Introduction:
Influenza is an acute viral illness with a significant financial burden. Point of care testing for influenza is available and has demonstrated accuracy [1,2], the current gap in knowledge is the question around the opportunity cost of influenza testing. If POCT is financially a less costly test this could free up scarce resource.

Methods:
The study adopts a cost minimisation approach. The point of care test is the Roche Cobas® Liat® machine which can detect flu A/B and is compared with the West of Scotland Specialist Virology centre’s established in house multiplex real time PCR assay. The model was developed using Microsoft Excel and has 2 arms comparing analysis of the above mentioned tests.

Results:
The model estimates that the total cost of POCT per patient tested is £3926.33 compared with £4053.92 for lab testing. This is a saving of £127.60 per patient when POCT is used. The result swings in favour of the lab test when POCT specificity falls to 95.72%. If the lab could provide the result of influenza testing within 12 hours the result would swing in favour of lab testing. Zanamivir which will potentially be used increasingly in the intensive care setting can more than double the difference between the 2 tests in favour of POCT.

Conclusion:
This research suggests that POCT offers potential cost savings in the ICU setting. This is the case as long as POCT specificity is higher than a threshold of 97.52% and the lab take longer that 12 hours to return the result. The sensitivity analysis should allow for external validity given the usual variations in ICU practice.

References:
Sensitivity analysis of the cost savings associated with POCT vs. formal lab testing. This table highlights what factors have the largest impact on cost between these 2 methods.