

RESULTS

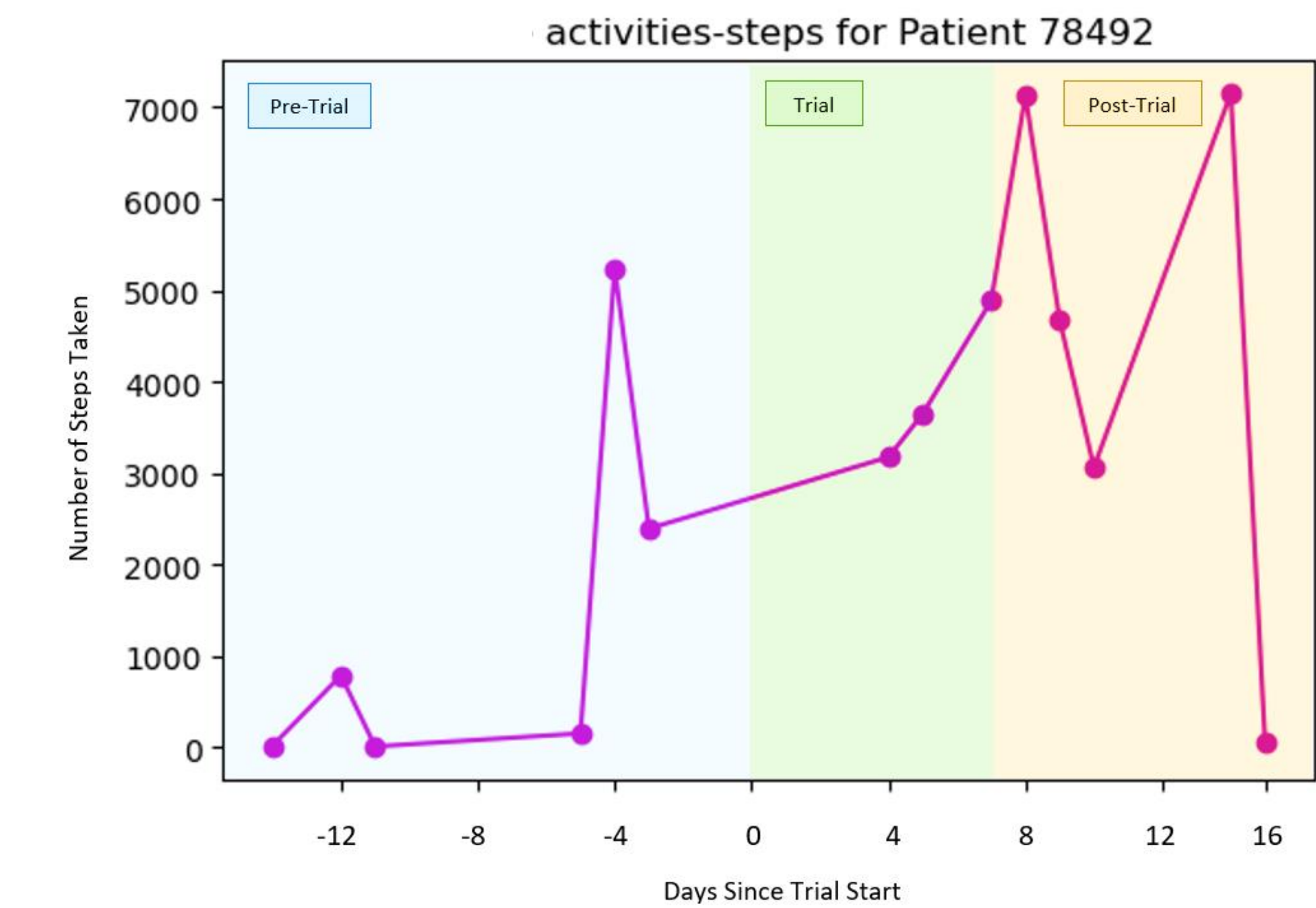


Figure 3. Activities-Steps for Patient 78492.

