**Table 1: CTV3 Read codes used to define asthma**

| N# | **CTV3 Read code** | **Definition** |
| --- | --- | --- |
| 1 | XaIR3 | Absent from work or school due to asthma |
| 2 | Xa9zf | Acute asthma |
| 3 | H333. | Acute exacerbation of asthma |
| 4 | Xafdj | Acute severe exacerbation of asthma |
| 5 | X101x | Allergic asthma |
| 6 | H33.. | Asthma |
| 7 | XaDvK | Asthma - currently active |
| 8 | XaDvL | Asthma - currently dormant |
| 9 | XaIIW | Asthma accident and emergency attendance since last visit |
| 10 | XaIeq | Asthma annual review |
| 11 | XE0YW | Asthma attack |
| 12 | XM0s2 | Asthma attack nos |
| 13 | XaINb | Asthma causes daytime symptoms 1 to 2 times per month |
| 14 | XaINc | Asthma causes daytime symptoms 1 to 2 times per week |
| 15 | XaINd | Asthma causes daytime symptoms most days |
| 16 | XaINZ | Asthma causes night symptoms 1 to 2 times per month |
| 17 | XaXZm | Asthma causes night time symptoms 1 to 2 times per week |
| 18 | XaXZp | Asthma causes symptoms most nights |
| 19 | 663N0 | Asthma causing night waking |
| 20 | XaJYe | Asthma clinical management plan |
| 21 | 1O2.. | Asthma confirmed |
| 22 | Y0024 | Asthma control |
| 23 | 8793. | Asthma control step 0 |
| 24 | 8794. | Asthma control step 1 |
| 25 | 8795. | Asthma control step 2 |
| 26 | 8796. | Asthma control step 3 |
| 27 | 8797. | Asthma control step 4 |
| 28 | 8798 | Asthma control step 5 |
| 29 | XaQHq | Asthma control test |
| 30 | XaIIZ | Asthma daytime symptoms |
| 31 | 663N. | Asthma disturbing sleep |
| 32 | 663N2 | Asthma disturbs sleep frequently |
| 33 | 663N1 | Asthma disturbs sleep weekly |
| 34 | XaIOV | Asthma finding |
| 35 | XaIer | Asthma follow-up |
| 36 | Y137e | Asthma guidance |
| 37 | 663P. | Asthma limiting activities |
| 38 | XaXZs | Asthma limits activities 1 to 2 times per month |
| 39 | XaXZu | Asthma limits activities 1 to 2 times per week |
| 40 | XaXZx | Asthma limits activities most days |
| 41 | XaINf | Asthma limits walking up hills or stairs |
| 42 | Xaam3 | Asthma management plan declined |
| 43 | 663x. | Asthma limits walking on the flat |
| 44 | 663U. | Asthma management plan given |
| 45 | XaIfK | Asthma medication review |
| 46 | 9OJ3. | Asthma monitor offer default |
| 47 | XM1Xb | Asthma monitoring |
| 48 | 9OJZ. | Asthma monitoring admin.nos |
| 49 | XaIu6 | Asthma monitoring by doctor |
| 50 | XaIu5 | Asthma monitoring by nurse |
| 51 | XaBU2 | Asthma monitoring call |
| 52 | 9OJ4. | Asthma monitoring call first letter |
| 53 | 9OJ5. | Asthma monitoring call second letter |
| 54 | 9OJ8. | Asthma monitoring call telephone invite |
| 55 | 9OJ6. | Asthma monitoring call third letter |
| 56 | 9OJ7. | Asthma monitoring call verbal invite |
| 57 | XE2Nb | Asthma monitoring check done |
| 58 | XaIRN | Asthma monitoring due |
| 59 | Xabj3 | Asthma monitoring invitation email |
| 60 | XacLz | Asthma monitoring sms text message 1st invitation |
| 61 | XacM0 | Asthma monitoring sms text message 2nd invitation |
| 62 | XacM1 | Asthma monitoring sms text message 3rd invitation |
| 63 | XaBU3 | Asthma monitoring status |
| 64 | Xabiu | Asthma monitorng invit sms (short message servce) txt messge |
| 65 | XaINa | Asthma never causes daytime symptoms |
| 66 | XaY2V | Asthma never causes night symptoms |
| 67 | 663O0 | Asthma never disturbs sleep |
| 68 | 663f. | Asthma never restricts exercise |
| 69 | XaIoE | Asthma night-time symptoms |
| 70 | XE0YX | Asthma nos |
| 71 | 663O. | Asthma not disturbing sleep |
| 72 | 663Q. | Asthma not limiting activities |
| 73 | 663W. | Asthma prophylactic medication used |
