Introduction
Acute stroke accounts for significant morbidity and mortality globally. The role of troponin for risk stratification in stroke is unclear. The aims of this study were to assess the relationship between peak troponin and mortality in patients with ischemic stroke, haemorrhagic stroke, and subarachnoid haemorrhage and to compare this with the predictive value of first troponin or dynamic troponin change.

Methods
A retrospective cohort study was carried out using the National Institute for Health Research Health Informatics Collaborative Cardiovascular dataset of all consecutive patients who had a troponin measured at five hospitals (Imperial, University College London, Oxford, King’s and Guy’s and St Thomas’) between 2010 and 2017. Patients with at least one troponin measurement and a primary diagnosis of ischaemic stroke, haemorrhagic stroke or subarachnoid haemorrhage during a hospital admission were included. The main exposure variables were first and peak troponin, and dynamic troponin change, and the main outcome was all-cause mortality. Results were analysed using multivariable adjusted restricted cubic spline Cox regression. Receiver Operator Characteristic (ROC) curves were generated to assess the predictive value of each exposure variable. Results

4,712 patients were included in the analysis (ischaemic stroke: 3,346; haemorrhagic stroke: 718; subarachnoid haemorrhage: 648). Peak troponin was above the upper limit of normal in 47.4% of ischaemic stroke patients, 52.8% of haemorrhagic stroke patients, and 57.1% of subarachnoid haemorrhage patients. Patients with elevated peak troponin were older and had more cardiovascular risk factors. A direct positive relationship was seen between peak troponin level and mortality hazard ratio in all three types of stroke (Figure 1). This relationship was consistent when considering dynamic troponin fold change for ischaemic or haemorrhagic stroke. For all three types of stroke, there was no added predictive value of peak troponin or dynamic troponin change over first troponin in predicting mortality (Figure 2).

Conclusions
A positive peak troponin and positive first admission troponin are associated with increased mortality in patients presenting with ischaemic stroke, haemorrhagic stroke, and subarachnoid haemorrhage, while dynamic troponin change is associated with increased mortality only in patients with ischaemic stroke. Overall, serial troponin measurements may not improve mortality prediction beyond a single measurement. These findings may have implications for risk stratification of patients with acute stroke syndromes.

Conflict of Interest
No conflicts of interest
1.42–1.64; p < 0.00001) and this result remained robust on sensitivity analysis. The sampling population subgroup analysis suggests that the risk in men could be even higher based on studies that were part of health screening programmes (RR 2.88; 95% CI 2.16–3.83; p < 0.00001). However, the age subgroup analysis suggests that no statistically significant difference exists between the sexes beyond 50 years (RR 1.19; 95% CI 0.96–1.46; p = 0.11).

Conclusion This systematic review unequivocally demonstrates that men have a higher risk of new-onset AF than women in the general population. Future research could address the usefulness of screening programmes and provide more empirical evidence for older patients.

Conflict of Interest None