### Variation in the Provision and Outcomes of Speech and Language Therapy for People with Parkinson's Disease in the UK

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### Introduction

- 90% of patients with PD experience deterioration of speech<sup>1</sup> (dysarthria), 80% will experience swallowing difficulties<sup>2</sup> (dysphagia) and approximately 35% will see a decline in voice quality<sup>3</sup> (dysphonia)
- Provision of SLT for PD across the UK is varied<sup>4</sup> and more research is needed to explore the effectiveness of SLT intervention<sup>5</sup>
- The RCSLT Online Outcome Tool (ROOT)<sup>6</sup> collects Therapy
   Outcome Measure (TOM)<sup>7</sup> data from SLT services across the UK<sup>8</sup>
- The TOM is a psychometrically robust outcome measure<sup>9</sup> and is based on the World Health Organization's International Classification of Functioning, Disability and Health<sup>10</sup>, and measures change in these domains, including 'impairment' (level of severity of the disorder) and 'activity' (level of severity of with communicating with others or eating and drinking).

### Methods

- 6 NHS SLT services from across the UK entered 1191 datasets from patients with PD into ROOT between 01/07/2010 30/06/2020 (Nb. not all services provided data for the entire duration)
- Data from each service was analysed to calculate:
  - o the composition of cases
  - average TOM scores at the start of episodes of care
  - the proportion of treatment episodes demonstrating
     improvement, maintenance or decline in TOM scores

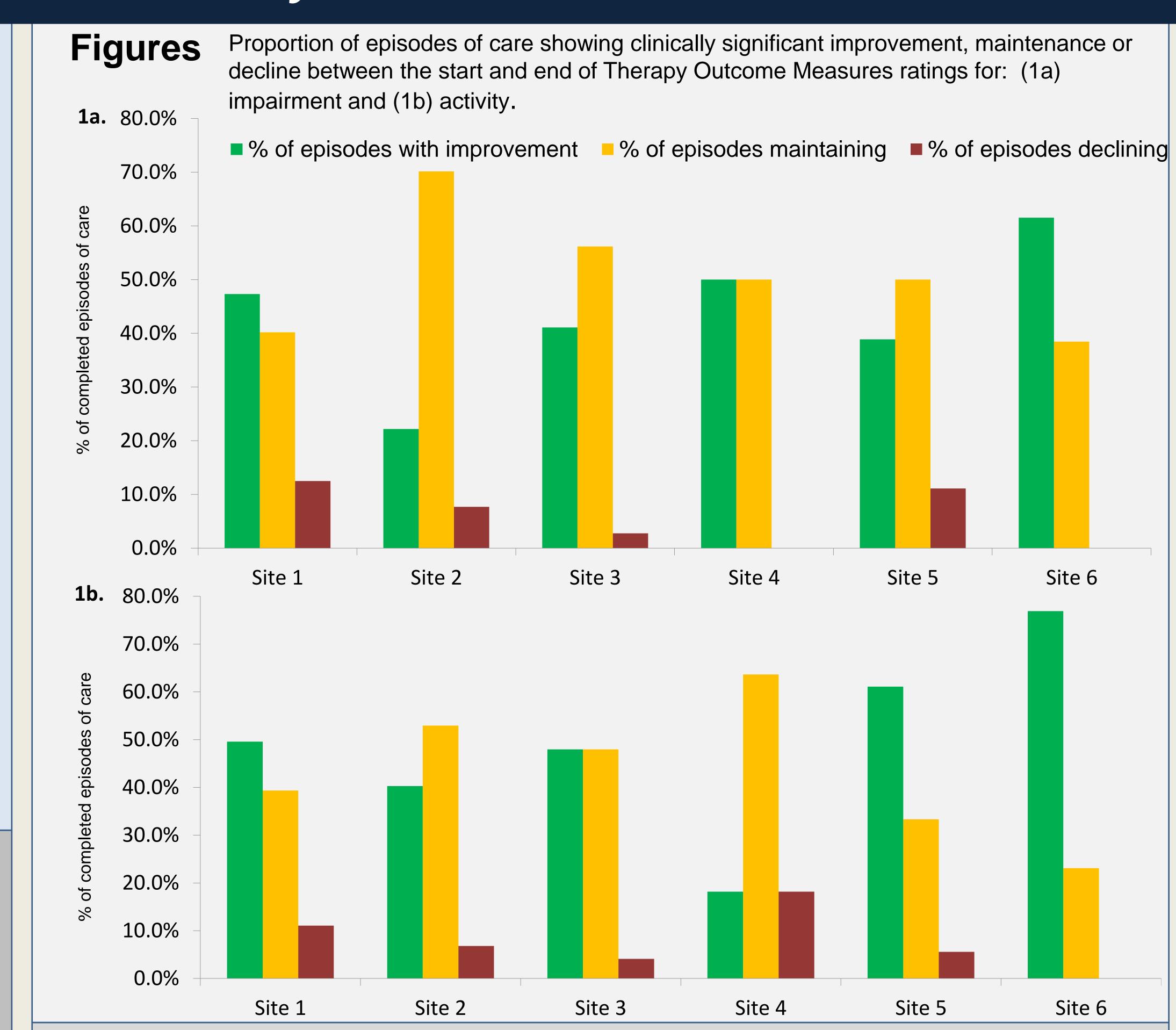
### Results

- There are observable inconsistencies in the composition of caseloads among PD SLT services
- For example: At Site 1, 25.2% of cases are for dysarthria, compared with 96% at Site 3. Further to this, there are stark differences in the patterns for dysphagia patients, making up 63% and 2% respectively.
- There are clinically significant differences between services in how severely patients present at the start of treatment
- For example: At Sites 1, 2 and 5 patients are generally presenting more severely (in impairment & activity) when they start treatment, compared to Sites 3, 4, and 6.
- There is variation in the nature of treatment outcomes from different services.
- For example: At Sites 1 & 6, the majority of cases make improvement in both impairment and activity domains, whereas other sites have mostly maintained performance (Sites 2, 3, 4) or a more complex picture, such as Site 5, where the majority of cases make improvement in activity but maintain a level of impairment (Site 5).

### Discussion

- Despite PD's **progressive nature**, patients with communication or swallowing disorders **can make improvements** following SLT
- Referral patterns and care pathways for PD SLT are heterogeneous across the UK
- Variation in the processes and practices of PD SLT services may be associated with differences in patient outcomes
- Closer inspection of the differences between services will inform on how to improve the quality of care for PD patients and enhance treatment outcomes

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**Table** Composition of caseloads of PD patients in each site.

	NHS Trust	Number of episodes of care for PD	Proportion (%) of episodes of care by target for Intervention (Swallowing or Communication Disorder)				Median impairment score at	Median Activity score at
			Dysarthria	Dysphagia	Dysphonia	Other disorders	start of episode	start of episode
	Site 1	841	25.2	63.4	7.7	3.7	3	3.5
	Site 2	221	16.7	76.0	0.5	6.8	3	3.5
	Site 3	75	93.3	2.7	0.0	4.0	4	4
	Site 4	22	31.8	68.2	0.0	0.0	4	4
	Site 5	18	38.9	61.1	0.0	0.0	3	3.5
	Site 6	14	21.4	50.0	14.3	14.3	3.75	4

# Speech and language therapy services for people with Parkinson's disease are varied across the UK in terms of:

- The patients that services provide with treatment
- The severity of a patient's presentation at the start of treatment
- The nature of change that is observed following therapy

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