

COLLECTIVE REVIEWS

CRITICAL INCIDENT STRESS MANAGEMENT (CISM): BENEFIT OR RISK FOR EMERGENCY SERVICES?

Bryan E. Bledsoe, DO, EMT-P

ABSTRACT

Background. Critical incident stress management (CISM) has become a common practice in modern emergency services. Described in 1983 as critical incident stress debriefing (CISD), CISM was originally marketed to help emergency personnel deal with ostensibly stressful situations they would encounter as a part of their work. **Objective.** To review the status of the medical and psychological literature regarding the efficacy and safety of CISM. **Methods.** Several pertinent databases were accessed and searched for scientific articles pertaining to CISM. These were subsequently analyzed for methodology and pertinence to the study topic. **Results.** Numerous scientific articles were found concerning CISM. Several high-quality studies were identified, but many other studies lacked adequate methodology sufficient for use in an evidence-based medicine approach. Others were from trade magazines, non-refereed journals, and obscure mental health journals. Several meta-analyses and randomized controlled trials (RCTs) were found. Overall, these studies show that, at best, CISM has no effect on preventing psychiatric sequelae following a traumatic event, particularly post-traumatic stress disorder (PTSD). Furthermore, several studies report possible paradoxical worsening of stress-related symptoms in patients and personnel receiving CISM. **Conclusions.** Despite the limitations of the existing literature base, several meta-analyses and RCTs found CISM to be ineffective in preventing PTSD. Several studies found possible iatrogenic worsening of stress-related symptoms in persons who received CISM. Because of this, CISM should be curtailed or utilized only with extreme caution in emergency services until additional high-quality studies can verify its effectiveness and provide mechanisms to limit paradoxical outcomes. It should never be a mandatory intervention. **Key words:** emergency med-

ical services; ambulances; mental health; post-traumatic stress disorder; critical incident stress management.

PREHOSPITAL EMERGENCY CARE 2003;7:272-279

Critical incident stress management (CISM) has become a common practice in emergency services. It was originally marketed to aid emergency services personnel in dealing with ostensibly stressful situations encountered as a part of their work. CISM was built around the use of critical incident stress debriefing (CISD) sessions that allow emergency personnel to openly discuss their feelings with peers and with mental health personnel. CISD was initially described by Mitchell in 1983¹ and has been subsequently modified and expanded by others to include the term "psychological debriefing" (PD) in describing the debriefing process.² The hypothesis behind debriefing is that the cognitive structure of the event, such as thoughts, feelings, memories, and behaviors, is modified through retelling the event and experiencing emotional release, and this serves to reduce distress and prevent the emergence of post-traumatic stress disorder (PTSD) and other psychiatric sequelae.³

The initial CISD model, described by Mitchell, consisted of a team made up of a "partnership of mental health professionals [master's degree or more in mental health] and peer support personnel. The major purposes of the CISD team [were] to prepare emergency personnel to manage their job-related stress and to assist emergency personnel who were experiencing the negative effects of stress after exposure to an unusually stressful event."⁴ Later, the goals of CISD were expanded to include: prevention of disorders that may develop as a result of traumatic stress, such as PTSD; to serve as a screening tool to identify personnel who should be referred for further treatment; to facilitate verbalization of experiences; to normalize reactions to stressful events; and to improve peer group support and cohesion.⁵⁻⁷ The name of the process was changed to CISM, purportedly to reflect this more global approach.⁸

Received May 12, 2002, from the Department of Emergency Medicine, University of North Texas Health Sciences Center, Fort Worth, Texas. Revision received October 29, 2002; accepted for publication November 4, 2002.

Address correspondence and reprint requests to: Bryan E. Bledsoe, DO, 6420 Hayes Road, Midlothian, TX 76065-5235. e-mail: <bbledsoe@earthlink.net>.

Critical incident stress debriefing sessions were originally conceived as group sessions for professional “helpers,” such as firefighters, police officers, soldiers, and emergency medical services (EMS) personnel. They typically consist of a single session taking place 24–72 hours after critical incidents. In the Mitchell model, CISD sessions follow a specific method and structure consisting of seven phases:

1. *Introduction*—The CISD intervention team introduces members, explains the process, and sets expectations and ground rules.
2. *Fact*—Participants describe the traumatic event from their own perspective.
3. *Thought*—Participants describe their thoughts about the event.
4. *Reaction*—The most traumatic aspect of the crisis is identified for participants who wish to speak. Cathartic ventilation is allowed during this phase.
5. *Symptom*—Any symptoms of distress or psychological discord that the group wishes to share are identified.
6. *Teaching*—Facilitates a return to the cognitive domain by normalizing and “demedicalizing” the crisis reactions of the participants. In addition, basic personal stress management techniques are taught.
7. *Re-entry*—Provides closure to the CISD process remembering that the goal of CISD is to provide psychological closure to the crisis incident.⁹

