
POSTER ABSTRACT

Exploring distinct trajectories of use of telehealth devices among adults with hypertension: a latent class growth analysis approach

1st Asia Pacific Conference on Integrated Care, Brisbane, 06-08 Nov 2017

Ting Ye¹, Pei Zhang², Chengzhong Xu², Zijing Pan¹, Yongfei Wang¹, Liang Zhang¹

1: School of Medicine and Health Management, Tongji Medical College, Huazhong University of Science and Technology, People's Republic of China;

2: Yichang Centre for Disease Control and Prevention, People's Republic of China

Background: Telehealth devices are considered with potential to foster improved health outcome for patients with hypertension. However, the longitudinal use trajectories of telehealth devices have not been identified yet, nor has the connection between developmental trajectories of telehealth devices use and health outcome over time.

Objective: To identify the longitudinal trajectories of use of telehealth devices among patients with hypertension, characterize features for each trajectory, and to unravel the correlation between longitudinal trajectories of telehealth devices use patterns and BP control outcome.

Methods: A total of 122 patients with hypertension were enrolled, portable telehealth device were given to them to monitor blood pressure. Socio-demographics (e.g. name, age, sex, marital status) were collected at baseline. The real-time measured data, including time and both systolic and diastolic blood pressure data, were sent up to cloud platform through the portable device. The latent class growth analysis modeling approach was used to determine the latent trajectory of telehealth use. And the joint trajectory method was used to identify the correlation between the longitudinal trajectories of telehealth use and BP control status.

Results: 5 distinct trajectories were finally identified: Persistently low (47.1%), Moderate with decreasing (23.9%), Sharply decreasing (11.2%), High with decreasing (11.3%), Persistently high with increasing (6.6%). However, no statistical significant differences in age, marital status, BP (both SBP and DBP) and BP control status in the first period between the 5 trajectories were found. It provided evidence that strong correlation existed between the longitudinal telehealth devices use patterns and individuals' longitudinal BP control status.

Conclusions: The latent trajectories of telehealth use were identified; yet, no predictors of trajectory membership have been found. Although more prove of the causal relationship needs to be revealed in further studies, this study demonstrated that regular monitor has some positive correlation with improved BP control.

Ye; Exploring distinct trajectories of use of telehealth devices among adults with hypertension: a latent class growth analysis approach

Keywords: China; telehealth; hypertension; latent class growth analysis; BP control; self-monitor
