Chapter 13
Working with Combat-Injured Families Through the Recovery Trajectory

Stephen J. Cozza and Jennifer M. Guimond

Abstract Combat injury can profoundly affect the children and families of service members. The range of experiences for these families varies depending the specific injury type, severity, and recovery trajectory; composition of the family; developmental age of the children; preexisting parent, child, or family characteristics; as well as the longer-term functional impact on the injured parent. Following the injury children and adolescents may display distress, emotional or behavioral problems, risk-taking behaviors, increased helpfulness within the family, or motivation to participate in community service. The impact on children is influenced by the capacity of both the injured and noninjured parents to cope effectively, maintain effective parenting, and help the child adjust to changes in family relationships and circumstances. Interventions with combat-injured families should focus on reducing distress, supporting healthy child and parent functioning, and encouraging constructive communication within families and with service providers about the injury.

Introduction

By January 2010, over 35,000 soldiers, sailors, marines and airmen were injured in Operations Iraqi Freedom and Enduring Freedom (U.S. Department of Defense, 2010). Forty-three percent of U.S. military service members have children, averaging approximately two children per parent (U.S. Department of Defense, 2007), suggesting that over 30,000 military children have been affected by parental combat related injuries. It is likely that many other children have been affected by the injury of their service member siblings, cousins, or other close relatives or family friends, as well.

The range of combat injury family experience varies, depending upon the time from the original injury, the specific injury type and severity, the composition of the

S.J. Cozza (✉)
Center for the Study of Traumatic Stress, Department of Psychiatry Uniformed Services University of the Health Sciences, Bethesda, MD 20814
e-mail: scozza@usuhs.mil

S. MacDermid Wadsworth and D. Riggs (eds.), *Risk and Resilience in U.S. Military Families*, 259
DOI 10.1007/978-1-4419-7064-0_13,

family, the developmental age of the children, preexisting parent, child, or family characteristics, the course of required medical treatment, as well as the longer-term functional impact (if any) on the injured parent. Case reports have described the impact of combat injury on military children (Cohen et al., 2006; Cozza, Chun, & Miller, in press; Cozza, Chun, & Polo, 2005). The effects on families and on children in particular are complex. From the initial distress to longer-term injury adjustment challenges, children and families face difficult emotional and practical problems.

The injury recovery trajectory can be conceptualized within four phases: acute care, medical stabilization, transition to outpatient care, and long-term rehabilitation and recovery. During acute care, life-saving and life-sustaining medical interventions are provided in combat theater. Medical stabilization includes definitive tertiary medical/surgical care that prepares the service member to function or be cared for outside of a hospital environment. Transition to outpatient care begins prior to discharge, as follow-up care and ongoing rehabilitation is planned. Rehabilitation and recovery is the longer-term period in which service members continue to progress and learn to adapt to their injury and settle into their new lives. During this phase, families often must transition to new communities and engage new health-care providers.

The injury recovery trajectory may involve alternating periods of medical stability and instability when complications occur, recovery progress is limited, or additional treatments are needed (Halcomb & Davidson, 2005). For example, multiple reconstructive surgeries may be required or a limb that is not regaining function despite rehabilitation may be amputated at a later date. Continuity of care for combat injury may be complicated by multiple transitions in care facilities, resulting in changes in family living arrangements and disruptions in community connection (Chesnut et al., 1999). Since many war-related injuries are extensive, the care of patients can be time consuming, often requiring months to years of recurring hospital-based treatments, as well as outpatient rehabilitative services.

In short, the impact of these experiences over time on injured service member families and children is profound. This chapter reviews information about combat injury, its immediate and longer-term impact on families and children, and interventions that may assist the family in injury recovery.

Nature and Impact of Injuries on Service Members

The most common causes of physical injuries in the current OIF and OEF conflicts are blasts and improvised explosive devices (Owens et al., 2008). Combat injuries can include but are not limited to musculoskeletal injuries, spinal cord injuries, disfigurement, amputations, burns, and visual impairment. Service members may also suffer from “invisible” injuries, such as traumatic brain injury (TBI). In addition to moderate or severe TBI, scientists have voiced concern about the impact of milder forms of TBI that may not come to medical attention, but can result in symptoms, dysfunction or sense of ill health (Warden, 2006). When mild TBI is co-morbid

with other physical injuries, families may contend with a parent who exhibits cognitive or personality alterations as well as physical injury.

Serious physical injury may be compounded by development of co-morbid psychiatric problems (Zatzick et al., 2007). Longitudinal data suggest that combat-injured service members are at significant risk for developing complicating psychiatric problems such as PTSD and depression (Koren, Norman, Cohen, Berman, & Klein, 2005; MacGregor et al., 2009). Mental health symptoms may present a variable course, resolving or worsening during the first year after hospitalization. In one study, nearly 80% of those combat-injured service members who screened positive for either PTSD or depression at 7 months postinjury screened negative for both conditions at 1 month (Grieger et al., 2006), suggesting that the population's mental status likely changes throughout the recovery period. Assessment of mental health early in the medical stabilization period does not adequately predict psychological problems later in the recovery trajectory.

Impact of Parental Distress on Children

Parental emotional distress, whether related to parental mental or physical illness, has been shown to constitute an important risk for poor adjustment in children (Beardslee, 1984; Lester, Stein, & Bursch, 2003; Rutter, 1966). Stressful life events in the family are often associated with higher rates of mental health symptoms and negative outcomes for children (Beardslee & Wheelock, 1994; Coyne & Downey, 1991; Dohrenwend & Dohrenwend, 1981). Evaluations of the risk of parental emotional distress for the child have shown that the psychosocial disturbance within the family, especially the child's exposure to parental irritability, aggression, and hostility, are most predictive of poor child adjustment (Rutter & Quinton, 1984).