Follow-up sessions may be prescribed as deemed necessary.^{4,8} Although CISD as originally described by Mitchell utilized group sessions, others have used individual sessions of PD. Mitchell has repeatedly endorsed this strategy, including the use of individual sessions or “one-on-one” interventions as elements of his programmed approach.^{4,9}

A controversy has developed in recent years regarding the effectiveness of CISM in decreasing psychiatric morbidity, most specifically PTSD.^{10,11} PTSD is an anxiety disorder that results from a patient’s experiencing or witnessing an unusually traumatic event and includes intrusive recollections of the event, distressing dreams, and similar signs and symptoms.¹²

The purpose of this study was to review the scientific literature pertaining to CISM interventions, specifically including CISD and/or PD, as preventative interventions.

METHODS

In order to find relevant English-language studies, the databases PubMed and Published International Literature on Traumatic Stress (PILOTS) were accessed using the following key words: “CISM,” “CISD,” “psychological debriefing,” and “Critical Incident Stress Management.” The PubMed search yielded 32 hits for “CISM,” 24 hits for “CISD,” 172 hits

for “psychological debriefing,” and 47 hits for “Critical Incident Stress Management.” The PILOTS search yielded 31 hits for “CISM,” 46 hits for “CISD,” 304 hits for “psychological debriefing,” and 64 hits for “Critical Incident Stress Management.” There were considerable duplications of citations between the two databases and between the key words employed. Only articles that appeared in peer-reviewed journals were selected. Of these, particular attention was paid to locating meta-analyses of randomized controlled trials (RCTs), RCTs, comparison studies, uncontrolled studies and case reports, and narrative reviews of the literature. Articles were then copied and evaluated for methodology and relevance to the study topics.

RESULTS

The number of articles that met all search criteria was limited. Despite the large number of hits, most articles were discussions of CISM methodologies and applications or other anecdotal reports, generally appearing in trade magazines and non-peer-reviewed journals. However, those articles that met the search criteria provided insight into the effectiveness of CISM.

Literature Review—Meta-Analyses of RCTs

Four articles provided meta-analysis of RCTs, with some also including controlled quasiexperimental studies. Van Emmerik and colleagues¹³ performed a meta-analysis of seven studies that specifically evaluated single-session debriefing performed within one month after a traumatic event. Five of the studies specifically evaluated CISD, and three evaluated non-CISD interventions (historical group debriefing, a 30-minute counseling session, and education); six of the studies reviewed utilized non-intervention controls. Non-CISD interventions and no intervention were found to have improved symptoms of PTSD, but CISD did not improve symptoms and may have retarded natural resolution for some. Furthermore, they found that CISD did not improve natural recovery with respect to other trauma-related disorders.

Rose and colleagues¹⁴ evaluated the effectiveness of brief PD in the management of psychological distress after trauma and the prevention of PTSD in a Cochrane Review. Their inclusion criteria included RCTs where single-session PD was provided within one month after a traumatic event. They found 11 trials that fulfilled their inclusion criteria and, based on their meta-analysis of these, reported that PD did not reduce psychological distress or prevent the onset of PTSD. They concluded that there was no current evidence that PD is a useful treatment for the prevention of PTSD.

Everly and colleagues¹⁵ performed a meta-analysis of eight studies. Their inclusion criteria were studies that “purported to assess CISM.” The authors con-

cluded that, "an extremely large effect size was revealed attesting to the power of the CISM to mitigate the symptoms of psychological distress." None of the eight studies in their meta-analysis were included in the meta-analyses of Van Emmerick and colleagues or Rose and colleagues. Because of this, the source literature in their meta-analysis was specifically reviewed.

Five of the articles were by Flannery and colleagues and detailed an Assaulted Staff Action Program (ASAP) instituted at state psychiatric hospitals in Massachusetts. The ASAP program was designed to assist mental health facility staff that were either physically or sexually assaulted by patients. In four of these articles, there was no mention of CISM or CISD as a component;¹⁶⁻¹⁹ only in the most recent article did Flannery et al. describe the ASAP program as employing a CISD component.¹⁹

Flannery et al. reported a decrease in the number of patient assaults as the dependent variable in assessing program effectiveness. The specific objective of CISM, however, is the mitigation of stress symptoms and prevention of PTSD. Thus, the dependent variable in these studies provides no pertinent information regarding the efficacy of the intervention set with respect to the objectives of CISM. The relationship between these studies and CISM appears, at best, loose.

