

Abstract

A Survey of Internet Performance During COVID-19

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Abstract

Background: Since the beginning of 2020, many societal systems have been used to extend the health care system, which were not planned for, and as such, there is concern for its collapse. Clearly, the collapse of the health care system, primarily hospitals, has been a key concern, and many initiatives, including lockdown and curfew, were taken to avoid such a collapse. The internet was the key platform used to enable people to work from home, provide remote teaching, conduct meetings on the web, etc. However, when it comes to data communication and processing, the risk of collapse is not the only risk, and maybe not even the biggest one. Many systems were not properly adapted for used in such a hurry, which did not allow time (and concern) for a proper risk and privacy assessment.

Objective: This paper presents internet performance statistics and analyzes how this knowledge can be used in future designs of internet-based telemedical solutions.

Methods: Statistics regarding traffic increases and security attacks on the internet during 2020 and 2021 were analyzed.

Results: The internet did not collapse during the COVID pandemic—as many people had predicted. However, the massive use of the internet, in new innovative ways, created a number of new opportunities for cybersecurity breach. Especially, the use videoconferences enabled made-in-middle attacks, phishing, and other classical breaches in new ways due to insufficient authentication and content encryption.

Conclusions: Even though a large amount of experience has been gathered with respect to scaling eHealth systems, a minimum amount of improvement with respect to privacy and security has been identified.

Conflicts of Interest: None declared.

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