

Frequency and circumstances of falls for adults with Charcot-Marie-Tooth disease

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Background

Falls are anecdotally reported by people with Charcot-Marie-Tooth disease (CMT) but to date there has been little formal investigation of this problem. Frequent falling increases risk of injury and reduces mobility through avoidance of activities perceived to threaten stability. To successfully manage the problem of falls there needs to be greater understanding of why people fall. This study aimed to survey people with CMT to ascertain how often they fell, nearly fell and the circumstances that may have contributed.

Methods

A postal survey was administered to 222 people with CMT under the care of the MRC Centre for Neuromuscular Diseases. The questionnaire contained a mixture of closed and open questions to ascertain the frequency of falls events and to explore the circumstances behind each event. Descriptive statistics were used to analyse quantitative data. Qualitative statements were coded for emerging themes by two investigators independently. Themes were later negotiated and agreed using a triangulation process.

Frequency of falls events

Ninety four questionnaires were returned. In total, 89.4% of respondents reported falls, most commonly occurring at least once a month (29.8%), 19% fell more frequently than once a month and 33% less than once a month.

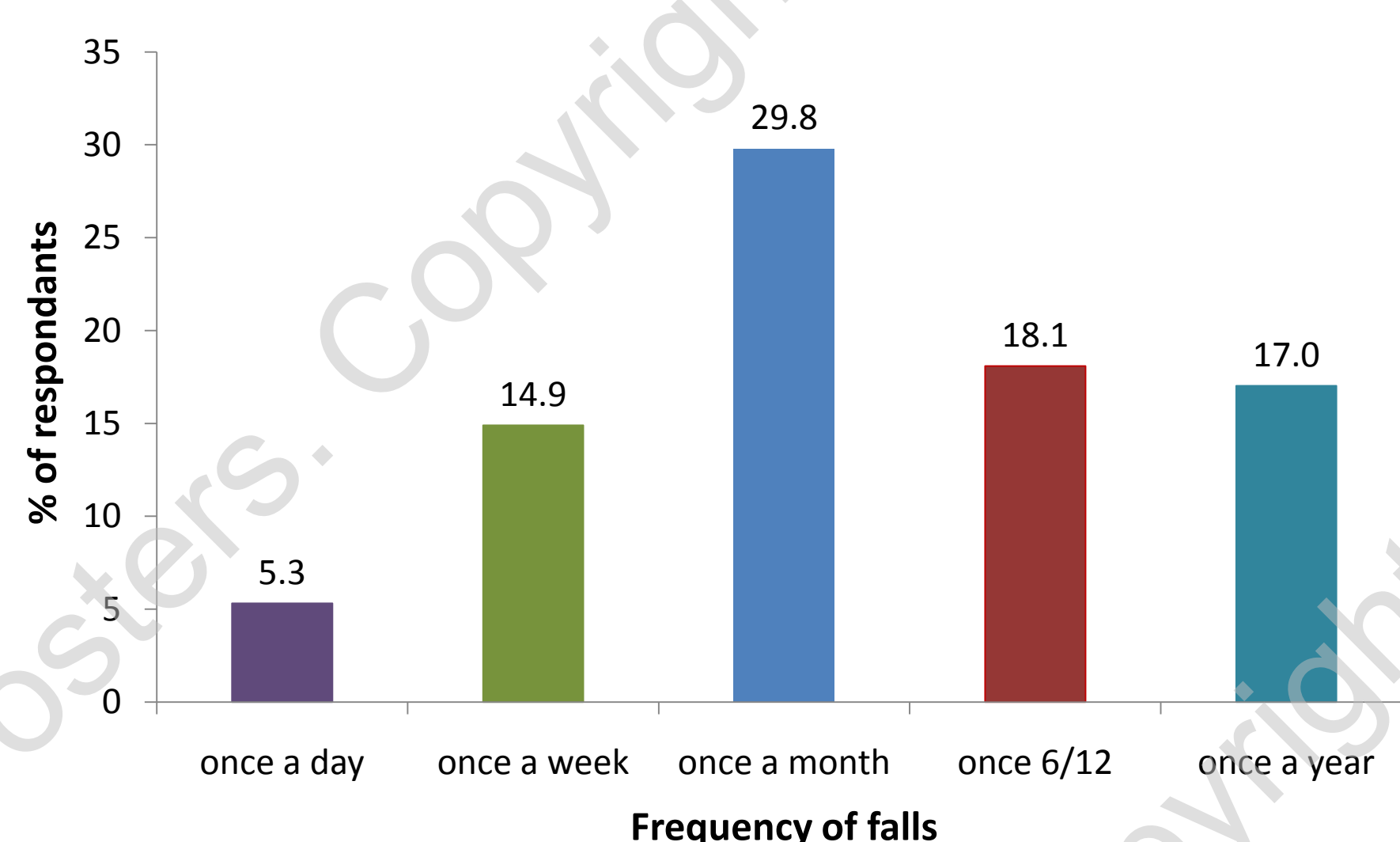


Figure 1: Reported frequency of falling

Near falls in the previous six months were reported by 89.4% of respondents. A proportion of participants nearly fell once a month (27.7%), 42.6% more frequently than once a month and 19.1% less than once a month.

