

Guidance document for processing PM-JAY packages

1. Chronic Cough

2. Wheezing

Procedures covered: 2

Specialty: Pediatric Medical Management

Package name	Procedure name	HBP 1.0 code	HBP 2.0 code	Package price (INR)
Chronic Cough	Chronic Cough	M200015	MP019A	General Ward- 1800/- HDU – 2700/- ICU without ventilator– 3600/- ICU with Ventilator– 4500/-
Wheezing	Wheezing	M200016	MP018A	General Ward- 1800/- HDU – 2700/- ICU without ventilator– 3600/- ICU with Ventilator– 4500/-

ALOS: 1 day (Once diagnosis is established the case can be booked in the relevant package, further stay/admission should be decided based on the level of complications of the disease)

Minimum qualification of the treating doctor:

Essential: MD/DNB/DCH/ equivalent (Pediatric Medicine), DM/DNB/ equivalent (Pulmonology)

Special empanelment criteria/linkage to empanelment module: Care at Tertiary Hospital

Disclaimer:

For monitoring and administering the claim management process of **Chronic cough and Wheezing**, NHA shall be following these guidelines. This document has been prepared for guidance of PROCESSING TEAM and TRANSACTION MANAGEMENT SYSTEM of AB PM-JAY for the claims of procedures mentioned above. The hospitals can also refer to this document so that they have the insight on how the claims will be processed. However, this document doesn't provide any guidance on clinical and therapeutic management of patient. In that respect the hospitals and physicians may refer to any other relevant material as per the extant professional norms.

PART I: Guidelines for Clinicians and Healthcare Providers

1.1 Objective:

The purpose of this section is to act as a guidance & a clinical decision support tool for the clinicians in deciding the line of treatment, plan clinical management of patient and decide referral of cases to the appropriate level of care (as required) for treatment of patients under PMJAY and selection of corresponding Health Benefit Package.

It will also serve as a tool for hospitals to determine and submit the mandatory documents required for claiming reimbursement of health benefit package under PMJAY.

1.2 Clinical key pointers:

Proceed with Chronic cough and Wheezing only if diagnosis made is backed by clinical manifestation:

Chronic cough

Chronic cough in children 14 years and younger usually is defined as a daily cough lasting four or more weeks.

