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## EVOLUTION OF SELF-REPORTED MOTOR AND NON-MOTOR PROBLEMS IN PARKINSON'S DISEASE

### OVER 24 MONTHS

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#### OBJECTIVE

• To analyze the longitudinal evolution of patient-reported problems in Parkinson's Disease (PD).

#### BACKGROUND

- The Parkinson's Disease--Patient Report of Problems (PROP<sup>TM</sup>) [1]
  is an instrument that asks participants with PD:
  - What is the most bothersome problem for you due to your PD?
  - In what way does this problem bother you by affecting your everyday functioning or ability to accomplish what needs to be done?
- The feasibility and informativeness of the PD-PROP has been demonstrated in over 30,000 participants from the Fox Insight (FI) study. [1,2]
- We investigated longitudinal relationships with these data among motor and non-motor domains towards using more quantitative metrics to complement the descriptive utility of PD-PROP.

#### METHODS

- A subset of 664 participants with PD [years since diagnosis 0-3; age: 65.36±8.56; males: 57%] who provided 24 months of data were selected from the FI cohort.
- Recorded verbatim PD-PROP responses were allocated into 14 clinical domains using an established custom curation and classification methodology [2].
- Occurrence probabilities of each of these domains were compared every 3 months between baseline and 24 months.
- For each domain and 3-month time point, three indices were calculated between that time point and baseline:

Similar	Similar Captures the domains that remained unchange		
Worsening	Captures increase in domains reported		
Reduction	Captures decrease in domains reported		

#### RESULT

- The absolute magnitude of the change of 'Reduction' index between 3 and 24 months was highest for tremor among motor domains [9.9%], likely indicating the influence of initiating treatment.
- The change in 'Worsening' index was highest for fatigue among the non-motor domains [9.8%], followed by autonomic dysfunction [7.9%] and sleep [7.5%].

	Domain	Reduction	Worsening	Similar
Motor	Tremor	9.9	3.1	-13.1
	Rigidity	6.7	5.1	-11.8
	Bradykinesia	5.6	5.1	-10.7
	Postural Instability	8.2	5.4	-13.6
	Gait	7.6	6	-13.6
	Other Motor	9.6	<mark>7.4</mark>	<mark>-17</mark>
	Fluctuations	0.7	3.7	-4.5
	Dyskinesias	0.4	2	-2.4
Non-Motor	Sleep	7.2	7.5	-14.7
	Pain	6.8	5.7	-12.5
	Cognition	8	6.4	-14.3
	Psychiatric	11	4.1	-15.1
	Fatigue	6.4	9.8	<mark>-16.1</mark>
	<b>Autonomic Dysfunction</b>	5.8	7.9	-13.7

Table 1. Absolute magnitude of change of burden index from 3-24 months from baseline. Highlighted values show the top 2 PD domains with maximum change in each index

#### CONCLUSION

Quantitative methods applied to patient-reported problems collected over time offer opportunities to detect change in elements of PD meaningful to patients. Autonomic function and fatigue, which can be difficult to treat, notably worsen on patient self-report in early disease.

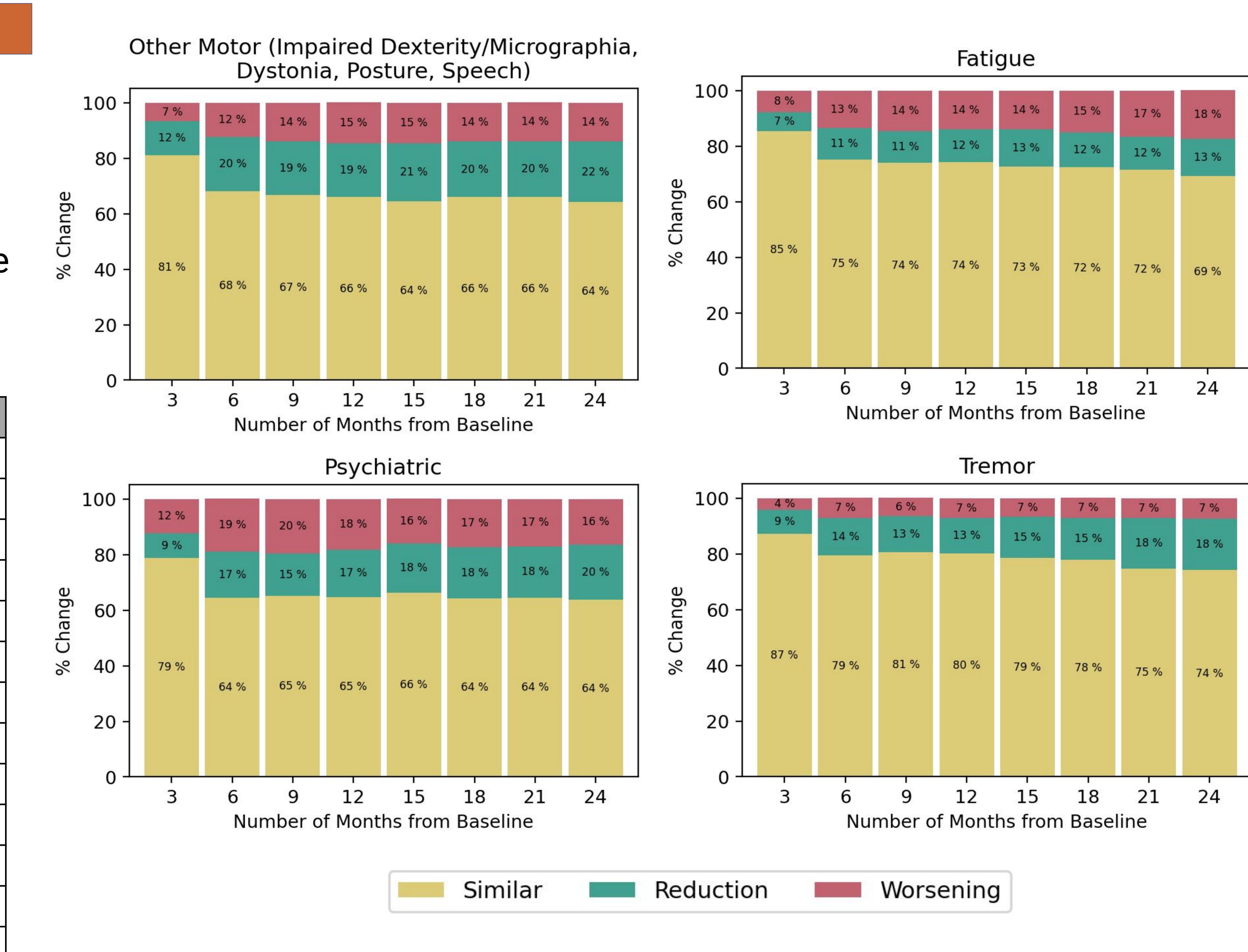


Figure 1. Change Index as observed in domains highlighted in Table 1.

#### REFERENCES

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