

Effectiveness of Telehealth for Women's Preventive Services

Executive Summary



Main Points

- Based on 16 studies, outcomes of telehealth interventions compared with in-person or usual care were generally similar for adolescent and adult women presenting for contraceptive care (screening, counseling, provision, followup care) or receiving services for screening, evaluation, or treatment of interpersonal violence (IPV).
- Two studies demonstrated that telehealth was either better or worse than usual care for contraceptive care or IPV services; the remaining 14 studies showed no differences in effectiveness.
- Compared with usual care alone, telehealth interventions to supplement in-person care resulted in similar rates as comparators for contraceptive use (oral contraception, condoms, or long-acting reversible contraception) at 6 months, sexually transmitted infection (STI), and pregnancy (all low strength of evidence [SOE]); impact on abortion rates was unclear (insufficient SOE).
- Compared with usual care, telehealth interventions for IPV services resulted in similar rates of repeat IPV, depression, fear of partner, coercive control, self-efficacy, post-traumatic stress disorder, and safety behaviors (low SOE), and unclear evidence on harms (insufficient SOE).
- No studies evaluated telehealth services for family planning or STI counseling.
- Three studies indicated the COVID-19 pandemic increased telehealth utilization.
- Studies did not adequately evaluate factors related to access, health equity, or potential harms of telehealth.





Purpose and Background

This Comparative Effectiveness Review aims to address the decisional dilemma about the uncertainty regarding the **effectiveness of telehealth for delivering specific preventive services for women** and how to best mobilize telehealth to address women's healthcare needs, particularly for those who are geographically isolated or in underserved settings or populations. This review also serves as a resource for policymakers, practice leaders, and other stakeholders to inform future efforts to evaluate telehealth outcomes for women presenting for preventive health services and its role in serving populations adversely affected by disparities due to socioeconomic disadvantage, race or ethnicity, rural location, or other factors.



Methods

This review follows standard methods for systematic reviews¹ that are further described in the full protocol available on the Agency for Healthcare Research and Quality website: <https://effectivehealthcare.ahrq.gov/sites/default/files/pdf/telehealth-women-protocol.pdf>. The protocol was registered with PROSPERO (CRD42021282298).

Searches were conducted in Ovid MEDLINE[®], CINAHL[®], Embase[®], and Cochrane CENTRAL databases from July 1, 2016, to March 4, 2022, and were supplemented by manual review of reference lists and a Federal Register Notice.

Investigators developed pre-established eligibility criteria defined by populations, interventions, comparators, outcomes, and setting in accordance with established methods¹ and revised the criteria with input from a technical expert panel and federal partners. The population included adolescent and adult women (≥ 13 years old), including those who are pregnant, eligible for screening, counseling, or treatment for reproductive health (family planning, contraception, and STI counseling) and IPV services. For this review, family planning services were defined based on Title X guidelines² and include preconception counseling and birth spacing; contraceptive care (screening, counseling, provision, and followup care) was considered separately under reproductive health services.



Results

A total of 5,704 references from electronic database searches and reference lists were reviewed. After dual review of titles and abstracts, 320 papers were selected for full-text review. Across all Key Questions, eight randomized controlled trials, one nonrandomized trial, and seven observational studies on the comparative effectiveness of telehealth interventions for women's preventive services were included. Most studies evaluated the effectiveness of telehealth interventions for contraceptive care and IPV. Cross-sectional studies evaluated the effects of telehealth interventions during the COVID-19 pandemic mostly using data from surveys of clinicians and patients.

Evidence on contraceptive care mostly examined populations of non-white (62 to 75%), lower income, and young women ages 16 to 27 years. For IPV interventions, patients were slightly older (mean age of 33 years). Outcomes related to access, health equity, or health disparities were not addressed. Data on harms was extremely limited for IPV and not addressed in studies of contraceptive care. Main findings are summarized by preventive service in **Table A**.

Table A. Summary of evidence: Effectiveness of telehealth interventions versus comparator

