Supplemental Table 1. STROBE Statement

	Item No	Recommendation	Page number
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	2
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	2
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	4
Objectives	3	State specific objectives, including any prespecified hypotheses	6
Methods			
Study design	4	Present key elements of study design early in the paper	5
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	5
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	5, 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	
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	6,7
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*
Bias	9	Describe any efforts to address potential sources of bias	NA
Study size	10	Explain how the study size was arrived at	5, 6

Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	6
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	8
		(*b*) Describe any methods used to examine subgroups and interactions	8
		(*c*) Explain how missing data were addressed	NA
		(*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	8
		(*e*) Describe any sensitivity analyses	NA

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	9
		(b) Give reasons for non-participation at each stage	
		(c) Consider use of a flow diagram	Figure 1
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	9
		(b) Indicate number of participants with missing data for each variable of interest	NA
		(c) *Cohort study*—Summarise follow-up time (eg, average and total amount)	11
Outcome data	15*	*Cohort study*—Report numbers of outcome events or summary measures over time	*11*
		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	*10, 11*

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	10, 11
		(*b*) Report category boundaries when continuous variables were categorized	10, 11
		(*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	10, 11
Discussion			
Key results	18	Summarise key results with reference to study objectives	11
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	14
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	14, 15
Generalisability	21	Discuss the generalisability (external validity) of the study results	14
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	15

*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.

Supplemental Table 2. Odds of PRISm and variable obstruction by CKD and DM status.

	Normal	PRISm[a]				Variable obstruction[b]			
		Model 1		Model 2		Model 1		Model 2	
		OR[95% CI]	*p* value	OR[95% CI]	*p* value	OR[95% CI]	*p* value	OR[95% CI]	*p* value
CKD	Ref	**1.66(1.34,2.05)**	**<0.0001**	**1.29(1.02,1.64)**	**0.03**	**1.47(1.06,2.03)**	**0.02**	**1.53(1.08,2.16)**	**0.02**
CKD+DM	Ref	**1.54(1.13, 2.10)**	**0.01**	1.34(0.98, 1.82)	0.06	1.93(0.62,5.97)	0.25	1.84(0.59,5.67)	0.28

Model 1: adjusted by age, sex, eth, education, annual_household_income; Model 2: adjusted by age, sex, eth, education, annual_household_income, BMI, hypertension, smoking, cardiovascular disease, diabetes mellitus; CKD was defined as eGFR <60 mL/min/1.73m2 or urinary ACR ≥30 mg/g; [a]PRISm was defined as FEV1<80% predicted and FEV1/FVC≥0.7; [b]Variable obstruction was defined as pre-bronchodialator FEV1/FVC<0.7 and post-bronchodialator FEV1/FVC≥0.7

Supplemental Table 3. All-cause mortality risk associated with different spirometry types and CKD status.

	Entire cohort		Diabetes[a]	
	HR [95% CI]	*p* value	HR [95% CI]	*p* value
Normal spirometry without CKD	reference		reference	
Normal spirometry with CKD[d]				
Model 1	**2.20(1.68,2.88)**	**<0.0001**	**2.31(1.44,3.72)**	**<0.001**
Model 2	**1.97(1.49,2.59)**	**<0.0001**	**2.11(1.32,3.36)**	**0.002**
PRISm without CKD				
Model 1	**1.77(1.15,2.72)**	**0.01**	1.28(0.65,2.52)	0.48
Model 2	1.48(0.98,2.23)	0.06	1.18(0.63,2.24)	0.60
PRISm with CKD				
Model 1	**4.60(3.22,6.57)**	**<0.0001**	**4.34(2.56,7.35)**	**<0.0001**
Model 2	**3.30(2.28,4.77)**	**<0.0001**	**3.46(1.94,6.16)**	**<0.0001**
Variable obstruction without CKD				
Model 1	1.66(0.86,3.21)	0.13	0.60(0.06,5.99)	0.67
Model 2	1.56(0.81,2.98)	0.18	0.51(0.04,5.90)	0.59
Variable obstruction with CKD				
Model 1	1.11(0.46,2.65)	0.82	1.68(0.47,6.06)	0.43
Model 2	0.89(0.37,2.16)	0.80	1.26(0.33,4.82)	0.74

Model 1: adjusted by age, sex, eth, education, annual_household_income; Model 2: adjusted by age, sex, eth, education, annual_household_income, BMI, hypertension, smoking, cardiovascular disease, diabetes mellitus; [a]Diabetes was defined based on the use of insulin or oral hypoglycaemic agents, fasting plasma glucose ≥126 mg/dL, or glycated hemoglobin ≥6.5%; [b]PRISm was defined as FEV_1<80% predicted and FEV_1/FVC≥0.7; [c]Variable obstruction was defined as pre-

bronchodialator $FEV_1/FVC<0.7$ and post-bronchodialator $FEV_1/FVC\geq0.7$; [d]CKD was defined as eGFR <60 mL/min/1.73m2 or urinary ACR ≥30 mg/g

Supplemental Table 4. All-cause mortality risk associated with different spirometry and/or CKD.

