THE ATTENDING PHYSICIAN
CONGRESS OF THE UNITED STATES
H-166, U.S. CAPITOL
WASHINGTON, DC 20515-9086

BRIAN P. MONAHAN, MD, MACP
PROFESSOR OF MEDICINE AND PATHOLOGY

December 28, 2019

The Honorable Bernard Sanders
United States Senate
332 Dirksen Senate Office Building
Washington DC 20510

Dear Senator Sanders:

This letter summarizes your general health history and current medical evaluation prepared at your request. My office has served as your physician for the past 29 years. I am certified by the American Board of Internal Medicine and Internal Medicine, Hematology, and Medical Oncology.

Your most recent physical examination was conducted on December 19, 2019 when you were 78 years old, 6 feet 0 inches tall, and weighed 174 pounds. Your general physical examination was normal including a blood pressure of 102/56 mmHg, and pulse of 62 beats/min. Recent comprehensive laboratory test results indicated your complete blood count, vitamin D level, and thyroid function panel were normal. Your fasting glucose was 84 mg/dL. Your total cholesterol was 117mg/dL, HDL cholesterol was 32mg/dL, and LDL cholesterol was 58 mg/dL. Your electrocardiogram demonstrated normal sinus rhythm.

Over the years, you have been treated for medical conditions including gout, hypercholesterolemia, diverticulitis, hypothyroidism, laryngitis secondary to esophageal reflux, lumbar strain, and complete removal of superficial skin lesions. Your colorectal cancer screening is up to date. Your past surgical history consists of repair of left and right-side inguinal hernias by laparoscopic technique and a right true vocal cord cyst excision. In November 2019, a follow-up ENT evaluation of your vocal cords for hoarseness was stable. You have no history of tobacco use, exercise regularly, and seldom drink alcohol. Your current daily medications include atorvastatin, aspirin, clopidogrel, levothyroxine, and lisinopril.

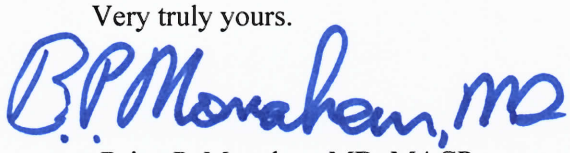
The most significant event in your recent health was your admission to the Desert Springs Hospital in Las Vegas, Nevada on October 1, 2019. You experienced myocardial infarction due to an acute blockage of a coronary artery. In the initial hours of your evaluation, you were found to have an elevation of cardiac muscle proteins in your blood accompanied by diminished heart muscle strength and chamber wall motion reduction as determined by echocardiogram. You underwent prompt cardiac catheterization with identification of the narrowed segment of the midportion of the left anterior descending coronary artery. The narrowed segment was re-opened followed by the placement of two drug-eluting stents, a procedure that is referred to as primary percutaneous coronary intervention (PCI). You received standard treatment with medications to improve your heart function and provide antiplatelet therapy required by your stents. You were released from the hospital three days later and returned home.

You have obtained additional consultation with cardiologists in your home state of Vermont in November and December 2019 who have closely followed your cardiovascular function with serial echocardiograms and adjustment of your medications. Several of the medications you initially required (blood-thinner, beta blocker) were stopped based on your progress. Your heart muscle strength has improved. You have never had symptoms of congestive heart failure. The heart chamber sizes, wall thickness, estimated pressures, and heart valves are normal. Several 24-hour recordings of your heart electrical activity indicated no significant heart rhythm abnormality.

In December 2019, you underwent a successful graded exercise treadmill examination monitoring your heart function, muscular exertion, and oxygen consumption that indicated a maximal level of exertion to 92% of your predicted heart rate without any evidence of reduced blood flow to your heart or symptoms limiting your exercise performance. Your overall test performance was rated above average compared to a reference population of the same age. The cardiac exercise physiologist who evaluated your results determined that you are fit to resume vigorous activity without limitation.

You are in good health currently and you have been engaging vigorously in the rigors of your campaign, travel, and other scheduled activities without any limitation.

Very truly yours.



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Re: Results of Cardiopulmonary Exercise Tolerance Test

Mr. Sanders underwent a cardiopulmonary exercise tolerance test on 12/11/2019 as part comprehensive examination at the University of Vermont Medical Center (UVMMC) Cardiac Rehabilitation Program. Cardiopulmonary exercise testing is an important clinical tool to evaluate exercise capacity and predict outcomes in patients with a cardiac condition. It provides a comprehensive assessment of the integrative exercise responses involving the pulmonary, cardiovascular and skeletal muscle systems. Mr. Sanders was able to exercise to a level that is approximately 50% higher than other men his age with a similar diagnosis[1]. Compared to otherwise healthy men with no known heart disease, his exercise capacity is average for man his age[2]. Mr Sander's level of fitness would be suggestive of favorable outcomes, from a cardiovascular perspective, going forward. According to Philip Ades, MD, Cardiologist, Director of Preventive Cardiology at UVMMC, "Mr. Sanders is more than fit enough to pursue vigorous activities and an occupation that requires stamina and an ability to handle a great deal of stress."

Sincerely.

Philip A. Ades, MD
Director, Cardiac Rehabilitation
University of Vermont Medical Center

Patrick D Savage, MS
Senior Clinical Exercise Physiologist

1. Ades PA, Savage PD, Brawner CA, Lyon CE, Ehrman JK, Bunn JY, Keteyian SJ.Aerobic capacity in patients entering cardiac rehabilitation. Circulation. 2006 Jun 13;113(23):2706-12. Epub 2006 Jun 5

2. Kaminsky LA, Arena R, Myers J. Reference Standards for Cardiorespiratory Fitness Measured With Cardiopulmonary Exercise Testing: Data From the Fitness Registry and the Importance of Exercise National Database.Mayo Clin Proc. 2015 Nov;90(11):1515-23. doi: 10.1016/j.mayocp.2015.07.026. Epub 2015 Oct 5.

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December 30, 2019

To whom it may concern:

Following is my assessment of the current medical status of my patient, Senator Bernard Sanders.

Senator Sanders has made an uneventful recovery from the heart attack he suffered in Las Vegas, October 1, 2019. He received prompt and effective stent treatment to restore blood flow to his heart muscle. While he did suffer modest heart muscle damage, he has been doing very well since. He is currently entirely asymptomatic, his heart function is stable and well-preserved, his blood pressure and heart rate are in optimal ranges, he is getting regular exercise and his exercise tolerance, based on quantitative, cardiopulmonary exercise testing, is well above average. He is receiving several medications that are routinely prescribed after a heart attack and stenting procedure. At this point, I see no reason he cannot continue campaigning without limitation and, should he be elected, I am confident he has the mental and physical stamina to fully undertake the rigors of the Presidency.

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