

Appendix 1: Medline Search Strategy

1. exp Parkinson Disease/
2. exp Incidence/
3. exp Prevalence/
4. exp Epidemiology/
5. 2 or 3 or 4
6. 1 and 5
7. *Parkinson Disease/ep [Epidemiology]
8. 6 or 7
9. 8
10. limit 9 to yr="2001 -Current"
11. limit 10 to animals
12. 10 not 11

Appendix 2: Quality Criteria^{3,4}

Representativeness of sample

1. Is the target population clearly defined?

e.g. The target population must be defined by shared characteristics assessed and measured accurately. Some of these characteristics include age, sex, ethnicity, income, etc. Clear inclusion and exclusion criteria.

2. Was either of the following ascertainment method used (must be one or the other):

- a. Probability sampling OR
- b. Entire population surveyed

e.g. Members of the target population were identified through a sampling frame or listing of potential respondents. This listing must provide access to all members of the defined target population except for exclusions acknowledged by the study authors.

3. Is the response rate >70%
4. Are non-responders clearly described?
5. Is the sample representative of the target population

e.g. need to ensure that non-responders have similar characteristics as responders (otherwise may have selection bias)

Assessment of neurological condition

6. Were data collection methods standardized?

e.g. Identical methods of assessment and data collection were used with all respondents so that the information for analysis is completely comparable. Standardization of methods not only refers to eliciting information from respondents but also to interviewing training, supervision, enlistment of respondents and processing of data.

7. Were validated criteria used to assess for the presence/absence of disease?

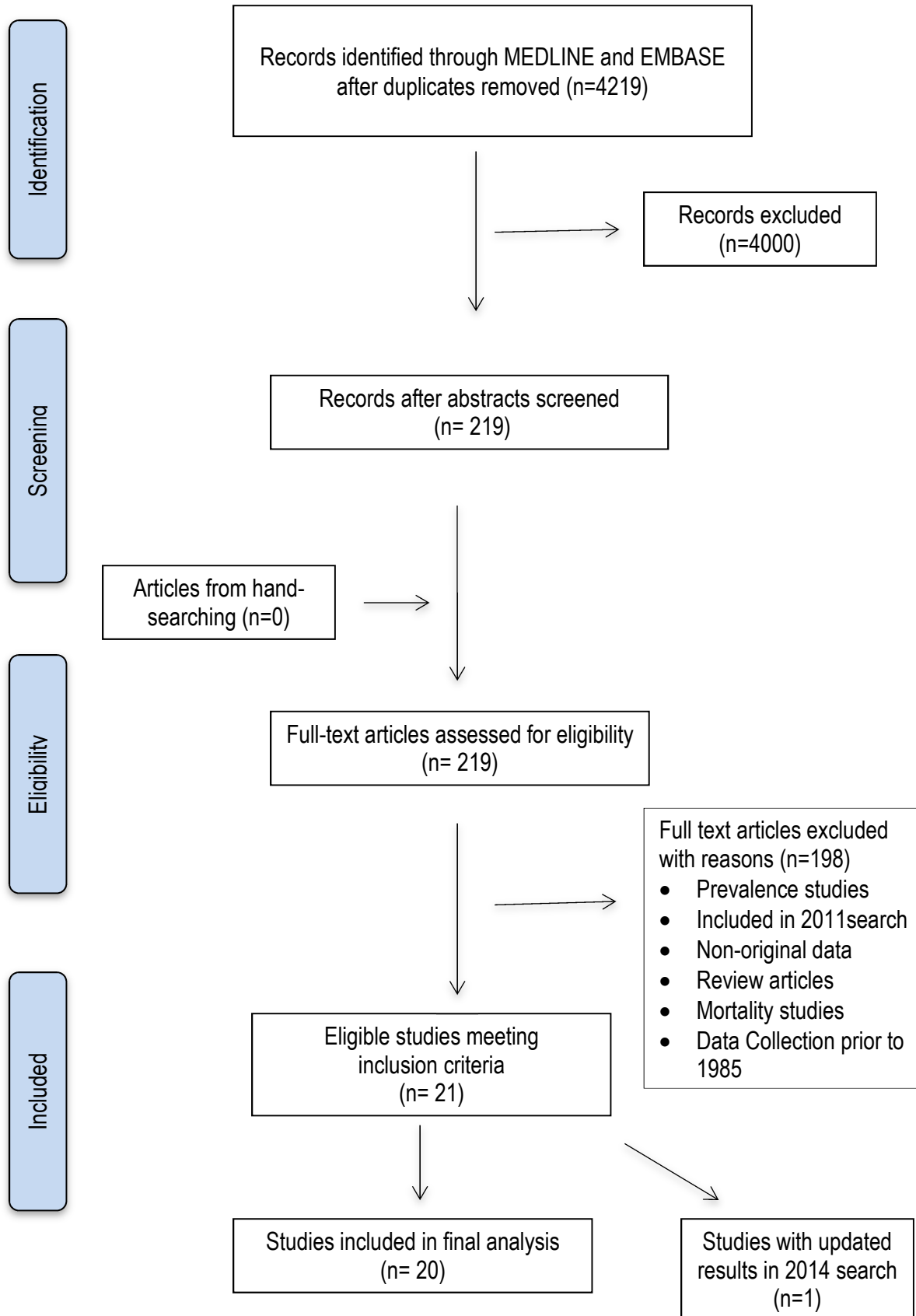
e.g. or a validated scale, diagnostic tool, survey, etc.

