Original Articles and Reviews

RTM Protocol's Developments in War-Affected Ukraine

Professional Training, Field Challenges, and Procedural Adaptations

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Abstract: The full-scale Russian invasion of Ukraine has created unprecedented mental health challenges, with post-traumatic stress disorder (PTSD) prevalence reaching critical levels among civilians, refugees, and military personnel. Traditional trauma-focused therapies, while effective, are often difficult to implement in war conditions due to their duration, resource intensity, and emotional burden. The Reconsolidation of Traumatic Memories (RTM) Protocol, a brief, imagery-based intervention grounded in memory reconsolidation theory and research, offers a scalable alternative. This article examines the RTM Protocol's implementation in Ukraine, including professional training, adaptations for frontline and hospital settings, and its integration into the Armed Forces' psychological support framework. We discuss procedural modifications for high-risk environments, hybrid delivery models for continuity of care, and strategies to overcome stigma and logistical barriers. Additionally, the paper explores the RTM Protocol's application for Ukrainian refugees across Europe and outlines the rationale for developing a Child Version of the RTM Protocol to address trauma in children. Emerging evidence suggests that RTM reduces intrusive symptoms, improves sleep, and restores functionality within three to five sessions, even under disrupted conditions. Its brevity, minimal verbal disclosure, and compatibility with remote delivery make RTM uniquely suited for humanitarian and military contexts. These findings underscore the RTM Protocol's potential as an evidence-based, adaptable intervention for mitigating trauma in Ukraine and similar conflict-affected regions.

Keywords: RTM protocol, PTSD treatment, trauma-focused intervention, mental health, memory reconsolidation

Since the full-scale Russian war against Ukraine began on February 24, 2022, millions of Ukrainian civilians and military personnel have been exposed to shelling, occupation, torture, and displacement, which have profoundly impacted their psychological well-being. Starting from 2014, the prevalence of post-traumatic stress disorder (PTSD) in Ukraine was already high due to the previous wave of Russian invasion and the annexation of Crimea in 2014. A civilian population trauma study conducted in 2021 found that 65% of internally displaced people (IDPs) experienced direct exposure to war-related traumatic events, with 26% displaying PTSD symptoms (Johnson et al., 2022). However, 2022 brought an escalation of the war, triggering mass casualties, physical injuries, and chronic stress, which increased PTSD prevalence to 55.4% among IDPs, and showed its rates of 50.8% and 62.2% for nondisplaced persons and refugees, respectively (Lushchak et al., 2023). Publicly available statistics from the National Health Service of Ukraine reveal an increase in PTSD cases, rising from approximately 3,000 annually in 2021 to over 12,000 in 2024 (National Health Service of Ukraine, 2024).

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Ukraine's traditional mental healthcare infrastructure, already underfunded before the full-scale invasion, is now facing cascading losses, including attacks on hospitals, emigration of trained professionals, and fragmentation of services (Pinchuk et al., 2025; World Health Organization, 2025). A major service delivery issue in Ukraine is the shortage of mental health practitioners, particularly in near-frontline and rural areas. Traditional trauma treatments such as Cognitive Behavioral Therapy (CBT), EMDR, and Narrative Exposure Therapy (NET) require weeks or months and often rely on clinicians with long-term specialized training. As demand has far exceeded supply, Ukraine has a pressing need for effective short interventions that can be safely delivered by newly trained clinicians, remotely or in person.

The Reconsolidation of Traumatic Memories (RTM) Protocol is a brief, structured, imagery-based intervention explicitly developed for treating PTSD, with research-proven effectiveness in veteran populations and positive outcomes for civilians documented in clinical reports (Gray & Bourke, 2015; Gray et al., 2019; Gray et al., 2021; Tylee et al., 2017). Research on the neuro-mechanisms of memory consolidation and reconsolidation shows that, when a long-term memory is reactivated, it returns to a labile state, during which its emotional component can be modified or reconsolidated with new information (Alberini, 2005; Phelps & Hofmann, 2019). The RTM Protocol applies these findings through memory re-activation and rescripting by briefly recalling the traumatic event, visualizing it at different speeds and perspectives (first- and third-person), and finally integrating a non-traumatic scenario, thereby strengthening the memory's reconsolidation in a safer emotional context. The whole process typically requires only three to five 90-minute sessions over consecutive days, with particular features that make it especially suitable for individuals affected by trauma. It involves minimal verbal disclosure, meaning clients are not required to speak in detail about the traumatic event, and it avoids direct emotional re-experiencing by using dissociative imagery techniques. As the RTM Protocol is a manualized procedure with every step compulsory to follow, it can be confidently utilized by newly trained mental health professionals or even para-professionals (such as nurses and social workers), significantly increasing the country's treatment capacity. Furthermore, the RTM Protocol is fully adjustable for remote delivery, providing essential access to care for displaced populations, refugees, individuals residing in combat-affected zones, or in some cases, those in general hospitals that are often understaffed with mental health professionals (Gorbunova & Hampton, 2025).