Another study in their meta-analysis (by Busuttill et al.²⁰) examined the efficacy of the Royal Air Force Wroughton Posttraumatic Stress Disorder (PTSD) rehabilitation program. This study evaluated the effectiveness of PD in the treatment of patients who had been diagnosed as having PTSD. CISM is reportedly designed to prevent PTSD and, by definition, is not a treatment.⁸ Furthermore, CISM is nowhere mentioned in the article or discussion, and the only reference to CISM in the endnotes cites an article in a non-refereed trade magazine related to educating personnel about stress.¹

Yet another article included in the meta-analysis (Mitchell and colleagues²¹) describes CISM employed as a treatment for 18 rescuers more than three years after a tornado touched down in the town of Coldenham, New York. Of these 18 rescuers, all reportedly had symptoms of PTSD, but had previously refused psychotherapy. Because of persistent problems, CISM was provided 42 months post-impact with reported decreases in PTSD symptoms. First, the severity of PTSD symptoms in this group was extremely high and their persistence chronic. More significantly, CISM was used as a treatment modality rather than a preventive measure. The impact of CISM-styled intervention three years after an event holds little direct relationship to application of CISM immediately following exposure and says nothing regarding its efficacy as a preventive measure when so applied. Small sample size, lack of a control group,

varying definitions of PTSD, and lack of independent assessment of outcomes render the findings difficult to interpret, even with respect to contribution as a treatment modality in chronic PTSD.

The remaining paper in the meta-analysis was not published and thus could not be reviewed for internal validity and integrity.

Everly and Boyle reported another meta-analysis that relied on five studies not included in the meta-analyses previously described. All of those studies were comparison or case studies with small sample sizes; none involved randomization. Four of these studies reportedly evaluated CISD within one month of the critical incident; one study involved using CISD for survivors of Hurricane Iniki six and nine months after the event. The authors concluded that this meta-analysis showed the CISD model of psychological debriefing to be an effective crisis intervention.

Literature Review—RCTs

The Federal Emergency Management Agency (FEMA) commissioned a three-year study on the effectiveness of CISD as an early intervention for traumatic stress in firefighters.²³ These findings were summarized and published in a peer-reviewed journal.²⁴ Thorough assessments were made of 660 firefighters exposed to a critical event; of these, 264 had attended one or more CISM sessions (predominantly based on the Mitchell model of CISM). Standard objective psychological measures found a weak inverse relationship with negative affectivity and a weak positive correlation with positive world assumptions. No relationship was found between debriefing and PTSD.

Hobbs and colleagues²⁵ performed an RCT of 106 road accident victims who received early debriefing (within 24-48 hours of the accident). They found that, while psychiatric morbidity was substantial four months after the accident, there was no evidence that debriefing helped. They further reported indications that debriefing might have been disadvantageous. In a three-year follow-up of the same study group,²⁶ they were able to replicate their earlier findings, reporting particularly strong indications of paradoxical outcome for debriefed patients. They concluded that debriefing had no benefit and may have made the patient worse and entered an explicit conclusion that debriefing was "not an appropriate treatment for trauma victims."

Rose and colleagues²⁷ studied 157 victims of violent crime who were randomly assigned either to an educational group, to a PD (based loosely on Mitchell's protocol) plus educational group, or to an assessment-only group. Follow-up was attained at six months and 11 months. They found no evidence to support the efficacy of brief one-session interventions for preventing PTSD.

Similar results were found when victims of acute burn trauma were studied. In an RCT involving 123 adult burn trauma victims, Bisson and colleagues²⁸

found that 16 (26%) of the group who received PD had PTSD at 13-month follow-up, while only four (9%) of the control group had PTSD. They concluded that limited post-trauma PD should be seriously questioned.

Several of these studies have shown paradoxical worsening of stress symptoms in the intervention group with various forms of PD. Hobbs et al. found that, at four months post-accident, levels of anxiety and somatization had declined more in the non-treatment group, while levels of hostility and psychiatric symptoms had actually risen in the treatment group.²⁵ In the same study group, three years post-accident, patients in the treatment group had marginally more severe psychiatric symptoms, had more severe pain, had recovered less well, reported more impaired functioning, and had greater financial problems as a result of the accident.²⁶ At 13 months following their burn injuries, Bisson et al. found worse scores of anxiety, depression, and PTSD in the treatment group compared with the control group.²⁸

Literature Review—Comparison Studies

Carlier et al.²⁹ studied 243 traumatized police officers in the Netherlands. Officers were assigned to a debriefing group or to one of two control groups. Randomization was not possible, as police rules required that all traumatized officers be offered debriefing. Pre-tests and post-tests were administered. No differences in psychological morbidity were found between the groups at pre-test, at 24 hours, or at six months post-trauma. At one week post-trauma, they found that debriefed subjects exhibited significantly more PTSD symptoms than non-debriefed subjects. These findings were consistent with their earlier study of debriefing for police officers³⁰ where comparison of 46 debriefed and 59 non-debriefed officers found no differences at eight months post-exposure, but significantly more disaster-related hyperarousal symptoms at 18 months post event.

