

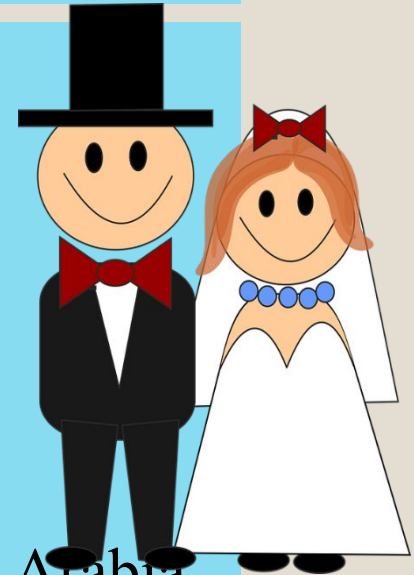
PRE-MARITAL COUNSELING AND TESTS

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Community Medicine Unit Faculty
Family and Community Medicine Department- King Saud University
Reproductive System Block- 2nd year Medical Students
April 3rd, 2019 11-12 p.m.

Learning Objectives

By the end of this lecture the student should be able to:

1. Recognize the Saudi Healthy Marriage program
2. Recall the program's areas of pre-marital counseling
3. List diseases included in the Saudi pre-marital screening program
4. Identify the fate of tested individuals (case, carrier, clear)
5. Recognize cultural considerations for pre-marital counseling in Saudi Arabia



Lecture Outline

The Saudi Scene

Brief on the Saudi pre-marital screening program

Pre-marital counseling and its application in KSA

The program's objectives

Overview video

Cultural considerations

3 minutes in-class stretching break

Scenario application for fates of tested couples

Infectious disease scenarios

Inherited blood disorders

Closing remarks

The scene

- The middle East is one of the regions known for high rates of **sickle cell disease and beta-thalassemia**.(1)
- In the 80s Saudi Arabia was hyper-endemic with **Hep B Virus**. (2)
- In Saudi Arabia, **Hepatitis C** persists as a problem in hemodialysis patients and IV drug users. In KKUH, Hep C prevalence was 0.58 % in 1996 and decreased to 0.08% in 2006. (2)
- From the year 2000 to 2009, there were 2,956 reported Saudi cases of **HIV**. A rate of 1.5 cases per 100,000 Saudis.(3)

1. Marked regional variations in the prevalence of sickle cell disease and b-thalassemia in Saudi Arabia: Findings from the pre-marital screening and genetic counseling program. Journal of Epidemiology and Global Health. December 2011. Ziad A. Memish, Mohamad Y. Saeedi.
2. Epidemiology of viral Hepatitis in Saudi Arabia: Are We Off the Hook?. Saudi Journal of Gastroenterology. Nov-Dec 2012. Ayman Abdo, Faisal M. Sanai, Faleh Z. Al-Faleh.
3. HIV Case Notification Rates in the Kingdom of Saudi Arabia over the Past Decade (2000-2009). PLoS ONE. Sep 2012. Mohammed A. A. I. Mazroa et al



وزارة الصحة
الوكالة المساعدة للطب الوقائي
الإدارة العامة للأمراض غير المعدية



برنامج الزواج الصحي



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سليم وسلمى

مع تحيات وزارة الصحة

هاتف: ٤٧٥٠٤٢٦ - ٠١ ٤٧٥٠٤٥٣ - فاكس: ٠١ ٤٧٥٠٤٢٨ - الموقع الإلكتروني لوزارة الصحة www.moh.gov.sa

موقع الإدارة العامة للأمراض غير المعدية www.moh-ncd.gov.sa

Healthy Marriage Program

- Program started in 2004. It included tests for hemoglobinopathies: **sickle cell and thalassemia**.(1)
- In 2008 the MOH added to the program testing for **HIV, Hep B, Hep C**.(2)
- In 2013, the program changed its name from *pre-marital screening* فحص ما قبل الزواج to *healthy marriage program* برنامج الزواج الصحي, and started electronic integration. (3)

