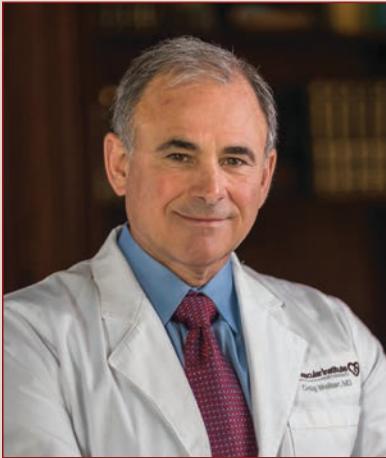


The Role of Telemedicine



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Hello and welcome to the August 2022 edition of *Vascular Disease Management*. I have chosen to comment on the role of telemedicine, as this has become progressively more important secondary to a critical shortage of healthcare professionals coupled with patients' fear of exposure to infection that was exacerbated by the COVID-19 crisis.

Many nurses and catheterization lab employees have retired, changed jobs, or were fired if they refused COVID-19 immunization. Many interventional labs lost their most experienced colleagues because of these same problems. Many physicians have opted to retire early out of frustration related to electronic medical records, loss of key employees, decreasing fee schedules, and more burdensome regulations when ordering tests. The COVID-19 pandemic accelerated this process. Secondary to worker shortage, hospitals have struggled to staff beds and interventional suites. This has resulted in limited interventional capacity, particularly in cases where overnight admission is required or where the few remaining interventional laboratory colleagues may be overwhelmed with work secondary to the loss of coworkers. This has resulted in many hospitals limiting the numbers and types of interventional procedures.

Because of these factors, intensive medical monitoring of patients at risk who would have traditionally undergone interventional procedures is required. Patients with cardiovascular disorders where intervention is contemplated may be deemed to not be emergencies by hospitals, but these individuals can worsen dramatically in very short periods of time, resulting in untoward outcomes,

increased health care costs, or death while awaiting future revascularization procedures.

Physician offices have experienced capacity problems secondary to nursing and support worker shortage as well as earlier physician retirement. COVID-19 protocols are time-consuming, resulting in less efficient flow of patients. The increased demand for outpatient visits, as well as the decreased slots available for visits, make it impossible for many physician practices to follow these patients as frequently as needed. Emergency departments are not the answer as they are overburdened, expensive, and not designed to provide longitudinal follow-up of patients.

Telemedicine is a potential solution to this present dilemma. As there is no physical contact with patients or other workers, and the schedules can be more flexible, there has been less dropout of workers in telemedicine programs. There is no requirement for COVID-19 vaccination, as there is no direct contact with patients or coworkers. Because there are adequate numbers of these professionals with experience, there remains capacity in the virtual system with far less worker turnover.

A complete history and review of testing can be performed virtually as easily as in person. Mobile devices permit monitoring of the patient's rhythm and electrocardiograms. Although there are limitations in performing a full physical examination, imaging of extremities and wounds is possible with smartphones. Companies are developing devices that patients can use to further aid in physical diagnosis.

Limited-scope, focused follow-up of these patients via telemedicine until future intervention can be performed has the potential to identify individuals with progressive symptoms requiring urgent treatment before irreversible tissue damage occurs. There is no risk of infection exposure to the patient or provider. Utilization of telemedicine in these patients can improve the capacity of physician offices to follow other patients. Most surveys show that patients often prefer virtual visits as they are less costly and more convenient than in-person visits.

It is impossible to predict at this time if the critical shortage of health care workers will be a transitory issue or whether the present issues will become the "new normal." While all of us hope that the present health care labor shortage will improve and we can return to prior practice patterns, I believe that remote monitoring of patients with cardiovascular disorders will play a vital role in the care of patients needing interventional procedures where those procedures are delayed due to loss of capacity. ■