| 74 | Y0045 | Asthma prophylaxis drug id |
| 75 | 663e. | Asthma restricts exercise |
| 76 | XaX3n | Asthma review using roy colleg of physicians three questions |
| 77 | XaYb8 | Asthma self-management plan agreed |
| 78 | XaYZB | Asthma self-management plan review |
| 79 | 663e1 | Asthma severely restricts exercise |
| 80 | 663V. | Asthma severity |
| 81 | 663e0 | Asthma sometimes restricts exercise |
| 82 | XaIIX | Asthma treatment compliance satisfactory |
| 83 | XaIIY | Asthma treatment compliance unsatisfactory |
| 84 | XaIww | Asthma trigger |
| 85 | XaObi | Asthma trigger - airborne dust |
| 86 | XaLIr | Asthma trigger - animals |
| 87 | XaLJS | Asthma trigger - cold air |
| 88 | XaLJT | Asthma trigger - damp |
| 89 | Y01eb | Asthma trigger - dust mites |
| 90 | XaLJU | Asthma trigger - emotion |
| 91 | XaObj | Asthma trigger - exercise |
| 92 | YA598 | Asthma trigger - humidity |
| 93 | XaObk | Asthma trigger - pollen |
| 94 | XaLIm | Asthma trigger - respiratory infection |
| 95 | XaLIn | Asthma trigger - seasonal |
| 96 | XaObl | Asthma trigger - tobacco smoke |
| 97 | XaObm | Asthma trigger - warm air |
| 98 | YA599 | Asthma trigger - wind |
| 99 | Y0142 | Asthma trigger other |
| 100 | H33z. | Asthma unspecified |
| 101 | Xa0lZ | Asthmatic bronchitis |
| 102 | Ua1AX | Brittle asthma |
| 103 | XaIQ4 | Change in asthma management plan |
| 104 | X101t | Childhood asthma |
| 105 | X1027 | Colophony asthma |
| 106 | XaJ2A | Did not attend asthma clinic |
| 107 | 9OJ1. | Attends asthma monitoring |
| 108 | XaR8K | Did not attend asthma review |
| 109 | 8H2P. | Emergency admission, asthma |
| 110 | 663d. | Emergency asthma admission since last appointment |
| 111 | H335. | Chronic asthma with fixed airflow obstruction |
| 112 | Xa1hD | Exacerbation of asthma |
| 113 | XaJ50 | Excepted from asthma quality indicators: informed dissent |
| 114 | XaJ4z | Excepted from asthma quality indicators: patient unsuitable |
| 115 | XaJ4W | Exception reporting: asthma quality indicators |
| 116 | 173A. | Exercise-induced asthma |
| 117 | X1020 | Hay fever with asthma |
| 118 | 679J. | Health education - asthma |
| 119 | XaRFj | Health education - asthma self management |
| 120 | XaRFl | Health education - structured patient focused asthma discuss |
| 121 | Y139d | Indicators - asthma attack |
| 122 | H330. | Extrinsic (atopic) asthma |
| 123 | H330z | Extrinsic asthma NOS |
| 124 | H3301 | Extrinsic asthma with status asthmaticus |
| 125 | H3300 | Extrinsic asthma without status asthmaticus |
| 126 | Xafdz | Life threatening acute exacerbation of asthma |
| 127 | 663V1 | Mild asthma |
| 128 | 663V2 | Moderate asthma |
| 129 | XaLPE | Nocturnal asthma |
| 130 | XE0YT | Non-allergic asthma |
| 131 | XaINh | Number of asthma exacerbations in past year |
| 132 | 663V0 | Occasional asthma |
| 133 | H331. | Intrinsic asthma |
| 134 | H331z | Intrinsic asthma NOS |
| 135 | H3311 | Intrinsic asthma with status asthmaticus |
| 136 | H3310 | Intrinsic asthma without status asthmaticus |
| 137 | H33z2 | Late-onset asthma |
| 138 | XaRFi | Patient has a written asthma personal action plan |
| 139 | XaBAQ | Recent asthma management |
| 140 | H332. | Mixed asthma |
| 141 | 9OJ2. | Refuses asthma monitoring |
| 142 | XaNKw | Royal college of physicians asthma assessment |
| 143 | XaXa0 | Royal college physician asthma assessment 3 question score |
| 144 | 663V3 | Severe asthma |
| 145 | X102D | Status asthmaticus |
| 146 | H33z0 | Status asthmaticus NOS |
| 147 | XaIQE | Step down change in asthma management plan |
| 148 | XaIQD | Step up change in asthma management plan |

