

Telemedicine exams result in antibiotics as often as regular exams, study finds

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Patients treated for an acute respiratory infection by a doctor on a telephone or live video are as likely to be prescribed an antibiotic as patients who are treated by a physician face-to-face for the same illness, according to a new RAND Corporation study.

However, the patients treated virtually were more likely to be prescribed a broad-spectrum antibiotic—concerning since overuse of the drugs increases costs and contributes to [antibiotic resistance](#), according to the study.

Researchers say both treatment settings had high rates of inappropriate prescribing for conditions such as bronchitis, which is consistent with prior research that about half of outpatient antibiotic prescriptions are not clinically necessary. The findings are published online by the journal *JAMA Internal Medicine*.

"The pattern of treatment offered to patients who saw a [physician](#) face-to-face versus those who spoke with a physician on the telephone was not substantially different," said Lori Usher-Pines, the study's lead author and a policy researcher at RAND, a nonprofit research organization. "However, we found the antibiotics prescribed during telemedicine 'visits' raised some specific quality concerns that require further attention."

RAND researchers say the use of direct-to-consumer telemedicine programs are increasing rapidly, despite a lack of research about whether

such programs are offering care of comparable quality to other types of medical services. This study is the first of its kind to assess quality of direct-to-consumer telemedicine as compared to in-person care for common [acute respiratory infections](#).

Interest has grown because of the shortage of [primary care physicians](#), which will likely worsen as more Americans acquire medical coverage under the federal Affordable Care Act. Telemedicine is one of the alternatives touted as a way to better provide primary health care without greatly expanding the number of doctors.

RAND researchers studied about 1,700 patient "visits" for an acute respiratory infection from April 2012 to October 2013 by Teladoc, one of the nation's largest providers of telemedicine services. Teladoc is different from most other telemedicine efforts because the company connects directly with patients, rather than providing specialty visits or offering consults for in-hospital care.

The patients with the telemedicine visits were covered through a health plan offered by the California Public Employees' Retirement System, which provides health insurance to the state's public workers. The experiences of patients who used Teladoc were compared to about 64,000 patients who visited a doctor's office for a similar medical problem.

Researchers say the higher use of broad-spectrum antibiotics by the telemedicine doctors may be a result of direct-to-consumer companies practicing conservatively, based upon limited diagnostic information about their patients.

The results suggest that telemedicine providers should consider quality-improvement initiatives to change physicians behavior, as well as direct education to [patients](#) to influence demand for unnecessary antibiotics,

according to the study.

More information: [archinte.jamanetwork.com/artic ...
px?articleid=2296013](https://archinte.jamanetwork.com/article.aspx?articleid=2296013)

Provided by RAND Corporation

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