The RECORD statement – checklist of items, extended from the STROBE statement, that should be reported in observational studies using routinely collected health data.

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
Title and abstract					
	1	(a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found	Title, p. 1 (study design stated); Abstract, p. 1	RECORD 1.1: The type of data used should be specified in the title or abstract. When possible, the name of the databases used should be included. RECORD 1.2: If applicable, the geographic region and timeframe within which the study took place should be reported in the title or abstract. RECORD 1.3: If linkage between databases was conducted for the study, this should be clearly stated in the title or abstract.	Title, p. 1 (register-based; Norway, 2014–2018); Abstract, p. 1 (NAR, NPR, Statistics Norway; linkage stated)
Introduction					
Background rationale	2	Explain the scientific background and rationale for the investigation being reported	Introduction, p. 2–3		
Objectives	3	State specific objectives, including any prespecified hypotheses	Introduction, last paragraph, p. 3 (primary and secondary aims)		
Methods					
Study Design	4	Present key elements of study design early in the paper	Methods, Study design and setting, p. 3		
Setting	5	Describe the setting, locations, and relevant dates, including	Methods, Study design and setting, p. 3 (Norway, 2014–		

		periods of recruitment, exposure, follow-up, and data collection	2018, 45 public and 6 private non-profit hospitals)		
Participants	6	*(a) Cohort study* - Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study* - Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study* - Give the eligibility criteria, and the sources and methods of selection of participants *(b) Cohort study* - For matched studies, give matching criteria and number of exposed and unexposed *Case-control study* - For matched studies, give matching criteria and the number of controls per case	Methods, Participants and data sources, p. 4	RECORD 6.1: The methods of study population selection (such as codes or algorithms used to identify subjects) should be listed in detail. If this is not possible, an explanation should be provided. RECORD 6.2: Any validation studies of the codes or algorithms used to select the population should be referenced. If validation was conducted for this study and not published elsewhere, detailed methods and results should be provided. RECORD 6.3: If the study involved linkage of databases, consider use of a flow diagram or other graphical display to demonstrate the data linkage process, including the number of individuals with linked data at each stage.	RECORD 6.1: Methods, Participants and data sources, p. 4 (NCSP codes NFB20/30/40/99 and NGB20/30/40/99; all ICD-10 codes). RECORD 6.2: p. 4 (NAR capture rate 95%, ref. 11, 12). RECORD 6.3: Methods, p. 4 and Figure 1 flow chart, p. 19
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.	Methods, Variables and Outcomes, p. 5–6	RECORD 7.1: A complete list of codes and algorithms used to classify exposures, outcomes, confounders, and effect modifiers should be provided. If these cannot be reported, an explanation should be provided.	RECORD 7.1: Methods, Participants and data sources, p. 4 (procedure and diagnosis codes); Variables, p. 5–6 (CCI, ISCED categories, income quartiles)

Data sources/ measurement	8	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	Methods, Participants and data sources, p. 4		
Bias	9	Describe any efforts to address potential sources of bias	Methods, Statistics, p. 7 (sensitivity analyses); Discussion, Limitations, p. 14		
Study size	10	Explain how the study size was arrived at	Methods, Participants and data sources, p. 4 (all eligible patients in Norway 2014–2018; n = 62,676)		
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen, and why	Methods, Variables, p. 5–6, and Statistics, p. 7 (age as natural splines; waiting time and volume dichotomized at median; income quartiles)		
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding (b) Describe any methods used to examine subgroups and interactions (c) Explain how missing data were addressed (d) *Cohort study* - If applicable, explain how loss to follow-up was addressed	Methods, Statistics, p. 7–8 (mixed logit in preference and WTT space; multilevel models; missing data; sensitivity analyses)		

