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	"cohort study"
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	2	"an historical cohort study… linked health data… poor survival and high risk of rehospitalization…"
Introduction				
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	3	"However, there are few data on the prevalence and prognosis of HRF as a single entity. This is an important gap in knowledge because systematic evaluation of patients with HRF frequently demonstrates the co-occurrence of multiple diseases with the potential to cause ventilatory failure."
Objectives	3	State specific objectives, including any prespecified hypotheses	3,4	"we sought to determine the prognosis for survival and for re-hospitalization… hypothesizing that the prognosis in patients with HRF is substantially related to the underlying cause of the condition"
Methods				
Study design	4	Present key elements of study design early in the paper	4	"population-based historical cohort study using linked health

				data”
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	4-6	
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	4-6	
		(*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	N/A (not matched)	
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	6-7	“Specific diagnoses of interest… were COPD, congestive cardiac failure… sleep disordered breathing… neuromuscular disease… opioid use. “Covariates for these models were determined using a directed acyclic graph (DAG), shown in the online Supplement…”
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	6-7	“Details of the ICD-10-AM codes used for data extraction are provided in the Supplementary Material.”
Bias	9	Describe any efforts to address potential sources of bias	4	“We considered this a representative population cohort based on the following…”

Study size	10	Explain how the study size was arrived at	N/A

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Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	6	"Data were summarised…"
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	6-7	"Age-standardised death rates… "We used Cox proportional hazards regression models… "DAGs were constructed and minimum sets of adjustment covariates identified…"
		(*b*) Describe any methods used to examine subgroups and interactions	N/A	
		(*c*) Explain how missing data were addressed	N/A	
		(*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	11	"low likelihood of loss to follow-up, another strength of this study"
		(*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	12-13	Table 1, Table 2
		(b) Indicate number of participants with missing data for each variable of interest		
		(c) *Cohort study*—Summarise follow-up time (eg, average and total amount)	5	"Follow-up period"
Outcome data	15*	*Cohort study*—Report numbers of outcome events or summary measures over time	7	*"Deaths"* *"Rehospitalizations"*
		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		
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	13	Table 2

	(*b*) Report category boundaries when continuous variables were categorized
	(*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	9	"The present study shows that hospitalization with HRF heralds a high risk of rehospitalization and death in subsequent years…"
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	11	"Our study has a number of limitations also…"
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	11	"The underlying disease appears to have some influence on overall survival and subsequent hospitalizations…"
Generalisability	21	Discuss the generalisability (external validity) of the study results	10	"We have identified a population-based cohort of people with HRF using arterial blood gas measurements, thus providing an inclusive picture of this condition"
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	N/A	

*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.