

# Clinical Outcome Variables Scale (COVS)

## Assessment Overview

### Assessment Area

**ICF Domain:**

Activity

**Subcategory:**

Mobility

**Subscales:**

General Mobility

Ambulation

### You Will Need

**Length:**

13 items

**Scoring:**

7-point scale ranging from 1 (fully dependent mobility) to 7 (normal independent mobility). COVS summed total score ranges from 13 to 91. The general mobility subscale ranges from 7-49 and the ambulation subscale ranges from 5-35.

Higher scores = better mobility.

**Equipment:**

Stopwatch, plastic mug, penny and slotted can (or slotted can), exercise mat, ramp (1 inch to 12 inch rise), 6-inch platform

**Training:**

Raters should be trained in the administration of both the COVS and TCOVS.

### Summary

The Clinical Outcome Variables Scale (COVS) is a measure of mobility that has been used in people with stroke, traumatic brain injury, amputations, and musculoskeletal injuries in a variety of settings (acute, inpatient/outpatient rehabilitation, and community settings). Items include: rolling, lying to sitting, sitting balance, transfers, ambulation, wheelchair mobility, and arm function.

There are two subscales in the COVS: 1) General Mobility subscale (7 items) and 2) Ambulation subscale (5 items)

Two versions:

- 1) **COVS:** clinician-administered through observation of task performance
- 2) **TCOVS:** Self-report, administered by telephone

### Availability

**Worksheet:** Can be found in the appendix of publication linked [here](#). Full guidelines and scoring software available for purchase [here](#).

**Languages:** English

## Assessment Interpretability

### Minimal Clinically Important Difference

Not established in SCI

### Statistical Error

Not established in SCI

### Typical Values

**COVS mean (SD) scores:**

Composite score: 55 (20)

Mobility subscale: 39 (13)

Ambulation subscale: 11(9)

**TCOVS mean (SD) scores:**

Composite score: 54 (18)

Mobility subscale: 37 (12)

Ambulation subscale: 11(9)

(Barker et al. 2007; study 1 n=37, 31 males,

traumatic SCI, mixed injury types, mean time since injury (SD): 8 (3.7) months, community living)

**Threshold Values:**  
Not established in SCI

## Measurement Properties

### Validity – High

The COVS can discriminate across clinically distinct groups (by lesion level, completeness of injury and walking status) during discharge from hospital and admission to a transitional rehabilitation program.

(Campbell & Kendall 2003; n=169; 124 males, 45 females; 36 complete paraplegia, 56 incomplete paraplegia, 25 complete paraplegia, 52 incomplete paraplegia, community rehab)

**Number of studies reporting validity data: 1**

### Reliability – High

**High Test-retest Reliability (TCOVS):**

ICC = 1.00

**High Correlation between COVS and TCOVS:**

ICC = 0.98

(Barker et al. 2007; study 1 n=37; 31 males, 6 females; traumatic SCI, 18 tetraplegia, 19 paraplegia; 19 complete injury, 18 incomplete injury; mean time since injury (SD): 8 (3.7) months, community living)

**Number of studies reporting reliability data: 1**

## Responsiveness

**Floor/Ceiling Effect:**

Not established in SCI

**Effect Size:**

Not established in SCI

**Number of studies reporting**

**responsiveness data: 0**