

Rwandan Nurses Saving Lives

On-Site Mentorship

Note: This is a rough draft. One of the Core Team's group projects is to review this document and build it to best suit the NCD nurse as mentor and HC nurse. It is to be a colleague discussion versus test. The goal is to assess if the HC nurse is providing safe and competent RHD care using the evidenced-based information and tools provided for the nurses.

Streptococcus Pyogenes infections

Scenario 1. Mary is a 7-year-old female living with her parents and her 5 siblings. The children are ages 4, 5 ½, 7 (Mary), 9 and 10 ½. Mary came home from school today feeling poorly. She reports a very painful throat, being tired, and a headache. She gives a note to her mother from the teacher that suggests Mary should go to the nurse because there have been children diagnosed with Strep throat and it is important that a trained nurse does an exam.

Discuss Mary's Risks.

What part of the history is suggestive of Strep Throat?

Vital signs: T 38 R24 P120 B/P 100/72

Discuss the vitals and what is normal and abnormal for Mary at age 7.

PEDIATRIC VITAL SIGNS

Age	HEART RATE		RESP	BLOOD PRESSURE			
	Awake HR (beats/min)	Sleeping HR (beats/min)	Resp Rate (breaths/min)	Minimal Systolic Pressure (mmHg)	Systolic Pressure (mmHg)	Diastolic Pressure (mmHg)	Mean Arterial Pressure (mmHg)
Neonate (0-30 days)	100-205	90-160	40-60	60	60-84	31-53	48-60
Infant (1-12 months)	100-180	90-160	30-53	70	72-104	37-56	50-62
Toddler (1-2 years)	98-140	80-120	22-37	74	86-106	42-63	49-62
Preschooler (3-5 years)	80-120	65-100	20-28	78	89-112	46-72	58-69
School aged (6-9 years)	75-118	58-90	18-25	86	97-115	57-76	66-72
10+ years	60-100	50-90	12- 20	90	102-131	61-83	71-79

Approved by Dr. Daftary | July 2021



Physical exam- Discuss the 4 major criteria for a clinical diagnosis of Strep Throat

1. Swollen and inflamed tonsils
2. Exudate (pus) or red petechiae on tonsils
3. Swollen and painful tonsillar lymph node
4. NO cough/runny nose

What other aspects can add to the clinical diagnosis critical thinking?

1. Rapid onset
2. Throat so sore they may drool
3. Swollen uvula
4. Clear lungs
5. No diarrhea/abdominal pain (but may have some nausea)
6. May have a headache
7. No ear ache

What is the urgent sign indicating possible meningitis?

Range of motion of the neck painful, especially with resistance

Discuss physical exam and use of the tongue depressor, otoscope (light source), palpation of cervical lymph nodes

Strep Skill check list

Level: N= needs more support C= competent and safe

Skill	Level N or C	Notes
Oral pharynx: describes tonsils, uvula, and tongue		
Use of a tongue depressor, if needed.		
Use of a light source		
Range of motion of head with ad without resistance		
Palpation of lymph nodes		

Discuss treatment plan.

Does the clinic have penicillin available?

PCN (Penicillin) VK:

- Adolescents/ adults: 500mg twice daily x **10 days**
- Children greater than 27 Kg: 500 mg two- or three-times daily x **10 days**
- Children 27 kg or less: 250 mg orally 2 to 3 times a day x **10 days**

Discuss; Anaphylaxis (0.2% risk with Intramuscular Penicillin injection)

List the steps the nurse shares for giving IM PCN

1. Dose: _____
2. Site on body: _____
3. How to decrease pain: _____
4. Dose calculation: _____

Scenario 2- Acute Rheumatic Fever

Have the nurse share signs and symptoms a child might experience of there is ARF. Check of which ones were identified. Then have a discussion about all the signs and symptoms to remind the nurse.

First: How many weeks after Strep Throat can a patient then develop ARF? _____

Recognized	Sign or Symptom	Needed Reminded
	A red swollen joint without trauma. Lasts a few days and then can be in a different site. Most commonly in knees, ankles wrists, and elbows	
	Chest pain, discomfort, or pressure. This occurs from the inflamed	

	heart muscle. The child may feel better leaning forward and have more discomfort laying flat.	
	Tachycardia- very important as it shows the heart is inflamed from the autoimmune response	
	A murmur: most common at mitral location. 5 ICS mid-clavicular line	
	Fatigue, tired and tires easily	
	Shortness of breath with exertion because the heart is inflamed	
	Odd behavior: laughs or cries inappropriately. Facial muscle twitch or grimaces. Odd hand and finger movements. This is Chorea related to inflammation in the brain.	
	A skin rash	
	FEVER of unknown origin	
	A recent history of a streptococcus pyogenes infection of Strep Throat or Impetigo	

Scenario 3: HF and RHD

Discuss how a strep infection can cause irreversible heart valve damage (autoimmune response).

Jean Damascene is 15 years old and loves to play football. He is good in school and especially like math and science. Over the last several months he has noticed it has been hard to play football as he get short of breath. In fact in the last few weeks he has been unable to play. It takes longer to walk to school so he has been late. His teachers are complaining that he has become lazy with his school work. He explains he is tired because he is not sleeping well at night. His parents are upset at him for being lazy and not working hard enough at home and school. He is in a family of five children. He is the oldest.

Exam:

VS: T 36.8, R 24, P 116 B/P 92/68

He appears fatigued and breathing has prolonged expirations. Skin is dry without a rash. HEENT-normal. +JVD. Chest has smooth and equal excursion; lung sounds abnormal with decreased bases and bilateral rales (no change with cough). S1S2 heard. Abnormal heart sound with loud murmur at mitral position. Point of maximum intensity is at axilla and big. Abdomen is soft. No ascites. Legs with +1 pitting edema to upper tibia.

What does the nurse want to do next?

What is the process?

Discuss together what the plan of care should be.

Have the nurse use the Rwandan Nurses Saving Live Flip chart to explain HF and why she need this patient to get an echocardiogram.

Knows well	Assessment & rationale	Needed reminded
	Explains, "what is heart failure"	
	Shares how his symptoms are most likely because his heart is not pumping well	
	Explains about an echocardiogram and why it is important	
	Explains what the treatment plan is going to be (medications) and follow up	
	Explains the importance diet and walking	
	Discusses with parents about including the teacher in understanding the diagnosis. He is not lazy, he has a heart disease.	
	Explains that this time can be emotional and stressful and that the staff at the clinic are there to help him and his family.	