JRRD Guest Editorial

Adaptation of life care planning to patients with polytrauma in a VA inpatient setting: Implications for seamless care coordination

INTRODUCTION

As of March 2006, more than 1.3 million U.S. military service members had served or were serving in Operation Enduring Freedom (OEF) or Operation Iraqi Freedom (OIF). Both active duty and veteran service members are eligible to receive healthcare services from the Department of Veterans Affairs (VA). In May 1982, Congress passed legislation that allowed the VA to provide healthcare services to active duty service members during wars or national emergencies. The Veterans Health Programs Improvement Act of 2004 (Public Law 108-422, § 302, 118 Stat. 2379, 2383-86) mandated the VA to create research, education, and clinical activity centers focused on the complex multiple trauma associated with combat injuries. In response, the VA created five Polytrauma Rehabilitation Centers (PRCs) within five large medical facilities (located in Palo Alto, California; Tampa, Florida; Richmond, Virginia; Minneapolis, Minnesota; and San Antonio, Texas [under construction]). These PRCs provide integrated and interdisciplinary rehabilitation medicine to severely injured combat personnel.

In addition to establishing the five PRCs, the VA, the Department of Defense (DOD), and other Government agencies have examined ways to provide a "seamless transition of care" across the battlefield, military treatment facility (MTF), VA facility, and community. Seamless transition of care refers to the careful and well-coordinated transfer of active duty and recently discharged service members from an MTF to a VA facility. It includes establishing VA points of contact within the DOD and DOD points of contact within the VA. Because the VA has undertaken a larger role in treating active duty service members, the seamless transition of care requires bidirectionality between the VA and MTF before, during, and after treatment at the VA.

POLYTRAUMA AND CARE COORDINATION

The VA defined polytrauma as "injury to the brain in addition to other body parts or systems resulting in physical, cognitive, psychological, or psychosocial impairments and disability" (VA Memorandum 11-05-13, 2005). It also suggested that treatment of traumatic brain injury (TBI) should be the primary emphasis of rehabilitation programs. TBI tends to produce cognitive deficits in executive function and memory and neurobehavioral disorders,

including denial of illness and minimization of symptoms [1–2]. The high prevalence of neurobehavioral disorders related to diminished insight and denial of illness is often combined with such mental health issues as depression, anxiety, and posttraumatic stress disorder [3]. These impairments significantly decrease the ability of patients with TBI to initiate and independently seek appropriate health and psychosocial care. Patients with polytrauma, who experience both TBI-related issues and various physical injuries, have even more complex medical and psychosocial needs that are combined with the just-described diminished ability to manage such needs.

The complex care that patients with TBI require often necessitates lifelong coordinated care from a multidisciplinary team and a comprehensive support network in the community. This care coordination is even more important for patients with polytrauma. Because of their chronic and evolving symptoms, deficits, and functional disabilities, patients with polytrauma who do not receive dynamic and coordinated health services are likely to have significantly reduced quality of life (QOL) and to overwhelmingly burden the healthcare system [4]. While rehabilitation clinicians are knowledgeable about the individual conditions seen in polytrauma, patients with several comorbid conditions represent a new and poorly understood rehabilitation population. By simply extrapolating from what is known of the component injuries, one can clearly see that healthcare for patients with polytrauma will require unprecedented coordination across diverse clinical specialties and care systems. Moreover, this process will need to be individualized, dynamic, long-term, and capable of accommodating life span developmental changes in patients and their families. Advances in medical treatment, while certainly welcome, likely will introduce further complexity.

The emerging healthcare system for patients with polytrauma is multilayered, wide-ranging, and likely to evolve as patients and families age and medical systems and technologies develop. Successfully navigating this increasingly complex healthcare system will be crucial to whether patients and families receive their prescribed services as designed and intended. Methodologies for healthcare planning and coordination therefore will be essential components of polytrauma care.

LIFE CARE PLANNING

We explored the feasibility of using life care planning to facilitate continuity of care, comprehensively identify current and future needs, and coordinate lifelong care across institutions and geographic locations. Life care planning is an existing healthcare planning methodology that was originally developed for the forensic arena to estimate disability litigation and estate-planning costs [5]. Life care planning's primary use in legal proceedings, in our view, has clouded perception regarding the intrinsic value of several core components of the life care planning process. The core methodology of life care planning consists of applying a standardized and structured healthcare needs-identification process, using guidelines from research and clinical expertise to formulate a plan for meeting those needs, and creating a formal document that serves as a roadmap to help clinicians, as well as patients and families, track clinical needs and services and navigate multiple elements of a complex and geographically dispersed healthcare system. Life care planning, thus, facilitates delivery of appropriate care, increases accountability, and helps identify and remove bottlenecks to the care plan.

Thus, one central feature of the present report is that we removed the life care planning process from the medicolegal arena. Another central feature is that we based the process entirely on existing VA medical information and focused on modifying the traditional life care planning process to maximize its integration with current VA practices and policies. Our motives included not only the obvious ones of avoiding duplicated effort and minimizing disruption of systems of care but also identifying ways to increase the efficiency and economy of the traditionally expensive life care planning process.

