STROBE Statement—Checklist of items that should be included in reports of *cohort studies*

	Item No	Recommendation	Page No
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or	Title page
		the abstract	Abstract
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	
		was done and what was found	
Introduction 1/ / / 1			Page 1
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	Intro
Objectives	3	State specific objectives, including any prespecified hypotheses	Line 17 to 21
Methods			
Study design	4	Present key elements of study design early in the paper	Page 1 line 24
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Table 1 Pg 1 line 24 Page 2, line 5-7
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up(b) For matched studies, give matching criteria and number of exposed and unexposed	Pg 2 line 6- 22
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	P 2Line 16- 19 and Lines 20-22 Page 3, line 1-2
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 2, line 23 -28
Bias	9	Describe any efforts to address potential sources of bias	Page 2 Lines 13- 15 and 27 - 28
Study size	10	Explain how the study size was arrived at	Surveillance
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	Page 3, line 5-7
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	Page 3 Line 8-15 Line 16-18
		(b) Describe any methods used to examine subgroups and interactions	N/A
		(c) Explain how missing data were addressed	Page 2, line 28
		(d) If applicable, explain how loss to follow-up was addressed	N/A
		(\underline{e}) Describe any sensitivity analyses	N/A
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	N/A

		(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 (b) Indicate number of participants with missing data for each variable of interest (c) Summarise follow-up time (eg, average and total amount) 	Table 2 Table 3 and page 3, line 16-17 Page 3 line 8-15
Outcome data	15*	Report numbers of outcome events or summary measures over time	Page 3 line 26-27 Table 2

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 4 line 5- 10	
		(b) Report category boundaries when continuous variables were categorized	Table 3	
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period		
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	Table 4 Page 4, line 18- 19 P 4, Line 21-24 Pg 5 lines 1- 3	
Discussion				
Key results	18	Summarise key results with reference to study objectives Addressed main decreases in CA and HA RV disease Addressed the herd protection from RV Adressed the vaccine failure rate	Page 5 lines 5- 7 Lines lines 21-22 Lines 30-31	
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		
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence		
Generalisability	21	Discuss the generalisability (external validity) of the study results	Page 7 Line 4	
Other informati	on			
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	Title page	

^{*}Give information separately for exposed and unexposed groups.

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 http://www.strobe-statement.org.