## STROBE Statement—checklist of items that should be included in reports of observational studies

| Section/item | Item No | Recommendation | Reported on Page Number/Line Number | Reported on Section/Paragraph |
|---|---|---|---|---|
| **Title and abstract** | 1 | (a) Indicate the study's design with a commonly used term in the title or the abstract | Page 1/Lines 2-4 | Title /Paragraph 1 |
| | | (b) Provide in the abstract an informative and balanced summary of what was done and what was found | Page 2/ Lines 48-65 | Abstract/Paragraphs 1-4 |
| **Introduction** | | | | |
| Background/ rationale | 2 | Explain the scientific background and rationale for the investigation being reported | Page 3/Line 91-Page 4/Line117 | Introduction/Paragraphs 1-3 |
| Objectives | 3 | State specific objectives, including any prespecified hypotheses | Page 4/Lines 118-121 | Introduction/Paragraph 3 |
| **Methods** | | | | |
| Study design | 4 | Present key elements of study design early in the paper | Page4/Lines 127-128 | Methods/Paragraph 1 |
| Setting | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection | Page 4/Line 128-Page 5/Line 133 | Methods/Paragraph 1, 3, &5 |
| Participants | 6 | (a) ***Cohort study***—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up<br>***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<br>***Cross-sectional study***—Give the eligibility criteria, and the sources and methods of selection of participants | Page 4/Line 128-Page 5/Line 133 | Methods/Paragraph 1 |
| | | (b) ***Cohort study***—For matched studies, give matching criteria and number of exposed and unexposed<br>***Case-control study***—For matched studies, give matching criteria and the number of controls per case | Not applicable | Not applicable |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable | Page 5/Lines 152-161 | Methods/Paragraph 4 |
| 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 | Page 5/Line 163-Page 6/Line 173 | Methods/Paragraph 5 |
| Bias | 9 | Describe any efforts to address potential sources of bias | Page 6/Lines 170-173 | Methods/Paragraph 5&6 |
| Study size | 10 | Explain how the study size was arrived at | Not applicable | Not applicable |
| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why | Page 6/Lines 178-179, | Methods/Paragraph 6 |

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| Statistical methods | 12 | (a) Describe all statistical methods, including those used to control for confounding | Page 6/Lines 175-186 | Methods/Paragraph 6 |
| | | (b) Describe any methods used to examine subgroups and interactions | Not applicable | Not applicable |
| | | (c) Explain how missing data were addressed | Page 6/Lines 172-173 | Methods/Paragraph 6 |
| | | (d) ***Cohort study***—If applicable, explain how loss to follow-up was addressed<br>***Case-control study***—If applicable, explain how matching of cases and controls was addressed<br>***Cross-sectional study***—If applicable, describe analytical methods taking account of sampling strategy | Not applicable | Not applicable |
| | | (e) Describe any sensitivity analyses | Not applicable | Not applicable |
| **Results** | | | | |
| Participants | 13* | (a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed | Page 6/Lines 191-192 | Results/Paragraph 1 |
| | | (b) Give reasons for non-participation at each stage | Not applicable | Not applicable |
| | | (c) Consider use of a flow diagram | Not applicable | Not applicable |
| Descriptive data | 14* | (a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders | Page 6/Lines 192-198, Page 7/Lines 199-217 | Results/Paragraphs 1-3 |
| | | (b) Indicate number of participants with missing data for each variable of interest | Page 14/Line 446-Page | Table 1-3 |
| | | (c) ***Cohort study***—Summarise follow-up time (eg, average and total amount) | Page 7/Lines224-226 | Results/Paragraph 4 |
| Outcome data | 15* | ***Cohort study***—Report numbers of outcome events or summary measures over time | Page 7/Lines 221-227 | Results/Paragraph 4 |
| | | ***Case-control study***—Report numbers in each exposure category, or summary measures of exposure | Not applicable | Not applicable |
| | | ***Cross-sectional study***—Report numbers of outcome events or summary measures | Not applicable | Not applicable |
| Main results | 16 | (a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included | Page 7/Line 221-Page8/Line 247 | Results/Paragraphs 4-7 |
| | | (b) Report category boundaries when continuous variables were categorized | Page 7/Lines 228-231 | Results/Paragraph 5 |
| | | (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period | Not applicable | Not applicable |
| Other analyses | 17 | Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses | Not applicable | Not applicable |
| **Discussion** | | | | |
| Key results | 18 | Summarise key results with reference to study objectives | Page 8/Lines 251-253 | Discussion/Paragraph 1 |
| 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 | Page 10/Lines 302-309 | Discussion/Paragraph 3 |

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| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence | Page 8/Line253-Page 10-Line 300 | Discussion/Paragraph 1&2 |
| Generalisability | 21 | Discuss the generalisability (external validity) of the study results | Page10/Lines 301-302 | Discussion/Paragraph 3&4 |
| **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 | Page10/Line 319 | Acknowledgments /Paragraph 1 |

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

**Note:** An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.

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*As the checklist was provided upon initial submission, the page number/line number reported may be changed due to copyediting and may not be referable in the published version. In this case, the section/paragraph may be used as an alternative reference.