COMMENTARY

Telemedicine and the Sharing Economy: The "Uber" for Healthcare

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ABSTRACT

Telehealth platforms, which include both competitors and complements to traditional care delivery, will offer many benefits for both consumers and clinicians, and may promote increased specialization and competition in service delivery. Traditional medical services providers face a challenge similar to that faced by traditional taxicabs after Uber entered the marketplace: how to compete with a connection services platform that threatens to disrupt existing, regulated, and licensed service providers.

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The rise of telehealth represents a new frontier of the sharing economy, both complementing and challenging traditional players in the market for medical care delivery. Telehealth platforms have been forced to navigate local regulatory and competitive barriers to entry, in addition to attracting both patients and clinicians. Their development path has mirrored the recent experience of on-demand driver-for-hire services like Uber, Lyft, and other companies, which serve as electronic platforms connecting drivers and passengers more efficiently than traditional taxis. Although there are differences in the 2 marketplaces, telehealth companies may be able to take advantage of modern technology in a similar fashion.

Uber is a software-based technology platform that uses GPS-enabled smartphone technology to connect drivers and riders in real time. Drivers can be professionals driving for hire full time or as nonprofessionals who meet basic requirements (eg, background check, vehicle quality) and seek to monetize their free time. Ride-sharing companies compete against traditional taxis, which match drivers with riders through street hails or via telephone dispatch. Telehealth platforms are following a similar path: initially serving as a platform to facilitate physician utilization of their medical licenses when not seeing patients in person, while concurrently migrating into the market for traditional care delivery.

The Rise of the Sharing Economy: Ride-Sharing Platforms

Historically, the taxi marketplace has been characterized by significant economic regulation, such as restrictions on entry (eg, a fixed number of taxi medallions), limitations on site-specific customer access (eg, a prohibition on airport pickups), special license requirements for drivers, and other regulatory barriers to entry. Therefore, when ride-sharing platforms entered the marketplace, many local jurisdictions sought to apply regulations designed to govern the traditional taxi industry.

Even prior to entry by ride-sharing platforms, many traditional taxi regulations traditionally had "no persuasive economic rationale," while imposing a "disproportionate burden on low-income

people,"[1] as Federal Trade Commission staff found in 1984 when examining these restrictions. Entry restriction and the concordant negative effects on output were not counterbalanced by consumer benefits. Resistance to entry by new ride-sharing platforms came primarily from those who benefited from regulatory barriers to competition: existing taxi companies and dispatch services.

TAKE-AWAY POINTS

Through telehealth platforms, the sharing economy has entered the market for medical care delivery and begun to both challenge and complement traditional modes of delivery. Akin to Uber, telehealth platforms are connection services platforms that have the potential to disrupt existing, regulated, licensed service providers. As they develop, telehealth platforms will offer many benefits to both consumers and clinicians, and may promote increased specialization and competition in service delivery.

Despite navigating significant regulatory entry barriers, ride-sharing platforms achieved market penetration by reducing connection costs for drivers and riders, providing innovative pricing services, such as real-time, consumer demand–driven pricing; and convincing regulators and lawmakers to adopt entry-friendly policies. Consumers benefited from decreases in price, search time, and wait time, coupled with increased convenience. Generally, platforms themselves take steps to ensure quality, safety, and price by making information more transparent to consumers through reputation review systems. Subsequently, consumers are satisfied, with over 140 million trips on ride-sharing services in 2014.[2] Economists' estimates of the consumer benefits caused by Uber's entry into the taxi marketplace range as high as $6.8 billion in 2015 alone.[3] In addition to consumer benefits, ride-sharing platforms benefit drivers, as well: drivers select their working hours and there is evidence that ride-sharing platforms are more efficient, allowing drivers to spend more time transporting passengers instead of searching or waiting for new fares.[4]

Expansion of the Sharing Economy: The Rise of Telehealth Platforms

Modern telehealth platforms present a variety of unique benefits to both consumers and physicians. Patients may seek telemedicine services for episodic care, specialty management of chronic illnesses, and primary care. Consumers stand to experience increased convenience in accessing medical services and encountering a variety of connection services platforms, choosing the modality they prefer based on their own unique characteristics as consumers. In contrast to traditional, office-based services, patients may access medical services in an "on-demand" fashion, engaging in instant message exchanges, video chats, and remote exams. Lastly, clinicians will also benefit from improved work-life balance due to flexible practice hours and location, in addition to potential increased earnings.