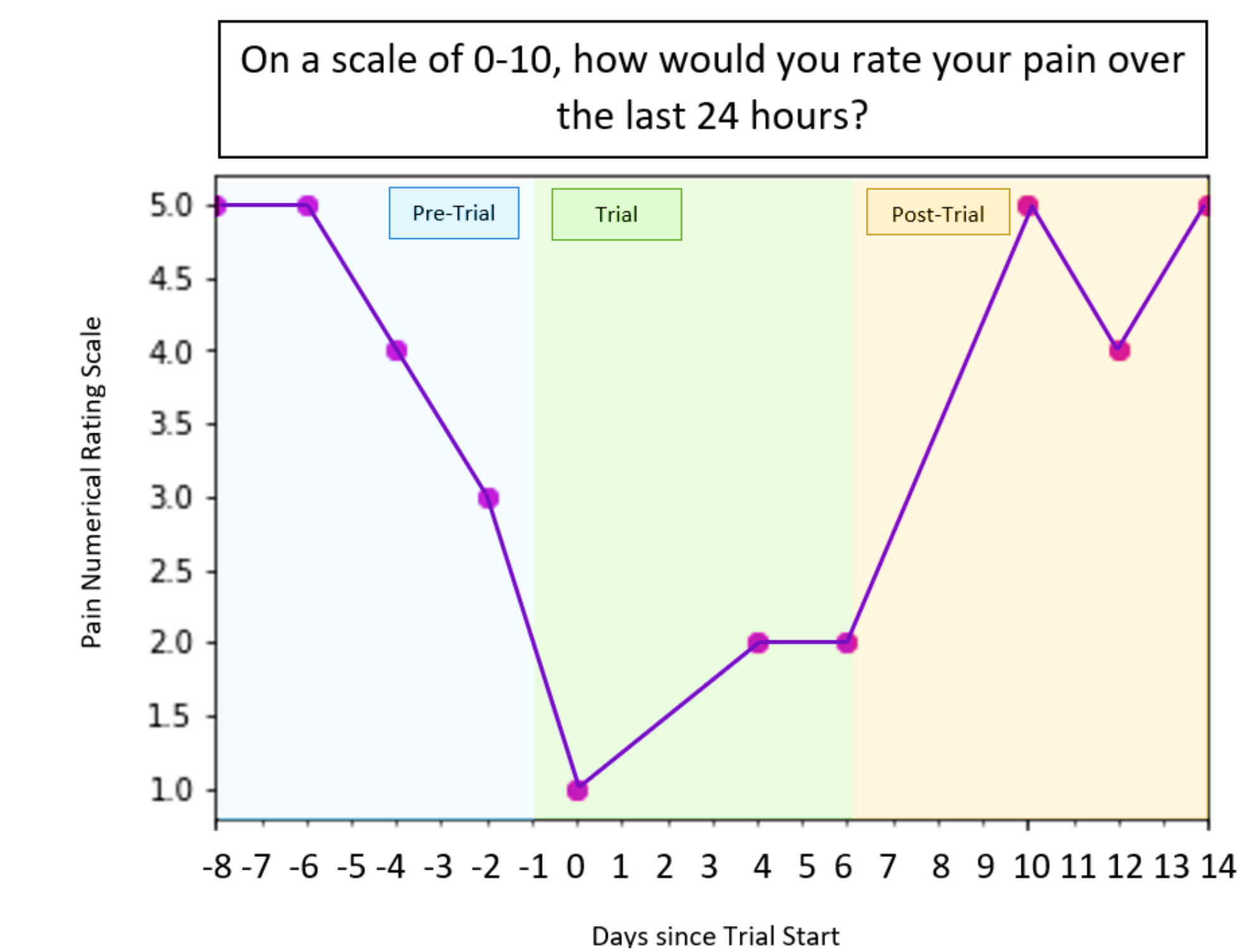


Figure 4. Pain Rating Over 24 Hours for Patient 5b6c8.