Healthy Marriage Program cnt'

Centers

- List of MOH centers accredited to give the healthy marriage certificate:

<https://www.moh.gov.sa/en/HealthAwareness/Beforemarriage/Pages/002.aspx>

- There are others in non-MOH institutes. Ex: PCC1 here in KKUH for KSU staff

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Pre-marital counseling

Pre-marital: before marriage

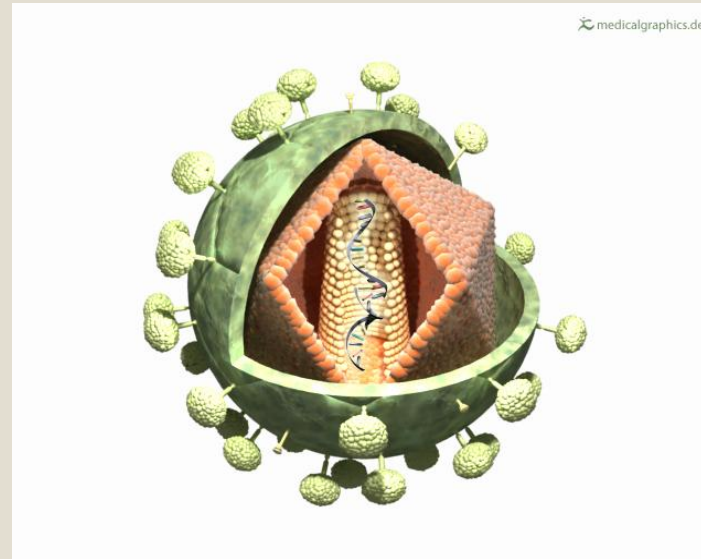
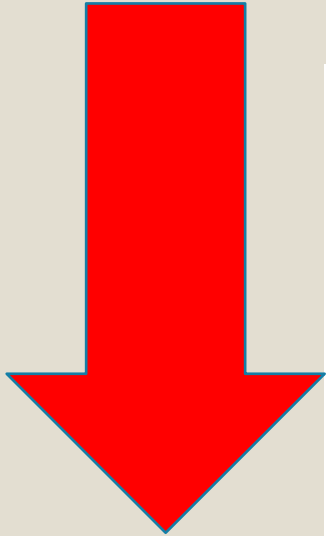
Counseling: *“professional guidance of the individual by utilizing psychological methods.....” (1)*

Pre-marital Counseling in KSA

The Saudi Healthy Marriage program, tests for genetic blood disorders (hemoglobinopathies) and infectious diseases. Then according to the results, it **provides counseling on:**

- The **odds** of transferring this disease **to their prospective marriage partner**
- The **odds** of transferring this disease **to their future children**
- **Solutions** and how to move forward

The program's objectives



Anatomie HIV-Virus illustration by www.medicalgraphics.de, distributed under creative commons CC BY-ND 3.0. URL: <http://www.medicalgraphics.de/en/free-pictures/erkrankungen/hiv-virus-offen.html>. Accessed: April 2nd, 2018

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The program's objectives

4- To make it easier for people who want to make the test to ask for it

5-To raise awareness about the concept of a comprehensive healthy marriage

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سليمة صحيا



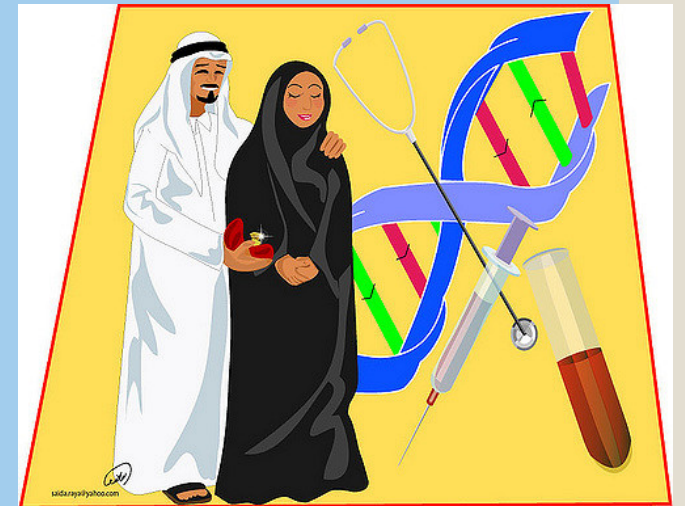
Certificate of healthy marriage

The certificate is issued after the test results have been done and counseling has been performed in the counseling clinic for cases that mandate it.