The RTM Protocol also offers promising opportunities for further development and adaptation to meet the needs of diverse trauma-affected populations. Its brief duration and low emotional burden make it suitable not only for PTSD but also for early interventions in cases of acute stress disorder (Gorbunova & Hampton, 2025). A child-focused version is already in development, featuring child-friendly language, adjusted pacing, and creative visual supports, while still maintaining the protocol's core re-consolidation mechanism (Global in Mind, 2025). The RTM Protocol also shows promise for use in cases of high-intensity or complex trauma, such as sexual violence, torture, or repeated abuse, in a fully closed version that reveals no trauma story. Also, it is highly adaptable for use in nontraditional environments that are often inaccessible to standard, long-term psychotherapeutic treatments. These include military personnel on active duty, emergency responders, displaced populations, and individuals in crisis or conflict zones. Its manualized structure, minimal session count, and compatibility with remote delivery allow for flexible deployment in mobile clinics, field hospitals, or through telehealth platforms. Additionally, the development of a virtual reality (VR)-assisted RTM version could further standardize delivery and support clients with limited capacity for internal imagery by offering immersive, controlled environments that facilitate safe dissociation and structured memory engagement. These adaptations – child-specific, high-containment, VR-integrated, and mobile-compatible – emphasize RTM's unique scalability and potential to address trauma across diverse settings and populations in Ukraine.

Given that the Ministry of Health of Ukraine has already approved the RTM Protocol as an evidence-based treatment for trauma-related conditions (Ministry of Health of Ukraine, 2023) and considering the available data on its feasibility both in terms of professional training and PTSD treatment in Ukraine (de Rijk et al., 2023), its implementation would be a pathway toward effectively addressing the country's increasing trauma numbers.

RTM Protocol Professional Training and Supervision in Ukraine

In response to the urgent need for scalable, non-retraumatizing trauma treatment, an international system for training, supervision, and research for the RTM Protocol was established in Ukraine through a collaborative effort involving the official training provider Quresta Inc. (formerly the Post-Traumatic Training Institute), in partnership with the Research and Recognition Project (R&R), and a network of Ukrainian ministries, public institutions, NGOs, charitable foundations, and international donors,

both private and institutional. Today, Ukraine has a growing community of RTM-certified clinicians delivering this trauma treatment amid the ongoing war. The first training groups for professionals practicing in Ukraine and the formation of a Ukrainian RTM Protocol training team have been organized with support from the Mental Health for Ukraine (MH4U) Project. In 2022, four training sessions took place for Ukrainian clinicians with sufficient English-speaking, listening, and reading skills, and 52 clinicians completed the full program that year (de Rijk et al., 2023; Implemental, n.d.). Among these were selected Ukrainian practitioners who later formed the Ukrainian training team. Building this internal capacity was essential for ensuring the sustainability and scalability of the education and practice, particularly under conditions of war and disrupted international mobility. In June 2023, the Ukraine RTM training team delivered the first complete Ukrainian-language training, resulting in 71% of Ukrainian clinicians achieving full certification. These results demonstrated that a high-fidelity RTM training program could be successfully transferred to Ukrainian trainers and delivered in the Ukrainian language (Gorbunova, 2023). To date, the RTM training program has been successfully accomplished by approximately 260 Ukrainian clinicians, including military and civilian psychologists, crisis responders, medical doctors, and academic professionals (RTM Protocol, n.d.).

Long-term support systems are essential for maintaining practice quality. Led by the Ukrainian Lead Trainer and Coaches under the supervision of the Global Director of Education and Training, biweekly supervision groups were established. These groups allow certified clinicians and those working toward certification to present cases, ask questions, receive ongoing mentoring, and deepen their conceptual understanding of the RTM Protocol. Modeled after the weekly US support groups, the Ukrainian groups foster peer support, facilitate troubleshooting of difficult cases, provide a forum for sharing success stories, and strengthen professional identity within the RTM community. Ukrainian clinicians consistently emphasize the central role of these supervision meetings in sustaining confidence and procedural fidelity under conditions of chronic stress and high caseloads.

