PHC Chapter 19: Ear, nose and throat conditions

19.1 ALLERGIC RHINITIS

J30.0-4

DESCRIPTION

Inflammation of the mucous membranes of the nose and paranasal sinuses in response to an allergen e.g. pollen, house dust, grasses, and animal hair.

Allergic rhinitis is characterised by recurrent episodes of:

» blocked stuffy nose
» watery nasal discharge
» frequent sneezing, often accompanied by nasal itching and irritation
» conjunctival itching and watering
» oedematous pale nasal mucosa
» mouth breathing
» snoring at night

Exclude other causes, such as infections, vasomotor rhinitis, overuse of decongestant drops, and side effects of antihypertensives and antidepressants.

GENERAL MEASURES

Avoid allergens and irritants.

MEDICINE TREATMENT

Adults and children > 6 years of age

- Corticosteroid, e.g.: *LoE:III*[1]
- Fluticasone, aqueous nasal solution, 1 spray of 100 mcg in each nostril 12 hourly.
  - Aim the nozzle laterally and upwards (aim for the eye) and not to the back of the throat.
  - Do not sniff vigorously.
  - Review 3 monthly. *LoE:I*[2]

Note: Fluticasone and budesonide interacts with protease inhibitors. Refer all patients on protease inhibitors requiring corticosteroids for further management. *LoE:III*[3]

For short term symptomatic use:

Children

- Chlorphenamine, oral, 0.1 mg/kg/dose 6–8 hourly. See dosing table: Chapter 23.

Adults

- Chlorphenamine, oral, 4 mg, 6–8 hourly.

For relief of nocturnal nasal blockage:

Topical nasal decongestant e.g.:

- Oxymetazoline 0.05%, intranasal, administered at night for a maximum of 5 days.

Long-term antihistamines should only be used after an adequate trial of intranasal corticosteroids and should be added to steroid therapy, if necessary.

For long-term use in adults and school going children:

Children: 2–6 years of age

- Cetirizine, oral, 5 mg once daily. See dosing table: Chapter 23.

Children > 6 years of age and adults
- Non-sedating antihistamine, oral e.g.:
- Cetirizine, oral, 10 mg daily. *LoE:I*[4]

CAUTION
Do not give an antihistamine to children < 2 years of age.

REFERRAL
» Chronic persistent symptoms.
» Severe symptoms.
» Patients on protease inhibitors, requiring nasal corticosteroids.

19.2 COMMON COLD (VIRAL RHINITIS)
J00

DESCRIPTION
Colds are self-limiting viral conditions that may last up to 14 days. Colds begin to clear within 3 days. Colds present with nasal stuffiness and throat irritation.
Malnourished children, the elderly and debilitated patients are at greater risk of developing complications.

Complications
Secondary bacterial infections, including:
» pneumonia
» otitis media
» sinusitis

GENERAL MEASURES
» Limit strenuous activity.
» Ensure adequate hydration.
» Advise patient to return to clinic if earache, tenderness or pain over sinuses develops or symptoms persist for > 14 days.

MEDICINE TREATMENT
Antibiotics are of no value for the treatment of the common cold.

Infants
- Sodium chloride 0.9%, 1–3 drops, instilled into each nostril as required. *LoE:III*[5]

Symptomatic relief of pain and fever with discomfort:

Children
- Paracetamol, oral, 10–15 mg/kg/dose 6 hourly when required. See dosing table: Chapter 23. *LoE:III*[6]

REFERRAL
Severe complications.

19.3 EPISTAXIS
See Section 21.2.7: Nose bleeds (epistaxis).

19.4 OTITIS

19.4.1 OTITIS EXTERNA

H60.0/H60.5/H60.9

DESCRIPTION

Inflammation of the external ear may be one of the following:

» Diffuse: An infection of the ear canal, often due to Gram negative bacilli (especially P. aeruginosa). Pain is increased when chewing and the lining of the canal may be either inflamed or swollen with dry or moist debris or even a white or clear discharge.
» Furuncular: Usually caused by Staphylococcus aureus. A painful localised swelling present at the entrance to the ear canal. May be precipitated by trauma caused by scratching, e.g. matchsticks, earbuds.