Examples of such cases: Having Hep C, hemoglobinopathy with chance of having diseased children

Cultural considerations

- Consanguineous marriage (56% in 1995, 57.7% in 2007 in KSA)*
- Respect the couple's decisions. The test is mandatory but the results are not mandatory.
- Family and tribal pressure
- Taboo of certain diseases/ stigma
- Privacy and confidentiality



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Scenario #1

Mohammed and Fatima presented to the primary care clinic for pre-marital screening. You performed the following blood tests: complete blood count, sickle cell test, hemoglobin electrophoresis, and virology tests for HIV, Hep C, and Hep B. Both were clear from any abnormalities.

- 1. Is counseling required in this situation?**



Scenario #2

Amal and Tareq performed pre-marital screening tests and it was found that Tareq is a Hep B carrier. Repeat the tests to confirm. To issue them a health marriage certificate it is mandatory that they go to the counseling clinic.

what will you counsel them about?

1. Transmission to wife- Hep B vaccine
2. Transmission to future children – Hep B vaccine
3. Solutions: refer to specialty clinic as needed.



What if it was Hep C or HIV?

1. **Repeat the tests** to confirm.
2. **Counseling** is mandatory as well.
 - Transmission to wife- no vaccines, health education
 - Transmission to future children
 - Solutions: refer to specialty clinic as needed. (antiviral therapy)
3. **The marriage**
 - If decided to proceed, sign that they received counseling and they are going ahead with the marriage despite counseling

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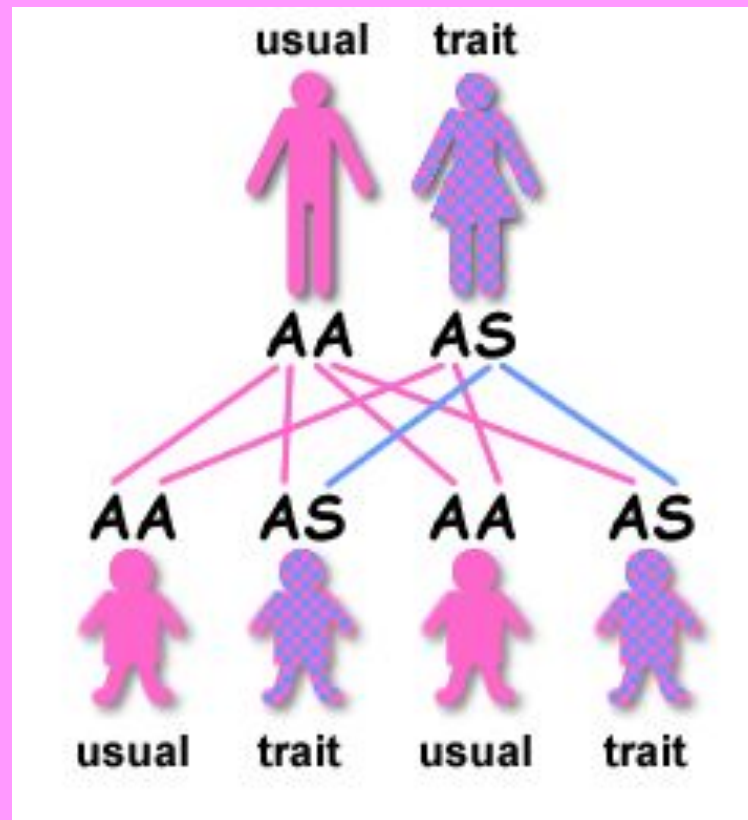
Scenario #3

- Ali, from the Eastern region, presented to your clinic for pre-marital screening as he intends to marry his cousin. His prospective wife did the test and was clear from any abnormalities. Ali's hemoglobin electrophoresis shows Hb A : 60 % , Hb SS :40% , Hb F : 2 % , meaning he is a carrier of sickle cell trait.