The success of the initiative depends on a multilayered partnership model. Thus, Quresta Inc. provides international leadership in training and education, ensuring curriculum fidelity, supervising coaching, developing strategies for scalable implementation of the RTM Protocol, and maintaining the global register of certified professionals (RTM Protocol, n.d.). The Research and Recognition Project contributes to the scientific foundation by closely collaborating with the research and development initiatives of the University of Luxembourg, the National Psychological Association of Ukraine, the Center of Mental Health and Rehabilitation "Forest Glade" of the Ministry of Health of Ukraine, GlobalInMind ASBL. The Ministry of Defense of Ukraine actively supports and invests in training organization and the continuing professional development of its psychologists. Financial support comes from philanthropic and institutional donors, including the Luxembourg National Research Fund partnering with the Directorate for Development Cooperation and Humanitarian Affairs (MFA, Luxembourg) and the Luxembourg Development Cooperation Agency to support the first RTM Protocol clinical trial through the LuxAid BRIDGES program; the Ukrainian Charitable Foundation Voices of Children, which facilitates the development and research of the Child version of the RTM Protocol; and individual donor Dave Lapasata, who provides financial support for cohorts of military psychologists.

Field Challenges in Using the RTM Protocol With Military Personnel Involved in Combat

As cited by President Volodymyr Zelenskyy during a press conference on January 15, 2025, the Armed Forces of Ukraine (AFU) comprise approximately 880,000 active service members (Fakty ICTV, 2025). While this reflects the total military capacity, the exact number of troops directly engaged in combat operations is not publicly specified for security reasons. However, due to the ongoing war and Ukraine's defensive stance, a significant portion of the active personnel, several 100,000, are engaged in direct combat or frontline support roles. Additionally, according to official statistics from the Ministry of Veterans Affairs, over 600,000 veterans who have served since 2014 and been demobilized for various reasons hold combatant status (Ministry of Veterans Affairs of Ukraine, n.d.). It is reasonable to conclude that about one million Ukrainian soldiers have experienced combat and may therefore be at increased risk of combat-related physical and mental health issues, especially PTSD.

Besides being in combat itself, which can cause PTSD and other stress-related disorders, active-duty military personnel encounter several other factors specific to their duties. These include, but are not limited to, frequent deployments, long separations from family, strict hierarchical structures, moral dilemmas, and exposure to physically and emotionally demanding environments. In addition to combat, factors associated with an increased risk of PTSD include female gender, ethnic minority

status, low education, nonofficer ranks, multiple or prolonged deployments, prior adverse life events and traumas, and previous psychological problems (Xue et al., 2015). The nature of the Russo-Ukrainian war causes the Armed Forces of Ukraine to constantly overstretch their capabilities, which negatively impacts rotation lengths, recovery, and rehabilitation periods. These factors are also known to influence PTSD prevalence (Rona et al., 2007).

Psychological support is essential for maintaining and restoring combat readiness, protecting the mental health of military personnel, and preventing the long-term adverse effects of war-related stress. Consequently, a psychological support system has been established for the Armed Forces of Ukraine through a range of orders on psychological support issued by the Commander-in-Chief of the Armed Forces of Ukraine in 2024. Implemented across five levels, the system addresses all stages of military service, from the initial day in the army to transitioning back to civilian life (Ministry of Defense of Ukraine, 2025). The support levels are as follows: (1) Self-care and peer support, where fellow soldiers help each other; (2) Support within the military units, which is consistently provided by officers-psychologists; (3) Recovery at the brigade or regiment level at the Psychological Support Stations, where personnel may stay up to 7 days, facilitated by officers from the Combat Stress Control Groups and the Psychological Support and Recovery Groups; (4) Professional assistance at specialized rear facilities, with stays of up to 14 days, provided by military psychologists deployed with personnel to implement psychological recovery measures; (5) Extensive psychological rehabilitation in medical facilities outside the operational area, with stays of up to 15 days, provided by medical psychologists.

While implementing the mentioned system, the Armed Forces of Ukraine attempt to follow the doctrinal approach used by NATO partner countries' armed forces, which is based on the principles of proximity, immediacy, expectation, and simplicity (NATO Standardization Office, 2019). According to NATO Standard for Forward mental healthcare, and due to the intensity of combat operations in Ukraine and the limited time available for military personnel to fully recover, short-term trauma treatment methods are crucial. The RTM Protocol, as one of the evidence-based short-term interventions approved by the Ministry of Health of Ukraine (Ministry of Health of Ukraine, 2023), was introduced into the psychological support system of the Armed Forces of Ukraine in December 2024. The main reason for implementing the method is that it can be used at nearly all levels of psychological support, starting from the second, immediate support within military units. Aside from its general advantages mentioned earlier in the article, the RTM Protocol can be adapted for field conditions, which are very challenging due to the realities of active combat service.

