

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

	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	1/2	Title Abstract
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	2	Abstract
<b>Introduction</b>				
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	3	1. Introduction
Objectives	3	State specific objectives, including any prespecified hypotheses	3	1. Introduction (5 <sup>th</sup> paragraph)
<b>Methods</b>				
Study design	4	Present key elements of study design early in the paper	4	2. Methods – 2.1 Mortality data (1 <sup>st</sup> paragraph)
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	4	2. Methods – 2.1 Mortality data (1 <sup>st</sup> paragraph) 2. Methods – 2.2 Environmental data
Participants	6	(a) <i>Cohort study</i> —Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up <i>Case-control study</i> —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 <i>Cross-sectional study</i> —Give the eligibility criteria, and the sources and methods of selection of participants	4	2. Methods – 2.1 Mortality data
		(b) <i>Cohort study</i> —For matched studies, give matching criteria and number of exposed and unexposed <i>Case-control study</i> —For matched studies, give matching criteria and the number of controls per case		NA

Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	4/5	<b>Outcomes:</b> 2. Methods – 2.1 Mortality data <b>Exposures:</b> 2. Methods – 2.2 Environmental data (1 <sup>st</sup> paragraph) <b>Confounders:</b> 2. Methods – 2.2 Environmental data (2 <sup>nd</sup> paragraph) <b>Effect modifiers:</b> 2. Methods – 2.1 Mortality data (2 <sup>nd</sup> paragraph) & 2. Methods – 2.3 Statistical analysis (5 <sup>th</sup> paragraph)
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	4/5	<b>Mortality:</b> 2. Methods – 2.1 Mortality data <b>Population:</b> 2. Methods – 2.1 Mortality data (2 <sup>nd</sup> paragraph) <b>Air pollution:</b> 2. Methods – 2.2 Environmental data (1 <sup>st</sup> paragraph) <b>Temperature:</b> 2. Methods – 2.2 Environmental data (2 <sup>nd</sup> paragraph) <b>Dew point temperature/Relative humidity/Apparent temperature:</b> 2. Methods – 2.2 Environmental data (2 <sup>nd</sup> paragraph) <b>Urbanicity:</b> 2. Methods – 2.3 Statistical analysis (5 <sup>th</sup> paragraph)
Bias	9	Describe any efforts to address potential sources of bias	5	2. Methods – 2.3 Statistical analysis (6 <sup>th</sup> paragraph)
Study size	10	Explain how the study size was arrived at	4	2. Methods – 2.1 Mortality data & 2. Methods - 2.2 Environmental data (1 <sup>st</sup> paragraph)

Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	4/5	<b>Air pollution:</b> 2. Methods – 2.3 Statistical analysis (3 <sup>rd</sup> paragraph & 4 <sup>th</sup> paragraph) <b>Temperature:</b> 2. Methods – 2.3 Statistical analysis (3 <sup>rd</sup> paragraph) <b>Age:</b> 2. Methods – 2.1 Mortality data (2 <sup>nd</sup> paragraph)
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	4/5	2. Methods – 2.3 Statistical analysis (1 <sup>st</sup> to 5 <sup>th</sup> paragraph)
		(b) Describe any methods used to examine subgroups and interactions	5	2. Methods – 2.3 Statistical analysis (4 <sup>th</sup> paragraph & 5 <sup>th</sup> paragraph)
		(c) Explain how missing data were addressed	5	3. Results – 3.1 Descriptive analysis
		(d) <i>Cohort study</i> —If applicable, explain how loss to follow-up was addressed <i>Case-control study</i> —If applicable, explain how matching of cases and controls was addressed <i>Cross-sectional study</i> —If applicable, describe analytical methods taking account of sampling strategy		NA
		(e) Describe any sensitivity analyses	5	2. Methods – 2.3 Statistical analysis (6 <sup>th</sup> paragraph)
		<b>Results</b>		
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	5	3. Results – 3.1 Descriptive analysis
		(b) Give reasons for non-participation at each stage		NA
		(c) Consider use of a flow diagram		NA
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	5	3. Results – 3.1 Descriptive analysis
		(b) Indicate number of participants with missing data for each variable of interest		NA
		(c) <i>Cohort study</i> —Summarise follow-up time (eg, average and total amount)		NA
Outcome data	15*	<i>Cohort study</i> —Report numbers of outcome events or summary measures over time		NA
		<i>Case-control study</i> —Report numbers in each exposure category, or summary measures of exposure		NA

		<i>Cross-sectional study</i> —Report numbers of outcome events or summary measures	5	3. Results – 3.1 Descriptive analysis
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	5/6	3. Results – 3.2 Association of air pollution with cause-specific mortality
		(b) Report category boundaries when continuous variables were categorized	6	3. Results – 3.3 Effect modification by sex, age, and urbanicity (2 <sup>nd</sup> paragraph)
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period		NA
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	6	3. Results – 3.3 Effect modification by sex, age, and urbanicity & 3. Results – 3.4 Sensitivity analyses
<b>Discussion</b>				
Key results	18	Summarise key results with reference to study objectives	7/9	4. Discussion (1 <sup>st</sup> paragraph) & 5. Conclusion
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	9	4. Discussion (12 <sup>th</sup> paragraph)
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	7/8/9	4. Discussion
Generalisability	21	Discuss the generalisability (external validity) of the study results	8/9	4. Discussion (9 <sup>th</sup> paragraph & 12 <sup>th</sup> paragraph)
<b>Other information</b>				
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	10	Funding sources

\*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](http://www.strobe-statement.org).