Causes of chronic cough in children

Primary cause	Risk factors or mechanisms	Major evaluation method (in addition to clinical findings)
Pulmonary causes		
Aspiration* (recurrent small volume)	<ul style="list-style-type: none"> Primary swallowing dysfunction or laryngeal disorders (eg, laryngeal cleft, trachea-esophageal fistula), gastroesophageal reflux, achalasia 	<ul style="list-style-type: none"> Swallowing assessment (eg, videofluoroscopic) and other evaluation as indicated[¶]
Asthma, cough-dominant asthma*	<ul style="list-style-type: none"> Genetics, environment, atopy, post-acute respiratory infections 	<ul style="list-style-type: none"> Lung function, airway hyperresponsiveness
Chronic endobronchial suppurative disease* (protracted bacterial bronchitis, chronic suppurative lung disease, bronchiectasis)	<ul style="list-style-type: none"> Cystic fibrosis Immunodeficiency (primary or secondary) Primary ciliary dyskinesia Aspiration 	<ul style="list-style-type: none"> Sweat test, genetic screening Evaluation of immune function Cilia biopsy, genetic testing Refer to "Aspiration" above
Chronic pneumonia*	<ul style="list-style-type: none"> Chronic atelectasis, mucous plugging, plastic bronchitis Pathogens include tuberculosis, nontuberculous mycobacteria, mycoplasma, fungi, and chlamydia 	<ul style="list-style-type: none"> Chest CT, bronchoscopy Relevant microbial assessment (eg, QuantiFERON gold and Gene Xpert for tuberculosis)
Eosinophilic lung disease*	<ul style="list-style-type: none"> Primary or secondary (ie, related to parasitic disease) 	<ul style="list-style-type: none"> Bloods and bronchoalveolar lavage
Inhaled retained foreign body*	<ul style="list-style-type: none"> Young child, history of choking (even if days or weeks before cough onset) 	<ul style="list-style-type: none"> Bronchoscopy
Interstitial lung disease*	<ul style="list-style-type: none"> Primary genetic abnormality, post-severe infection bronchiolitis obliterans, autoimmune disease, radiation, drugs 	<ul style="list-style-type: none"> Relevant genetic or autoimmune test, ± lung biopsy
Mechanical inefficiency	<ul style="list-style-type: none"> Tracheobronchomalacia and other airway anomalies Vascular rings or other anomalies that cause tracheal narrowing 	<ul style="list-style-type: none"> Dynamic bronchoscopy Chest CT with contrast Chest MRI (if vascular cause suspected)
Noninfective bronchitis*	<ul style="list-style-type: none"> Exposure to environmental pollutants (eg, tobacco smoke, fungi, traffic) 	<ul style="list-style-type: none"> History and removal of trigger
Postinfection (self-resolving)	<ul style="list-style-type: none"> Viral infections, pertussis, parainfluenza 	<ul style="list-style-type: none"> PCR and/or serology
Space-occupying lesions*	<ul style="list-style-type: none"> Cysts and tumors 	<ul style="list-style-type: none"> Chest CT or MRI scan
Extrapulmonary causes		
Cardiac*	<ul style="list-style-type: none"> May cause cough due to airway compression, pulmonary edema, or arrhythmia 	<ul style="list-style-type: none"> ECG and other evaluation as indicated
Ear disease*	<ul style="list-style-type: none"> Oto-respiratory reflex (Arnold reflex), in which stimulation of the auricular branch of the vagus nerve triggers cough 	<ul style="list-style-type: none"> Examination of the ear canal, and removal of the object or treatment of disease that is triggering the cough
Esophageal disorders	<ul style="list-style-type: none"> Gastroesophageal reflux (acid and non-acid) 	<ul style="list-style-type: none"> Esophageal pH monitoring or impedance monitoring, ± endoscopy
Medications*	<ul style="list-style-type: none"> ACE inhibitors (common); any inhaled medication, proton pump inhibitors, other drugs (uncommon) Certain other medications (eg, cytotoxic drugs) may be associated with interstitial lung disease 	<ul style="list-style-type: none"> Discontinuation of medication Evaluation for interstitial lung disease (eg, HRCT)
Habit cough (tic cough)*	<ul style="list-style-type: none"> May be isolated, but more likely if other tics are present 	<ul style="list-style-type: none"> Suppressibility, distractibility, suggestibility, variability, and the presence of a premonitory sensation; cough absent during sleep. Response to behavioral therapy (eg, suggestion therapy)
Somatic cough disorder (psychogenic cough)*	<ul style="list-style-type: none"> More likely in individuals with generalized anxiety or other somatic symptom disorders 	<ul style="list-style-type: none"> Disproportionate thoughts and anxiety about the seriousness of symptoms Response to reassurance, counseling, or psychotherapy
Upper airway pathology	<ul style="list-style-type: none"> Chronic sinusitis, obstructive sleep disorders^Δ 	<ul style="list-style-type: none"> Evaluation guided by suspected disorder (CT, polysomnography)

CT: computed tomography; MRI: magnetic resonance imaging; PCR: polymerase chain reaction; ECG: echocardiogram; ACE: angiotensin-converting enzyme; HRCT: high-resolution computerized tomography.

* Children with these disorders typically have specific signs and symptoms that are clues to the underlying disease, sometimes known as specific cough "pointers."

¶ Evaluation for suspected aspiration may include bronchoscopy, esophageal pH monitoring or impedance monitoring, endoscopy, nuclear medicine scans. Refer to UpToDate topic on evaluation of children with suspected swallowing dysfunction.

Δ Possibly related to aspiration of secretions rather than primary pathology.