Children and their parents tend to respond to each other's stress, and parents may model particular stress responses to their child. Significant associations between child and parent self-reported symptoms following psychological trauma have been described (Breton, Valla & Lambert, 1993; Laor et al., 1996; Sack, Clarke, & Seeley, 1995). Others have proposed that symptom contagion across the family may occur following trauma (see Pfefferbaum, 1997, for review). In the setting of a natural disaster, McFarlane (1987) found that separation from parents immediately following the event, negative changes in family functioning following the trauma, and maternal preoccupation were more predictive of poor childhood adjustment than either direct exposure to the event or bereavement. In contrast, healthy family relationships have been identified as protective for children in traumatic situations in other contexts (Kinzie, Sack, Angell, Manson, & Rath, 1986; Pynoos & Nader, 1989).

Similar intrafamilial forces are likely to be exerted in combat-injured families. Family functioning is central to the child's response to parental illness (Anthony, 1970; Armistead, Klein, & Forehand, 1995; Finney & Miller, 1998; Korneluk & Lee, 1998). Factors that support family health, such as greater availability and involvement of friends and extended family members or the continuity of previously

established family routines are likely to ameliorate negative consequences. A family's capacity to maintain structure, to provide emotional support, and to diminish distress all appear to help children adjust to parental illness or injury. As with most family stresses, children's responses tend to mirror the distress and functional capacity of the important adults in their lives. Whether the seriousness of the injury or resultant parental disability has more or less influence on child functioning and emotional response is less well understood. In either case, these findings highlight the importance of adopting intervention models that reduce distress and improve family and parental functioning when parental health problems exist, in order to support the health and wellbeing of children.

Impact of Parent Illness and Disability on Children

While little literature exists that systematically examines the impact of parental combat injury on military children, literature on parental illness and disability can inform our understanding of this population. One large-scale study indicated that children of disabled parents are at greater risk for behavior problems (LeClere & Kowalewski, 1994). Studies have shown that children of parents with multiple sclerosis (MS), compared to children whose parents have no disability, have more parent-reported internalizing and externalizing problems (Diareme et al., 2006) greater somatization and lower life satisfaction (Pakenham & Bursnall, 2006), and higher levels of distress as well as greater difficulty in relating interpersonally and in managing their lives (De Judicibus & McCabe, 2004).

Sudden health-altering events, such as stroke, automobile accidents, and combat injury, are likely to have different effects on children and families than parental illness (Visser-Meily, Post, Meijer, Maas, et al., 2005). Of the few studies that have examined the impact of sudden medical events on families, those related to TBI are most instructive for this discussion. TBI often results in profound impact on the child and the family, as the noninjured parent assumes the burden of caregiving (Verhaeghe, Defloor, & Grypdonck, 2005) and is at high risk for depression and anxiety (Kreutzer et al., 2009; Ponsford, Olver, Ponsford, & Nelms, 2003). According to Urbach and Culbert (1991) psychiatric sequelae associated with TBI tend to be more distressing to family members and disruptive to family functioning than other physical and nonneurological impairment. The most troublesome conditions include personality alterations, behavioral dyscontrol, erratic emotional expression, irritability, anger, apathy, and lack of energy.

In a study relying on retrospective noninjured parent report, children from TBI families displayed increased acting out behavior and emotional problems following the parental injury (Pessar, Coad, Linn, & Willer, 1993). In qualitative studies, children have reported feelings of loss and grief at the change in the injured parent (Butera-Prinzi & Perlesz, 2004) and a sense of isolation (Charles, Butera-Prinzi, & Perlesz, 2007). One study that included families in which the TBI occurred before the child's birth found no difference between children with a TBI parent and nondisabled parents (Uysal, Hibbard, Robillard, Pappadopulos, & Jaffe, 1998),

suggesting that it is the adjustment to the changed parent that is most distressing. Factors related to impact on children include TBI symptom severity, chronicity, and stability; preexisting parent, child, and family functioning and relationships; children's developmental level and sex; family cohesion, adaptability, resources, and conflict; and degree of disruption to routine, residence, and household composition (Urbach, 1989; Urbach & Culbert, 1991; Verhaeghe et al., 2005).

Armistead et al. (1995) hypothesized that the impact of parental physical illness on child functioning is mediated by disrupting parenting. In their model, parental physical illness directly and indirectly disrupts parenting through increased relationship conflict and parental depression. There is significant support for this model in the parental illness and disability literature. Elevated levels of emotional and behavioral difficulties in children of TBI patients correlate with compromised parenting in both the injured and noninjured parent as well as depression in the noninjured parent (Pessar, et al., 1993). Among children of parents suffering from a stroke, parent-reported internalizing symptoms and child-reported depressive symptoms have been associated with caregiver strain and depression (Visser-Meily, Post, Meijer, Maas, et al., 2005), with prior child depression as well as depression and martial dissatisfaction in the well parent contributing to greater risk (Visser-Meily, Post, Meijer, van de Port, et al., 2005). Among children of parents with MS, parental impairment was associated with child internalizing symptoms and family functioning was associated with child externalizing symptoms (Diareme et al., 2006).

Impact of Combat Injury on Children and Families

It is likely that the effect of combat parental injury on children is more complicated and potentially more challenging than nonviolent and accident-related parental injuries. No scientific investigation has yet systematically and directly measured the responses of children to parental combat injury over time. However, one small cross-sectional study found that the degree of family disruption following the injury (e.g., change in discipline, less time with parent), as well as preinjury family distress, were related to child and family distress in the first few months following the injury (Cozza et al., 2010). Clearly, more research is needed in this important area.

It is expected that all family members are likely to show some level of distress due to the sudden injury of a military family member. Clinicians have anecdotally reported that while most children do not initially demonstrate symptoms consistent with actual psychiatric disorder, many appear anxious, saddened, or troubled by the news early on (Cozza et al., 2005; Cozza et al., in press). Parents do not always accurately recognize the emotional impact of the parent's injury on children. This is to be expected, as prior studies show that parent reports alone are not reliable in the determination of child behavioral and emotional problems and that cross-informant input from others, to include children, is required for accurate assessment (Achenbach, McConaughy, & Howell, 1987). Throughout the literature, children who have been exposed to psychological trauma report different and much higher

levels of clinical symptoms than do parents, again highlighting the importance of direct child assessment for accurate evaluation (Meiser-Stedman, Smith, Glucksman, Yule, & Dalgleish, 2007).