One of the most critical challenges is ensuring safety during the administration of the Protocol. In frontline environments, the concept of a secure setting is relative, as even Psychological Support Stations may be subject to shelling or destruction. Sessions often take place in improvised spaces, such as dugouts, damaged buildings, vehicles, or tents. To adapt, therapists and military personnel establish clear safety protocols before beginning treatment, including agreed procedures for interrupting sessions and relocating to safer environments when sudden threats emerge. Another challenge concerns continuity of care. The unpredictable nature of rotations and the limited time available for recovery often make it impossible to complete the standard series of Protocol's sessions at one location. To address this, interventions may start at a Psychological Support Station in an offline format and be continued online once personnel return to their units. However, unstable internet connections create additional complications. Connections may be lost suddenly, requiring a shift to audio-only communication and prior training in self-regulation strategies to ensure that soldiers can remain stable until contact is re-established. The unpredictability of combat duties further complicates the therapeutic process. Soldiers may be redeployed with little warning, interrupting ongoing treatment. In such cases, new traumatic experiences often accumulate before previous ones are fully processed, creating tension between the need to address the initial event and the urgency of dealing with recent traumas. Psychologists respond to this challenge by prioritizing the most pressing issues, while maintaining structured follow-up to support the continuation of therapy when possible. Cultural and interpersonal barriers also shape how the RTM Protocol is applied in field conditions. Stigma around mental health remains strong within military culture with many personnel downplaying their symptoms or perceiving help-seeking as weakness. Such minimization of distress can lead to underreporting and difficulties in identifying signs of physical arousal during recounting of traumatic events. To adapt, therapists use ongoing psychoeducation, invest in rapport-building, and explain the purpose of each step of the Protocol. These measures help maintain trust and preserve the therapeutic alliance in situations where respect and credibility are crucial. Finally, attrition due to force majeure events such as injury, evacuation, or death is a reality of field conditions. While unavoidable, adaptations to such events include the modular design of the RTM Protocol, which enables the transfer of cases between specialists without risking treatment outcomes. In addition, skepticism toward the method is reduced through visible

improvements in sleep, mood, and performance, as well as through endorsement by commanders who recognize positive changes in their subordinates.

Such challenges are not only theoretical but are regularly observed in practice. For example, it is not uncommon for soldiers in highly specialized roles, such as drone engineers or sappers, to experience acute stress reactions that temporarily render them unable to perform their duties. In one instance, a service member developed severe physiological and psychological symptoms following exposure to a drone attack in which he was injured and witnessed the serious wounding of a colleague. These symptoms – manifesting as disturbed sleep, heightened arousal, and loss of operational capacity – necessitated the temporary withdrawal of his team from active operations. With the completion of the RTM Protocol, the soldier was able to regain stability, return to duty, and sustain his performance in less than a week.

Taken together, these experiences highlight that while the administration of the RTM Protocol under active-duty conditions is complex and often disrupted by operational realities, adaptive strategies have been developed to preserve its effectiveness. Through flexible delivery formats, safety planning, rapport-building, and the support of military leadership, the protocol can be implemented even in unstable and high-risk environments, making it a viable component of psychological support in the Armed Forces of Ukraine.

Implementation of the RTM Protocol for Military Personnel in Hospital Settings in Ukraine

The Ukrainian healthcare system faces an unprecedented need to support the mental health of soldiers hospitalized due to combat injuries. As of January 2025, the country counts estimated combat-injured military personnel between 350,000 and 380,000 (NBC News, 2025). One of the largest trauma centers in Ukraine, Mechnikov Hospital in Dnipro, reports receiving 40 to 100 severely wounded soldiers daily, translating to 1,200–3,000 admissions per month at a single facility (Burridge et al., 2024). The combination of high physical injury rates and combat-related stress factors creates a level of mental health demand that exceeds any previous challenge faced by the Ukrainian medical system, particularly within hospital settings where both physical and psychological rehabilitation must be addressed simultaneously.