		Entire cohort		Diabetes[a]	
		HR [95% CI]	*p* value	HR [95% CI]	*p* value
PRISm without CKD			reference		
PRISm with CKD	Model 1	**2.60(1.60,4.23)**	**0.002**	**3.40(1.63,7.07)**	**0.001**
	Model 2	**2.23(1.33,3.74)**	**0.0001**	**2.91(1.33,6.39)**	**0.008**
VO without CKD			reference		
VO with CKD	Model 1	0.66(0.22,2.01)	0.47	2.79(0.23,34.63)	0.42
	Model 2	0.57(0.19,1.75)	0.33	2.47(0.17,34.87)	0.50

PRISm, preserved ratio impaired spirometry; VO, variable obstruction; Model 1: adjusted by age, sex, eth, education, annual_household_income; Model 2: adjusted by age, sex, eth, education, annual_household_income, BMI, hypertension, smoking, cardiovascular disease, diabetes mellitus

Supplemental Table 5. Proportion hazard assumption test (Schoenfeld residuals) of Table 1

Entire Cohort Model 1				**Entire Cohort Model 2**			
Variable	**Chi-Square**	**df**	**p-value**	**Variable**	**Chi-Square**	**df**	**p-value**
spiro	0.000405	2	1	spiro	4.17E-04	2	1
age	0.001312	1	0.97	age	1.51E-03	1	0.97
sex	0.000316	1	0.99	sex	3.10E-04	1	0.99
eth	0.000134	4	1	eth	1.09E-04	4	1
edu	0.00053	2	1	edu	5.92E-04	2	1
AHI	0.00047	1	0.98	AHI	4.94E-04	1	0.98
GLOBAL	0.002716	11	1	bmi	3.16E-05	1	1
				Hypertension	5.12E-04	1	0.98
				smoke1	1.67E-04	2	1
				CVD	3.73E-04	1	0.98
				DM	1.16E-04	1	0.99
				GLOBAL	3.15E-03	17	1

Diabetes Cohort Model 1				**Diabetes Cohort Model 2**			
Variable	**Chi-Square**	**df**	**p-value**	**Variable**	**Chi-Square**	**df**	**p-value**
spiro	2.50E-03	2	1	spiro	2.77E-03	2	1
age	1.13E-09	1	1	age	2.16E-07	1	1
sex	2.07E-06	1	1	sex	1.12E-06	1	1
eth	1.34E-03	4	1	eth	1.12E-03	4	1
edu	1.22E-03	2	1	edu	1.37E-03	2	1
AHI	4.34E-05	1	0.99	AHI	1.03E-04	1	0.99
GLOBAL	4.95E-03	11	1	bmi	5.26E-04	1	0.98

Hypertension	1.71E-03	1	0.97
smoke1	5.61E-04	2	1
CVD	1.37E-04	1	0.99
GLOBAL	8.68E-03	16	1

Supplemental Table 6. Proportion hazard assumption test (Schoenfeld residuals) of supplemental table 3

Entire Cohort Model 1				**Entire Cohort Model 2**			
Variable	**Chi-Square**	**df**	**p-value**	**Variable**	**Chi-Square**	**df**	**p-value**
CKDspiro	0.000616	5	1.00	CKDspiro	6.53E-04	5	1.00
age	0.001299	1	0.97	age	1.48E-03	1	0.97
sex	0.000296	1	0.99	sex	3.05E-04	1	0.99
eth	0.000122	4	1.00	eth	1.01E-04	4	1.00
edu	0.000555	2	1.00	edu	5.98E-04	2	1.00
AHI	0.000509	1	0.98	AHI	5.18E-04	1	0.98
GLOBAL	0.00297	14	1.00	bmi	4.18E-05	1	0.99
				Hypertension	5.50E-04	1	0.98
				smoke	1.68E-04	2	1.00
				CVD	4.06E-04	1	0.98
				DM	1.32E-04	1	0.99
				GLOBAL	3.38E-03	20	1.00

Diabetes Cohort Model 1				**Diabetes Cohort Model 2**			
Variable	**Chi-Square**	**df**	**p-value**	**Variable**	**Chi-Square**	**df**	**p-value**
CKDspiro	2.45E-03	5	1.00	CKDspiro	2.82E-03	5	1.00
age	1.52E-08	1	1.00	age	2.84E-07	1	1.00
sex	1.81E-06	1	1.00	sex	3.25E-06	1	1.00
eth	1.27E-03	4	1.00	eth	1.03E-03	4	1.00
edu	1.38E-03	2	1.00	edu	1.29E-03	2	1.00
AHI	1.14E-04	1	0.99	AHI	2.04E-04	1	0.99
GLOBAL	5.06E-03	14	1.00	bmi	5.89E-04	1	0.98
				Hypertension	1.78E-03	1	0.97
				smoke	5.45E-04	2	1.00
				CVD	1.63E-04	1	0.99
				GLOBAL	8.85E-03	19	1.00