


Virtual primary/urgent care

► Intervention in brief

Low risk:	Virtual primary/urgent care allows patients to access primary care or urgent care services through a web-based platform instead of meeting with a physician in person. This can include virtual visits via video conferencing or synchronous or asynchronous, patient-to-physician communication via email or another communication method. The goal is to provide more convenient care for patients with minor concerns or who need follow up care that doesn't require a physical assessment.
Strength of evidence	 Medium Research is relatively recent and measures the effect of virtual care only exist across a limited range of health problems.
Impact	<ul style="list-style-type: none">• Decreased cost: 20-55% decreased per-visit cost for certain conditions compared to PCP office, 95-97% decreased per-visit cost for certain conditions compared to ED; \$2,974 reduced claims cost per episode• Decreased utilization: 37.7 percentage point decreased 21-day follow-up appointments; 2.5-14 percentage point decreased outpatient lab use; 23.9-32 percentage point decreased imaging• Improved quality, clinical outcomes: Not demonstrated• Increased access: Greater weekend/holiday availability, extending care to more patients (34% of visits occur during these times); increased provider capacity (10% increase in panel size; 10% increase in annual visit capacity; 7.5 percentage point increased antibiotic use• Improved stakeholder satisfaction: Not demonstrated
How to succeed	<p>To develop an effective virtual care program:</p> <ul style="list-style-type: none">• Understand the virtual visit opportunity, including models available and barriers to adoption, and how to overcome those barriers• Develop a goal-oriented service design, acknowledging that ROI extends beyond direct revenue• Take an informed investment approach, considering barriers such as reimbursement requirements, data transferability, and stakeholder interests• Proactively engage physicians by addressing their concerns around program design, care quality, and compensation <p>To learn more about developing an evidence-based program, check out our Telehealth: Driving Adoption of Virtual Visits brief here.</p>

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► Demonstrated impact

Literature review summary

Title: Virtual Visits for Acute, Nonurgent Care: A Claims Analysis of Episode-Level Utilization

Publication: Journal of Medical Internet Research

Date: 2017

Type: Cross-sectional analysis

Study population: Patients age 65 and younger without serious chronic conditions that had sought care for one or more of a defined list of minor acute conditions (e.g. sinusitis, UTI, upper respiratory infection) either virtually or at different care sites. All patients were members of a certain large commercial health insurer.

Major findings:

- Patients using virtual care had lower visit costs compared to those visiting a retail health clinic (33.8%), urgent care center (UCC) (63.4%), emergency department (96.5%), or primary care physician office (PCP) (55.0%).
- Patients using virtual care had decreased follow-up medical costs compared to those using UCC (25%), ED (66%), and PCP (31%).
- Incidence of lab tests within three weeks of the index visit were lower among virtual patients compared with retail health clinics (24%), UCC (27%), and PCP (41%), as were rates of imaging as compared to UCC (2%), ED (36%), and PCP (4%).

Source: Full article [here](#).

Title: Direct-to-Consumer Telehealth May Increase Access to Care but Does Not Decrease Spending

Publication: Health Affairs

Date: 2017

Type: Cross-sectional analysis

Study population: Beneficiaries of a specific BCBS – California HMO that presented virtually (via Teladoc) or in-person with acute respiratory infections. The analysis mitigated for potential selection bias by controlling for various factors such as age, sex, and zip code, among others.

Major findings:

- Patients whose commercial claims and enrollment data showed virtual utilization for acute respiratory conditions had lower visit costs compared to patients using physician office visits (46%) or ED visits (95%).
- The vast majority of virtual visits (88%) were determined to represent new utilization from patients who hadn't engaged with the system in the past year, which suggests that the virtual visit allowed patients to overcome barriers to seeking care.

Source: Full article [here](#).