Both consumers and physicians will also benefit from the systems innovations that will accompany increased use of telehealth platforms. For example, in order to mitigate malpractice risk, telehealth platforms will need to differentiate between, and then route, patients requiring higher-acuity or more specialized care to the right point and service provider. Telehealth platforms may also innovate in how they regulate quality and safety standards and screen and select providers, and in how consumers rate service providers—a common feature of many platforms in the sharing economy. By facilitating information collection and making it transparent, telehealth platforms have the potential to protect and empower consumers.

Telehealth platforms can further expand access to general medical services by reaching out to consumers in underserved areas and providing access to highly specialized consult services. Currently, medical care delivery is highly local, with physicians practicing in their towns or cities and patient interaction occurring primarily in person in an office or hospital setting. Highly localized delivery, coupled with state-based licensure systems, potentially restricts the supply of physicians and limits consumer access to, and price competition for, telemedicine services. Telehealth platforms offer an opportunity to expand access without major financial investment, in addition to increased price competition for some medical services.

Empirical Evidence of Benefits With Limited Harms

Early market evidence supports the conclusion that telehealth platforms yield substantial consumer and clinician benefits. Teladoc, a publicly traded telehealth platform company, had 576,000 visits in 2015 with 95% consumer satisfaction,[5] while physician hourly income increased 50%. These and other benefits will power market growth, with estimates of the current telemedicine market ranging from $1.9 billion to $30 billion. Despite this rapid growth, some have raised concerns regarding the safety of telehealth platforms as a rationale for restricting the market entry and growth of telehealth platforms.

In addressing this concern, one must note that physicians have successfully practiced telemedicine for over 100 years by using the telephone to conduct physician-to-physician consults, diagnose and treat patients, prescribe medications, and order diagnostic tests. Like the taxi industry's move from telephone dispatch to matching through GPS-enabled smartphones, modern telehealth platforms represent a natural outgrowth of the practice of medicine, using modern technology to grow a systems approach to safety and quality.

Competition between competing connections services platforms—telehealth and physical plant health systems (ie, hospitals)—will serve to accelerate the development of these safety and quality systems, in addition to spurring competition along the

dimensions of cost, access, and convenience. Traditional physical plant health systems have existed since the 1400s and have been continuously improving: the American College of Surgeons published the first manual of hospital standardization in 1920 and established the Joint Commission in 1950. Due to increased competition, we expect that safety systems for telehealth platforms will rapidly evolve.

Disruption, Innovation, and Growth

Telehealth platforms have the potential to disrupt the market for supplying medical services. Compared with ride-sharing, medical care delivery is complex, varying in acuity, intensity, and degree of specialization. Some medical services, due to training, complexity, or infrastructure requirements, cannot be substituted, whereas other services are substitutable and are not provider-specific. Due to the well-documented shortage of primary care and other physician specialties,[6] this potential substitutability is currently not transparent to consumers. Telehealth platforms will improve the transparency of the potential substitutability of certain service providers. For example, for common, episodic needs, patients might not require an ongoing, personal relationship with a physician in order to receive safe and effective care.[7] Thus, telehealth platforms may connect patients to a capable and appropriate provider for on-demand services, as opposed to an already known physician.

Likewise, for a variety of low-acuity and general medical services, telehealth platforms may offer more convenient or lower-priced care, supplanting traditional physical plant–focused delivery platforms. Telehealth platforms can be complements or competitors. At this stage in the growth of telehealth opportunities, health systems and plans are in a position to think strategically about telehealth and be proactive in defining their relationship to this platform. They can develop, buy, or collaborate with telehealth platforms. Thus far, their response is varied: from partnering, as demonstrated by the Highmark BCBS's Teladoc partnership, to development, as exemplified by Kaiser Permanente's new video chat service. Practicing clinicians face similar choices and can adopt and steer the coming wave of transparency of safety, quality, and consumer ratings or face increased competition.

Conclusions

Telehealth platforms will promote increased competition in medical care delivery. As competing platforms offer on-demand connection services to patients and physicians, consumers will benefit from having access to another mode of medical care—one that does not require traveling to a special location or advance scheduling—while clinicians will benefit from increased flexibility in how, when, and where they work. Telehealth platforms have the potential to provide significant consumer benefits and promote increased competition in the healthcare system. ■

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