

# Patients and neurologists' preferences for remote patient monitoring and artificial intelligence to improve Parkinson's disease management.

**Authors:** Godoy Junior C<sup>1\*</sup>, Miele F<sup>2</sup>, Mäkitie L<sup>3</sup>, Bakker LJ<sup>1</sup>, Fiorenzato E<sup>2</sup>, Uyl-de Groot C<sup>1</sup>, Redekop K<sup>1</sup>, van Deen WK<sup>1</sup>

1. Erasmus School of Health Policy and Management, Rotterdam, Netherlands

2. University of Padova, Padova, Italy

3. University of Helsinki, Helsinki, Finland

## Rationale

- Effective advanced therapies to manage advanced Parkinson's disease (PD) have become available.
- Timely and correct identification of the candidates for advanced therapies remains a challenge.
- Remote monitoring combined with AI algorithms can assist neurologists in this task.
- Limited evidence exists on patients and physicians' preferences for these novel technologies.

## Aim

- Explore the perspectives of patients and neurologists on the use of AI and remote monitoring for detection of advanced PD.

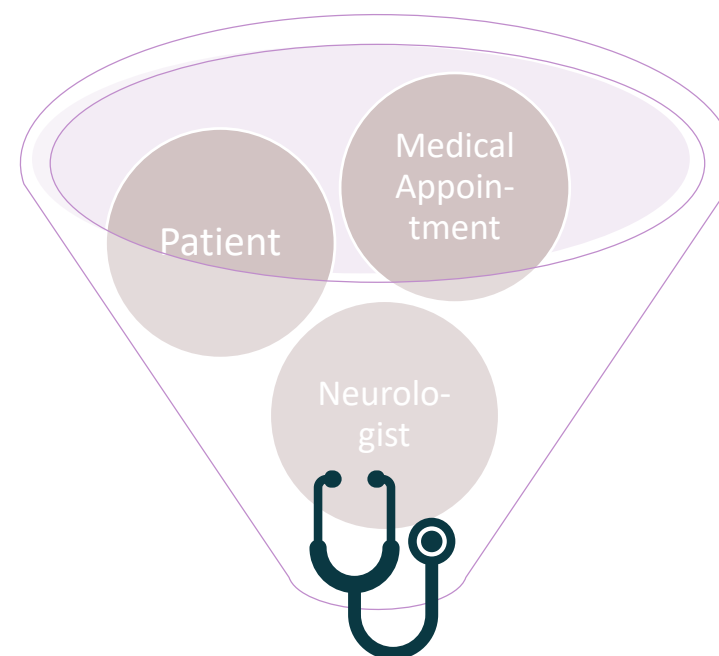
## Methods

- Interviews with patients (N=5) and neurologists (N=6), and 6 focus groups with patients (n=21) in Finland and Italy.
- Topics: disease progression detection, disease monitoring and perceptions about an AI and remote monitoring.

