



SICKLE CELL CLINIC

Acute Chest Syndrome (ACS)

What is Acute Chest Syndrome?

- Acute Chest Syndrome (ACS) is a sickle cell crisis in the lungs.
- Normally, blood travels through vessels to the lungs to pick up oxygen and then delivers it to the rest of the body. In ACS, blood is sickling in the lungs, so it can't pick up as much oxygen as usual.

What are the causes of Acute Chest Syndrome?

Acute chest is more likely to occur after:

- ✓ **Infections.**
- ✓ **Pain crises.**
 - It is important to make sure your child is moving around even though they are in pain.
 - During admission, it is important to do your breathing exercises with incentive spirometry.
- ✓ **Sedation for procedure.**
 - Sedation can put your child at a higher risk for developing ACS.
 - Please let your medical team know about any upcoming surgeries or sedation.
 - In many cases, we can give a blood transfusion before surgery to help decrease the risk of ACS.

What are the signs of ACS?

- Fever over 101.
- Chest pain, cough, wheezing, shortness of breath.

What should I do if I think my child is developing ACS?

Take your child to the ED immediately. If he/she is having trouble breathing, call an ambulance (911) to transport him/her to the nearest hospital.

How will the doctors know if my child has ACS?

- Once at the hospital, let the doctors know your child has sickle cell and trouble breathing, chest pain, shortness of breath, or wheezing. If your child has fever and the chest x-ray shows that blood is sickling in the lungs, the doctors will diagnosis him/her with ACS.
- Some children develop ACS while admitted for another sickle cell complication. If you feel that your child's breathing is worse while at the hospital, please tell the doctor immediately.

How will my child's ACS be treated?

- Your child will get IV antibiotics and likely receive a blood transfusion to treat ACS.
- Your child may also need oxygen to help breathe until the lungs heal completely.
- Acute chest syndrome may take several days to a week to get better.

How can I help prevent my child from getting ACS?

- Your child should receive all recommended vaccines, including pneumovax and a yearly flu vaccine.
- Hydroxyurea decreases the risk of getting ACS.
- If your child has a severe episode of ACS, your doctors may want your child to receive blood transfusions for several months until the body heals.

Transfusion reaction: The hospital makes every attempt to make sure the red blood cells you receive are a perfect match for your body. However, your body may realize that these are not year exact red blood cells. If this happens, your body's immune system may attack the red blood cells that were transfused causing you to have a rash, itching, chills, or fever.

- The side effects can be treated with allergy or fever medications.
- In rare cases, a transfusion can lead to a patient having shortness of breath. If this happens, we would admit you to the hospital.
- Over time, some people's immune system may realize that these blood cells are not your own and reject blood transfusions. This makes it very difficult to find red blood cells that we can transfuse to a patient.

Infection: All blood products are carefully screened to prevent a patient from receiving blood from a person with an infection including diseases such as hepatitis or HIV. This risk is very small. For example, the current risk of getting HIV from a blood transfusion is less than 1 in a million. The blood bank continues to try to identify new ways to make this even a lower risk.