GENERAL MEASURES

» Exclude any underlying suppurative otitis media. If suppurative otitis media is
» diagnosed, see Section: 19.4.3 Otitis media, chronic, suppurative.
» Most cases recover after thorough cleansing and drying of the ear.
» Keep the ear clean and dry (dry mopping).
» Do not leave pieces of cotton wool, etc. in the ear.
» Do not instil anything into the ear unless prescribed.

MEDICINE TREATMENT

Diffuse

» Does not usually require an antibiotic
» Make a wick where possible, using ribbon gauze or other suitable absorbent cloth, e.g. paper towel to clean and dry the ear.
- Acetic acid 2% in alcohol, topical, instilled into the ear every 6 hours for 5 days.
  - Instil 3–4 drops after cleaning and drying the ear.

Furuncular

Children

- Cefalexin, oral, 12–25 mg/kg/dose 6 hourly for 5 days. See dosing table: Chapter 23.

OR

- Flucloxacillin, oral, 12–25 mg/kg/dose 6 hourly for 5 days. See dosing table: Chapter 23.

Children > 7 years of age and adults

- Cefalexin, oral, 500 mg 6 hourly for 5 days.

OR

- Flucloxacillin, oral, 500 mg 6 hourly for 5 days.

Severe penicillin allergy:

Z88.0

Children

- Macrolide, e.g.:
- Azithromycin, oral, 10 mg/kg daily for 3 days. See dosing table: Chapter 23.

Children > 35 kg and adults
- Macrolide, e.g.:
- Azithromycin, oral, 500 mg daily for 3 days.

REFERRAL
No response to treatment.

19.4.2 OTITIS MEDIA, ACUTE
H66.9

DESCRIPTION
Inflammation of the middle ear characterised by:
» pain
» loss of hearing
» red bulging eardrum
» drum perforation
» fever in about half of the cases
» loss of the normal light reflex of the eardrum

Mild redness of the eardrum and rubbing the ear are not reliable signs.

GENERAL MEASURES
» Do not instil anything into the ear.
» Avoid getting the inside of the ear wet.
» Dry mop ear if discharge is present.
» Do not plug the ear with cotton wool, etc.
» Exclude HIV infection as a contributing factor for recurrent ear infection.

MEDICINE TREATMENT
Children
- Amoxicillin, oral, 45 mg/kg/dose 12 hourly for 5 days.

Weight kg	Dose mg	Use one of the following: Syrup mg/ 5mL		Capsule mg		Age Months/years
		125	250	250	500	
>3.5–5 kg	175 mg	7 mL	3.5 mL	–	–	>1–3 months
>5–7 kg	250 mg	10 mL	5 mL	–	–	>3–6 months
>7–11 kg	375 mg	15 mL	7.5 mL	–	–	>6–18 months
>11–14 kg	500 mg	–	10 mL	2	1	>18 months–3 years
>14–17.5 kg	750 mg	–	15 mL	3	–	>3–5 years
>17.5–25 kg	1000 mg	–	20 mL*	4	2	>5–7 years
>25–30 kg	1250 mg	–	25 mL*	5	–	>7–10 years
>30 kg	1500 mg	–	–	6	3	>10 years

  - Review response after 5 days. *LoE:III*[7]
  - If pain or discharge persists, consider alternative diagnosis and continue antibiotics for a further 5 days. *LoE:III*[8]

Adults
- Amoxicillin, oral, 1500 mg 12 hourly for 5 days. *LoE:III*[9]

Antibiotic treatment for those who have taken amoxicillin in the previous 30 days; or poor response to 10-day course of amoxicillin:

Children

- Amoxicillin/clavulanic acid oral, 15–25 mg/kg/dose of amoxicillin component, 8 hourly for 5-10 days.

Weight kg	Dose mg (amoxicillin component)	Use one of the following			Age months/years
		Susp 125/31.5 mg/5 mL	Susp 250/62.5 mg/5 mL	Tablet 500/125 mg/tab	
>3.5–5kg	75 mg	3 mL	1.5 mL	–	>1–3 months
>5–7 kg	100 mg	4 mL	2mL	–	>3–6 months
>7–9 kg	150 mg	6 mL	3 mL	–	>6–12 months
>9–11 kg	200 mg	8 mL	4 mL	–	>12–18 months
>11–14 kg	250 mg	10 mL	5 mL	–	>18 months–3 years
>14–17.5 kg	300 mg	12 mL	6 mL	–	>3–5 years
>17.5–25	375 mg	15 mL	7.5 mL	–	>5–7 years
>25–35 kg	500 mg	20 mL	10 mL	1 tablet	>7–11 years

Children > 35 kg and adults

Amoxicillin/clavulanic acid, oral, 875/125 mg 12 hourly for 5 to 10 days. *LoE:III*[10]

Severe penicillin allergy: *LoE:III*[11]

Z88.0

Children

- Macrolide, e.g.:
- Azithromycin, oral, 10 mg/kg daily for 3 days. See dosing table: Chapter 23.

