

The structure discovered thus far for sections on Recommend Empiric Therapy, with emphasis on Respiratory, are shown below. Other sections were also examined to confirm or expand the pattern.

The structural outline shown will be the basis for a data schema for this section. It will also drive the mapping for any content tool. Examples are shown in the accompanying figures for the various outline elements.

1. Category (examples shown in Fig. 1, Fig. 4)
 - 1.1. Sub Category (examples shown in Fig. 4)
 - 1.1.1. Disease (examples shown in Fig. 1, Fig. 4)
 - 1.1.1.1. Disease Overview (examples shown in Fig. 1)
 - 1.1.1.1.1. Presentation 1 (examples shown in Fig. 2, Fig. 4)
 - 1.1.1.1.1.1. Presentation Overview (examples shown in Fig. 3)
 - 1.1.1.1.1.2. Pathogen(s) (examples shown in Fig. 3)
 - 1.1.1.1.1.3. Therapy 1 (examples shown in Fig. 2)
 - 1.1.1.1.1.3.1. Therapy Note or Prerequisite (shown in Fig. 2, Fig 3.)
 - 1.1.1.1.1.3.2. Drug (examples shown in Fig. 4)
 - 1.1.1.1.1.3.3. Dosage (examples shown in Fig. 4)
 - 1.1.1.1.1.3.4. Duration (examples shown in Fig. 4)
 - 1.1.1.1.1.3.5. Linked Note (examples shown in Fig. 2)
 - 1.1.1.1.1.3.6. Combined with Linkage (examples shown in Fig. 3)
 - 1.1.1.1.1.4. Therapy 2 (therapy sections repeated as necessary)
 - 1.1.1.1.1.5. Presentation End Note (examples shown in Fig. 2)
 - 1.1.1.1.2. Presentation 2
 - 1.1.1.1.2.1. Presentation Overview
 - 1.1.1.1.2.2. Pathogen(s)
 - 1.1.1.1.2.3. Therapy 1
 - 1.1.1.1.2.3.1. Therapy Note or Prerequisite
 - 1.1.1.1.2.3.2. Drug
 - 1.1.1.1.2.3.3. Dosage
 - 1.1.1.1.2.3.4. Duration
 - 1.1.1.1.2.3.5. Linked Note
 - 1.1.1.1.2.3.6. Combined with Linkage
 - 1.1.1.1.2.4. Therapy 2
 - 1.1.1.1.2.5. Presentation End Note
 - 1.1.1.1.3. Presentation 3 ... etc.
 - 1.1.2. Disease 2 etc.

The outline from 1 to 1.1.1.1.1.5 shows the base structure. All or parts of the structure are repeated as necessary.

Outline elements such as Disease Overview, Presentation Overview, and Presentation End Notes will be captured as unstructured rich text. "Unstructured" implies that the text is captured as a single entity without any child data elements. While this is not theoretically ideal, it may be the only practical path forward given the diversity of formats in the textual notes.

Feedback on the accuracy and correctness of the outline above is required before developing an underlying schema.