Statistical Analysis

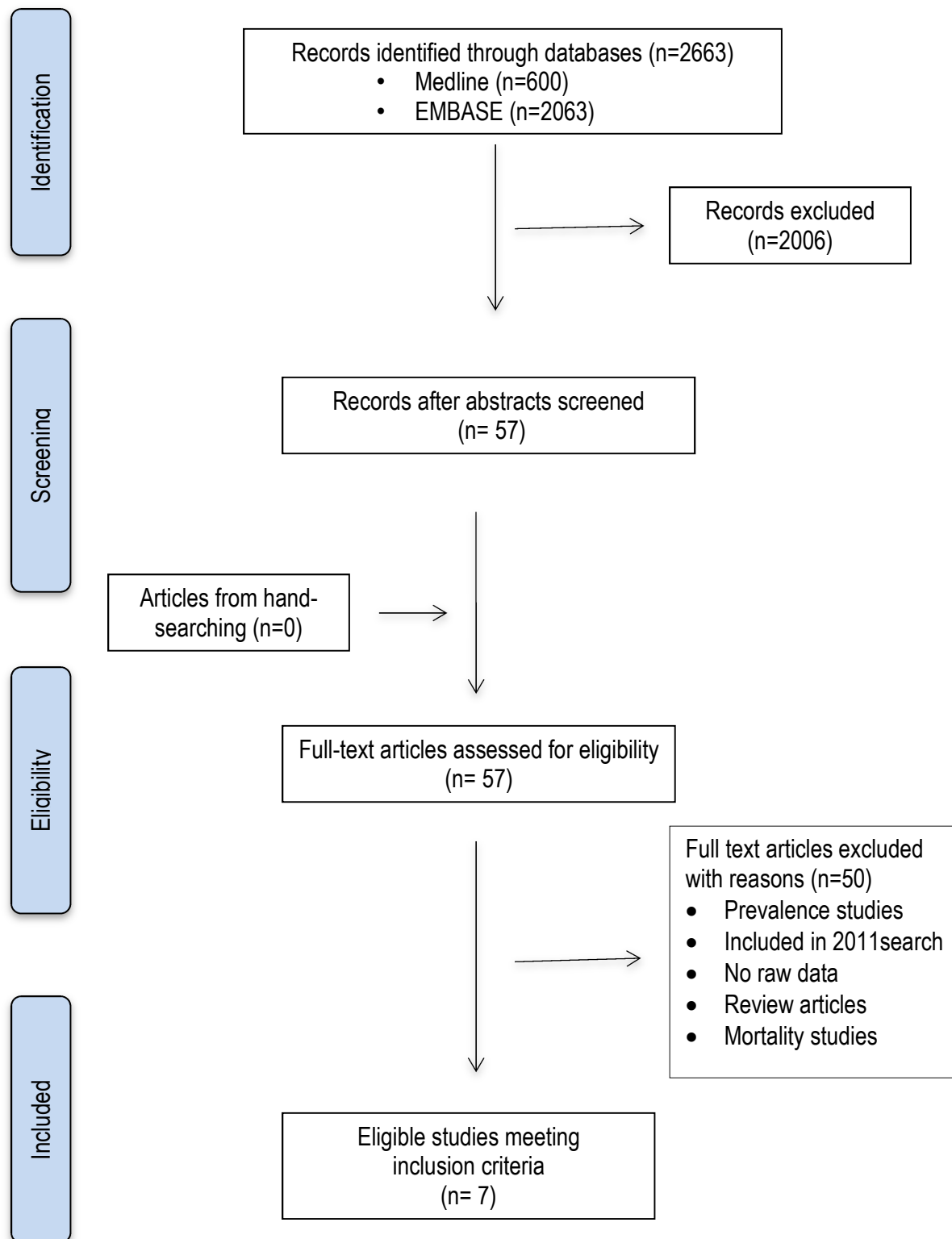
8. Are the estimates of prevalence and incidence given with confidence interval and in detail by subgroup (if applicable)?

