Editorial

The impact of net neutrality on digital health

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Will healthcare solutions be treated as content providers and treated differently under a new regulatory landscape for Internet Service Providers (ISPs)? Will changes to net neutrality layer additional costs on an already overburdened global healthcare system? These are important questions to consider as rule changes and policy continue to shape how individuals, consumers, and even healthcare providers interact with our increasingly digital ecosystem. For years ISPs legally were not allowed to differentiate between types of content, a concept of treating everything moving over networks the same and as a public utility (1). Increasingly the concern is that ISPs are focusing more on content creation and content innovation (2) and the potential exists to "fast track" internal or preferential information traveling over networks. Thus, ISPs control both the network and the content moving over managed networks giving preferential treatment to certain types of content, and increasingly potentially content ISPs have a financial interest associated with (1,2).

Within the context of healthcare, several important trends continue to shape the digital health landscape and healthcare delivery systems. First, the provision of healthcare is increasingly dependent on efficient and fully operational networks. More practices, varied care settings, and healthcare systems are utilizing electronic health records (EHRs) and digital health platforms to capture, store, and move data (3,4). In addition, in the United States, the broad dissemination of data to stakeholders is often a requirement of policy (5). Further, innovative and disruptive early stage companies are often leveraging functional aspects of mobile devices to create patient related data or content which must be transported over wireless and wireline networks (6). Prime examples include a focus on telemedicine or telehealth solutions and increasingly monitoring patients within the home or remotely. These technological approaches all represent data intensive solutions which have shown promise to reduce the cost of care, improve quality, and lessen the burden on our healthcare system (7).

As policymakers continue to evaluate the next era in policy making for the internet, relevant stakeholders should be cognizant of the following key matters directly impacting healthcare delivery:

Avoid subjecting health data to paid prioritization

Health and healthcare data should not be subjected to paid prioritization or discrimination and should not be encumbered from movement. Any rulemaking that impacts critical public services should ensure exemption from differential pricing and ongoing dialogue on how to best support these institutions. Solutions like telemedicine, movement of health data between health information exchanges, and intra-organizational and professional exchange of information all require exigent transmission across networks. Telemedicine and digital health solutions stand the greatest chance for exposure to risk as ISPs adopt paid prioritization strategies and network traffic discrimination (6,8).

Avoid adding cost to an overburdened healthcare system

Policymakers should avoid creating additional costs to the healthcare system which is mandated to exchange information by pursuing paid prioritization policies. Two major trends are present globally which have necessitated the creation of digital health technologies. The first trend

is a global shortage of healthcare providers (a deficit of nearly 2.3 million in 2006) (9) which places an emphasis on growing telemedicine and digital health services. The second global trend is continued increase in spending across a multitude of national income settings and health system types (10). By subjecting healthcare data to paid prioritization, ISPs contribute an additional element of cost to an already overtaxed system.

Provide safe harbor from information blocking and information exchange regulations

Finally, consideration should be given with regards to the impact paid prioritization exerts on recent United Sates regulations surrounding information blocking (11,12). Recent legislative language contained within the 21st Century Cures Act requires the Office of the Inspector General to develop details on penalties associated with blocking information. While the penalties and regulatory framework are largely left open to interpretation, any advancement on the topic will be conducted with the support of the Office of the National Coordinator for Health Information Technology. These agencies should consider the potential impact paid prioritization has and if necessary provide safe harbor measures to limit regulatory impact.

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Footnote

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