



Health Outcomes of Telehealth

What are the health outcomes of gaining access to telehealth?

There are multiple options for telehealth.

The available telehealth options include talking to a provider on the phone or video call, sending and receiving secure messages, emailing, texting, and using a remote monitoring device to collect vital signs (**Table 1**; [Department of Health and Human Services \(HHS 2023\)](#)).

Types of telehealth care include but is not limited to ([HHS 2023](#)):

- Urgent care issues
- Prescription management
- Mental health treatment
- Physical therapy
- Notifications to exercise or stick with treatment plan
- Health instructions for diet, mobility, or stress

For information on telehealth limitations, see our [Broadband & Telemedicine](#) Science Note.

Telehealth has some positive effects on patients.

While there are many studies comparing health outcomes of telehealth to in-person health visits, there are few studies comparing telehealth

Research Highlights

Telehealth can address a range of issues from healthy diets to urgent care issues.

Telehealth improves certain health outcomes for pregnant women, children with diabetes, and elderly patients.

Telehealth can lead to the overprescription of antibiotics.

access to a lack of healthcare access.

- Overall, telehealth is expected to improve patient outcomes due to access to healthcare and timeliness of care ([Mahtta et al. 2021](#)).

Texting health recommendations to pregnant mothers had mixed effects on outcomes ([DeNicola et al. 2020](#)).

- Texting reduced smoking and led to a greater continuation of breastfeeding.
- Texting did not affect vaccination rates or healthy eating.
- Texting had mixed effects on rates of physical activity.
- The use of a mobile app focusing on pelvic floor muscle training decreased incontinence severity.

Telehealth sometimes reduced Cesarean sections, blood glucose levels, and insulin requirements in pregnant women with pre-existing diabetes ([DeNicola et al. 2020](#)). Access to remote monitoring devices reduced rates of preeclampsia and medical interventions for high blood pressure in pregnant women.

Table 1. Overview of how telemedicine is used for different services. Table adapted from [Tuckson et al. 2017](#).

Interaction	Telemedicine Tools	Telemedicine Services
clinician to patient	video, phone, email, remote monitor, web portal	care for chronic conditions, medication management, wound care, follow-ups, counseling
patient to mobile health technology	wearable monitor, smartphone, mobile app, video, web portal	health education, medication adherence, monitoring of diet and activity

- Most of these studies on diabetic pregnant women were performed in high middle-income European countries.

When telemedicine was implemented in NY schools, students with diabetes reported lower blood sugar levels and had fewer urgent calls to doctors ([Izquierdo et al. 2009](#)). In WY, access to teleconsultation services for children resulted in fewer children being prescribed psychotropic drugs and at lower doses ([Hilt et al. 2015](#)). Teleconsultation also redirected children from treatment facilities to alternative community treatments ([Hilt et al. 2015](#)). School-based telemedicine in rural NC reduced the likelihood of avoidable emergency department visits ([Mayfield et al. 2023](#)).

In elderly patients, remote monitoring reduced mortality due to any cause and heart failure-related hospitalizations ([Clark 2018](#)). Elderly patients that enrolled in a home-based pulmonary rehabilitation program also showed improvements in shortness of breath, exercise capacity, depression, and quality of life ([Drwal et al. 2022](#)).

Telehealth can lead to overprescribing.

Compared to face-to-face visits, telehealth visits led to the overprescribing of antibiotics for adults and children ([Mehrotra et al. 2013](#), [Ray et al. 2019](#)). This overprescription may be due to physicians being cautious in their treatment when they are unable to directly examine patients ([Mehrotra et al. 2013](#)). Antibiotic management followed guidelines less strictly in telehealth settings compared to other settings ([Ray et al. 2019](#)).