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

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|  | Item No. | Recommendation | Page No. | Relevant text from manuscript |
| **Title and abstract** | 1 | (*a*) Indicate the study’s design with a commonly used term in the title or the abstract | *1* |  Title  |
| (*b*) Provide in the abstract an informative and balanced summary of what was done and what was found |  *2* | *Abstract paragraph 2 and 3* |
| Introduction |  |
| Background/rationale | 2 | Explain the scientific background and rationale for the investigation being reported |  *3* | *Background paragraph 1- 5* |
| Objectives | 3 | State specific objectives, including any prespecified hypotheses | *3* | *Background paragraph 8* |
| Methods |  |
| Study design | 4 | Present key elements of study design early in the paper |  *4* | *Methods paragraph 2* |
| Setting | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection |  *4* | *Methods paragraph 1*  |
| 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 | *5* |  *Methods paragraph 7 - 10* |
| (*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 |  |  |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable |  *5* | *Methods paragraph 11-13* |
| 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 |  *5* | *Methods paragraph 4 - 6* |
| Bias | 9 | Describe any efforts to address potential sources of bias |  *5* | *Methods paragraph 6*  |
| Study size | 10 | Explain how the study size was arrived at |  *4* | *Methods paragraph 2-3* |

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| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why | *6* | *Methods* *paragraph 12 -14* |
| Statistical methods | 12 | (*a*) Describe all statistical methods, including those used to control for confounding |  *6* | *Methods paragraph 12-15* |
| (*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 |  8 | Methods paragraph 12 - 14 |
| (*e*) Describe any sensitivity analyses |  |  |
| 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 |  *8* | *Results paragraph 5 and Table 1* |
| (b) Give reasons for non-participation at each stage |  | N/A |
| (c) Consider use of a flow diagram |  | N/A  |
| Descriptive data | 14\* | (a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders |  *8* | *Results paragraph 5 and Table 1* |
| (b) Indicate number of participants with missing data for each variable of interest |  |  |
| (c) *Cohort study*—Summarise follow-up time (eg, average and total amount) |  |  |
| 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 | *8 -10* | *Results paragraph 5 -7 and Fig 4* |
| 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 | *8- 10* |  |
| (*b*) Report category boundaries when continuous variables were categorized | *8 - 10* | *Results paragraph 5 -7* |
| (*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period |  | *N/A* |

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| Other analyses | 17 | Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses  |  |  |
| Discussion |
| Key results | 18 | Summarise key results with reference to study objectives | *11* | *Discussion paragraph 1 - 2* |
| 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 | *11* | *Discussion paragraph 7* |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence | *11* |  *Discussion paragraph 1*  |
| Generalisability | 21 | Discuss the generalisability (external validity) of the study results | *11-12* | *Discussion paragraph 8* |
| 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 | *14* | *Declarations paragraph 5* |

\*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.

**Reference**

Von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandenbroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. Annals of internal medicine. 2007 Oct 16;147(8):573-7.