

Delivery of resistance exercise for older people living with probable sarcopenia or frailty – findings from the BEPOP project

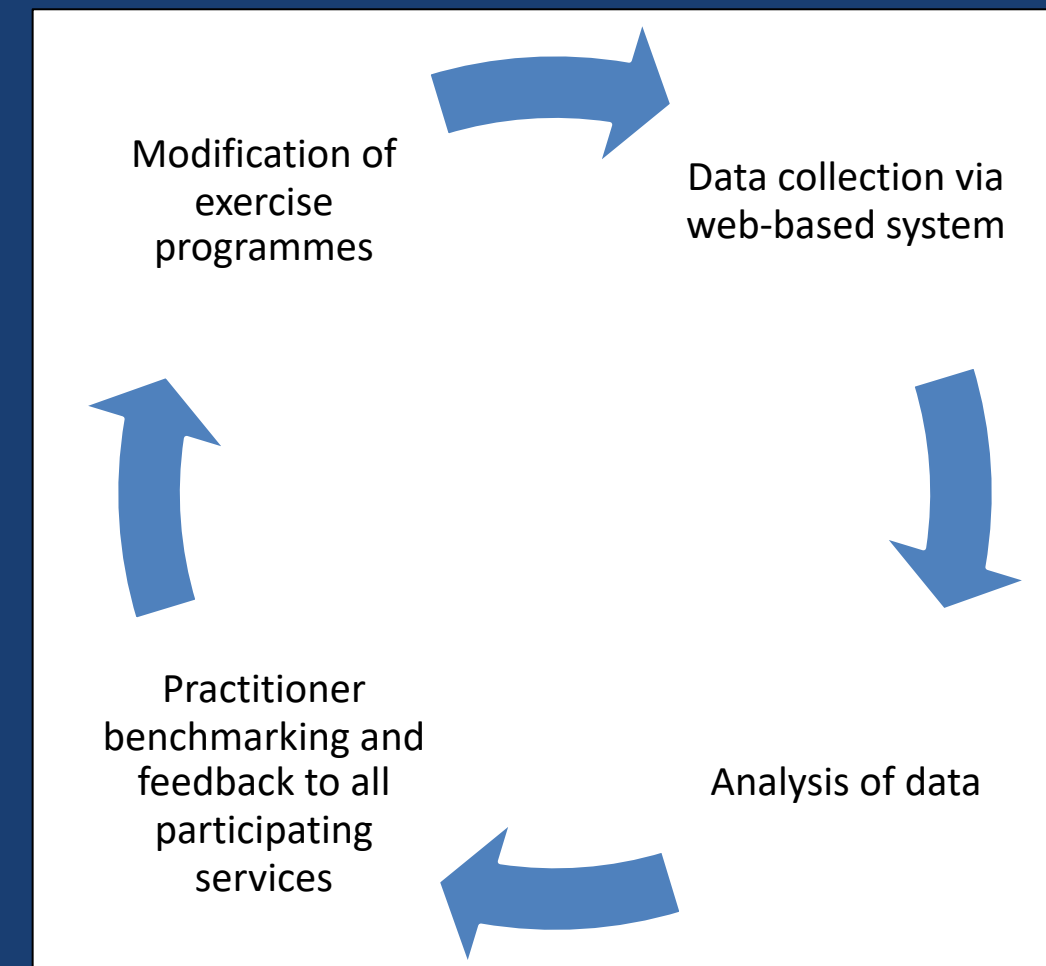
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Introduction

- Sarcopenia and frailty are common and important conditions affecting older people.
- Resistance exercise is an effective intervention for sarcopenia and frailty and is strongly recommended by consensus guidelines¹.
- Resistance exercise training was offered in only 9% of services in a recent survey².



- The **Benchmarking Exercise Programmes for Older People (BEPOP) project** aims to promote best practice in the prescription of resistance exercise for older people through cycles of benchmarking, feedback, and improvement.

