### 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 2/Line 52-54                  | Abstract/Paragraph 1         |
|                        |         | (b) Provide in the abstract an informative and balanced summary of what was done and what was found                                                                                                          | Page 2/Line 49-77                  | Abstract/Paragraphs 2-4      |
| **Introduction**       | 2       | Explain the scientific background and rationale for the investigation being reported                                                                                                                        | Page 3/Line 80-99                  | Introduction/Paragraphs 1-2  |
| **Objectives**         | 3       | State specific objectives, including any prespecified hypotheses                                                                                                                                           | Page 3-4/Line 100-105              | Introduction/Paragraph 3    |
| **Methods**            | 4       | Present key elements of study design early in the paper                                                                                                                                                   | Page 4/Line 109-126               | Methods/Paragraphs 1-2       |
| Study design           | 5       | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection                                                                          | Page 4/Line 109-126               | Methods/Paragraphs 1-2       |
| Setting                | 6       | (a) **Cohort study**—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up                                                                 | Page 4-5/Line 117-126             | Methods/Paragraph 2         |
|                        |         | **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                                                                                                         | N/A                                 | N/A                           |
|                        |         | **Case-control study**—For matched studies, give matching criteria and the number of controls per case                                                                                                   |                                     |                               |
| Participants           | 7       | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable                                                                     | Page 5/Line 129-150               | Methods/Paragraphs 3-4       |
| Variables              | 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 5-6/Line 129-150             | Methods/Paragraphs 3-4       |
| Data sources/          | 9       | Describe any efforts to address potential sources of bias                                                                                                                                                 | Page 9/Line 216-231               | Discussion/Paragraph 2      |
| measurement**          |         |                                                                                                                                                                                                            |                                     |                               |
| Bias                   | 10      | Explain how the study size was arrived at                                                                                                                                                               | Page 4-5/Line 117-126             | Methods/Paragraph 2         |
| Study size             | 11      | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why                                                                             | Page 6/Line 153-160               | Methods/Paragraph 5         |
| Quantitative variables |         |                                                                                                                                                                                                            |                                     |                               |
| Statistical methods | 12 | (a) Describe all statistical methods, including those used to control for confounding | Page 6/Line 153-160 Methods/Paragraph 5 |
|---------------------|----|-------------------------------------------------------------------------------------|--------------------------------------|
|                     |    | (b) Describe any methods used to examine subgroups and interactions                  | Page 6/Line 153-160 Methods/Paragraph 5 |
|                     |    | (c) Explain how missing data were addressed                                           | Page 6/Line 153-160 Methods/Paragraph 5 |
|                     |    | (d) **Cohort study** — If applicable, explain how loss to follow-up was addressed     | Page 6/Line 153-160 Methods/Paragraph 5 |
|                     |    | **Case-control study** — If applicable, explain how matching of cases and controls was addressed | Page 6/Line 153-160 Methods/Paragraph 5 |
|                     |    | **Cross-sectional study** — If applicable, describe analytical methods taking account of sampling strategy | Page 6/Line 153-160 Methods/Paragraph 5 |
|                     |    | (e) Describe any sensitivity analyses                                                | Page 6/Line 153-160 Methods/Paragraph 5 |

### 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/Line 163-166 Results/Paragraph 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 | Page 6-7/Line 168-176 Results/Paragraph 2 |
|-----|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|     | (b) Indicate number of participants with missing data for each variable of interest                                               | Page 6-7/Line 168-176 Results/Paragraph 2 |
|     | (c) **Cohort study** — Summarise follow-up time (eg, average and total amount)                                                    | Page 6-7/Line 168-169 Results/Paragraph 2 |

**Outcome data**

| 15* | **Cohort study** — Report numbers of outcome events or summary measures over time | Page 6-8/Line 168-203 Results/Paragraph 2-5 |
|-----|----------------------------------------------------------------------------------|----------------------------------------|
|     | **Case-control study** — Report numbers in each exposure category, or summary measures of exposure | N/A                                    |
|     | **Cross-sectional study** — Report numbers of outcome events or summary measures | N/A                                    |

**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 6-8/Line 168-203 Results/Paragraph 2-5 |
|-----|----------------------------------------------------------------------------------------------------------------|----------------------------------------|
|     | (b) Report category boundaries when continuous variables were categorized                                                                 | Page 6-8/Line 168-203 Results/Paragraph 2-5 |
|     | (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period | N/A                                    |

**Other analyses**

| 17  | Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses | N/A                                    |
|-----|------------------------------------------------------------------------------------------------|----------------------------------------|

### Discussion

**Key results**

| 18  | Summarise key results with reference to study objectives | Page 8/Line 206-215 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 9/Line 216-231 Discussion/Paragraph 2 |
|-----|---------------------------------------------------------------------------------|----------------------------------------|
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence | Page 9-12/Line 232-285 | Discussion/Paragraphs 3-4 |
|----------------|----|-------------------------------------------------------------------------------------------------|------------------------|-------------------------|
| Generalisability | 21 | Discuss the generalisability (external validity) of the study results | Page 12/Line 288-296 | Conclusion/ Paragraph 1 |
| 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 | Page 15/Line 311-312 | Funding/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.

Article information: http://dx.doi.org/10.21037/atm-20-806

*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.*