

EDITORIAL

Virtual Outpatient Visits During COVID-19 Pandemic: So Distant, Yet So Close

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The sudden surge and rapid spread of SARS-CoV-2 virus infection has taken a tragic toll on people's lives and health worldwide.¹ However, aside from the obvious consequences of acute respiratory failure characterizing COVID-19 syndrome, this pandemic has imposed additional, farther-reaching consequences on the health system as a whole. One major example is the impaired ability to admit patients with acute myocardial infarction seen in many countries, partly linked to reduced availability of intensive care unit beds for non-COVID conditions.²

See Article by McAlister et al.

At the same time, proper delivery of care for chronic conditions has largely suffered as well.³ Decreased diagnostic workup, therapeutic interventions, and follow-up for many patients suffering chronic, non-COVID-19-related conditions (eg, cardiac diseases, cancer) have been widely reported. Several factors may have contributed to impaired outpatient management of chronic diseases, including—on the part of patients—overcompliance on stay-at-home orders and social confinement measures; reluctance of going to hospitals and clinics out of fear of getting the infection; and refitting of hospital services to divert doctors, nurses, and spaces, to cope with the huge number of patients with COVID-19.

As the SARS-CoV-2 impact on individual health and health systems tends to decrease because of an overall higher level of immunity and prevalence of less virulent variants, it is emerging with increasing evidence that the pandemic may have induced some permanent legacy changes to society and health systems. The need to slow viral spread, which boosted measures to reduce personal contacts during the early pandemic phases, has given rise to a series of changes in everyday life. Remote access to work, virtual meetings, and greater use of electronic communication systems are examples of widely adopted means to reduce personal encounters, which are likely to stay after the end of the SARS-CoV-2 pandemic.

This paradigm shift toward greater use of at-distance interactions may well extend to redefine health care management of chronic diseases. Indeed, a shift from in-person to “virtual” outpatient visits through remote access had been advocated as a solution to reduce the risk of infection while providing care, particularly for patients in a primary care context,⁴ and it may pave the way for a permanent change in health care.

IMPACT ON CARDIOVASCULAR PATIENTS

In this issue of the *Journal of the American Heart Association (JAHA)*, McAlister et al⁵ analyze the extent of adoption and the impact of shifting from

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in-person to virtual outpatient visits (mostly via telephone calls or Internet-based video consulting) following the COVID-19 pandemic, for several “ambulatory care–sensitive cardiovascular conditions,” namely, heart failure (HF), hypertension, and diabetes. Ambulatory care–sensitive cardiovascular conditions are defined as “health conditions/diagnoses for which appropriate outpatient care is felt able to reduce the risks of hospitalization by preventing the onset of the condition, controlling acute exacerbations, or managing chronic disease.”⁶ Importantly, the analysis involved linking different population-based health administrative data sets for 3.8 million adults in Alberta, Canada, with respect to outpatient visits, emergency department accesses, hospitalizations, and drug prescriptions. Thus, McAlister et al made a quite laudable and comprehensive effort to provide a precise picture of the spread of virtual visits, on a very large population. Of note, accurate tracking of virtual visits was made possible because the Alberta physician billing codes were promptly modified on March 17, 2020, to include specific codes (“v codes”) for virtual (telephone or video) visits; before this, physicians were required to see patients in person for remuneration, as it is still the case in many countries.

The findings are absolutely impressive in many ways. For one thing, on such a large sample, McAlister et al⁵ were able to precisely document that in the year after March 1, 2020, in-person outpatient visits dramatically decreased, by 38.9% (10 142 184 versus 16 592 599 in the prior year). This trend had been previously reported but never with such breadth and accuracy. At the same time, though, the introduction of the virtual visit program was followed by a huge increase in virtual visits, by 7 152 147, that is, largely making up for the loss of in-person visits or even exceeding them. Furthermore, at a 90-day follow up, implementation of virtual outpatient visits was associated with fewer subsequent emergency department visits or hospitalizations for patients with HF, with only a slight increase in mortality—in all, a remarkable feat.

The complex impact of the pandemic on patients’ behavior, health systems response, and health outcomes does not allow us to make direct interpretation of whether increased virtual contacts and reduced emergency department visits and hospitalization were causally related. In fact, impairment to health care access during the pandemic is an alternative, less favorable explanation. Similarly, the possible increase in mortality cannot be clearly interpreted because of possible confounding effects of COVID-19–related mortality. This is particularly true for a historical cohort study based on administrative data, and this limitation is correctly acknowledged by the authors.

