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POSTTRAUMATIC STRESS DISORDER: *Beyond Best Practices*

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Traditional therapies for posttraumatic stress disorder (PTSD) and the many neuropsychiatric conditions associated with abuse, stress, and combat are effective in only half of patients, despite best efforts and practices. The 50% of patients who do not improve by responding to usual standards of care are labeled *treatment resistant*. I propose that comorbid medical illnesses and injuries affecting mental state and general health and the failures of the systems that treat them contribute to the so-called "resistance" of chronic PTSD, depression, and anxiety. Military veterans and victims of torture often manifest treatment-resistant PTSD, depression, and anxiety. Many are debilitated by sleep disturbances, anxiety, depression, postconcussion syndrome, hypothyroidism, pain, and degenerative arthritis. Current practices lack an effective model for integrating these medical illnesses and injuries into the diagnosis and treatment of treatment-resistant PTSD, depression, and anxiety. A working model that integrates these components would involve comprehensive and integrated diagnosis and treatment. Current treatment approaches also often fail to track meaningful measures of recovery, most notably quality of life. The application of general systems theory provides a framework to address these deficits by focusing on the complex interplay between the psychological and physiological, recognizing the cumulative and synergistic effects of the psychiatric, neurological, metabolic, and pain problems—both clinical and subclinical—that contribute to treatment-resistant PTSD, depression, and anxiety.

Keywords: posttraumatic stress disorder, postconcussion syndrome, treatment resistance, integrative model of care, systems modeling

A large proportion of my clinical practice and research involves patients with posttraumatic stress disorder (PTSD) and other sequelae of stress and war, including service

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members with combat tours in Iraq and Afghanistan, detainees in Guantánamo, and others victims of torture, abuse, and cruel treatment. These cohorts are part of a broader population of trauma survivors for whom existing treatments and treatment delivery systems are often ineffective. Traditional therapies for PTSD and the many neuropsychiatric conditions associated with abuse, stress, and combat are effective in only half of patients, despite best efforts and practice (National Research Council, 2008). In this article, I propose an alternative.

The 50% of patients who do not improve by responding to usual standards of care are labeled "treatment resistant." In my practice, however, I have found that a number of these patients suffer multiple illnesses and injuries that have gone undetected, thus limiting the effectiveness of even best practices. For example, many soldiers, veterans, and victims of torture and abuse have mild traumatic brain injuries (mTBI) and chronic postconcussion syndrome. The insidious and debilitating effects of concussions on mental state and general health are now becoming more apparent, but diagnosis and treatment still lag. Similarly, recent findings regarding thyroid, methylfolate, hormonal, and adrenal functioning have added to the understanding of metabolism and mental health, but have not been assimilated into clinical practice. A single traumatized patient can present with a variety of symptoms and disorders and, given the way health care is organized, then be subjected to multiple, uncoordinated treatments that often exacerbate problems rather than cure them.

Therein lies the rub for mental health care: If any area of clinical practice should engage the whole patient, it is mental health. Our patients are much more than the list of their symptoms, but we lack a working model for comprehensive diagnosis and treatment, particularly for stress-induced illnesses, trauma, and their comorbidities; and too often we fail to track meaningful measures of recovery, most notably quality of life (QOL).

I intend to outline an approach to diagnosis and treatment of combat veterans and victims of abuse and torture that is holistic and focuses on improving QOL. The principles of general systems theory frame that perspective. This integrative view examines the complex interplay between the psychological and the physiological, leading to the development of more appropriate treatments for many of these nuanced, highly interconnected problems. The following clinical summaries illustrate important factors calling for this new working model.

The Combat Veteran

The typical combat veteran has had multiple tours in Iraq and Afghanistan. Army soldiers usually spend a year in the combat theater, return to home base in the United States, and then redeploy within the next 12 to 15 months. Tens of thousands of soldiers have had multiple tours over the 11 years of war since 9/11, sometimes six or seven within a 5-year period.

Young men and women voluntarily enlist in the Army or Marines "to make something" of themselves, to defend their country, and to experience the sense that there is purpose in their lives. A number have had relatively unstable adolescences marked by occasional scrapes with the law and minor drug charges. Often, depending on recruitment needs, the services have granted waivers to these recruits who, in previous years, would never have been admitted, allowing them to sign up despite their histories.

Basic and advanced individual training are intense and determined to make warriors of these young men and women, many of whom are initially out of shape and overweight.