RECOMMENDED EMPIRIC THERAPY OF SELECTED INFECTIONS IN NEONATAL/PAEDIATRIC PATIENTS ^A					
Infection	Usual Pathogens	Recommended Empiric Therapy	Recommended Paediatric Dose ^B	Recommended Duration	Comments
Respiratory					
Pharyngitis	<p>- Majority of cases (> 70%) of pharyngitis are of viral etiology and do not require antimicrobial therapy. The following suggests a viral etiology: conjunctivitis, cough, hoarseness or rhinorrhea.</p> <p>- The role of Chlamydia pneumoniae and Mycoplasma pneumoniae has been suggested but not substantiated. Empiric therapy for these organisms is not recommended.</p> <p>- Occasionally pharyngitis is caused by Group C or G. Streptococci, or Arcanobacterium haemolyticum.</p> <p>- A. haemolyticum causes pharyngitis in young adults (12-30 years old); majority of patients have scarlatiniform rash most marked on the extremities. Notify laboratory if clinically suspected.</p> <p>Group A Streptococcal (GAS) Pharyngitis:</p> <p>- Uncommon in children < 3 years old. It is most common in children between 5-10 years of age and in fall and winter.</p> <p>- Infectious for 2-5 days prior to symptoms.</p> <p>- Antibiotic therapy decreases:</p> <ul style="list-style-type: none"> severity of symptoms duration of symptoms by ~ 1 day risk of transmission (after 24h of therapy) likelihood of suppurative complications and of rheumatic fever. <p>Group A Streptococci</p> <p>- No in vitro resistance to penicillin.</p> <p>- Macrolide and clindamycin resistance is increasing.</p> <p>- TMP/SMX – no activity against Group A Streptococcus.</p> <p>- Quinolones and cephalosporins NOT indicated in pharyngitis – too broad spectrum, potential to increase resistance.</p> <p>- If sexually active, consider N. gonorrhoeae. For treatment, see Adult Empiric Therapy Recommendations, Pharyngitis.</p> <p>- Accurate diagnosis of Group A Streptococci cannot be made based on clinical presentation alone. Throat swab recommended.</p> <p>- Treat according to C&S results as:</p> <ul style="list-style-type: none"> Group A Strep is a self-limited disease (8-10 days) antimicrobial therapy can be delayed while awaiting throat culture results and still prevent acute rheumatic fever delay in antibiotic therapy may decrease reinfection rates. <p>- Follow up cultures not routinely recommended except if there is:</p> <ul style="list-style-type: none"> family history of rheumatic fever outbreak of rheumatic fever or glomerulonephritis outbreak of pharyngitis in a closed community repeat transmission within families ("ping-pong" spread). 				
Infection	Usual Pathogens	Recommended Empiric	Recommended	Recommended	Comments

Fig. 1
(Category, Disease, Disease Overview)

RECOMMENDED EMPIRIC THERAPY OF SELECTED INFECTIONS IN NEONATAL/PAEDIATRIC PATIENTS ^A					
		Therapy	Paediatric Dose ^B	Duration	
Respiratory					
Pharyngitis (cont'd)					Linked Note
Acute	Group A Streptococci	Penicillin VK	40mg/kg/d PO div bid	10 days*	<p>* No good evidence that shorter courses of antibiotic therapy (including cephalosporins, azithromycin, clarithromycin) are as effective as 10 days.</p> <p>- If treated empirically (NOT recommended), & 48 hour throat swab culture antibiotics.</p>
Presentation		Alternative Erythromycin or Clindamycin	40mg/kg/d PO div tid	10 days*	
			20mg/kg/d PO div tid	10 days*	
Non-responders (after 72 hours of therapy*)	Group A Streptococci	Non-responders* Change in antibiotic therapy may not be required.			<p>* Consider:</p> <ul style="list-style-type: none"> noncompliance concurrent viral infection in a Group A Strep carrier suppurative complication of Group A Strep pharyngitis (e.g. peritonsillar, tonsillar, and retropharyngeal abscess). <p>†Early relapse: repeat throat swab necessary – only treat if culture positive for Group A Strep.</p> <p>- Group A Strep resistance to macrolides and clindamycin is increasing.</p>
or					
Early relapse (2-7 days post-therapy*)		Early relapse*† Clindamycin or Erythromycin	20mg/kg/d PO div tid 40mg/kg/d PO div tid	10 days 10 days	

Fig. 2
(Presentation, Therapy, Linked Note, Therapy Note or Prerequisite, Presentation End Note)

