



# Late Breaking Abstract - Effect on asthma control using a novel digital self-management system: a physician blinded randomised controlled cross-over pilot trial

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## Abstract

**Background:** Asthmatuner is a new self-management system that consists of a patient app, a cloud based storage solution and a healthcare interface. Patients use a Bluetooth spirometer (MIR SmartOne) to measure FEV1 and can register symptoms. They then receive immediate feedback on asthma control and an image of the correct inhaler(s) to use and the dose, coupled to their treatment plan. We aimed to evaluate the effect of Asthmatuner on asthma control test (ACT).

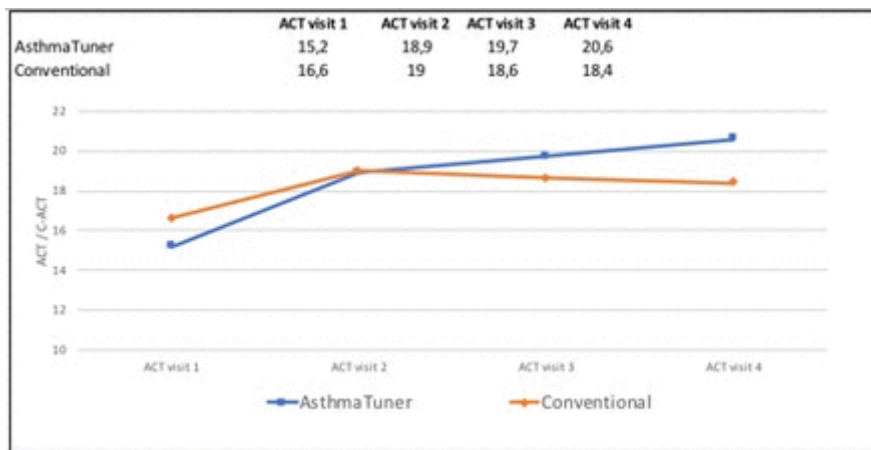
**Methods:** This cross-over pilot study evaluated 38 schoolchildren (mean age 11 years) with uncontrolled asthma (ACT <20 points), randomised to start 8 weeks with Asthmatuner or conventional management (paper personalized treatment plan), and with 2 weeks wash-out period between the periods. The outcome ACT was evaluated before and after each period with paired t-tests.

**Results:** Both Asthmatuner and conventional arm resulted in significantly improved ACT between visit one and two (mean score 3.7 vs 2.4, p-values <0.003) Figure 1. In addition, Asthmatuner improved the ACT between visit three and four (mean score 0.9 vs. - 0.2). When combining the two arms, the overall difference between Asthmatuner and conventional management did not reach statistical significance (p=0.23).

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**Conclusions:** AsthmaTuner improves asthma control. Our findings support the use of digital self-management for asthma.

## Footnotes

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