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

	Item No	Recommendation
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract Page 2: Line 33
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found Pages 2-3: Lines 26-55
Introduction		
Background/rationale Page 2-3 (line 26-55)	2	Explain the scientific background and rationale for the investigation being reported Pages 4-5: Lines 100-105
Objectives	3	State specific objectives, including any pre-specified hypotheses Pages 4-5: Lines 105-109
Methods		
Study design	4	Present key elements of study design early in the paper Pages 5-8: Lines 124-183
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection Page 5: Lines 113-117
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 Page 5: Lines 117-120
		(*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 NA
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable Page 8: Lines 190-193
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 6: Lines 133-135; Page 6-8: Lines 142-183,
Bias	9	Describe any efforts to address potential sources of bias NA
Study size	10	Explain how the study size was arrived at NA
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why Page 8: Lines 194-195

Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding Page 8: Lines 193-197
		(*b*) Describe any methods used to examine subgroups and interactions Page 8: Lines 193-197
		(*c*) Explain how missing data were addressed Page 5: 126-127
		(*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 NA
		(*e*) Describe any sensitivity analyses NA

Continued on next page

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 NA
		(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 Page 11: Table 1; Pages 11-13: Line numbers 261-303; Page 14: Table 2
		(b) Indicate number of participants with missing data for each variable of interest Page 11: Table 1; Page 14: Table 2
		(c) *Cohort study*—Summarise follow-up time (eg, average and total amount) NA
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 Page 12: Line numbers 271-275
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 NA
		(*b*) Report category boundaries when continuous variables were categorized Page 11: Table 1; Page 14: Table 2
		(*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 NA
Discussion		
Key results	18	Summarise key results with reference to study objectives Page 17: Lines 385-386 Page 18: Lines 412-416 Page 19: Lines 420-422 and 442-445 Page 20: Lines 448-450, 456 and 461-463
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 21: 470-475
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence Pages 17-21: Lines 382-490
Generalisability	21	Discuss the generalisability (external validity) of the study results

		Page 19: Lines 437-440
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 Submission form PLoS Neglected Tropical Diseases

*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.