Wearable technology model to control and monitor hypertension during pregnancy(Conference Paper)

- [Lopez, B.D.B.^aEmail Author](#),
 - [Aguirre, J.A.A.^aEmail Author](#),
 - [Coronado, D.A.R.^aEmail Author](#),
 - [Gonzalez, P.A.^bEmail Author](#)
-
- ^aEscuela de Ingeniería de Sistemas y Computación, Universidad Peruana de Ciencias Aplicadas, Lima, Peru
 - ^bRowe School of Business, Faculty of Management, Dalhousie University, Halifax, Canada

Abstract [View references \(27\)](#)

In this paper, we proposed a wearable technology model to control and monitor hypertension during pregnancy. We enhanced prior models by adding a series of health parameters that could potentially prevent and correct hypertension disorders in pregnancy. Our proposed model also emphasizes the application of real-time data analysis for the healthcare organization. In this process, we also assessed the current technologies and systems applications offered in the market. The model consists of four phases: 1. The health parameters of the patient are collected through a wearable device; 2. The data is received by a mobile application; 3. The data is stored in a cloud database; 4. The data is analyzed on real-time using a data analytics application. The model was validated and piloted in a public hospital in Lima, Peru. The preliminary results showed an increased-on number of controlled patients by 11% and a reduction of maternal deaths by 7%, among other relevant health factors that allowed healthcare providers to take corrective and preventive actions. © 2018 AISTI.

Author keywords

Data analyticsHypertensionMobile health applicationPregnancyTechnologyWearable

Indexed keywords

Engineering controlled terms:	Health careHospitalsInformation systemsInformation useObstetrics
Engineering uncontrolled terms	Data analyticsHypertensionMobile health applicationPregnancyWearable
Engineering main heading:	Wearable technology

- **ISSN:** 21660727
- **ISBN:** 978-989984348-6
- **Source Type:** Conference Proceeding
- **Original language:** English

- **DOI:** 10.23919/CISTI.2018.8399200
- **Document Type:** Conference Paper
- **Volume Editors:** Rocha A.,Cota M.P.,Lozano-Tello A.,Goncalves R.
- **Sponsors:** IEEE Portugal Section,IEEE SMC Portugal Chapter,IEEE Spain Section
- **Publisher:** IEEE Computer Society