

**Additional file 3: Description of variables included in negative binomial regression analyses**

Dependent variables		N	Included countries	Year	Source	Mean (range)	SD
Avoidable hospitalizations	Asthma admission rate per 100.000 population (age-sex stand.)	25	AUT, BEL, CZE, DNK, FIN, DEU, HUN, ISL, IRL, ITA, LVA, LUX, NLD, NOR, POL, PRT, SVK, SVN, ESP, SWE, CHE, ENG, AUS, CAN, NZL	2009-2012	OECD	48.7 (11.4-150.9)	34.1
	COPD admission rate per 100.000 population (age-sex stand.)	25	AUT, BEL, CZE, DNK, FIN, DEU, HUN, ISL, IRL, ITA, LVA, LUX, NLD, NOR, POL, PRT, SVK, SVN, ESP, SWE, CHE, ENG, AUS, CAN, NZL	2009-2012	OECD	209 (70.5-365.0)	82.5
	Diabetes: Short-term complication admission rate per 100.000 population (age-sex stand.)	23	AUT, BEL, CZE, DNK, FIN, DEU, HUN, ISL, IRL, ITA, LVA, NLD, NOR, POL, PRT, SVN, ESP, SWE, CHE, ENG, AUS, CAN, NZL	2009-2012	OECD	18.3 (7.8-37.5)	7.8
	Diabetes: Long-term complication admission rate per 100.000 population (age-sex stand.)	23	AUT, BEL, CZE, DNK, FIN, DEU, HUN, ISL, IRL, ITA, LVA, NLD, NOR, POL, PRT, SVN, ESP, SWE, CHE, ENG, AUS, CAN, NZL	2009-2012	OECD	87.6 (19.4-249.9)	61.4
	Uncontrolled diabetes admission rate per 100.000 population (age-sex stand.)	21	AUT, BEL, CZE, DNK, FIN, DEU, HUN, ISL, IRL, ITA, LVA, NOR, POL, PRT, ESP, SWE, CHE, ENG, AUS, CAN, NZL	2009-2012	OECD	43.2 (7.2-180.7)	40.5
	Congestive heart failure admission rate per 100.000 population (age-sex stand.)	24	AUT, BEL, CZE, DNK, FIN, DEU, HUN, ISL, IRL, ITA, LVA, NLD, NOR, POL, PRT, SVK, SVN, ESP, SWE, CHE, ENG, AUS, CAN, NZL	2009-2012	OECD	245.16 (56.5-595.4)	122.7
<b>Independent variables</b>							
Hospital beds	Number of hospital beds per 100.000 population	25	AUT, BEL, CZE, DNK, FIN, DEU, HUN, ISL, IRL, ITA, LVA, LUX, NLD, NOR, POL, PRT, SVK, SVN, ESP, SWE, CHE, ENG, AUS, CAN, NZL	2009-2012	OECD	4.6 (2.5-8.3)	1.7
Asthma prevalence	Population aged 15+ with asthma (%) (age-sex stand.)	19	AUT, BEL, CZE, DNK, FIN, DEU, HUN, IRL, ITA, LVA, LUX, NLD, POL, PRT, SVK, SVN, ESP, SWE, ENG	2007-2010	Eurostat Statistics Database	6.5 (2-11)	3.2
COPD prevalence	Population aged 15+ with COPD (%) (age-sex stand.)	19	AUT, BEL, CZE, DNK, FIN, DEU, HUN, IRL, ITA, LVA, LUX, NLD, POL, PRT, SVK, SVN, ESP, SWE, ENG	2007-2009	Eurostat Statistics Database	20.8 (13.1-31.9)	4.5
Diabetes prevalence	Population aged 20–79 with diabetes (%) (age stand.)	23	AUT, BEL, CZE, DNK, FIN, DEU, HUN, ISL, IRL, ITA, LVA, NLD, NOR, POL, PRT, SVN, ESP, SWE, CHE, ENG, AUS, CAN, NZL	2011	IDF	6.5 (3.2-14.9)	2.3
Smoking	population aged 15+ daily smokers (%)	18	AUT, BEL, CZE, DNK, FIN, DEU, HUN, IRL, ITA, LUX, NLD, POL, PRT, SVK, SVN, ESP, SWE, ENG	2006-2012	OECD	6.49 (3.2-14.9)	2.3