Macnab and colleagues³¹ evaluated the effectiveness of CISD (following the Mitchell model) provided for paramedics, physicians, and nurses following an air ambulance crash with five fatalities in British Columbia in 1995. At six months following the accident an empirically designed questionnaire was mailed to all transport paramedics, to all directly involved medical staff, and to a random sample of nurses and paramedics from the province. Twenty-four months following the accident, all members completed an Impact of Event Scale (IES)³² and a general health questionnaire. They found that CISD did not appear to affect the severity of stress symptoms. They also found that those who had pre-existing stress management routines appeared to have less severe symptoms at six months.

Deahl et al.³³ studied the effects of brief counseling and PD following traumatic events sustained by

British soldiers in the Gulf War. They particularly studied soldiers who were assigned to the Army War Graves Service (AWGS), whose responsibilities included recovery and identification of bodies for burial. Following the experience, the soldiers were provided varying degrees of PD. They found that PD did not appear to reduce subsequent psychiatric morbidity.

Similar results were found in a Norwegian study. Hytten and Hasle³⁴ studied 115 firefighters involved in a major hotel fire that 47% described as the “worst experience they ever had.” Of these firefighters, 39 underwent formal debriefing. The results showed no significant difference on the IES between the group who was debriefed and the group who simply talked to their colleagues. In addition, they found that, in spite of an extreme stress situation, the frequency of disturbing stress reactions following the event was low.

Literature Review—Uncontrolled Studies and Case Reports

In an Israeli study of 15 non-injured women exposed to a terrorist attack, all were provided group debriefing with brief group psychotherapy in six meetings during the first two months following the critical event. They found that PD did not bring substantial relief of the suffering of terrorist attack victims.³⁵

Literature Review—Narrative Reviews

Greenburg³⁶ performed a narrative review of various studies related to psychological debriefing and CISD with particular emphasis on how it impacted the British Royal Navy and Royal Marines. He concluded that, “Psychological debriefing cannot be considered safe and thus it should not be routinely used.”

Arendt and Elklit³⁷ performed a narrative review of 25 studies pertaining to PD and found that no preventive effect of PD could be demonstrated, although people are generally very satisfied with the PD experience.

Bisson and Deahl¹⁰ performed a narrative review of uncontrolled, comparison, and controlled studies pertaining to PD. They concluded that most of the studies they evaluated were methodologically flawed. They called for additional quality studies regarding the effectiveness of PD. They concluded that, “At present the hypothesis that PD decreases psychological sequelae has not been adequately tested.”

DISCUSSION

There appears to be an increasing breach between the practice and the science of the discipline in respect to the practice of CISM/CISD/PD. Most reports of the effectiveness of this therapy were anecdotal. Many of the scientific studies suffer from serious methodological errors, including: absence of control group, non-prospective design, small sample sizes, absence of randomization, lack of uniformity for PD, sampling

bias, and other deficits.¹⁰ Although numerous, often-quoted articles abound concerning debriefing, few have been able to meet the standards of an evidence-based medicine (EBM) approach. Overall, studies have been weak and contain significant methodological flaws.

The initial studies referenced by Mitchell and Everly,⁴ and later detailed,³⁸ are difficult to evaluate as most are from trade and non-refereed journals, obscure mental health journals, or self-published treatises of their work. Fullerton and colleagues stated, "Reports cited in a meta-analysis by Everly, Boyle and Lating; and Everly and Boyle, are not representative outcome studies."³ Critics have noted that many of the articles supportive of the process are published in the *International Journal of Emergency Mental Health*, which is edited by Everly and published by Chevron Publishing Corporation. Chevron Publishing Corporation is owned by Mitchell and Everly and associated with the International Critical Incident Stress Foundation, Incorporated (ICISF),³⁹ and is also the source of several texts frequently cited to anchor CISM constructs and claims.^{7,9} Mitchell is the President, and Everly the co-founder and "Chairman Emeritus" of the ICISF, a tax-exempt, non-profit corporation chartered in the State of Maryland. The principal activities of this organization are reportedly the marketing of CISM training, workshops, and seminars, and the provision of speakers for the promotion of CISD.⁴⁰

