SUPPLEMENT S1: RECORD CHECKLIST

The RECORD statement – checklist of items, extended from the STROBE statement, that should be reported in observational studies using routinely collected health data (11).

	Item No.	**STROBE items**	**Location in manuscript where items are reported**	**RECORD items**	**Location in manuscript where items are reported**
Title and abstract					
	1	(a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found	Page 1	RECORD 1.1: The type of data used should be specified in the title or abstract. When possible, the name of the databases used should be included. RECORD 1.2: If applicable, the geographic region and timeframe within which the study took place should be reported in the title or abstract. RECORD 1.3: If linkage between databases was conducted for the study, this should be clearly stated in the title or abstract.	1 1 n/a
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	4		
Methods					
Study Design	4	Present key elements of study design early in the paper	4-5		
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up,	5		

		and data collection			
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 *(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	5 n/a n/a n/a	RECORD 6.1: The methods of study population selection (such as codes or algorithms used to identify subjects) should be listed in detail. If this is not possible, an explanation should be provided. RECORD 6.2: Any validation studies of the codes or algorithms used to select the population should be referenced. If validation was conducted for this study and not published elsewhere, detailed methods and results should be provided. RECORD 6.3: If the study involved linkage of databases, consider use of a flow diagram or other graphical display to demonstrate the data linkage process, including the number of individuals with linked data at each stage.	5 n/a n/a
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.	6	RECORD 7.1: A complete list of codes and algorithms used to classify exposures, outcomes, confounders, and effect modifiers should be provided. If these cannot be reported, an explanation should be provided.	6
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	5-6 & supplement 2 (S2)		

		more than one group			
Bias	9	Describe any efforts to address potential sources of bias	7		
Study size	10	Explain how the study size was arrived at	7		
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen, and why	5		
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding (b) Describe any methods used to examine subgroups and interactions (c) Explain how missing data were addressed (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 (e) Describe any sensitivity analyses	7 n/a		
Data access and cleaning methods		..		RECORD 12.1: Authors should describe the extent to which the investigators had access to the database population used to create the study population. RECORD 12.2: Authors should provide information on the data cleaning methods	5 5

				used in the study.	
Linkage		..	-	RECORD 12.3: State whether the study included person-level, institutional-level, or other data linkage across two or more databases. The methods of linkage and methods of linkage quality evaluation should be provided.	5
Results					
Participants	13	(a) Report the numbers of individuals at each stage of the study (*e.g.*, 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. I Consider use of a flow diagram	-	RECORD 13.1: Describe in detail the selection of the persons included in the study (*i.e.*, study population selection) including filtering based on data quality, data availability and linkage. The selection of included persons can be described in the text and/or by means of the study flow diagram.	7
Descriptive data	14	(a) Give characteristics of study participants (*e.g.*, demographic, clinical, social) and information on exposures and potential confounders (b) Indicate the number of participants with missing data for each variable of interest (c) *Cohort study* - summarise follow-up time (*e.g.*, average and total amount)	Table 1		
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	7-9 Table 1,2,3 n/a		

		Cross-sectional study - Report numbers of outcome events or summary measures	n/a		
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included (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	Table 2		
Other analyses	17	Report other analyses done—e.g., analyses of subgroups and interactions, and sensitivity analyses	S4		
Discussion					
Key results	18	Summarise key results with reference to study objectives	7-9		
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	RECORD 19.1: Discuss the implications of using data that were not created or collected to answer the specific research question(s). Include discussion of misclassification bias, unmeasured confounding, missing data, and changing eligibility over time, as they pertain to the study being reported.	11
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity	9-10		

		of analyses, results from similar studies, and other relevant evidence			
Generalisability	21	Discuss the generalisability (external validity) of the study results	9-10		
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	11		
Accessibility of protocol, raw data, and programming code		..	-	RECORD 22.1: Authors should provide information on how to access any supplemental information such as the study protocol, raw data, or programming code.	S1-S4

SUPPLEMENT S2: DEFINITIONS POSTOPERATIVE COMPLICATIONS

Surgical re-exploration: thoracotomy due to bleeding, cardiac tamponade, graft- or valve failure within 30 days after surgery (13).

Deep wound infection (within 30 days after surgery): when deeper tissues are affected (muscle, sternum and mediastinum) and one or more of the following three criteria are met:

1) surgical drainage/refixation
2) an organism is isolated from culture of mediastina tissue or fluid
3) antibiotic treatment because of a sternal wound (21).

Renal failure (within 30 days after surgery) one or more of the following criteria are met:

1) renal replacement therapy (dialysis or CVVH) which was not present preoperatively
2) highest postoperative creatinine level > 177 μmol/L and a doubling of the preoperative value (the preoperative creatinine value is the value on which the EuroSCORE is calculated) (14).

Cerebral vascular accident/stroke: an acute neurological event within 72 hours after surgery with focal signs and symptoms and without evidence supporting any alternative explanation. Diagnoses of stroke requires confirmation by a neurologist (22).

