

Guidance document for processing PM-JAY packages

Pneumonia

Procedures covered/ procedure count: 2

Specialty: General Medicine/ Pediatric Medical Management

Package name	Procedure name	HBP 1.0 code	HBP 2.0 code	Package price
Pneumonia	Pneumonia	M100019 M200003	MG016A	General Ward- 1800/- HDU – 2700/- ICU without ventilator– 3600/- ICU with Ventilator– 4500/-
Severe pneumonia	Severe pneumonia	M100047 M200065	MG017A	General Ward- 1800/- HDU – 2700/- ICU without ventilator– 3600/- ICU with Ventilator– 4500/-

ALOS: 5 days (to be capped, new pre-auth to be raised after 5 days, if required, & should not be auto-approved)

Minimum qualification of the treating doctor:

Essential: MBBS

Desirable: MD / DNB/ equivalent (Medicine/ Pediatrics/ Pulmonology)

Special empanelment criteria/linkage to empanelment module: None

Disclaimer:

ICMR has issued clinical guidelines for **Acute Respiratory Infection in Adults & Management of Severe Pneumonia in Children** to be followed in country. For monitoring and administering the claim management process of **Pneumonia, Severe Pneumonia** 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.



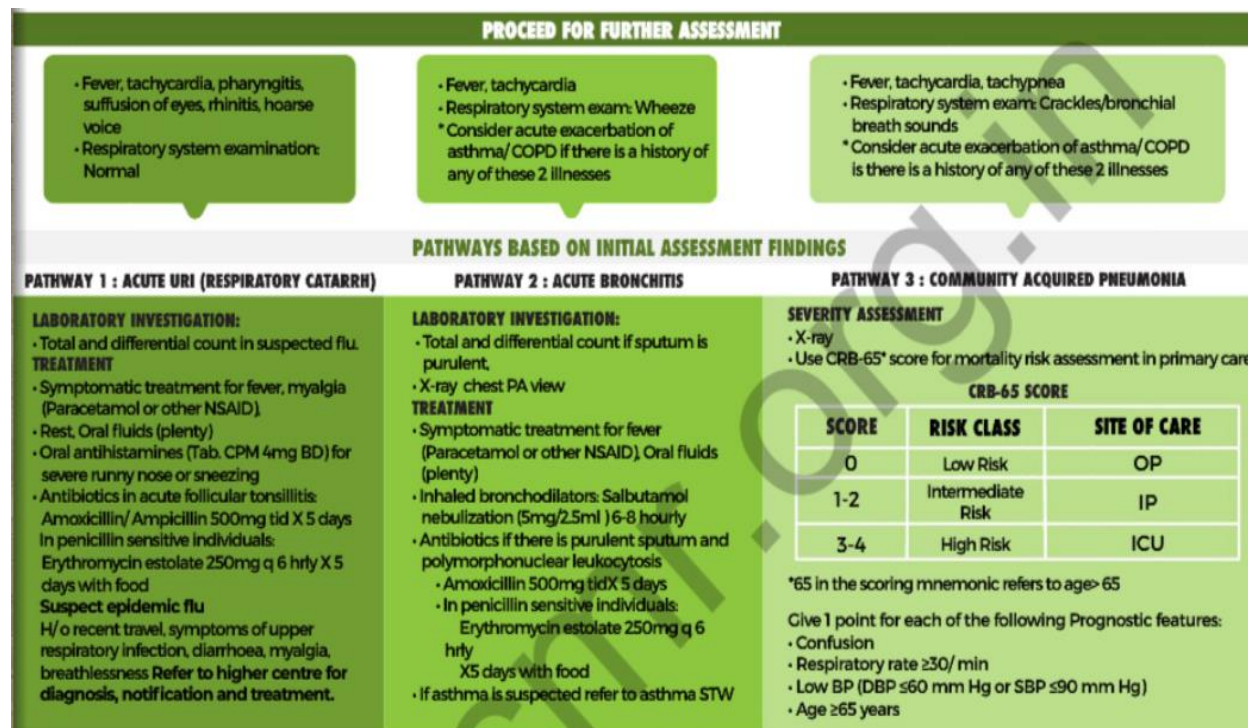
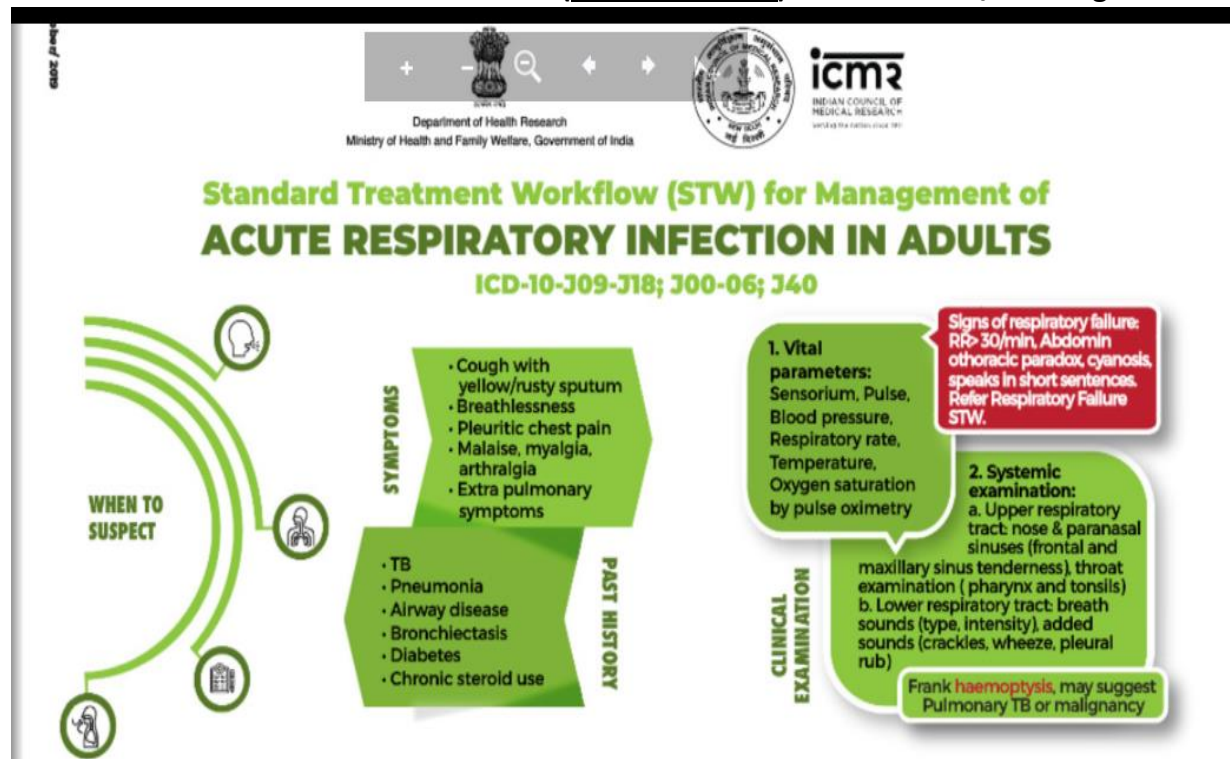
It will also serve as a tool for hospitals to determine and submit the mandatory documents required for claiming reimbursement of health benefit package under PMJAY.

