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# Outcome and mortality of hospital admission with COVID-19 for individuals with parkinsonian syndromes

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### OUTCOME AND MORTALITY OF HOSPITAL ADMISSION WITH COVID-19 FOR INDIVIDUALS WITH PARKINSONIAN SYNDROMES

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**Objective** To evaluate features of Parkinson's disease (PD) and atypical Parkinson's syndromes (APS) associated with poor outcome and mortality in people with COVID-19 in a hospital setting.

**Background** Previous studies have demonstrated increased mortality of COVID-19 in people with PD. However, it is not known whether this is associated with disease-related factors (eg autonomic dysfunction, dysphagia).

**Methods** An online survey tool captured anonymised patient data from hospital admission records of people with PD and APS who tested positive for COVID-19 between February 2020 and July 2021. We will use Cox proportional hazards and linear regression models to evaluate which characteristics are associated with mortality, increased care requirement and more severe COVID-19 infection. Models will be adjusted for known associations with poor outcome, such as co-morbidities, age and sex.

**Results** Data were collected from 556 admissions from 21 UK sites: 66.2% male; median (IQR) age 80 (11) years; median disease duration 5 (7) years. 19.2% were asymptomatic, 28.8% had mild symptoms and 52.5% required respiratory support. 38.3% died within 4 weeks of a positive COVID-19 test. Preliminary Kaplan-Meier curves suggest that co-existing dementia, marked motor fluctuations and more advanced Hoehn and Yahr stage may be associated with 28-day mortality. Full statistical analysis is in progress.

**Conclusions** Identification of Parkinson's features associated with poor in-hospital COVID-19 outcome will allow a more informed discussion relating to individual COVID-19 risk.

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### FACTORS THAT AFFECT CARE NEEDS IN PEOPLE WITH PARKINSON'S DISEASE: A PATIENT PERSPECTIVE

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**Background** The care that people with Parkinson's (PwP) require varies over the course of the disease. A patient perspective on the factors determining care needs over time has been lacking.

**Aim** 1) To identify the relative importance of factors that affect care needs of PwP from a patient perspective. 2) To identify whether the relative importance of different factors varies by demographic and clinical characteristics.

**Method:** 392 PwP completed a 5-point Likert scale to score the importance of 6 different factors that affect care needs. Means scores were obtained and factors were compared by participant age, gender, living alone, disease progression, and presence of co-morbidities.

**Results** From a patient perspective, mobility was the most important factor for assessing care needs, followed by

dexterity, eating and drinking, communication, cognitive function, and mental health. This ranking was constant across demographic and clinical characteristics. However, younger patients, females, those living alone, more progressed patients, and those with co-morbidities tended to produce higher mean scores of importance suggesting a larger impact at an individual level.

**Conclusion** This study determined which factors patients consider to most affect the care they require, enabling healthcare professionals to provide more personalised care to PwP.

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### PARKINSON'S DISEASE AND SOCIODEMOGRAPHIC FACTORS: A REVIEW

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**Background** Unwarranted variation in treatment, care and support for people with Parkinson's Disease (PD) is well documented. To improve equity of service, in line with the NHS Long Term Plan, it is imperative that we understand how sociodemographic factors affect management and care of PD.

**Aim** To review published literature between sociodemographic factors and clinical factors, diagnosis, treatment and outcomes for people with PD.

**Method** We conducted a focused review of published literature between 2000-2021 to outline the evidence describing the relationship between the ten protected characteristics of the Equality Act 2010 and clinical factors, treatment and outcomes in PD. Other factors such as deprivation, settlement status, education and employment were also explored.

**Results** There is an abundance of published literature on age, disability, sex and gender over the twenty-year period. Studies on race and education and employment yielded mixed results. Evidence is lacking for gender reassignment, marriage and civil partnership, pregnancy and maternity, religion and belief, sexual orientation, deprivation, geographical variation (within UK), immigration and settlement.

**Discussion** PD impacts on many facets of life. This review has identified many gaps in knowledge of the effect of sociodemographic factors affecting PD. More research is needed to better provide a more equitable service to patients.

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### ASSESSING PREDICTORS OF NEDA IN RRMS PATIENTS INITIATING DIMETHYL FUMARATE IN A REAL-WORLD SETTING

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**Introduction** No evidence of disease activity (NEDA) is a treatment goal when using disease modifying therapy for