

Storyboard revision of selected basic clinical sciences for nurses

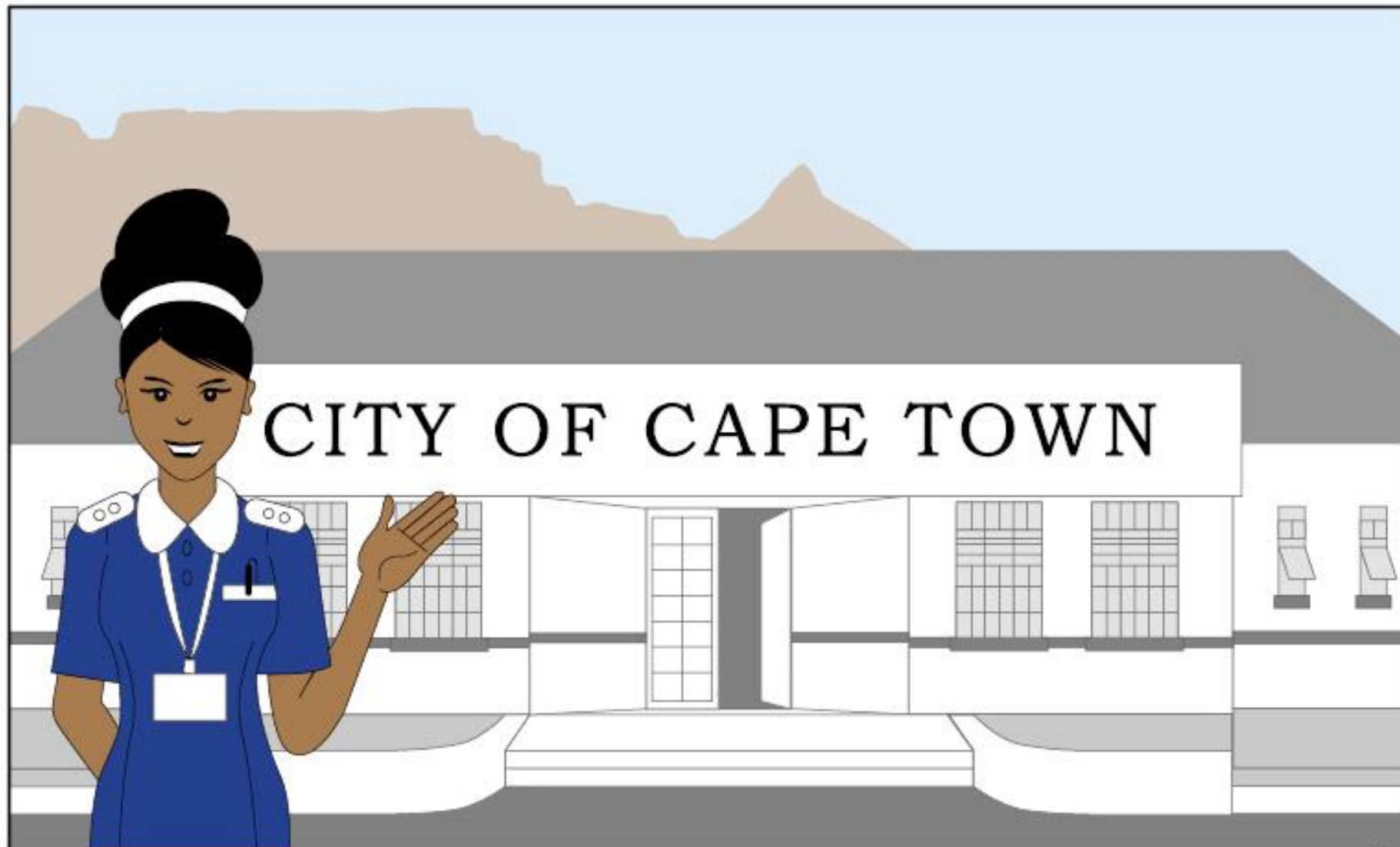
By Una Kyriacos



Overview

This online resource is for registered nurses planning to study for the Postgraduate Diploma in Ophthalmic Nursing, a postgraduate nursing clinical specialist qualification, and who may have forgotten basic concepts of the clinical sciences. It is aimed at setting you up for success – particularly if you have not studied for a long time!

In this case-based learning zone you will meet Mrs Sarah September and members of her family who will guide you on your voyage of rediscovering knowledge that you will need to give them appropriate health care.



You are the clinic sister at a Cape Town community health centre.



