BACKGROUND

- Cardiovascular disease (CVD) is the leading cause of death worldwide, causing an estimated 17.8 million deaths in 2017.
- Within the United States, the care and management of CVD costs nearly $149 billion spent annually accounting for approximately 17% of the national health expenditure.
- As the population continues to age, the burden of CVD is expected to increase as well, with expenditures attributable to CVD expected to triple by 2030.
- Distance delivered care is becoming increasingly more necessary due to stay at home measures to mitigate the spread of COVID-19.
- Telehealth is a distance-based form of healthcare delivery relying on audio, visual, or electronic health information to manage care.

OBJECTIVE

- The goal of this rapid review is to:
  - Assess the effectiveness of telehealth before widespread implementation to ensure high quality care.
  - Fill previous gaps in reviews by evaluating cost effectiveness and quality of life in patients.

METHODS

Data Sources

- All studies were drawn from PUBMED and Scopus.

Inclusion Criteria

- All interventions described in this review feature telehealth through phone, app, or other electronic devices.
- All studies evaluated intervention with population diagnosed with a form of CVD.
- Study designs included in this review include: randomized controlled trials, pilot randomized controlled trials, and cohort studies.

RESULTS

- Five studies were included in the final review, four randomized control trials and one cohort study.
- The primary outcomes of the studies were physical activity (2), cost effectiveness (2), and hospitalization rate (1).

<table>
<thead>
<tr>
<th>First Author (year)</th>
<th>Telehealth Intervention</th>
<th>CVD Studied</th>
<th>Primary Outcome</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernocchi (2017)</td>
<td>Telehealth-HBP Calls</td>
<td>Congestive Heart Failure</td>
<td>Exercise tolerance (6MWT)</td>
<td>✓</td>
</tr>
<tr>
<td>Class (2020)</td>
<td>PATHway - cardiac rehabilitation for CVD</td>
<td>CVD</td>
<td>Physical activity (METTP)</td>
<td>✓</td>
</tr>
<tr>
<td>Eliat-Tasman (2015)</td>
<td>Telemonitoring</td>
<td>Congestive Heart Failure</td>
<td>Hospitalization rate &amp; duration</td>
<td>✓</td>
</tr>
<tr>
<td>Frederix (2015)</td>
<td>Telerehabilitation Telemonitoring</td>
<td>Congestive Heart Failure, Coroary Artery Disease</td>
<td>Cost-effectiveness</td>
<td>✓</td>
</tr>
<tr>
<td>Whitaker (2014)</td>
<td>Telerehabilitation CVD</td>
<td>Cost of delivery</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

DISCUSSION

- All of the studies found that the telehealth intervention improved the primary outcomes being measured.
- Of the primary outcomes, cost-effectiveness was consistently better for telehealth programs when compared to traditional care.
- Telehealth can be used to increase clinical distancing in healthcare settings and reduce medical distancing from patients’ concerns.
- Due to small sample size and limited CVDs, definitive conclusions cannot be drawn at this time, however results indicate positive effects on telehealth in CVD management and care.

ACKNOWLEDGEMENTS

A special thank you to Dr. Rosie Frasso & Abby Adamczyk!

Citations: Available on slides or upon request