Developmental Considerations

A developmental perspective is critical when considering responses of children to parental injury. For example, while infants and toddlers (0–2 years old) may be assumed to have little cognitive capacity to appreciate their parents' injuries, they will respond based upon changes in schedule and routines of their lives, the physical and emotional availability of important adults, as well as any changes in the emotional tenor (anxiety, interpersonal abruptness, irritability) of their households. If the combat injury severely disrupts the capacity of the noninjured parent to care for an infant, the young child may evidence problems in sleeping or eating, or may develop irritability or regulation problems or disturbance of attachment.

Young children (3–6 years old) have greater awareness of the actual nature of the injury. However, this understanding is likely to be undeveloped and fragile. Young children use *magical thinking*, an immature cognitive process characterized by age-appropriate self-centeredness, which can lead them to inaccurately assume responsibility for events that occur. Young children's cognitive processes may become even less reality based at times of high anxiety, as occurs after a parent's injury. Not uncommonly, preschoolers who see their seriously injured parents become disorganized and extremely anxious. They may wonder, "If this powerful and important person in my life can be hurt in this way, what could potentially happen to me?" (Cozza et al., in press). They may worry that the injury is punishment for something that they or their parent did wrong. Preschoolers are likely to demonstrate distress through regressive behaviors, loss of previously established developmental milestones (such as enuresis or new sleep problems), clinginess, and tantrums.

Older children have more mature developmental capacity. Still, the school-aged child may harbor similar anxieties. Fear in combination with a sense of guilt and a desire to take responsible action can complicate the school-aged child's response. Not surprisingly, children can be confused about expectations about how to act, especially toward the injured parent. They may not understand what is or is not appropriate and may feel uneasy bringing up questions (Cozza et al., in press).

Teenagers are faced with unique developmental challenges related to parental injury. At a time when teens are expected to become more independent and less reliant on family, they can be confused by a sudden need to once again be intensely involved due to fallout from the injury. Given their near-adult capacity, teenagers may also be asked to shoulder some of the greater demands that result from parental injury, including increased chores, care for younger children, or assistance in the care of the injured parent. Teenagers may be ambivalent and may voice their wish to be with their friends, rather than spend time with their family. Apparent lack of interest in a teenager should not be construed as apathy, but rather an attempt to cope with this developmental conflict (Cozza et al., in press).

Children with preexisting emotional, behavioral, developmental, or medical conditions of their own require close monitoring. Clinicians can expect that the stresses associated with parental injury may lead to greater distress or worsening of underlying conditions in more vulnerable children. Health-care providers should maintain a lower threshold for referral to appropriate clinical resources. When families that have children with preexisting conditions move to be within the vicinity of military hospitals where injured parents can be treated, discontinuity in children's health care can result. Given any family's urgency to address the medical needs of an injured parent, children's health care or educational needs can be neglected or inappropriately delayed.

Impact on the Family System

In addition to the direct effect of the physical injury, children can be impacted by the psychological and cognitive effect of these injuries on service members and resultant changes in family roles, including parenting. Injuries can impact a service member's capacity to feel comfortable in intimate relationships and may create distance between marital partners or close friends. Since the vast majority of injured service members are young men, it is important to recognize the potential for a negative impact on sexual competence or sense of virility with resulting impact on spouses and children.

Prior to the injury, many young military service members were physically active individuals who incorporated such traits in their parenting activities. Physical activities (hiking, backpacking, and camping), hands-on activities (playful wrestling), and athletic activities (ball throwing, skiing, and golfing) were all likely modes of interaction for young military fathers with their children. Depending upon the nature of the injury, those modes of engagement either may no longer be possible or may require significant modification in order to continue. When profound alterations in parenting activities are necessary, injured service members must modify a previously held, idealized sense of themselves as parents and mourn any related body change or functional loss. Parental physical absence due to hospitalizations and emotional unavailability due to physical condition or treatment effects can seriously limit any parent's ability to effectively interact with his or her children (Kelley & Sikka, 1997; Kotchick, Summers, Forehand, & Steele, 1997; LeClere & Kowalewski, 1994; Peters & Esses, 1985; Power, 1979).

Experience of the Children and Families in the During Medical Stabilization of Combat Injuries

Cozza et al. (in press) have described the early experience of injury for the family. When the family is notified, children may witness the response of their nonservice member parents or other adults, who may become extremely distressed, tearful, or

emotionally volatile. Such raw adult emotional response can be both confusing and overwhelming to children, challenging their own sense of safety. Once the family has been notified of the injury a period of intense activity typically follows, often leading to disruptions in the family's schedule or structure. Spouses usually join injured service members being treated at military hospitals, which are often great distances from the family home. At the hospital the noninjured spouse is often inundated by the requirements they face and must learn to navigate the medical environment and military system while being available to their injured spouse. Children may accompany noninjured parents, stay in or near their own homes with other adults, or move to live with relatives in distant places for extended periods of time. In some cases, families must split the children, due to age, logistical requirements, or custody agreements, resulting in separation from their siblings, adding to their distress. In some cases, children may not be able to visit their injured parent in the hospital for some time.

When children first see their injured parent they may experience a broad range of emotions that can be confusing both to themselves and to the important adults in their lives. Some children may be hesitant, fearful, distressed, and reluctant to show affection to the injured parent. As a result, some injured service members express feelings of hurt or disappointment, which can complicate the parent–child relationship. Children may feel betrayed by an adult's promise that the service member will return home safely and express confusion and anger toward the caregiver, other adults, or authority in general. Some blame others for their parents' injuries or feel guilty as if somehow they are responsible. These responses can fluctuate in character and intensity and are generally mingled with feelings of relief and gratitude that the service member parent is alive and safe.

In the hospital setting, staff and family members may have behavioral expectations for young children that are unrealistic (e.g., preschoolers sitting quietly for extended periods of time). Adults may react to loud and boisterous behavior with frustration and unnecessary harshness. Children who get negative feedback from parents or hospital staff members may feel that they are not wanted. However, children are important members of military families and identification and attention to their unique developmental needs is critical to helping them cope with difficult situations.

