

European Respiratory Society Annual Congress 2013

Abstract Number: 1374

Publication Number: P2096

Abstract Group: 6.3. Tobacco, Smoking Control and Health Education

Keyword 1: Smoking **Keyword 2:** Environment **Keyword 3:** Public health

Title: Significant reduction of COPD hospitalizations after implementation of a public smoking ban in Graubünden, Switzerland

Dr. Frank 12907 Dusemund frankdusemund@arcor.de MD ¹, Dr. Florent 12908 Baty Florent.Baty@kssg.ch ¹ and Prof. Martin Hugo 12909 Brutsche Martin.Brutsche@kssg.ch MD ¹. ¹ Pneumology, Kantonsspital St. Gallen, St. Gallen, Switzerland .

Body: Background Only few studies have examined the effect of public smoking bans on respiratory conditions. These showed reduced admission rates for different respiratory diseases. Objective of the present study was to evaluate the effect of the public smoking ban implemented in Graubünden, Switzerland, on the incidence of acute hospital admissions for COPD, pneumonia, asthma and bronchitis. Methods We searched a database including all nation-wide hospitalizations in Switzerland for COPD, pneumonia, asthma and bronchitis and analysed incidence rate ratios (IRR) before and after introduction of the smoking ban using Poisson regression and incidence rate ratios. Results After introduction of the smoking ban we observed a significant 22.4%-decrease in the incidence of COPD hospitalizations in Graubünden (IRR = 0.78 (0.68-0.88), $p < 0.001$). In the same period the incidence of COPD hospitalizations only slightly decreased by 7.0% in the rest of Switzerland (IRR = 0.93 (0.91-0.95), $p < 0.001$). The observed reduction in COPD incidence was significantly greater in Graubünden than in the rest of Switzerland ($p = 0.008$). For asthma, bronchitis and pneumonia, we could not find a significant decrease of incidence in Graubünden. Conclusion Our study supports the limited body of evidence demonstrating that a reduction of second hand smoke by legislated bans on smoking are associated with reduced rates of admission to hospital for respiratory conditions, hereby shown for COPD, in addition to the meanwhile well documented impact on cardiovascular disease.