

## Digital Health Tools for Prenatal Care in COVID-19 Pandemic

Marjan Ahmadi<sup>1</sup> , Seyed Mohammad Ayyoubzadeh<sup>2</sup> , Sakineh Abbasi<sup>3\*</sup> 

1. Department of Obstetrics and Gynecology, Perinatology Unit, Shariati Hospital, Tehran University of Medical Sciences, Tehran, Iran
2. Department of Health Information Management, School of Allied Medical Sciences, Tehran University of Medical Sciences, Tehran, Iran
3. Department of Laboratory Science, School of Allied Medical Sciences, Tehran University of Medical Sciences, Tehran, Iran

 [10.30699/jogcr.7.3.254](https://doi.org/10.30699/jogcr.7.3.254)

Received: 2021/09/01; Accepted: 2021/10/17; Published Online: 12 Jan 2022;

### Corresponding Information:

Sakineh Abbasi, Department of Laboratory Science, School of Allied Medical Sciences, Tehran University of Medical Sciences, Tehran, Iran.

Email: [sakineh4612004@yahoo.com](mailto:sakineh4612004@yahoo.com)



Copyright © 2022. This is an original open-access article distributed under the terms of the Creative Commons Attribution-noncommercial 4.0 International License which permits copy and redistribution of the material just in noncommercial usages with proper citation.

### Dear Editor in Chief

Pregnant women are at higher risk of severe COVID-19 than the general population (1). Furthermore, COVID-19 increases the preterm and cesarean rates due to maternal and fetal complications (2). Owing to the adverse effects of the COVID-19 on pregnant women, in-person prenatal visits face challenges. Thus, alternative solutions that reduce the number of visits while preserving maternal and fetal care quality should be considered.

Digital health tools are potential solutions to facilitate prenatal care. In general, digital health tools could provide information to pregnant women, modification of maternal's lifestyle, diabetes care, mental health care, telemonitoring, and teleconsultation (3). Digital health offers smartphone apps and wearable and nonwearable devices that could be used to obtain subjective and objective data from pregnant women and fetuses. The subjective data or symptoms such as fetal movements, vaginal bleeding, headaches, blurred vision, epigastric pain, and edema could be gathered from the pregnant women using smartphone apps; and the objective data including The authors declare that there is no conflict of interest.

body temperature, weight, blood pressure, and heart rate could be measured by digital health sensors and devices. In the past, these tools showed that they were feasible in practice (4, 5).

Due to the COVID-19 pandemic and, consequently, lifestyle changes, it seems there will be potential benefits to investigating these tools. Although there is a guideline provided by the American College of Obstetricians and Gynecologists regarding applying telehealth for prenatal care, we want to emphasize investigating and conducting more research than previously on this matter. We think IT, obstetricians and gynecologists, and other clinical experts should cooperate to define digital tools' requirements and standards for prenatal care. Moreover, governments and healthcare insurance should facilitate the coverage of services' costs by digital health tools, especially in developing countries.

### Conflict of Interest

The authors declared no conflict of interest.

### References

1. Wastnedge EA, Reynolds RM, van Boeckel SR, Stock SJ, Denison FC, Maybin JA, et al. Pregnancy and COVID-19. *Physiological reviews*. 2021;101(1):303-18. [\[PMID\]](#) [\[PMCID\]](#) [\[DOI:10.1152/physrev.00024.2020\]](https://doi.org/10.1152/physrev.00024.2020)
2. Pediatrics AAO. Committee on Fetus and Newborn, and American College of Obstetricians and Gynecologists, Committee on Obstetrics. *Maternal and fetal medicine: guidelines for perinatal care 3rd ed* Elk Grove Village (IL): American Academy of Pediatrics. 1992.

3. Van Den Heuvel JF, Groenhof TK, Veerbeek JH, Van Solinge WW, Lely AT, Franx A, et al. eHealth as the next-generation perinatal care: an overview of the literature. *Journal of medical Internet research*. 2018;20(6):e202. [[DOI:10.2196/jmir.9262](https://doi.org/10.2196/jmir.9262)] [[PMID](#)] [[PMCID](#)]
4. Marko KI, Krapf JM, Meltzer AC, Oh J, Ganju N, Martinez AG, et al. Testing the feasibility of remote patient monitoring in prenatal care using a mobile app and connected devices: a prospective observational trial. *JMIR research protocols*. 2016;5(4):e200. [[DOI:10.2196/resprot.6167](https://doi.org/10.2196/resprot.6167)] [[PMID](#)] [[PMCID](#)]
5. van Zutphen M, Milder IE, Bemelmans WJ. Integrating an eHealth Program for Pregnant Women in Midwifery Care: A Feasibility Study Among Midwives and Program Users. *J Med Internet Res*. 2009;11(1):e7. [[DOI:10.2196/jmir.988](https://doi.org/10.2196/jmir.988)] [[PMID](#)] [[PMCID](#)]

#### How to Cite This Article:

Ahmadi M, Ayyoubzadeh S M, Abbasi S. Digital Health Tools for Prenatal Care in COVID-19 Pandemic. *J Obstet Gynecol Cancer Res*. 2022; 7 (3) :254-255

#### Download citation:

[BibTeX](#) | [RIS](#) | [EndNote](#) | [Medlars](#) | [ProCite](#) | [Reference Manager](#) | [RefWorks](#)