Family constellations may be complicated or nontraditional. Child and family distress may be compounded by conflicts between spouses, ex-spouses, girlfriends, boyfriends, and parents of the injured service member in the hospital setting. In young service members with serious injuries, disagreements can develop between service member's mothers, who respond to the regressive needs of their incapacitated sons or daughters, and young spouses, who can feel like intruders to the parent–child relationship. Assistance in negotiating communication and visitation may be needed. Spouses may question their commitments to service members who are permanently altered by the injury. Preexisting marital problems may be amplified in the injury recovery process. Marital dissolution and divorce are not rare.

Child and Family Considerations through Outpatient Transition, Rehabilitation, and Recovery

Some data suggest that injured service members may become more vulnerable as they transition back to their homes and communities (Grieger et al., 2006). When families leave the hospital setting they no longer have the intensive resources that were available. They can lose connection with the families of other injured service members with whom they may have developed a sense of fellowship and camaraderie. Families may struggle with the realities of being home and having to face responsibilities and routines that no longer seem manageable. Many injured service members require continuing medical or rehabilitative care. Access to needed services can be problematic or may require the scheduling of appointments at treatment facilities that are at great distance from home, adding more stress to family routines.

As the injured service member prepares to leave the hospital, children and other family members may expect a return to the life they remember. They may become disappointed with changes that they experience in the family. Older children and teenagers may have to pick up additional household responsibilities that the injured parent is no longer able to perform. When children are placed in a care provider role to the injured service member, emotional challenges can be even greater. Teens may be asked to assist with wound care, self-care, or other activities of daily living that require intimate contact with the parent that can be confusing, emotionally upsetting, and lead to resentment and frustration.

Finally, longer-term consequences of severe combat injury can result in medical retirement from the military service, the loss of a cherished military career, and movement from homes in military communities to other locations or back to families-of-origin. While such transitions may increase access to available resources, particularly when the extended family is supportive, these changes are likely to be stressful for both adults and children. Moves from known communities likely mean loss of friends, changes in schools, and possible elimination of enjoyable extracurricular activities. Moves also can cause relocations to communities that have little understanding or appreciation of military culture and the unique challenges that the family has faced.

Discussions with Combat-Injured Families

When significant changes in parental ability result from injury, parents and children must renegotiate family relationships and integrate the reality of the injury, whether physical, psychological or both, and its consequences. Focus groups conducted by these authors with 14 combat-injured families identified consistent themes to long-term injury impact (Cozza, Schmidt, Guimond & Feerick, 2009). Although it had been 1–5 years since the initial injury, most service member's continued to experience physical problems and posttraumatic stress related to their injuries, and high

distress among all family members was universal. Families reported ongoing anger, anxiety, shame, and sadness as well as increased risk-taking behaviors (e.g., excessive alcohol consumption, prescription drug abuse, reckless driving, and compulsive spending) particularly in the service member, but occasionally in other family members as well. Disappointment with service delivery and care was also evident, with transitions from military to Veterans Administration (VA) or civilian care being particularly problematic.

In many cases within this sample, family roles were disrupted, as some service member's with TBI remained impaired and unable to resume full parental and household responsibilities. Children were often given adult responsibilities and their reactions ranged from pride to resentment. Parents recognized the burden they placed on their children and expressed guilt about it. Strained relationships between parents and children and between spouses were reported. Adolescents, in particular, struggled with trying to be "normal" teenagers during a time when many families needed them to be adults (Cozza et al., 2009).

Communication with children about the injury varied widely. Some spouses were able to clearly explain the injury and behavioral changes in the injured service member to their children, whereas others struggled to find the appropriate words. Although many children identified their injured parent as having TBI or PTSD, few could clearly explain what the terms meant. Most family members reported reluctance to discuss their current challenges with each other (Cozza et al., 2009).

Families stressed that health care was most effective when it was family centered. Noninjured parents expressed a need for more involvement of family members with medical personnel, greater involvement in the rehabilitation process, and services for themselves and their children. Families also discussed the need for information about recovery trajectories. In the midst of these challenges, families also evidenced strengths. They described appreciation of and commitment to each other. Injured service members, spouses, and adolescents also recognized the stressors and difficulties faced by the others. Several adolescents voiced expectation for family growth as a result of the injury experience and hopefulness for the future (Cozza et al., 2009).

Intervention with Combat-Injured Families

To date, there is no research on interventions for children and families of combat-injured service members. An expert panel of professionals recently identified the three most important elements of intervention with this population: (1) reducing individual and family distress, (2) supporting child, parent, and family functioning, and (3) ensuring effective communication among family members and with other professional and personal contacts outside of the family as related to combat injury experience and recovery (Cozza, 2009). This latter concept has been termed *injury communication* and is discussed below in greater detail. These three principles serve to guide intervention strategies starting with hospitalization and throughout the later stages of injury recovery.

The literature on parental illness and disability can inform our intervention recommendations. Studies of family-based interventions for adult relatives have been shown to improve functioning and outcomes in individuals with TBI, chronic illness, and their family members (see Dausch & Saliman, 2009; Martire, Lustig, Schulz, Miller, & Helgeson, 2004, for reviews), suggesting that family-based care is likely to benefit the injured service member as well as other family members. In these studies, the most promising therapies included psychoeducation, skill-building, and family strengthening.

In the limited literature on interventions for children, McLaughlin (1992) described an activity group model for children aged 6–13 years with brain-injured relatives. The group uses hands-on interaction with medical and rehabilitation equipment in physical and occupation therapy settings to teach children about brain injury and rehabilitation. The group also serves as a supportive outlet for children to discuss changes in their parents and other pertinent topics. However, no evaluation of the group is provided. Behavioral parent training in individuals with a brain injury was evaluated in one small multiple baseline study (Ducharme, Spencer, Davidson, & Rushford, 2002). Results indicated increased compliance in oppositional children and increased self-esteem in the parent. The authors hypothesized that the intervention led to a more positive interaction style, characterized by increased warmth and approval from the parent, which facilitated restoration of the parent-child bond.

