

Appendix 1: Medline search strategy:

1	exp Asthma/
2	asthma*.mp.
3	(antiasthma* or anti-asthma*).mp.
4	Respiratory Sounds/
5	wheez*.mp.
6	bronchial spasm/
7	(bronchospas* or (bronch* adj3 spasm*)).mp.
8	exp bronchoconstriction/
9	(bronchoconstrict* or (bronch* adj3 constrict*)).mp.
10	Bronchial hyperreactivity/
11	Respiratory hypersensitivity/
12	((bronchial* or respirat* or airway* or lung* or pulmonary) adj3 (hypersensitiv* or hyperreactiv* or allerg* or insufficien*)).ti,ab.
13	((dust or mite*) adj3 (allerg* or hypersensitivity)).mp.
14	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13
15	Nitric Oxide/
16	nitric oxide.ti,ab.
17	(feno or eno or exhaled no).ti,ab.
18	(biomarker* or biological marker?).mp.
19	(marker? adj5 (inflamm* or eosinophil* or exhal* or breath* or airway? or asthma*)).mp.
20	((sign? or count?) adj5 (inflamm* or eosinophil*)).mp.
21	Biomarkers/
22	15 or 16 or 17 or 18 or 19 or 20 or 21
23	"Severity of Illness Index"/
24	treatment failure/
25	exacerbation?.mp.
26	(asthma* adj3 (exacerbat* or acute* or status or sever* or worse* or respon* or emergen* or attack? or crisis or morbidit* or event? or episode? or outcome?)).mp.
27	((acute* or sever*) adj3 (attack? or episode? or morbidit* or event?)).ti,ab.
28	(symptom* adj3 (exacerbat? or acute* or status or sever* or worse* or increas*)).mp.
29	exp Anti-Bacterial Agents/
30	(antibiotic? or anti-biotic? or antimicrob* or anti-microb* or antibacterial? or anti-bacterial?).mp.
31	exp *Adrenal Cortex Hormones/
32	exp Adrenal Cortex Hormones/ad, tu
33	exp Adrenal Cortex Hormones/ and (Drug Utilization/ or Drug Prescriptions/)
34	*Bronchodilator Agents/
35	Bronchodilator Agents/ad, tu
36	*Anti-Asthmatic Agents/
37	Anti-Asthmatic Agents/ad, tu

38	((steroid? or corticosteroid? or glucocorticoid? or dexamethasone or decadron or prednisolone or pediaped or prednisone or steraped or hydrocortisone or methylprednisolone or solucortef or solu-cortef or solumedrol or solu-medrol) adj5 (prescri* or utili* or use? or usage or modif* or adjust* or titrat* or control* or step* or intensi* or increas* or respon*)).ti,ab.
39	((steroid? or corticosteroid? or glucocorticoid? or dexamethasone or decadron or prednisolone or pediaped or prednisone or steraped or hydrocortisone or methylprednisolone or solucortef or solu-cortef or solumedrol or solu-medrol) adj5 (systemic or oral* or intravenous*)).ti,ab.
40	(steroid? or corticosteroid? or glucocorticoid? or dexamethasone or decadron or prednisolone or pediaped or prednisone or steraped or hydrocortisone or methylprednisolone or solucortef or solu-cortef or solumedrol or solu-medrol).ti.
41	((therap* or treat* or manag*) adj3 (systemic or oral* or intravenous*)).ti,ab.
42	((therap* or treat*) adj3 (response? or fail*)).ti,ab.
43	hospitalization/ or patient admission/
44	Emergency Service, Hospital/
45	(hospitali* or ((patient or hospital?) adj3 (admission? or admit*))).ti,ab.
46	(emergenc* adj3 (ward? or department? or dept? or unit? or hospital*)).ti,ab.
47	((emergenc* or unscheduled or unplanned) adj3 (visit? or attendance? or admission?)).ti,ab.
48	23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47
49	14 and 22 and 48
50	exp animals/ not humans.sh.
51	49 not 50
52	14 and 22
53	limit 52 to "reviews (maximizes specificity)"
54	51 or 53