Children > 35 kg and adults

- Macrolide, e.g.:
- Azithromycin, oral, 500 mg daily for 3 days.

Pain:

Children

- Paracetamol, oral, 10–15 mg/kg/dose 6 hourly when required. See dosing table: Chapter 23. *LoE:II*[12]

Adults

- Paracetamol, oral, 500 mg to 1 g, 4 to 6 hourly as required (to a maximum of 4 g in 24 hours).
  - Maximum dose: 15 mg/kg/dose.

For patients with upper respiratory tract congestion, secondary to allergy: (T78.4)

- Non-sedating antihistamine, oral, e.g.:
- Cetirizine, oral, 10 mg daily for 10 days. *LoE:II*[13]

For management of allergic rhinitis, see section 19.1: Allergic rhinitis.

REFERRAL

» Severe pain, fever or vomiting, not responding to treatment after 72 hours (if otoscopy confirmed) or after 24 hours (if otoscopy unconfirmed).
» Recurrent otitis media.

» Painful swelling behind the ear or tenderness on percussion of the mastoid.
» Suspected meningitis.

19.4.3 OTITIS MEDIA, CHRONIC, SUPPURATIVE

H66.1-3

DESCRIPTION

A purulent discharge from the ear with perforation for > 2 weeks. If the eardrum has been ruptured for ≥ 2 weeks, a secondary infection with multiple organisms usually occurs. Oral antibiotic treatment is generally ineffective.

TB may present with a chronically discharging ear. Consider the diagnosis of TB if other clinical features suggestive of TB are present (e.g. cough, weight loss, failure to thrive, etc.). See Section 17.4: Pulmonary tuberculosis (TB). *LoE:III*[14]

GENERAL MEASURES

» Do not send pus swabs collected from the external ear canal for routine bacterial and fungal MC+S (microscopy, culture and sensitivity) or for microscopy and culture for tuberculosis.
» Explain to patients and caregivers that a chronically draining ear can only heal if it is dry.
» Dry mopping is the most important part of the treatment. It should be demonstrated to the child's caregiver or patient if old enough. Roll a piece of clean absorbent cloth into a wick.
  - Carefully insert the wick into the ear with twisting action.
  - Remove the wick and replace with a clean dry wick.
  - Repeat this until the wick is dry when removed.
» Do not leave anything in the ear.
» Do not instil anything else in the ear.
» Avoid getting the inside of the ear wet while swimming and bathing.
» Check HIV status if unknown.

REFERRAL

» All sick children, vomiting, drowsy, etc.
» Painful swelling behind the ear.
» Ear discharge still present for ≥ 4 weeks, despite dry mopping.
  Note: These referrals do not all require referral to an ENT. They may be referred to a hospital outpatient department for consideration of a topical antibiotic eardrops.
» Any attic perforation.
» Any perforation not progressively improving after 3 months or closed by 6 months, even if dry.
» Moderate or severe hearing loss.

19.5 SINUSITIS, ACUTE, BACTERIAL

J01.0-4/J01.8-9

DESCRIPTION

Bacterial infection of one or more paranasal sinuses that occurs most often after a viral nasal infection or allergic rhinitis.

Bacterial sinusitis is characterised by:

» Deterioration of a common cold after 5–7 days.
» Headache.
» Purulent nasal discharge, especially if unilateral.
» Pain and tenderness over one or more sinuses.
» Nasal obstruction.
» Fever.

Note: Sinusitis is uncommon in children < 5 years of age, as sinuses are not fully developed.

GENERAL MEASURES

Consider HIV in recurrent sinusitis.

MEDICINE TREATMENT

Children ≤ 3 years of age

- Amoxicillin, oral, 45 mg/kg/dose 12 hourly for 5 days.