Six months after enlisting, the new soldier is assigned to a combat unit. Often, that unit has been alerted it will deploy to the war theater in the coming 12 months. Training becomes even more intense, with combat veterans bearing down on the young recruits to prepare them for the dangers they will face. Nonetheless, on deployment, many soldiers remark that their training did not really prepare them for what they encountered once in theater.

The typical combat soldier carries a backpack of approximately 90 pounds to the desert sand of Iraq or the mountains of Afghanistan. The infantry squad often goes on four to five patrols per week. They are situated in isolated outposts called forward operating bases. They live and sleep in combat housing units that look like big supply containers typically found on ocean liners. Their diet consists of a mix of hot, cooked, processed food and meals-ready-to-eat (MREs) that come in sealed plastic wrappers. Many also have a steady diet of uppers and downers—prescribed stimulants and/or caffeinated drinks (e.g., Red Bull), tranquilizers for sleep, and ibuprofen, referred to as "Ranger candy" for almost constant aches and pains.

From the moment he leaves the continental United States, the soldier's sleep is disturbed. A number of the special operators (Green Berets and SEALs) may not get more than 2−4 hours of sleep per night for stretches of months. The typical infantryman's sleep cycle is disrupted with variable times for waking and falling asleep. As the years of combat have dragged on, more soldiers have been prescribed psychotropic medications with reports of approximately 20% taking antidepressants, benzodiazepines, and/or second-generation antipsychotics. Not reported is that many younger soldiers, particularly in Afghanistan, have also been smoking hashish and marijuana. Exposure to toxins and other environmental agents is unknown.

Tactics have changed significantly over the years of war in Iraq and Afghanistan, and soldiers have had to function within a constantly shifting political and strategic landscape. The nature of insurgency warfare is confusing and chaotic. It lacks clear lines of demarcation and visible identification of the enemy, most tragically demonstrated in the unnecessary injury and death of women and children. No young soldier is emotionally prepared to handle the shock of a dismembered young child. Whereas in past wars, long periods of boredom and drudgery were interspersed with intense moments of frenetic action and panic, today drudgery and panic in the insurgency warfare of Iraq and Afghanistan are not so neatly divided. The signature weapon of this warfare has become the improvised explosive device (IED). Hundreds of thousands of servicemen have been exposed to multiple IED blasts and shocks from mortar rounds. They are at risk for mTBI and postconcussion syndrome. The mechanism of injury is uncertain, but thought to involve axonal shearing, contusion, and microscopic hemorrhaging.

Combat is complex, chaotic, and unpredictable, and it imposes multiple stressors and harsh conditions, all of which converge with potential to induce a cluster of broad and, potentially, disabling symptoms for the remaining life of the veteran. Paradoxically, however, many soldiers do not think of their combat experience as having been stressful. Instead, they see it as exciting and adventurous. Young recruits, as well as more seasoned soldiers, are often eager to do their duty and get the job done. They have moments of fear and anxiety, but the intense focus on the mission and their relationships with their teammates distract them from their concerns. They experience deep gratification from being a member of a close-knit military team, training intensely, and supporting the mission. Indeed, one of the challenges of leaving active duty military service for many Reserve and National Guard soldiers seems to be the profound sense of loss when they are no longer a part of this community.

Detainees and Victims of Cruel, Degrading, and Inhuman Treatment

Since 2008, I have spent hundreds of hours over many months in the notorious Army detention facility at Guantánamo Bay, Cuba, interviewing detainees and reviewing files. In addition, my work in human rights has taken me to many other countries—Bahrain, Israel, Palestine, Kyrgyzstan, and Iraq—where I have evaluated scores of victims of cruel, degrading, and inhuman treatment. There are some common themes in the stories of these men and women, and almost all are suffering from symptoms of PTSD.

The majority of detainees in Guantánamo were apprehended in Afghanistan in 2002, held in a Bagram prison, and then transferred to Cuba within a year. Many were not active combatants as we commonly think of soldiers or infantrymen. As a child psychiatrist, I have assessed several younger inmates, including Omar Khadr, a detainee whose highly publicized case eventually resulted in his return to a Canadian prison. For the purposes of this article, I will focus on Khadr to illustrate the elements of PTSD as they manifested in this cohort.

