

The NICoE Fire Arms Training Simulator (FATS) Program

Service members referred to the NICoE suffer from comorbid, combat and mission-related traumatic brain injuries with psychological health conditions. The NICoE interdisciplinary care model provides a holistic, patient-oriented approach to treatment by utilizing care teams representing a wide range of therapeutic disciplines. As part of this interdisciplinary approach, the Fire Arms Training Simulator (FATS) system is one of the many therapeutic modalities offered during the four week NICoE program. After undergoing acute rehabilitation for their injuries, service members often lack confidence in their ability to perform their war fighting duties. The FATS system operator works with clinicians to help service members build confidence and relax while performing a leisure activity in an environment in which many service members are more comfortable. They also assess functional pain and/or vision problems, and help service members develop the other resiliency tools learned as part of the NICoE program.

The Simulator

FATS consists of an Instructor/Operator Station, audio/visual system, and four weapons firing positions. Each firing position is capable of operating simulated weapons that include the M9 pistol, M4 rifle, and the M870 12 gauge shotgun. Weapons accompanying the FATS have the external appearance, weight, and characteristics of fully functioning, in-service weapons, but they have all been demilitarized and use laser technology. Factors can be integrated into the simulator such as running out of ammunition and firearm failures to allow for more military tangible problem solving situations.

Interdisciplinary Approach

Throughout the FATS evaluation, the service member is under the direct observation of the prescribing clinician and the FATS system operator. The service member is constantly providing feedback to the provider with regards to subjective sensation, such as comfort and anxiety, all while the system operator is capturing data describing the service member's interaction with the provided encounter. Upon completion of the encounter, the prescribing clinician will have subjective and objective data with which to tailor a specific treatment plan for the service member. The collaboration of the FATS's system operator and the clinician allows for creation of a FATS environment in which the service member's basic marksmanship skills can be assessed in a safe, controlled environment. The more accurate the assessment, the better equipped the interdisciplinary team is to assist the service member in returning to his or her duties.

FATS Procedure

Phase One: Assessment

- The service member will be assessed on his or her ability to accurately handle and fire a weapon. The assessment will also take into account the service member's emotional state prior to, during, and after handling the weapon.

Phase Two: Marksmanship Evaluation

- The service member will work with the FATS system operator to set specific goals for attaining superior marksmanship abilities.
- The FATS system operator will personalize the range settings for the service member as he or she fires at different targets in different settings. Afterwards, the system operator will analyze the service member's accuracy and precision.

Phase Three: Video Evaluation (Optional)

- The last phase will put the service member through a virtual reality situation where he or she must make real time decisions about simulated human targets and must deal with the intensity that accompanies battlefield situations.
- The system operator will then play back the video to the service member and analyze his or her performance before deciding if additional FATS treatment is necessary.