Weight kg	**Dose** mg	**Use one of the following:**				**Age** Months/years
		Syrup mg/ 5mL		**Capsule** mg		
		125	250	250	500	
>2–2.5 kg	100	4 mL	2 mL	–	–	34–36 weeks
>2.5–3.5 kg	125	5 mL	2.5 mL	–	–	Birth–1 month
>3.5–5 kg	175	7 mL	3.5 mL	–	–	>1–3 months
>5–7 kg	250	10 mL	5 mL	–	–	>3–6 months
>7–11 kg	375	15 mL	7.5 mL	–	–	>6–18 months
>11–14 kg	500	–	10 mL	2	1	>18 months–3 years

Children > 3 years of age

- Amoxicillin, oral, 500 mg 8 hourly for 5 days.

Adults

- Amoxicillin, oral, 500 mg 8 hourly for 5 days.

Severe penicillin allergy:
Z88.0

Children

- Macrolide, e.g.:
- Azithromycin, oral, 10 mg/kg daily for 3 days. See dosing table: Chapter 23.

Children > 35 kg and adults

- Macrolide, e.g.:
- Azithromycin, oral, 500 mg daily for 3 days.

AND

- Oxymetazoline, nose drops, 2 drops in each nostril 6–8 hourly for not more than 5 days continuously.

- Children > 5 years of age: 0.025%
- Adults: 0.05%

LoE:III[15]

AND/OR

- Sodium chloride 0.9%, nose drops, use frequently and in fairly large volumes.

Pain:

Children

- Paracetamol, oral, 10–15 mg/kg/dose 6 hourly when required. See dosing table: Chapter 23.

Adults

- Paracetamol, oral, 500 mg to 1 g, 4 to 6 hourly as required (to a maximum of 4 g in 24 hours).
  - Maximum dose: 15 mg/kg/dose.

REFERRAL

» Fever lasting > 48 hours.
» Poor response > 5 days.
» Complications, e.g. periorbital cellulitis with periorbital swelling.
» Oedema over a sinus.
» Recurrent sinusitis.
» Meningeal irritation.

19.6 TONSILLITIS AND PHARYNGITIS

J03.0/J03.8-9/J35.0/J02.0/J02.8-9/J31.1-2

DESCRIPTION

A painful red throat and/or enlarged inflamed tonsils. White pus exudates, either spots or patches, may be present. Tender anterior cervical lymphadenopathy may be present.
Viruses cause the majority of cases. Group A beta haemolytic streptococcus causes 20% of pharyngitis/tonsillitis, and may result in rheumatic fever (which can cause serious heart disease) as well as local suppurative complications.
Other clinical features that might suggest streptococcal infection may include palatal petechiae, inflamed tongue mucosal papillae (strawberry tongue), a scarlitiniform (i.e.: rough, diffuse, fine papular) rash.

GENERAL MEASURES

» Homemade salt mouthwash, gargle for 1 minute twice daily:
  - 2.5 mL (½ medicine measure) of table salt in 200 mL lukewarm water.
  - Do not give to children unable to gargle.
» Advise adequate hydration.
» Avoid irritants e.g. vaporubs inserted into nostrils.
» For children < 6 years of age: Soothe the throat with, breastmilk. If not exclusively breastfed, give warm water or weak tea: add sugar or honey and lemon if available.

MEDICINE TREATMENT

Antibiotics are not required for all patients with a sore throat.

Antibiotics to eradicate streptococci must be given to patients presenting with a sore throat who are at risk for rheumatic fever (3–21 years of age) if they have:

» Enlarged tonsils;
PLUS at least one of the following criteria:
- Exudates on their tonsils
- No cough
- No runny nose

LoE:I[16]

- Benzathine benzylpenicillin, IM, single dose.
  - Children < 30 kg: 600 000 IU.
  - Children ≥ 30 kg and adults: 1.2 MU.
  - Dissolve benzathine benzylpenicillin 1.2 MU in 3.2 mL lidocaine 1% without adrenaline (epinephrine) or 3 mL water for injection.

OR

Children

- Amoxicillin, oral, 50 mg/kg daily for 10 days.

