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Telehealth Services Designed for Women: An Evidence Map

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PREFACE

The VA Evidence-based Synthesis Program (ESP) was established in 2007 to provide timely and accurate syntheses of targeted healthcare topics of particular importance to clinicians, managers, and policymakers as they work to improve the health and healthcare of Veterans. QUERI provides funding for four ESP Centers, and each Center has an active University affiliation. Center Directors are recognized leaders in the field of evidence synthesis with close ties to the AHRQ Evidence-based Practice Centers. The ESP is governed by a Steering Committee comprised of participants from VHA Policy, Program, and Operations Offices, VISN leadership, field-based investigators, and others as designated appropriate by QUERI/HSR&D.

The ESP Centers generate evidence syntheses on important clinical practice topics. These reports help:

- Develop clinical policies informed by evidence;
- Implement effective services to improve patient outcomes and to support VA clinical practice guidelines and performance measures; and
- Set the direction for future research to address gaps in clinical knowledge.

The ESP disseminates these reports throughout VA and in the published literature; some evidence syntheses have informed the clinical guidelines of large professional organizations.

The ESP Coordinating Center (ESP CC), located in Portland, Oregon, was created in 2009 to expand the capacity of QUERI/HSR&D and is charged with oversight of national ESP program operations, program development and evaluation, and dissemination efforts. The ESP CC establishes standard operating procedures for the production of evidence synthesis reports; facilitates a national topic nomination, prioritization, and selection process; manages the research portfolio of each Center; facilitates editorial review processes; ensures methodological consistency and quality of products; produces “rapid response evidence briefs” at the request of VHA senior leadership; collaborates with HSR&D Center for Information Dissemination and Education Resources (CIDER) to develop a national dissemination strategy for all ESP products; and interfaces with stakeholders to effectively engage the program.

Comments on this evidence report are welcome and can be sent to Nicole Floyd, ESP CC Program Manager, at Nicole.Floyd@va.gov.

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Stakeholder and Technical Expert Panel

In designing the study questions and methodology at the outset of this report, the ESP consulted several technical and content experts. We sought broad expertise and perspectives. Divergent and conflicting opinions are common and perceived as healthy scientific discourse that results in a thoughtful, relevant systematic review. Therefore, in the end, study questions, design, methodologic approaches, and/or conclusions do not necessarily represent the views of individual technical and content experts.

The list of stakeholders and members of the Technical Expert Panel (TEP) who provided input to this report follows.

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ABSTRACT

Background: Telehealth encompasses a variety of technologies and approaches to connect individual patients to health care resources with the goal of delivering the right intervention to the right patient at the right time. The Department of Veterans Affairs has been on the forefront of implementing telehealth solutions as a way to extend care to key populations of interest or to overcome barriers to receiving timely and high-quality care. Women Veterans are one such key population who could benefit from the flexibility and access afforded by telehealth because they are geographically dispersed within the Veterans Health Administration and have gender-specific care needs. Thus, the goal of this report was to conduct an evidence map that characterizes the quantity, distribution, and characteristics of evidence which assesses the effectiveness of telehealth services designed specifically for women.

Methods: We searched MEDLINE® (via PubMed®) and Embase® to identify relevant articles and systematic reviews (SRs) published between inception and December 29, 2016, for peer-reviewed, English-language, randomized controlled trials (RCTs), nonrandomized controlled studies, controlled before-after studies, interrupted time-series or repeated-measures studies, and relevant SRs or patient-level meta-analyses of telehealth interventions designed for women. We conducted article inclusion screening and abstraction based on predetermined criteria such as type of study design used, population recruited, and intervention tested. Two reviewers independently evaluated titles and abstracts to identify potentially eligible primary studies and SRs for full-text review. Because of the large volume of primary studies, at the full-text screening stage a trained independent reviewer made eligibility decisions, of which at least a random sample of 20% was dual-reviewed. The SRs were examined separately by 2 team members. Disagreements were resolved by consensus between the 2 investigators or by a third investigator. Articles meeting eligibility criteria were included for data abstraction.

Results: The literature search identified 5305 unique citations, of which 590 primary studies and 21 SRs were promoted to full-text review. Of these, 209 studies and 2 SRs were retained for data abstraction. From these, 81 primary studies and 1 SR related to maternal care, 56 to prevention, 43 to disease management, 11 to family planning, 7 to identifying and managing women at high risk for breast cancer, 6 to mental health, and 5 studies and 1 SR to intimate partner violence (IPV). When looking across these 7 focused areas of research, the majority of studies identified were relatively small (n <250). For studies that provided race and ethnic study composition, the overwhelming majority of studies included populations that were predominantly white. Age distributions in this literature tracked with population distributions of women potentially affected by the identified health issues. However, we found relatively few studies that focused on health issues of women 60 years of age and older across the reports on prevention, disease management, mental health, and intimate partner violence.

When mapping the setting of telehealth interventions designed for women, the overwhelming majority of studies was conducted in countries categorized as high income by the World Bank. The only exception to this was in the area of family planning, where half the studies were conducted in middle- and low-income countries. When looking across the literature, most studies recruited from outpatient clinics (including specialty outpatient clinics), followed by the community. Across all areas of research, telephone was the dominant telehealth modality to deliver intervention content. Nearly all studies used telehealth technologies to facilitate communication between patients and health care team members. We identified only 1 study that focused on provider-to-provider communication. Very few telehealth interventionists were

physicians or advanced practice providers (*eg*, nurse practitioners, physician assistants). Instead, the interventions were mostly supported by diverse credentialed and noncredentialed positions (*eg*, registered nurses, behavioral health specialists, health educators, peer or lay health workers). The majority of studies were limited in their duration and did not extend beyond 12 weeks. The only exception was among studies focused on prevention; the majority of these were 25 weeks or more. We also mapped the outcomes addressed in each study. Of the studies that reported primary outcomes, most focused on patient-level outcomes. No studies focused on provider-level outcomes, and only 11 studies reported primary outcomes focused on the system level.

Conclusions: Telehealth offers a potentially ideal approach to deliver targeted support to women Veterans in a manner that is convenient to the patient and does not require traveling long distances. From a provider and system level, telehealth provides additional tools to aid the facilitation of continuity of care and transitions of care (*eg*, post-acute care) and can be a powerful tool for population health management. The goal of this report was to provide an overview of current evidence for the use of telehealth services designed specifically for women. To our knowledge, this is the first attempt to map this literature base.

A key use of these evidence maps is to inform decisions about where more primary research is needed. The maps in this report serve as a broad visualization of the field of telehealth interventions for women. Beyond maternal health care, we identified a relatively small number of telehealth studies that addressed other gender-specific needs of women Veterans that warrant further exploration, such as family planning, IPV, homelessness, pain management, and high-risk breast cancer assessment. Also, outside of postpartum depression, few studies used telehealth interventions to address the mental health needs of women. Further, mobile health technologies were underrepresented, emphasizing the need to study how best to use evolving technology to address the needs of women. Finally, there is a need for research on the extent to which telehealth improves provider- and system-level outcomes related to provider satisfaction and retention and patient access to care. Only after conducting studies that address these key research gaps can the promise of telehealth for optimizing the well-being of women Veterans be fully assessed. Because the VA is a large, integrated health care system that has demonstrated a commitment to the development and use of telehealth modalities and has been a setting for the successful conduct of multisite studies, the VA health care system is well-positioned to address the gaps in the women's telehealth literature.