Presenting complaint:

- Daily cough lasting for four or more weeks

Associated medical conditions:

- Specific cough is associated with clinical features suggestive of an underlying etiology - chest pain, dyspnea, digital clubbing, feeding problems, failure to thrive, hemoptysis, episode of choking and abnormal pulmonary auscultation
- Nonspecific cough is typically a dry cough for which no underlying etiology is identifiable after a thorough assessment

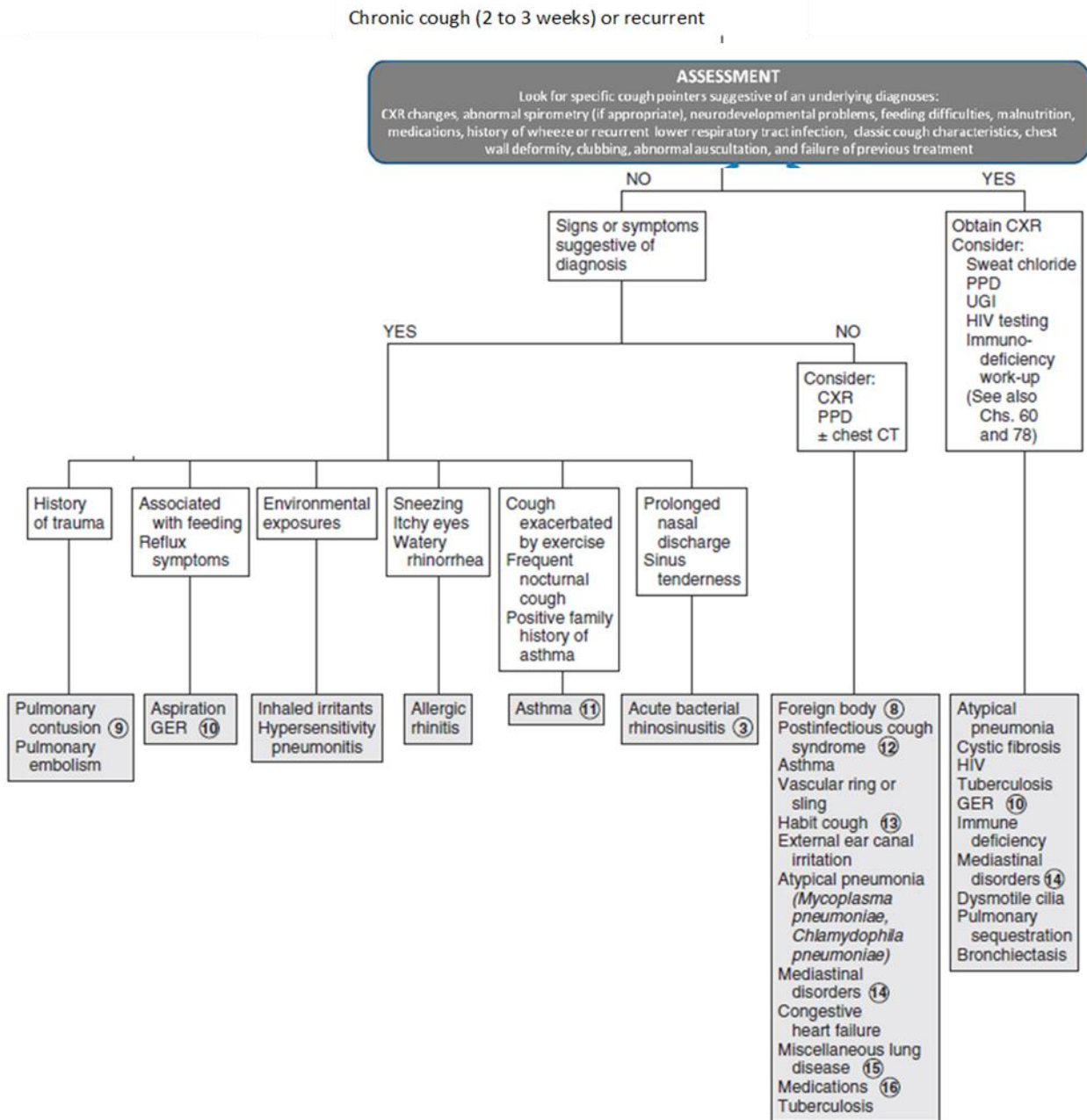
Signs and symptoms suggesting a specific cause of cough in children (specific cough "pointers")