Methods

- 10 participating services delivering community-based exercise interventions
- Data collected between October 2021 and September 2022.
- Each centre asked to upload anonymised data on 20 consecutive individuals:
 - Patient demographics
 - Baseline assessment and prescription of exercise programme
 - Review and reassessment during the exercise programme
 - Outcomes following completion of the exercise programme

Table 1. Descriptive data on patient population in wave 1 (n=188)

Mean age (years) (range)	80.3 (60 to 101)
Female sex (%)	110 (58.5)
Living in own home (%)	155 (92)
Reason for referral (%):	
Falls prevention	150 (79.8)
Improve physical performance	143 (76.1)
Mobility assessment	93 (49.5)
Improve sarcopenia/frailty	67 (35.6)
Other	5 (2.7)
Mean Rockwood Clinical Frailty Scale (range)	4.8 (1 to 7)
Diagnosis of sarcopenia made before referral (%)	32.(17.0)

Results

Baseline assessment

115 (61%) individuals were assessed using an **objective strength-based assessment tool** (e.g. grip strength, timed up and go (TUG) test, one-repetition maximum, five times sit-to-stand test). Many received **non-strength based assessments** such as Tinetti, (“other” in Figure 1).

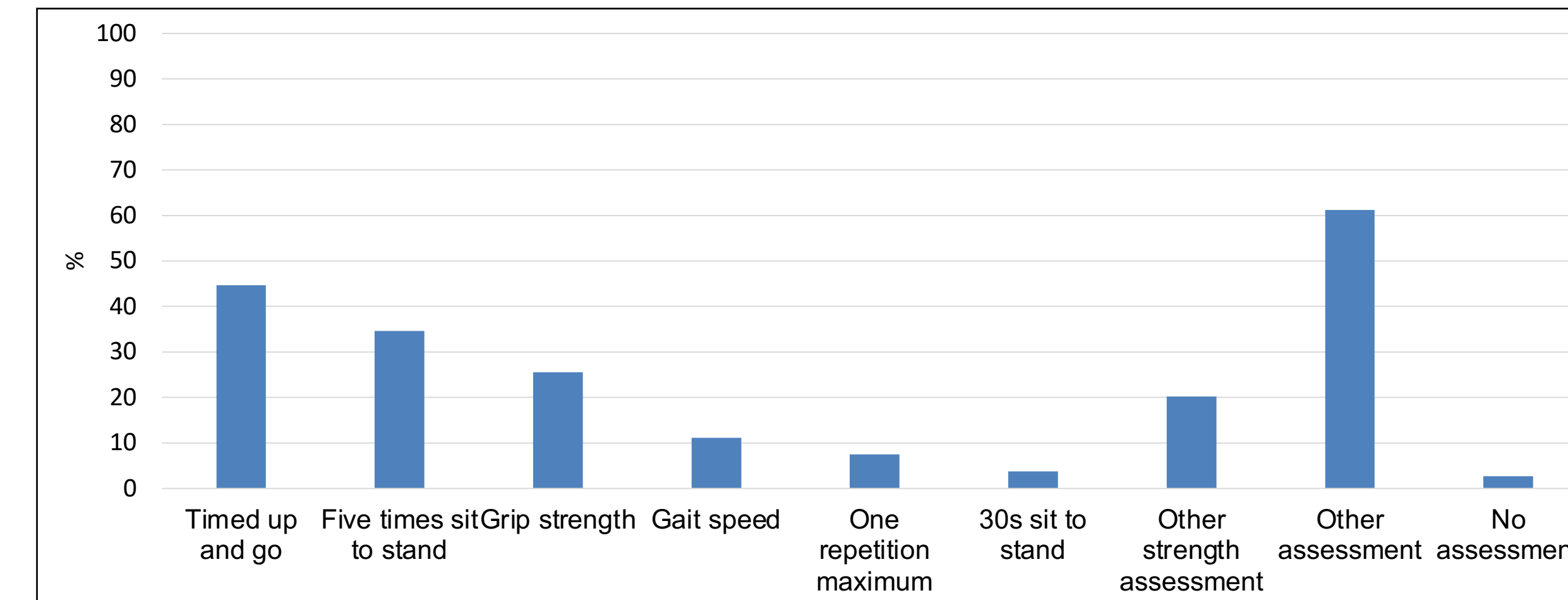


Figure 1. Baseline assessment methods

Prescription of resistance exercises

Almost all services included some element of **resistance exercise training**. Bodyweight exercises were most commonly prescribed (n=173, 92%). 98 individuals (52%) were prescribed an additional element of resistance exercise.

