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; Abstract	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; Abstract Abstract (timeframe); Methods, Section 2.1 (geographic context, limited) Not applicable; no linkage between databases was conducted
Introduction					
Background rationale	2	Explain the scientific background and rationale for the investigation being reported	Introduction, paragraphs 1–4		Introduction, paragraphs 1–4
Objectives	3	State specific objectives, including any prespecified hypotheses	Introduction, final paragraph		Introduction, final paragraph
Methods					
Study Design	4	Present key elements of study design early in the paper	Methods, Section 2.1		Methods, Section 2.1
Setting	5	Describe the setting, locations, and relevant dates, including	Methods, Sections 2.1 and 2.2		Methods, Sections 2.1 and 2.2

		periods of recruitment, exposure, follow-up, and data collection			
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, Section 2.2; Results, first paragraph; Figure 1 Methods, Sections 2.2 and 2.4; Results, first paragraph; Figure 1	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.	Methods, Section 2.2; Supplementary Table S1; Figure 1 Methods, Section 2.2, with citation to reference [31]; Supplementary Table S1 Not applicable; no database linkage was performed. Cohort construction is shown in Figure 1.
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.	Methods, Sections 2.2–2.4; Tables 1–6	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.	Methods, Section 2.2; Supplementary Table S1
Data sources/ measurement	8	For each variable of interest, give sources of data and details of methods of assessment (measurement).	Methods, Sections 2.1–2.3; Supplementary Table S1		Methods, Sections 2.1–2.3; Supplementary Table S1

		Describe comparability of assessment methods if there is more than one group			
Bias	9	Describe any efforts to address potential sources of bias	Methods, Section 2.4; Discussion, Section 4.7		Methods, Section 2.4; Discussion, Section 4.7
Study size	10	Explain how the study size was arrived at	Methods, Section 2.2; Results, first paragraph; Figure 1; Discussion, Section 4.7		Methods, Section 2.2; Results, first paragraph; Figure 1; Discussion, Section 4.7
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen, and why	Methods, Sections 2.2 and 2.4		Methods, Sections 2.2 and 2.4
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 *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	Methods, Section 2.4 Methods, Section 2.4 Methods, Section 2.2 Methods, Sections 2.3 and 2.4 Not reported separately; no formal sensitivity		

			analyses were performed		
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.	Patient-level data were not accessible Methods, Section 2.1
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.	Not applicable; no person-level or cross-database linkage was performed
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 the study, completing follow-up, and analysed) (b) Give reasons for non-participation at each stage. (c) Consider use of a flow diagram	Results, first paragraph; Figure 1 Results, first paragraph; Figure 1 Figure 1	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. The selection of included persons can be described in the text and/or by means of the study flow diagram.	Methods, Section 2.2; Results, first paragraph; Figure 1
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	Results, Table 1 Not reported as variable-specific missing counts;		

		(c) *Cohort study* - summarise follow-up time (*e.g.*, average and total amount)	complete-case analysis described in Methods, Section 2.2 and discussed in Discussion, Section 4.7 Follow-up windows reported in Methods, Section 2.3 and throughout Results; median or total follow-up time not separately summarized		
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, Tables 2–6; Figure 3; Supplementary Figures S1–S3		
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 (c) If relevant, consider translating estimates of relative	Methods, Sections 2.2 and 2.4; Results, Table 2; Table 3; Figure 3. Methods, Section 2.2 Not reported separately; Table 2 provides event		

		risk into absolute risk for a meaningful time period	counts by group at 1, 3, and 5 years, but no formal absolute-risk translation was performed		
Other analyses	17	Report other analyses done—e.g., analyses of subgroups and interactions, and sensitivity analyses	Tables 4–6		
Discussion					
Key results	18	Summarise key results with reference to study objectives	Discussion, Section 4.1; Conclusions		
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, Section 4.7	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.	Discussion, Section 4.7
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Discussion, Sections 4.1–4.6; Conclusions		
Generalisability	21	Discuss the generalisability (external validity) of the study results	Discussion, Section 4.7		
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	Funding statement		

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.	Supplementary Materials statement; Data Availability Statement

*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**; *12*, e1001885.

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