Telehealth for Disease Management: A Scoping Review of Effectiveness in the Perinatal Period

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INTRODUCTION

The COVID-19 pandemic changed the public health scheme, forcing healthcare services to transition to telehealth to reduce the spread of the virus.[1,2] With the high frequency of visits, prenatal care was greatly impacted by the transition to telehealth.[3] Individuals with a low-risk pregnancy attend 8 or more visits in 40 weeks. If a pregnancy is complicated by diabetes, hypertension, mental health conditions, and/or opioid use disorder, more prenatal care visits are required. Suboptimal treatment of these diseases can lead to increased maternal morbidity and mortality.[4] Based on the unique needs of chronic disease management during the perinatal period and the paradigm shift caused by the COVID-19 pandemic, the effectiveness of telehealth provision of disease management in the perinatal period should be evaluated.

OBJECTIVE

To conduct a review of the literature and summarize the effectiveness of telehealth for diabetes, hypertensive disorders of pregnancy (HDP), mental health (anxiety and depression), and opioid use disorder (OUD) management in the perinatal period post-onset of COVID-19.

METHODS

Following the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (**PRISMA-ScR**) checklist, PubMed, CINAHL, Web of Science, and IEEE Xplore databases were searched for articles published between 2020 and 2023 using these keywords: **COVID-19** (covid-19), **maternal care** (maternal or maternity or obstetrics or perinatal or pregnancy), and **telemedicine** (telemedicine or telehealth).

Inclusion:

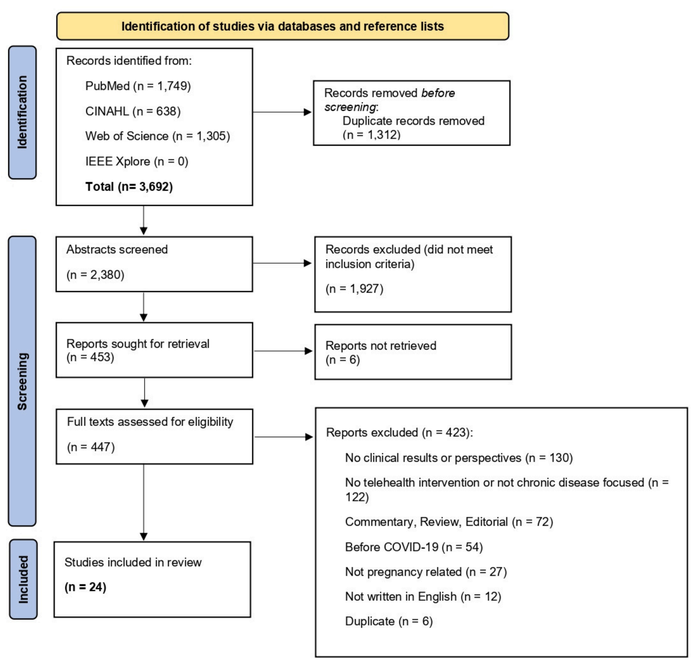
1. Article described an intervention or change in practice and reports clinical results
2. Data collected post-onset of the COVID-19 pandemic
3. Published in English language
4. Addressed disease management (i.e., diabetes, hypertension, mental health conditions, opioid use disorder)
5. Focused on care provided during the perinatal period

Exclusion:

1. Commentary, editorial, guideline, protocol, or review articles
2. Patient or provider perspectives

RESULTS

Figure 1. PRISMA Diagram



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RESULTS

Diabetes N=9[5-13]

N=9
Positive or Neutral Outcomes
Telehealth group achieved glycemic control, and had a lower occurrence of adverse maternal and fetal outcomes (e.g., lower rates of preeclampsia, shoulder dystocia, hypoglycemia, fewer cesarean deliveries), or outcomes were not significantly different compared to standard care groups.

N=5
Negative Outcomes
Telehealth group reported more problems with self-monitoring & lower patient engagement (e.g., fewer visits).

Mental Health N=10[14-23]

N=9
Positive or Neutral Outcomes
Telehealth decreased symptoms of anxiety & depression or outcomes were not significantly different compared to standard care groups.

N=1
Negative Outcomes
Level of endorsement for suicidal ideation slightly increased from 2019 to 2020 cohort.

Hypertensive Disorders of Pregnancy N=4[24-27]

N=4
Positive or Neutral Outcomes
Telehealth group reported increased patient engagement (e.g., blood pressure ascertainment, higher number of visits among Black women), lower rate of antihypertensive use postpartum, or outcomes not significantly different.

N=1
Negative Outcomes
Telehealth group had a higher mean diastolic blood pressure.

Opioid Use Disorder N=1[28]

N=1
Negative Outcomes
Telehealth group had lower attendance rate and increased up-titration of medication-assisted therapy.

DISCUSSIONS & CONCLUSION

Telehealth may offer positive clinical benefits for the management of diabetes, mental health, and hypertensive disorders of pregnancy. However, there may be unintended negative consequences associated with telehealth for opioid use disorder, and more studies are needed to examine the effectiveness of telehealth in managing opioid use disorder during the perinatal period. Some benefits reported in other studies include accessibility, demonstrated by higher attendance rates, perhaps due to the flexibility where patients can receive health care in the comfort of their homes. Some barriers of telehealth reported in other studies include accessibility (due to unstable internet access) and limited privacy.[29-33] **Telehealth should be offered to patients if appropriate for the clinical condition and depending on patient preference.**

REFERENCES & AUTHOR INFORMATION

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