What would you tell them about the odds of inheritance for their future children?



Scenario #3 cnt'

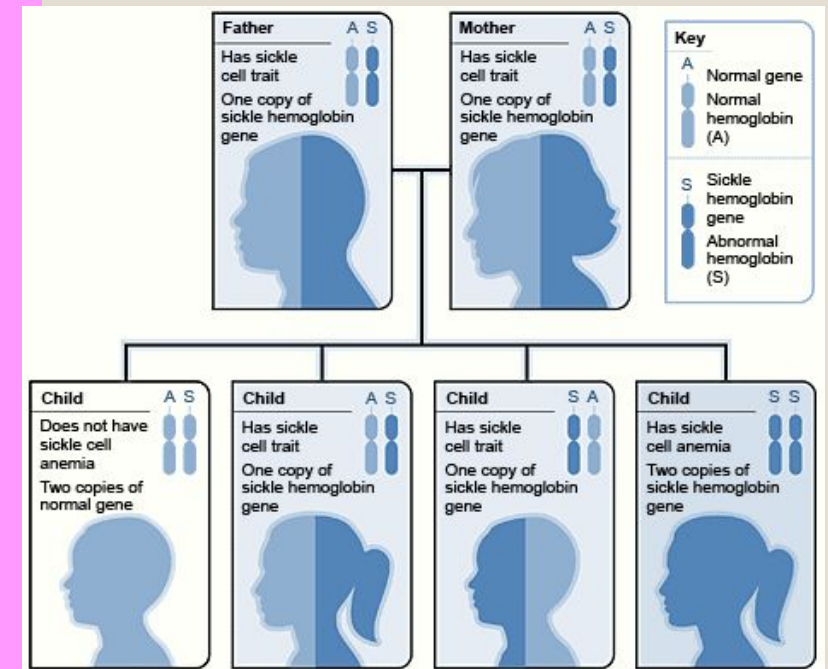


What if Ali's fiancé Sara was also a sickle cell trait carrier?

Counseling:

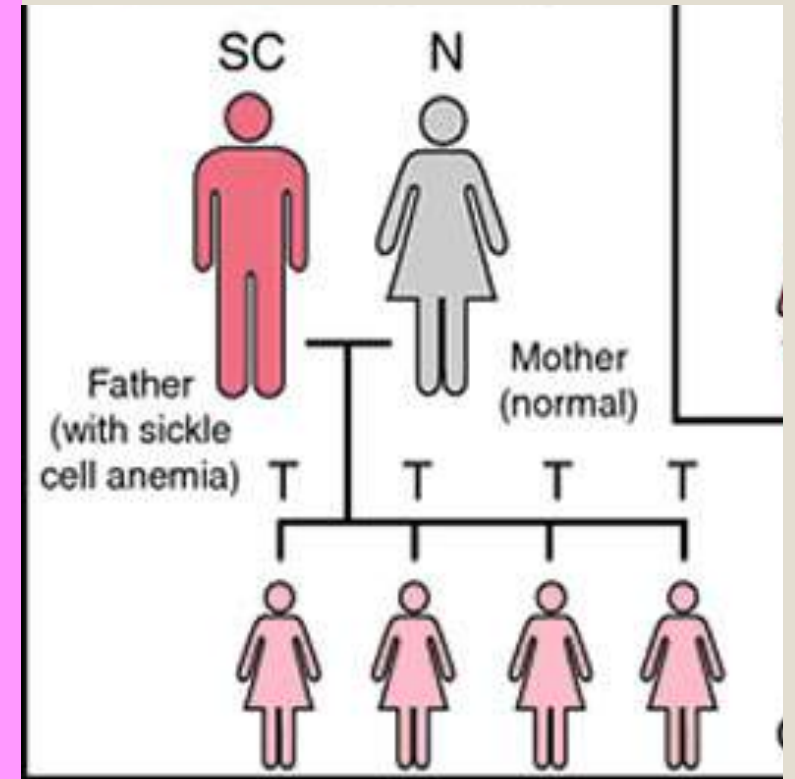
1. Transmission to future children?
2. Solutions/alternatives?
 - Find another partner for marriage who doesn't have sickle cell trait or anemia

Certificate of healthy marriage will be given after they go to the counseling clinic.