Questionable claims, dubious marketing practices, and misrepresentation of the empirical standing of the technique have been recurrent issues regarding CISM and its proponents. A fairly detailed exchange concerning the use of CISM occurred in 1997 in a popular EMS trade magazine.^{38,39,41} Lohr et al. recently called CISD an example of pseudoscience in clinical psychology.⁴² Lipton and Everly⁴³ published a report of a "consensus panel" report, commissioned by the American Psychological Association, detailing the role and efficacy of CISM in caring for the mental health needs of EMS providers who treat children. In that paper, despite substantial scientific evidence to the contrary, they recommended the use of CISM for EMS workers who care for seriously ill or injured children. That article resulted in the submission of a letter to the editor from the Executive Director of the American Psychological Association (APA) that stated, "The meeting was not a research-based consensus conference. Furthermore, the conclusions and recommendations of the meeting do not represent policy positions of the APA."⁴⁴ Another such review, authored by Everly and Talley⁴⁵ under a Department of Health and Human Services "Emergency Medical Services for Children" contract, also made supportive declarations regarding the utility and efficacy of CISM for providers of pediatric emergency services. However, after serious issues arose in respect to its scholarship

and conclusions, the APA subsequently withdrew that document.⁴⁶

Many organizations are now seriously re-examining the efficacy, and possible iatrogenic effects, of CISD/CISM. The National Institute of Mental Health (NIMH), in conjunction with the U.S. Department of Health and Human Services, the U.S. Department of Defense, the U.S. Department of Veterans Affairs, the U.S. Department of Justice, and the American Red Cross, held a workshop to reach consensus on best practices in evidenced-based early psychological intervention for victims/survivors of mass violence. In its report, following an exhaustive review of the world literature on the subject, that panel specifically did not recommend CISM, CISD, or PD as an early intervention practice.⁴⁷

The World Health Organization (WHO) stated, "Because of the possible negative effects, it is not advised to organize forms of single-session psychological debriefing that push persons to share their personal experiences beyond what they would normally share."⁴⁸

Following a systematic evidence-based review backed by an expert consensus panel, the British Health Service listed routine debriefing as a contraindicated procedure. They concluded, "Review of the best-designed studies suggests that routine 'debriefing' (a single session intervention soon after the traumatic event) is not helpful in preventing post-traumatic disorders."⁴⁹

The North Atlantic Treaty Organization (NATO)–Russia Advanced Research Workshop on Social and Psychological Consequences of Chemical, Biological, and Radiological Terrorism, convened to discuss the social and psychological implications of terrorism, similarly concluded, "There is still no consensus on the role, if any, of very acute interventions. CISD debriefing can no longer be recommended."⁵⁰

The New South Wales Health Department did not recommend CISD in the guidelines for the 2000 Olympic Games in Sydney, NSW, Australia. They concluded that, "There is no evidence that it [CISD] prevents PTSD or other psychological morbidity and it may make some people worse."⁵¹

Criticism of CISM/CISD is starting to come from within the various components of the CISM community. In 1998, the Australasian Critical Incident Stress Association (ACISA), in their "Guidelines for Good Practice for Emergency Responder Groups," stated, ". . . experience and systematic investigations have revealed a marked discrepancy between outcomes once presumed to be achievable (Mitchell, 1983; Mitchell and Everly, 1995) and those that can be reliably delivered (Rose and Bisson, 1998)".⁵²

One concern inadequately addressed in the literature regards the effect of CISD on peer workers. Vicariously reliving a traumatic event may induce

similar signs and symptoms in those who are helping with the CISD. In general, through years of training and experience, mental health professionals learn to isolate their feelings and emotions from their professional work. It would be a significant request to ask volunteer, non-mental health professional CISD providers to not become emotionally involved in the CISD process.

This also brings up the question of the role of non-mental health personnel in CISD. Patient confidentiality in mental health care is among the most sacrosanct in health care. It might well be considered a breach of this confidentiality to ask personnel to share thoughts and feelings with non-mental health personnel, although they are functioning in a pseudo-mental health role in the CISD process. Moreover, despite whatever assurances such "peer providers" might proffer, there is no basis in law or codified professional ethics to guarantee such assertions or enforce them in practice.

Initially, CISD was designed to aid "helpers" who were normal people with normal emotions and feelings following an unusually traumatic event. Later, it was expanded to prevent the development of PTSD. PTSD is a mental disorder that is not a normal result of exposure to even severe stressors. In many instances, underlying personality and psychiatric issues may predispose a patient to the development of PTSD. Perhaps mental health personnel would be most beneficial in determining which personnel may be at risk for development of abnormal responses to stress and to accordingly refer these patients to appropriate care.³ The incidence of PTSD in U.S. adults (ages 18–54 years) is about 3.6%. Estimates of the incidence of PTSD in Persian Gulf War veterans were reported to be up to 8%.⁵³ Thus, with a relatively low incidence of PTSD, why has CISM become so widespread?

