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 abstrac | ct | | | | |
| | 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 | (a) line 45-49 (b) line 45-57 | 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. | line 45-46 |
| | | summary of what was done and what was found | | RECORD 1.2: If applicable, the geographic region and timeframe within which the study took place should be reported in the title or abstract. | line 42-43 |
| | | | | RECORD 1.3: If linkage between databases was conducted for the study, this should be clearly stated in the title or abstract. | line 45-49 |
| Introduction | | | | | |
| Background rationale | 2 | Explain the scientific background and rationale for the investigation being reported | | | line 76-91 |
| Objectives | 3 | State specific objectives, including any prespecified hypotheses | | | line 91-95 |
| Methods | | | | | |
| Study Design | 4 | Present key elements of study design early in the paper | | | line 99-101 |
| Setting | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection | | | line 128-144, Figure 2 |

| 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 | 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. | line 128-144 Figure 2. |
|------------------------------|---|---|--|---------------------------|
| | | sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls <i>Cross-sectional study</i> - Give the eligibility criteria, and the sources and methods of selection of participants | 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. | line 107-109 |
| | | (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 | 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. | Figure 2. |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable. | 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. | line 128-144 |
| 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 | | line 144-147 |

| Bias | 9 | Describe any efforts to address | | line 134-138,139- |
|------------------|----|--|--|-------------------|
| | | potential sources of bias | | 140,143-144 |
| Study size | 10 | Explain how the study size was | | Figure 2. |
| | | arrived at | | |
| Quantitative | 11 | Explain how quantitative | | - |
| variables | | variables were handled in the | | |
| | | analyses. If applicable, describe | | |
| | | which groupings were chosen, | | |
| | | and why | | |
| Statistical | 12 | (a) Describe all statistical | | a)line 144-147 |
| methods | | methods, including those used to | | Figure 2. |
| | | control for confounding | | b)Figure 2 |
| | | (b) Describe any methods used | | c) line 134- |
| | | to examine subgroups and | | 138,139-140,143- |
| | | interactions | | 144,figure2 |
| | | (c) Explain how missing data | | 3)- |
| | | were addressed | | |
| | | (d) <i>Cohort study</i> - 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 | | |
| Data access and | | l | RECORD 12.1: Authors should | 12.2.: line 104- |
| cleaning methods | | | describe the extent to which the | 107 |
| Ç | | | investigators had access to the database | |
| | | | population used to create the study | 12.2.: |
| | | | population. | Figure 2. |
| | | | | |

| Linkage | | | RECORD 12.2: Authors should provide information on the data cleaning methods used in the study. 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. | line 99-104 Figure 2. |
|----------------------|----|--|--|--|
| 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 | RECORD 13.1: Describe in detail the selection of the persons included in the study (<i>i.e.</i> , 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. | Figure 2 |
| 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) | | a) line 163- 184, Figure 2 b) Figure 2 c) Figure 2 |
| Outcome data | 15 | Cohort study - Report numbers of outcome events or summary measures over time Case-control study - Report numbers in each exposure | | line 163-184, 199-211 |

| | | category, or summary measures | | |
|----------------|-----|-----------------------------------|--|---------------|
| | | of exposure | | |
| | | Cross-sectional study - Report | | |
| | | numbers of outcome events or | | |
| | | | | |
| 3.6 1. | 1.6 | summary measures | | \ F: 2 |
| Main results | 16 | (a) Give unadjusted estimates | | a) Figure 2 , |
| | | and, if applicable, confounder- | | line 144- |
| | | adjusted estimates and their | | 146 |
| | | precision (e.g., 95% confidence | | b) - |
| | | interval). Make clear which | | c) - |
| | | 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 | | |
| | | risk into absolute risk for a | | |
| | | meaningful time period | | |
| Other analyses | 17 | Report other analyses done— | | line 213-221 |
| | | e.g., analyses of subgroups and | | |
| | | interactions, and sensitivity | | |
| | | analyses | | |
| Discussion | | | | |
| Key results | 18 | Summarise key results with | | line 239-248 |
| | | reference to study objectives | | |
| Limitations | 19 | Discuss limitations of the study, | RECORD 19.1: Discuss the | line 305-323 |
| | | taking into account sources of | implications of using data that were not | |
| | | potential bias or imprecision. | created or collected to answer the | |
| | | Discuss both direction and | specific research question(s). Include | |
| | | magnitude of any potential bias | discussion of misclassification bias, | |
| | | | unmeasured confounding, missing | |
| | | | data, and changing eligibility over | |
| | | | time, as they pertain to the study being | |
| | | | reported. | |
| Interpretation | 20 | Give a cautious overall | | line 250-262 |
| | | interpretation of results | | |
| | | considering objectives, | | |

| | | limitations, multiplicity of analyses, results from similar studies, and other relevant evidence | | |
|---|----|---|--|--------------|
| Generalisability | 21 | Discuss the generalisability (external validity) of the study results | | line 282-286 |
| Other Information | n | | | |
| 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 | | line 153-154 |
| 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. | line 154-155 |

^{*}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.

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