Title: A Comparison of Care at E-visits and Physician Office Visits for Sinusitis and Urinary Tract Infection

Publication: Journal of the American Medical Association – Internal Medicine

Date: 2013

Type: Cross-sectional analysis

Study population: Patients that attended any of four specific primary care practices within the UPMC Health System or sought virtual care for sinusitis or UTI between January 2010 and May 2011.

Major findings:

- E-visits for UTI resulted in lower costs than office visits for the same condition (20%).
- The analysis did not draw a cost comparison between virtual and in-person sinusitis visits.

Source: Full article [here](#).

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Title: Analysis of Teladoc Use Seems to Indicate Expanded Access to Care for Patients Without Prior Connection to a Provider

Publication: Health Affairs

Date: 2014

Type: Cross-sectional analysis

Study population: Beneficiaries of a specific BCBS – California HMO that presented either virtually (via Teladoc) or in-person. The analysis examined commercial claims data.

Major findings:

- Patients using virtual visits had a decreased likelihood of follow-up visits compared to physician offices (7%) and the ED (14%).
- Virtual visits also improved patient access, as over one-third of virtual visits took place during the weekends or on a holiday (34%), times when physician offices are often closed.
- Furthermore, 21% of Teladoc patients had no other health care utilization during the year of the study, suggesting that the virtual visit allowed patients to overcome barriers to seeking care.

Source: Full article [here](#).

Title: Intermountain Healthcare Demonstrates Telehealth ROI

Publication: American Well Blog

Date: 2018

Type: Case study

Study population: Intermountain Healthcare patients from 23 hospitals, 185 clinics, one medical group, and a health plan division (SelectHealth)

Major findings: Compared to patients who went to the ED, patients receiving virtual care experienced:

- Reduced 21-day follow-up appointments (35.3% vs. 73%)
- Reduced outpatient lab use (9% vs. 11.5%)
- Reduced imaging use (3.9% vs. 27.8%)
- Increased antibiotic use (69.8% vs. 62.3%)
- Reduced claims cost per episode (\$429 vs. \$3,403)

Source: Full article [here](#).

Title: The Impact of E-visits on Patient Access to Primary Care

Publication: Health Care Management Science

Date: 2017

Type: Case study

Study population: Primary care and specialty patients at Dean East Clinic in Madison, WI that had either e-visits or in-person visits. The study examined appointment length.

Major findings: Use of e-visits in the Dean East Clinic is projected to increase individual physician panels by 10% (from 2,000 to 2,200) and increase individual physicians' visit capacity by 10% per year (from 5,000 to 5,500).

Source: Full article [here](#).

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Appendix

- Gordon AS, et al., “Virtual Visits for Acute, Nonurgent Care,” *J Med Internet Res*, 19, no. 2 (2017): e35, <https://www.jmir.org/2017/2/e35/#Results>.
- Ashwood JS, et al., “Direct-To-Consumer Telehealth May Increase Access To Care But Does Not Decrease Spending,” *Health Affairs*, 36, no. 3 (2017): 485-491, <http://content.healthaffairs.org/content/36/3/485.full>.
- Mehrotra A, et al., “A Comparison of Care at E-visits and Physician Office Visits for Sinusitis and Urinary Tract Infection,” *JAMA Intern Med*, 173, no. 1 (2013): 72-74, <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/1392490>.
- Uscher-Pines L, Mehrotra A, “Analysis Of Teladoc Use Seems To Indicate Expanded Access To Care For Patients Without Prior Connection To A Provider,” *Health Affairs*, 33, no. 2 (2014): 258-264, <http://content.healthaffairs.org/content/33/2/258.full>.
- O’Riordan B, “Intermountain Healthcare Demonstrates Telehealth ROI,” *American Well Blog*, (2018), <https://www.americanwell.com/intermountain-demonstrates-telehealth-roi/>
- Zhong X, et al., “The Impact of E-visits on Patient Access to Primary Care,” *Health Care Management Science*, (2017): <https://link.springer.com/article/10.1007%2Fs10729-017-9404-8#>.