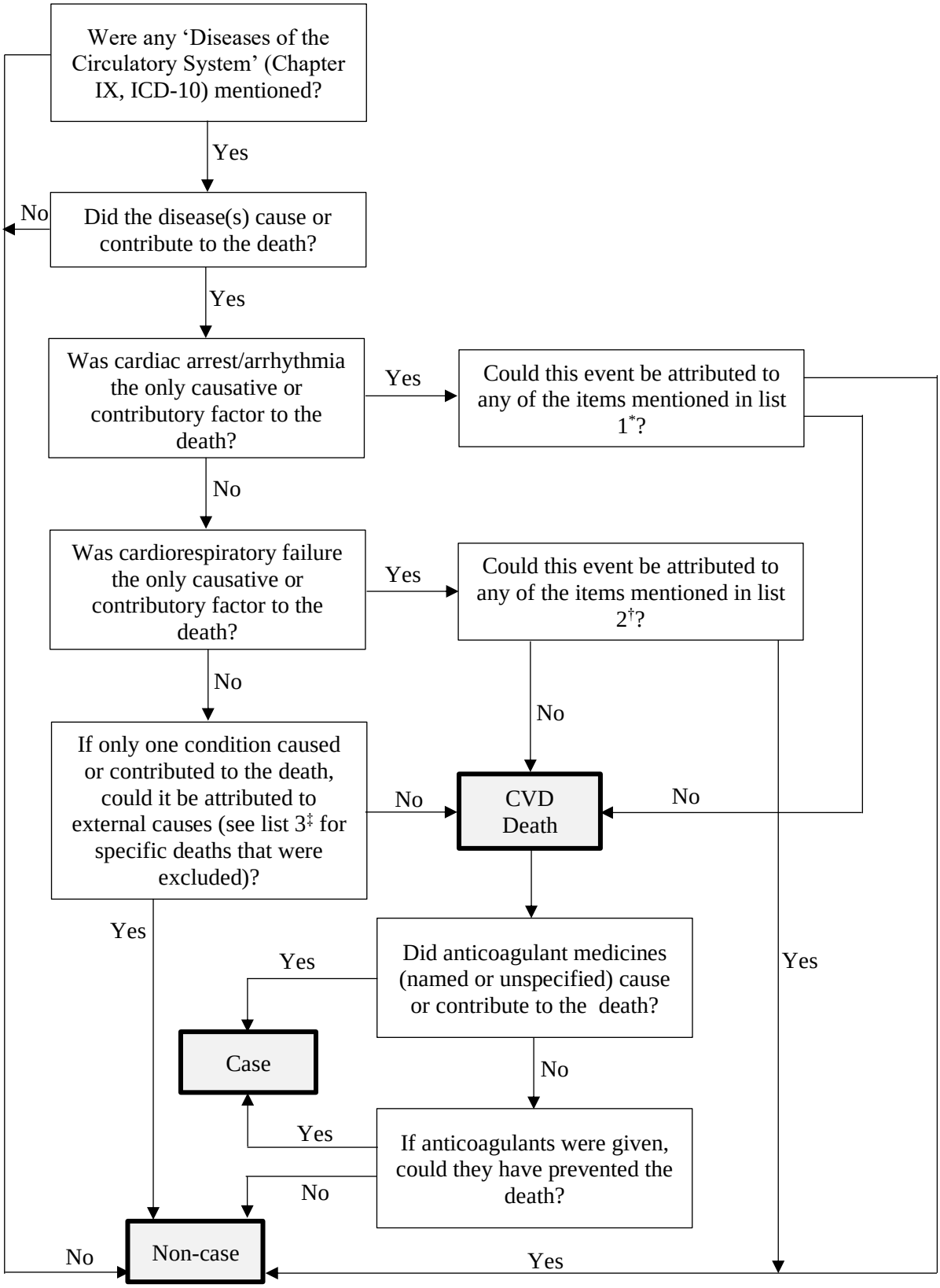
Supplementary materials

Figure S1: Algorithm for the selection of cardiovascular disease-related PFDs involving anticoagulants



[*]List 1: prolonged hypoxia; hypoxia caused by impaired respiratory function; occlusion of the airways; positional asphyxia; covering applied over the head; oxygen supply not being connected properly; failed attempt at intubation; choking; failure to carry out prompt ventilation after aspiration; a synthetic cannabinoid; reaction to a drug; presence of drugs (according to the pathologist's ruling); clozapine associated myocarditis; general anaesthetic therapies; ingestion of E-cigarette fluid; exposure to a known allergy; car collision; a fall (traumatic cardiac arrest); persistent epistaxis; suicide/ hanging; seizure; sepsis; legionella pneumonia; Addisonian crisis; electrolyte disturbance (e.g. hyperkalaemia); intussception of the bowel; vomiting caused by an intermittent blockage of the bowel; ectopic pregnancy; congenital malformations of the great artery

[†]List 2: prone position; bronchopneumonia; fire; ileus of the small intestine, due to restoration of bowel continuity which in turn was due to Crohn's disease; severe anaemia due to sickle cell disease

