Title: Trends in diagnosis and long-term treatment of patients with asthma in primary health care facilities (1998-2011) in Saint-Petersburg, Russia

Body: Background. This study was performed to assess the changes in diagnosis and treatment of asthma (1998-2011) in primary health care facilities in Saint-Petersburg, the second largest city in Russia. Methods. Case record forms (CRF) of 1248 outpatients 18 to 89 years old with asthma were reviewed in 13 outpatient departments in 7 residential areas in Saint Petersburg in 1998, 2002 and 2005 (253, 579 and 416 respectively) and the telephone interviews with 205 asthma outpatients (aged 24 to 90 yrs) were conducted in 2011. Asthma control was assessed by using the Asthma Control Test™ (ACT) in 2011. Results. During the past 12 month spirometry were performed in 81.3% of patients in 2002 and only 62.1%, 50.7% and 26.8% in 1998, 2005 and 2011 respectively (p<0.01). Inhaled corticosteroids were more often prescribed to persistent asthma patients in 2005 (87.8% vs 79.1%, 63.4%, and 46% in 2011, 2002 and 1998, p<0.01), whereas oral steroids for maintenance therapy were more frequently used in 1998 and 2002 (32% and 28% vs 14.9% and 7.3% in 2005 and 2011, p<0.001). Fixed combinations of budesonide/formoterol and fluticasone/salmeterol were not used in 1998 while their prescriptions were increased from 0.9% in 2002 to 34.9% and 45.4% in 2005 and 2011(p<0.001). Asthma was uncontrolled for 72.2% of patients in 2011. Conclusion. Quality of diagnostics and treatment of asthma in primary health care is not sufficient and should be improved. Asthma pharmacotherapy has been changed in the past 13 years according to evidence-based guidelines.