

ATTACHMENT B.3

Statement of Objectives

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STATEMENT OF OBJECTIVES

POST TRAUMATIC STRESS DISORDER (PTSD) CLINICIAN ADMINISTERED PTSD SCALE (CAPS 5) SIMULATION

1. PURPOSE

This Statement of Objectives is for a contractor to design and build an advanced training course using artificial intelligence and computerized responsive virtual human technology (RVHT) to allow learners to practice the administration and scoring of the CAPS-5.

2. SCOPE

A Critical Mission Need: A Responsive Virtual Human Technology (RVHT) Training Simulation

To provide the design and build of an advanced training simulation using artificial intelligence and computerized responsive virtual human technology (RVHT) to allow learners to practice the administration and scoring of the Clinician Administered PTSD Scale (CAPS) CAPS-5. The NCPTSD has developed a separate online course to teach basic CAPS-5 administration skills. This effort is intended to augment the existing basic training course and will not include didactic content from that course (e.g., history of the CAPS-5, introduction to CAPS-5, and changes since the prior version). The vendor will deploy and maintain the training simulation as well as provide web based hosting of the simulation

3. PERIOD AND PLACE OF PERFORMANCE

The anticipated Period of Performance is a one (1) twelve-month base period after date of contract award with four (4) twelve-month option periods subject to the availability of appropriated funds.

Period Of Performance	Start	End
BASE	July 3, 2017	July 2, 2018
Option 1	July 3, 2018	July 2, 2019
Option 2	July 3, 2019	July 2, 2020
Option 3	July 3, 2020	July 2, 2021
Option 4	July 3, 2021	July 2, 2022

* The option periods are not guaranteed and are subject to the Contracting Officer exercising each period.

* Any work with the Government staff shall not take place on Federal holidays or weekends unless directed by the Contracting Officer (CO).

* There are ten (10) Federal holidays set by law (USC Title 5 Section 6103) that VA follows:

* Under current definitions, four are set by date:

New Year's Day January 1

Independence Day July 4

Veterans Day November 11

Christmas Day December 25

If any of the above falls on a Saturday, then Friday shall be observed as a holiday. Similarly, if one falls on a Sunday, then Monday shall be observed as a holiday.

The other six are set by a day of the week and month:

Martin Luther King's Birthday Third Monday in January

Washington's Birthday Third Monday in February

Memorial Day Last Monday in May

Labor Day First Monday in September

Columbus Day Second Monday in October

Thanksgiving Fourth Thursday in November

4. BACKGROUND

The Clinician Administered PTSD Scale (CAPS) is the gold standard for posttraumatic stress disorder (PTSD) assessment and diagnosis for both military Veteran and civilian trauma survivors. The CAPS is a structured interview in which a clinician asks a patient a series of questions to identify the presence of PTSD symptoms. A quality interview takes approximately 60 minutes to administer. The CAPS was recently revised to

reflect the PTSD diagnostic criteria changes in the *Diagnostic and Statistical Manual-5th edition (DSM-5)*. This revised version is called the CAPS-5. A detailed administration protocol has been created by the National Center for PTSD (NCPTSD) which is included in pages 2-4 of the CAPS-5 assessment measure.

This training is expected to last approximately 120-140 minutes depending on the queries selected by the learner.

5. PERFORMANCE OBJECTIVES

At a minimum, this SOO supports the following goals:

Objective 1 - Develop, deploy, and support management of a simulation training and provide content management support.

Overall Characteristics:

Development includes development of software and simulation training. Deployment and management support includes deployment and hosting of simulated training on the vendor provided site.

Solution must use artificial intelligence and responsive virtual human technology (RVHT) to create avatars that look, speak, and behave like real people and interact dynamically with the learner. NCPTSD will have final approval regarding the features of avatars. The avatar's verbal responses must be available via both audio and closed captioned text. The learner must have the ability to interact with the avatar verbally (using a computer microphone) and through typed text.

Along with the use of one or more avatars, the course must integrate ongoing real-time feedback and coaching throughout the administration and scoring of the CAPS-5. This coaching should be supplied by an on-screen figure who advises, guides, and corrects the learner as necessary through written or spoken (recorded) prompts. Coaching will focus on aspects of CAPS-5 administration that are known to cause challenges for novice administrators.