Coronary re-intervention: a percutaneous re-intervention like CAG or PCI after surgery (13).

Myocardial infarction: myocardial infarction (MI) in the postoperative period. Myocardial infarction associated with CABG (within 48 hours after CABG) is arbitrarily defined by elevation of cardiac biomarker values >10 x 99th percentile upper reference limit (URL) in patients with normal baseline cardiac troponin values. In addition, either (i) new pathological Q waves or new LBBB, or (ii) angiographic documented new graft or new native coronary artery occlusion, or (iii) imaging evidence of new loss of viable myocardium or new regional wall motion abnormality. After 48 hours, the standard definition of myocardial infarction is appropriate. The following criteria meets the diagnosis

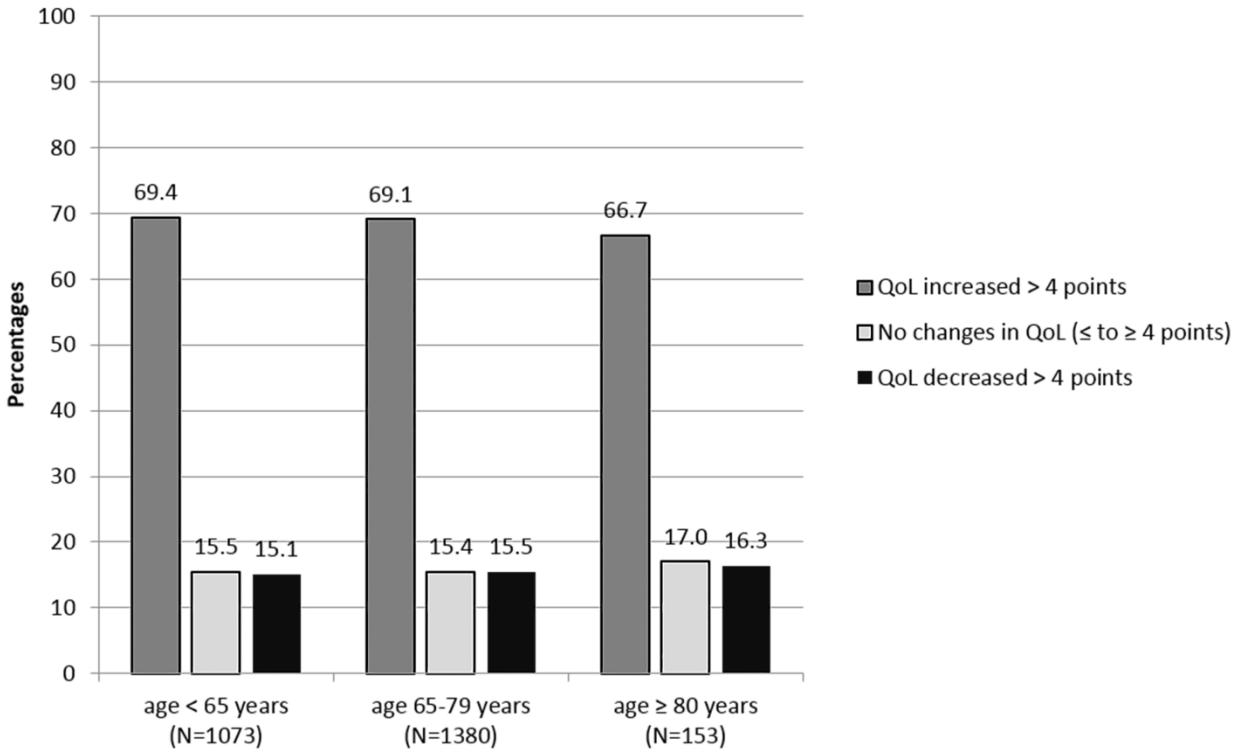
for MI: detection of a rise and/or fall of cardiac biomarker values, preferably cardiac troponin, with at least one value above the 99th percentile URL and in addition, either (i) symptoms of ischaemia, or (ii) new or presumed new significant ST-segment–T wave (ST–T) changes or new left bundle branch block (LBBB), or (iii) development of pathological Q waves in the ECG, or (iiii) imaging evidence of new loss of viable myocardium or new regional wall motion abnormality or identification of an intracoronary thrombus by angiography or autopsy (13).

