Will health marketplace apps improve laboratories?

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Effective cancer care relies on high-quality affordable laboratory support. However, the following scene may well be familiar to oncologists across the region:

A patient lies suffering from an unknown ailment. A sample has been taken from a lump that may be the root cause of the problem, but without laboratory confirmation, this remains speculation. Unfortunately, the patient has no insurance and is desperately trying to save money. They ask, "Doctor, the laboratory here is too expensive, can I go somewhere cheaper?" Reluctantly, the doctor provides some names of laboratories that they think may be of reasonable quality. The patient returns with a "diagnosis." The printed sheet looks official enough, but the tumor type does not match the clinical symptoms and a sophisticated genetic mutational analysis is given. The doctor knows immediately that it cannot be right.

Such situations play out across the country and illustrate the problem of lack of standards, regulation, and quality control of laboratories. Many have heard of the "sink" test where a sample is thrown into the sink and a completely spurious report issued. Whether this is a myth or not, unfortunately there are always the unscrupulous who will exploit the vulnerable. Such is the degree of unscrupulousness in the health marketplace that, when, in 2013, a patient who had had nothing but negative experiences in finding ethical providers wrote a heartfelt message about a new app that helped him find a better doctor and sent it to their friends on WhatsApp, and it was forwarded millions of times and resulted in 250,000 downloads of the app within just a few days.

Most people suffering from any kind of chronic condition will be aware of the proliferation of "e-pharmacies" that replace the existing bricks and mortar facilities with online sales and promises of delivery within 30 min for urban areas. Moreover, we have also seen the introduction of e-health systems that collate, and to some degree assess, a diverse range of healthcare providers such as specialists, radiologists, and laboratories. These more fully featured apps are now mature and have become very valuable platforms. They present curated lists of doctors, specialists, and laboratories, while also providing value-added services such as call-out phlebotomists and generalized medical advice. They have become health systems in an app. At their core however, they rely on the same logic that drives Silicon Valley superstars such as Uber, Ebay, TripAdvisor, and Amazon: they standardize information and allow users to provide feedback. Although such review-based systems are susceptible to gaming and fraudulent reviews, the evidence suggests that these review-based systems confer value to users – the global taxi industry is reeling from the competition created by Uber – a single, global competitor.

This has important implications for all diagnosis and care. In diagnostics (not least for a life and death diagnosis like cancer), by standardizing the way in which providers are presented, these apps could limit the potential for marketing spin to make a bad laboratory look like a good one. ISO certification and other markers of quality are clearly presented in most apps, allowing users to quickly see that they are dealing with an approved provider. Most importantly perhaps, the users can see the price they will pay and make informed decisions about their care. The most popular Indian healthcare marketplace apps now have many millions of monthly users and have experienced huge growth in the recent years and their continued expansion seems inevitable.

In the absence of effective regulation of laboratories, such apps offer some very important advantages. Not only does standardization of information and transparency of costs increase competition and reduce fraud but also the phone-based nature of the app increases the efficiency for patients who may be in a hurry and with limited means to travel.

It is important that we recognize the limitations of these apps. They are not regulators. They do not do safety or quality inspections nor do they regulate professional practice. Crucially, they are profit-driven businesses unto themselves, and while they may collate information about providers in a useful, standardized way, they are not obliged to offer a level playing field. Presumably, those laboratories that pay for it will feature higher in their users' searches, as is the case in many other marketplace apps. In addition, patients are not well-placed to leave objective reviews of laboratories – their experience is subjective, and while the review system may work well for taxis and products, it may not work well for laboratory tests. We still need regulators and professional standards to control practice and ensure quality. Finally, as profit-driven businesses, the owners of these apps are also inclined to target the easiest, richest healthcare consumers. Delivering Ayurvedic medicines to rich patients in Mumbai is, after all, less hassle and more profitable than dealing with cancer patients in Chitrakote. This further widens the healthcare access gap between the rich and the poor in India.

Effective cancer care relies on high-quality affordable laboratory support, and until all patients have access to better information about providers markets will not function properly. In this regard, these new apps hold much promise, but they also challenge regulators to innovate too. Bad reviews could point regulators toward laboratories that should be prioritized for quality checks and data on certification could help them further prioritize their work, but regulators also need to ensure bad providers cannot buy their way into the market. Healthcare marketplace apps are here to stay, and we should be asking how we can ensure that patients experience the best of their benefits without suffering the same old problems in a new digital format.

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The authors are presently involved in a Gates-funded project that aims to create a smartphone health market place app that empowers patients and regulators and rewards good quality.

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