The learner must be able to ask unscripted prompts and the avatar must have deep answers. Thus the learner must be able to craft their own series of questions and get individualized responses. The avatar should not respond with an answer such as "I don't understand what you are asking" but instead should be able to provide answers to questions that are somewhat off target. The coach should then provide the learner with feedback and make recommendations on the correct way to ask the question.

At the conclusion of the training, the learner will receive summary feedback on their performance administering and rating the CAPS-5. Feedback should include: information on what aspects of the CAPS-5 were administered and scored adequately and/or poorly, noting any systematic problems such as asking too many questions or not following standard prompts, the accuracy of the scoring, and their efficiency with determining symptom severity. An overall level of competency should result either in passing the course and receiving a certificate or feedback on additional training to achieve competency.

Minimum characteristics of Training:

- Provide learners with experience administering and scoring the CAPS-5 with a lifelike responsive virtual human that demonstrates human emotions, behaviors and speech.
- Provide learners experience in the administration of the CAPS-5 so they will:
 - Become familiar administering the CAPS-5 items and asking appropriate prompts
 - Be efficient in CAPS-5 administration, asking only those prompts necessary to obtain severity ratings
- Learners will gain experience scoring the CAPS-5 by:
 - Determining whether Criterion A is met
 - Determining whether a symptom meets the *DSM-5* criterion
 - Deciding whether qualifying symptoms are related to the index trauma
 - Calculating the CAPS-5 symptom cluster severity scores, total symptom severity score, and determining PTSD diagnostic status
- Provide ongoing real-time feedback and coaching on learners' performance as they administer and score the CAPS-5.
- Provide descriptive summary feedback on learners' performance administering and rating the CAPS-5.

The training should include an on-screen visual depiction of the CAPS-5 that replicates the look and layout of the actual measure. We are proposing that learners be able to select (using point-and-click) from the various prompts listed in the on-screen version of the CAPS-5 (see below).

After the simulated patient's response to each item, the learner will have the option to:

1. Rate the **symptom severity** (using live links to select the appropriate rating in the right-hand section of the item)
2. Ask additional **CAPS-5 prompts** within the same item (any bold statement is considered a CAPS-5 prompt), i.e. "Tell me more about that," "How strong are your feelings of being distant or cut off from others?")

3. Ask additional, **optional CAPS-5 prompts** (any statement that is not in bold in the item, i.e. “Who do you feel closest to?”, “Do you think it’s related to [EVENT]?”)
4. Ask **additional prompts** as determined by the learner in order to follow up with the simulated patient to get more detail or ask for an example. There will be 3 or 4 additional prompts that need to be developed for each symptom item). These prompts will further develop the symptom item.
5. As the learner works through the items, an on-screen coach will provide ongoing real-time feedback and guidance as appropriate.

13. (D6) Feelings of detachment or estrangement from others.

<p>In the past month, have you felt <u>distant</u> or <u>cut off</u> from other people?</p> <p>Tell me more about that.</p> <p>How strong are your feelings of being distant or cut off from others? (<i>Who do you feel closest to? How many people do you feel comfortable talking with about personal things?</i>)</p> <p><i>Circle:</i> Detachment or estrangement = <i>Minimal</i> <i>Clearly Present</i> <i>Pronounced</i> <i>Extreme</i></p> <p>How much of the time in the past month have you felt that way? % of time _____</p> <p>Did this feeling of being distant or cut off start or get worse after (EVENT)? (<i>Do you think it's related to [EVENT]? How so?</i>) <i>Circle:</i> Trauma-relatedness = <i>Definite</i> <i>Probable</i> <i>Unlikely</i></p> <hr/> <p><i>Key rating dimensions = frequency / Intensity of detachment or estrangement</i> Moderate = some of the time (20-30%) / feelings of detachment clearly present but still feels some interpersonal connection Severe = much of the time (50-60%) / pronounced feelings of detachment or estrangement from most people, may feel close to only one or two people</p>	<p>0 Absent</p> <p>1 Mild / subthreshold</p> <p>2 Moderate / threshold</p> <p>3 Severe / markedly elevated</p> <p>4 Extreme / incapacitating</p>
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As the learner administers and scores the 30 CAPS-5 items, the training will provide the learner specific real-time feedback through the use of an on-screen coach. This feedback may contain constructive advice on:

1. The learner’s ability to use all the information the patient is giving even if the details were for a different item if relevant to the current item
2. Asking appropriate CAPS-5 prompts
3. Asking appropriate optional CAPS-5 prompts
4. Developing and asking additional clarifying questions
5. Comparing the learner’s CAPS-5 ratings to the expert ratings for each symptom item
6. How efficient the learner is in determining the symptom severity rating
7. Other feedback based on working with the contractor

NCPTSD also requires that this training provide a printable descriptive summary assessment to the learner after CAPS-5 administration and scoring. Specifically, the summary should outline:

- How efficiently the learner conducted the CAPS-5.
- Whether the learner needs additional training to achieve competency.

