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BIOETHICS AND INFORMATION TECHNOLOGY

Ethics, Guidelines, Standards, and Policy: Telemedicine, COVID-19, and Broadening the Ethical Scope

Bonnie Kaplan*

Yale Center for Medical Informatics, Yale Interdisciplinary Center for Bioethics, Information Society Project, and Solomon Center for Health Law and Policy, Yale University, New Haven, CT 06511, USA
*Corresponding author: Email. Bonnie.Kaplan@yale.edu

Abstract

The coronavirus crisis is causing considerable disruption and anguish. However, the COVID-19 pandemic and consequent explosion of telehealth services also provide an unparalleled opportunity to consider ethical, legal, and social issues (ELSI) beyond immediate needs. Ethicists, informaticians, and others can learn from experience, and evaluate information technology practices and evidence on which to base policy and standards, identify significant values and issues, and revise ethical guidelines. This paper builds on professional organizations' guidelines and ELSI scholarship to develop emerging concerns illuminated by current experience. Four ethical themes characterized previous literature: quality of care and the doctor–patient relationship, access, consent, and privacy. More attention is needed to these and to expanding the scope of ethical analysis to include health information technologies. An applied ethics approach to ELSI would addresses context-specific issues and the relationships between people and technologies, and facilitate effective and ethical institutionalization of telehealth and other health information technologies.

Keywords: telehealth; telemedicine; ethical issues; legal issues; social issues; ELSI; ethics; policy; regulation; evaluation; health information technology; informatics; healthcare; law; pandemic; COVID-19

Introduction

Telehealth and telemedicine literally have been life-saving during the COVID-19 outbreak. Clinicians can serve patients near and far at any time of day or night without fear of contagion for either patients or clinicians. They triage suspicious symptoms, follow quarantined patients, involve specialists as needed, and address non-COVID patients' health conditions. Together with government and public health officials, they track patients, recommendations, and public health.

Clinicians and healthcare institutions rapidly expanded telehealth services. This was facilitated by regulatory changes that permitted service reimbursement. Relaxed enforcement of privacy and data sharing rules and requirements for licensure, credentials, supervision of nonphysician providers, and requirements for previously established doctor–patient relationships also enabled telemedicine's rise. While there were some discussions of ethical, legal, and social issues (ELSI) over the years, in a time crisis that instigated rapid change and vastly increased use of telemedicine, triage and resources, access to care, and public health have, not surprisingly, taken precedence.[1]

During a crisis, there is little opportunity to delve into ethical, legal, or social issues beyond immediate needs, or to identify, let alone easily address, emerging ones. Now, in 2020, as the first COVID summer begins, this paper is a start. It briefly synthesizes national and global professional organizations' and the European Union's telemedicine guidelines and also international literature primarily from the past two

decades. It then discusses emerging ethics, guidelines, and policy considerations informed primarily by the experience in the United States but applicable elsewhere. This orientation is in line with recommendations that bioethics broaden its scope and methods to include questions of governance, societal impact, and "situate the ethical analysis in real-world practices and specific contexts,"[2] a call reminiscent of arguments for "an ethics of telehealth,"[3] and for applied ethics related to health information technologies,[4] points similarly made by medical informaticians working on ELSI.[5,6,7] With telemedicine's expansion expected to permanently change healthcare delivery,[8] it is imperative to learn from experience to make that expansion as effective and ethical as possible.

Telemedicine is "the practice of medicine, from a distance."[9,10] Telehealth has been similarly defined.[11] Because of the definitional similarities, and different health professionals' preferences for one of the terms to the other, the two terms, "telemedicine" and "telehealth" are used interchangeably below.

