi-Family Group format

Slide 44

Multi-Family Group Format

- Two half-day educational workshops at the beginning of the program.
- Ongoing support and problem solving experiences, provided in bi-weekly group meetings.
- Groups meet for 9 to 12 months.

Slide 45

Multi-Family Group Content

- Education is provided about the biological nature of TBI and management of related conditions
- Survivors of TBI and their families are assisted in improving coping, problem-solving skills, and communication
- Family educators are partners in management of TBI, associated problems and goal setting

Slide 46

Phases of MFG

- Joining: two or three sessions with individual TBI survivors and families.
- Educational Workshop: Two half-day educational workshops with all the TBI survivors and families.
- Multi-Family Group Meetings: once every two weeks for 9 to 12 months, with all the TBI survivors and families. Group meetings are led by the family clinicians. Group meetings provide education, support, practical guidelines and solutions to everyday problems.

Slide 47

What is the role of MFG clinician?

- Work collaboratively with clients and families.
- Assume the role of educator, family partner, and trainer-coach.
- Teach families and clients to use the problem-solving method to deal with injury-related behaviors.

Slide 48

Why participate in MFG for Traumatic Brain Injury?

- Survivors of TBI and their families need education and support for major lifestyle changes.
- The recovery of TBI survivors is greatly affected by their families.
- Many survivors of TBI and their families would benefit by obtaining more information about day to day management of TBI-related conditions

Slide 49

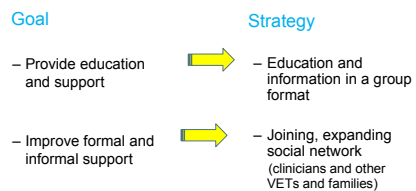
Why Participate in MFG for Traumatic Brain Injury?

- Learning in a multi-family group format provides an opportunity to learn from others
- Families report that the multi-family group format reduces their feelings of isolation by connecting with other families and professionals with expertise in this area

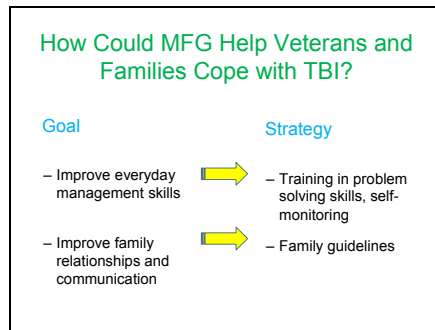


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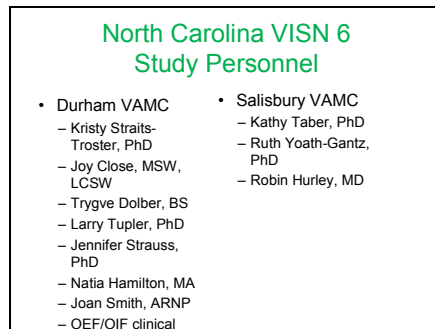
How could MFG help Veterans and Families Cope with TBI?



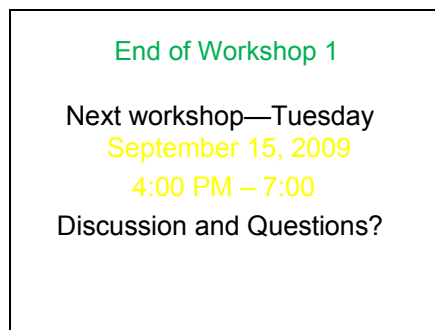
Slide 51



Slide 52



Slide 53



Workshop – Durham (Part II)

Slide 1

Multi - Family Group Educational Workshop For Veterans with Traumatic Brain Injury and Their Family Members

Workshop #2
Durham VAMC

Slide 2

Educational Workshop Agenda

- 4:00 PM – 4:20 Welcome, Light Dinner and Informal Interaction
- 4:20 PM – 4:30 Review--Why Participate in MFG?
- 4:30 PM – 4:45 What is the Evidence for MFG interventions and outcomes?
- 4:45 PM – 5:15 Family Adjustment Issues
- 5:15 PM – 5:25 Break
- 5:25 PM – 6:00 Family Guidelines
- 6:00 PM – 6:15 Structure of Multi Family Group Education and Problem Solving Meetings
- 6:15 PM – 6:30 Discussion, Closing

Slide 3

Why Participate in MFG for TBI?

- Survivors of TBI and their families need education and support for major lifestyle changes.
- The recovery of TBI survivors is greatly affected by their families.
- Many survivors of TBI and their families would benefit by obtaining more information about day to day management of TBI-related conditions.