Acute, post-traumatic stress disorders (ASD, PTSD) and complex PTSD are among the most prevalent mental health conditions observed in service members exposed to combat and operational stress (Armed Forces Health Surveillance Division, 2024; Grieger et al., 2006; Grinsill et al., 2024; McCabe et al., 2021). Battle-injured combatants are more susceptible to trauma and stress-related disorders than their peers, with the severity of physical injuries strongly correlating with PTSD risk (Grieger et al., 2006; Koren et al., 2005; Prykhodko et al., 2023). Such vulnerability in the Ukrainian context can also be explained by the fact that most of the service members are former civilians who received only brief military training and are not adequately prepared to handle combat-related stressors (GLOBSEC, 2023). Additionally, combat-injured veterans often face moral injury, anxiety, depression, and sleep problems, which are risk factors for PTSD (Bravo et al., 2019; Wounded Warrior Project, 2017). Research shows, however, that early interventions in hospital settings can reduce trauma-related symptoms and enhance long-term recovery outcomes (Roberts et al., 2019).

Intrusive symptoms, such as flashbacks, nightmares, and recurring distressing memories, are among the most disabling manifestations of traumatic stress in hospitalized service members. These symptoms not only reduce overall functionality but also complicate medical treatment, rehabilitation, and the reintegration process after discharge. Sleep disturbances, in particular, play a critical role. Nightmares and insomnia amplify pain perception, impair mood regulation, and prolong recovery, creating a vicious cycle that undermines both physical and psychological healing (Gilbert et al., 2015). Hospital environments may unintentionally reinforce trauma responses. Sensory cues such as the beeping of monitors, bright lighting, antiseptic odors, or the sight of other severely wounded patients can resemble combat-related stimuli and trigger flashbacks or hyperarousal (Schumann et al., 2025). Also, despite the readiness of many service members to seek specialized psychological care, barriers remain (Bravo et al., 2019). These include organizational and logistical difficulties, stigma associated with mental health care, fear of re-experiencing trauma during therapy, and concerns about the quality or method of psychological support (Wounded Warrior Project, 2017). Moreover, psychological conditions are frequently overlooked in surgical and trauma wards, where the primary focus is on acute physical injuries (Koren et al., 2005). For Ukrainian mental health clinicians working in hospitals, the main challenges include balancing the immediate physical consequences of combat injuries with patients' psychological needs, managing ward limitations, and addressing broader systemic obstacles such as fragmented care pathways and resource shortages (GLOBSEC, 2023; Gorbunova & Hampton, 2025). Mentioned above emphasizes the necessity of

integrating structured trauma-focused interventions, such as the RTM Protocol, into hospital-based care for injured service members. The first introduction of the RTM Protocol into Ukrainian hospitals was done remotely by civilian psychologists (Gorbunova & Hampton, 2025). Later, psychologists from the Medical Forces Command, a special corps within the Ukrainian Armed Forces, were trained in the method. RTM Protocol implementation in hospital environments is connected with a series of adjustments to respond to the unique challenges posed by surgical and trauma wards.

Unlike frontline conditions, hospitals provide relative physical safety, but their environment often contains powerful sensory triggers. In addition, the constant demands of medical procedures frequently interrupt therapeutic work. To address these challenges, therapists adapt by creating psychologically safe micro-spaces within wards (e.g., using screens, noise reduction strategies, or private consultation rooms when possible) and by synchronizing RTM sessions with surgical schedules to avoid disruption. These environmental and procedural adjustments ensure that the intervention can take place without exacerbating distress or interfering with life-saving medical treatment. Combat-injured patients often face pain, fatigue, and limited concentration due to medication or physical conditions. Standard RTM Protocol sessions, therefore, require tailoring. Therapists assist patients in identifying neutral events for visual training, carefully select traumatic memories for processing, and adapt session language to avoid wording that could trigger associations with injury or pain. Sessions may also be shortened or broken into smaller segments to accommodate medical fatigue, ensuring therapeutic continuity while respecting the patient's physical limits. Hospitalization is often brief, and patients are frequently transferred to rehabilitation centers or discharged before completing treatment. This creates difficulties in continuity of care. So, hospital-based RTM practitioners employ hybrid models, which involve initiating treatment in person during hospital stays and continuing therapy online after discharge or transfer, thereby ensuring consistency despite fragmented care pathways. Finally, psychological support in hospitals is often deprioritized compared to acute physical treatment, and coordination between medical and psychological teams is limited. The RTM Protocol helps bridge this gap by offering a structured, brief method that can be flexibly inserted into hospital workflows. Interdisciplinary briefings and psychoeducation of medical staff improve recognition of trauma-related symptoms and strengthen collaboration between surgeons, nurses, and psychologists. This integrated approach increases the visibility of mental health care within surgical wards and reduces the tendency to overlook psychological needs.