1.2 Clinical key pointers:

Proceed with management of Pneumonia only if diagnosis made is backed by one or more of the following clinical signs & symptoms:

1. Clinical picture of High fever (>39 degree)
2. Cough
3. Difficult breathing
4. Chest pain
5. Dullness to percussion
6. Diminished breath sounds
7. Inspiratory crepitations
8. Sometimes bronchial breath sounds on examination
9. Presence of comorbid medical conditions
10. Saturation $O_2 \leq 92\%$ and $\leq 90\%$ for age ≤ 50 and >50 years

1.3 STANDARD TREATMENT WORKFLOW (DHR-ICMR STW)ⁱ- For clinicians/ treating doctor



OUT-PATIENT BASED CARE OF CAP (CRB-65 SCORE 0-1)

INVESTIGATIONS

Preliminary

Chest radiogram

Repeat if:

i. Patient is not improving/worsening clinically

ii. Suspected underlying malignancy

Desirable

1. Pulse oximetry in outpatients

2. Sputum microbiology. In suspected PTB & non-response after 48 hours of antibiotics

TREATMENT

1. Targeted towards *Streptococcus pneumoniae*

2. Oral antibiotics after checking for comorbidities* (Diabetes, CVDs, CKD, CLD, Hepatic Pathology, Cancer, Alcohol Abuse, H/o antibiotics within last 3 months.)

a. Without comorbidities: Cap. Amoxicillin (500 mg TDS)/Tab. Erythromycin 250mg QID/ Tab. Doxycycline 100mg BD

b. With comorbidities: Cap. Amoxicillin 500mg TDS + Tab. Azithromycin 500 mg OD

3. Duration: 5 days in (A); extend to a 7-10 days course if there is no response within 3 days of starting treatment and in (B).

