

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	“Register based cohort”
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	2	Patients and methods & Results
Introduction				
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	4	Page 4
Objectives	3	State specific objectives, including any prespecified hypotheses	5	Lines 71-73
Methods				
Study design	4	Present key elements of study design early in the paper	5	Line 77-79
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	5-6	Line 81-95
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	6	Line 97-110
		(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		
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	7	Line 116-121
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	7	Line 116-121
			12	Line 239-243
Bias	9	Describe any efforts to address potential sources of bias	13	Line 242-248
Study size	10	Explain how the study size was arrived at	9	Line 161

Continued on next page

Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	7	130-135
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	8	130, 136-143
		(b) Describe any methods used to examine subgroups and interactions	“	“
		(c) Explain how missing data were addressed	Missing data outlined in table 1	
		(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	No loss to follow up	
		(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		
		(b) Give reasons for non-participation at each stage		
		(c) Consider use of a flow diagram		
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	Fig 1, line 162-164	
		(b) Indicate number of participants with missing data for each variable of interest	Table 1	
		(c) <i>Cohort study</i> —Summarise follow-up time (eg, average and total amount)	Table 2-3, line 166-79	
Outcome data	15*	<i>Cohort study</i> —Report numbers of outcome events or summary measures over time	-“-	
		<i>Case-control study</i> —Report numbers in each exposure category, or summary measures of exposure		
		<i>Cross-sectional study</i> —Report numbers of outcome events or summary measures		
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	Table 2-4 Surgeon experience is discussed in line 229-230 indirectly. Sex and age was included in the regression model.	

(b) Report category boundaries when continuous variables were categorized

Not applicable

(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period

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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	10	Line 182-191
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	12	Line 233-248
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	13	Line 257-262
Generalisability	21	Discuss the generalisability (external validity) of the study results	13	Line 250-254
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	9	Line 156-158

*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.