

Evaluation of a computerized telephone system to monitor falls

Take Home Message

The Falls Telephone is a feasible and efficient tool, which enables long-term monitoring of fall incidents. Although it has been tested initially in PD, it may be used for patients with other movement disorders as well.

Introduction

Falls are a common problem in Parkinson's disease (PD). The morbidity of falls is considerable, for example because of hip fractures and self-imposed restriction of daily activities causing excessive immobilization and reduction of social contacts. The prevalence of falling and possible prevention strategies are subject of many research studies. Hence, precise monitoring of fall incidents is important.

There are several methods available to collect falls data, like interviews, questionnaires and diaries. However, these methods are labor-intensive, especially within large and long-lasting trials. To overcome this problem, we have developed a computerized telephone system, the "Falls Telephone".¹ The objective was to evaluate the Falls Telephone on reliability and patient satisfaction.

Methods

The Falls Telephone automatically calls patients on a weekly basis and asks them to enter the number of fall incidents in the preceding week (see Figure 1).

- The **reliability** was evaluated by telephone interviews in 121 non-demented patients.
- Patient characteristics**
 - idiopathic PD, Hoehn and Yahr stage I-IV
 - living independently in the community
 - 64% men
 - mean age 67.6 years (range 43.4- 81.1 yrs)
 - mean disease duration 6.2 years (range 0.75 – 21 yrs).
- User experiences** were evaluated by a random sample of 90 patients via structured telephone interviews, including questions on comprehensibility, reliability and an overall rating on a 10-point scale (1 bad - 10 excellent).

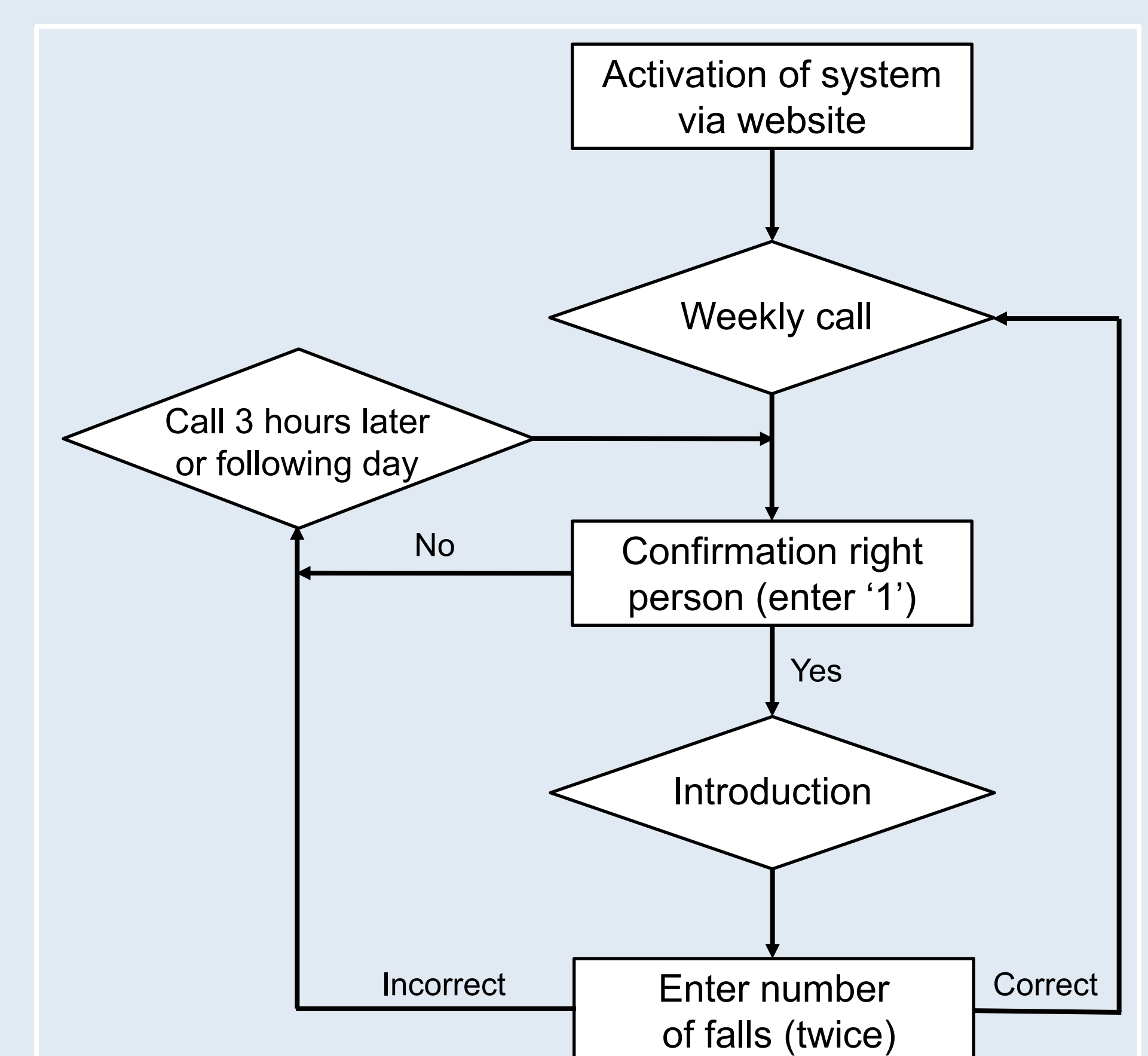


Figure 1. Protocol of Falls Telephone

Results

Reliability (see also Figure 2)

- A random sample of 173 non-falls was verified; all were confirmed as non-falls.
- 125 indicated fall incidents were verified by a telephone interview. 82,5% were confirmed to be actual fall incidents.