4. Do not give:

a. Corticosteroids: unless other medical indications present

b. Fluoroquinolones: as they have anti-tubercular activity.

INPATIENT MANAGEMENT OF CAP

ANTIBIOTIC THERAPY IN THE HOSPITALIZED NON-ICU SETTING

a. Single agent IV β -lactam

b. If suspected atypical pathogens, other end organ disease, diabetes, malignancy, severe CAP, use of antibiotics in past 3 months: Combination of IV β -lactam (Cefotaxime 2 grams TID/ IV Ceftriaxone 1gram BD/ Amoxicillin-Clavulanic acid 1.2 grams TID) + ORAL macrolide (Tab Azithromycin 500 mg PO OD/ Tab Clarithromycin 500 mg PO BD)

ANTIBIOTIC THERAPY IN THE HOSPITALIZED ICU SETTING

i. Patients without risk factors for *Pseudomonas aeruginosa*: Manage as above

ii. Suspected *P. aeruginosa* (diabetes, chronic lung disease like bronchiectasis, chronic steroid therapy):

IV Cefepime (1G BD)/ IV Ceftazidime (2G TID)/ Piperacillin-tazobactam (4.5 G QID)/ IV Cefoperazone-sulbactam 1.5G IV TID/ IV Meropenem 1g TID;

Combination therapy: Aminoglycosides (IV Amikacin)/ Antipseudomonal fluoroquinolones (Levofloxacin/ Moxifloxacin)

ADJUNCTIVE THERAPIES FOR THE MANAGEMENT OF CAP

a. Steroids are not recommended for use in non-severe CAP

b. Non-invasive ventilation may be used in patients with CAP and acute respiratory failure

CONTRA INDICATIONS FOR NON-INVASIVE VENTILATION

a. Cardiorespiratory arrest

b. Presence of severe upper airway inflammation & edema

c. Severe haemodynamic instability - hypotension

d. Eu-capnic (normal PaCO₂) coma

e. Multiple organ dysfunction or severe psychomotor agitation

DISCHARGE CRITERIA

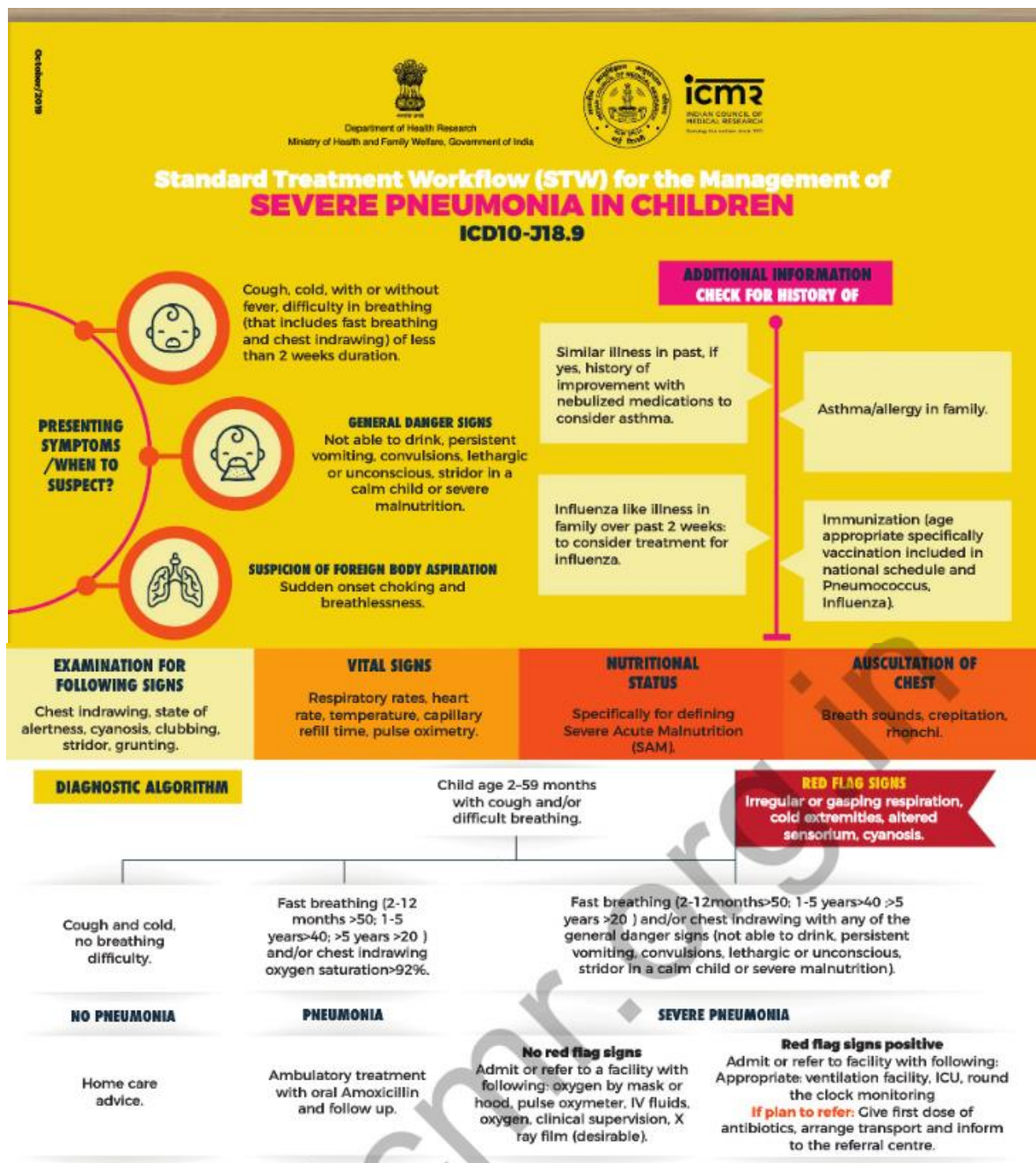
Accepting orally, Afebrile and Hemodynamically stable for a period of at least 48 h