ELSI over the Years

At least since the early 1980s,[12] globally and nationally, guidelines from organized medicine, government commissions, and scholarly ethical, legal, and other analyses emphasized the centrality of the patient–clinician relationship, consent, privacy and security, and legal and regulatory issues. A 2008 review of 21 ethical guidelines published in journals found most of them came from the United States, United Kingdom, Australia, and India, while none specifically addressed developing countries. Guidelines dealt with ethics in the form of codes of conduct for health websites, doctor–patient relationships, consent and communication, data security, confidentiality, different specialties, homecare, and email consultations. The review identified these common issues: the doctor–patient relationship, informed consent, confidentiality, data security, adequacy of records, data standards and quality, clinical competence, licensure, and medical responsibility.[13]

These emphases are evident over the past 20 years in guidelines of leading international organizations and professional societies in the US. The World Medical Association (WMA), the American College of Physicians (ACP), and the American Medical Association (AMA) stressed that physician–patient relationships should be similar to those in face-to-face care. They highlighted quality of care, informed consent, privacy/confidentiality and security, appropriate authorizations to practice, use of and access to technologies, services tailored to the patient, awareness of technological limitations, and the need for guidelines and assessment. They warned of potential conflicts of interest that could threaten patient care and trust because of commercialization and cost-cutting.[14,15,16,17,18,19] By 2019, the AMA significantly incorporated telemedicine into their Code of Ethics, again stressing that physicians' ethical responsibilities do not change during teleconsults.[20,21]

Governing bodies also weighed in. The European Union's 2013 "Telehealth Services Code of Practice for Europe" included increasing transparency of mission statements and ethical principles; changing clinicians' professional roles, including special training; viewing patients as active participants in their healthcare, making them the arbiters of its social acceptability, and ensuring they have enough information to make consent meaningful; and avoiding conflicts of interest or prioritizing vendors' interests.[22]

Meanwhile, scholars also discussed ELSI related to telemedicine. Literature reviews identified and expanded on the familiar list: physician–patient relationships and quality of care, consent, access, equity, privacy, one-size-fits-all implementations, assumptions that new technology must be effective, patient and family satisfaction with telemedicine services, and the need for evaluation.[23,24,25,26] Some authors remarked that these concerns were illustrative of ethics involving health information technology in general.[27,28,29,30]

At the outbreak of COVID-19, members of the International Medical Informatics Association's Telemedicine Working Group from nine countries compared the WMA, AMA, and Health Professions Council of South Africa guidelines according to how they treated patient–provider relationships and communication, and data integrity and protection.[31] They summarized relevant issues in multiple countries as they investigated cultural and regional differences, artificial intelligence and data issues, how telmedicine compared with face-to-face practice, and how it affected special populations as exemplified

by elder care. They found that regulations sought primarily to prevent practice across borders and that black-box AI and algorithms needed "careful assessment" and attention to bias. Care of the elderly raised issues of empowerment, privacy, access, quality of life, and difficulties of one-size-fits-all. They identified key omissions from the ethical frameworks they reviewed: improving the telehealth system by promoting research and learning, reducing health disparities, and including patients and care providers. They concluded that guidelines are general, but practice contexts change over time. Clinicians' concern with their specific contexts created a gap between guidelines and clinical priorities.[32]

Another review of world-wide telehealth ethical and legal challenges from 2010 to 2020 literature, also published at the outset of the pandemic, recapitulated topics of informed consent, data protection and confidentiality, malpractice and liability, and regulation. Patient interaction with his/her data and the use of those data were new additions to the usual discussion.[33] However, authors noted that a 12-year-old observation still applied: "Current measures often ignore ethical issues linked to professional conduct and relationships, protection of patient autonomy, patient safety, cultural diversity, and the human value system."[34] This is unfortunate, as telemedicine is a key source of outpatient healthcare in a time when virulent infectious disease interferes with other means to access care. Subsequently, a more recent review identified quality of care and the doctor–patient relationship, access, consent, and privacy as the four ethical areas that characterized previous literature. It revealed gaps in what the focus has been, called for evaluation, and argued for evidence-based guidelines and policy informed by an expanded bioethics that includes healthcare information technologies.[35]

