

Physician visits and medication use preceding neurodegenerative diseases: a cross-country study from Australia, France, the UK, and Sweden

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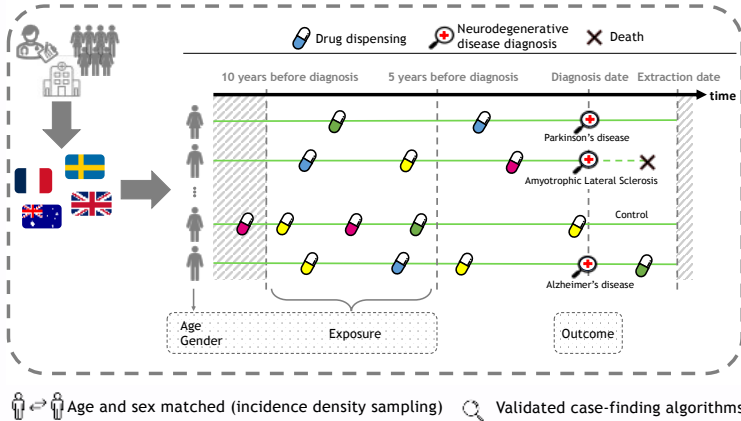
INTRODUCTION

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→ Neurodegenerative diseases pose a growing public health challenge due to their increasing prevalence, lack of effective treatments, and significant healthcare costs.
 → Our study aimed to identify predictors for these diseases, compare them across countries, and explore potential shared predictors.

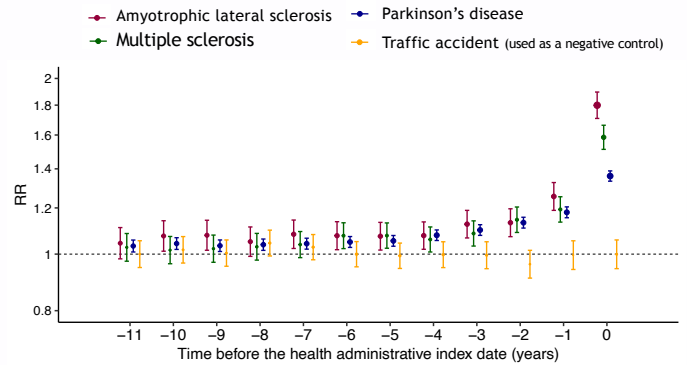
STUDY OVERVIEW

Prescription-wide association study



KEY FINDINGS

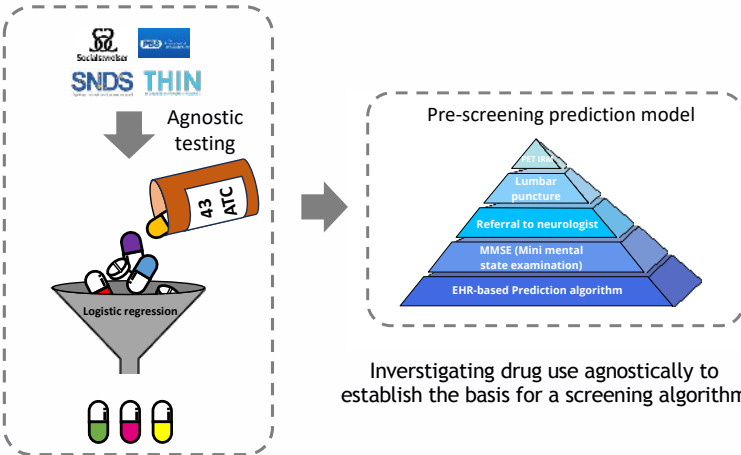
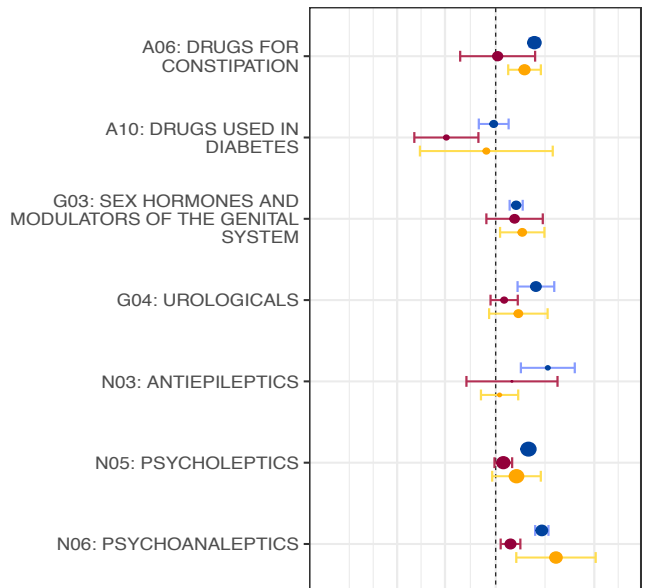
Physician visits preceding the diagnosis of NDDs



Onset of NDD is associated with more frequent visits to the GP 7 years before diagnosis

Associations of drug dispensing in the 5-10 year before diagnosis of NDDs

Diseases	Average prevalence in case group (%)
Alzheimer's disease	• 10
Amyotrophic Lateral Sclerosis	• 30
Parkinson's disease	• 50



Investigating drug use agnostically to establish the basis for a screening algorithm

COHORT DESCRIPTION

	Alzheimer's disease			Parkinson's disease		Amyotrophic Lateral Sclerosis		
Countries								
Period	2007 - 2016	1998 - 2019	1996 - 2020	2007 - 2016	2014 - 2022	2007 - 2016	2014 - 2022	2002 - 2018
Cases	39,341	19,458	20,214	18,209	195,575	3062	14,065	6621
Controls	393,410	19,458	20,214	182,090	195,575	30,620	140,650	66,210
Age, average	81	79	81	75	73	70	67	64
Sex, male (%)	39	37	31	60	57	55	60	60

Characteristics of the neurodegenerative disease cohorts

CONCLUSION

Increased use of psychoanaesthetics are common predictors of AD, PD, and ALS 5-10 years later.
 The increased use of laxatives is specific to AD and PD, while the decreased use of antidiabetics is specific to ALS.