Psychological First Aid

Psychological First Aid (PFA) is an evidence informed intervention for early to mid-level mass trauma recovery (for review, see Hobfoll et al., 2007) that is particularly relevant to combat-injured families. Five key principles of PFA intervention emphasize (1) establishing a sense of safety, (2) promoting calming through distress reduction, (3) building a sense of self- and community efficacy, (4) fostering connectedness, and (5) promoting a sense of hope. These PFA principles can best be implemented with children of the combat injured on three levels: (1) community-based programs (e.g., peer mentoring and support groups, family assistance programs, parent guidance, and respite programs), (2) family and parentally administered support, and (3) coordinated clinical care for those children considered at higher risk or exhibiting symptoms of a disorder. Clinicians can provide consultation to parents, other family members, hospital personnel, and other service providers in PFA.

These principles must be applied in a developmentally appropriate manner. For example, maintaining daily routines and physical proximity to a trusted adult are essential in establishing feelings of safety in infants, toddlers, and preschoolers. At the other end of the developmental spectrum, older children and adolescents may need a sense of control, which they attain through knowledge, understanding, and constructive action, to feel safe.

In addition to attending to safety, preschool children (3–5 years old) may have unique requirements for managing distress. Their lack of cognitive capacity to fully understand the situation or to describe their feelings necessitates nonverbal outlets. Young children gain mastery through play, practice, and repetition. Playing with toy hospital equipment or military-related toys can help children become more comfortable with the experiences of their parents. One resource developed specifically for children at this age is the Sesame Workshop's *Talk, Listen and Connect* series of DVDs and print materials (available at http://www.sesameworkshop.org/initiatives/emotion/tlc).

Whereas younger children's primary needs for connectedness revolve around family, preadolescents and adolescents also rely heavily on peer relationships for support. By permitting and facilitating regular contact with peers, adults allow children in these age groups to have a important outlet. The noninjured parent's connectedness to supportive family and community resources is also important for ensuring that parents can meet their children's needs.

Parents and hospital personnel can promote a sense of efficacy by providing children with opportunities to be helpful in a developmentally appropriate manner. For example, younger children can bring water to the injured service member and assist with simple activities of daily living. Older adolescents may also benefit from involvement in community-based service, such as promoting blood drives, supporting other children with combat-injured parents, or promoting causes important to military families. However, adults should ensure that these activities do not interfere with other age-appropriate activities.

Parent Guidance and Consultation in the Hospital Setting

Clinicians can begin assisting families early on by providing guidelines for children's hospital visits. Consultation to hospitals may include recommendations for communicating with children about the injury and hospital setting (see section on Injury Communication), creating appropriate areas for family activities that are "child and family friendly," allowing children to be present and involved in their parent's care, protecting children from unnecessary exposure to other injured service members, and advising parents regarding child visits.

Helping parents prepare children to visit a hospitalized parent is essential and often overlooked in the emotional and practical upheaval common to combat injury situations. Noninjured parents should initially visit the hospital without children, so that they can first integrate the experience themselves (Cozza et al., in press). In preparing a child for hospital visits, adults can explain what to expect during the visit, describe or show pictures of the injured parent and hospital setting, teach the vocabulary of the injury, reassure the child that the injured parent is still the same person, and discuss how the child might feel during the visit. It is important to use accurate language, rather than euphemisms, to avoid any misunderstandings (Cozza et al., in press). Noninjured parents can gauge the appropriate amount of injury related information (presence of bandages, casts, amputations, or medical equipment) and

mix the discussion with less anxiety-provoking topics such as descriptions of the hospital cafeteria, the kind of food that they can eat while in the hospital, or the hotel or living quarters. With proper planning most children will feel comfortable when the time for the visit arrives.

Children's visits to the hospital should be time limited and structured to ensure that they are beneficial experiences for them as well as for their parents. The noninjured parent should take cues from the child, refrain from forcing expressions of affection, and be prepared to leave if the child become frightened or bored. Allowing children to bring something for the service member (e.g., a drawing, photo, or flowers) may give them a sense that they are helping their parent feel better (Cozza et al., in press).

Guidelines for Effective Injury Communication

Given the confusion and fear associated with injury, combat-injured families face unique challenges that can compromise communication. *Injury communication* refers to the multiple requirements for effective communication about injury-related topics and information both within the family and with others in civilian and military communities (Cozza, 2009). Effective injury communication requires open dialog about the injury and its consequences between multiple parties: the injured service member and spouse, family members (to include children), friends, medical personnel, and other community professionals and service providers. When properly conducted, injury communication respects the delicateness of the high emotional valence of injury-related topics as well as the necessity of using developmentally informed language when communicating to children of different ages. Most importantly, effective injury communication changes to meet the needs of a family as they evolve and change over the course of hospitalization, recovery, and reintegration.

Sometimes the noninjured parent or other adults have trouble gauging what to tell their children. Adults sometimes struggle with their own emotional reactions, which may make communication particularly difficult. In their own distress, parents may not recognize what is appropriate to pass on to children. Some adults may choose to withhold important information related to serious injuries from children in an attempt "not to worry them." In such circumstances, clinicians need to challenge the assumption that such "secrets" can realistically be kept from children. Just as some parents may provide too little information about the injury, others share more than children are able to tolerate or may frighten them by unnecessarily bringing up unknown future consequences. Adults may need help processing and calibrating the amount, content, and timing of the facts that they share. Knowledgeable professionals should communicate that even young children should be given some explanation without causing them to become overly worried to help them understand the actions and emotions of the adults they see around them. The foundation of the clinician's helpful stance towards the families and children of the injured is to increase adult awareness and to help them notice and respond appropriately to children's emotional signals.

Offering reassuring yet realistic and consistent commentaries about a developing and uncertain situation are major objectives of communication early in the injury recovery process. Early injury communication recognizes the sensitivity of injury related topics and the importance of developmentally appropriate language with children. Later goals of injury communication include the need for family members to integrate the experience through a process of shared understanding. As different individual thoughts, feelings, and concerns may arise through injury recovery, ongoing dialog about the injury and its consequence is extremely important.