New Directions for ELSI

That telemedicine is expected to remain part of routine medical care[36] suggests the value of revised directions for guidelines, scholarship, and policy and for an expanded scope of bioethics. The COVID-19 outbreak and consequent explosion of telehealth services presents an unparalleled opportunity for ethical analysis that re-examines ELSI and asks what fundamental responsibilities are, especially during and after a time of crisis. Whether or not adequate attention has been given to previously discussed considerations, they may take on new dimensions in light of experience. Among newer questions as the usual are revisited are: what constitutes quality of care when alternatives are not available; how changes in access affect various populations and patients; effectiveness of consenting procedures, including their relationship to data privacy; privacy protections, especially for commercial teleservices; a variety of legal and regulatory issues, including licensure and reimbursement; and the obvious role of information technologies and data, and consequent ELSI.

Quality of Care

Quality is a matter of beneficence. Some aspects of what constitutes quality have come to the fore. Attention to the doctor–patient relationship is one. That relationship can change when care is conducted remotely, mediated by technology. Telehealth is a primary way that information technologies contribute to virtualizing patients and care, to reshaping the value of touch and physicality, and to focusing on measurement and quantification that treat both patients and clinicians more machine-like—all possibilities that should be addressed.[37,38] While some physicians laud their ability to treat patients effectively via telecare, others are troubled by the need to negotiate new ways to use technologies, including for data access and input, possibly on different devices, that interfere with their looking at patients. Some poignantly express changes in practice as they learn the "new language" of telecare. They remark on how they try to avoid depersonalization and to compensate for losing nonverbal cues, touch, and accustomed ways to express empathy and build rapport. Learning to incorporate these new skills into clinician training is emerging as an urgent concern[39] and a way of decreasing unintentional harms. Training will be even more important if the proposed new specialty of medical virtualist comes into being and virtual clinics become more common.[40]

Another issue is how crucial information is, particularly if there is no previous relationship between clinician and patient, no diagnostic data, little knowledge of the patient's likelihood of compliance or understanding, and no ability to follow up.[41] Even before the pandemic, the risk of misdiagnosis during a virtual visit was greater than for in-person care.[42] Data availability can help prevent some potential mishaps. This makes information sharing even more important than previously generally recognized.

Consent and Autonomy

Autonomy and consent are compromised when alternatives to care are limited or when a patient faces family and community pressures that may restrict care settings and options. Who should consent, for example, when technology medicalizes the home and involves people beyond the patient?[43,44,45] Other relevant issues include just how *informed* consent is when privacy policies, if they exist at all, are overwhelmingly vague and opaque, while consenting itself is questionable when patients have little choice in services or in accepting these policies.[46,47] Having to use telehealth services because there is no real alternative to getting care makes meaningful consent difficult.

Access

Well-known problems of access include addressing the digital divide while not providing different levels of patient safety and quality of care, along with those of offering services appropriate to different kinds of patients and locales.[48,49,50,51,52] Health equity and access include the burdens that seeking care or using technologies place on patients, most notably the elderly, disadvantaged, and minorities who are especially hard-hit by COVID-19. Reducing disparities by extending telemedicine to them and to populations in rural or underdeveloped areas also is part of equity and access.[53,54,55] This is even more pertinent in locations with little broadband and few available devices, poor health services, illiterate populations, or other obstacles to remote or in-person healthcare. Clearly, telehealth improves access for patients who otherwise would not be getting care, but whether access is sufficiently widely available is a matter of social justice.