This document by Una Kyriacos (Ph.D. RN, UCT Division of Nursing & Midwifery) is licensed under the Creative Commons Attribution- No Derivatives 4.0 International Licence.
<http://creativecommons.org/licenses/by-nd/4.0/>. Illustrations by Emily Booth





A lady with a limp enters your consulting room and introduces herself as Sarah September.



This document by Una Kyriacos (Ph.D. RN, UCT Division of Nursing & Midwifery) is licensed under the Creative Commons Attribution- No Derivatives 4.0 International Licence.
<http://creativecommons.org/licenses/by-nd/4.0/>. Illustrations by Emily Booth





Sarah says Joseph works in an abattoir and that she been a flower seller on Adderley Street for 39 years.



This document by Una Kyriacos (Ph.D. RN, UCT Division of Nursing & Midwifery) is licensed under the Creative Commons Attribution- No Derivatives 4.0 International Licence.
<http://creativecommons.org/licenses/by-nd/4.0/>. Illustrations by Emily Booth

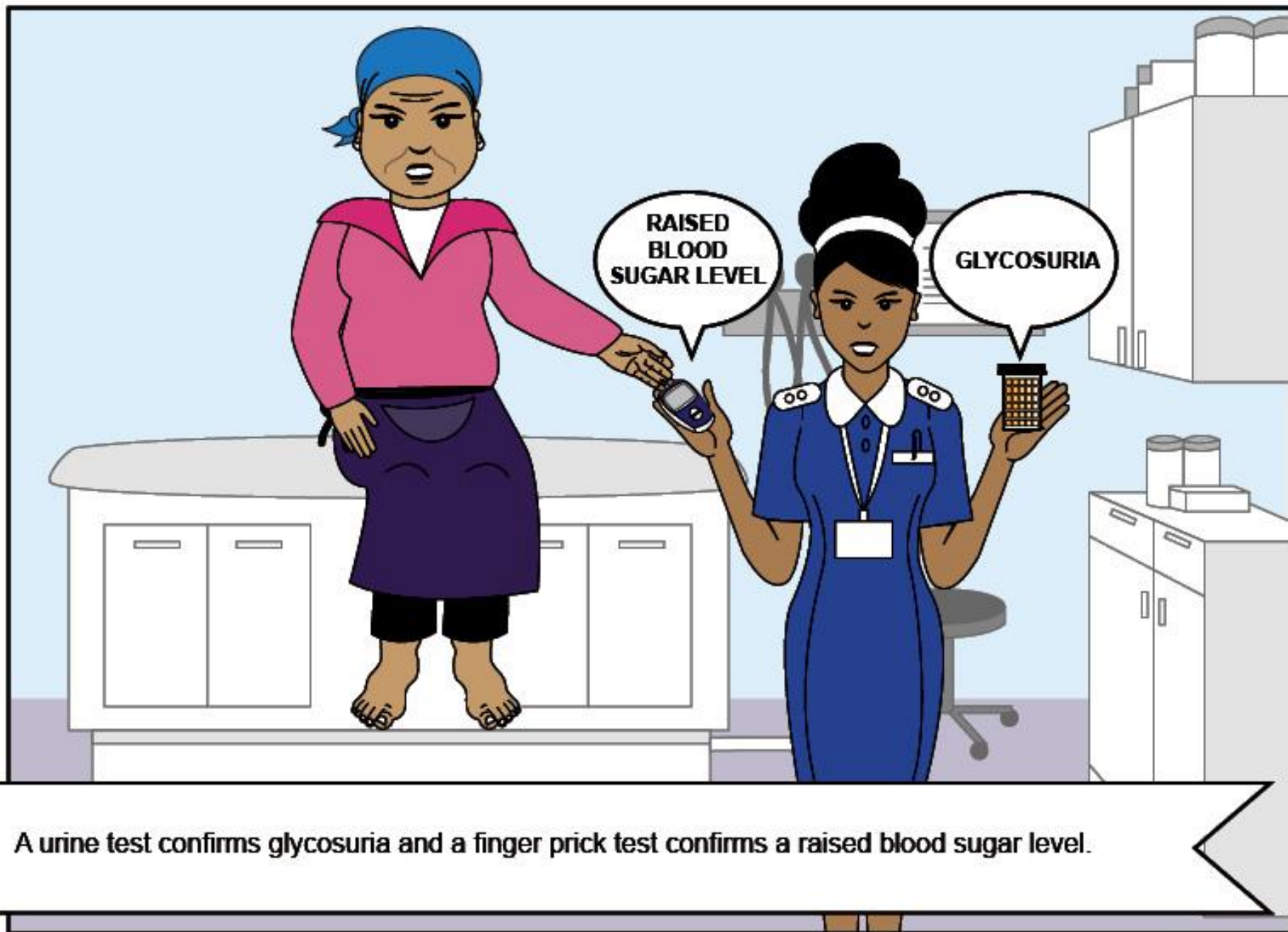




Apart from getting colds and flu, she has felt healthy. She has a family history of 'sugar in the blood'. Today Sarah complains that she has a smelly sore between the toes on her left foot that will not heal.