We addressed these objectives by constructing life care plans for 20 survivors of combat-related polytrauma. We should emphasize that this effort was an institutional review board-approved preliminary report, in that we examined the feasibility

of applying life care planning methods within a VA healthcare system and identified procedures that modified traditional life care planning methods and maximized their usefulness and economy for application to polytrauma patients.

We reviewed the medical records of 66 consecutive patients with TBI admitted to a VA PRC; all patients had been deployed in OEF/OIF from 2001 to 2005. These patients' prominent clinical characteristics included vision impairment, light and/or noise sensitivity, sleep disturbances, and posttraumatic stress disorder (detailed in Lew et al. [4]). We then selected 20 of these OEF/OIF patient charts for life care plan development. Our chart selection was based on the following criteria: (1) consistency with the VA definition of polytrauma (multiple physical injuries, behavioral health problems) and (2) multiple severe injuries sustained during combat operations. Chart selection was based on unanimous consensus.

We adapted the traditional life care planning model so that it focused on organizing the data from VA medical records. One of the team members (HQ) constructed a customized template to facilitate production of the 20 life care plans. Since each life care plan contains primarily protected veteran health information, the results of the individual plans cannot be published. However, the process of creating these plans can guide other rehabilitative teams' development of this type of integrative treatment planning. A multidisciplinary team of two physicians and three doctoral-level psychologists reviewed and formed records into life care plans. One physician (HQ) was a certified life care planner. The other physician was a board-certified physiatrist who cared for patients with polytrauma and also held a doctorate of philosophy. The three doctoral-level psychologists all had extensive experience and training in evaluating patients with polytrauma. After creating the 20 life care plans, the team met for 2 days as an expert panel to evaluate the creation process and utility of the resultant life care plans. Having reached uniform consensus that the life care plans were extremely useful, the panel devoted substantial effort to identifying the most efficient components of life care planning and the most economical and efficient ways to obtain those components.

While the level of detail in each medical record varied, we found that all 20 records could be transformed into life care plans. Although all the data (e.g., premorbid conditions, description of the catastrophic event) necessary to complete the life care plan were not always immediately available in the VA electronic medical system, the expert panel had the knowledge and experience required to fill in any gaps. In real-life prospective application, this fact demonstrates that the VA medical record would already contain most of the information necessary for a life care plan and that a reasonably experienced rehabilitation team could ask and answer the questions required to fill in gaps in the medical record. Such a team would typically include a physiatrist, nurse, social worker/case manager, recreational therapist, occupational therapist, neuropsychologist, psychiatrist, speech-language pathologist, audiologist, and other specialists. Typically, the resources and expertise needed to formulate a life care plan are readily available in the existing VA healthcare system.

The life care plan is a dynamic multidisciplinary management tool for patients with catastrophic injuries. The goal is to construct a care-coordination plan at admission and review the recommendations at each interdisciplinary team meeting and polytrauma case-manager follow-up. This process allows patients to benefit from the expert recommendations of every treatment team member and facilitates a more seamless transition and reintegration into the MTF or community.

In this preliminary report, we adapted life care planning methodology to guide coordinated long-term care for patients with polytrauma and their families in a complex, multi-institutional healthcare system. Results demonstrated that deriving essential data from existing treatment records to produce a life care plan and thereby support complex case-management and clinical care was feasible with little additional effort or resources beyond those currently used. Life care planning, thus, promises to save time and effort while improving QOL for survivors of polytrauma and their families. To expand their understanding of life care planning, two coauthors (HLL and JB) completed the required coursework and passed the

certification examination to become certified life care planners.

Although not included in the present report, associated analyses of present and future healthcare costs may be calculated via the life care planning approach. Future research on care coordination for patients with polytrauma should measure not only costs but also a broad range of physical, mental, and QOL outcomes. In essence, life care planning methodology would change our perspective from viewing each care episode as an independent objective to viewing each as a part of the ongoing dynamic process of improving QOL for patients with polytrauma. The life care plan provides a "template" for care that is readily available from existing VA electronic medical records and can be formulated by any reasonably experienced rehabilitation team.

One or more VA polytrauma rehabilitation teams should replicate the findings and conclusions of this preliminary report. Should replication be successful, the emphasis of research should shift to increasing the economy and efficiency of the process. We devoted much effort to identifying the most important life care planning components, but this was but an initial pilot effort and future investigators likely will improve the approach. One logical next step toward increased efficiency and economy would be the development of medical informatics that automate the life care planning process and decrease the human labor required to produce life care plans.

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Gregory A. Leskin, PhD;[1–2*] Henry L. Lew, MD, PhD, CLCP;[1,3] Heidi Queen, MD, MPH, CLCP;[4] Dennis Reeves, PhD;[5] Joseph Bleiberg, PhD, CLCP[6]

[1]Department of Veterans Affairs Palo Alto Health Care System, Palo Alto, CA; [2]Education and Clinical Laboratory, National Center for Posttraumatic Stress Disorder, Menlo Park, CA; [3]Stanford University School of Medicine, Stanford, CA; [4]Center for Career Evaluations, Inc, Oakland, CA; [5]Clinvest, Springfield, MO; [6]National Rehabilitation Hospital, Washington, DC

[*]Email: gregory.leskin@va.gov

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