LIMITATIONS & DISCUSSION

- Limitations: Patient visits to the clinic may include an increased step count that was not filtered out in this data. In addition, the duration of device wear per patient per day is not known and this can skew data from patient wearables.
- The incorporation of functional sensing into implantable devices (e.g., IPG) would help to overcome the challenges with patient compliance.

CONCLUSION

- Ongoing data collection with a growing enrollment pool is anticipated to help further expound upon the inter-related roles of physical function, sleep, mood, and pain during the neuromodulation trial period.

REFERENCES

[1] J.G. Pilitsis, M. Fahey, A. Custozzo, K. Chakravarthy, and R. Capobianco, "Composite Score is a Better Reflection of Patient Response to Chronic Pain Therapy Compared With Pain Intensity Alone," *Neuromodulation*, vol. 24, no. 1, pp. 68-75, 2021.

[2] Mills SEE, Nicolson KP, Smith BH, "Chronic Pain: a review of its epidemiology and associated factors in population-based studies," *British Journal of Anaesthesia*, 2019.

Remote Monitoring Outcomes in Chronic Pain Patients During the Neuromodulation Trial Period

Keith Scarfo¹, Laert Rusha¹, Alexios Carayannopoulos¹, Sakshi Kulkarni², Soroush Dehghan², Bryce Lakin², Aamna Ahsan², Misagh Mansouri², David Page²

¹Rhode Island Hospital 593 Eddy St. Providence, RI 02903
²Abbott Neuromodulation 6901 Preston Rd. Plano, TX 75024

INTRODUCTION

- Intractable chronic pain is a multi-dimensional challenge that affects up to 20% of adults in the United States alone [1].
- In the search for an effective treatment, many pain patients undergo a short-term percutaneous trial of neuromodulation therapy.
- The efficacy of the trial is assessed using a single pain-based survey question administered at the end of the trial period, however, pain is known to vary daily due to various factors such as sleep, physical activity, and mood [2].
- This study aims to assess whether trial outcomes could be better assessed by collecting multiple days of multi-factor well-being information from chronic pain patients before, during, and after their trial period.

