**Nicholas’ Story**

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**Preparation:**

Prior to the case discussion in class (as a homework assignment), get acquainted to the case.

* Watch the video titled “Managing Sickle Cell Disease as a Teenager”

<https://www.youtube.com/watch?v=iKQmQHh4E2w>.

* Review the materials presented in Part 0 and answer the questions.

**Part 0: Understanding Sickle Cell Disease (SCD)**

*Box 1: Storyline*

The video that you watched described Nicholas’ experiences living with sickle cell disease (SCD). Before we explore any specific questions about Nicholas’ experiences, it may be helpful to understand what SCD is, how it is caused, and its key molecular players.

a. Read the Fact Sheet document at <https://ghr.nlm.nih.gov/condition/sickle-cell-disease#genes> or the pdf version attached to the website.

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Answer the following questions in a few sentences each:

Q1. What causes sickle cell disease?

Q2. What is hemoglobin? Where is it present in our body? Why is it so important for us?

Q3. What is the overall composition of hemoglobin?

Q4. How does the sickle cell mutation in hemoglobin (HbS) cause red blood cells to sickle?

Q5. What are some current medications/strategies for treating sickle cell disease?