Specific chronic cough "pointer"	Possible major underlying etiology
History	
Pulmonary symptoms	
▪ Chronic wet or productive cough*	Suppurative lung diseases (protracted bacterial bronchitis, chronic suppurative lung disease, bronchiectasis), aspiration, abscess, cavitations
▪ Hemoptysis	Infection (eg, tuberculosis), interstitial lung disease, bronchiectasis, autoimmune lung disease
▪ Wheeze (at rest or on exertion)	Asthma (if no other specific cough pointer present other than spirometry, and dyspnea that responds to bronchodilators); bronchiectasis, eosinophilic disorders (if other specific cough pointer[s] present)
▪ Dyspnea (at rest or on exertion)	Asthma or any severe lung disease
▪ Classically recognizable cough sounds [†]	These cough characteristics (eg, barking, honking, whooping) often suggest a specific cause of cough [†]
▪ Recurrent pneumonia	Immunodeficiency, obstructed airways or any conditions causing bronchiectasis
Timing and triggers	
▪ Symptoms from neonatal period	Congenital abnormality related to airways, immune function, or causes with predisposition to bronchiectasis (eg, primary ciliary dyskinesia)
▪ Onset after an episode of choking	Inhaled retained foreign body
▪ Cough worsens when child is anxious or attention is focused and is absent during sleep. Cough improves with distraction or suggestion and can be voluntarily suppressed	Habit cough (tic cough)
▪ Child has disproportionate thoughts and anxiety about the seriousness of symptoms	Somatic cough disorder (psychogenic cough)
Associated symptoms or conditions	
▪ Cardiac disease	Primary cardiac disease causing cough, tracheomalacia or primary ciliary dyskinesia
▪ Neurologic and developmental abnormalities	Aspiration
▪ Feeding difficulties	Laryngeal or trachea disorders, aspiration
▪ Failure to thrive	Any severe lung disease, cystic fibrosis, immunodeficiency, indolent infections (eg, tuberculosis)
▪ Exposure to tuberculosis, pertussis, and/or sick animals and travel history	Tuberculosis and other mycobacterium, pertussis, parasites (eg, <i>Toxocara</i>), and/or zoonoses (eg, trematodes, <i>Strongyloides</i> , Q fever)
▪ History of deep infections ± immunodeficiency (primary or secondary to cancer treatment or medications)	Opportunistic infections (eg, fungal)
▪ Autoimmune disease	Interstitial lung disease
▪ Angiotensin-converting enzyme inhibitor use	Known adverse effect of angiotensin-converting enzyme inhibitor
▪ Chronic fever	Indolent infection with or without immunodeficiency
Examination	
Digital clubbing	Bronchiectasis or interstitial lung disease
Chest wall abnormality	Any lung disease, neuromuscular disease
Wheezing or crepitations	Any lung disease; in particular, asthma, bronchiolitis obliterans, bronchiectasis (from any cause), bronchopulmonary dysplasia, heart failure, immunodeficiency and aspiration
Hypoxia	Any lung disease
Routine investigations/tests	
Abnormal chest radiography	Any lung disease
Abnormal spirometry	Obstructive or restrictive lung/chest wall diseases

* In young children, wet cough is substituted for productive cough.

[†] Classically recognized characteristics are a cough that sounds barking/brassy, honking, paroxysmal/whooping or staccato, or that produces casts. Refer to separate table on classically recognizable cough sounds for details.

Careful consideration of other underlying pulmonary or systemic disorders should be made in children with chronic or recurring cough, including detailed history, thorough physical examination, and assessment of specific cough pointers, to guide the diagnosis, testing, and management



Wheezing

Wheezing is a common presenting symptom of respiratory disease in infants and children. Wheezing may be either a benign, self-limited process or the presenting symptom of a significant respiratory disease. Wheezing during infancy could be due to viral infections. Wheezing in asthma is recurrent, gets worse in night and after exercise, seasonal and may be associated with other allergic illnesses like atopic dermatitis, allergic rhinitis etc. Clinical features suggestive of other cause of wheezing are: neonatal onset, associated with difficulty in feeding, choking or vomiting, localized findings in chest or abnormality in cardiovascular system.