SUPPLEMENT S3: SUBSCALE SCORES QUALITY OF LIFE

	<65 yrs (n = 1073)			65-79 yrs (n =1380)			≥ 80 yrs (n = 153)		
Sub-score	Preoperative	1-year FU	P value	Preoperative	1-year FU	P value	Preoperative	1-year FU	P-value
GH	61.6 ± 22.4	69.2 ± 22.3	< 0.001	64.7 ± 23.2	71.6 ± 21.2	< 0.001	61.8 ± 24.3	67.2 ± 21.9	0.002
PF	54.4 ± 29.9	77.3 ± 26.0	< 0.001	54.8 ± 29.4	74.6 ± 26.9	< 0.001	44.9 ± 29.1	61.2 ± 29.5	< 0.001
RP	31.6 ± 30.4	46.1 ± 32.8	< 0.001	34.5 ± 30.5	47.1 ± 31.9	< 0.001	30.2 ± 28.1	41.6 ± 30.0	< 0.001
BP	64.8 ± 28.3	81.5 ± 23.9	< 0.001	68.0 ± 27.2	84.0 ± 22.3	< 0.001	62.9 ± 27.2	82.3 ± 25.3	< 0.001
MH	62.1 ± 20.6	67.5 ± 22.9	< 0.001	63.7 ± 19.9	70.2 ± 21.1	< 0.001	63.3 ± 19.4	66.5 ± 18.8	0.052
VT	52.2 ± 23.0	60.3 ± 21.2	< 0.001	57.2 ± 24.5	63.0 ± 20.7	< 0.001	52.9 ± 26.6	56.3 ± 20.5	0.102
SF	70.3 ± 26.6	80.7 ± 23.9	< 0.001	73.5 ± 26.8	84.1 ± 22.3	< 0.001	69.5 ± 27.5	77.0 ± 23.4	0.001
RE	48.2 ± 33.1	53.2 ± 33.6	< 0.001	51.3 ± 33.7	55.3 ± 33.5	< 0.001	50.8 ± 30.5	49.9 ± 30.5	0.633

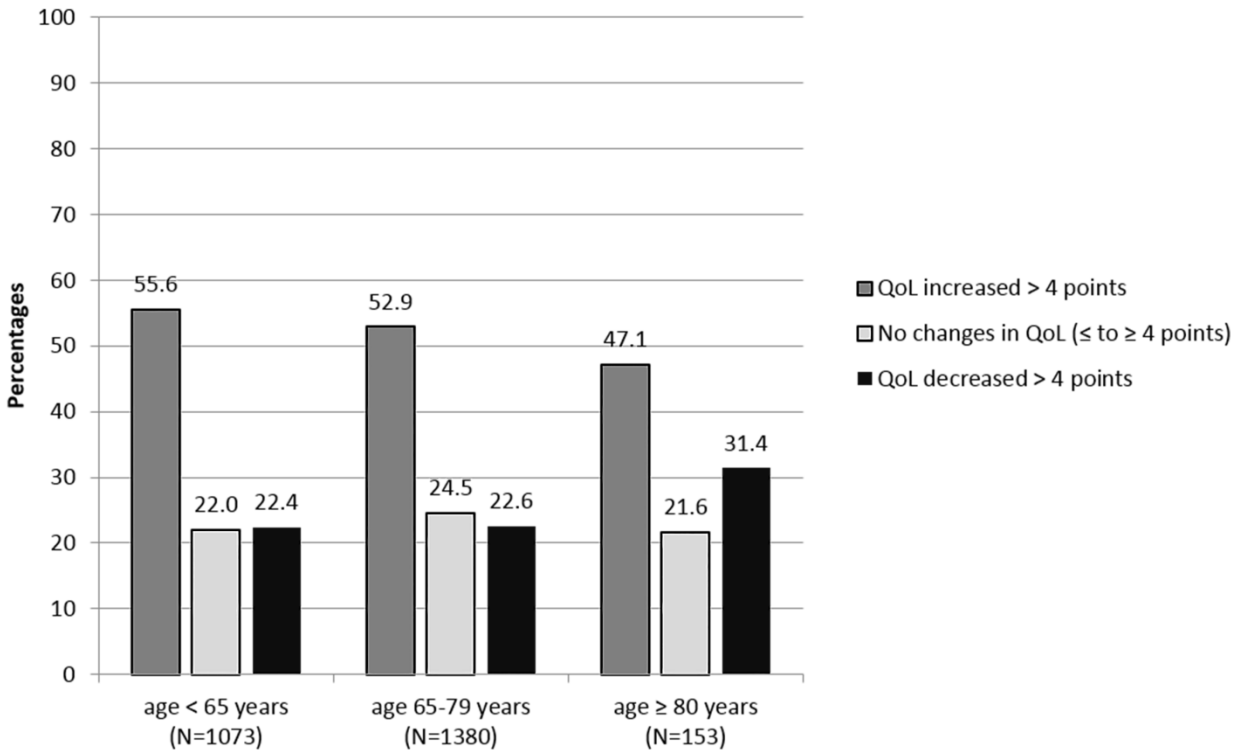
BP = bodily pain , FU = follow up , GH = general health, MH = mental health, PF = physical functioning, RE = role emotional , RP = role physical, SF = social functioning, VT = vitality. All numbers are presented as mean with standard deviation.

SUPPLEMENT S4A: SENSITIVITY ANALYSIS PHYSICAL COMPONENT SCORE



Differences between baseline and one-year follow-up per age group, in the quality of life physical component score; cut-off value 4 points

SUPPLEMENT S4B: SENSITIVITY ANALYSIS MENTAL COMPONENT SCORE



Differences between baseline and one-year follow-up per age group, in the quality of life mental component score; cut-off value 4 points