At age 15, Omar was severely wounded and captured by American forces in July 2002. His father Ahmed detailed his son to Khost, Afghanistan, to translate for Libyan expatriates who were training local Pashtuns to make IEDs. American special forces attacked the compound, having received intelligence that this activity was taking place. Early in the attack, Omar was blinded by shrapnel and crippled with a wound to his leg. The firefight lasted for another 4 hours and ended with the deaths of all the Libyans in the compound. Tragically, an American sergeant was fatally wounded in the last minutes of the conflict and died 10 days later. Omar sustained two M-16 wounds to his upper back, but was kept alive by Army medics. As the only survivor, he was charged with throwing the grenade that killed the Army medic.

Omar spent several months in the prison in Bagram and reported being subjected to abuse, including being chained to hooks in the ceiling of his cell and forced to hang with his arms outstretched over his head. His treatment in Guantánamo was even rougher. He described being subjected to the "frequent flyer program" that has been documented in Central Intelligence Agency memoranda as a systematic means to impose sleep deprivation. Other forms of cruel treatment included "walling" (i.e., being thrown repeatedly against a specially constructed wall) and being a "human mop" (i.e., cleaning up one's own urine on the floor by lying down and moving around on it). Of course, American authorities deny these charges. Omar did not reveal these details until we had a fortuitous meeting in a jail cell, much like the one where these incidents occurred. He had a frank anxiety attack, and then agreed to talk about what had happened to him.

Many detainees have endured similarly harsh treatment and abuse. Almost all have described anxiety attacks, sleep disturbances, fatigue, weakness, and nonspecific aches and pains. They have a list of medical problems and complaints and feel they have not been adequately treated. They do not trust medical personnel because medics participated in the harsh interrogations they endured when they first arrived. Many have been on hunger strikes at some point during their long years of detention.

As I travel to other countries where human rights abuses are common, I have met other men and women who have had comparable experiences. They have been arrested unexpectedly in the middle of the night, beaten, shackled, kept in solitary isolation, and subjected to extreme environmental conditions. A number have suffered gunshot wounds, concussions, and other injuries. Naturally, they complain of depression, anxiety, sleep problems, and difficulties carrying on life as normal.

Notions on Clinical Formulations

Despite the fact that veterans and torture victims would consider their experiences differ vastly, the aftereffects have much in common:

- Sleep disturbances—partly induced by routines and habits in the combat veterans, but imposed on detainees;
- Sudden and unexpected panic;
- Persistent anxiety and feelings of intense alertness and vigilance;
- Unexpected and intrusive memories and associations to distressing events;
- Mood shifts that fluctuate by hours and days, particularly as characterized by sadness and anger;
- Awkwardness and hesitance in social relationships, even with family and close friends;
- Fatigue, weakness, somatic complaints (particularly gastrointestinal), and headaches;
- Difficulties paying attention and concentrating, resulting in poor memory and comprehension;
- Decreased libido, low interest in pleasurable activities, and shifting (often diminished) appetite.

These symptoms constitute some obvious, overlapping clinical presentations. Sleep disturbances occur in PTSD, anxiety disorders, depression, postconcussion syndrome, hypothyroidism, and pain secondary to degenerative arthritis. Irritability is common to multiple emotional disorders, postconcussion syndrome, hypothyroidism, and pain disorders. Problems in executive functioning, as demonstrated by difficulties in attention, concentration, and memory, occur in these conditions as well.

The most common diagnoses in these populations are posttraumatic stress, generalized anxiety, and major depressive disorders. Often, annotation of other medical conditions, including postconcussion syndrome, is missing (Iacopino & Xenakis, 2011). Traditional mental health treatment has focused almost exclusively on managing symptoms with medications, talk-based therapy, and, occasionally, so-called alternative and complementary interventions. The typical menu of drugs, in turn, often produces side effects, or more iatrogenic symptoms. Some patients improve, but many endure chronic ailments, leading to the burgeoning suicide rate among combat veterans and the innumerable stories of these men and women being unable to cope with civilian life. Broken homes, drug and alcohol abuse, unemployment, and chronic illnesses are common. Some veterans who are able to persuade intransigent medical boards about their impairment are fortunate to receive full disability from the Department of Veterans Affairs (VA). The detainees, in contrast, just suffer, sometimes engage in hunger strikes, and pray.

Strategies for Treatment

For mental health treatment, I propose that the goals should extend beyond diagnosis and symptom reduction to enabling an optimal QOL. Typically, treatment programs only focus on illness. They effectively shortchange patients and ignore what is most important to many—their experiences of their lives. Available treatments are fragmented among specialists and lack strategies that map out functional goals and objectives and that coordinate clinical interventions accordingly.