GENERALIZABILITY OF VIRTUAL VISITS TO DIFFERENT CARDIAC CONDITIONS AND DIFFERENT HEALTH SETTINGS

Obviously, the virtual approach could only replace those medical procedures that do not require physical contact or attendance to a health structure, and therefore it is not surprising that McAlister et al⁵ found that certain laboratory test frequency, for example, glycosylated hemoglobin, declined by 47%. Along this vein, it is worth noting that the shift from in-person to virtual visits was less pronounced for more severe conditions (ie, HF) than among patients with hypertension; whether this was attributable to a thoughtful choice of physicians or patients cannot be established, yet it suggests that the health service might graduate virtual response based on actual health needs and risk.

Indeed, out of the COVID-19 emergency context with the need to reduce the risk of SARS-CoV-2 transmission, proper use of virtual visits for patients with cardiovascular conditions should be defined in relation to health outcomes and individual risk assessment, not always as a “flat” substitute for in-person visits. Obviously, telephone and Internet-based video consulting are not equivalent to personal visits in many respects, including need of precise diagnosis and definition of extent of disease and comorbidities, patients’ safety, and quality of care.⁷ Thus, virtual visits might be more suitable for patients already diagnosed and on treatment, for whom reassessment could be largely limited to confirm or refine an ongoing management strategy. At the same time, while a formal reimbursement policy—as in Alberta and other places—could boost virtual visits, lack of economical (and legal) recognition could represent a major hurdle elsewhere.

To illustrate these concepts, 2 reports can help, which analyzed prescriptions during the COVID-19 pandemic of direct anticoagulants for atrial fibrillation and of sacubitril/valsartan for HF in Italy as derived from a nationwide government-run registry.^{8,9} While overall sales for those drugs decreased by <20%, new prescriptions plummeted by about 50%. In Italy, there is no structured program to perform virtual visits, and therefore there is no economic incentive to it; furthermore, lack of precise regulation makes physicians reluctant because of fear of possible legal consequences. Thus, in a context of limited access to virtual outpatient visits, many patients were not granted guideline-directed therapy. However, perhaps of even greater interest is the finding that this decrease was largely concentrated to *new prescriptions*, not to refilling of ongoing orders. In other words, what was mostly affected during the COVID-19 pandemic was the possibility of properly diagnosing a disease or initiating a new therapy, which understandably is more effectively performed through in-person outpatient visits.

CONCLUSIONS

A trend toward increasing use of remote care had already begun before the pandemic; it has increased to a large (albeit variable) extent during the pandemic; and it likely will be maintained or increase further in a postpandemic era. There is no way back to the *status quo ante*. And there are lessons to be learned from this experience.

Based on chronic care models, virtual visits both empowering patients and through multidisciplinary care teams would be a useful additional tool to maintain adequate disease control and, consequently, reduce acute events, hospitalization, and mortality risks, while keeping resources at a sustainable level.

As a caveat, the possible negative influence of not being able to fully evaluate health status in patients receiving care for chronic conditions (eg, assessing congestion in patients with HF, glycosylated hemoglobin monitoring in diabetics) may need more time to unwind than the short, 90-day follow-up period considered in the study by McAlister et al.⁵ On the other hand, however, the issue of less accurate control for patients with chronic conditions might be solved in the near future. Indeed, the combined use of remote monitoring devices, blood tests that can be self-administered at home, and artificial intelligence systems to share information between patients and the multidisciplinary care team may have the potential to improve patient monitoring and disease control.^{10–12}

Finally, efforts should be put in place to make remote health easier, safer (with respect to confidentiality safeguards), formally recognized through specific regulations, and, finally, appropriately reimbursed. These various issues are currently not solidly addressed in various countries, and it is an unmet need. Importantly, this approach can be cost effective and allow for a wider availability of care in remote or underdeveloped areas. Thus, besides all the advantages mentioned, it could help narrow the gap in providing access to care in underprivileged countries.

A last commentary should be duly devoted to Health Authorities of Alberta, Canada, as they have shown that it is indeed possible to overcome bureaucratic hurdles in a speedy and efficient way to make remote medicine a fulfilled promise.

ARTICLE INFORMATION

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Disclosures

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