

Adopting digital health interventions for secondary prevention of cardiovascular disease: clinician perspectives

Y. Gao¹, A. Diab², A. Sharma¹, S. Khoury¹, P. Huynh¹, E. Spaulding³, S. Martin¹, F. Marvel¹

¹ Johns Hopkins University School of Medicine, Baltimore, United States of America; ² Johns Hopkins Bloomberg School of Public Health, Baltimore, United States of America; ³ Johns Hopkins University School of Nursing, Baltimore, United States of America

Funding Acknowledgement: Type of funding sources: None.

Background: Cardiovascular disease (CVD) remains the leading cause of death globally, taking an estimated 18 million lives each year. Digital health interventions (DHI), such as wearables and smartphone applications, have shown promise in CVD detection, prevention, and management. However, there are scarce data regarding clinician perspectives on the utility of DHI and identification of key elements to support adoption in clinical practice.

Method: In this cross-sectional study, a web-based survey was administered to 107 clinicians directly involved in the care of cardiac inpatients across multiple academic health care systems in the United States, between January 2020 and March 2021. Participants (1) reported their perceptions of DHI impact on their ability to care for patients with CVD, (2) rated the importance of factors related to DHI adoption, and (3) shared perspectives on using DHI for secondary CVD prevention to support guideline-directed medical therapy in patients after acute myocardial infarction. Descriptive statistics were analyzed and summarized as frequencies with percentages.

Results: Among survey respondents, 41% were women; 22% specialized in cardiovascular medicine; and 31% were practicing attendings (Table). Overall, 92% (86/94) of respondents believed that DHI would be important in offering advantages in cardiovascular patient care (Figure). Increasing patient adherence was reported as the most important benefit of DHI adoption by 39% of clinicians, followed by improvement in the patient-clinician relationship (29%), enabling remote care (18%), and improving patient experience (14%). Clinicians under age 40 years old, cardiologists, and internists were the groups more likely to consider DHI important in remote patient care, disease monitoring, and tele-visits, as compared to clinicians over age 40 years old or in other clinical specialties.

Conclusion: Our results highlight clinician perspectives on the advantages of DHI and the potential for its adoption for secondary prevention of CVD.

Characteristics ^a	No. (%)
Age groups (n=101)	
24-40	85 (79.4)
41-50	7 (6.5)
51-65	8 (7.5)
>65 years old	1 (1.0)
Gender, female (n=100)	44 (41.1)
Specialty (n=101)	
Cardiovascular medicine	23 (21.5)
Internal medicine	63 (58.9)
Hospitalist medicine	15 (14.0)
Professional role (n=101)	
Attending	33 (30.8)
Fellow	15 (14.0)
Nurse practitioner or physician assistant	4 (3.7)
Resident	49 (45.8)

^a Because all questions were optional, the total number of respondents varied per survey question.

Table 1. Characteristics of Respondents

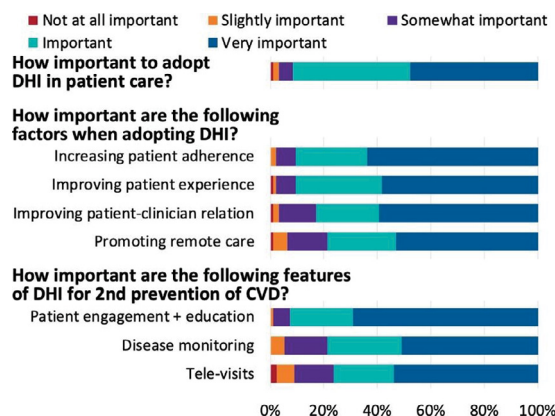


Figure 1. Clinician Survey