User experiences

- Weekly calls indicated as no burden at all (94%)
- Majority was positive about the clarity and comprehensibility of instructions.
- All patients indicated the Falls Telephone as a reliable tool to monitor falls
- The Falls Telephone was regarded as an appealing system to monitor falls by 96%, in contrast to a calendar (50%), postcards (31%) or a falls hotline (30%).
- The mean overall rating was 8.3 (range 6-10).

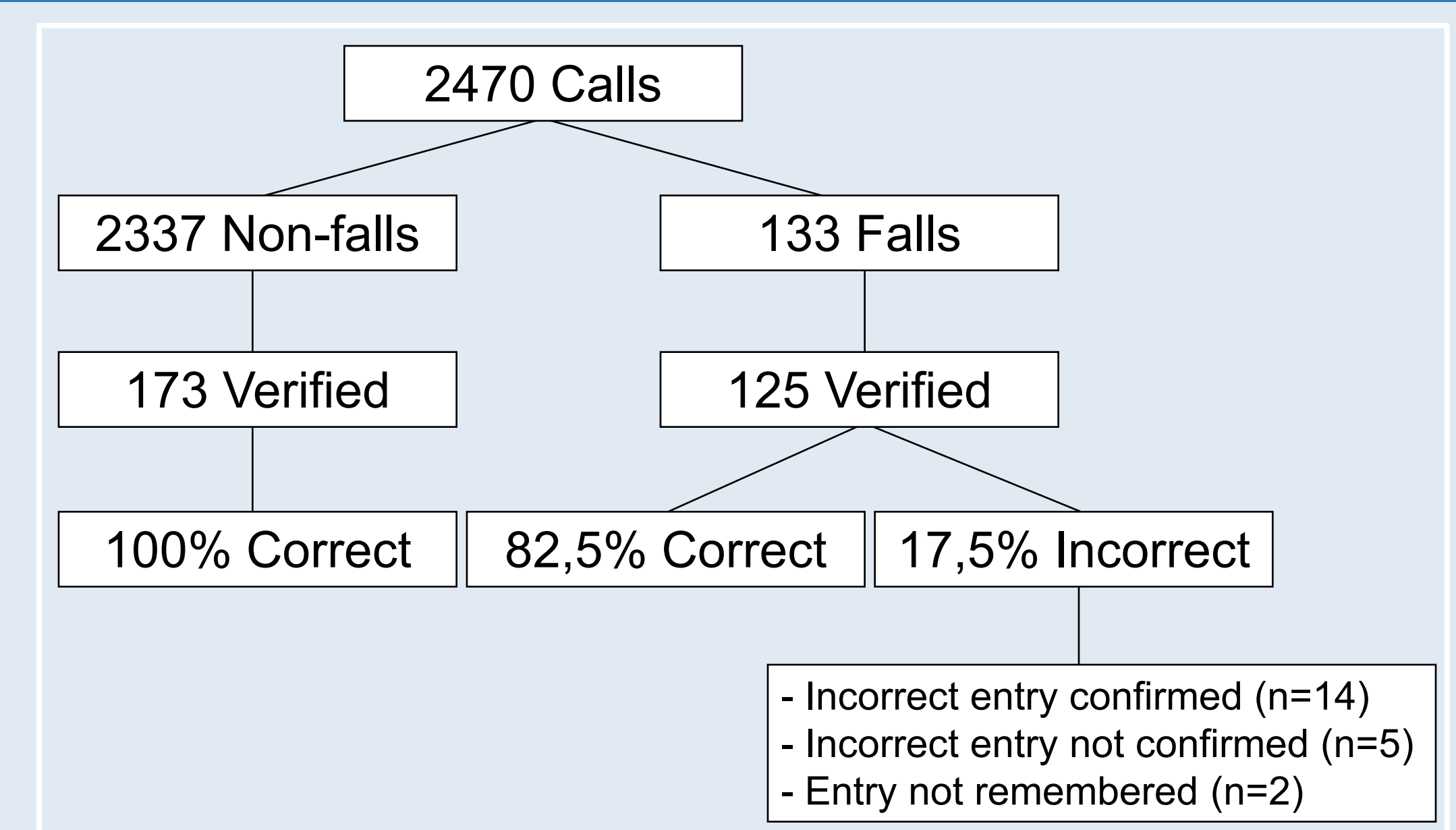


Figure 2. Overview of number of telephone calls of the Falls Telephone, indicated fall incidents and the reliability of these values.

Conclusions

The Falls Telephone can reliably monitor non-falls and is reasonably reliable for detecting fall events in the home situation. Hence, only patients who indicate having fallen in the preceding week need to be called by the researcher to obtain a good measure of the frequency of falls. Also, patients indicate the system as an appealing tool.

References

- www.askcareconnect.com

Acknowledgements

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