

PRODUCT FEATURE

Able Score

What is Able Score?

A screening produces results across different scales: grip force kilograms, chair stand repetitions, timed-up-and-go seconds and gait speed m/s. Each is meaningful, but taken together, they currently do not provide a simple answer to the question of how a person is doing overall.

The Able Score is a composite functional health score that combines multifactorial assessment data (grip strength, 30-second chair stand, timed-up-and-go and 4-metre gait speed) into a single continuous value (0 - 100), where higher is better. Population percentiles are the common currency that lets the disparate test outputs (e.g. kg, reps, secs) be meaningfully aggregated. Because it is percentile based, the score already accounts for age and sex: a 78-yo female and a 62-yo male with the same score are performing similarly relative to their own peer groups, even though their raw results look nothing alike.

Each test is scored against a published normative dataset, selected for sample size and relevance to the screened population:

Test	Normative dataset	Sample	Ages
Grip (SMGT)	GripAble continuous percentile model, device specific [1]	1,907 UK and US adults	18-90
Chair stand (CST)	Rikli & Jones (1999) [2]	7,183 US and Canadian adults	60-94
Timed Up & Go (TUG)	Mayhew et al. (2023), Canadian Longitudinal Study on Aging [3]	25,248 Canadian adults	45-85
Gait speed (GST)	Bohannon & Wang (2019), NIH Toolbox [4]	1,320 US adults	18-85

How it is calculated

Each result is converted to a percentile using the normative dataset for that person's age and sex, so that stronger and faster always mean a higher percentile. Those percentiles are averaged and placed on the 0 - 100 scale, automatically, as soon as the screening is completed.

Tests that were skipped, or that have no normative data for the person's age, are left out of the average rather than counted as zero. No score is produced when every test was skipped or none can be converted to a percentile. Because the score reflects the tests actually performed, track it over time across screenings that used the same configuration.

Worked example

Three clients, all four tests completed. Percentiles are those the platform derives from the normative datasets above.

	Alice - 71, female	Bob - 78, male	Cath - 83, female
Grip (SMGT)	10.0 kg (6th)	30.0 kg (86th)	8.0 kg (9th)
Chair stand (CST)	11 reps (34th)	14 reps (50th)	6 reps (7th)
Timed Up & Go (TUG)	11.6 s (11th)	12.6 s (12th)	15.2 s (5th)
Gait speed (GST)	0.82 m/s (22nd)	1.05 m/s (47th)	0.68 m/s (13th)
Able Score	18.25	48.75	8.50
Band	Medium	High	Low
Risk flag	Not-At-Risk	At-Risk (TUG)	At-Risk (TUG, GST, CST)

Alice clears every clinical threshold, so no flag is raised, but her score sits in the lower half of the Medium band, held down by weak grip and a timed-up-and-go close to the cutoff: the flag shows no concern, the score shows a prevention opportunity. Bob is flagged on a single

mobility test against otherwise strong function, giving both a clear target and the strengths to build a programme around, and he scores well above Alice, who is not flagged. Cath is flagged on three tests and sits in the Low band, making her the clearest priority of the three.

Score bands

The boundaries come from real Able Care data: completed screenings on the platform were split into thirds as follows:

Band	Score	Meaning
Low	< 11	Bottom third compared to Able Care individuals who have completed a screening
Medium	11 – 31	Middle third compared to Able Care individuals who have completed a screening
High	> 31	Top third compared to Able Care individuals who have completed a screening

These are the current defaults based on 730 screenings. The bands will be updated periodically as more screening data is collected.

How it complements the falls risk calculation

The falls risk flag is a binary, rule based safety check for anyone aged 65 or over, raised by a Timed Up & Go of 12 seconds or more, a gait speed of 0.8 m/s or less, or a chair stand result below the age- and sex-specific normal range [5]. The thresholds follow established clinical guidelines, including the CDC STEADI [6][7]. In the future, grip strength, PROMs (e.g. 3 Key Questions) and skipped tests will be incorporated into the calculation.

The score adds a continuous measure alongside that binary answer. The two are correlated: across 730 completed screenings, clients with lower scores were more likely to be flagged. But correlation is not equivalence. As examples Alice and Bob highlight above, someone

flagged can still score higher than someone who is not, because the flag responds only to a threshold being crossed on a mobility test while the score reflects age- and gender-adjusted performance across every test taken.

Availability

The score is calculated and stored with the screening. It can be configured to be shown at the end of the screening; will soon be available on the Able Care web portal and within pdf reports; and is sent to third-party platforms via our integrations. As the Able Score is intrinsically normalized for age and sex, cohort-level statistics are directly comparable: a facility or organization can track its own population over time and benchmark against others, regardless of how their populations differ in age and sex.

References

1. GripAble continuous grip-strength percentile model (GAMLSS), n = 1,907 UK and US community-dwelling adults, device specific to GripAble. Mutalib et al. 2024; McGee et al., in preparation.
2. Rikli RE, Jones CJ. Development and validation of a functional fitness test for community-residing older adults. *Journal of Aging and Physical Activity*. 1999;7(2):129-161.
3. Mayhew AJ, et al. Normative values for the Timed Up and Go test in community-dwelling adults aged 45 to 85 years from the Canadian Longitudinal Study on Aging. *BMC Geriatrics*. 2023;23:197. doi:10.1186/s12877-023-03888-2.
4. Bohannon RW, Wang YC. Four-meter gait speed: normative values and reliability determined for adults participating in the NIH Toolbox study. *Archives of Physical Medicine and Rehabilitation*. 2019;100(3):509-513. doi:10.1016/j.apmr.2018.06.031.
5. Able Care. Able Assess: the multifactorial evidence behind falls risk screening. <https://able-care.co/blog/able-assess-multifactorial-evidence-falls-risk-screening>
6. Centers for Disease Control and Prevention. STEADI: Older Adult Fall Prevention, Assessment and Interventions. Source of the 12-second Timed Up & Go threshold.
7. Cruz-Jentoft AJ, et al. Sarcopenia: revised European consensus on definition and diagnosis (EWGSOP2). *Age and Ageing*. 2019;48(1):16-31. doi:10.1093/ageing/afy169. Source of the 0.8 m/s gait-speed threshold.

Disclaimer: The Able Score is a measure of functional performance relative to normative data. It is not a clinically validated diagnostic measure, does not predict the likelihood of a fall, and does not replace clinical judgement or the risk flag alongside it.