Mobile Apps for Hypertension Management: Cross-sectional survey of dietitian app use in patient care

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ABSTRACT

Background
Mobile apps show promise for managing chronic diseases such as hypertension; however, more evidence is needed to understand how dietitians are using apps in hypertension care.

Objective
To classify dietitians’ incorporation of apps into dietary education for patients with hypertension.

Study Design, Setting, Participants
An online cross-sectional survey of registered dietitian nutritionists who work with patients with cardiovascular disease.

Measurable Outcome/Analysis
App use in hypertension diet education classified with descriptive statistics and Friedman tests with Bonferroni corrections. Dietitian characteristics impacting app use measured through stepwise regression.

Results
A total of 190 completed the survey. The DASH diet was the most common dietary approach used in hypertension education (p<.001). The most commonly recommended apps for hypertension education was MyFitnessPal (23%); however, only 36% recommend any apps to patients with hypertension. For comparison, 64% recommended apps for weight management. Few (2%) were extremely satisfied with apps for hypertension management and less than a third were somewhat satisfied (30%). In general, dietitians did use apps for diet tracking, with a third reporting using apps for diet tracking most of the time, and another third sometimes. Dietitians were more likely to recommend apps for diet tracking than pen and paper (p<.001), online programs or websites (p=.01), or computer-based word-processing (p<.001). Stepwise regression analysis showed that as dietitian education level increased, the number of patients that dietitians recommended apps to also increased (R-squared=.04, p=.01). Dietitian age and gender did not significantly predict app use.

Conclusions
Most dietitians are not specifically recommending apps for hypertension management. Those who do use an app are most likely to use MyFitnessPal. Future work should examine the effectiveness of using MyFitnessPal to reduce hypertension and barriers to dietitian satisfaction with apps.

AIM
To identify dietitian approaches to hypertension diet education, including the use of mobile apps

METHOD
Survey Development
Survey items adapted from previously validated survey of practitioner use of apps in diabetes care.

Survey Validation
Cognitive Interviews:
- Iterative process
- 2 rounds
- 5 Registered Dietitian Nutritionists with at least 1 year of experience working with patients with heart disease in clinical, outpatient and community settings
- 2 researchers reviewed responses

Survey Administration
41 item Qualtrics survey

RESULTS
Dietitian Characteristics
94.7% female, 3.2% male, 0.5% prefer not to answer
94.2% not Hispanic or Latino, 3.7% Hispanic or Latino
4.7% Asian, 3.2% Black or African American, 90% White
6.8% 20-29 years old, 44.2% 30-39, 16.3% 40-49, 20.0% 50-59, 11.1% 60-69
43.7% 4-year degree, 51.6% Masters degree, 1.6% Doctoral degree, 1.6% Professional degree (JD, MD), 1.6% other

Hypertension Education Approaches
Dietitians rely on the following approaches ranked from the most frequent to least frequent:
- DASH
- Mediterranean Diet
- Therapeutic Lifestyle Changes
- Dietary Guidelines for Americans

Hypertension Education Approaches

CONCLUSIONS
Most dietitians are not specifically recommending apps for hypertension management. Those who do use an app are most likely to use MyFitnessPal.

Future work should examine the effectiveness of using MyFitnessPal to reduce hypertension and barriers to dietitian satisfaction with apps.

REFERENCES