## **Telemedicine Security: A Systematic Review**

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## Abstract

Telemedicine is a technology-based alternative to traditional health care delivery. However, poor security measures in telemedicine services can have an adverse impact on the quality of care provided, regardless of the chronic condition being studied. We undertook a systematic review of 58 journal articles pertaining to telemedicine security. These articles were selected based on a keyword search on 14 relevant journals. The articles were coded to evaluate the methodology and to identify the key areas of research in security that are being reviewed. Seventy-six percent of the articles defined the security problem they were addressing, and only 47% formulated a research question pertaining to security. Sixty-one percent proposed a solution, and 20% of these tested the security solutions that they proposed. Prior research indicates inadequate reporting of methodology in telemedicine research. We found that to be true for security research as well. We also identified other issues such as using outdated security standards.

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Abbreviations: (HIPAA) Health Insurance Portability and Accountability Act, (HL7) Health Level Seven

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