Weight kg	Dose mg	Use one of the following				Age Months/years
		Susp		Capsule		
		125 mg/5mL	250 mg/5mL	250 mg	500 mg	
>2–2.5 kg	100 mg	4 mL	2 mL	–	–	>34–36 weeks
>2.5–3.5 kg	150 mg	6 mL	3 mL	–	–	>36 weeks–1 month
>3.5–5 kg	200 mg	8 mL	4 mL	–	–	>1–3 months
>5–7 kg	275 mg	11 mL	5.5 mL	–	–	>3–6 months
>7–11 kg	400 mg	–	8 mL	–	–	>6–18 months
>11–17.5 kg	575 mg	–	11.5 mL	–	–	>18 months–5 years
>17.5–25 kg	750 mg	–	15 mL	3	–	>5–7 years
>25–35 kg	1000 mg	–	20 mL	4	2	>7–11 years
>35kg	2000 mg	–	–		4	>11 years

LoE:I[17]

Adults

- Amoxicillin, oral, 1 000 mg 12 hourly for 10 days.

LoE:III[18]

OR

Children: 18 months–11 years of age

- Phenoxymethylpenicillin, oral, 250 mg 12 hourly for 10 days.

Children > 11 years of age and adults

- Phenoxymethylpenicillin, oral, 500 mg 12 hourly for 10 days.

Severe Penicillin allergy:
Z88.0

Children > 3 years of age
- Macrolide, e.g.:
- Azithromycin, oral, 10 mg/kg daily for 3 days. See dosing table: Chapter 23.

Children > 35 kg and adults
- Macrolide, e.g.:
- Azithromycin, oral, 500 mg daily for 3 days.

Pain:

Children
- Paracetamol, oral, 10–15 mg/kg/dose 6 hourly when required. See dosing table: Chapter 23.

Adults
- Paracetamol, oral, 500 mg to 1 g, 4 to 6 hourly as required (to a maximum of 4 g in 24 hours).
  - Maximum dose: 15 mg/kg/dose.

REFERRAL

» Any suppurative complications, e.g. retropharyngeal or peritonsillar abscess.
» Tonsillitis accompanied by difficulty in opening the mouth (trismus).
» Recurrent tonsillitis (≥ 6 documented episodes/year) for possible tonsillectomy.
» Suspected acute rheumatic fever.
» Suspected acute glomerulonephritis.
» Heart murmurs not previously diagnosed.

References:

[1] Corticosteroids, topical nasal (children > 6 years of age): South African Medicines Formulary. 12th Edition. Division of Clinical Pharmacology. University of Cape Town. 2016.

[2] Corticosteroids, topical nasal (therapeutic class): Chong LY, Head K, Hopkins C, Philpott C, Burton MJ, Schilder AG. Different types of intranasal steroids for chronic rhinosinusitis. Cochrane Database Syst Rev. 2016 Apr 26;4:CD011993. https://www.ncbi.nlm.nih.gov/pubmed/27115215

Corticosteroids, topical nasal (therapeutic class): South African Medicines Formulary. 12th Edition. Division of Clinical Pharmacology. University of Cape Town. 2016.

Corticosteroids, topical nasal (therapeutic class): Herman H. Once-daily administration of intranasal corticosteroids for allergic rhinitis: a comparative review of efficacy, safety, patient preference, and cost. Am J Rhinol. 2007 Jan-Feb;21(1):70-9. https://www.ncbi.nlm.nih.gov/pubmed/17283565

Fluticasone, topical, aqueous nasal spray: Contract circular HP07-2017DAI. http://www.health.gov.za/

[3] Beclomethasone, topical, aqueous nasal spray (drug-drug interaction with protease inhibitors): Foisy MM, Yakiwchuk EM, Chiu I, Singh AE. Adrenal suppression and Cushing's syndrome secondary to an interaction between ritonavir and fluticasone: a review of the literature. HIV Med. 2008 Jul;9(6):389-96. https://www.ncbi.nlm.nih.gov/pubmed/18459946

Beclomethasone, topical, aqueous nasal spray (drug-drug interaction with protease inhibitors): University of Liverpool. HIV drug interaction database. https://www.hiv-druginteractions.org/

Beclomethasone, topical, aqueous nasal spray (drug-drug interaction with protease inhibitors): Frankel JK, Packer CD. Cushing's syndrome due to antiretroviral-budesonide interaction. Ann Pharmacother. 2011 Jun;45(6):823-4. https://www.ncbi.nlm.nih.gov/pubmed/21558486

Beclomethasone, topical, aqueous nasal spray (drug-drug interaction with protease inhibitors): Yoganathan K, David L, Williams C, Jones K. Cushing's syndrome with adrenal suppression induced by inhaled budesonide due to a ritonavir drug interaction in a woman with HIV infection. Int J STD AIDS. 2012 Jul;23(7):520-1. https://www.ncbi.nlm.nih.gov/pubmed/22844010