		Case-control study - If applicable, explain how matching of cases and controls was addressed *Cross-sectional study* - If applicable, describe analytical methods taking account of sampling strategy (e) Describe any sensitivity analyses			
Data access and cleaning methods		..		RECORD 12.1: Authors should describe the extent to which the investigators had access to the database population used to create the study population. RECORD 12.2: Authors should provide information on the data cleaning methods used in the study.	RECORD 12.1: Methods, Participants and data sources, p. 4; Ethics, data sharing plan, funding, and disclosures, p. 8–9. RECORD 12.2: Methods, Statistics, p. 7 (handling of missing data)
Linkage		..		RECORD 12.3: State whether the study included person-level, institutional-level, or other data linkage across two or more databases. The methods of linkage and methods of linkage quality evaluation should be provided.	RECORD 12.3: Methods, Participants and data sources, p. 4 (person-level linkage across registries using pseudonymized identifiers)
Results					
Participants	13	(a) Report the numbers of individuals at each stage of the study (*e.g.*, numbers potentially eligible, examined for eligibility, confirmed eligible, included in	Results, first paragraph, p. 9; Figure 1 flow chart, p. 19	RECORD 13.1: Describe in detail the selection of the persons included in the study (*i.e.,* study population selection) including filtering based on data quality, data availability and linkage.	RECORD 13.1: Methods, Participants and data sources, p. 4, and Figure 1, p.

		the study, completing follow-up, and analysed) (b) Give reasons for non-participation at each stage. (c) Consider use of a flow diagram		The selection of included persons can be described in the text and/or by means of the study flow diagram.	19 (selection, exclusions, data quality filtering)
Descriptive data	14	(a) Give characteristics of study participants (*e.g.*, demographic, clinical, social) and information on exposures and potential confounders (b) Indicate the number of participants with missing data for each variable of interest (c) *Cohort study* - summarise follow-up time (*e.g.*, average and total amount)	Results, Patients´ characteristics, p. 9–10; Table 1, p. 20; missing data for education and income: Methods, Statistics, p. 7, and Table 1		
Outcome data	15	*Cohort study* - Report numbers of outcome events or summary measures over time *Case-control study* - Report numbers in each exposure category, or summary measures of exposure *Cross-sectional study* - Report numbers of outcome events or summary measures	Results, Provider-related factors, p. 10; Table 2, p. 22		
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included (b) Report category boundaries when continuous variables were categorized	Results, p. 10–11; Table 2, p. 22; Table 3, p. 23 (univariate and multivariable estimates with 95% CI); Figures 2–3, p. 21 and 23		

		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period			
Other analyses	17	Report other analyses done—e.g., analyses of subgroups and interactions, and sensitivity analyses	Results, Patients´ characteristics associated with the utility of travel time, p. 11; Table 3, p. 23; sensitivity analyses, Methods, Statistics, p. 7		
Discussion					
Key results	18	Summarise key results with reference to study objectives	Discussion, first paragraph, p. 12		
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Discussion, Limitations, p. 14	RECORD 19.1: Discuss the implications of using data that were not created or collected to answer the specific research question(s). Include discussion of misclassification bias, unmeasured confounding, missing data, and changing eligibility over time, as they pertain to the study being reported.	RECORD 19.1: Discussion, Limitations, p. 14 (provider attributes averaged over period; registry data not collected for research purposes; residual confounding)
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Discussion, p. 12–14		
Generalisability	21	Discuss the generalisability (external validity) of the study results	Discussion, p. 12–14 (comparison with findings from England, Denmark, and the Netherlands;		

			Norwegian setting described)		
Other Information					
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Ethics, data sharing plan, funding, and disclosures, p. 8–9		
Accessibility of protocol, raw data, and programming code		..		RECORD 22.1: Authors should provide information on how to access any supplemental information such as the study protocol, raw data, or programming code.	RECORD 22.1: Ethics, data sharing plan, funding, and disclosures, p. 8–9 (data obtained by formal application to NAR, Norwegian Directorate of Health, and Statistics Norway; public access restricted)

*Reference: Benchimol EI, Smeeth L, Guttmann A, Harron K, Moher D, Petersen I, Sørensen HT, von Elm E, Langan SM, the RECORD Working Committee. The REporting of studies Conducted using Observational Routinely-collected health Data (RECORD) Statement. *PLoS Medicine* 2015; in press.