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Letter to the Editor

Telemedicine in internal medicine: A statement by the European Federation of Internal Medicine.

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The World Health Organization defines telemedicine as “the delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities” [1]. Access to telemedicine services has increased in the last decade, but its use is still not widespread due to technical difficulties at the point of care, regulatory laws, and a lack of reimbursement structures. The COVID-19 pandemic has served as a catalyst for the rapid implementation of multiple telemedicine services, demonstrating their ability to provide access to healthcare while maintaining physical distancing to protect the safety of providers and patients [2]. Moving forward, healthcare systems must combine the lessons learned during the pandemic with evidence-based practices in order to successfully implement telemedicine to the benefit of patients and providers.

1. Current evidence

A growing body of evidence has demonstrated that telemedicine is cost-effective and efficient and can have a positive impact on patients' health-related behavior, medication adherence, and quality of life. To date, the following evidence has been validated with real-world data: telemedicine reduces the time spent accessing care, prevents unnecessary travel by both patients and professionals, facilitates care in remote areas [3] and reduces costs [4]. It can improve health outcomes if it is part of a well-coordinated care process [5]. It has proven useful for tele-triage and remote consultations between patients and physicians in remote or rural areas or if mobility is a concern. It may be beneficial in emergency care when treatment is time-sensitive and access to an on-site specialist is not possible within a safe time period, such as in stroke care [6]. It can also be used in the telemonitoring of chronic conditions such as chronic heart failure and arrhythmias [7]. Video consultations can form part of long-term patient care. Lastly, remote consultations have been a useful strategy for providing safe care during the COVID-19 pandemic.

Moving forward, any future systematic implementation of

telemedicine must not only be technically feasible, but also be grounded in more evidence-based studies and implemented based on defined use cases.

2. Doctor-patient relationship

Telemedicine not only entails a technological transformation, but also has considerable cultural and social consequences. It fundamentally reshapes the roles and relationship between physicians and patients. Patients can participate more actively in their treatment through a patient-centered model and technology can facilitate patients becoming more involved and responsible [8]. However, evidence regarding the non-use and discontinued use of telemedicine has shown that in addition to technical issues such as poor usability and poor internet connectivity, user-related aspects such as attitudes and technology literacy are the main barriers to its use. Access to telemedicine is not always unbiased, but in spite of these possible inequalities, it may increase access to care by vulnerable groups, such as the older adult population in general or those with exacerbations of chronic diseases.

Research has revealed that patients highly value an in-person examination. This is not due to a perceived greater accuracy—since diagnosis and treatment are not the product of an isolated event of rational decision-making but the result of continued monitoring of a patient's condition and adjustments to care—but rather its affective properties. In light of this preference for face-to-face care, telemedicine needs to be understood as fundamentally different from conventional healthcare in which the interaction between technology and the local context is key. In order to optimize the use of telemedicine, new standard practices for behavior and interpersonal communication must be developed in order to support different aspects of medical consultation.

It is well-known that the participation of several actors, including professionals from different disciplines, allows for better diagnostic decision-making and reduces the time to diagnosis. Furthermore, patients are more engaged and feel they play an active role in decision-making. However, communication differs between face-to-face and telemedicine settings, partly because of the intervention of different providers in different phases of care and partly because of the introduction of new technologies. At a time when it is increasingly essential

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in internal medicine to create synergies between hospital internists and general practitioners, telemedicine can be a useful tool for ensuring continuity of care. A hybrid model should be considered for long-term primary and specialist care; it can ensure increased access to care through telemedicine while also offering in-person visits when needed and appropriate.

3. Data security

Although telemedicine has many meaningful applications, the transfer of patients' sensitive personal health information inevitably raises data security concerns. Vast amounts of personal health data have been collected, often without patients being aware of it [9]. The European Union General Data Protection Regulation (GDPR) has attempted to clarify personal data protection in the delivery of digital healthcare, where the limits and responsibilities are less clear than in traditional healthcare. Therefore, it is strongly recommended that only GDPR-approved services be used.

4. Telemedicine, multimorbidity and a vision of the future

The use of telemedicine in internal medicine has been demonstrated to improve the management of several chronic conditions and clinical outcomes. In an era of global population aging, telemedicine is a novel opportunity to overcome the myriad challenges associated with aging, such as impaired physical and cognitive function, multiple chronic conditions, and changes in social relations [10].

The healthcare of the future should embrace telemedicine, a flourishing field with immense resources that may be able to revolutionize the classic concept of medical care. The future of telemedicine could play out in four different scenarios:

- 1 Services that could be incorporated into any traditional diagnostic and/or therapeutic health services as another alternative.
- 2 Services that cannot fully replace traditional health services, but rather support it by making it more accessible.
- 3 Services that supplement traditional health services by making it more efficient and able to adapt to patients' changing care needs.
- 4 Services that are able to completely replace traditional health services.

At present, the third scenario is what is expected to happen with the increasing use of telemedicine. The healthcare sector, because of its complexity, must play the leading role in defining the standards needed to drive this groundbreaking digital transition in the industry. At this point, education is now essential: universities must develop evidence-based rules and guidelines and patient and healthcare providers must be educated on them. Further knowledge is needed to outline the extent that telemedicine can best be used in internal medicine.

Based on the available scientific evidence, the European Federation of Internal Medicine recommends the increased use of these innovative methods for providing suitable care for complex patients with multiple chronic diseases. Given the ongoing epidemiological transition and ever-advancing technological development, the EFIM believes that the increasingly widespread use of telemedicine will be fundamental in providing proper care for internal medicine patients.

Declaration of Competing Interest

The authors declare they have no conflict of interest.

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