What if Ali had sickle cell anemia and Sara was clear?

- Odds of transmission to future children?
- Is an appointment at the counseling clinic mandatory to issue the certificate?

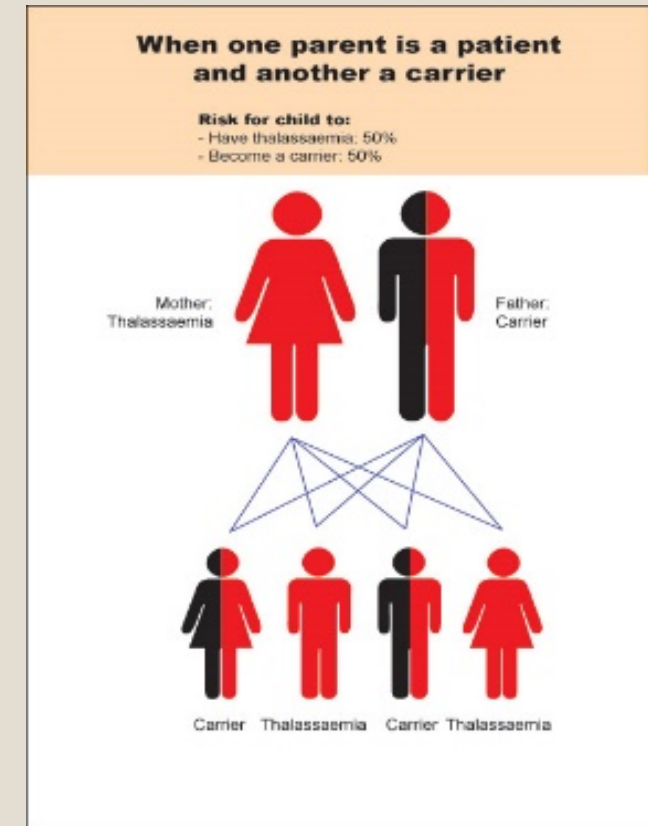


What if Ali is a carrier and Sara has sickle cell anemia?

Counseling:

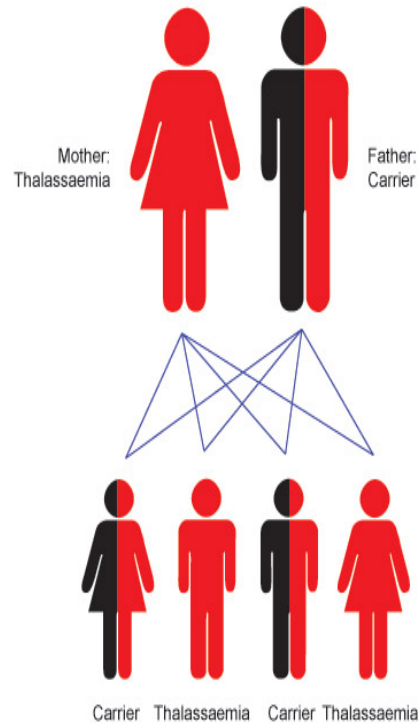
1. Odds of transmission to future children?
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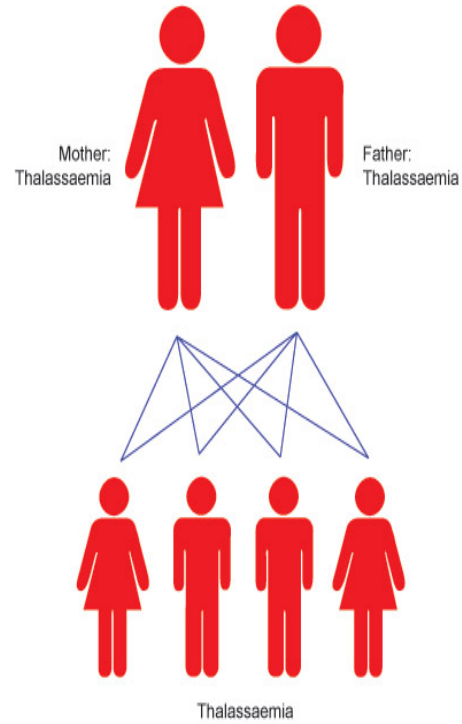
When one parent is a patient and another a carrier