[4] Non-sedating antihistamines, oral: Howarth PH, Stern MA, Roi L, Reynolds R, Bousquet J. Double-blind, placebo-controlled study comparing the efficacy and safety of fexofenadine hydrochloride (120 and 180 mg once daily) and cetirizine in seasonal allergic rhinitis. J Allergy ClinImmunol. 1999;104(5):927-933. https://www.ncbi.nlm.nih.gov/pubmed/10550734

Non-sedating antihistamines, oral: Olasińska-Wiśniewska A , Olasiński J, Grajek S. Cardiovascular safety of antihistamines. Postep Derm Alergol. 2014, 3: 182–186. https://www.ncbi.nlm.nih.gov/pubmed/25097491

Non-sedating antihistamines, oral: National Department of Health: Affordable Medicines, EDP-Adult Hospital level. Medicine Review: Non-sedating antihistamines for persistent allergic rhinitis, 23 November 2017. http://www.health.gov.za/

[5] Sodium chloride 0.9% nose drops: South African Medicines Formulary. 12th Edition. Division of Clinical Pharmacology. University of Cape Town. 2016.

[6] Paracetamol, oral: NICE Clinical Guideline-Feverish illness in children: assessment and initial management in children younger than 5 years, May 2013. http://www.nice.org.uk/guidance/cg160/chapter/recommendations

[7] Amoxicillin, oral (AOM – children): Siddiq S, Grainger J. The diagnosis and management of acute otitis media:

American Academy of Pediatrics Guidelines 2013. Arch Dis Child Educ Pract Ed. 2015 Aug;100(4):193-7. https://www.ncbi.nlm.nih.gov/pubmed/25395494

Amoxicillin, oral (AOM – children): National Department of Health, Integrated Management of Childhood Illness (IMCI) Guidelines, 2014. http://www.health.gov.za/

Amoxicillin, oral (AOM – children): Brink AJ, Cotton M, Feldman C, Finlayson H, Friedman R, Green R, Hendson W, Hockman M, Maartens G, Madhi S, Reubenson G, Silverbauer E, Zietsman I. Updated recommendations for the management of upper respiratory tract infections in South Africa. S Afr Med J. 2015 Apr 6;105(5):344-52. https://www.ncbi.nlm.nih.gov/pubmed/26242659

[8] Antibiotics, oral (AOM-children): Venekamp RP, Sanders SL, Glasziou PP, Del Mar CB, Rovers MM. Antibiotics for acute otitis media in children. Cochrane Database Syst Rev. 2015 Jun 23;(6):CD000219. https://www.ncbi.nlm.nih.gov/pubmed/26099233

Antibiotics, oral (AOM-children): NICE. Otitis media (acute): antimicrobial prescribing. Clinical guideline NG91, March 2018. https://www.nice.org.uk/guidance/ng91

[9] Amoxicillin, oral (AOM – children > 7 years of age and adults): Brink AJ, Cotton M, Feldman C, Finlayson H, Friedman R, Green R, Hendson W, Hockman M, Maartens G, Madhi S, Reubenson G, Silverbauer E, Zietsman I. Updated recommendations for the management of upper respiratory tract infections in South Africa. S Afr Med J. 2015 Apr 6;105(5):344-52. https://www.ncbi.nlm.nih.gov/pubmed/26242659

[10] Amoxicillin/clavulanate, oral (AOM – children): Siddiq S, Grainger J. The diagnosis and management of acute otitis media: American Academy of Pediatrics Guidelines 2013. Arch Dis Child Educ Pract Ed. 2015 Aug;100(4):193-7. https://www.ncbi.nlm.nih.gov/pubmed/25395494

Amoxicillin/clavulanate, oral (AOM – children): Brink AJ, Cotton M, Feldman C, Finlayson H, Friedman R, Green R, Hendson W, Hockman M, Maartens G, Madhi S, Reubenson G, Silverbauer E, Zietsman I. Updated recommendations for the management of upper respiratory tract infections in South Africa. S Afr Med J. 2015 Apr 6;105(5):344-52. https://www.ncbi.nlm.nih.gov/pubmed/26242659