Early evidence from hospital implementation suggests that the RTM Protocol reduces both acute and posttraumatic stress symptoms, improves sleep quality, and facilitates rehabilitation, even within short hospital stays (Gorbunova & Hampton, 2025). Its adaptability allows clinicians to address immediate symptoms without overwhelming patients, while hybrid delivery methods ensure continuity after discharge. With these adjustments, the RTM Protocol is feasible and effective in hospital-based care, complementing surgical treatment and enhancing recovery outcomes for combat-injured soldiers.

RTM Protocol's Potential to Assist Ukrainian Refugees Across Europe

The full-scale invasion of Ukraine by Russian troops in 2022 resulted in the extensive forced migration of millions of Ukrainians to the EU and other countries. As of September 2, 2025, the number of Ukrainian forcibly displaced persons in European countries has exceeded five million, of whom about 30% are children (UNHCR, n.d.). Mental health disorders are considerably more prevalent among Ukrainian refugees in host countries compared to the general population of the European Union (Eurostat, 2024; UNHCR et al., 2025).

The prevalence of PTSD among forced Ukrainian migrants in Europe is estimated to range between 15% and 41.2%, depending on demographic factors, region of origin, and host country context (Bilewicz et al., 2024; Yasenok et al., 2025). The causes of PTSD are direct exposure to war-related events (such as direct attacks, witnessing violence, or the traumatic escape from invaded regions), but also pre- and postmigration life difficulties: the loss of ties with family and community, economic hardship, loss of employment, employment well below the level of previous qualifications, difficulties in language adaptation, and poor access to psychological assistance in the native language (Karstoft et al., 2025). Also, there are alarmingly high rates of acute stress and trauma-related disorders among Ukrainian refugees shortly after displacement, reporting that 93.5% of Ukrainian war refugees met the criteria for ASD, with significant predictors including direct exposure to violence, financial insecurity, and social isolation in host countries (Kordel et al., 2024). The typical Ukrainian refugee profile consists predominantly of women, particularly single mothers responsible for one or two children without consistent spousal support (UNHCR, n.d.). This demographic context often worsens trauma symptoms along with other psychosocial stressors like the husband's military service in Ukraine.

At the early stages of the war, several European countries – including France, Lithuania, Spain, Sweden, Belgium, Denmark, Portugal, and Slovakia – integrated psychosocial support into adaptation classes or initial integration programs, enabling Ukrainian refugees to receive mental health or social-emotional assistance upon first contact with reception services (Karasapan, 2022). However, access to ongoing professional psychological or psychiatric care remains impeded by systemic barriers across EU host countries. Refugees frequently encounter long waiting lists, scarcity of mental health professionals, language obstacles, cultural differences, and instability that hamper follow-up care (Kardas et al., 2025; Red Cross EU Office, 2024). The most effective approaches used with refugees and asylum seekers are trauma-focused cognitive behavioral therapy (TF-CBT), eye movement desensitization and reprocessing (EMDR), and Narrative Exposure Therapy (NET; Macallin & Wynn, 2021; Turrini et al., 2025). Still, resource constraints, extended treatment duration, and high levels of emotional exposure often hinder the implementation of the methods in humanitarian contexts. In this regard, the RTM Protocol, as a brief and easy-to-implement intervention, represents a promising alternative.

Currently, about one-third of certified Ukrainian RTM Protocol practitioners are based in European countries (RTM Protocol, n.d.). They support Ukrainians abroad through medical insurance systems, projects operated by charitable organizations, or private counseling practices (often conducted online), addressing challenges related to the refugee situation via Protocol adjustments.

The adversities faced by Ukrainian refugees combine the extreme intensity of direct war exposure with the prolonged stressors of forced migration, producing a cumulative effect of traumatization. Experiences such as bombardments, witnessing violence, or fleeing under life-threatening conditions are compounded by postmigration challenges, including loss of community, economic insecurity, family separation, and the strain of adapting to a new language and culture. A key advantage of the RTM Protocol in this context is that it does not require individuals to provide detailed verbal accounts of their traumatic experiences. Instead, the method works through guided visualization techniques that allow memories to be reconsolidated without detailed retelling or reliving them. This makes it especially suited for populations whose trauma is both severe and ongoing, providing an effective pathway to symptom relief while minimizing the risk of additional psychological harm. One of the challenges concerns the safety and stability of treatment environments. Refugees often live in temporary accommodation centers, shelters, or host households where privacy is limited, and interruptions are frequent. To adapt, clinicians have applied the RTM Protocol in improvised but safe spaces – such as community centers, mobile health units, or even online platforms – with measures for managing interruptions and ensuring that patients can regulate themselves if a session is cut short. An additional advantage in this context is the brevity of the RTM Protocol: It does not require several weeks or months of engagement and achieves substantial symptom reduction within three to five sessions. This shorter treatment course not only lowers the risk of dropout due to relocation or changing living conditions but also increases the feasibility of delivering effective trauma care in unstable and resource-limited refugee settings. Stigma and mistrust of mental health services represent another barrier. Many refugees minimize their distress or perceive psychological treatment as a sign of weakness, often rooted in cultural attitudes toward mental health and reinforced by fears of traumatization. Clinicians delivering RTM address this by emphasizing the protocol's brevity, noninvasive character, and avoidance of emotional overload. These characteristics reduce shame and the fear of being judged, while also lowering the risk of traumatization. Framing RTM as a practical tool for restoring daily functioning and family stability – rather than as conventional psychiatric treatment – further decreases resistance, enhances trust, and encourages uptake among refugees who might otherwise avoid seeking psychological support.