After further questioning she admits to always being thirsty, drinking a lot of water and then passing a lot of urine.



A urine test confirms glycosuria and a finger prick test confirms a raised blood sugar level.



This document by Una Kyriacos (Ph.D. RN, UCT Division of Nursing & Midwifery) is licensed under the Creative Commons Attribution- No Derivatives 4.0 International Licence.
<http://creativecommons.org/licenses/by-nd/4.0/>. Illustrations by Emily Booth







At her second visit the diagnosis of Diabetes Mellitus type 2 is confirmed.



On examination: her feet and ankles are swollen and she is getting a little breathless. Her blood pressure is 180/90, heart rate is 110 but regular and her respiratory rate is 23.



She thinks her blood is 'thin' and asks you what blood is made up of because Joseph, her husband, works in an abattoir and says that blood that stands in a jug gets thick at the bottom.

TASK ONE

Go to the website: <http://www.getbodysmart.com/ap/circulatorysystem/menu/menu.html>

Prepare your answer for Mrs September by summarising the following information:

COLUMN A

List the components of blood:

COLUMN B

List the functions of each component:



Sarah asks you some questions about her blood pressure and heart rate.

TASK TWO

Go to the websites: <http://www.bloodpressureuk.org/BloodPressureandyou/Thebasics/Bloodpressure>

&

<http://education-portal.com/academy/lesson/heart-rate-cardiac-output-stroke-volume.html#lesson>

Prepare your answer for Mrs September by summarising the following information:

1. Heart rate is defined as: _____
2. Stroke volume is defined as: _____
3. Cardiac output is defined as: _____
4. Blood pressure is defined as: _____

Summarise what you will say to her about her blood pressure and heart rate readings:



Sarah is worried about her breathlessness and swollen feet and ankles.

TASK THREE

Go to the website: <http://www.getbodysmart.com/ap/respiratorysystem/menu/menu.html>

Prepare your response to Mrs September by answering the following questions:

1. The lungs contain about 300 million _____ where gas exchange takes place.
2. The pulmonary veins convey _____ blood to the _____.
3. The pulmonary artery conveys _____ blood to the _____.
4. _____-sided heart failure may cause swelling of the legs/ankles/feet.
5. _____-sided heart failure may cause breathlessness.
6. The normal respiratory rate range = _____ to _____.
7. The normal oxygen saturation level = _____.
8. Summarise what you will say to her in response to her questions.



Sarah also asks you how her life will have to change to keep healthy. She also wants to know what she should do about the sores between her toes.

TASK FOUR

1. Choose the correct answer: People with Type 1 diabetes have/do not have a total lack of insulin.
2. Choose the correct answer: People with Type 2 diabetes have too little insulin or cannot use insulin effectively/do not have too little insulin or do use insulin effectively
3. Explain how glucose crosses the cell membrane into the cell.
4. Explain what hyperglycaemia is.
5. Hyperglycaemia can be lowered by _____ and _____ and _____.
6. For each of the answers you gave for question 5 explain how you would help Sarah understand what she needs to do to keep healthy. What do you need to know about her and her circumstances to enable you to give her appropriate health advice.
7. Explain why you think she has developed smelly sores between her toes.
8. Explain what advice would you give Sarah about foot hygiene.



Just before leaving the consulting room she tells you that for the past few months she has had difficulty reading her book.

TASK FIVE

1. With her diagnosis of diabetes mellitus what could be the reason for her diminished vision?
Provide an illustration of the structure/s of the eye that could be involved.
2. At her age what could also be the reason for her diminished vision when reading?
3. How would you go about testing her vision in the clinic?
Give the reasons for every test that you would do.
4. A patient with type 2 diabetes mellitus must have an annual dilated funduscopy - TRUE or FALSE.
5. If you answered true to question 4 explain your answer.
6. If you answered false to question 4 explain your answer.



Sarah thanks you for all your kind help and advice as she leaves your consulting room.



This document by Una Kyriacos (Ph.D. RN, UCT Division of Nursing & Midwifery) is licensed under the Creative Commons Attribution- No Derivatives 4.0 International Licence.
<http://creativecommons.org/licenses/by-nd/4.0/>. Illustrations by Emily Booth





Storyboard revision of selected basic clinical sciences for nurses by Una Kyriacos is licensed under a [Creative Commons Attribution-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/)

Click [here](#) to access the online version