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| **Reduced benefit of performing repeat 6MWTs after the first visit** |
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| **Introduction/Aim:** The ERS/ATS technical standard for field walk tests states there is strong evidence of a learning effect (increase in distance walked) when two or more six minute walk tests (6MWT) are conducted. However, there is a lack of data to determine if this effect persists in individuals who have previously performed 6MWTs or whether repeat walks affect the SpO2 nadir recorded. We aimed to determine whether the learning effect observed during 6MWTs is reduced on repeat visits and secondly, if the SpO2 nadir recorded is lowered on repeat walks.  **Method:** 162 participants (52% female, aged [mean±SD] 69±13 yrs, FEV1 %pred 80±22%) conducted 6MWTs at Royal Perth Hospital between January 2020 and December 2022. In line with 2014 ATS/ERS guidelines, two 6MWTs were performed on every occasion. Of the 162 participants, 20 attended a second visit within the study period (50% female, aged 70±13 yrs, FEV1 %pred 88±21%). Paired t-tests were used to compare distance walked and the Wilcoxon signed rank test was used to compare SpO2 nadirs.  **Results:**Consistent with previous reports, we observed a learning effect of 18m during the first visit (mean distance walk 1 367m vs walk 2 385m, 95%Cl 13 to 22, p<0.001). However, we observed no difference in the SpO2 nadir recorded during repeated walks (walk 1 & 2 median SpO2 93%, IQR 91% to 95%, p=0.260). In the 20 patients who attended for a second 6MWT, the learning effect was reduced at the second occasion. The learning effect at the first visit was 31m (95%CI 18 to 44, p<0.001) compared to 8m (95%CI -4 to 19, p=0.179) at the second visit (p=0.040).  **Conclusion:** We demonstrated that there is reduced benefit of performing repeat 6MWTs after the first visit and that there is no significant change in SpO2 nadir when conducting repeat walks.  **Key Words:** 6MWT, six minute walk test, learning effect  **Nomination for New Investigator Award:** No  **Grant Support:** N/A. |