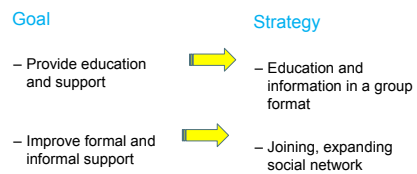
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Why Participate in MFG for TBI?

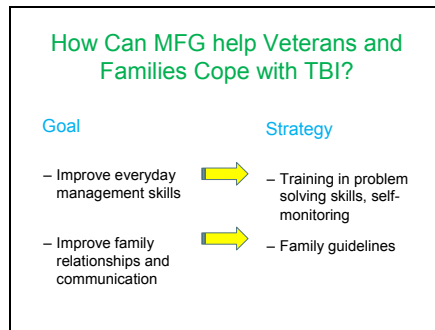
- Learning in a multi-family group format provides an opportunity to learn from others.
- Families report that the multi-family group format reduces their feelings of isolation by connecting with other families and professionals with expertise in this area.

Slide 5

How Can MFG Help Veterans and Families Cope with TBI?



Slide 6



Slide 7

MFG works for other medical conditions!

- Preliminary evidence for improved outcomes with civilian TBI and spinal cord injury

Slide 8

The Spokane MFG Study for Civilian TBI and Spinal Cord Injury

- Unique Features:
 - Intervention development study
 - Pre versus Post Design
 - St. Luke's rehab
 - 27 survivors; 28 caregivers
 - MFG-trained clinicians
 - Outcomes of MFG for TBI, SCI
 - Outcomes for survivors & caregivers



(Becker & Dyck; NIDRR; H13352 2006)

Slide 9

Multiple-Family Group Treatment for TBI and Spinal Cord Injury: Intervention Development and Preliminary Outcomes

- Survivors reported a decrease in depressive symptoms and anger expression and an increase in life satisfaction
- Family caregivers reported a significant reduction in burden.
- Themes that emerged from qualitative analyses included:
 - Normalization of the care giving experience
 - Importance of socialization-improvement in a variety of coping skills
 - Education about the injuries

Rogers, M., Storde, A., Norell, D., Short, R., Becker, B., & Dyck, D.G.;

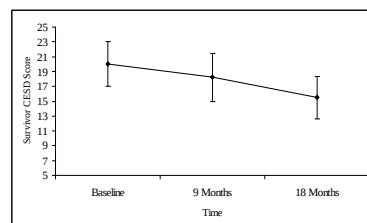
Slide 10

Demographics of Participants

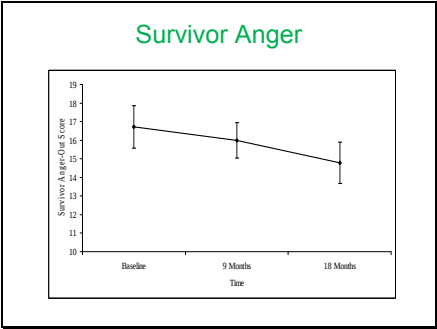
Variable	Survivor		Caregiver	
	Percent	Mean(SD)	Percent	Mean(SD)
Age		39.3 (11.3)		47.0 (11.1)
Duration of injury (years)		6.4 (10.7)		
Gender				
Male	77.8		14.3	
Ethnicity				
Caucasian	100		92.9	
Relationship to Survivor				
Spouse/Live in			60.7	
Parent			17.9	
All other			21.4	

Slide 11

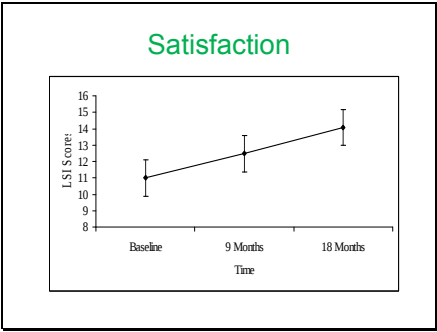
Depression



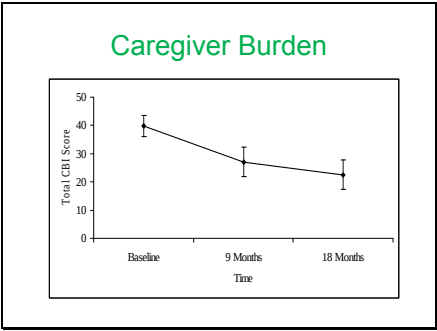
Slide 12



Slide 13



Slide 14



Slide 15

MFG Focus Group Highlights

- Learned to be a better listener
- Sessions gave participants a sense of friendship, support and bonding
- “Group gave me a sense of family that I had not felt for years”
- Presented a new perspective on injuries and caretaking responsibilities
- Gained a greater understanding of and compassion for the injured person and why he/she acts in certain ways

