

**FIRST YEAR LUNG FUNCTION IMPROVEMENT OF PATIENTS REFERRED TO AN ADULT ASTHMA EDUCATION PROGRAM IN SOUTH OF BRAZIL**

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Introduction: patient education is considered a cornerstone of asthma treatment. Effective education and formation of a partnership between patients and physicians has been shown to reduce hospitalizations, emergency department visits, and frequency of severe asthma attacks while improve quality of life. Objectives: our primary objective was to evaluate the impact of an asthma education program on lung function. Methods: we hypothesized that, after a one year period, patients referred to an asthma education program had achieved better lung function in spirometry than controls with similar lung function at baseline. Cases were identified through program archives, monitored every three months or earlier and provided information about their disease and medications. Controls were defined as >12 years old patient that had performed follow-up spirometries and were identified through hospital's spirometry schedule. For both groups, first spirometry was stated at baseline once confirmed there was a one year follow-up exam. The primary objective was investigated through group X time interaction with linear mixed models using Toeplitz covariance structure. Significance was set to 0.05. Results: we identified 75 cases and 55 controls, who had similar VEF1 ( $1661\pm 745\text{mL}$  vs.  $1656\pm 780\text{mL}$ , respectively) and FVC ( $2478\pm 912\text{mL}$  vs.  $2518\pm 917\text{mL}$ ) at baseline. But for age (47,9 vs. 53,5,  $P=0,03$ ), groups were similar in other parameters. After one year and full adjustment, cases had improved their FEV1 to  $1867\pm 781\text{mL}$  vs.  $1648\pm 760\text{mL}$  of controls ( $P=0.001$  for group X time interaction) and their FCV to  $2761\pm 941\text{mL}$  vs.  $2533\pm 916\text{mL}$  of controls ( $P=0.003$  for group X time interaction). Conclusions: referral to an asthma education program is associated with substantial improvement on lung function parameters.