Telehealth consultations can produce positive outcomes for acute and chronic care

Totten AM, Hansen RN, Wagner J, Stillman L, Ivlev I, Davis-O'Reilly C, et al. Telehealth for acute and chronic care consultations. Comparative effectiveness review no. 216. Rockville, MD: Agency for Healthcare Research and Quality; 2019.

What is the context of this review?

- Telehealth (the use of telecommunication systems to facilitate or support collaboration between two or more providers, often involving a specialist, or between clinical team members across time or distance) has many potential benefits, but its implementation has been slower than expected.
- Telehealth can be used for assessment, diagnosis, and/or clinical management of a specific patient or group of patients.
- Telehealth for consultations can allow medical expertise to be available despite time or distance barriers, and could help to make best use of scarce resources.
- Supporting and sustaining the use of telehealth requires information on the impact of its different uses, specifically evidence to help make decisions about where telehealth can improve care. Therefore, a systemic review of telehealth for consultations would contribute to future decision-making on telehealth's potential improvements to care.

> **Box 1: Coverage of OHT building blocks**
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> This review addresses OHT building block #5:
> 1) defined patient population
> 2) in-scope services
> 3) patient partnership and community engagement
> 4) patient care and experience
> **5) digital health (domain 37 – e-consultations for patients)**
> 6) leadership, accountability and governance
> 7) funding and incentive structure
> 8) performance measurement, quality improvement, and continuous learning

What question is being addressed?

- What is the effectiveness of telehealth on provider-to-provider consultations?

How was the review done?

- This study was limited to the use of telehealth for consultations and outcomes that measure clinical and cost-effectiveness. The authors included any telehealth technology and any comparative study.
- Team members reviews abstracts and assessed each full-text article. The literature searches found a total of 9,366 articles, but 233 were included in the review after assessing their eligibility.

How up to date is this review?

- The authors last searched for the included evidence in 2018, with studies being published from 1996 to May 2018.

What are the main results of the review?

- In general, the findings revealed that telehealth consultations are effective in improving outcomes or providing services, or there was no difference between telehealth and the comparators across the settings and for the clinical indications studied.
- More specifically, the review found evidence that:
  - remote intensive care unit consultations likely reduced mortality;
  - specialty telehealth consultations likely reduce the time that patients spent in the emergency department;
  - telehealth consultations in emergency services likely reduced mortality for patients who had a heart attack; and
  - remote consultations for outpatient care likely improve access to care and clinical outcomes.
- The review found lower-certainty evidence that:
  - inpatient telehealth consultations could reduce length of stay and costs; and
  - telehealth consultations in emergency care could improve outcomes and reduce costs due to fewer transfers, and could reduce outpatient visits and costs due to less travel.

How confident are we in the results?

- This is a recent and moderate-quality review with an AMSTAR score of 7/11.
- The authors found several limitations to the studies on telehealth consultations, which may affect the generalizability of the findings.
  - The variation in study design and rigor meant very few studies were rated as having a low risk of bias, and in many it was impossible to know whether 'usual care' referred to in-person care by a consultant, no consultant involvement, or both.
  - The outcomes used to evaluate telehealth were not consistent or standardized, and the studies provided little information on the context and environment of the telehealth consultation.
- Future research should use more specific methods and standardized outcomes, so that there is a more consistent way to measure the effectiveness of telehealth consultations.