[‡]List 3: haemorrhage resulting from a fall; intraabdominal haemorrhage following medical intervention (colonscopy); injuries to blood vessels resulting from bad surgical planning; injury of heart and pericardium; gastrointestinal bleeding due to deep duodenal ulcer; congestive cardiac failure resulting from inadvertent fluid overload of Total Parenteral Nutrition (TPN) given via an UVC; cardiac tamponade as complication of central lines being put in for parental nutrition; cerebral infarct following cannulation of the carotid artery rather than the vein; medical procedure penetrated the patient's heart causing it to stop; medical procedure caused acute arteritis of innominate artery; air embolization and cerebral infarction resulting from the clamp on a central venous catheter being left open; laparoscopy which caused a leaking oesophagus leading to mediastinitis, compromised breathing and cardiac arrest; stroke as a complication of a liver transplant; pseudoaneurysm of the left thigh which developed as a result of intravenous drug abuse; multiple complications of a cardiac trial

Table S1: Cardiovascular disease-related Prevent Future Death reports in comparison with the Office of National Statistics mortality data and those involving anticoagulants by year

Year	Total no. of PFDs	No. of CVD-related PFDs	No. of CVD-related PFDs involving anticoagulants	No. of CVD deaths reported to the ONS	% of CVD-related PFDs vs ONS CVD deaths
2013	173	34	7	140301	0.024
2014	555	133	17	135904	0.098
2015	477	105	26	138614	0.076
2016	470	99	14	133705	0.074
2017	435	108	16	133511	0.081
2018	413	81	16	132233	0.061
2019	514	99	17	129421	0.076
Total	3037	659	113	943689	0.070
Median (IQR)	470 (424-495)	99 (90-107)	16 (15-17)	133705 (132872-137259)	0.075 (0.068-0.078)

CVD: cardiovascular disease; IQR: interquartile range; ONS: Office of National Statistics; PFDs: Prevention of Future Deaths reports

Table S2: Actions recommended by coroners and the number of reports in which they featured

Recommendations	No. of cases (%)
Action should be taken	93 (82)
Ensure effective communication	3 (3)
Introduce new policy and protocols	2 (2)
Review handling of prescriptions	2 (2)
Review medical record-keeping	2 (2)
Review national guidelines	2 (2)
Review policy and protocols	2 (2)
Review procedures for risk assessments	2 (2)
Review training of relevant staff	2 (2)
Carry out further inspections	1 (1)
Ensure accurate record keeping	1 (1)
Ensure medical records are available electronically	1 (1)
Ensure patients are reviewed promptly	1 (1)
Ensure process exists to report patient non-compliance	1 (1)
Ensure recommended practice is followed	1 (1)
Ensure sufficient staffing levels	1 (1)
Improve booking system	1 (1)
Improve communication	1 (1)
Improve medical record-keeping	1 (1)
Provide training	1 (1)
Review alarm system	1 (1)
Review discharge process	1 (1)
Review fitness to practice	1 (1)
Review IT systems	1 (1)
Review methods of communication	1 (1)
Review referral process	1 (1)
Review service provision	1 (1)
Review treatment of current patients	1 (1)

Table S3: Addressees' responses to coroners' Prevention of Future Death reports based on response rate and responding on-time, within 56 days from the date of the report

Rank	Addressee	Response rate (%)	% On-time	% Late	% Overdue
1	NHS 111	100	100	0	0
1	NHS Wales	100	100	0	0
2	CCGs	100	67	33	0
3	Police	100	0	100	0
4	Ambulance	71	57	14	29
5	NHS Trusts	60	45	15	40
6	NHS England	50	50	0	50
7	DHSC	43	14	29	57
8	Hospitals	37	26	11	63
9	General practices	36	29	7	64
10	Local authorities	33	33	0	67
11	CQC	33	17	17	67
12	Local Health Board	33	0	33	67
13	University Health Board	30	20	10	70
14	Private company	25	25	0	75
15	NICE	25	13	13	75
16	Welsh Government	14	14	0	86
17	Care home	11	11	0	89
18	AACE	0	0	0	100
18	BCS	0	0	0	100
18	BMA	0	0	0	100
18	BRS	0	0	0	100
18	Carewatch	0	0	0	100
18	GDC	0	0	0	100
18	GMC	0	0	0	100
18	Highway maintenance	0	0	0	100
18	Housing Association	0	0	0	100
18	ICS	0	0	0	100
18	Local Charity	0	0	0	100
18	Mental Health trust	0	0	0	100
18	MHRA	0	0	0	100
18	NHS Pathways	0	0	0	100
18	RCGP	0	0	0	100
18	RCOG	0	0	0	100
18	RCP	0	0	0	100
18	RPS	0	0	0	100
18	The Renal Association	0	0	0	100

AACE: Association of Ambulance Chief Executives; BCS: British Cardiovascular Society; BMA: British Medical Association; BRS: British Renal Society; CQC: Care Quality Commission; DHSC: Department of Health and Social Care; GDC: General Dental Council; GMC: General Medical Council; ICS: Intensive Care Society; MHRA: Medicines and Healthcare products Regulatory Agency; NICE: The National Institute for Health and Care Excellence; NHS: National Health Service; RCGP: Royal College of General Practitioners; RCOG: Royal College of Obstetricians and Gynaecologists; RCP: Royal College of Physicians; RPS: Royal Pharmaceutical Society