

APPENDIX A. Modified Medical Research Council (mMRC) dyspnea score

Grade	Description of breathlessness
0	I only get breathless with strenuous exercise
1	I get short of breath when hurrying on level ground or walking up a slight hill
2	On level ground, I walk slower than people of the same age because of breathlessness, or have to stop for breath when walking at my own pace
3	I stop for breath after walking about 100 yards or after a few minutes on level ground
4	I am too breathless to leave the house or I am breathless when dressing

APPENDIX B. Post-COVID telehealth rehabilitation program description

Houston Michael E. DeBakey VAMC (MEDVAMC) Pulmonary Section developed and implemented a Post-COVID Telehealth Rehabilitation Program. The program is currently available for all VA within VHA VISN16. Our mission and vision are to provide individualized and holistic care to reduce healthcare disparities from rurality, isolation, physical limitation, and/or socioeconomic status.

The Post-COVID Telehealth Rehabilitation Program therapist uses whole health approach in providing individualized education, training, and exercise to reduce the long-COVID symptoms. The component in the program includes:

- Understanding disease, co-morbidities, and symptoms
- Pulmonary hygiene and breathing retraining
- Physical exercise training
- Nutritional education
- Psychosocial support
- Smoking cessation

The Post-COVID Telehealth Rehabilitation Program is available for Veterans that remained symptomatic after 12 weeks of positive test or post hospital admission.

INCLUSION CRITERIA

- Long-COVID symptoms >12 weeks post-acute infection
- Have cognitive and physical ability to use technologies for VA Video Connect (VVC)
- Be able to attend up to 12 weekly sessions: Monday-Friday between 7:00AM & 5:00PM
- Medically stable (mentally and physically) to follow program instructions and exercises

EXCLUSION CRITERIA

- Mental and/or physical condition that severely impairs cognitive function & learning ability
- Inability to connect through VA Telehealth service
- Recent MI, Unstable Angina and/or Unstable CV Condition [e.g., significant aneurysm or unstable ischemic heart disease]
- Acute Cor Pulmonale and/or Severe Pulmonary Hypertension
- Uncontrolled HTN
- Significant Hepatic Dysfunction
- Active Infection and/or Exacerbation of intercurrent Illness
- Recent Radiation and/or Chemotherapy TX [within last 6 months]
- Medical conditions that may require other medical or surgical intervention while in program

REFERRAL PROCEDURE

- The Long-COVID interfacility e-consult [IFC] template was provided to VISN16 and disseminated to facility's Clinical Application Coordinator [CAC] for install
- The facility's Provider may submit the Long-COVID e-Consult IFC to the Houston MEDVAMC Long-COVID Rehabilitation Program Medical Director for chart review before enrollment
- If a Veteran does not have technologies for VVC, a consult for VAMC loaner iPad will be submitted by the referring facility's Provider or Telehealth Nurse.

TELEHEALTH SESSION

- Therapist performs baseline mental and physical assessment, biometrics, and questionnaires
- Education, training, and exercise
- Adjust therapeutic interventions according to signs, symptoms, physical limitation, and/or situations
- Alert Medical Director to consult or follow-up with other services [e.g., PACT Provider, Mental Health, Sleep, Social Work, etc.]
- Therapist should complete the Telehealth Home Emergency Management Guidance and Plan. The Home Emergency Management Guidance and Plan may include:
 - Local medical/MH emergency resources for back-up [e.g., ER, MH staff and/or support staff, suicide prevention coordinator]
 - National Veterans Crisis Line [VL] at 1-800-273-TALK or -8255 for assistance
 - Suicide Prevention Coordinator or referral when necessary
- Therapist should be competent in Telehealth technologies and applications to provide VVC education and training to Veteran, family and/or caregiver
- Clinic contact and emergency numbers should be provided at all sessions

PATIENT SAFETY

- Therapist do brief cardiopulmonary, mental, and physical assessment at every session to ascertain changes
- Adverse changes will be reported to Medical Director and PCP then documented in electronic health record [EHR]
- Provide appropriate adjustment, correction, education, and/or training intervention[s] for acute or persistent long-COVID symptoms
- Communicate need for referral or consult to other specialty or services as needed

- Emergency Management Guidance and Plan may include:
- Local medical/MH emergency resources for back-up (e.g., ER, MH staff and/or support staff, suicide prevention coordinator)
- National Veterans Crisis Line (VL) at 1-800-273-TALK or -8255 for assistance
- Suicide Prevention Coordinator or referral when necessary
- Urgent/Emergent Events: In the event of a medical or behavioral emergency that occurs during VVC session, the therapist should commence the following in order:
 - Identify the individual of the person in the veteran's home or whoever is physically closest
 - Call the phone numbers for that person to immediately activate the emergency response system and act (e.g., call 911, initiate CPR or basic First Aid if trained, and assist as directed)
 - If no one is there to respond, activate the e-911 to obtain the local emergency numbers then report the event and location.
 - Maintain VVC connection until local emergency medical service (EMS) assumes responsibility for the event
 - Contact the Program Medical Director to guide with the assessment, determine severity of the emergency, and provide emergency care or treatment until local EMS arrives

OUTCOME MEASURES

- The Post-COVID Telehealth Rehabilitation Program utilize the following tests, tools, and questionnaires to measure dyspnea, mental, and physical objective and subjective changes from interventions provided.
- Post-COVID Functional Status Scale (PCFS)
- Modified Medical Research Council Dyspnea Scale (mMRC)
- Rating of Perceived Dyspnea (RPD) Scale
- St George Respiratory Questionnaire (SGRQ)
- COPD Assessment Test (CAT)
- One-Minute Sit-to-Stand Test (1-SST)
- Duke Activity Status Index (DASI)
- Patient Health Questionnaire 9 (PHQ9)
- Generalized Anxiety Disorder 7 (GAD7)
- Incentive Spirometry (IS) Volume
- Rate My Plate

QUESTIONS

Please refer questions to: Dr. Amir Sharafkhaneh, Sharafkhaneh.amir@va.gov;
 Paul Ropp DNP RN VISN 16 Rural & Connected Care Coordinator, paul.ropp@va.gov; or
 Christina Nguyen, Christina.Nguyen15@va.gov