European Respiratory Society Annual Congress 2013

Abstract Number: 3280

Publication Number: P4899

Abstract Group: 5.2. Monitoring Airway Disease

Keyword 1: Asthma - management Keyword 2: Monitoring Keyword 3: Children

Title: Added value of electronic monitoring in the assessment of asthma control?

Ms. Dillys 19596 van Vliet dillys.van.vliet@mumc.nl MD ¹, Mr. Sjoerd 19597 Gulikers S-.gulikers@student.maastrichtuniversity.nl MD ², Ms. Sanne 19598 Vaassen semvaassen@gmail.com] MD ³, Ms. Marieke 19599 van Horck marieke.van.horck@mumc.nl MD ¹, Dr. Kim 19600 van de Kant kim.vande.kant@mumc.nl ¹, Dr. Jean 19603 Muris jean.muris@maastrichtuniversity.nl MD ⁴, Dr. Quirijn 19604 Jöbsis r.jobsis@mumc.nl MD ¹ and Prof. Dr Edward 19608 Dompeling edward.dompeling@mumc.nl MD ¹. ¹ Department of Paediatric Pulmonology, School for Public Health and Primary Care (CAPHRI), Maastricht University Medical Centre (MUMC+), Maastricht, Netherlands ; ² Department of Paediatrics, Atrium Medical Centre, Heerlen, Netherlands ; ³ Department of Paediatrics, VieCuri Medical Centre, Venlo, Netherlands and ⁴ Department of General Practice, CAPHRI, MUMC+, Maastricht, Netherlands .

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.¹ 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.