MAVEN

Association between digital prenatal service use and emergency room and in-person care reduction

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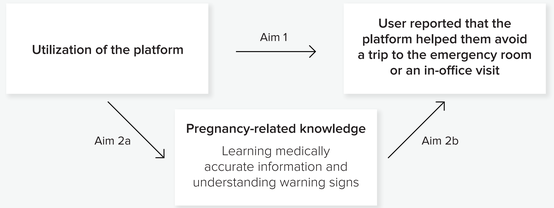
BACKGROUND

Emergency Room (ER) utilization during pregnancy contributes to high-cost, low-value care, and is driven by insufficient anticipatory guidance in routine prenatal care.

AIMS

1. To determine if utilization of a digital health platform with prenatal services (e.g., provider appointments, articles, classes, care navigator, etc.) is associated with helping users reduce ER and in-person care during pregnancy.
2. To examine how pregnancy-related knowledge may influence the association between digital health, in-person care, and ER utilization.

Figure 1: Conceptual model



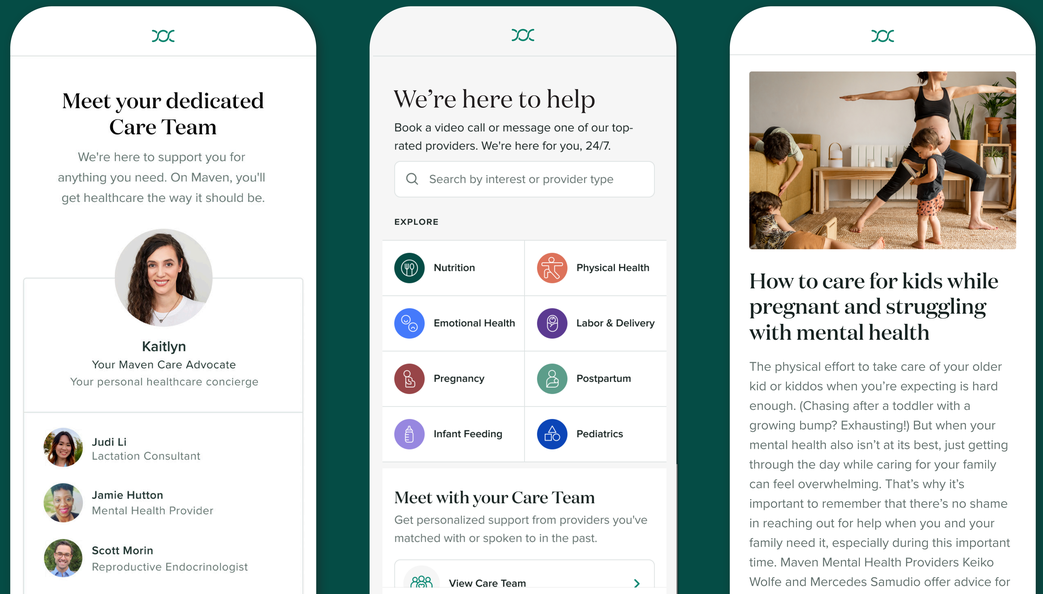
METHODS

Study design: retrospective study

Statistical method: adjusted logistic regression

Confounders: age, race/ethnicity, medical risk score, mental health conditions, pregnancy-related anxiety, parity, pregnancy trimester enrolled, and high SVI

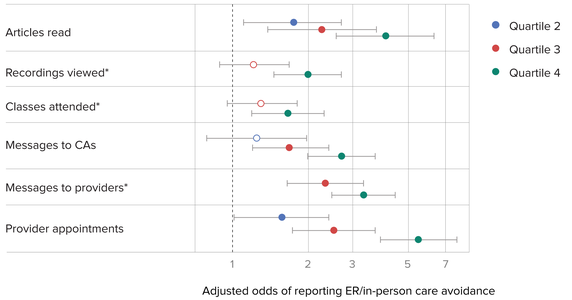
Dose-response association between digital health utilization and prenatal emergency room and in-person care avoidance



RESULTS

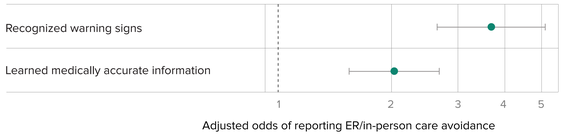
- 5.3% (280/5263) of users reported that digital services helped them reduce in-person care during pregnancy.
- All types of resources used on the digital platform were associated with avoiding in-person care in a dose-response manner.
- Users' reports that the digital platform helped them recognize warning signs or learn medically accurate information were associated with in-person care avoidance.

Figure 2. Digital resource utilization is associated with ER/in-person care avoidance



*Resource utilization in tertiles.
Note: Solid circles indicate p<0.05

Figure 3. Pregnancy-related knowledge is associated with ER/in-person care avoidance



Note: all types of digital resource use were associated with higher report of users understanding warning signs and learning medically accurate information in a dose-response manner (Aim 2a)

Note: Solid circles indicate p<0.05

DISCUSSION

These results suggest that digital platforms can provide accessible anticipatory guidance, potentially reducing unnecessary in-person care utilization.