## Results

### Results

Figure 1: Frustrations with current monitoring techniques



Low Awareness

- Symptoms
- Daily functioning
- Side effects

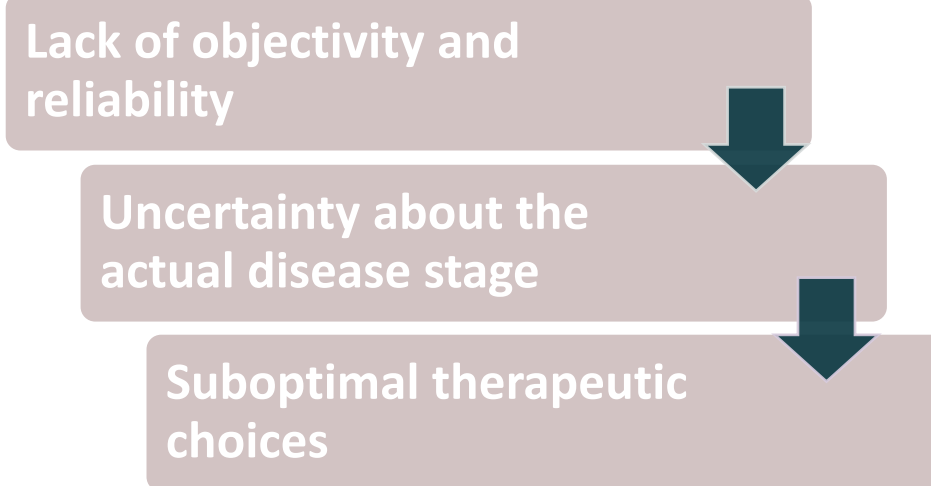
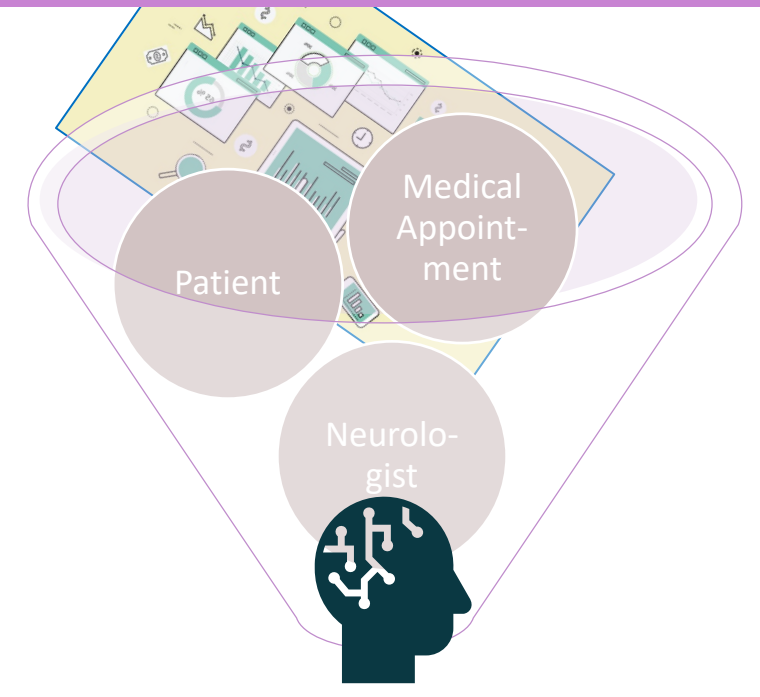


Figure 2: Expectations about a future with AI and remote patient monitoring

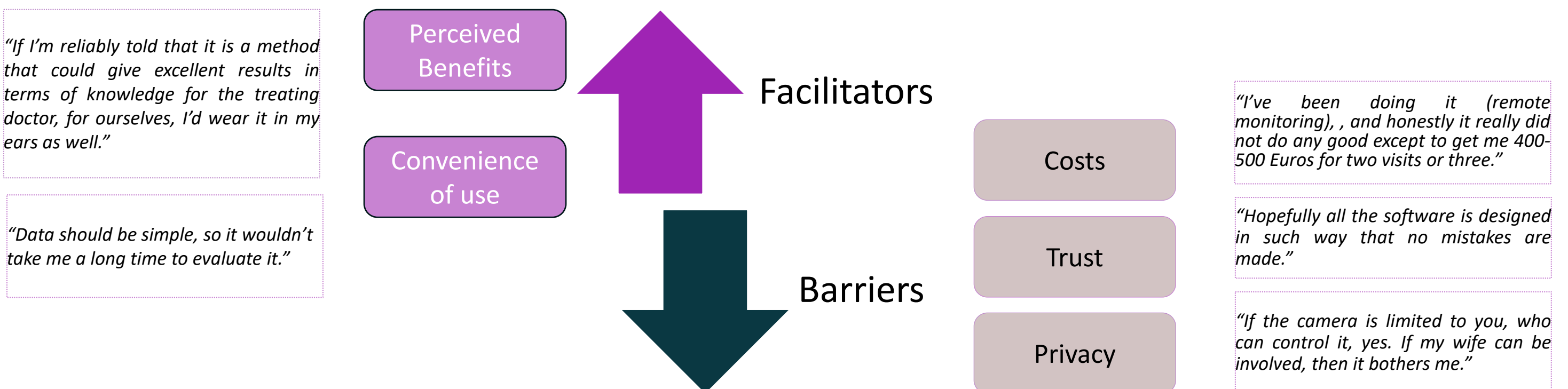


High Awareness

- Symptoms
- Daily functioning
- Side effects



Figure 3: Barriers and facilitators for AI enhanced remote patient monitoring in Parkinson's disease



## Conclusion

Parkinson's patients and neurologists want to increase their ability to monitor disease progression in a timely fashion, amplifying their control over the condition. Remote monitoring and AI are welcomed for this purpose.

Patients acknowledge trade-offs between potential benefits and undesirable aspects of AI-enhanced remote monitoring. The potential benefits in controlling symptoms or disease progression seem to outweigh most of the inconveniences brought by the technology.

Data from this study will be used to design a discrete choice experiment to assess the trade-offs quantitatively.