[11] Amoxicillin/clavulanate, oral (AOM – adults): Brink AJ, Cotton M, Feldman C, Finlayson H, Friedman R, Green R, Hendson W, Hockman M, Maartens G, Madhi S, Reubenson G, Silverbauer E, Zietsman I. Updated recommendations for the management of upper respiratory tract infections in South Africa. S Afr Med J. 2015 Apr 6;105(5):344-52. https://www.ncbi.nlm.nih.gov/pubmed/26242659

[12] Paracetamol, oral (AOM – children): Sjoukes A, Venekamp RP, van de Pol AC, Hay AD, Little P, Schilder AG, Damoiseaux RA. Paracetamol (acetaminophen) or non-steroidal anti-inflammatory drugs, alone or combined, for pain relief in acute otitis media in children. Cochrane Database Syst Rev. 2016 Dec 15;12:CD011534. https://www.ncbi.nlm.nih.gov/pubmed/27977844

[13] Antihistamines, oral (Cetirizine): Griffin G, Flynn CA. Antihistamines and/or decongestants for otitis media with effusion (OME) in children. Cochrane Database Syst Rev. 2011 Sep 7;(9):CD003423. https://www.ncbi.nlm.nih.gov/pubmed/21901683

[14] TB testing of pus swabs: Baron EJ, Miller JM, Weinstein MP, Richter SS, Gilligan PH, Thomson RB Jr, Bourbeau P, Carroll KC, Kehl SC, Dunne WM, Robinson-Dunn B, Schwartzman JD, Chapin KC, Snyder JW, Forbes BA, Patel R, Rosenblatt JE, Pritt BS. A guide to utilization of the microbiology laboratory for diagnosis of infectious diseases: 2013 recommendations by the Infectious Diseases Society of America (IDSA) and the American Society for Microbiology (ASM)(a). Clin Infect Dis. 2013 Aug;57(4):e22-e121. http://www.ncbi.nlm.nih.gov/pubmed/23845951

[15] Oxymetazoline, nose drops: South African Medicines Formulary. 12th Edition. Division of Clinical Pharmacology. University of Cape Town. 2016.

[16] Antibiotics (Tonsillitis and pharyngitis): Engel MF, Bruns AH, Hulscher ME, Gaillard CA, Sankatsing SU, Teding van Berkhout F, Emmelot-Vonk MH, Kuck EM, Steeghs MH, den Breeijen JH, Stellato RK, Hoepelman AI, Oosterheert JJ. A tailored implementation strategy to reduce the duration of intravenous antibiotic treatment in community-acquired pneumonia: a controlled before-and-after study. Eur J Clin Microbiol Infect Dis. 2014 Nov;33(11):1897-908. https://www.ncbi.nlm.nih.gov/pubmed/24859925

[17] Amoxicillin, oral (children): Clegg HW, Ryan AG, Dallas SD, Kaplan EL, Johnson DR, Norton HJ, Roddey OF, Martin ES, Swetenburg RL, Koonce EW, Felkner MM, Giftos PM. Treatment of streptococcal pharyngitis with once-daily compared with twice-daily amoxicillin: a noninferiority trial. Pediatr Infect Dis J. 2006 Sep;25(9):761-7. https://www.ncbi.nlm.nih.gov/pubmed/16940830

Amoxicillin, oral (children): Lennon DR, Farrell E, Martin DR, Stewart JM. Once-daily amoxicillin versus twice-daily penicillin V in group A beta-haemolytic streptococcal pharyngitis. Arch Dis Child. 2008 Jun;93(6):474-8. https://www.ncbi.nlm.nih.gov/pubmed/18337284

[18] Amoxicillin, oral (adults): Brink AJ, Cotton M, Feldman C, Finlayson H, Friedman R, Green R, Hendson W, Hockman M, Maartens G, Madhi S, Reubenson G, Silverbauer E, Zietsman I. Updated recommendations for the management of upper respiratory tract infections in South Africa. S Afr Med J. 2015 Apr 6;105(5):344-52. http://www.ncbi.nlm.nih.gov/pubmed/26242659

Amoxicillin, oral (adults): National Department of Health: National Department of Health: Affordable Medicines, EDP-Primary Health Care level. Medicine Review: Phenoxymethylpenicillin vs amoxicillin for tonsilitis_pharyngitis, October 2016. http://www.health.gov.za/

SOUTH AFRICAN PRIMARY HEALTHCARE LEVEL ESSENTIAL MEDICINES LIST
CHAPTER 19: EAR, NOSE AND THROAT (ENT) CONDITIONS
NEMLC RECOMMENDATIONS FOR MEDICINE AMENDMENTS (2020)

Medicine amendment recommendations, with supporting evidence and rationale are listed below.
Kindly review the medicine amendments in the context of the complete chapter for gastrointestinal conditions.
Note: The PHC eye chapter has been updated to align to previous NEMLC recommendations as well as the recent NEMLC-approved Adult Hospital Level STGs and EML, 2019 edition.

