Body: Background Despite international guidelines asthma remains poorly controlled in many children. More accurate monitoring of asthma control by home monitoring might give room for improvement in the level of asthma control. Aim To compare two methods for assessment of asthma control: 1) home monitoring, based on daily forced expiratory volume in 1 second (FEV1) measurements and electronic symptom score; 2) a hospital visit by using the Asthma Control Questionnaire (ACQ). Methods Data were used from an observational study that included 102 children with asthma. Asthma control was assessed by means of a home monitor that included an electronic symptom score based on GINA criteria and FEV1. In the hospital the ACQ was filled out and FEV1 was measured. Bland Altman analysis was performed. Results In total, 80 children (mean age 9.7 years) with asthma had completed at least 50% of home monitor measurements within 7 days before hospital ACQ assessment (65% controlled, 19% partly controlled, 16% uncontrolled). The mean difference between methods was -0.06, with limits of agreement of -0.38 to 0.26 (figure 1).

Conclusion Agreement between the methods was weak. Home self-monitoring shows a different aspect of asthma control and might have added value in achieving better asthma control.