

A review of heart failure weight monitoring apps to identify their use in supporting patients with heart failure self-care.

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1: Review aim

To evaluate whether apps with weight monitoring features support patients with independent self-monitoring when significant weight gain is reached.



2: Search and review methodology

A systematic search using Cumulative Index to Nursing and Allied Health Literature (CINAHL), Pubmed, MEDLINE, Web of Science, Embase, Scopus, PsycINFO, WHO GIM and Google Scholar was undertaken.

The search focused on Apps for heart failure (HF) with a weight monitoring feature, but without telemonitoring and included patient engagement with the app and HF related hospitalisation. It was limited to publications written in English and published between 2012 and 2022. The search yielded four studies (1-4) that incorporated an evaluation of four apps.

3: Results

There were 5556 articles reviewed, of which four, met the inclusion criteria. There was one pilot study and three randomized controlled trials. Study durations ranged from 30 days to 6 months. The apps were reported to affect improvements in self-care ($p < 0.05$) and in self-care confidence ($p = 0.03$).

•Review of apps using Riegel's (2016) HF self-care processes:

- **Maintenance:** All apps supported daily weight logging.
- **Perception:** Unclear whether apps using weight and symptoms comprehensively supported this process.
- **Management:** Limited evidence on whether apps empowered patients in HF self-care management.

Limitations: *Heterogeneity* among apps with respect to features, intervention components, sample sizes, and outcomes measured, rendering it difficult to conduct a comprehensive systematic review.



4: Conclusions

Heart failure self-care often yields suboptimal outcomes. There is some degree of promise in using apps to support patients with HF. It remains unclear if app-generated weight alerts prompt medical intervention. A study in Ireland, using the Fluid Heart Tracker app, aims to address this gap.

References

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