Appendix 3: Flow Diagrams

Flow Chart for 2011 Search



Flow Chart for June 2014 Search



Appendix 4: Table of Included Studies

Study, Year	Country, Continent	Population	Age	Cases; Total Sample: Total Person-Years	Validated Diagnostic Criteria	Data Source	Diagnosis Established by	Overall Incidence (per 100,000) (IR or IP)	Quality Rating	Included In Meta-Analysis?
Alves, 2009 ⁵	Norway, Europe	Children; Adults; Elderly	All ages	265 cases; 1,052,075 persons	2 of 4 cardinal features	Multiple: Hospital/clinic chart review; Search for referral letters	Clinical Assessment by Health professional	13.7 (IP)	5	Yes; Incidence Proportion
Bauso, 2014 ⁶	Argentina, South America	Infants; Children; Adults; Elderly	All ages	239 cases; 140,000 persons; 754082 person years	UK PD Society Brain Bank Criteria	Administrative databases; Prescription drug databases	Medical Chart Review by specialist	31.2 (IR)	6	Yes; Incidence Rate
Benito-Leon, 2004 ⁷	Spain, Europe	Elderly	65+	30 cases; 3813 persons; 12,710 person years	Cardinal features of PD	Door to door study	Clinical Assessment by Health professional; Medical chart review	235.9 (IR)	7	Yes; Incidence Rate
Brandt-Christensen, 2006 ¹⁹	Denmark, Europe	Adults; Elderly	30+	Cases not given; Total population of Denmark (not given)	Not specified	Prescription drug database	Use of specific prescription drug	55.9 (IR)	4	No; Not Stratified by age group
Caslake, 2013 ⁸	United Kingdom, Europe	Infants; Children; Adults; Elderly	All ages	363 cases; 1,176,552 person years	UK PD Society Brain Bank Criteria	Mailed survey; Prescription drug databases; Physician referral	Clinical Assessment by Health professional; Medical chart review	17.9 (IR)	6	Yes; Incidence Rate
Chen, 2001 ⁹	Taiwan, Asia	Adults; Elderly	40+	15 cases; 9972 persons; 49,830 person years	2 of 4 cardinal features	Administrative data	ICD code 332	30.1 (IP)	6	Yes; Incidence Proportion
Chillag-Talmor, 2011 ²⁸	Israel, Asia	Adults; Elderly	20-84	5288 cases	Not specified	Prescription drug databases	Use of specific prescription drug	33 (IP)	4	No; Not stratified by age group

Study, Year	Country, Continent	Population	Age	Cases; Total Sample: Total Person-Years	Validated Diagnostic Criteria	Data Source	Diagnosis Established by	Overall Incidence (per 100,000) (IR or IP)	Quality Rating	Included In Meta-Analysis?
Das, 2010 ²⁹	India, Asia	Children; Adults; Elderly	All ages	23 cases over 5 years; 100,802 persons	2 of 4 cardinal features	Door-to-door survey	Clinical Assessment by Health professional	4.56 (IR)	6	No; presented average annual incidence rates
De Lau, 2004 ¹⁰	The Netherlands, Europe	Adults; Elderly	55+	67 cases; 38,422 person years	2 or more cardinal features	Prospective cohort study	Clinical Assessment by Health professional	174.4 (IR)	6	Yes; Incidence Rate
Driver, 2009 ¹¹	USA, North America	Adults; Elderly	40+	563 cases; 21,970 persons; 467,316.5 person years	Self report of PD diagnosis	Mailed survey	Self-report of a condition (diagnosed or undiagnosed by a health professional)	120.48 (IR)	4	Yes: Incidence Rate
Duncan, 2014 ¹²	United Kingdom, Europe	Infants; Children; Adults; Elderly	All ages	155 cases; 488576 persons; 977152 person years	Queen Square Brain Bank Criteria	Hospital/clinic chart review; Physician referral	Clinical Assessment by a Health Professional	15.9 (IR)	6	Yes: Incidence Rate
Horsfall, 2013 ²⁰	United Kingdom, Europe	Adults; Elderly	50+	Not stated	Not specified	Administrative databases	Medical Chart Review, Use of specific prescription drug	84 (IP)	5	No; Not stratified by sex
Hristova, 2010 ²¹	Bulgaria, Europe	Children; Adults; Elderly	All ages	2,133,521 person years	UK PD Society Brain Bank Criteria	Registry	Clinical Assessment by Health professional; Imaging Test	11.44 (IR)	5	No; raw data not reported
Jones, 2012 ¹³	Canada, North America	Elderly	65+	10,910 cases; 768,827 persons; 6,051,682 person-years	Not specified	Hospital/clinic chart review; Administrative databases; Prescription drug databases	ICD code 332, use of a prescription drug	252 (IR)	5	Yes; Incidence Rate