In circumstances when injuries lead to longer-term impairments, personality changes, or cognitive problems in parents, young children will need to be given simple and clear explanations of the behaviors they see (e.g., "Remember that I told you daddy's brain was hurt… sometimes he gets angry easily and he says things that he doesn't mean…but that is not your fault…even though he has trouble being in charge of himself, he still loves you.") School-aged children, who may inappropriately accept responsibility for problems that they come to see in their families, need to be reminded that they are not responsible for these problems and that it is not their job to "fix" them. With adolescents, parents must recognize the real conflict created by teenagers' developmental needs for independence and neither expect them to act like surrogate adults in the family nor abdicate the need to set appropriate limits on any risk-taking behaviors. The most important communication to children of any age is that, despite the news of the injury, they will be cared for and that important adults will remain available to them.

Effective injury communication will likely involve multiple parties: the injured service member and spouse, family members including children, extended family and friends, medical personnel, and other community professionals and service providers. Clear concise messages to people outside of the family can help others understand family member experiences and needs, without having to share too much unnecessary or personal information. Parents can help children speak with teachers, coaches, and other caring adults about the family injury, so they may better understand the behaviors they see in these children. Such knowledge will alert these adults to make themselves more available when needed. Connection to trusted health-care providers or community support providers makes it more likely that family members will seek help when needed. Parents and other trusted adults (grandparents, aunts, uncles, teachers, counselors, coaches, ministers, etc.) must remain available to support children through the injury recovery trajectory.

Family-Based Interventions

As combat injury disrupts family structure and functioning, a family-centered approach is needed to address the issues of children, spouses, and service members following combat injury. Based on clinical observations, the symptoms, functioning, and responses of family members change throughout the injury rehabilitation process, requiring longitudinal evaluation of the recovery trajectory and ongoing

care. Patient-centered approaches to care, focusing on evolving patient needs, are vital to the longitudinal management and healthy recovery of the traumatically injured (Zatzick et al., 2001) and can readily incorporate family requirements as well. Families are expected to need more help at various transition points (e.g., after initial notification of spouse injury, traveling to the hospital; after stabilization, moving from the hospital to a rehabilitation site, etc.). When the injury is serious, the recovery process is likely to be drawn out, requiring effective care management and interventions to be implemented across time and tailored to the specific needs of each family (Zatzick et al., 2001). Services should include longitudinal supportive engagement, assistance in identifying and connecting with needed resources, parent guidance, help with family problem solving and goal setting, ongoing risk assessment, and, when indicated, referral for clinical intervention.

In response to the lack of any identified interventions for combat-injured families, the authors, in collaboration with other colleagues, have developed a preventive intervention specific for this population. It is based on two models. The first, Families OverComing Under Stress (FOCUS; Saltzman et al., 2009), is a well-respected and evidence-informed preventive intervention program that has been successfully used with military families dealing with the impact of deployment. The second, Early Combined Collaborative Care (ECCC; Zatzick et al., 2001), focuses on the needs of traumatically injured patients as they move from the hospital to the community over time, incorporating shared patient–health-care provider treatment planning, the provision of long-term care management, and active sustained follow-up that promotes continuity in care delivery sectors.

This newly developed intervention, FOCUS for combat-injured families (FOCUS-CI) has seven core components: (1) family-focused care management, (2) emotion regulation skills, (3) psychoeducation; (4) injury communication, (5) problem solving, (6) goal setting, and (7) integration of skills. At its core, FOCUS-CI encourages longstanding trusting and helpful relationships with combat-injured families, so that any family needs are identified and addressed as they develop throughout the injury recovery trajectory. Family strengths are emphasized, and parents and children are encouraged to explore innovative, mutually developed activities and play that allow them to "try on" fresh ways of relating. The capacity for the parent–child dyad to reestablish enjoyable modes of interaction is critical to future health and happiness. Candid parental discussions can allow injured service member parents to reframe their situations, develop new skills, and to develop greater strength in parenting.

Conclusion

In summary, combat injury can profoundly affect the lives of service members, their families, and their children. Upon injury notification, a cascade of events takes place that can result in distress and interpersonal turmoil for children and adults in the combat-injured family. Disruption in parental functioning and family structure

are common, with immediate challenges leading to family disruption, unexpected separations, and long-term changes to parental functioning, cognitive capacity, and relatedness, as well as transitions from military to civilian community settings. Children's developmental and emotional capacities determine their ability to understand and integrate the experience of parental injury. Parents and health-care providers can benefit from developmentally informed guidance to help children with the injury. Family and child reactions to combat injury must be understood as a longitudinal process beginning with injury notification and continuing through longer-term rehabilitation. Intervention strategies should work to decrease distress, support effective functioning, and implement strategies of effective *injury communication*. Principles of PFA can support these goals. Family-focused interventions appear to be effective methods of engaging these vulnerable families through the injury recovery trajectory. Strategies for such intervention are currently being developed and studied.

References

Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin, 101*, 213–232.

Anthony, E. J. (1970). The mutative impact of serious mental and physical illness of a parent on family life. In J. Anthony & C. Koupemik (Eds.), *The Child in his family* (pp. 131–163). New York: Wiley-Interscience.

Armistead, L., Klein, K., & Forehand, R. (1995). Parental physical illness and child functioning. *Clinical Psychology Review, 15*, 409–422.

Beardslee, W. R. (1984). Familial influences in childhood depression. *Pediatric Annals, 13*, 32–36.

Beardslee, W. R., & Wheelock, I. (1994). Children of parents with affective disorders: Empirical findings and clinical implications. In W. R. Reynolds & H. F. Johnston (Eds.), *Handbook of depression in children*. New York: Plenum.

Breton, J. J., Valla, J. P., & Lambert, J. (1993). Industrial disaster and mental health of children and their parents. *Journal of the American Academy of Child and Adolescent Psychiatry, 32*, 438–445.