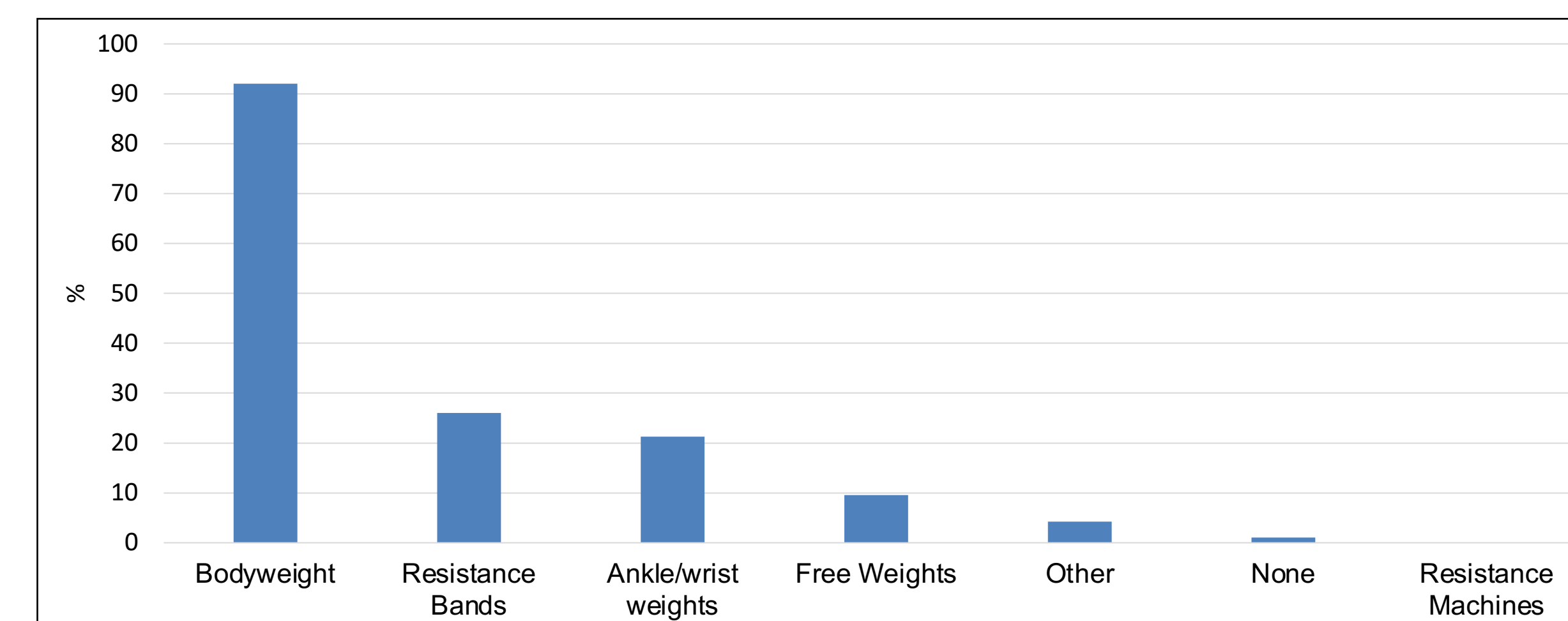


Figure 2. Methods of resistance exercise training prescribed

Progression of resistance exercises

Most resistance exercise training was progressed by an increase in volume (repetitions, sets or duration). **Only 48 individuals (26%)** were progressed via an **increase in intensity**, such as by an increase in weights used or greater resistance band.