The RTM Protocol demonstrated a great capacity for integration into host communities, with careful adaptation to mobility, cultural context, and service delivery constraints. The method can become an effective and scalable component of refugee mental health support in Europe.

Addressing War-Related PTSD in Children: The Rationale for Developing the RTM-C Protocol

The ongoing Russian invasion has exposed millions of Ukrainian children to shelling, displacement, bereavement, and chronic insecurity, resulting in alarmingly high levels of post-traumatic stress. Recent findings reveal that approximately 44% of Ukrainian children aged 10–17 exhibit signs of potential post-traumatic stress disorder (PTSD), with prevalence rising to 47% among older adolescents (Olena Zelenska Foundation & Kyiv School of Economics, 2024). Alarming figures from another study show that 68.7% of Ukrainian children referred to professional psychological support faced war-related traumatic events; nearly 70% of them met DSM-5 criteria for PTSD, and around 21% met ICD-11 criteria for complex

PTSD (Pfeiffer et al., 2024). It is important to note that in war-affected children, PTSD is a risk factor for developing other mental health disorders, where secondary traumatization after displacement increases the risk of depression, anxiety, destructive behaviors, and self-injury, among other issues (Skrypnyk et al., 2024). Mentioned figures and tendencies underscore the pervasive nature of war-related trauma, which is not confined to particular regions but is widespread across the country. For practitioners, treating child PTSD in this context poses significant challenges. Traditional evidence-based methods require long treatment times and a secure therapeutic environment. These conditions are often hard to fulfill in war-affected areas of Ukraine, where healthcare services are overwhelmed and staff shortages are common. Furthermore, traditional trauma therapies frequently involve repeated retelling of traumatic experiences, which increases the risk of retraumatization and can be particularly burdensome for children.

The RTM Protocol offers a way to overcome these barriers. Originally designed for adults, the RTM Protocol, as a brief, structured, and imagery-based intervention with minimum verbal disclosure of traumatic events, can be easily adapted to meet children's needs. A child-focused version of the RTM Protocol (RTM-C Protocol) for children ages 6-12 is currently under development as a therapeutic tool that builds on the main reconsolidation principles and is tailored to the PTSD specific as well as cognitive and neurological development of children.

PTSD in children presents both similarities to, and differences from, adult symptomatology. Core features include intrusive re-experiencing of traumatic events (nightmares, flashbacks, intrusive images), avoidance of trauma reminders, and heightened arousal (hypervigilance, exaggerated startle responses, irritability, concentration difficulties). However, symptoms are often expressed less verbally and more behaviorally. Younger children frequently display regressive behaviors (e.g., bedwetting, clinging, loss of previously acquired skills), somatic complaints (stomach aches, headaches without medical explanation), and trauma-related play in which violent or frightening themes are repetitively enacted (De Young et al., 2011; Scheeringa et al., 2011). School-aged children often show impaired learning, distractibility, and declining academic performance, while adolescents may demonstrate risk-taking, aggression, or withdrawal (Pynoos et al., 2009). From about six years of age, children demonstrate sufficient neurocognitive maturity to benefit from reconsolidation-based interventions. At this age, children develop the necessary executive and memory-related capacities, which are supported by maturing different brain structures (Teeter, 2009). The hippocampus undergoes significant development across middle childhood, with functional maturity for integrating episodic details into coherent memory narrative emerging between 7 and 10 years of age (Keresztes et al., 2017; Shing et al., 2010). Also, children aged 6–14 show that hippocampal ripples, a key mechanism in declarative memory, are reliably activated during memory judgments, which suggests that they possess functional mechanisms similar to adults, supporting their ability to participate in explicit memory tasks (Norman et al., 2023). Still, prefrontal regions that support higher-order memory control and regulation continue to mature into adolescence (Gogtay et al., 2004), which makes children less efficient at long-term memory consolidation (Ghetti & Bunge, 2012). This developmental trajectory suggests that children around age six are able to engage in imagery-based reconsolidation, provided the method is adapted to their cognitive capacities.