Critical incident stress management is now commonly available to emergency personnel. In some services, personnel are required to attend CISD sessions, although they are not required to speak or participate. Many feel that CISD sessions replace the already functional collegial and supportive environment present in most emergency organizations when, in fact, forced discussion with outside personnel may inhibit personnel from discussing feelings they would be more comfortable discussing with colleagues they know and trust.³ After finding that PD did not bring substantial relief of the suffering to victims of a terrorist bombing in Israel, Amir and colleagues stated, "This raises serious questions concerning the provision of this service, which the community is quick to offer to its trauma victims, possibly meeting some social and political needs, but not necessarily meeting the needs of the victims."³⁵

There are several possible explanations for the lack of efficacy of CISD as well as for some of the iatrogenic

effects described in the literature. CISD may interfere with the natural recovery process inherent in normal individuals. The alternation of intrusion and avoidance characterizes normal psychological processing that follows a traumatic event and CISD may interfere with this normal alternation. In a broader sense, CISD might cause affected personnel to bypass their established personal support system (family, friends, coworkers, clergy), usually used for non-occupational-related crises, in favor of CISM. Furthermore, a certain amount of time appears necessary for an individual to process the psychological impact of exposure to a traumatic event. No external stimulus or program may be capable of shortening this time interval.¹³

Thus, what role should mental health play in modern emergency services? Several organizations and researchers have addressed this issue. Litz and colleagues⁵⁴ have recommended that competent mental health personnel provide "psychological first aid" to trauma survivors. This entails providing comfort, information, and support, and meeting people's immediate practical and emotional needs. In addition, information is provided that describes trauma, what to expect, and where to get help if needed. "Psychological first aid" is not a treatment, but a response to the acute need that arises in many to share the experience while respecting the wishes of those who do not wish to discuss what happened. They also recommend that competent mental health personnel be available following the critical incident to screen personnel who may be developing stress-related symptoms or PTSD. The NIMH supports the provision of "psychological first aid" to personnel exposed to a critical incident. They too recommend that competent mental health personnel be used to screen personnel for the development of stress-related symptoms and PTSD within two months after the critical event.⁴⁷

With increasing frequency, EMS personnel look to the system medical director and associated physicians for guidance in regard to occupational health and similar issues. It is for this reason that EMS medical directors, and those closely involved in EMS, should be familiar with the controversies, as well as the status of the medical literature, in regard to CISM/CISD. Current information indicates that such interventions should be seriously and very critically reviewed, and a number of independent researchers have concluded that they should be curtailed. If CISM or PD is to be offered, it should be provided only after express informed consent that reflects the current status of the scientific literature pertaining to the practice.

CONCLUSION

There is a limited amount of quality data pertaining to CISD/CISM/PD. The better studies, however, are certainly sufficient to raise doubts about the effectiveness

of CISD/CISM. Furthermore, some studies seem to indicate that CISD/CISM/PD may actually be harmful. Additional randomized controlled trials are needed to truly determine the efficacy of these practices. Because of possible iatrogenic injury, CISD/CISM/PD should be utilized with extreme caution, if at all, in emergency services until adequate, quality scientific research can verify its effectiveness or lack thereof.

The author acknowledges the assistance of Richard Gist, PhD, and Morag Harris, PhD, in preparation and review of the manuscript.