**Table 2: Medications related to treatment of asthma**

|  |  |  |
| --- | --- | --- |
| N# | BNF subsection | Medications |
| 1 | 03.01 | Bronchodilators  Formoterol fumarate, Salbutamol, Salmeterol, Terbutaline sulphate, Ipratoropium bromide,  Atrovent, almeterol, salamol, Orciprenaline |
| 2 | 03.02 | Corticosteroids  Beclometasone diproprionate, Budesonide, Ciclesonide, Fluticasone |
| 3 | 03.03 | Cromoglicate, related therapy and leukotriene receptor antagonists  Sodium cromoglicate, montelukast |

**Table 3: CTV3 Read codes used to define atopic eczema**

|  |  |  |
| --- | --- | --- |
| **N#** | **CTV3 Read code** | **Definition** |
| 1 | X505K | Eczema |
| 2 | XE1Av | Eczema nos |
| 3 | M111. | Atopic dermatitis |
| 4 | M11.. | Atopic dermatitis and related conditions |
| 5 | M112. | Infantile eczema |
| 6 | M12z0 | Dermatitis nos |
| 7 | XaINM | Exacerbation of eczema |
| 8 | XaY4o | Infected eczema |
| 9 | XE1C6 | Atopic eczema/dermatitis nos |
| 10 | XaINK | Dry eczema |
| 11 | M113. | Flexural atopic dermatitis |
| 12 | Xa7lZ | Eczema of face |
| 13 | X505M | Constitutional eczema |
| 14 | Xa0p8 | Dermatitis of eyelid |
| 15 | XaY4Z | Infective eczematoid dermatitis |
| 16 | X505L | Hand eczema |
| 17 | X505P | Discoid atopic dermatitis |
| 18 | X505R | Follicular atopic dermatitis |
| 19 | M11z. | Atopic dermatitis nos |
| 20 | M114. | Allergic (intrinsic) eczema |

## Table 4: Medications and procedures related to treatment of atopic eczema

|  |  |  |
| --- | --- | --- |
| N# | BNF subsection | Medications |
| 1 | - | Ultraviolet light therapy  Procedure: not searched for as not usually recommended for children. |
| 2 | 13.04 | Emollients  Procedure: search for the BNF sub section number |
| 3 | 13.02 | Topical corticosteroids  Procedure: search for the BNF sub section number |
| 4 | 13.05 | Topical calcineurin inhibitors  Procedure: Text mining in case insensitive manner for the terms “pimecrolimus” and “tacrolimus”. The following prescriptions were found: pimecrolimus 1% cream; tacrolimus 0.03% ointment; tacrolimus 0.1% ointment. |
| 5 | 13.05  08.02 | Systemic immunomodulatory agents  Text mining in case insensitive manner for the terms “azathioprine”, “mycophenolate”, “methotrexate”, “cyclosporine” and “ciclosporin”. The following prescriptions were found: azathioprine 50mg tablets; methotrexate 5mg/2ml solution for inject; mycophenolatemofetil 1g/5ml oral suspen |
| 6 | 06.03 | Systemic steroids, in two steps.  1st: Text mining in case insensitive manner for all possible names of corticosteroids: prednisolone, dexamethasone, budesonide, hydrocortisone, beclomethasone, betamethasone, clobetasone, rimexolone, triamcinolone, loteprednol, fluorometholone, loteprednol, ciclesonide, cortisone, ceflazacort, fludrocortisone.  2nd: The list was discussed with a clinician and the following code and medications were considered as systemic. The following medications were found: fludrocortisone, hydrocortisone, betamethasone, dexamethasone, efcortesol and prednisolone. |

**Table 5: CTV3 Read codes used to define hay fever**

|  |  |  |
| --- | --- | --- |
| N# | CTV3 Read code | Definition |
| 1 | Xa0lX | Seasonal allergic rhinitis |
| 2 | XE0Y5 | Allergic rhinitis |
| 3 | X00Zj | Seasonal allergic conjunctivitis |
| 4 | X00l9 | Hay fever - unspecified allergen |
| 5 | H17z. | Allergic rhinitis NOS |
| 6 | X00Zk | Perennial allergic conjunctivitis |
| 7 | X1020 | Hay fever with asthma |
| 8 | XE16b | Other chronic allergic conjunctivitis |
| 9 | X00lA | Perennial allergic rhinitis |
| 10 | X00l8 | Hay fever - other allergen |
| 11 | XE2QI | Allergic rhinitis due to pollens |
| 12 | H172. | (Hay fever) or (allergic rhinitis) due to unspecif allergen |
| 13 | X00Zi | Atopic conjunctivitis |
| 14 | H170. | Pollinosis (& allergic rhinitis due to pollens) |
| 15 | XE0Y7 | Allergic rhinitis due to unspecified allergen |
| 16 | Hyu21 | [X]other allergic rhinitis |
| 17 | F4C14 | Allerg conjunctivitis &/or oth chron allergic conjunctivitis |
| 18 | Hyu20 | [X]other seasonal allergic rhinitis |
| 19 | X00lB | Perennial allergic rhinitis with seasonal variation |
| 20 | XE0Y6 | Allergic rhinitis due to other allergens |

**Table 6: Medications related to treatment of hay fever**

|  |  |  |
| --- | --- | --- |
| N# | BNF subsection | Medications |
| 1 | 03.04 | Antihistamines  Alimemazine, Cetirizine hydrochloride, Chlorphenamine maleate, Desloratadine, Fexofenadine hydrochloride, Loratadine, Promethazine teoclate, Diphenhydramine |
| 2 | 12.02 | Intranasal corticosteroids  Beclometasone dipropionate, Budesonide, Fluticasone, Mometasone furate, Triamcinolone acetonide |