Privacy, Confidentiality, Cybersecurity, and Other Legal and Regulatory Considerations
Privacy and confidentiality

Privacy often takes second place to public health, as exemplified by long-standing mandates to report sexually transmitted diseases. Though laws and guidelines require telemedicine physicians to maintain patient confidentiality as they would in face-to-face practice, US data protection enforcement was relaxed for telemedicine during the pandemic. As mobile health and other means to access telehealth through multiple devices expand, privacy, cybersecurity, data use, and related end-user agreements (EULAs) are more salient.[56] Location and contact tracking involve collecting data about each person's activities and connections. In this way, data from shopping to church attendance further illustrate how all data can become health data, yet not protected as health data.[57]

While most authors advocate greater attention to privacy, some consider worries about surveillance as unduly Orwellian.[58] Privacy, confidentiality, and cybersecurity, particularly in terms of the Health Insurance Portability and Accountability Act (HIPAA), Food and Drug Administration (FDA), and Federal Trade Commission (FTC) regulations, remain primary legal and regulatory issues in the US in light of the lack of real consent involved with relinquishing privacy and control over data through obligatory end-user agreements. While EULAs are of concern in general, they are considerably fraught for vulnerable populations.[59] The European Union's General Data Protection Regulation (GDPR) is a different model, and other countries vary in their arrangements, each with significant implications for privacy and surveillance.

Cybersecurity

Commercialization of telemedicine services and the widespread use of mobile health apps and different devices raise additional threats to privacy and cybersecurity. The US Department of Homeland Security identifies healthcare and information technology as critical infrastructure sectors, the Federal Bureau of Investigation (FBI) has issued warnings about healthcare cyberattacks, and there is growing public concern about health data breaches, thefts, and misuse. Previous ransomware attacks on the National Health Service in the UK, the World Health Organization (WHO), and other healthcare organizations illustrate the importance of improving cybersecurity.[60,61] The urgency of such improvements is reinforced by email addresses and passwords, presumably from the WHO, the US National Institutes of Health, and the Gates Foundation being posted on line in mid-April 2020.[62] Bring-your-own-device practices that allow clinicians and patients to use their personal devices for healthcare-related purposes make cybersecurity even more problematic.[63] In addition to being guideline and policy issues for healthcare organizations, privacy, data security, and cybersecurity are significant legal and regulatory issues.

Other regulatory issues

Licensure, credentials, liability and malpractice, conflicts of interest, technological certification standards and device regulation, and conflicts between state rules, have been discussed for years in the US.[64,65] Parallel concerns were expressed internationally as well,[66,67,68] with some additional attention to vulnerable populations not being served, and to responsibility for hardware and software malfunctions, errors, safety, and interoperability.[69,70,71] Such considerations were recognized as possibly impeding the expansion of telehealth services.

Licensure requirements, in particular, may need revisiting. They were relaxed so clinicians need not be licensed to practice in the same jurisdictional locale as the patient. There is some history for this during emergencies. Texas, for example, allowed telemedicine providers and health systems in other states to provide virtual support for Houston hospitals and patients dealing with Hurricanes Harvey and Irma.[72] Liability and malpractice also are worrisome as everyone is using new technologies, possibly without sufficient information to ensure quality care, and is acting under extreme conditions. Which of the various relaxations and regulations should be continued and which have proved harmful, or are in need of changing?

Clinician, Patient, and Institutional Responsibilities

As is apparent, ELSI cross-cut the four most common themes of prior discussion (quality and relationships, access, consent, and privacy), as well as newly surfacing ones. As telecare services mushroom, clinicians and patients take on new roles, relationships, and responsibilities. Changes in status, control, legal responsibility, ways of working and needed skill levels, and in relationships between clinicians and different communities as well as between patients and clinicians have implications for quality of care, guidelines, and policy.[73,74,75,76] All these create responsibilities for clinicians, patients, institutions, and regulators.

Responsibly using technology

Physicians are advised by professional guidelines discussed above that different situations and patients require knowing both the consequences and limitations of telehealth. Authenticating patients, ensuring appropriate data quality and protection, and informing patients about risks are new skills and requirements for ethical practice. Clinicians also need to be culturally sensitive to different communities and families as they provide care for patients in areas remote from them where customs, practices, and language may differ.[77,78,79] Patients, then, must be involved and accept telecare's benefits and limitations. They, too, need to learn how to select and use the technologies and possibly overcome access, usability, and language barriers.