Causes of wheezing in children

Acute	Chronic or recurrent
Asthma	Structural abnormalities
Bronchiolitis*	Tracheo-bronchomalacia*
Laryngotracheobronchitis ¶	Vascular compression/rings*
Atypical infection (<i>Mycoplasma pneumoniae</i>) ^Δ	Tracheal stenosis/webs*
Bacterial tracheitis	Cystic lesions/masses
Foreign body aspiration ¶	Tumors/lymphadenopathy
Esophageal foreign body	Cardiomegaly
	Functional abnormalities
	Asthma
	Gastroesophageal reflux
	Recurrent aspiration
	Cystic fibrosis
	Immunodeficiency
	Primary ciliary dyskinesia
	Bronchopulmonary dysplasia
	Retained foreign body (trachea or esophagus)
	Bronchiolitis obliterans
	Pulmonary edema
	Inducible laryngeal obstruction (vocal cord dysfunction) ^Δ
	Interstitial lung disease

* These disorders tend to present in infancy.

¶ These disorders are more commonly seen in young children (toddlers and preschoolers).

Δ These disorders are more commonly seen in teenagers.

Presenting complaint:

- Noisy breathing
- Increased work of breathing such as fast breathing, chest indrawing
- high pitched musical sound heard during expiration

Associated symptoms:

- fever



- weight loss
- night sweats
- dysphagia

Admission required if respiratory distress persists after failure to immediate management or recurrent wheezing.

Wheeze can be divided according to its pattern and duration:

1. Wheeze subtypes according to pattern (symptomatic classification):

- a. Episodic wheeze: Wheezing within a discrete period that is often associated with clinical evidence of a viral cold. There is wheezing between episodes
- b. Multi-trigger wheeze: Wheezing presenting with and apart from an acute viral episode

2. Wheeze according to duration:

- a. Never or infrequent: Children who never wheeze or have presented with wheezing once in their life.
- b. Transient early wheeze: This is a type of wheeze that starts early in the first year of life and then continues through the second year before beginning to subside after the third year.
- c. Intermediate wheeze: This condition presents as wheezing with onset between 18 and 42 months that subsequently persists into later childhood and is strongly associated with atopy, allergic sensitization, hyperresponsiveness, and lower PFT scores
- d. Late-onset wheeze: This presents as infrequent wheezing from 6 to 42 months old age that becomes more frequent at 42 months of age and then persists to an age of 6 years. Allergies in the nose are also commonly associated with late-onset wheezing, similar to smoke exposure is known to be a risk factor in males
- e. Persistent wheeze: This is wheeze with onset at 6 months of age or later. This subgroup presents with symptoms similar to asthma, and affected patients are further divided into two main subgroups: Nonatopic persistent wheezing phenotype and IgE-associated atopic and/or persistent wheezing phenotype.

