Exercise Therapy for Symptomatic Peripheral Artery Disease: We Must Do Better

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BACKGROUND

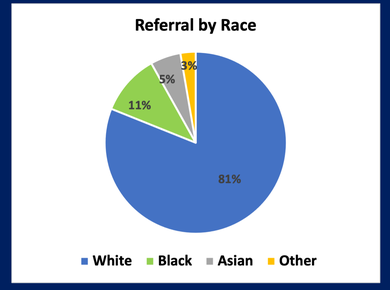
- Supervised exercise therapy (SET) carries a Class I recommendation for symptomatic peripheral artery disease (PAD).
- SET in combination with lower extremity revascularization (LER) is superior to either therapy alone to improve function.
- Centers for Medicare and Medicaid Services has covered SET for symptomatic PAD since 2017.
- Barriers to utilization remain:
  - Reimbursement disparities between supervised exercise for PAD vs cardiac rehabilitation - $56.85 vs $118.55 per session
  - Lack of provider awareness regarding this management strategy and its effectiveness
  - Lack of patient access to facilities
- We evaluated referral patterns of either home-based or supervised exercise therapy in patients with lower extremity revascularization for symptomatic PAD.

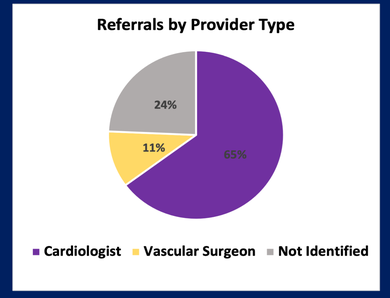
METHODS

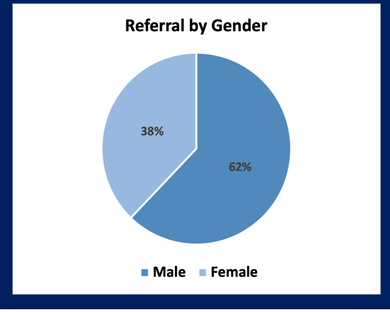
Medical records of patients who underwent LER from July 2016 through July 2021 at Denver Health (safety net hospital) and the University of Colorado (academic medical center) were reviewed for referral at any time either before or after revascularization to either home-based or supervised exercise therapy. LER included both endovascular and surgical revascularization.

RESULTS

- 782 patients underwent a total of 1547 LERs from July 2016 to July 2021; 35% were women, 18% Black, 20% Latino and 79% resided in or near Denver.
- Of those referred, 81% were White, 11% Black, and 5% Asian.
- Pre-procedural Rutherford class 2-5 was 7%, 20%, 23% and 37%, respectively.
- Overall, 11 patients (1.4%) were referred for home-based exercise therapy and 26 (3.3%) for SET (Figure).







Rates of Referral for Exercise Therapy in Patients with Symptomatic PAD

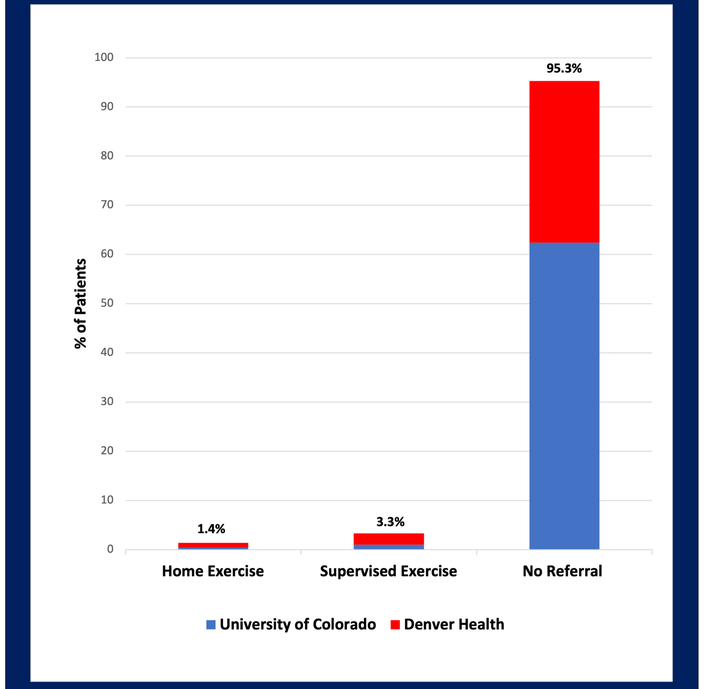


Figure. Percentage of patients referred for home-based or supervised exercise therapy.

DISCUSSION

We collected data from a diverse patient population including a large academic setting in the University of Colorado and a safety net hospital in Denver Health. Despite limited resources, Denver Health is equally successful in using appropriate therapy as the major academic institute. White males appear to be more likely to be referred for exercise therapy than other groups. Data was collected partially during the COVID-19 pandemic, which impacted elective outpatient procedures as well as rehabilitation center availability. Timing of implementation of exercise therapy may differ depending on revascularization type. Regardless, we can do better in treating our patients with symptomatic peripheral artery disease.

CONCLUSIONS

- Despite a Class I recommendation in the PAD guidelines, referral for home-based or supervised exercise therapy was low in both a large academic medical center and an urban safety net hospital system.
- Further work is needed to understand barriers and increase implementation of this proven therapy.

LIMITATIONS

- Patients were selected based on prior LER, which is reflected by Rutherford classification, so referral for home-based or SET may not be definitive therapy, rather supplemental management to LER. However, all patients with PAD should be eligible for SET.
- SET is not standard management for CLI (Rutherford 4-6), which was a large proportion of this cohort.
- This is a retrospective chart review with procedural and referral rates likely influenced by COVID-19 pandemic.

DISCLOSURES

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