Butera-Prinzi, F., & Perlesz, A. (2004). Through children's eyes: Children's experience of living with a parent with an acquired brain injury. *Brain Injury, 18*, 83–101.

Charles, N., Butera-Prinzi, F., & Perlesz, A. (2007). Families living with acquired brain injury: A multiple family group experience. *NeuroRehabilitation, 22*, 61–76.

Chesnut, R. M., Carney, N., Maynard, H., Patterson, P., Mann, N. C., & Helfand, M. (1999). *Rehabilitation for traumatic brain injury*. Rockville: Agency for Health Care Policy and Research.

Cohen, J. A., Mannarino, A. P., Gibson, L. E., Cozza, S. J., Brymer, M. J., & Murray, L. (2006). Interventions for children and adolescents following disasters. In E. C. Ritchie, P. J. Watson, & M. J. Friedman (Eds.), *Interventions following mass violence and disasters* (pp. 227–256). New York: Guilford.

Coyne, J. C., & Downey, G. (1991). Social factors and psychopathology: Stress, social support, and coping processes. *Annual Review of Psychology, 42*, 401–425.

Cozza, S. J. (Ed.). (2009). *Proceedings: Workgroup on Intervention with Combat Injured Families*. Bethesda: Center for the Study of Traumatic Stress.

Cozza, S. J., Chun, R. S., & Miller, C. (in press). The children and families of combat injured service members. In E. C. Richie (Ed.), *War psychiatry*. Washington: Borden Institute.

Cozza, S. J., Chun, R. S., & Polo, J. A. (2005). Military families and children during operation Iraqi freedom. *Psychiatric Quarterly, 76*, 371–378.

Cozza, S. J., Guimond, J. M., McKibben, J., Chun, R. S., Arata-Maiers, T. L., Schneider, B., et al. (2010). Combat injured service members and their families: The effect of deployment and combat injury on child distress. *Journal of Traumatic Stress, 23*, 112–115.

Cozza, S. J., Schmidt J.A., Guimond J. M., & Feerick M. M. (2009). *Discussions with combat injured families.* Manuscript in preparation.

Dausch, B. M., & Saliman, S. (2009). Use of family focused therapy in rehabilitation for veterans with traumatic brain injury. *Rehabilitation Psychology, 54*, 279–287.

De Judicibus, M. A., & McCabe, M. P. (2004). The impact of parental multiple sclerosis on the adjustment of children and adolescents. *Adolescence, 39*, 551–569.

Diareme, S., Tsiantis, J., Kolaitis, G., Ferentinos, S., Tsalamanios, E., Paliokosta, E., et al. (2006). Emotional and behavioural difficulties in children of parents with multiple sclerosis: a controlled study in Greece. *European Child and Adolescent Psychiatry, 15*, 309–318.

Dohrenwend, B. S., & Dohrenwend, B. P. (1981). *Stressful life events and their contents*. Reseda: Watson.

Ducharme, J. M., Spencer, T., Davidson, A., & Rushford, N. (2002). Errorless compliance training: Building a cooperative relationship between parents with brain injury and their oppositional children. *American Journal of Orthopsychiatry, 72*, 585–595.

Finney, J. W., & Miller, K. M. (1998). Children of parents with medical illness. In W. K. Silverman & T. H. Ollendick (Eds.), *Developmental issues in the clinical treatment of children* (pp. 433–442). Needham Heights: Allyn and Bacon.

Grieger, T. A., Cozza, S. J., Ursano, R. J., Hoge, C., Martinez, P. E., Engel, C. C., et al. (2006). Posttraumatic stress disorder and depression in battle-injured soldiers. *American Journal of Psychiatry, 163*, 1777–1783. quiz 1860.

Halcomb, E., & Davidson, P. (2005). Using the illness trajectory framework to describe recovery from traumatic injury. *Contemporary Nurse, 19*, 232–241.

Hobfoll, S. E., Watson, P., Bell, C. C., Bryant, R. A., Brymer, M. J., Friedman, M. J., et al. (2007). Five essential elements of immediate and mid-term mass trauma intervention: empirical evidence. *Psychiatry, 70*, 283–315. discussion 316–269.

Kelley, S. D., & Sikka, A. (1997). A review of research on parental disability: Implications for Research and counseling practice. *Rehabilitation Counseling Bulletin, 41*, 105–121.

Kinzie, J. D., Sack, W. H., Angell, R. H., Manson, S., & Rath, B. (1986). The Psychiatric Effects of Massive Trauma on Cambodian Children: I. The Children. *Journal of the American Academy of Child and Adolescent Psychiatry, 25*, 370–376.

Koren, D., Norman, D., Cohen, A., Berman, J., & Klein, E. M. (2005). Increased PTSD risk with combat-related injury: A matched comparison study of injured and uninjured soldiers experiencing the same combat events. *American Journal of Psychiatry, 162*, 276–282.

Korneluk, Y. G., & Lee, C. M. (1998). Children's adjustment to parental physical illness. *Clinical Child and Family Psychology Review, 1*, 179–193.

Kotchick, B. A., Summers, P., Forehand, R., & Steele, R. G. (1997). The role of parental and extrafamilial social support in the psychosocial adjustment of children with a chronically ill father. *Behavior Modification, 21*, 409–432.

Kreutzer, J. S., Rapport, L. J., Marwitz, J. H., Harrison-Felix, C., Hart, T., Glenn, M., et al. (2009). Caregivers' well-being after traumatic brain injury: A multicenter prospective investigation. *Archives of Physical Medicine and Rehabilitation, 90*, 939–946.

Laor, N., Wolmer, L., Mayes, L. C., Golomb, A., Silverberg, D. S., Weizman, R., et al. (1996). Israeli preschoolers under Scud missile attacks. A developmental perspective on risk-modifying factors. *Archives of General Psychiatry, 53*, 416–423.

LeClere, F. B., & Kowalewski, B. M. (1994). Disability in the family: The effects on children's well-being. *Journal of Marriage and Family, 56*, 457–468.