Slide 16

MFG Focus Group Highlights

Examples of solutions from the problem-solving sessions

- Better coping with the holidays
- Specific information on rehabilitation
- Learned to control temper
- Signed into a detox clinic
- Found a new doctor
- Re-established contact with children

Slide 17

Other Highlights

- Two survivors formed a strong friendship and business relationship
- One survivor gained confidence to take on leadership role at the Brain Injury Association

Slide 18

Informal Discussion

Slide 19

The Family and Adjustment

Typical and Normal Family Responses to This New Life



Slide 20

Common Family Responses: Loss, Grief, and Adjustment

- Denial
- Anxiety
- Fear
- Guilt
- Embarrassment
- Frustration
- Anger
- Sadness



Slide 21

Loss, Grief, and Adjustment

- Loss of cognitive functioning or functional limitations
- Changes or losses in physical functioning
- Emotional changes in mood
- Loss of freedom, autonomy, personal control



Slide 22

Consequences of Loss

- Long term condition can affect one's mental health
- Impact on social roles
- Occupational changes
- Impact on economic status
- Change of the vision of one's future, goals, values
- Affects one's self image, self esteem

Slide 23

Loss for Family Members

- Loss of some aspects of role as a spouse or mother or father or sibling as assume role as caregiver
- May experience physical, emotional challenges
- Experience similar emotional responses as the family member with the injury
 - Anger, frustration, impatience, sadness

Slide 24

Grief

- Denial
- Anger
- Bargaining
- Depression
- Acceptance

Slide 25

Adjustment

- We all have our own time tables for adjusting to this new life
- We all have our own set of coping behaviors to assist us with the adjustment
 - Some focus on the meaning of what happened
 - Some focus on taking action, building support, finding success
 - Some focus on feelings, release feelings and accept the situation
 - Use of a combination of coping behaviors

Slide 26

Coping

- Cope with loss and change.
- Realize that your feelings are a common, normal response to your experience.
- Recognize there is a natural tendency to worry and focus on what is not working, on the negative.
- Master the art of patience.

Slide 27

Coping with TBI

- Learn to focus on your accomplishments, strengths, and resources.
- Redefine the meaning of the injury, one's life.
- Think about the future you want and the best ways to get there.

Slide 28

Self Care for Family Members

- The injury affects the whole family.
- Family members need to learn and respect their own limits.
- Family members need to learn when to ask for help and where to get it.

Slide 29

Support Information

- MIRECC Post-Deployment Mental Health: www.mirecc.va.gov/visn6
- The Brain Injury Association of America: <http://www.biausa.org/Pages/home.html>
- Traumatic Brain Injury Resource Guide: <http://www.neuroskills.com>
- TBI Home Peer Support Website: <http://tbihome.org/>
- The Perspectives Network: <http://www.tbi.org/>
- Traumatic Brain Injury Central: <http://www.mssm.edu/tbinet>

Slide 30

Family Guidelines

to support the whole family



Slide 31

Structure The Environment For Success

- Avoid over-stimulation
- Create predictable routines
- Plan ahead – think things through
- Consider time of day
- Ready access to essential items (e.g., house keys)

Slide 32

Patience and More Patience

- Everything is slower and takes more time than before the injury.
- Basic everyday tasks that were done automatically before now take extra effort and time.
- Plan for it and expect it. That will decrease your frustration.
- Survivors should do as much as they are capable of doing for themselves.

Slide 33

It Doesn't Have To Be Pretty If It Works

- Many things are different than before the injury. This is a time to look at small successes and improvements.
- It is more important to modify a task than to have it done exactly the way it was before.
- Gaining independence is much more important to the survivor than doing something a certain way.

Slide 34

Don't Personalize Behaviors

- The behaviors that exist with brain injury are not specifically intended to irritate or upset others.
- The nature of the injury results in deficits that cause behaviors that can be irritating, such as a short term memory deficit.
- Survivors don't know that they keep asking a question over and over because their brain doesn't store the answer.

Slide 35

Get Help When You Need It

- This type of injury results in a roller coaster of emotional, financial and health concerns.
- No one can go through this type of experience without help on multiple fronts.
- Resources for help can include your physician, case manager, brain injury association, local mental health organizations, etc.

Slide 36

Get Out And Play

- For physical and emotional health, it helps to get out and have some fun and time for yourself.
- You can have fun together but you also need time away from each other.
- The TBI survivor may need support in establishing social circles and leisure activities.
- Prior to the injury, family members had a mix of together and alone time, which needs to be re-established.

