# TESTIMONY

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# Expanding the Use of Telehealth

## Promise and Potential Pitfalls

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*Expanding the Use of Telehealth:*
*Promise and Potential Pitfalls[2]*

**Before the Committee on Energy and Commerce**
**Subcommittee on Health**
**United States House of Representatives**

**May 1, 2014**

Thank you Chairman Pitts, Ranking Member Pallone, and distinguished members of the subcommittee; I am honored to have been invited to testify before you today on a topic of such importance to our healthcare system. My name is Dr. Ateev Mehrotra. I am a staff physician at the Beth Israel Deaconess Medical Center, an Associate Professor at Harvard Medical School, and a policy analyst at the RAND Corporation.

One of my core research interests is understanding the impact of delivery innovations on the triple aim – improving quality, decreasing costs, and improving access. In previous work I have examined new ways of delivering primary care or urgent care using nurses and physician assistants at retail clinics or nurse-managed health centers. I have also studied the care provided by personal health records, eVisits, and telephone-based visits. There are a burgeoning number of new delivery options available to patients which I have termed the "convenience revolution" in health care.[1] My hope is that these new delivery options can address the common complaint I hear as a physician, and what I am sure you hear from your constituents: that people across the nation often have difficulty accessing care in a timely manner.

My testimony today is organized around four points for the members of the Committee to consider as they address the growing use of telehealth.

**Frame telehealth broadly**

One form of telehealth is simply replacing an in-person visit between a patient and physician with a real-time videoconference. While such forms of telehealth are important, I believe we should

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define telehealth much more broadly. Telehealth essentially means receiving care in a mode other than a traditional face-to-face visit. In some cases, the goal of telehealth is to replace a face-to-face visit, but in many other cases the goal is to enhance the care provided in face-to-face visits or to deter costly complications such as hospitalizations. Some telehealth options that I think are worth noting:

- In Pittsburgh, almost 200,000 people have an online account hosted by their health system.[2] This allows them to use their computers or smart phones to regularly look up their test results and message with their physician to ask questions or address changes in management. Across the nation, more than 15 million have similar personal health records.
- In Detroit, nurses at Wayne State are studying whether text messages sent to patients with hypertension can help improve their blood pressure control.[3]
- In Oak Brook, Illinois, intensive care physicians and nurses help manage approximately 250 patients at eight different hospitals in the region from a single command center where they can monitor vital signs, lab tests, and other studies.[4]
- In San Francisco, physicians have set up kiosks in emergency departments and urgent care centers. If a woman is concerned she has a urinary tract infection, she answers a series of questions and based on her answers, a computer algorithm decides on the course of care.[5]
- In Rochester, Minnesota, primary care physicians are using eConsults to replace specialty visits. Typically, when a patient sees a primary care physician and a specialist's input is necessary, the primary care physician sends the patient to a specialist. Under an eConsult system, a primary care provider poses the question electronically. In many cases, the patient does not have to visit the specialist at all, saving both the patient time and money.[6]

I chose these telehealth options to illustrate the many different ways technology can be used to deliver care between patients and providers. The great diversity of telehealth makes Congress' job difficult as it is hard to simply define telehealth. The many federal agencies involved with telehealth have struggled to find a common definition.[7] While it might be tempting to begin to define, regulate, or pay for telehealth by technology, technology changes rapidly and any definition that specifies the type of technology runs the risk of being outdated very quickly.

One reason I advocate for increased use of bundled payment versus our current fee-for-service system is that the bundled payment is not contingent on providing the care in-person or specific to a given telehealth technology. Providers have more flexibility in deciding upon the most

appropriate means of delivering care for a given patient or condition. This flexibility is important for telehealth to reach its potential to improve quality, decrease costs, and improve access.

**Do not assume telehealth leads to better care**

There were initially concerns about the quality of care provided via telehealth, but these were often misplaced. Most published research studies have found that telehealth care can be as effective as in-person care. My own work on telephone-based urgent care[8] and other innovations such as retail clinics,[9] though preliminary, has indicated that the care might be equal to the care provided during an in-person physician visit. The care can also be superior. A recent study of tele-ICU care found that it led to more than a 15% reduction in mortality.[10]

As with all new technologies and delivery models, it is important, however, not to assume that the technology always improves care. Sometimes telehealth may even lead to harm. In one study we compared the care provided via eVisits and office visits from the same set of physicians. For some conditions it appeared that the physicians providing care via eVisits were more likely to prescribe antibiotics.[11] Without face-to-face contact, physicians might take what they view as a more conservative approach and prescribe more frequently which could lead to the adverse consequence of increased antibiotic resistance. Several large randomized trials of home monitoring for those with chronic illness have not found any benefit. In fact, one recent study found that home monitoring for older adults may lead to more hospitalizations and increased risk of death.[12] One potential explanation for the higher risk of death is that the frequent monitoring triggered more tests which led to harm.