In advocating a treatment "strategy," I am using "strategy" in its military connotation. I am applying the thinking of the great military theoretician Karl von Clausewitz to medicine. In his classic *On War* (von Clausewitz, 1943), he defined "tactics," "operations," and "strategy" as follows. Tactics connote the actual face-to-face fighting at the squad level, or the actual encounter between patient and doctor in clinical practice. Operations involve the chaotic and complex movements of battalions and larger fighting units on the battlefield; in its medical counterpart, this would refer to running a clinic or hospital. Strategy, in contrast, focuses on campaign planning and achieving the political objectives of the country that has gone to war, or health care planning at the national level or large-scale endeavors like the Human Genome Project.

From von Clausewitz's strategic perspective, current clinical practices have obvious shortfalls. They focus on "tactical" problems of symptoms and largely ignore the "strategic" concerns of integrating treatment services and improving QOL, as is evidenced in what follows:

- The Institute of Medicine (IOM) published a review of treatments for PTSD (randomized controlled trials) and concluded that there is no compelling evidence for the effectiveness of most accepted interventions, except for some indication of the efficacy of exposure therapy (National Research Council, 2008);
- IOM reviewed treatments available for substance abuse in the Department of Defense (DoD) and the VA, and identified critical shortfalls (IOM, 2012);
- The DoD and VA only acknowledged the injurious effects of repeated exposures to IEDs several years ago. As late as 2009, both agencies attributed the symptoms manifested from repeated exposure to IEDs to PTSD (Hoge, Goldberg, & Castro, 2009);
- Most military and VA facilities treat soldiers in separate specialty clinics for mental health, mTBI, musculoskeletal pain, and so forth, and do not coordinate care;
- The military health system has undertaken separate, disconnected, and uncoordinated initiatives in suicide mitigation, pain management, PTSD, resilience, mTBI, and family support;
- Initiatives in integrative care often entail only placing mental health "extenders" in primary care clinics to administer screening questionnaires;
- Insurance carriers and governmental agencies reimburse practitioners for specific diagnoses within a long list, contributing to inaccurate coding and inappropriate treatment;
- Many psychiatrists restrict their practice to prescribing psychotropic medications after meeting with patients for 15-min appointments;
- Commonly, talk-based and behavioral therapies are dictated by manuals that only target particular symptoms and are administered by relatively inexperienced therapists;
- Research grants are allocated along discrete departmental lines of psychological health, concussion, resilience, substance abuse, and pain;
- Minimal funding and clinical effort have been applied to studying metabolic factors and illnesses that co-occur with PTSD and mTBI, or the array of medications prescribed for treating them;
- And, the systems for rating disabilities across the DoD and VA has not fundamentally changed since the 1950s.

A strategic review of this list suggests that current medical practice is "tactical" and reductionistic. We engage patients on the front lines with medications, cognitive−behavioral therapy homework, behavioral interventions, neurofeedback, and so forth. We order tests, prescribe drugs, and perform procedures like snipers, not like generals leading a campaign. We think if we do more of the same, discover better medications or genes that guide us in prescribing them, and conduct more sophisticated randomized controlled trials to convince payers that we are worth what we charge, then somehow we will establish credibility and the quality of care will improve.

Proposals to "medicalize" treatment appear to be attempts to change this approach, but they are inherently flawed. The practice of mental health is not like cardiology, surgery, or radiology. It differs qualitatively. The conditions we treat are not limited to clear etiologies or pathologies, and the states of mind and health of our patients are most heavily influenced by their environments and social systems.

Culture

A shift in strategic thinking requires a change in culture and perspective. Culture, as it includes attitudes, politics, and economics, shapes the broad contexts of our personal lives, professional practices, and the strategic efforts therein. I have observed that the values, codes, and practices of the military and VA shape attitudes toward treatment and treatment approaches, as well as the effectiveness of interventions. For example, the Soldier's Creed:

> I will always place the mission first; I will never accept defeat; I will never quit; I will never leave a fallen comrade.

Herein lies a basic conflict that haunts the injured and damaged. Acknowledging pain undermines the core strength of the fighting force and the mission it serves, and endurance, perseverance, and commitment to others before self strengthen it. However, such an attitude also contributes to the unintended consequence that soldiers who need help do not seek it. As individuals, their pain and suffering marginalize them even further from the sustaining esprit of their comrades; there is often no way out, except for suicide or some other violent act. On a larger scale, the strength of the team—and the military more generally—also suffers when so many of its injured are not getting the attention they need.