References

- Mitchell JT. When disaster strikes . . . the critical incident debriefing process. *J Emerg Med Serv.* 1983;8:36-9.
- Dyregrov A. The process of psychological debriefing. *J Traumatic Stress.* 1997;10:589-605.
- Fullerton CS, Ursano RJ, Vance K, Lemming W. Debriefing following trauma. *Psychiatr Q.* 2000;71:259-76.
- Mitchell JT, Bray GP. *Emergency Services Stress: Guidelines for Preserving the Health and Careers of Emergency Services Personnel.* Englewood Cliffs, NJ: Brady/Prentice Hall, 1990.
- Robinson RC, Mitchell JT. Evaluation of psychological debriefings. *J Traumatic Stress.* 1993;6:367-82.
- Everly GS, Flannery RB, Mitchell JT. Critical incident stress management (CISM): a review of the literature. *Aggress Violent Behav.* 2000;5:23-40.
- Mitchell JT, Everly GS. *Critical Incident Stress Debriefing: An Operations Manual for CISD, Defusing and Other Group Crisis Interventions, Third Edition.* Ellicott City, MD: Chevron Publishing, 1997.
- Everly GS, Mitchell JT. The debriefing "controversy" and crisis intervention: a review of lexical and substantive issues. *Int J Emerg Mental Health.* 2000; 2:211-25.
- Everly GS, Mitchell JT. *Critical Incident Stress Management—CISM—A New Era and Standard of Care in Crisis Intervention, Second Edition.* Ellicott City, MD: Chevron Publishing, 1999.
- Bisson JL, Deahl MP. Psychological debriefing and prevention of post-traumatic stress: more research is needed. *Br J Psychiatry.* 1994;165:717-20.
- Raphael B, Meldrum L, McFarlane AC. Does debriefing after psychological trauma work? *Br Med J.* 1995;310:1479-81.
- American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR).* Washington, DC: American Psychiatric Press, 2000.
- van Emmerik AAP, Kamphuis JH, Hulsbosch AM, Emmelkamp PMG. Single-session debriefing after psychological trauma: a meta-analysis. *Lancet.* 2002;360:766-71.
- Rose R, Bisson J, Wessley S. Psychological debriefing for preventing post traumatic stress disorder (PTSD) (Cochrane Review). *The Cochrane Library.* 2002;4.
- Everly GS, Flannery RB, Eyler VA. Critical incident stress management (CISM): a statistical review of the literature. *Psychiatr Q.* 2002;73:171-82.
- Flannery RB, Hanson MA, Penk WE, Goldfinger S, Pastva GJ, Navon MA. Replicated declines in assault rates after implementation of the Assaulted Action Plan. *Psychiatr Serv.* 1998; 49: 241-3.
- Flannery RB, Hanson MA, Penk W, Flannery CJ, Gallagher C. The Assaulted Staff Action Program: an approach to coping with the aftermath of violence in the workplace. In: Murphy L, Hurrell R, Sauter S, Keita G (eds). *Job Stress Intervention.* Washington, DC: American Psychological Association, 1995, pp 189-212.
- Flannery RB, Penk W, Corrigan M. Assaulted Staff Action Program (ASAP) and declines in the prevalence of assaults: community-based replication. *Int J Emerg Mental Health.* 1999; 1:19-22.
- Flannery RB, Anderson E, Marks L, Uzoma L. The Assaulted Staff Action Program and declines in the rates of assaults: mixed replicated findings. *Psychiatr Q.* 2000; 71:165-75.
- Busuttill W, Turnbull GJ, Neal LA, et al. Incorporating psychological debriefing techniques with a brief group psychotherapy programme for the treatment of post-traumatic stress disorder. *Br J Psychiatry.* 1995;167:495-502.
- Mitchell JT, Schiller G, Eyler VA, Everly GS. Community crisis intervention: the Coldenham tragedy revisited. *Int J Emerg Mental Health.* 1999;1:227-36.
- Everly GS, Boyle SH. Critical incident stress debriefing (CISD): a meta-analysis. *Int J Emerg Mental Health.* 1999;3:165-8.
- Harris MB, Stacks JS. A three-year five state study on the relationships between critical incident stress debriefings, firefighters' disposition, and stress reactions. USFA-FEMA CISM Research Project. Commerce, TX: Texas A&M University—Commerce, 1998.
- Harris MB, Baloglu M, Stacks JR. Mental health of trauma-exposed firefighters and critical incident stress debriefing. *J Loss Trauma.* 2002;7:223-38.
- Hobbs M, Mayou R, Harrelson B, Worlock P. A randomized controlled trial of psychological debriefing for victims of road traffic accidents. *Br Med J.* 1996;313:1438-9.
- Mayou RA, Ehlers A, Hobbs M. Psychological debriefing for road traffic accident victims: three-year follow-up of a randomized controlled trial. *Br J Psychiatry.* 2000;176:589-93.
- Rose S, Brewin CR, Andrews B, Lirk M. A randomized controlled trial of individual psychological debriefing for victims of violent crime. *Psychol Med.* 1999;29:793-9.
- Bisson JL, Jenkins PL, Alexander J, Bannister C. Randomised controlled trial of psychological debriefing for victims of acute burn trauma. *Br J Psychiatry.* 1997;171:78-81.
- Carlier IVE, Voerman AE, Gersons BPR. The influence of occupational debriefing on post-traumatic stress symptomatology in traumatized police officers. *Br J Med Psychol.* 2000;73:87-98.
- Carlier IVE, Lamberts RD, van Ulchelen AJ, Gersons BPR. Disaster-related post-traumatic stress in police officers: a field study of the impact of debriefing. *Stress Med.* 1998;14:143-8.
- Macnab AJ, Russel JA, Lowe JP, Gagnon F. Critical incident stress intervention after loss of an air ambulance: two-year follow-up. *Prehosp Disaster Med.* 1999;14(1):8-12.
- Horowitz MJ, Wilner N, Alvarez W. The Impact of Event Scale: a measure of subjective stress. *Psychosom Med.* 1979;41:209-18.
- Deahl MP, Gillham AB, Thomas J et al. Psychological sequelae following the Gulf War: factors associated with subsequent morbidity and the effectiveness of psychological debriefing. *Br J Psychiatry.* 1994;165:60-5.
- Hytten K, Hasle A. Fire fighters: a study of stress and coping. *Acta Psychiatr Scand.* 1989;80:50-6.
- Amir M, Weil G, Kaplan Z, Tocker T, Witzum E. Debriefing with brief group psychotherapy in a homogenous group of non-injured victims of a terrorist attack: a prospective study. *Acta Psychiatr Scand.* 1998;98:237-4.
- Greenburg N. A critical review of psychological debriefing: the management of psychological health after traumatic experiences. *J R Nav Med Serv.* 2001;87:158-61.
- Arendt A, Elklit A. Effectiveness of psychological debriefing. *Acta Psychiatr Scand.* 2001;104:423-37.
- Mitchell JT, Everly GS. The scientific evidence for critical incident stress management. *J Emerg Med Serv.* 1997;22(1):86-93.
- Ostrow LS. Critical incident stress management: is it worth it? *J Emerg Med Serv.* 1996;21(8):28-36.
- International Critical Incident Stress Foundation, Inc. Internal Revenue Service Form 990 (Return of Organization Exempt

