1. **Asthma ICS Algorithm**

**Definition:**

1. Asthma patient definition:
	1. Include any principal diagnosis of 493.xx while ages 4-35yrs (at least 2 asthma codes on different days)
	2. Excluded if patient has diagnoses (at any time) of
		* Cystic Fibrosis 277.00 - 277.02
		* Immunodeficiency 279.xx
		* Bronchiectasis 494.0 - 494.1
		* Hereditary and degenerative diseases of CNS (331)
		* Mental Retardation (317,318,319)
		* Congestive Heart Failure 428-429.9
		* Pulmonary Hypertension, Embolism 415.11-415.19, 416.0 - 416.8, 417.XX
		* COPD 496
		* lupus (710.0)
		* RA (714.0)
		* Tuberculosis (511.1)
		* Lung cancer (162.\*)

|  |  |  |
| --- | --- | --- |
| **Generic** | **Trade Name** | **Route info required for generic?** |
| Beclomethasone | Beclovent, Qvar, Vanceril | Exclude nasal |
| Budesonide  | Budesonide Inhaled, Pulmicort | Exclude nasal |
| budesonide/ formoterol  | Symbicort, Vannair | No |
| ciclesonide  | Alvesco | Exclude nasal |
| flunisolide  | Aerobid | Exclude nasal |
| fluticasone  | Flovent Diskus, Flovent HFA | Exclude nasal |
| fluticasone/ salmeterol  | Advair HFA, Advair diskus | No |
| mometasone  | Asmanex | Exclude nasal and topical |
| mometasone/ formoterol  | Dulera | No |
| Triamcinolone | Azmacort | Require inhaled (also topical, IV, intraarticular, IM, nasal) |

* + - Sarcoidosis (135)
1. Must have inhaled corticosteroid use while ages 4-35:
2. **Asthma exacerbation**
3. **Inpatient hospitalizations :**
* Asthma +ics subjects
* Must have acute asthma exacerbation code or wheezing between check in/check out dates of inpatient stay.
* Must have oral/iv steroids between check in/check out dates of inpatient stay.
* Oral/iv steroids are limited to WIZ orders.
1. **Emergency hospitalizations separated from inpatient stay as above :**
* Start with inpatient hospitalization
* Must have “Emergency department” notes
* Absolute difference between check-in date (of inpatient stay) and entry date of emergency note is 1 day

Oral / IV steroid definition:

o   **Corticosteroid Medications**: Cortisone (Cortisone and Cortisone Acetate), Hydrocortisone (Hydrocortisone, Hydrocortisone Sodium Phosphate, Hydrocortisone Sodium Succinate, Hydrocortisone Acetate, Hydrocortisone Cypionate), Prednisone, Prednisolone (Prednisolone and Prednisolone Sodium Phosphate), Methylprednisolone (Methylprednisolone, Methylprednisolone Sodium Succinate, Methylprednisolone Acetate), Triamcinolone (Triamcinolone, Triamcinolone Acetonide, Triamcinolone Diacetate, Triamcinolone Hexacetonide), Dexamethasone (Dexamethasone, Dexamethasone Acetate, Dexamethasone Sodium Phosphate), Betamethasone (Betamethasone, Betamethasone Sodium Phosphate, Betamethasone Acetate)

o   Exclude if strength/dose includes a “%”

o   {[Route must be (IV, IM, or PO)] OR

[have a dose/strength (“MG|milligram|miligram”)]} AND

[Route not like intranasal|topical|inhaled]