Usability, acceptability, and access

People learning new skills and approaches face usability, acceptability, and access challenges. Meeting different needs both for healthcare provision and technology designs for different patient and clinician populations is necessary while also adhering to standards of care for all.[80,81,82,83,84] Usability has been little discussed as an ethical issue.[85] Lack of appropriate services and technology for the disabled, the elderly, and other populations, such as the cognitively impaired, also characterize other uses of technology in healthcare.[86,87,88]

Training and education

Institutionalizing training through curricular change and continuing education for new roles and responsibilities will improve quality and facilitate integrating telecare services into routine practice.[89,90,91,92,93] Such education will help ease burdens on clinicians to know benefits and limitations of new technologies and means of care. Changes in communication, power, and perhaps fiduciary relationships between clinicians, between patients and clinicians, and between a patient's family members, potentially affect diagnosis and treatment decisions. Institutional policies should account for how telemedicine can affect the clinical workforce and possibly lead to new jobs, layoffs, reskilling, shortages, and burnout. They should promote training for flux in clinicians' roles and responsibilities to ensure patient safety and ethical workplaces, not only effective use of technologies.[94] Patients, like clinicians, also need assistance and education to navigate new ways to get care and understand implications–including ethical considerations–of using telehealth services.[95,96,97]

Commercialization

The AMA flagged the possibility that healthcare delivery would become commercialized as private companies are used to provide telecare services. Though, to most, the benefits of telemedicine are clear, some authors questioned the extent to which the aim of telemedicine has been improving health and well-being or, instead, creating market opportunities or cutting costs. They considered that trading market rationality and efficiency for values traditionally at the heart of caregiving could compromise care. Outsourcing to national and international commercial telehealth services highlighted different standards and philosophies of healthcare. Data exploitation in ways that violate privacy, support marketing interests, create vulnerabilities, increase surveillance, and compromise both informed consent and patient–clinician relationships is among the challenges posed by commercial interests' market needs.[98,99,100,101,102,103] Related concerns are the notorious opacity of end-user agreements for commercial services and apps, with meaningful consent and privacy in question.[104,105]

The growing set of commercially available apps and social networking healthcare sites generally is not regulated in the US, so may lack medically validated content. These services also generally are not subject to privacy and cybersecurity protections governing clinical data in the US.[106] There is little to prevent telehealth vendors from requiring patients to agree to data uses for purposes unrelated to health care.

Ethics, Guidelines, and Policy

Myriad policy considerations have become more apparent during the COVID-19 telehealth expansion. They range from common legal and regulatory issues to new ones like billing codes, reimbursement, contact tracing, relaxation of requirements and expectations during overwhelming emergencies, and patients' control over data about themselves and what happens to these data. Before the pandemic, scholars and professional organizations proposed establishing institutional, professional, and regulatory policies to guide telemedicine practices.[107,108] Four themes predominated: quality and relationships, access, consent, and privacy. Privacy and cybersecurity were persistent themes, though some authors argued that these, while crucial, overshadowed other significant issues also needing attention, including

depersonalizing care, increasing patient isolation, ignoring changes in relationships, and adopting technology in order to achieve cost savings rather than health gains.[109,110,111,112,113]

The world's healthcare organizations and professional societies would be wise to establish telemedicine guidelines that go beyond the usual four themes and revise them to incorporate these previously discussed concerns. Guidelines also should address newer experiences that involve data sharing and ownership, cybersecurity (including acceptable devices and their uses), the incorporation of telehealth and information technology in general as part of clinical and continuing education, vendor relationships, billing and reimbursement, the need to keep treatment protocols and guidelines current, telehealth and information technology strategy, implementation and change management processes, workflow redesign and job skills, usability and access, and evaluation and assessment. They should lessen the gap between clinical priorities and macro-level guidance that ignores care contexts, dynamic settings and implementation processes, and individual patients' needs and quality of life.[114]