RECOMMENDED EMPIRIC THERAPY OF SELECTED INFECTIONS IN NEONATAL/PAEDIATRIC PATIENTS^A

Infection	Usual Pathogens	Recommended Empiric Therapy	Recommended Paediatric Dose ^B	Recommended Duration	Comments
Respiratory					
Pharyngitis (cont'd) Late relapse or Recurrent*	<p>* Late relapse or recurrence should be confirmed by culture. Consider:</p> <ul style="list-style-type: none"> concurrent viral infection in a Group A Strep carrier new infections with Group A Strep. <p>- Continuous antibiotic prophylaxis is not recommended.</p> <p>- If ≥ 3 culture confirmed symptomatic episodes per year consider:</p> <ul style="list-style-type: none"> throat swab during an asymptomatic period to document carrier status throat swab of all family members if suspect "ping-pong" spread from an asymptomatic carrier. Family pets are not carriers of Group A Strep. 				
	Group A Streptococci	Clindamycin or Amoxicillin-clavulanate or Erythromycin or Penicillin VK**	20mg/kg/d PO div tid 40mg/kg/d PO div tid 40mg/kg/d PO div tid 40mg/kg/d PO div bid	10 days 10 days 10 days 10 days	**Although Pen VK should be effective, there is some evidence that antibiotics with activity against β-lactamase producing organisms (e.g. anaerobes) may be superior.
	Asymptomatic carrier	<p>- Up to 20% of the paediatric population may carry Group A Strep asymptomatically, however carriage rate is much lower in older adolescents and adults (2.4-3.7%).</p> <p>- Chronic carriers are not significant in the spread of Group A Strep and are at little risk of rheumatic fever.</p>			
	Group A Streptococci	No therapy required unless: High risk* Clindamycin or Amoxicillin-clavulanate or [Penicillin VK + Rifampin]	20mg/kg/d PO div tid 40mg/kg/d PO div tid 40mg/kg/d PO div bid or tid 10mg/kg PO bid (max 300mg/dose)	10 days 10 days 10 days 4 days (given in last 4 days of treatment)	* Eradication of asymptomatic carriers is recommended only if high risk: • family history of rheumatic fever or glomerulonephritis • outbreak of rheumatic fever • outbreak of pharyngitis in a closed community • repeat transmission within families • multiple (≥ 3/year) culture confirmed symptomatic episodes of pharyngitis.
	Combined with linkage	Therapy Note or Prerequisite			

Fig . 3

(Combined with Linkage, Therapy Note or Prerequisite, Presentation Overview)

RECOMMENDED EMPIRIC THERAPY OF SELECTED INFECTIONS IN NEONATAL/PAEDIATRIC PATIENTS^A

Infection	Usual Pathogens	Recommended Empiric Therapy	Recommended Paediatric Dose ^B	Recommended Duration	Comments
Skin & Soft Tissue					
MRSA nasal carriage	S. aureus, methicillin-resistant				<p>- Eradication of MRSA colonization is controversial and should be individualized. Consult Infection Control.</p> <p>- Increasing mupirocin resistance noted in Canada.</p> <p>- For isolation/precautions, refer to Infection Control section of this book and site-specific Infection Control recommendations.</p>
	Category				
Vesicular lesions Chickenpox					<p>- Notify Public Health.</p> <p>- For contact prophylaxis recommendations, see Prophylaxis for Contacts of Communicable Diseases.</p>
	Sub Category				
Immuno-competent	Varicella zoster	≤12 years old See comments			<p>- Therapy not recommended unless: • chronic cutaneous or pulmonary disorder • long term salicylate therapy • short, intermittent or aerosolized courses of corticosteroids.</p> <p>- Most benefit if initiate acyclovir within 24h of rash onset.</p> <p>- For encephalitis, hepatitis, pneumonitis, use acyclovir IV for all ages.</p>
	Disease	>12 years old Acyclovir	80mg/kg/d PO div qid (max 800mg/dose)	5 days	
Immunocompromised					<p>For the purposes of data mapping the drug, dosage, and duration are being treated as components of a "therapy"</p>
	Varicella zoster	Acyclovir	30mg/kg/d IV div q8h	7-10 days	

Fig 4

(Category, Sub Category, Disease, Presentation)