Study, Year	Country, Continent	Population	Age	Cases; Total Sample: Total Person-Years	Validated Diagnostic Criteria	Data Source	Diagnosis Established by	Overall Incidence (per 100,000) (IR or IP)	Quality Rating	Included In Meta-Analysis?
Kyrozis, 2013 ²²	Greece, Europe	Adults; Elderly	20-86	Not stated	UK PD Society Brain Bank Criteria	Cohort	Self-report of a condition (confirmed with follow-up by Health Professional)	41 (IR)	6	No; Not stratified by sex
Leentjens, 2003 ²³	Netherlands, Europe	Children; Adults; Elderly	All ages	139 cases; 82,430 persons	Cardinal features of PD	Administrative database	Administrative data codes	22.4 (IR)	5	No; raw data not reported
Linder, 2010 ¹⁴	Sweden, Europe	Children; Adults; Elderly	All ages	112 cases; 141,950 persons; 567,800 person years	UK PD Society Brain Bank Criteria	Request for referrals of individuals with parkinsonism	Clinical Assessment by Health professional	19.7 (IP)	5	No; raw data not reported
Mehta, 2007 ³¹	Australia, Australia	Adults; Elderly	49+	19 cases over 10 years in 2545 persons	Not specified	Cohort study	Self report or use of drug; diagnosis confirmed by doctor	81 (IP)	2	No; not stratified by age or gender
Morioka, 2002 ¹⁵	Japan, Asia	Children; Adults; Elderly	All ages	Not stated	Japanese Research Committee on Neurodegenerative Disease	Mailed survey	Clinical Assessment by Health professional	16.9 (IP)	5	Yes; Incidence Proportion
Perez, 2010 ²⁴	France, Europe	Elderly	65+	68 cases; 25,820 person years	UK PD Society Brain Bank Criteria	Random sampling procedure	Clinical Assessment by Health Professional	263.4 (IR)	5	No; not stratified by age and gender
Taba, 2003 ²⁵	Estonia, Europe	Children; Adults; Elderly	All ages,	264 cases over 8 years; 156,417 persons	UK PD Society Brain Bank Criteria	Hospital/clinic chart review; GPs; nursing homes	Clinical Assessment by Health Professional	18.8 (IR)	4	No; not stratified by age and gender

Study, Year	Country, Continent	Population	Age	Cases; Total Sample: Total Person-Years	Validated Diagnostic Criteria	Data Source	Diagnosis Established by	Overall Incidence (per 100,000) (IR or IP)	Quality Rating	Included In Meta-Analysis?
Tan, 2007 ¹⁶	Singapore, Asia	Adults; Elderly	50+	12 cases; 31,426 person years	Gelb Criteria	Hospital/clinic chart review; Telephone survey; Administrative databases	Clinical Assessment by a Health Professional	33 (IR)	5	Yes; Incidence Rate
Van Den Eeden, 2003 ¹⁷	USA, North America	Adults; Elderly	20+	588 cases; 4,776,038 person years	Hughes Diagnostic Criteria	Hospital/clinic chart review; Registry; Administrative databases; Prescription drug databases	Clinical assessment by a Health Professional	12.3 (IR)	5	Yes; Incidence Rate
Van de Vijver, 2001 ²⁶	Netherlands, Europe	Adults; Elderly	55+	300,000 persons in database	Not specified	Prescription drug database	Use of specific prescription drug	102 (IP)	3	No; raw data not reported
Wermuth, 2008 ²⁷	Faroe Islands, Europe	Children; Adults; Elderly	All ages	97 cases over 10 years; 45878 persons	2 of 3 cardinal features	Hospital/clinic chart review; Prescription drug database; GPs	Clinical Assessment by a Health Professional	21.1 (IP)	4	No; not stratified by age or gender
Willis, 2010 ³⁰	USA, North America	Elderly	65+	29,530,834 persons	Not specified	Administrative databases	ICD code	445.79 (IR)	4	No; raw data not reported
Winter, 2010 ¹⁸	Russia, Europe	Children; Adults; Elderly	All ages	308 cases, 3,094,750 person years	UK PD Society Brain Bank Criteria	Population screening; search of records of primary care and hospitals	Clinical Assessment by a Health Professional	9.95 (IR)	5	Yes; Incidence Rate