The time is opportune to review and revise regulatory policy and regulations to better address issues of privacy, cybersecurity, licensure, liability, and malpractice. Privacy and licensure regulation have been relaxed. What are the implications? Geotracking brings privacy, device regulation, and algorithmic accuracy to the fore and reinforces alarms about unwanted interventions (e.g., via tracking, policing, and marketing). Wearables and ubiquitous mobile health applications, implantables, and mobile and home technologies for healthcare raise ethical and legal questions about oversight and validation of commercial apps. Concerns have focused on commercial devices' safety and efficacy; consent and privacy implications of their end-user agreements and privacy policies (and lack thereof, including lack of enforcement); and data sharing, ownership, control, and secondary use.[115,116,117,118,119]

The variety of information technologies and health record systems requires efforts to address what is needed so that crucial patient information, from multiple sources, is available for patient care, public health, and research, in ways that protect patients and clinicians. Informatics policy is both an organizational and governmental function. Different countries have different privacy policies—variations in geotracking and quarantine policies are prime examples, as are differences between the GDPR and data protection elsewhere. Much can be learned from comparing them and from the many critical analyses of the principles and approaches on which the GDPR and HIPPA both are based.[120,121,122,123,124] In the US, discussion of the need to revise HIPAA should continue along with the possibility of scrapping the approach to privacy that differentiates between different kinds of data and market sectors. FTC enforcement of privacy policies, and FCC enforcement of secure transmissions both need strengthening.[125]

But privacy, though crucial, is only one area for informatics guidelines, policy, and ethics. Other regulations and practices also need review and, possibly, revision or revocation. Perhaps it makes sense to allow qualified clinicians from other locales, even other countries, where there is lower demand, to provide care in places where demand cannot be met. Perhaps it would be wise to allow more patient data sharing. Perhaps not. Access, usability, appropriate use of different technologies under and for different conditions and cultural norms, ethnic and linguistic groups, all will enhance care and service.[126,127] They now are more evidently important to ensure the ill, disabled, illiterate, remote, and those without technological access can obtain needed care.

The AMA states that physicians should have information needed to make well-grounded recommendations for each patient.[128] Information not only must be available, but also accurate, reliable, complete, and up-to-date, particularly if the clinician and the patient do not know each other. Integrating health data from various sources and making relevant data available to clinicians are pressing needs. Having relevant, valid information about patients is a clear informatics mandate that requires far more interoperability and data sharing than there has been. This is all the more important when a previous professional relationship between patient and clinician may not be possible in healthcare systems overwhelmed with patients, or when telemedicine is the only available care option. The pandemic has made it all the more necessary to share data, improve interoperability, incorporate patient-generated data into records, and provide up-to-date prevention and treatment protocols There is an urgent need to develop informatics infrastructure and ethical guidelines to meet data and care needs while enhancing

privacy and cybersecurity. Guiding principles from the 2000 e-Health Ethics Draft Code remain applicable to all information technology services: The expansion of commercialization makes it incumbent on health information product or service providers to disclose (1) influences on their decisions pertaining to content and services, (2) potential risks of providing personal information, (3) privacy and terms-of-use policies, and (4) policies to safeguard privacy and ensure consent.[129] (The code was updated later the same year.[130]).

Further, policy involves weighing the benefits of telemedicine against other uses of resources to improve health,[131,132] as well as attention to other values that should inform policy, guidelines, and institutional practices. Potential value conflicts related to health, privacy, innovation, commercialization, political realities, and local differences need consideration. Among the decisions is whether telehealth is a wise use of resources. Perhaps food or water insecurity, or nursing and supply shortages, or economic development and social welfare, or literacy and education, or many other concerns should be undertaken instead. Answers are likely to vary geographically and politically. Policy decisions require addressing multiple values, thereby bringing ethics into play as decisions are made about how resources should be allocated, what restrictions should be placed on individuals during an epidemic, and how to proceed afterwards. Carefully considering values in addition to health, safety, and knowledge generation and dissemination is necessary. There is always more that could be done. What ethical, legal, and social considerations and norms should be brought to bear?

This is where ethics and evaluation can help.