To accommodate children's developmental profiles, the RTM-C Protocol requires several key modifications, which are now under investigation. Language is simplified, with abstract instructions translated into concrete, age-appropriate narratives and metaphors. Therapeutic delivery is supported by animated (cartoon-based) instructions, drawings, and cardboard models of imaginative space (cinema theater) to scaffold imagination and dissociation. Structured parental involvement is essential, providing orientation, emotional support, and continuity beyond therapy sessions. Stress-free recall procedures are prioritized, avoiding the need for detailed retelling of traumatic events; therapists are trained to interrupt distress promptly and redirect attention to neutral or grounding tasks. Finally, session design is adapted to developmental needs, with shorter sessions of approximately 60 minutes delivered more frequently, and positive reinforcement strategies such as games or stickers used to sustain engagement and motivation.

The developed RTM-C Protocol preserves the therapeutic principle of memory reconsolidation while embedding adaptations that make it developmentally appropriate, safe, and feasible. By addressing how PTSD manifests in children and adjusting delivery to their neurocognitive profile, the RTM-C Protocol represents a promising low-burden intervention for war-affected populations. Its brevity and scalability are particularly relevant in Ukraine, where the need for child trauma care far exceeds the available clinical capacity.

Conclusion

The experience of implementing the RTM Protocol in war-affected Ukraine demonstrates that a brief, non-retraumatizing, and highly structured trauma intervention can be effectively deployed across diverse and severely

constrained environments. Despite ongoing conflict, infrastructure destruction, professional shortages, and intense operational demands, Ukrainian clinicians, supported by an international training and supervision system, have built a sustainable community. Field psychologists working under dangerous frontline conditions, hospital-based practitioners treating combat-injured soldiers, and mental health professionals assisting refugees across Europe have successfully applied the RTM Protocol by developing special procedural adaptations.

Training outcomes show that a growing cohort of Ukrainian clinicians, including military psychologists, can reliably administer the protocol after relatively brief specialized training. Field and hospital challenges in treating active-duty military personnel and veterans, such as unstable environments, treatment interruptions, emotional barriers, and logistical constraints, have led to innovations in remote delivery, modular sequencing, and context-responsive session management. Among refugees, RTM offers a feasible solution to barriers such as language mismatch, long waiting lists, and frequent relocations. The emerging Protocol adaptation for children represents an important advancement, addressing the needs of Ukrainian children.

As the demand for scalable, effective trauma treatment continues to rise, RTM Protocol provides a viable pathway for strengthening mental health capacity in Ukraine and among displaced populations abroad. Its implementation underscores the importance of flexible, evidence-informed interventions that are compatible with unstable, high-stress, and resource-limited conditions. Continued training, empirical evaluation, and clinical innovation will be essential to further integrate RTM Protocol into national trauma-care systems and to support the recovery of war-affected military personnel, civilians, and children.

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Conflict of Interest
The first author, Viktoriia Gorbunova, serves as the Lead Trainer for the RTM Protocol in Ukraine and the Principal Investigator for the research initiatives in Ukraine described in this article. Robin Hampton is the Global Director of Training and Education at Quresta Inc., the official training provider for the RTM Protocol. All authors are affiliated with Quresta Inc. as members of the training and supervision team and receive financial compensation for their work. However, this article was written independently and without any financial support for its preparation. The authors affirm that these affiliations did not influence the scientific integrity, analysis, or reporting of the findings presented in this article.

Publication Ethics
During the preparation of this work, the authors used Microsoft Copilot (GPT-based AI tool) to assist with grammar checking, language refinement, and formatting suggestions in accordance with American English conventions. After using this tool, the authors thoroughly reviewed and edited the content as needed and take full responsibility for the integrity and accuracy of the publication.

Authorship
Viktoriia Gorbunova: Conceptualization; Methodology; Project administration; Writing – original draft; Investigation; Writing – review & editing; Supervision. Robin Hampton: Investigation; Writing – original draft; Supervision. Olha Savychenko: Investigation; Writing – original draft. Szergej Capec: Investigation; Writing – original draft. Danylo Bezmenov: Investigation; Writing – original draft. Liudmyla Baieva: Investigation; Writing – original draft. Tetiana Shyriaeva: Investigation; Writing – original draft. All authors approved the final version of the article, including the results and conclusions.
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