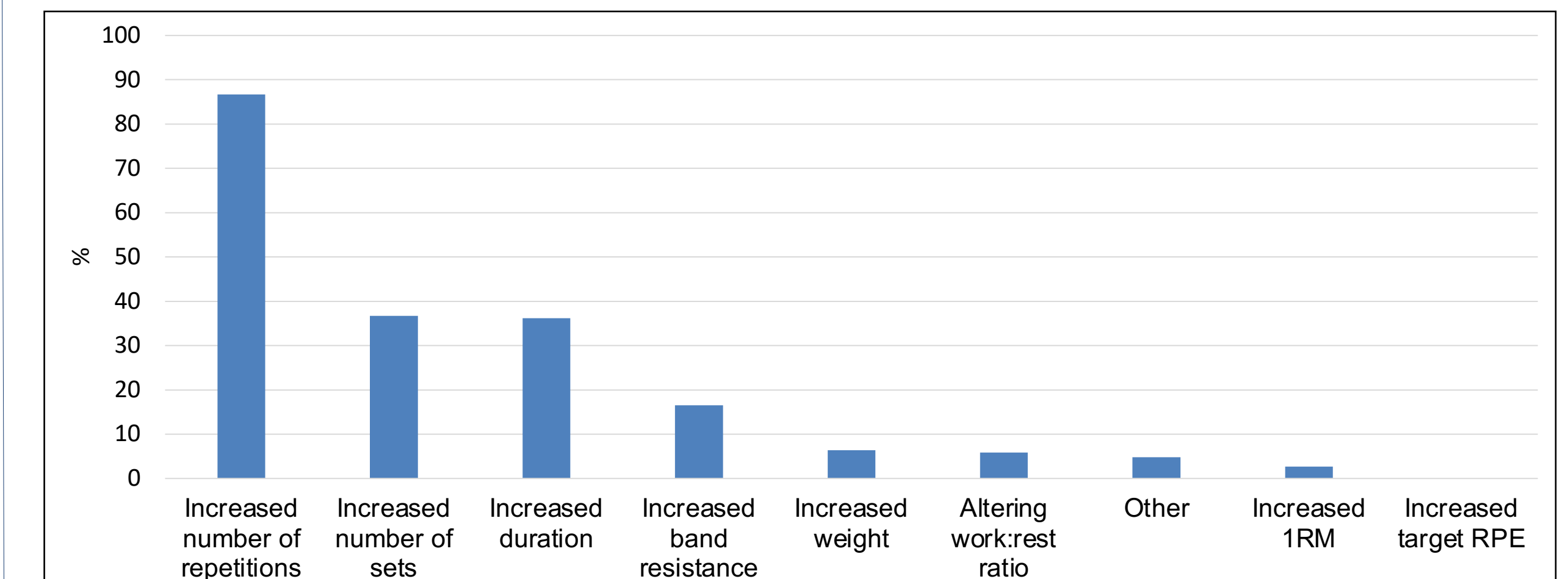


Figure 3. Methods of progressing resistance exercise training

Re-assessing outcomes

Rates of assessment following completion of an intervention **were lower than at baseline**. 50 patients (30%) **underwent no re-assessment** following completion of the prescribed exercise programme.