Ethics and Evaluation

Effective and ethical telehealth and information technology strategy should be evidence-based and value-based. Telehealth evaluation studies can be supplemented by what new experiences and approaches are revealing.[133] World-wide deployment of telehealth services entails considerable variety and so creates a natural experiment for learning from experience and updating ethical guidelines; this will allow for an applied ethics approach that addresses context-specific issues and the relationships co-created by people and technology.[134,135,136,137] Local practices can be studied and compared over time. It seems obvious, but worth stating, that as similar services are implemented in different places, a one-size-fits-all approach does not apply for consenting, for different kinds of services and technologies,[138] or for different patient populations and services, especially considering the range of possibilities in developed and less developed locations.[139,140,141] The evaluation of different approaches in different places is imperative so that ethicists, professionals, the public, and policy makers acquire sound evidence for improved analysis, decision-making, and services.[142,143] Guidelines, practices, and policy decisions vary from place to place, so they too can be compared, their consequences examined, and their content revised. Whether some kind of care is better than none, and what should be done if a patient cannot get recommended care also should be considered. This already was an issue internationally when a specialist consults for a rural person with no access to specialty service.[144]

Regulations, guidelines, and policies (whether institutional or governmental) should be based on both evidence and ethics. Carefully including ELSI in robust discussion and evaluation will improve ethical clarity and help generate a consistent analytical framework to inform future regulatory, institutional, and social practices. A sound ethical rationale and principled approach for responses to severe public health threats can lead to better public acceptance, harmonized and strengthened standards (both regulatory and voluntary) across different domains, a more highly developed culture of responsibility of all concerned, and increased public trust in governmental, institutional, and commercial actors[145]—for future routine as well as crisis practice. By working together with informaticists, clinicians, patients, and other stakeholders and scholars, ethicists can contribute to more ethical practices, guidelines, and policies.[146,147] ELSI examined in light of the COVID-19 pandemic can increase public awareness and debate to inform current practice and to stimulate further discussion.

Conclusion

Telehealth's explosive expansion during the COVID-19 pandemic provides a lens for addressing ELSI in the realm of health information technologies in general. Though informed by the experience in the US, many considerations are more general and relevant to different health information technologies in different places. The life-saving contributions of telehealth cannot be denied. At the same time, we should avoid the long-standing emphasis on technology that has permeated informatics and policy since its beginning. That emphasis comes at the expense of ethical, legal, and social considerations, and contributes to triumphalist accounts of telemedicine trials even though research and evaluation results may be less positive.[148,149] It could compromise the duty of care, a WMA telehealth guiding principle.[150]

Perhaps most important is learning from experience while moving forward ethically and responsibly. This will require broadening what generally constitutes ELSI beyond what usually constitutes bioethics topics to include information technologies; and beyond the scope of principles of beneficence, autonomy, and social justice. Ethicists have an important role: keeping ethics at the forefront, analyzing developing norms for new technologies and circumstances, highlighting the issues and values involved and informing people about them, asking whether telehealth practices treat people well and fairly, questioning precisely who is treated, how they are treated, and by what standards, and advising on how to facilitate ethical behavior and policies.

We have a remarkable opportunity to broaden bioethics' scope. By situating ethical analysis in real-world experience, we can study, critique, and improve upon past scholarship, professional guidelines and ethics codes, and institutional and governmental policies and regulation. This will improve the development and deployment of telehealth and other information technologies. Fortunately, this is starting to happen.[151] As Young et al. remark:

> …as we move forward, it is vital to consider the need to adhere to established principles of medical ethics, adapt old concepts to new forms of communication and address the unique ethical issues one may encounter with the use of technology in healthcare. Clinicians must always be cognizant of risks and implement ethical safeguards, all while nurturing the therapeutic relationship, insuring confidentiality, maintaining patient satisfaction and appropriately utilizing technology to provide evidence-based care and clinical benefits. (p. 15)[152]

This paper attempts to contribute to efforts to meet those responsibilities.

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