- Risk for child to:**
- Have thalassaemia: 50%
 - Become a carrier: 50%



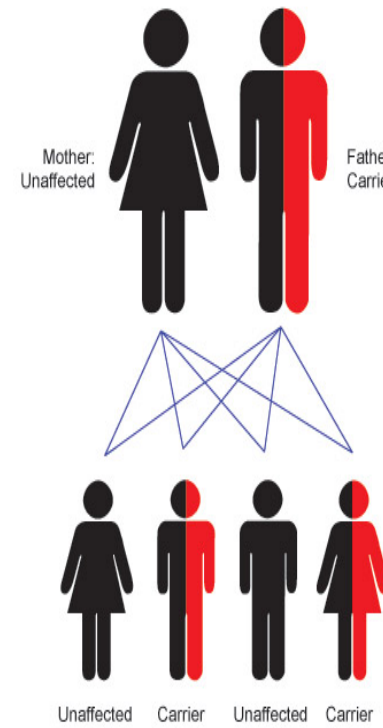
When both parents are patients

- Risk for child to:**
- Have thalassaemia: 100%
 - Become a carrier: 0%



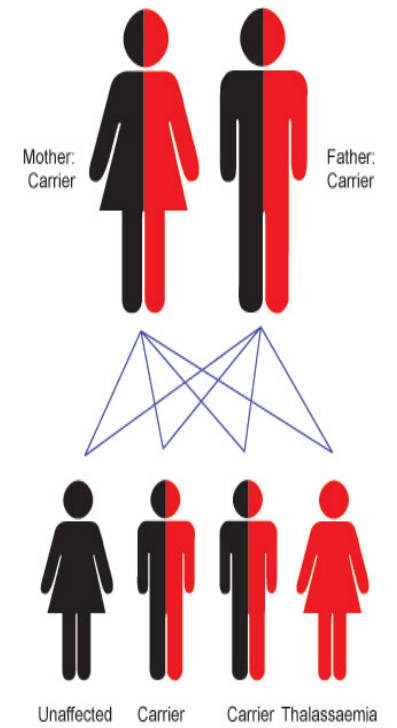
When one parent is a carrier

- Risk for child to:**
- Have thalassaemia: 0%
 - Become a carrier: 50%

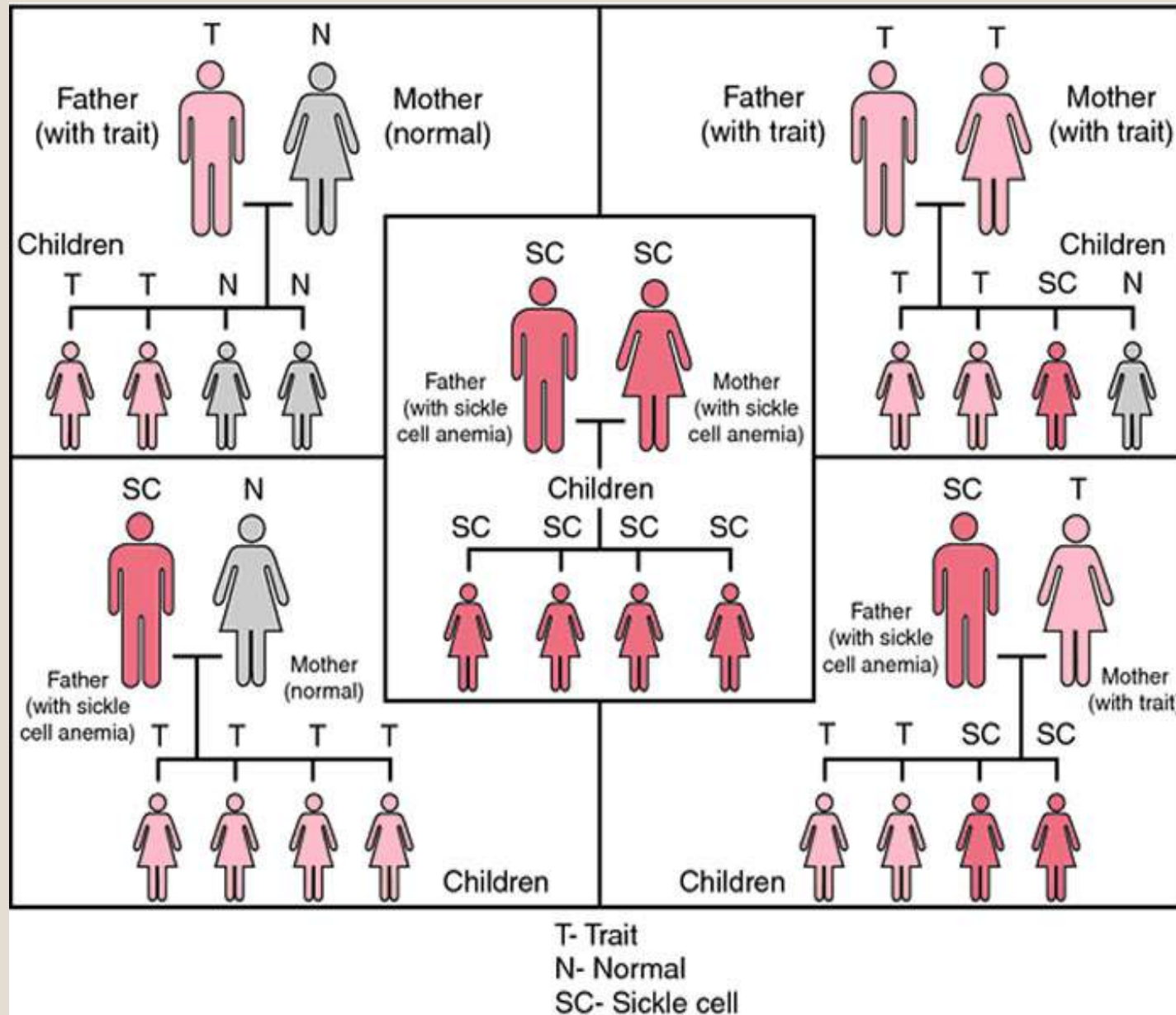


When both parents are a carrier

- Risk for child to:**
- Have thalassaemia: 25%
 - Become a carrier: 50%



Without thalassaemia trait
 With thalassaemia trait



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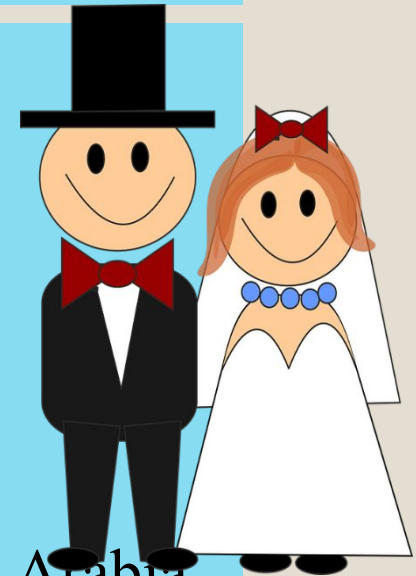
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THANK YOU

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