These findings emphasize several points. The first is that despite the many evaluations of telehealth, there is much more to learn about the impact of telehealth on quality. Second, the growth of telehealth increases the need for population-based quality measures (for example, the quality of care provided to patients with dementia) instead of our current quality measures which are often delivery specific (for example, nursing home quality measures). These quality measures will help ensure that care, whether in-person or via telehealth, is of high-quality. Lastly, it is hard to make blanket statements on whether a given telehealth technology is effective or ineffective. Rather, the impact of a given telehealth option will be helpful or harmful depending on the patient and context. This complexity makes it difficult for Medicare or other payers to make decisions on whether to pay for a given type of telehealth.

**Telehealth may improve access, but not always for the populations we expect**

One obvious appeal of telehealth is to increase access for patients who live in rural areas of the United States where there are few available providers. Telehealth has great potential in this respect and, indeed, many federal agencies include delivering care to rural or underserved communities in their definitions of telehealth.[7] However, when we think of telehealth options directed to patients, it is important to recognize that people who live in urban areas where there are many physicians may be those most likely to use telehealth. In our analyses of telephone-based care, the most common users were those who live in high income areas.[8] Prior national work using a national survey has found that the most common users of telehealth live in cities and have higher incomes and more education.[13]

At first blush, it may be surprising that patients who live in urban areas with ready access to providers would still prefer to use a telehealth option. In fact, many people even in these areas still have difficulty accessing care in a timely manner. For example, the majority of retail clinic users report having no primary care physician[14] and many telephone-based care users have no other contact with the health care system.[8] Also, because they often have greater availability and familiarity with some technology, more educated patients may be more willing to try these new innovations. Telehealth is also attractive because of its time-saving features, as it may allow one to avoid travel and wait times, certainly appealing to anyone working or with a family.

Recognizing that telehealth has broad-based appeal among patients is essential, because it is important that policies are not crafted just for rural communities. Also, if telehealth becomes widely available as a covered service via their insurance, most users may not come from underserved communities. This could contribute to overuse of care.

**Telehealth can lead to lower costs per clinical encounter, but also could drive increases in health care spending by increasing the number of clinical encounters overall.**

Telehealth has great potential to reduce health care spending. A recent study found that after-hours availability of telemedicine via a videoconference cart in nursing homes reduced the number of unnecessary hospital readmissions and led to almost $150,000 in savings per nursing home per year.[15] An eConsult system used by primary care physicians was associated with almost 20% fewer specialty referrals.[16]

We and others have documented that telehealth and other innovations can be cheaper than an in-person visit on a per visit basis. However, lower cost per visit does not ensure telehealth will

reduce costs. To reduce health care costs, telehealth options must replace in-person visits. The concern is that telehealth could increase costs by driving greater utilization of health care services. In other words, people who otherwise would not have sought care in the first place will use telehealth to get care. If this increased access and greater utilization leads to treatment that leads to improved health, then this new utilization is good for our society. If, however, this new use is overutilization, care that does not lead to improvements in health, then there could be increased costs without any added health benefits. The very advantage of telehealth, its ability to make care convenient, is also potentially its Achilles' heel. Telehealth may be "too convenient."

If the primary goal of telehealth is to reduce societal health care spending, then telehealth options that focus on eliminating high-cost medical events such as hospital admissions or specialty referrals are more likely to be effective. In contrast, telehealth options where the cost savings come from providing the same care more cheaply may be less effective in reducing spending. Any cost savings on a per visit basis may be trumped by an increase in utilization.

This possibility of overutilization can be tempered through payment reforms being considered by the Congress that focus on bundled payments. If telehealth is paid for under a fee-for-service payment then there is an incentive for overutilization. However, payments for managing a population of patients may be much more effective in driving more cost-effective use of telehealth tailored for individual patients and clinical scenarios.

**Summary**

I am a firm believer in the potential for telehealth and other delivery innovations to transform our health care system for the better. My hope is that twenty years from now, telehealth will be widely available. However, there are many complexities that I have highlighted that require further investigation and consideration. The growth of telehealth requires oversight to ensure that these new delivery models do three things: provide high-quality care, improve access to those who need it most, and are utilized in a cost-effective manner.

Again, let me thank you Mr. Chairman, Mr. Ranking Member, and members of the subcommittee for allowing me to appear before you today to discuss this important issue. I would be happy to take your questions.

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