Introduction:
We conducted a forced error simulation study, to test efficacy of the WireSafe for Seldinger chest drain insertions. Guidewire retention accounts for 50% of never events in UK emergency medicine [1]. The WireSafe is an engineered solution which prevents this [2] and is currently being implemented by NHS England as an evidence-based, cost-effective preventative engineered solution for central venous catheter insertions [3].

Methods:
With IRB approval and written consent, 20 chest drain competent doctors, but with no knowledge of the WireSafe, were randomised to standard or WireSafe groups. They were presented with a scenario to complete, where a colleague who had been urgently called away midway during a Seldinger drain insertion. The manikin had a 12G drain in-situ with a visible guidewire ‘accidentally’ left in the lumen. If asked, the assistant stated only that the WireSafe was a new procedure pack containing the sutures and dressings which could be used as a sharps repository after placement.

Results:
The WireSafe prevented guidewire retention (100% WireSafe v 10% Standard, n=20, p<0.001, Fisher’s Exact test). In the WireSafe group participants underwent searches of trolley, floor and/or sharps bin before the realisation of the intra-luminal location of the wire and all were removed.

Conclusion:
The WireSafe was 100% successful in preventing the never event of chest drain guidewire retention alongside facilitating fixation and sharps disposal.

References:
[1] www.rcem.ac.uk/safetyalerts. 2017