presenting with syncope, heart failure and atrial fibrillation. The purpose of this prospective study is to assess the safety and efficacy of this service in a large district general hospital.

Methods The baseline group (n = 710) were all patients admitted to the Acute Assessment Unit (AAU) in 2013 who had an echo that appeared to be discharge-dependent (defined as an echo performed on the day of discharge). The ambulatory group (n = 230) were consecutive patients referred to the new service for echo in the 6 months following the introduction of the service in 2015. We assessed length of stay in days and time to echo result in days in both groups. 30-day readmission, specialty referrals and estimated cost-savings were also assessed in the ambulatory group only.

Results Length of stay was lower in the ambulatory group compared to the baseline group (mean $0.57 \pm \text{SD } 2.12$ vs 5.12 ± 6.96 , $p < 0.00001$). Similarly, time to echo result was lower in the ambulatory group compared to the baseline group (0.82 ± 2.38 vs 2.02 ± 4.22 , $p = 0.00002$) (Figure 1). In the ambulatory group (Table 1), 25 patients (11%) were re-admitted at 30 days. 98 patients were referred to a specialty, most commonly cardiology (n = 74), neurology (n = 7) and respiratory (n = 5). Approximately 920 bed days were saved by offering echo in ambulatory care (assuming 4 days saved per patient). This amounts to an estimated £253,000 saving (assuming a cost of £275 per excess bed day) over 6 months.

Conclusion Echocardiography service in Ambulatory Emergency Care Unit reduces length of stay in hospital, provides rapid access to investigations for cardiac patients, with no significant increase in 30 day re-admission rates. The results show a significant cost savings together with improved quality of patient care.

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Ambulatory group demographics	n (%)
Age (mean $\pm$ SD)	62 $\pm$ 19
Male	112 (49%)
Syncope pathway	81 (35%)
Atrial fibrillation pathway	36 (16%)
Heart failure pathway	30 (13%)
Other cardiac pathway	45 (20%)
Non-cardiac pathway	38 (17%)
30-day readmission	25 (11%)

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SYNERGISTIC VALUE OF SIMULTANEOUS STRESS ECHOCARDIOGRAPHY AND CAROTID ULTRASOUND PERFORMED IN PATIENTS WITH SUSPECTED ANGINA WITHOUT KNOWN CORONARY ARTERY DISEASE FOR THE PREDICTION OF OUTCOME

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Background Presence of carotid artery disease has been shown to predict cardiovascular risk beyond traditional risk factors. However, the potential impact of carotid disease (CD) in patients undergoing stress echocardiography (SE) for new-onset chest pain without known coronary artery disease (CAD) is

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unknown. We hypothesised that information of ischemia and atherosclerosis which can be achieved simultaneously by ultrasound (SE and carotid ultrasound) can provide incremental prognostic information in these patients.

Methods Consecutive patients with no previous history of CAD investigated with SE for suspected angina underwent a simultaneous carotid ultrasound. Carotid plaque burden was assessed. Patients were followed up for combined major adverse cardiac events (MACE) of all-cause mortality, non-fatal myocardial infarction and unplanned coronary revascularization.

Results Of the 591 patients, (269 male (46%), mean age 59 ± 11 years), 67 (11%) demonstrated myocardial ischemia by SE. Prevalence of carotid plaque disease was higher (59%) but similar in normal and abnormal SE patients (58% vs. 66%, $p = 0.22$). At a mean of 37 months, 580 (98%) could be followed up during which 40 MACE occurred. In the multivariable model pre-test probability of CAD ($p = 0.001$), abnormal SE ($p < 0.0001$) and plaque burden ($p < 0.0001$) predicted MACE after adjusting for age, gender, cardiac risk factors and baseline drug therapy. MACE rate/year increased from 0.9% vs. 1.95% vs. 4.23% vs. 9.58% ($p < 0.0001$) in patients with no plaque and normal SE vs. presence of plaque and normal SE vs. no plaque and abnormal SE vs. plaque and abnormal SE, respectively. Figure demonstrates the prognostic value of simultaneous carotid plaque assessment and SE. When prognosis was assessed in a hierarchical manner as done clinically (pre-test probability of CAD followed by SE and carotid ultrasound), it showed significant increment in global chi square from 22.1 to 48.9 to 78.5 ($p < 0.0001$).

Conclusion In patients with suspected stable angina but without known CAD simultaneous SE (for ischemia) and carotid ultrasound (for atherosclerosis) provided synergistic prognostic value. This study supports simultaneous carotid ultrasound in

such patients investigated by SE and has implications in primary prevention treatment.

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DIAGNOSTIC ACCURACY OF STRESS ECHOCARDIOGRAPHY COMPARED WITH INVASIVE CORONARY ANGIOGRAPHY WITH FRACTIONAL FLOW RESERVE FOR THE DIAGNOSIS OF HAEMODYNAMICALLY SIGNIFICANT CAD IN PATIENTS WITH KNOWN OR SUSPECTED CAD

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Introduction Haemodynamically significant coronary artery disease (CAD) is an important indication for revascularisation. Wall motion analysis during stress echocardiography (SE) is a noninvasive alternative to invasive fractional flow reserve (FFR) for evaluating hemodynamically significant CAD. We sought to determine the diagnostic accuracy of SE compared with invasive coronary angiography with FFR for the diagnosis of hemodynamically significant CAD.

Methods and Results Between January 2008 and April 2015, all patients that underwent clinically indicated FFR measurements during invasive angiography and SE in close succession were analysed. Patients were excluded if tests were not done within 6 months of each other, or an intervening percutaneous coronary procedure or acute coronary syndrome occurred. 184 patients (mean age 66.5yrs, 59 (32%) female) were identified. The majority of patients underwent coronary angiography following SE. The prevalence of known CAD, diabetes

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