Introduction and objectives Pulmonary Rehabilitation (PR) improves exercise capacity and symptoms in patients with Chronic Obstructive Pulmonary Disease (COPD). However, the clinical benefits of supervised maintenance exercise following the completion of standard PR remains unclear. This study aimed to determine the effects on exercise capacity and symptoms in a maintenance exercise programme compared to usual care following standard PR completion.

Methods Following completion of PR, prospective data was collected between June 2017 to June 2018 from COPD patients attending a once weekly supervised maintenance exercise class and those receiving usual care. Key outcomes were the Incremental Shuttle Walk Test (ISWT) and COPD Assessment Test (CAT). Self-reported exacerbations and associated hospital admissions were also collected.

Results Forty four COPD patients were included (maintenance n=28 (15 male), mean (SD) age 74.5 (±6.6) years, FEV1 59.3 (±21.3)% predicted, MRC 3.1 (±0.6); control n=16 (8 male), mean (SD) age 71.3 (±9.8) years, FEV1 57.5 (±22.8)% predicted, MRC 3 (±0.7)). From baseline to follow up, there were significant, clinically relevant, mean differences in ISWT and CAT score between the maintenance and the control group (ISWT-0.3 m, 95% CI 70.6 to 21 vs −92.1 m, 95% CI 70.6 to −113.7 respectively; mean difference between groups 91.8 m, 95% CI 62.4 to 121.2, p≤0.0001; CAT −1.8, 95% CI −4.3 to 0.6 vs +5, 95% CI 1.7 to 8.2 respectively, mean difference between groups −6.8, 95% CI −10.7 to −2.8, p=0.0013). There was no significant difference between groups in self-reported exacerbations (p=0.91) or hospital admissions (p=0.24).

Conclusion A once weekly supervised exercise class following completion of PR prevented clinically relevant deterioration in exercise capacity and symptoms in patients with COPD compared to standard care. Further validation is warranted to determine the relevance of maintenance PR on long term health and service configuration.

Abstract P102 Figure 1 Mean change in incremental shuttle walk test from baseline to 12 months