Lester, P., Stein, J. A., & Bursch, B. (2003). Developmental predictors of somatic symptoms in adolescents of parents with HIV: a 12-month follow-up. *Journal of Developmental and Behavioral Pediatrics, 24*, 242–250.

MacGregor, A. J., Corson, K. S., Larson, G. E., Shaffer, R. A., Dougherty, A. L., Galarneau, M. R., et al. (2009). Injury-specific predictors of posttraumatic stress disorder. *Injury, 40*, 1004–1010.

Martire, L. M., Lustig, A. P., Schulz, R., Miller, G. E., & Helgeson, V. S. (2004). Is it beneficial to involve a family member? A meta-analysis of psychosocial interventions for chronic illness. *Health Psychology, 23*, 599–611.

McFarlane, A. C. (1987). Posttraumatic phenomena in a longitudinal study of children following a natural disaster. *Journal of the American Academy of Child and Adolescent Psychiatry, 26*, 764–769.

McLaughlin, A. M. (1992). Addressing the psychological needs of children with brain injured relatives: An activity group model. *The Journal of Cognitive Rehabilitation, 10*, 12–18.

Meiser-Stedman, R., Smith, P., Glucksman, E., Yule, W., & Dalgleish, T. (2007). Parent and child agreement for acute stress disorder, post-traumatic stress disorder and other psychopathology in a prospective study of children and adolescents exposed to single-event trauma. *Journal of Abnormal Child Psychology, 35*, 191–201.

Owens, B. D., Kragh, J. F., Jr., Wenke, J. C., Macaitis, J., Wade, C. E., & Holcomb, J. B. (2008). Combat wounds in operation Iraqi Freedom and operation Enduring Freedom. *Journal of Trauma, 64*, 295–299.

Pakenham, K. I., & Bursnall, S. (2006). Relations between social support, appraisal and coping and both positive and negative outcomes for children of a parent with multiple sclerosis and comparisons with children of healthy parents. *Clinical Rehabilitation, 20*, 709–723.

Pessar, L. F., Coad, M. L., Linn, R. T., & Willer, B. S. (1993). The effects of parental traumatic brain injury on the behaviour of parents and children. *Brain Injury, 7*, 231–240.

Peters, L. C., & Esses, L. M. (1985). Family environment as perceived by children with a chronically ill parent. *Journal of Chronic Diseases, 38*, 301–308.

Pfefferbaum, B. (1997). Posttraumatic stress disorder in children: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 1503–1511.

Ponsford, J., Olver, J., Ponsford, M., & Nelms, R. (2003). Long-term adjustment of families following traumatic brain injury where comprehensive rehabilitation has been provided. *Brain Injury, 17*, 453–468.

Power, P. W. (1979). The chronically ill husband and father: His role in the family. *Family Coordinator, 28*, 616–621.

Pynoos, R. S., & Nader, K. (1989). Children's memory and proximity to violence. *Journal of the American Academy of Child and Adolescent Psychiatry, 28*, 236–241.

Rutter, M. (1966). *Children of sick parents: An environmental and psychiatric study*. London: Oxford University Press.

Rutter, M., & Quinton, D. (1984). Parental psychiatric disorder: Effects on children. *Psychological Medicine, 14*, 853–880.

Sack, W. H., Clarke, G. N., & Seeley, J. (1995). Posttraumatic stress disorder across two generations of Cambodian refugees. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, 1160–1166.

Saltzman, W., Lester, P., Pynoos, R., Mogil, C., Green, S., Layne, C., et al. (2009). *FOCUS for military families individual family resiliency training manual* (2nd ed.). Los Angeles: UCLA Semel Institute for Neuroscience and Human Behavior.

U.S. Department of Defense. (2010). *Military casualty information*. Retrieved February 1, 2010, from http://siadapp.dmdc.osd.mil/personnel/CASUALTY/castop.htm.

U.S. Department of Defense. (2007). *Demographics 2007: Profile of the Military Community*. Retrieved August 20, 2009, from http://www.militaryonesource.com/MOS/ServiceProviders/2007DemographicsProfileoftheMilitaryCommuni.aspx.

Urbach, J. R. (1989). The impact of parental head trauma on families with children. *Psychiatric Medicine, 7*, 17–36.

Urbach, J. R., & Culbert, J. P. (1991). Head-injured parents and their children. Psychosocial consequences of a traumatic syndrome. *Psychosomatics, 32*, 24–33.

Uysal, S., Hibbard, M. R., Robillard, D., Pappadopulos, E., & Jaffe, M. (1998). The effect of parental traumatic brain injury on parenting and child behavior. *Journal of Head Trauma Rehabilitation, 13*, 57–71.

Verhaeghe, S., Defloor, T., & Grypdonck, M. (2005). Stress and coping among families of patients with traumatic brain injury: A review of the literature. *Journal of Clinical Nursing, 14*, 1004–1012.

Visser-Meily, A., Post, M., Meijer, A. M., Maas, C., Ketelaar, M., & Lindeman, E. (2005). Children's adjustment to a parent's stroke: Determinants of health status and psychological problems, and the role of support from the rehabilitation team. *Journal of Rehabilitation Medicine, 37*, 236–241.

Visser-Meily, A., Post, M., Meijer, A. M., van de Port, I., Maas, C., & Lindeman, E. (2005). When a parent has a stroke: Clinical course and prediction of mood, behavior problems, and health status of their young children. *Stroke, 36*, 2436–2440.

Warden, D. (2006). Military TBI during the Iraq and Afghanistan wars. *Journal of Head Trauma Rehabilitation, 21*, 398–402.

Zatzick, D. F., Rivara, F. P., Nathens, A. B., Jurkovich, G. J., Wang, J., Fan, M. Y., et al. (2007). A nationwide US study of post-traumatic stress after hospitalization for physical injury. *Psychological Medicine, 37*, 1469–1480.

Zatzick, D. F., Roy-Byrne, P., Russo, J. E., Rivara, F. P., Koike, A., Jurkovich, G. J., et al. (2001). Collaborative interventions for physically injured trauma survivors: A pilot randomized effectiveness trial. *General Hospital Psychiatry, 23*, 114–123.