

Are Telehealth-Delivered Nutrition Care Interventions Cost-Effective for Managing Chronic Diseases? A Systematic Review of All Payer Perspectives

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Objectives: To systematically evaluate the cost-effectiveness of telehealth-delivered nutrition interventions for improving health outcomes in adults living with chronic disease.

Methods: PubMed, CENTRAL, CINAHL and Embase were systematically searched from database inception to November 2021. Included studies were randomized controlled trials implementing a telehealth-delivered diet intervention in adults with chronic disease compared to non-telehealth (either alone or in combination with an exercise prescription), which reported on cost-effectiveness or cost-utility analysis. All studies were independently screened, and data extraction and quality appraisal adhered to the Consolidated Health Economic Evaluation Reporting Standards (CHEERS) checklist by two review authors. Data analysis was conducted by grouping studies according to their telehealth modality and payer perspective.

Results: Twelve randomized controlled trials; five phone-only interventions, three mobile health (mHealth), two online, and one each using a combination of phone-online or phone-mHealth interventions) were included in the review. mHealth interventions were found to be the most cost-effective intervention (in 100% (n = 3) of studies. Across all telehealth interventions analyzed from health system perspectives (n = 10), 60% studies were found to be cost-effective. One of the three (33%) studies analysed from societal perspectives reported that the intervention was cost-effective. Cost-utility analyses (n = 10) found 30% of studies were cost-saving and more effective, making the interventions dominant over usual care. One study reported no difference in costs or effectiveness and the remaining six studies reported increased cost and effectiveness, requiring payers to determine whether the incremental cost per additional quality-adjusted life year (QALY) gained falls within an acceptable willingness-to-pay threshold. Quality of study reporting varied with between 63% to 92%.

Conclusions: Telehealth-delivered nutrition care programs appear to be cost-effective from a health system perspective, particularly mHealth modalities for managing chronic disease nutrition care. These findings support telehealth-delivered nutrition care as an effective intervention to deliver high-quality care in a cost-effective way.

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