Table 5: Estimates of agreement, sensitivity, specificity, and predictive values for asthma algorithms

# Years		Algorithm	κ	Sens. (%)	Spec. (%)	Youden	PPV (%)	NPV (%)
1	1	1+P	0.37	28.7	98.7	0.27	64.1	94.5
	2	2+P	0.26	17.9	99.3	0.17	66.9	93.8
	3	1+Rx	0.52	57.0	96.1	0.53	53.8	96.5
	4	1+ H or 1+ P	0.38	30.1	98.6	0.29	62.6	94.6
	5	1+ H or 2+ P	0.27	19.2	99.1	0.18	63.8	93.9
	6	1+ H or 1+ P or 1+ Rx	0.52	60.5	95.6	0.56	52.2	96.8
	7	1+ H or 2+ P or 2+ Rx	0.50	47.2	97.6	0.45	60.7	95.9
2	8	1+P	0.42	38.9	97.5	0.36	55.2	95.2
	9	2+P	0.34	26.9	98.5	0.25	58.4	94.4
	10	1+Rx	0.50	65.3	94.0	0.59	46.5	97.1
	11	1+ H or 1+ P	0.43	40.8	97.3	0.38	54.4	95.4
	12	1+ H or 2+ P	0.35	28.8	98.2	0.27	56.8	94.5
	13	1+ H or 1+ P or 1+ Rx	0.49	68.6	93.0	0.62	43.8	97.4
	14	1+ H or 2+ P or 2+ Rx	0.54	59.0	96.3	0.55	56.0	96.7
3	15	1+P	0.48	49.0	96.7	0.46	54.6	96.0
	16	2+P	0.42	36.5	98.0	0.34	59.0	95.1
	17	1+Rx	0.51	72.4	92.8	0.65	44.7	97.7
	18	1+ H or 1+ P	0.49	51.2	96.5	0.48	54.2	96.1
	19	1+ H or 2+ P	0.43	38.6	97.8	0.36	57.9	95.2
	20	1+ H or 1+ P or 1+ Rx	0.48	74.4	91.4	0.66	41.0	97.8
	21	1+ H or 2+ P or 2+ Rx	0.56	65.9	95.6	0.62	54.6	97.2
5	22	1+P	0.50	60.3	94.9	0.55	48.6	96.8
	23	2+P	0.48	48.8	96.8	0.46	55.3	95.9
	24	1+Rx	0.48	80.6	90.1	0.71	39.4	98.3
	25	1+ H or 1+ P	0.50	61.5	94.7	0.56	48.2	96.9
	26	1+ H or 2+ P	0.48	50.1	96.6	0.47	54.3	96.0
	27	1+ H or 1+ P or 1+ Rx	0.44	84.1	87.9	0.72	35.8	98.6
	28	1+ H or 2+ P or 2+ Rx	0.55	75.1	93.8	0.69	49.1	97.9

Notes:

* # Years = number of years of administrative data to which the case ascertainment algorithm was applied. For example, 1+P in one year identifies individuals as disease cases if they had one or more physician billing claims with the relevant diagnosis code(s) in a one-year period. The algorithm 1+H or 2+P in one year identifies individuals as disease cases if they had one or more hospitalization or two or more physician claims with the relevant diagnosis code(s) in a one-year period.
* H = Hospital separation; P = Physician billing claim; Rx = Prescription drug record; PPV = Positive Predictive Value; NPV = Negative Predictive Value