- from Income Tax) 2000. Available at: <http://63.136.234.78/2000/521/676/2000-521676953-1-9.pdf>. Accessed Feb 2003.
41. Gist R, Lohr J, Kenardy J, et al. Researchers speak out on CISM. *J Emerg Med Serv.* 1997;22(5):27-8.
 42. Lohr JM, Fowler KA, Lilienfeld SO. The dissemination and promotion of pseudoscience in clinical psychology: the challenge to legitimate clinical science. *Clin Psychol.* 2002;55(3):4-10.
 43. Lipton H, Everly GS. Mental health needs for providers of emergency medical services for children (EMSC): a report of a consensus panel. *Prehosp Emerg Care.* 2002;6:15-21.
 44. Fowler RD. The American Psychological Association meeting [letter]. *Prehosp Emerg Care.* 2002;6:492.
 45. Everly GS, Talley AL (eds). United States Department of Health and Human Services; Health Resources and Services Administration, Maternal and Child Health Bureau; National Highway Safety Administration; American Psychological Association. *Helping the EMS Professional: The Stress of Providing Emergency Medical Services for Children.* Washington, DC: American Psychological Association, 2001.
 46. Personal communication. Jacqueline Hall Gentry, PhD, American Psychological Association, 2002.
 47. National Institute of Mental Health. *Mental Health and Mass Violence: Evidence-Based Early Psychological Intervention for Victims/Survivors of Mass Violence. A Workshop to Reach Consensus on Best Practices.* NIH Publication No. 02-5138, Washington, DC: U.S. Government Printing Office, 2002. Available at: <http://www.nimh.nih.gov/research/massviolence.pdf>. Accessed Feb 2003.
 48. World Health Organization. *Mental Health in Emergencies: Mental and Social Aspects of Health of Populations Exposed to Extreme Stressors.* Geneva: World Health Organization, 2003. Available at: http://www5.who.int/mental_health/download.cfm?id=0000000640. Accessed Feb 2003.
 49. Parry G (Chair, Development Group). *Treatment Choice in Psychological Therapies and Counselling.* Department of Health, National Health Service, United Kingdom. Available at <http://www.doh.gov.uk/mentalhealth/treatmentguideline/treatment.pdf>. Accessed Feb 2003.
 50. North Atlantic Treaty Organization. *North Atlantic Treaty Organization (NATO)-Russia Advanced Research Workshop on Social and Psychological Consequences of Chemical, Biological, and Radiological Terrorism.* Available at: <http://www.nato.int/science/e/020325-arw2.htm>. Accessed Feb 2003.
 51. New South Wales Health Department. *Disaster Mental Health Response Handbook: An Educational Resource for Mental Health Professionals Involved in Disaster Management.* NSW Health Department, Sydney, NSW, 2000. Available at <http://www.nswiop.nsw.edu.au>. Accessed Feb 2003.
 52. Australasian Critical Incident Stress Association. *Guidelines for Good Practice for Emergency Responder Groups in Relation to Early Intervention after Trauma and Critical Incidents (Glenelg Declaration), 1999.* Available at <http://www.ctsn-rcst.ca/glenelg.html>. Accessed Feb 2003.
 53. National Institute of Mental Health. *Facts about Post-Traumatic Stress Disorder.* Bethesda, MD. Available at: <http://www.nih.gov/anxiety/ptsdfacts.cfm>. Accessed Nov 2002.
 54. Litz BT, Gray MJ, Bryant RA, Adler AB. Early intervention for trauma: current status and future directions. *Clin Psychol Sci Pract.* 2002;9:112-34.