Slide 37

Maintain Roles In The Family

- TBI may require shifts in familiar roles or routines.
- When a spouse or parent is the TBI survivor, it is not uncommon to have a child step into a role of responsibility.
- In the long run, TBI survivors who are parents need to function in the role of parent as much as possible.
- Everyone does better when the normal roles are re-established.

Slide 38

Go Slow

- Recovery takes time. Rest is important. Things will get better in their own time.

Give 'em Space

- Time out is important for everyone. It's okay to offer. It's okay to refuse.

Slide 39

Keep It Cool

- Enthusiasm is normal. Tone it down. Disagreement is normal. Tone it down too.

Keep It Simple

- Say what you have to say clearly, calmly, and positively.

Slide 40

Lower Expectations, Temporarily

- Compare month to month rather than year to year.
- Use your own personal yardstick by comparing yourself to yourself over time. Notice your own changes.
- Having realistic expectations which may be lower for a while will help you feel less stress.

Slide 41

Structure of The Multiple Family Group Problem solving meetings

Slide 42

Problem Solving MFG Meetings

Structure

- Initial Socializing 15 minutes
- Go Around 25 minutes
- Select a problem to work on 5 minutes
- Solving a problem 40 minutes
- Final Socializing 5 minutes

Slide 43

Initial Socializing

- 15 minutes of social conversation at the beginning and 5 minutes at the end of each session
- A time to network with others
- Opportunity to learn about other members lives
- Time of humor
- Content is kept light
- Small talk

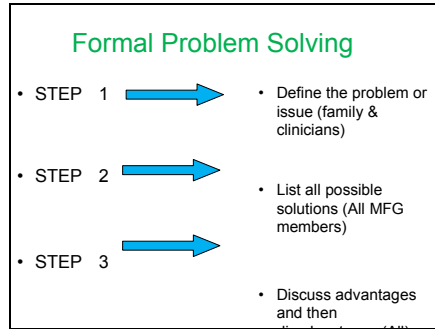
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Go Around

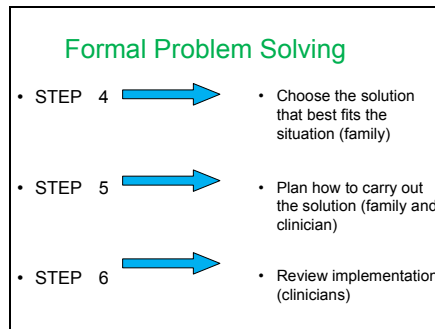
- Review the last couple of week's events
- What has been going well related to the family guidelines and in general
- What could be better related to the family guidelines and in general



Slide 45



Slide 46



Slide 47

Final Socializing

- We always end on a social and positive note



Slide 48

The Current Program, Wrap-Up, Q & A

Kristy Straits-Troster, PhD
Joy E. Close, LCSW
Trygve Dolber, BS
Natia Hamilton, B.A.

Slide 49

Multi-family group for Traumatic Brain Injury Survivors and their Families: the Current Project

P.I. Deborah Perlick, Coordinating Site P.I., Associate Director
for Family Intervention & Assessment, VISN 3 MIRECC;
Bronx, NY

Co-P.I. Kristy-Straits Troster, Durham NC Site

MFG Clinical training and supervision consultants:
Dennis Dyck and Diane Norell, Washington State University

Funded by Department of Defense, 2008

Slide 50

Aims

Overall aim of the program is to improve the health, mental health and quality of life for veterans with TBI and their families.

– Aim 1: To adapt MFG to address the needs of veterans with TBI and their family members.

– Aim 2: To evaluate the feasibility and efficacy of MFG for veterans with TBI and their family members.

Slide 51

Two Study Sites:

- James J. Peters VAMC, Bronx, NY
 - Poly-trauma network site for the NY/New Jersey Region; treats veterans from VISN 3; MIRECC
- Durham, VAMC; North Carolina
 - Mental health clinic for veterans returning from OIF/OEF; expertise in post-deployment, MI and TBI

Slide 52

Methods and Strategy

- Sample (n = 32 patients; and 32 family caregivers)
 - Patients inclusion and exclusion criteria
 - Family Caregiver inclusion and exclusion criteria
- Implementation
 - Adaptation of the MFG Treatment Manual
 - Therapist training and supervision plan
 - Treatment Implementation
- Operational Procedures
 - Recruitment
 - Diagnostic Assessment
- Project Assessment Plan
 - Quantitative (family, Veterans) at baseline, 0, 3, 6, 9 months post workshop)
 - Qualitative (post interviews with patients, family members, clinicians)

Slide 53

Questions??

Slide 54

Deciding On a Meeting Time

- When are we meeting?
- Where are we meeting?
- Who will be able to attend?
- How often are we meeting?
- What is the agenda for the next meeting?