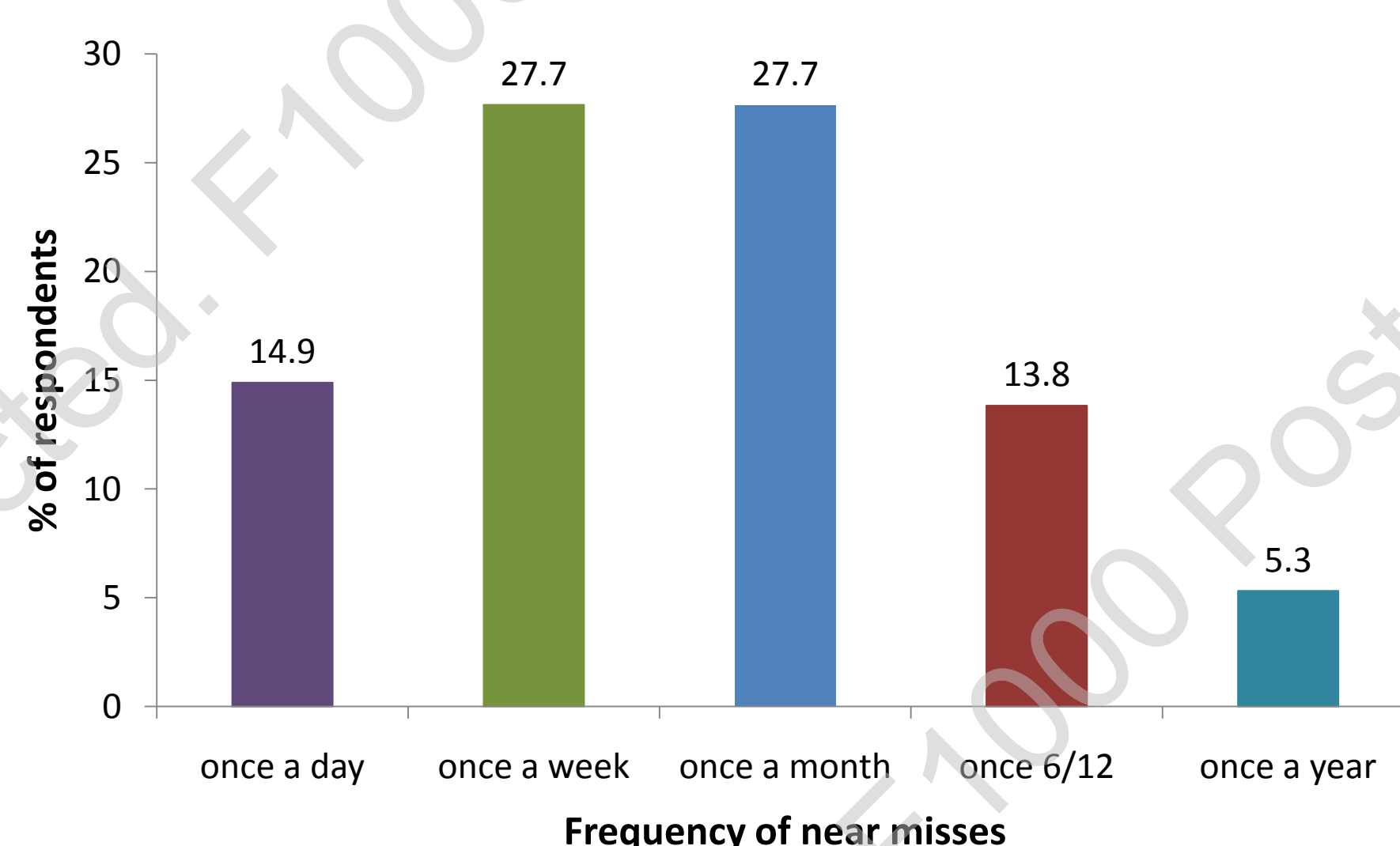


Figure 2: Reported frequency of near falls

Circumstances of falls events

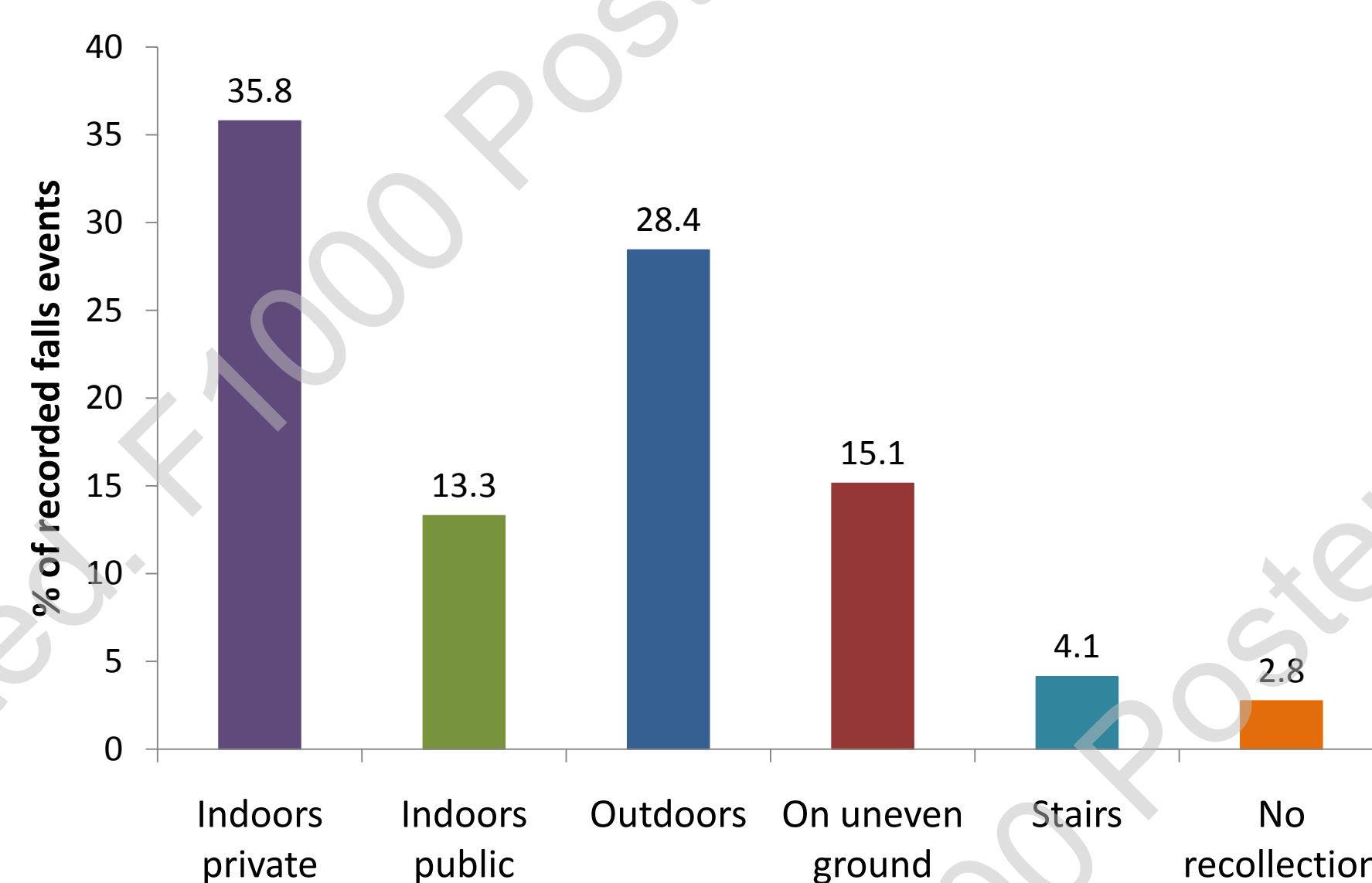


Figure 3: Where respondents fell. Percentage of reported falls events

The majority of falls happened indoors (47.8%) either at home (34.8%) or in a public place (12.9%). Twenty seven percent were outdoors with 14.7% being identified as on uneven ground. Most falls occurred when people were walking (52.2%) with participants reporting the causes as ankles or knees giving way (25.8%), tripping (20.8%), slippery or uneven surfaces (20.4%) and loss of balance (15.8%). The majority of falls resulted in no or minor injuries (61.2%), but moderate injuries, such as sprains were experienced in 14.8% of falls and 2.8% sustained serious injuries such as fractures or injuries requiring surgery.