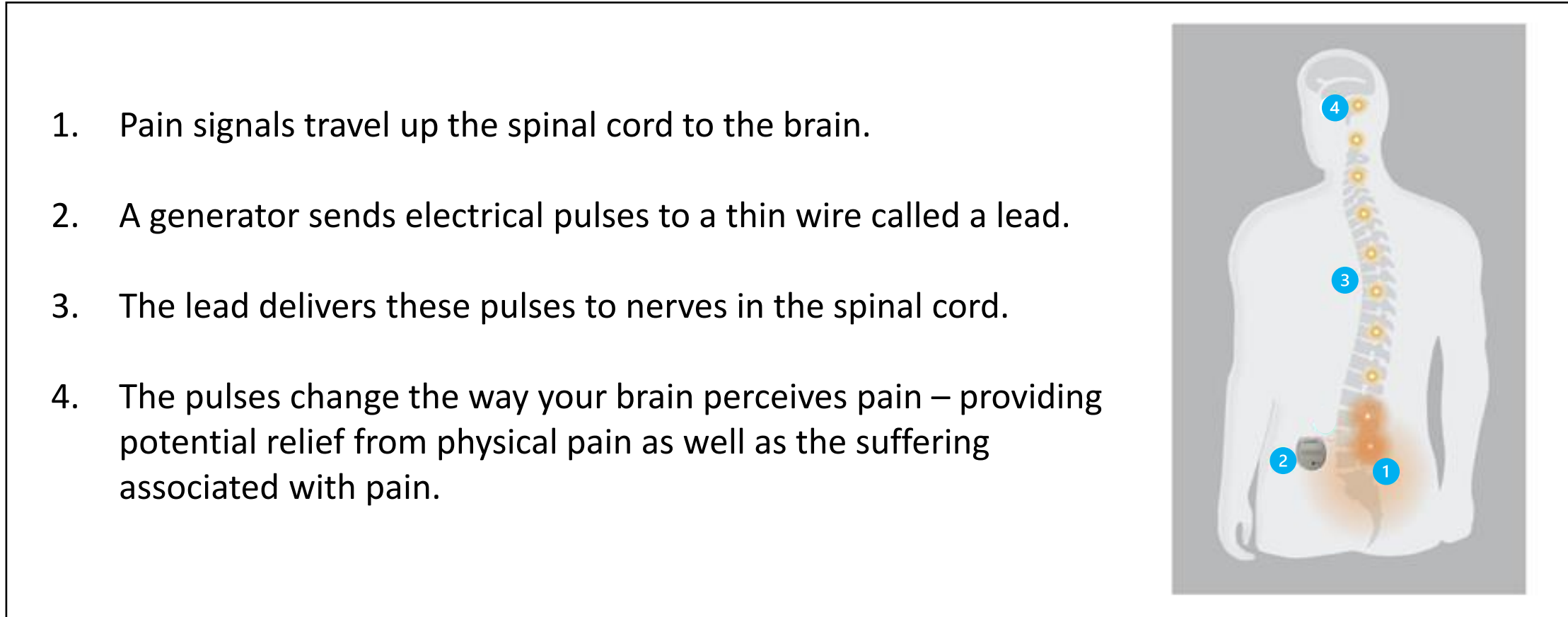


Figure 1. Fully implanted device and therapy overview

METHODS

- In this study, subjects participated in 4 in-clinic site visits: Pre-Trial (at least 7 days prior to their trial procedure), Trial start, Trial end/lead pull (trial must last at least 7 days), and Post-Trial (at least 7 days after lead pull).
- During their initial visit, subjects received a fitness watch and a smartphone.
- Subjects were instructed to respond to daily survey questions through a custom mobile application on the smartphone.
- They were also prompted to wear the fitness watch during the day and at night throughout the study to collect objective data regarding activity and sleep.

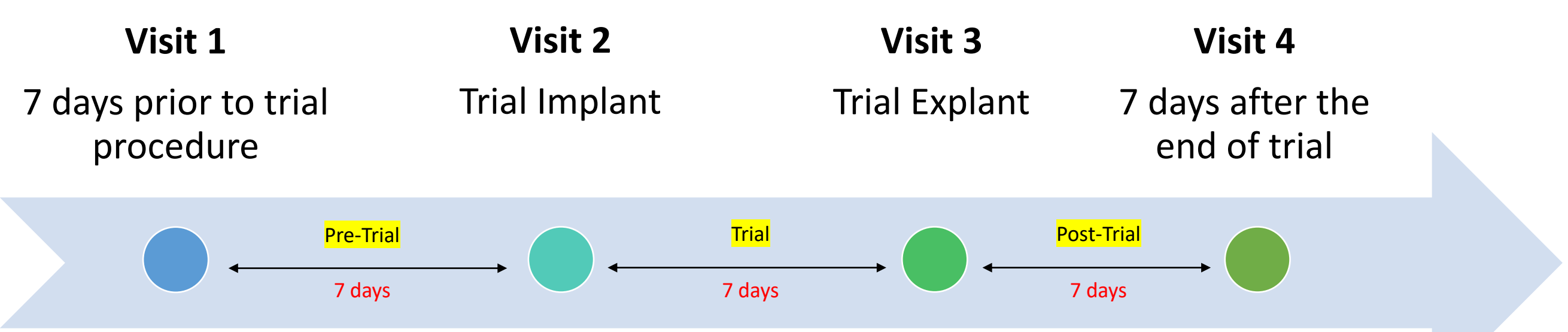


Figure 2. Diagram of Clinic Visits for Patients



Scan code to email me for additional information or questions.