- Aspects of the CAPS-5 that were administered and scored adequately.
- Aspects of the CAPS-5 that were administered and scored poorly.

Objective 2: Develop and implement a web based training simulation application to ensure all training simulation content available conforms to §508, and Sharable Content Object Reference Model (SCORM).

Characteristics:

This course will be packaged as a stand-alone online training that will be housed on the vendor's server or on a third party server in a SCORM-compliant learning management system (LMS). This server must be fully accessible by users on the VA network. NCPTSD will work with the vendor and VA's Enterprise Web Information Support to ensure that the server is accessible to VA staff.

Objective 3: Support the development and review of the CAPS-5 procedures and the management of competency and competency profile development, as well as the implementation of certification programs for clinical staff working in PTSD.

6. Operating Constraints:

This section lists laws, rules, regulations, standards, technology limitations and other constraints that the service and/or service provider must adhere to or work under.

- a) Vendor will provide all materials, labor, and facilities required to perform this contract.
- b) Vendor will be required to provide project management and detailed management reporting including formal monthly status reports and quarterly program management reviews.
- c) Vendor is required to recommend appropriate, meaningful, contract deliverables for each task in the performance Work Statement it develops and performance period to ensure government can use develop capability should funding or unforeseen issue result in discontinuance of the contract.
- d) Government will provide subject matter experts for data / characteristics to be used in simulation.
- e) No actual patient data will be provided, utilized, or required during development or execution of simulation.
- f) Simulation will not be hosted on government site.

- g) Travel is not anticipated. Limited travel to VA facilities may be required but will not be reimbursed
- h) The following directives will be adhered in performance of this contract:
 - a. FIPS Pub 201, "Personal Identity Verification of Federal Employees and Contractors," March 2006
 - b. 5 U.S.C. § 552a, as amended, "The Privacy Act of 1974"
 - c. Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d).
 - d. 42 U.S.C. § 2000d "Title VI of the Civil Rights Act of 1964"
 - e. 36 C.F.R. Part 1194 "Electronic and Information Technology Accessibility Standards," July 1, 2003
 - f. VA Directive and Handbook 0710, Personnel Suitability and Security Program, July 4, 2010.
 - g. Sections 508 of the Rehabilitation Act (29 U.S.C. § 794d), as amended by the Workforce Investment Act of 1998 (P.L. 105-220), August 7, 1998
 - h. VA Directive 6500, "Information Security Program," August 4, 2006
 - i. VA Handbook 6500, "Information Security Program," September 18, 2007
 - j. VA Handbook 6500.6, "Contract Security," March 12, 2010
 - k. VA Handbook 5015, Employee Learning and Professional Development.
 - l. VA Directive 6102, VA Internet/Intranet Services
 - m. VA Directive 6221, Accessible Electronic and Information Technology
 - n. VA Directive 0003, Technical Specifications And Design Standards For VA Learning
 - o. VA Directive 0004, Education And Learning Delivery System
 - p. VA Directive 0006, Talent Management System (TMS) E-Learning Section 508.
 - q. Sharable Content Object Reference Model (SCORM) Edition Specification (www.adlnet.gov/resources) and Aviation Industry CBT Committee (AICC) per their use in 3.0 below.
 - r. NIST SP 800-53 (rev.4)
 - s. NIST SP 800-47

6.1 Data

Records and data shall be documented in deliverable reports (electronically). Any databases/code shall be delivered electronically and become the sole property of the United States Government. All deliverables become the sole property of the United States Government. The Government, for itself and such others as it deems appropriate, will have unlimited rights under this contract to all information and materials

developed under this contract and furnished to the Government and documentation thereof, reports and listings, and all other items pertaining to the work and services pursuant to this agreement including any copyright. Unlimited rights under this contract are rights to use, duplicate, or disclose data, and information, in whole or in part in any manner and for any purpose whatsoever without compensation to or approval from the provider. The Government will at all reasonable times have the right to inspect the work and will have access to and the right to make copies of the above-mentioned items. All digital files and data, and other products generated under this contract, shall become the property of the Government.