SECTION	MEDICINE/ MANAGEMENT	ADDED/DELETED/AMENDED?NOT ADDED/RETAINED
19.1 Allergic rhinitis		
-Intranasal corticosteroids (general population) in adults and children > 6 years of age	Corticosteroids, nasal spray	Retained as a therapeutic class
	Fluticasone aqueous nasal spray	Retained as example of class in the STG
	Beclomethasone aqueous nasal spray	Retained as therapeutic alternative (and consideration at referral centres if patient on protease inhibitor)
	Budesonide aqueous nasal spray	Added as therapeutic alternative
	Mometasone aqueous nasal spray	Added as therapeutic alternative
	Triamcinolone aqueous nasal spray	Added as therapeutic alternative
- For short term symptomatic use: children	Chlorphenamine, oral	Retained
- For short term symptomatic use: adults	Chlorphenamine, oral	Retained
- For relief of nocturnal nasal blockage	Oxymetazoline, nasal spray	Retained and caution added
- For long-term use in children (2-6 years of age)	Cetirizine, oral	Retained
- For long-term use in adults and school going children	Non-sedating anti-histamines	Recommended as a therapeutic class
	Cetirizine, oral	Amended as an example of therapeutic class (listed in STG)
	Fexofenadine, oral	Added as a therapeutic alternative
19.4.2 Otitis media, acute		
- For patients with upper respiratory tract congestion, secondary to allergy	Management of allergic rhinitis	Cross-referred to section 19.1: Allergic rhinitis

19.1 ALLERGIC RHINITIS

Intranasal corticosteroids (in adults and children > 6 years of age):
Corticosteroids, nasal spray: *retained as a therapeutic class*
Fluticasone aqueous nasal spray: *retained as example of class (listed in the STG)*
Beclomethasone aqueous nasal spray: *retained as therapeutic alternative (and consideration at referral centres if patient on protease inhibitor)*
Budesonide aqueous nasal spray: *retained as therapeutic alternative*
Mometasone aqueous nasal spray: *added as therapeutic alternative*
Triamcinolone aqueous nasal spray: *added as therapeutic alternative*

For short term symptomatic use (children and adults):
Chlorphenamine, oral: *retained*

For relief of nasal blockage
Oxymetazoline, nasal spray: *retained and caution added*
The following caution was added, aligned with SAMF, 2016:

Note: Rebound nasal congestion occurs with prolonged use (>5 days) of topical nasal decongestants.

Level of Evidence: III Guidelines

For long-term use
Children (2-6 years of age)

Cetirizine, oral*: retained*

Adults and school going children
Non-sedating antihistamines, oral: *recommended as therapeutic class*
Cetirizine, oral: *retained as example of class (listed in STG)*
Fexofenadine, oral: *added as therapeutic alternative*
Refer to the medicine review, non-sedating antihistamines for persistent allergic rhinitis (November 2017):

Non-sedating Antihistamines for A

http://www.health.gov.za/index.php/standard-treatment-guidelines-and-essential-medicines-list/category/286-hospital-level-adults

Recommendation: Fexofenadine and cetirizine appear to be statistically and clinically similar with regards to seasonal allergic rhinitis symptom reduction. Fexofenadine has less drowsiness, but this is not statistically significant. Based on the medicine review, recommendations were guided by availability of agents based on price.

Prices

Medicine	Source	Price
Cetirizine 10 mg tablets (28)	Contract circular RT289-2019, 1 September 2020[1]	R 3.65
Fexofenadine 120 mg tablets (30)	SEP database[2]	R 23.99

Level of Evidence: I RCT, Expert opinion

19.4.2 OTITIS MEDIA, ACUTE

Patients with upper respiratory tract congestion, secondary to allergy:
Cross-reference to section19.1: Allergic rhinitis

[1] Contract circular RT289-2019, weighted average price
[2] SEP database, March 2020. https://medicineprices.org.za/ (60% of cheapest generic ex Manufacturer price)[2]