Similarly, practitioners' attitudes and the forces that shape them need to be reexamined. Many health care practitioners feel they work in a culture that is managed by agencies out of their control where fiscal imperatives override their individual opinions and goals. Feeling helpless, clinicians defer to government or health insurers and restrict their practice to diagnosing and treating only targeted symptoms and diseases.

An Alternative

Effective health care policy and treatment for our complex patients requires alternative strategies. We have the tools in these modern times to explore complex issues, conduct more sophisticated analyses, and develop and investigate effective treatment systems. My proposal regarding the diagnosis and treatment of combat veterans and victims of abuse and torture builds on the principles of general systems theory. D'Arcy Thompson, one of the spiritual fathers of the general systems movement, explained:

> Undertaking conventional analysis by splitting something into its various parts results in an exaggeration of the independence of these elements, so that we hide from ourselves (at least for a time) the essential integrity and individuality of the composite whole. We divided the body into its organs, the skeleton into its bones, in very much the same fashion we make a subjective analysis of the mind, according to the teaching of psychology, into component factors: but we know very well that judgment and knowledge, courage or gentleness, love or fear, have no separate existence, but are somehow mere manifestations, or imaginary coefficients, of a most complex integral. (Weinberg, 2001, pp. 262–263)

I suggest an integrated approach that acknowledges the complex interplay between the psychological and physiological and formulates therapeutic strategies for these nuanced, highly interconnected problems. At a basic level, this includes:

- A meticulous case history, beginning before the time of the injury, told in vivid narrative from the patient's view;
- Comprehensive assessment of previous medical and pharmacological illnesses and treatments;
- Critical evaluation of existing pharmacological treatment and careful, but systematic withdrawal from most medicines;
- A baseline evaluation of the patient, including sleep patterns, diet and exercise, laboratory findings, and psychosocial circumstances;
- Weekly psychotherapy;
- An individualized treatment regimen, perhaps including a number of nonstandard treatments like cranial electrostimulation therapy, vitamins, supplements, and hormones.

An integrative working model for PTSD and its comorbidities and an effective strategy for implementing it would shift clinical practice fundamentally. A systems view frames diagnosis and treatment of common symptoms, such as sleep disturbance and fatigue, in their broader contexts. Typical medical practice is grounded in iteratively listing signs and symptoms and then writing out treatment plans. In contrast, an integrative approach begins with efforts to understand the interdependent dimensions of the complex whole. It assumes that the cumulative and synergistic effects of the multiple psychiatric, neurological, metabolic, and pain problems underlie clinical presentations.

My clinical intuition is that so-called "treatment-resistant" PTSD, depression, and anxiety appear in patients with multiple problems that do not quite meet the threshold for diagnosis. Many patients suffer with subclinical illnesses, including low-normal thyroid disease, sleep apnea, chronic mild to moderate anxiety, and medication side effects. A systems view considers these as data points in a larger whole. It attends to associated injuries and illnesses and their complex interactions, and integrates them into a realistic and holistic clinical picture. It is truly "patient-centered," formulating individualized care plans with a focus on a more "strategic" goal of optimizing work, play, and relationships, not just relieving pain and suffering. The effective therapy of chronic fatigue or depression, for example, might involve treatment for the cumulative effects of low-normal thyroid, intermittent sleep apnea, and musculoskeletal pain in addition to psychotherapy and medications. The explosion in information technology could enable this more humane and holistic approach because it gives us tools to reach beyond a specialty-based, reductionistic health care system to one that is more complicated and integrated.

In contrast, patients in our current health care delivery system of "best practices" have been fragmented by excessive specialization, obfuscated by technology, and undermined

by our payment system. Surely, there are other voices advocating for "patient-centered care" and "value" in routine medical care, but they have barely been audible and taken hold. For greater effect, individual care providers need to initiate strategic change by taking charge of the care systems they work within such that integrated, "patient-centered" approaches and values prevail.

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Correction to Jurist (2014)

In the editorial by Elliot L. Jurist (*Psychoanalytic Psychology*, Vol. 31, No, 1, pp. 1–3. doi: 10.1037/a0035605) there was an error in the citation for Downing (2014). The correct citation is given below:

Downing, D. L. (2014). The Christopher Bollas Reader. *Psychoanalytic Psychology, 31*, 151–156.

The online version has been corrected.

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