REFERRAL TO A HIGHER CENTRE : CLINICAL CRITERIA

1. Frank hemoptysis and/or Signs of respiratory failure [listed under in the history and evaluation sections]
2. CRB-65 score > 1
3. Oxygen saturation by pulse oximetry \leq 92% (patients \leq 50 yrs)
OR \leq 90% (patients > 50 yrs)
4. Multi-lobe consolidation on chest X-ray
5. Confusion/disorientation
6. Hypothermia (core temperature $<$ 36.0C)

POINTS TO NOTE WHILE SHIFTING

1. If referring to a higher center, give the first dose of antibiotic (oral and if available, parenteral), secure an IV line and start 0.9% Normal saline and oxygen supplementation through face mask at 4-6 litres per minute during shift
2. If the patient is drowsy, has copious secretions, consider calling for help from the SUB-DISTRICT/DISTRICT hospital for endotracheal intubation and shifting on a transport ventilator



INVESTIGATIONS		TREATMENT		COMPLICATIONS AND THEIR TREATMENT	
ESSENTIAL: Hemogram, random blood sugar, CRP, chest X-ray. DESIRABLE: Blood culture, pleural tap, serum electrolytes, renal and liver function tests. OPTIONAL: ABG, lung ultrasound, PCT, tracheal aspirate (gram stain with culture), bronchoscopy/BAL, microbiology culture, investigations for atypical organisms, PCR for viral etiology.		OXYGEN INHALATION: by mask (1-2 L/min) or hood (4-6 L/Minute) to maintain oxygen saturation> 95%. IV ANTIBIOTICS: - For children 2-59 months: Ampicillin 100-200mg/kg in four divided doses + Gentamicin 5-7.5 mg/kg as single dose daily. - For children >5 years: Ampicillin/Amoxicillin, add macrolide (Azithromycin/Erythromycin) if atypical pneumonia is suspected. - If suspected Staphylococcal pneumonia in any age (Pneumatocele on CXR, post measles, infected scabies or pyoderma) add Cloxacillin/Amoxiclavulanic acid. SUPPORTIVE CARE: Paracetamol for fever, IV fluid, bronchodilators (inhaled) as needed. WHEN AND WHAT TO SWITCH TO ORAL AND DURATION: - Child is afebrile, RR has returned to below age specific cutoffs, no chest indrawing and accepting orally: switch to oral Amoxicillin to complete a total of 5-7 days duration (include duration of IV also in it). - If getting Doxacycline/Amoxycylav: continue oral Cloxacillin or Amoxclav for 2 weeks. - Start feeding as soon as possible when child shows improvement. IF ASSOCIATED SAM: follow treatment guidelines for SAM.		NON RESPONDERS: persistence of symptoms and/or signs 48-72 hours after initiation of appropriate treatment-change antimicrobials. PLEURAL EFFUSION: diagnostic aspiration. EMPHYSEMA: drainage with ICD. LUNG ABSCESS: change antibiotics for longer duration (4-6 weeks). PNEUMOTHORAX: Intercostal drainage. RESPIRATORY FAILURE: consider ventilation. INFECTION IN OTHER SITES: identify and treat appropriately.	
ADDITIONAL INFORMATION		FIRST LINE		ALTERNATE FIRST LINE	
First and second line antibiotics for severe pneumonia:		Ampicillin		First gen Cephalosporins	
WHEN TO REFER TO HIGHER CENTERS?		WHEN TO SUSPECT ACUTE BRONCHIOLITIS?		WHEN TO SUSPECT CHRONIC RESPIRATORY PROBLEM?	
Facilities (as described above) for treatment or complications (if develops) are not available, suspecting chronic respiratory problems.		A child below 2 years of age fulfilling case definition of first episode of severe pneumonia with predominant finding of wheezing on auscultation.		A child of age >3 years with history of recurrent cough, cold, wheezing with or without fever with good response to bronchodilator and personal or family history of asthma.	
WHEN TO SUSPECT INFECTION WITH H1N1 VIRUS?		WHEN TO SUSPECT ASTHMA?		WHEN TO SUSPECT CHRONIC RESPIRATORY PROBLEM?	
Child with cold, cough, fever with similar illness in any family members, consider H1N1 infection. Start Oseltamivir (as per national guideline).		A child of age >3 years with history of recurrent cough, cold, wheezing with or without fever with good response to bronchodilator and personal or family history of asthma.		Child has any of the following: severe malnutrition, clubbing, feeding difficulty, family history of sibling death due to pneumonia, multi site infections (diarrhea, ear discharge oral thrush).	
Discharge when child is switched to oral medications, accepting oral for 24 to 48 hours					
🚫 KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES					
REFERENCES					
1. Integrated Management of Childhood Illness (IMCI) (revised). Geneva, World Health Organization/The United Nations Children's Fund (UNICEF), 2014 (http://www.who.int/maternal_child_adolescent/documents/IMCI_chartbooklet/en/). 2. Revised WHO classification and treatment of childhood pneumonia at health facilities. http://apps.who.int/iris/bitstream/handle/10665/137319/9789241507813_eng.pdf?jsessionid=8BF6F1C94BD7BA8186F464D4CBA40249?sequence=1 . 3. Bradley JS, Byington CL, Shah SS, et al. Executive summary: the management of community-acquired pneumonia in infants and children older than 3 months of age: clinical practice guidelines by the Pediatric Infectious Diseases Society and the Infectious Diseases Society of America. Clin Infect Dis 2011;53:617-30. 4. Lodha R, Kabra SK, Pandey RM. Antibiotics for community-acquired pneumonia in children. Cochrane Database Syst Rev. 2013 Jun 4;(6):CD004874					
This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit our web portal (stw.icmr.org.in) for more information. © Indian Council of Medical Research and Department of Health Research, Ministry of Health & Family Welfare, Government of India.					

1.4 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	Pneumonia	Severe Pneumonia
i. At the time of Pre-authorisation		
Clinical notes	Yes	Yes
X ray / CT chest	Yes	Yes
ii. At the time of claim submission		
Indoor case papers	Yes	Yes
Complete Blood Count (CBC)	Yes	Yes
Liver Function Test (LFT)	Yes	Yes
X Ray / CT Chest	Yes	Yes
Pleural fluid culture	NA	Yes
COVID testing	To be decided on case to case basis as per ICMR/ Gol guidelines and only in specific centres approved by Gol for doing such testing.	To be decided on case to case basis as per ICMR/ Gol guidelines and only in specific centres approved by Gol for doing such testing.
Discharge Summary	Yes	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:

1. Clinical history & / or radiological findings are suggestive of Pneumonia – Yes
2. If COVID testing is advised, then have the extant ICMR/ Gol guidelines for it been strictly followed?- Yes

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

Acknowledgment:

ⁱ Standard Treatment Workflows of India. 2019 Edition, vol. 1, New Delhi, Indian council of Medical Research, Department of Health Research, Ministry of Health and Family Welfare, Government of India. These STWs have



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