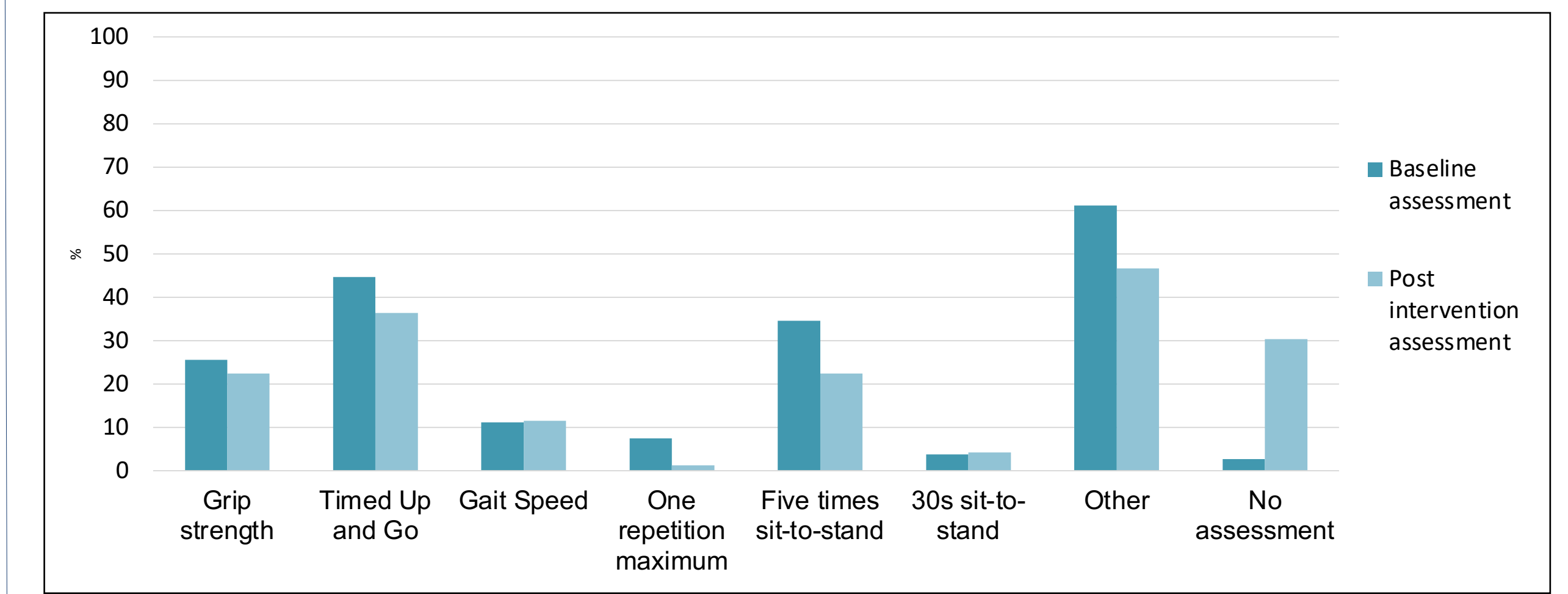


Figure 4. Percentage of patients who received a paired outcome assessment

Key recommendations from Wave 1

- Assessment:** All patients should be assessed using an objective strength-based assessment method before starting an exercise programme.
 - Diagnosis:** Probable sarcopenia can be diagnosed using objective strength-based assessment methods (using grip strength measurement and five times sit-to-stand test). This should be documented and shared to support individualised care.
 - Exercise prescription:** Progressive resistance exercise training should be included in all exercise prescriptions for older people with probable or confirmed sarcopenia and/or frailty.
 - Progress and Re-assess:** Resistance exercises should be progressed by increasing intensity of exercises, not just by increasing the volume. At the end of an exercise programme, all patients should be re-assessed using the same objective strength-based assessment method that was used at baseline.
 - Take forwards:** All patients completing an exercise programme should be offered signposting or referral to ongoing exercise services where possible.
- Individualised feedback to participating services will be provided to assist local service development. Further waves of benchmarking and feedback are planned. **Join us and benefit from this opportunity to contribute to a community of sustainable, evidence-based improvement practice!**

1. Dent et al International Clinical Practice Guidelines for Sarcopenia (ICFSR): Screening, Diagnosis and Management. The journal of nutrition, health & aging. 2018;22(10); 2. Witham et al Content of exercise programmes targeting older people with sarcopenia or frailty – findings from a UK survey. Journal of Frailty, Sarcopenia and Falls. 2020;5(1):17-23.