FOCUS THE WHEEZING CHILD: AN ALGORITHM

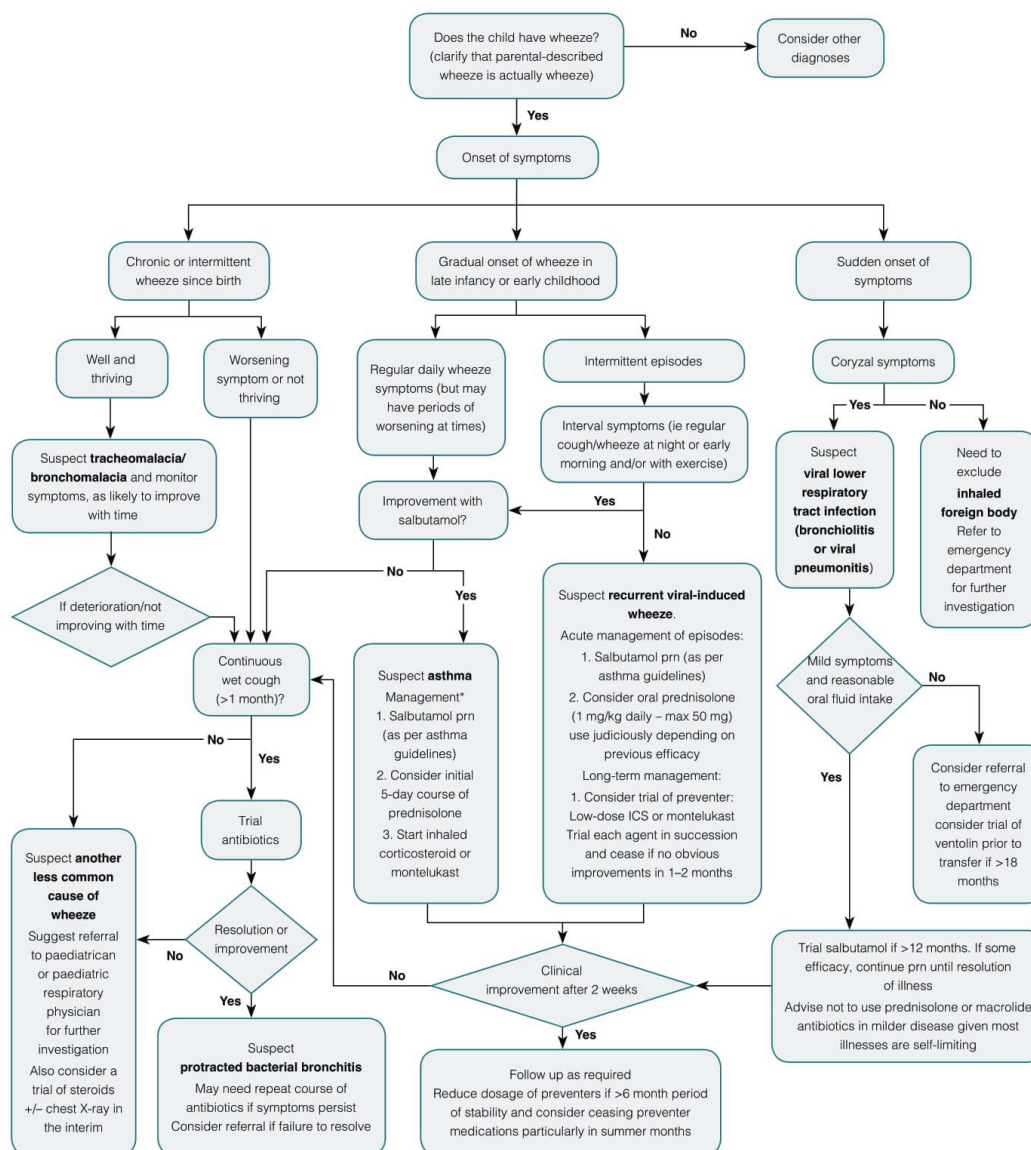


Figure 1. Algorithmic approach to young children presenting with wheeze in primary care

*Therapeutic benefit from asthma medications is poor for those 1-2 years of age and usually absent in the first year; ICS, inhaled corticosteroids

1.3 Mandatory documents- For healthcare providers

Following documents should be uploaded by the concerned hospital staff at the time of pre-authorization and claims submission:

Mandatory document	Chronic cough/Wheezing
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i. At the time of Pre-authorization	
Clinical notes showing vitals, examination findings, planned line of treatment and advice for admission	Yes
Chest X-ray, Complete blood count, Erythrocyte Sedimentation rate, Chest CT / HRCT, Spirometry, Sputum examination/gastric aspirate, Tuberculin test	Yes
Optional based on etiology and availability Renal function test, Serum Electrolytes, barium esophagram / Ph manometry, barium esophagram / Ph manometry, BAL (bronchoalveolar lavage), Sweat chloride test, Allergy testing (elevated immunoglobulin E), Angiography, 2D ECHO, Bronchoscopy/Nasopharyngoscopy/Endoscopy	Yes
ii. At the time of claim submission	
Detailed Indoor case papers (ICPs) with treatment details	Yes
Detailed discharge summary	Yes

PART II: GUIDELINES FOR PROCESSING TEAM

PART III: GUIDELINES FOR TRANSACTION MANAGEMENT SYSTEM (TMS)

3.1 Objective: To enable setting up of cross check mechanisms/rule engines within the IT platform (TMS) to ensure compliance with STGs and to prevent fraud / abuse of the Health Benefit Package.

3.2 Below mentioned are the scenarios where a provision would be built in TMS for pop-ups:

- I. Is cough present daily for ≥ 4 weeks in children less than 14 years? Yes
- II. Is there documentation of detailed h/o of wheeze including patient's age at the onset of wheezing and the course? Yes

Till the time the functionality is being developed, the processing doctors shall check the above manually.

References

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