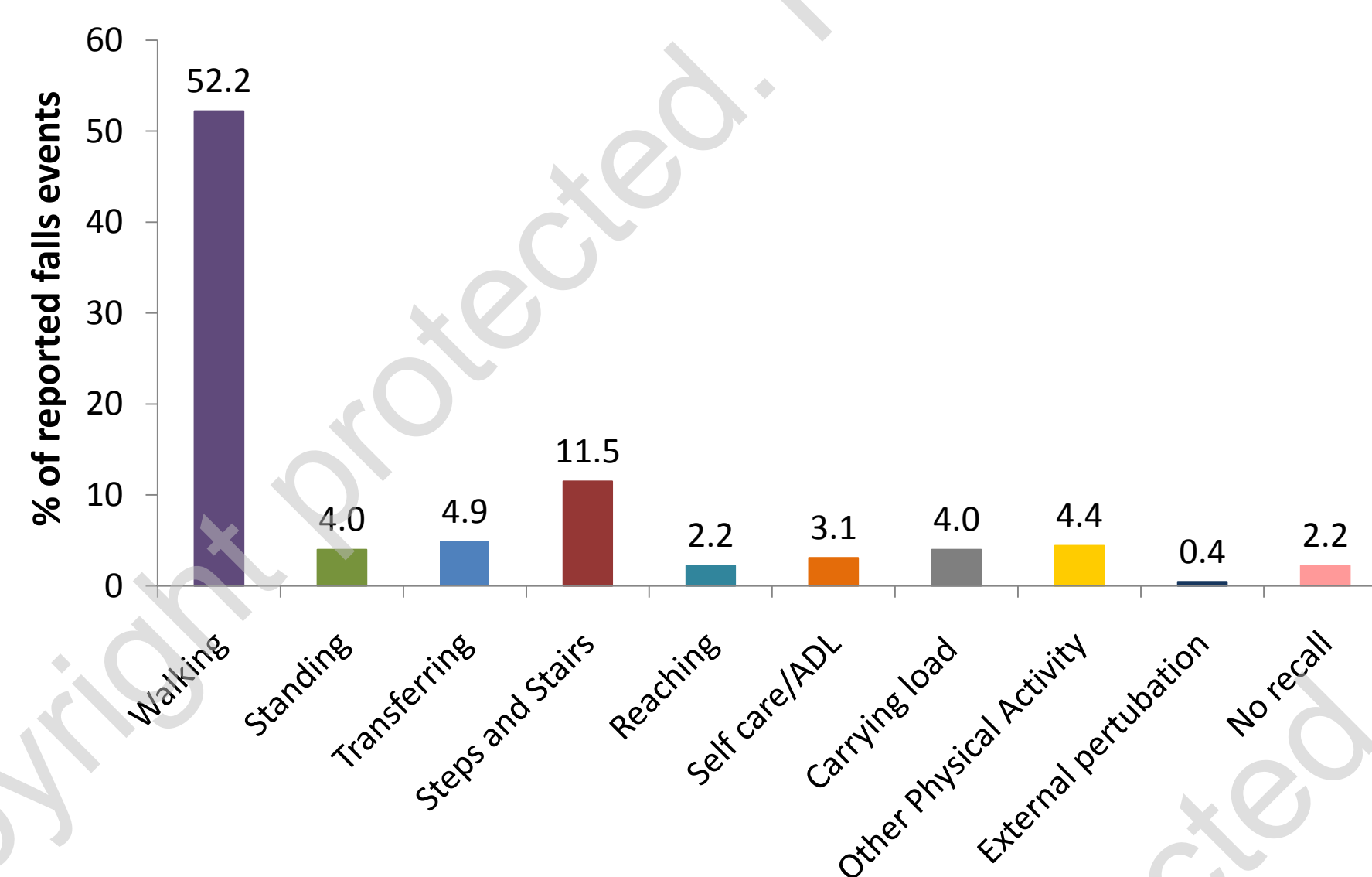


Figure 4: What respondents were doing when they fell

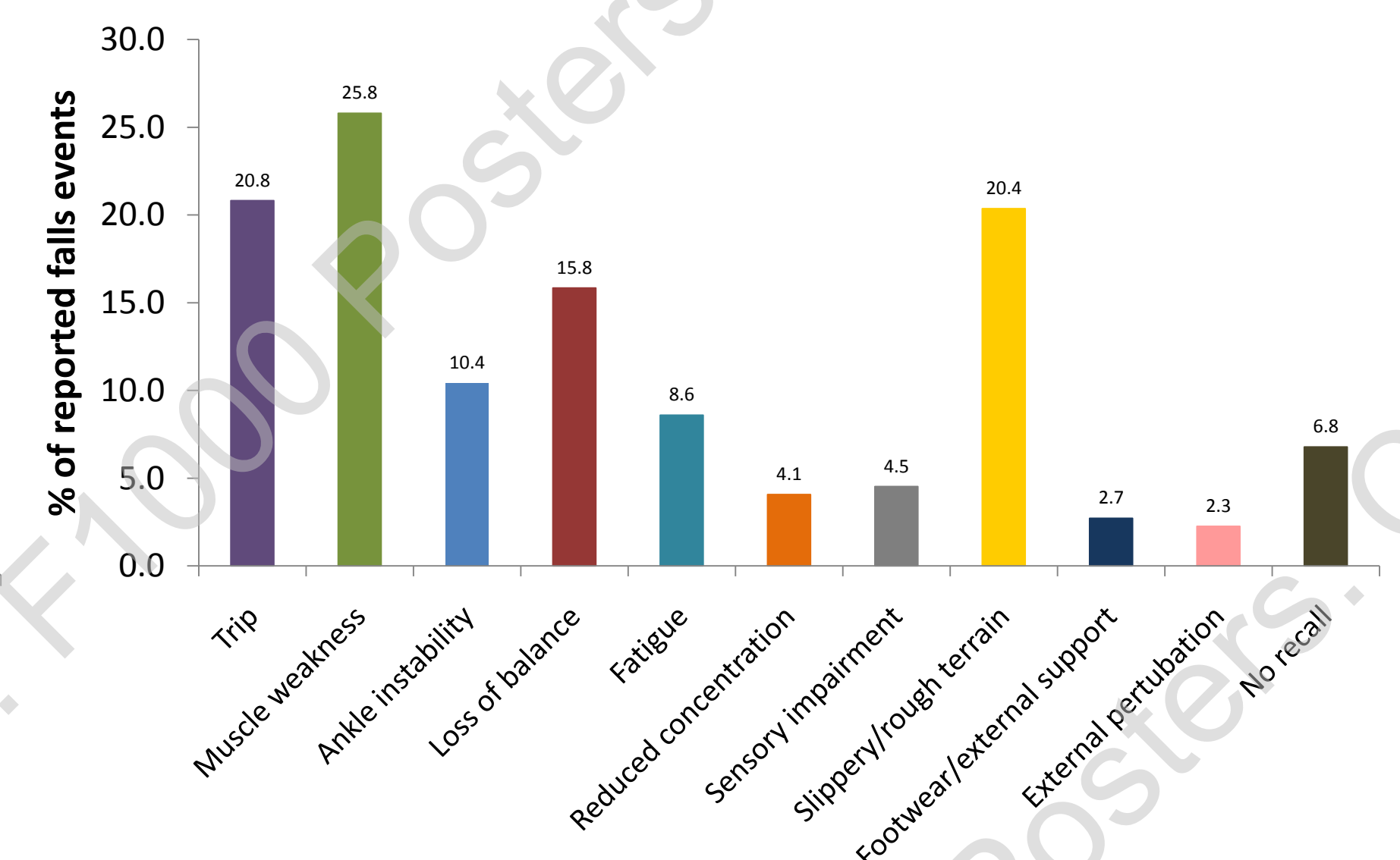


Figure 5: Why respondents think they fell

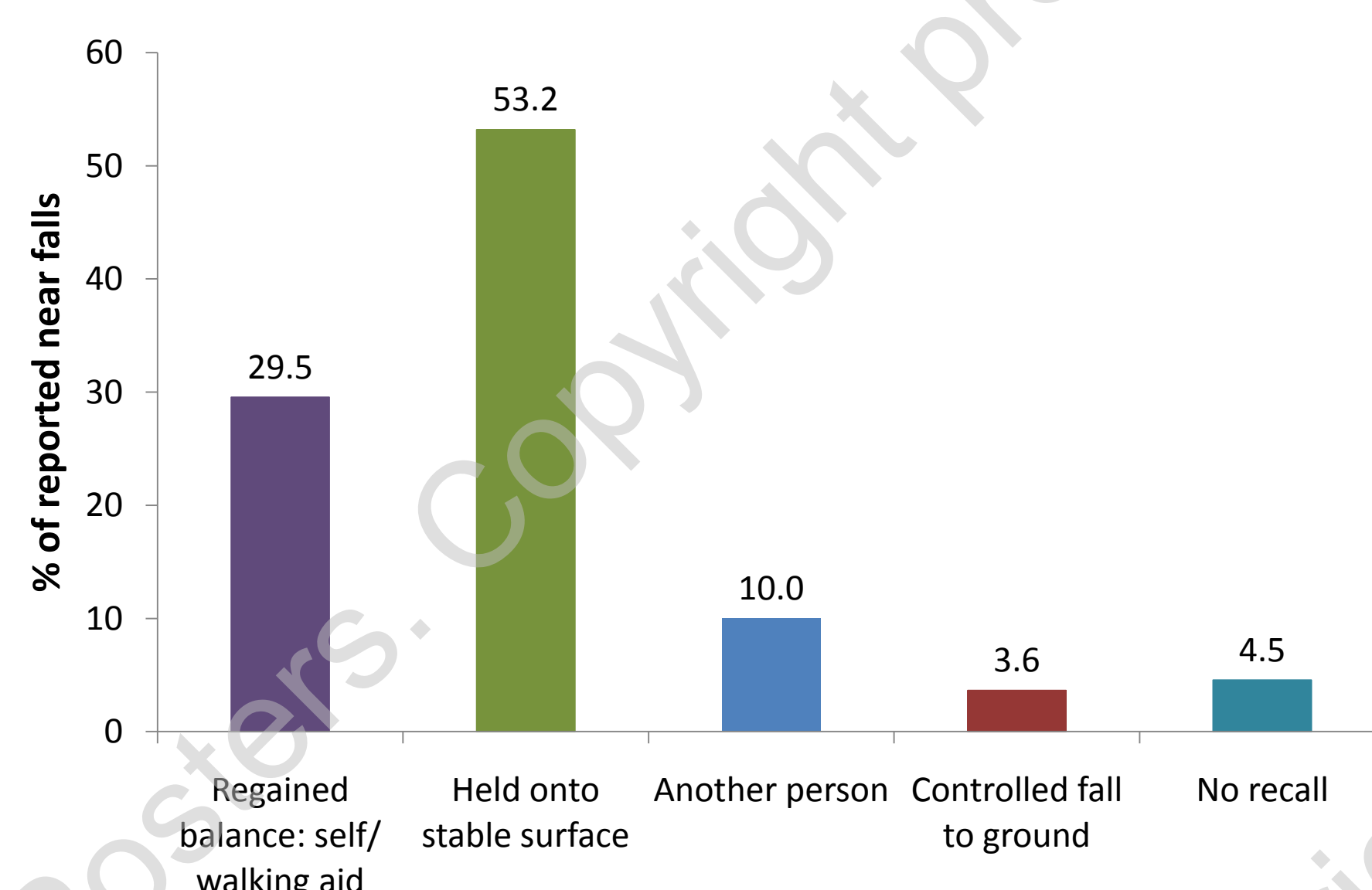


Figure 6: How respondents prevented falls during near falls

Near falls were attributed to similar causes with ankles or knees giving way the most common reported (35.4%) followed by loss of balance (25.6%), trips (17.5%) and slippery or uneven surfaces (16.6%). Respondents were able to prevent falls using a number of strategies (figure 6).

Conclusions

Falls and near falls are regular events for many people with CMT. The majority of people fall at home. Assessing how people walk in their home environment and making recommendations on a safe environment may be a useful first intervention in preventing falls. In addition the impact of distal weakness should be assessed as a cause of trips, joints giving way or loss of balance. The efficacy of bracing or muscle strength training should be investigated to ascertain the effect on balance strategies and the occurrence of falls.

References

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