Preventive Service	Outcome	Intervention	Comparison	Number of Studies;* Study Design; Participants (n)	Overall Effect	Strength of Evidence
Family Planning†	NA	NA	NA	No Studies	NA	NA
Contraception	Contraceptive use	Supplemental telephone counseling; Structured telephone support	4-month supply of OCPs, condoms, and in-person counseling; general advice for followup as needed	2 RCTs (1,724)	Similar rates of OCP continuation and condom use at 3,6, and 12 months; similar rates of LARC use at 6 months.	Low
	STI rates	Supplemental telephone counseling	4-month supply of OCPs, condoms, and in-person counseling;	1 RCT (1,155)	Similar rates of STIs.	Low
	Pregnancy rates	Supplemental telephone counseling	4-month supply of OCPs, condoms, and in-person counseling;	1 RCT (1,155)	Similar pregnancy rates.	Low
	Abortion rates	Structured telephone support	General advice for followup as needed	1 RCT (569)	Similar rates of abortion in both groups of postabortion patients at 1 year; reduction of subsequent abortion in both groups within 2 years.	Insufficient
STI counseling	NA	NA	NA	No studies	NA	NA
IPV	IPV rates	Interactive online tools	Noninteractive online tools	2 RCTs (1,132)	No difference in repeat IPV between interactive vs. noninteractive online tools in 2 RCTs	Low
	Depression scores	In-person interviews followed by phone calls; interactive online tools	Referral; noninteractive online tools	5 RCTs (2,322)	Telehealth is at least as effective as usual care alternatives for improving measures of depression.	Low
	PTSD scores	Interactive online tools	Noninteractive online tools	2 RCTs (1,182)	No difference in PTSD symptoms between interactive vs. noninteractive online tools.	Low
	Fear, coercive control	Interactive online tools	Noninteractive online tools	2 RCTs (884)	No difference between interactive vs. noninteractive online tools.	Low
	Self-efficacy	Interactive online tools; computerized encounters; in-person interviews followed by phone calls	Noninteractive online tools; in-person encounters; referral	3 RCTs (919)	Telehealth is at least as effective as usual care alternatives for improving self-efficacy scores.	Low
IPV, continued	Safety behaviors	Telephone calls; computerized encounters; in-person interviews followed by phone calls	Usual care; in-person encounters; referral	4 RCTs (1,175)	Telehealth is at least as effective as usual care for increasing safety behaviors.	Low

Preventive Service	Outcome	Intervention	Comparison	Number of Studies;* Study Design; Participants (n)	Overall Effect	Strength of Evidence
	Harms	Interactive online tool	Noninteractive online tool	1 RCT (231)	No difference in patient reported anxiety using a tailored, online safety tool vs. a static version.	Insufficient

*Outcomes reported separately; the same study may report different outcomes

[†]Family Planning was defined based on Title X guidelines² and included preconception counseling and birth spacing; contraceptive care (screening, counseling, provision, and followup care) was considered separately under reproductive health services.

Abbreviations: IPV=interpersonal violence; LARC=long-acting reversible contraception; NA= not applicable; OCPs=oral contraceptive pills; PTSD=post-traumatic stress disorder; STI=sexually transmitted infection; RCT=randomized controlled trial



Strengths and Limitations

This review provides limited evidence on telehealth interventions for contraceptive care and for screening, evaluation, or treatment of IPV in adolescent and adult women, that resulted in generally similar outcomes compared with in-person care. Limitations of this review include using only English-language articles, studies applicable to the United States, and exclusion of studies published only as abstracts. We did not conduct statistical or graphical methods for assessing for small sample effects (a potential marker for publication bias) due to small numbers of trials and heterogeneity in study design methods, patient populations, and outcomes. Other common reasons studies did not meet inclusion criteria were due to ineligible interventions, populations, or lack of comparators.

Most limitations of the evidence base are related to the lack of relevant telehealth studies for the preventive services included for this review, the relative weakness of study designs used in this field, the rigor with which the studies were conducted, and the completeness of reporting of key outcomes. Other important limitations include the lack of factors related to access, health equity, or potential harms of telehealth.



Future Research Needs and Opportunities

Research is needed to address gaps and deficiencies of existing studies. Additional research is needed to evaluate interventions for women's preventive services that have not been addressed by existing studies, including family planning and STI counseling.

Future trials should evaluate effectiveness of different types of telehealth interventions and strategies and include patients representing broader age ranges; with diverse backgrounds including those who are disadvantaged due to socioeconomic factors, rural location, or geographic isolation; and from other underserved groups at risk for health disparities based on race, ethnicity, disabilities, or gender identity.



Implications and Conclusions

Overall evidence is low for telehealth interventions that supplement usual care to increase contraceptive use and telehealth for IPV interventions; effectiveness is similar compared with usual care for most outcomes. No studies evaluated telehealth services for family planning or STI counseling or evaluated factors related to access, health equity, or potential harms of telehealth.



References

1. Methods guide for effectiveness and comparative effectiveness reviews. Rockville, MD: Effective Health Care Program, Agency for Healthcare Research and Quality. Content last reviewed January 2020. <https://effectivehealthcare.ahrq.gov/products/collections/cer-methods-guide>.
2. U.S. Department of Health and Human Services. HHS Announces \$35 Million for Telehealth in the Title X Family Planning Program. Washington, D.C.: U.S. Department of Health and Human Services; 2021. Accessed December 10, 2021.

Full Report

Cantor A, Nelson HD, Pappas M, Atchison C, Hatch B, Huguet N, Flynn B, McDonagh M. Effectiveness of Telehealth for Women’s Preventive Services. Comparative Effectiveness Review No. 256. (Prepared by the Pacific Northwest Evidence-based Practice Center under Contract No. 75Q80120D00006.) AHRQ Publication No. 22-EHC024. Rockville, MD: Agency for Healthcare Research and Quality; June 2022. DOI: <https://doi.org/10.23970/AHRQEPCCER256>. Posted final reports are located on the Effective Health Care Program [search page](#).

