

Note: This is Online Supplementary Document 1 of Jalavu TP, Rensburg M, Erasmus R. Clinical staff knowledge and awareness of point-of-care-testing best practices at Tygerberg Hospital, South Africa. Afr J Lab Med. 2020;9(1), a853 <https://doi.org/10.4102/ajlm.v9i1.853>.

Supplementary Document 1: Study Questionnaire

Point of Care Testing: An Audit into the Awareness and Practices in a Tertiary Hospital environment

Questionnaire

Date: _____

Thank you for agreeing to participate in the study. Please read carefully and answer all questions clearly.

1. Please indicate the following:
 - a. Qualification (MBChB, BCur etc): _____
 - b. Rank (Intern/MO/Reg/RN/SN etc): _____
 - c. Duration of qualification (years): _____

2. Which of the following do you regularly perform on patients? (please tick one or more as applicable to you)
 - a. Glucose monitoring
 - b. Blood gas monitoring
 - c. Urine analysis (Dipsticks)
 - d. Other (please specify): _____

3. Do you know how many devices this ward has (if yes, please indicate how many of each device; please write 'don't know' if unsure)
 - a. Glucose meters: _____
 - b. Blood gas analyser: _____
 - c. Urine dipsticks: _____
 - d. Other (please specify): _____

4. How many times do you perform the above tests per week? (fill those applicable to you)

Frequency per week Glucose Meter Blood gas analyser Urine dipstick

More than 5 times

3 to 5 times

Less than 3 times

5. Do you think POCT is necessary to improve patient care? (if no please explain briefly)

a. Yes, it is very important for patient care

b. Most of the time it helps to manage our patients

c. I'm not sure it makes a difference

d. It does not really help in our ward/clinic: _____

6. Do you know who is in charge of the maintenance and replacement of faulty devices?

a. Yes (indicate name): _____

b. No

c. Not sure

7. Have you ever had any formal training (by a lecturer/company representative for minimum 1 hour) on how to use the following devices?

(Please tick Yes or No as applicable to your ward/clinic)

Device	Yes	No
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a. Glucose meter

b. Blood gas analyser

c. Urine dipsticks

d. Other (please specify device name and use)

.....

8. If yes to any option in question 7, how long ago was your training (if you answered No to all options in question 7, please skip this question):

a. Less than 6 months ago

- b. Six months ago
 - c. About one year ago
 - d. About 2 years ago
9. Have you participated in any formal assessment (examination) to monitor the competency of staff in performing POCT?
- a. Yes, I went through a formal assessment
 - b. I only did a demonstration for the person who trained us
 - c. No formal assessment was offered
 - d. The last formal assessment was during college/university training
10. If you answered Yes to question 9, how often is the competency assessment performed? (if you answered No, please skip to question 11)
- a. Every 3 - 6 months
 - b. Every year
 - c. When there is a need
 - d. It was a once-off assessment, no follow up competency assessments
11. Do you think formal training in POCT is necessary? (please explain your answer below)
- a. Yes, to update existing knowledge and skills
 - b. The tests are not complicated, formal training is not necessary
 - c. I don't think I need any further training
 - d. It does not make any difference whether you get training or not

Brief explanation:

12. When a new device is introduced to the ward, is there any validation/verification done to confirm the manufacturer claims?
- a. Validation is done by the clinical engineering department
 - b. Validation is done by the ward
 - c. I don't know if any validation is done
 - d. Other: _____

13. Does the blood gas analyser require an operator ID to allow analysis of patient samples? (please tick one answer if your ward has a blood gas analyser, or skip to next question)

- a. Yes, access is by operator specific ID only
- b. Yes, but IDs are shared by users sometimes
- c. No, there is no login ID required to perform tests
- d. I do not operate the blood analyser

14. Do you know if the devices in this ward are part of any external quality control (EQA) programme to assess their accuracy compared to similar devices from other hospitals/clinics?

- a. Yes, we have an EQA programme
- b. I am not aware of such a programme
- c. I don't think it is needed because we confirm our results with the laboratory when we need to
- d. I don't know what that is, or how it's done

15. If there is an EQA programme, who is in charge of it and for keeping the records?

- a. Person/department responsible: _____
- b. I am not sure
- c. Not applicable to this ward
- d. Other: _____

16. Does this ward/clinic have a written protocol of what to do with the following (circle yes or no for each, as applies to this ward/clinic)?

- | | | |
|--|-----|----|
| a. Very high or low blood glucose: | Yes | No |
| b. Expired urine dipstick: | Yes | No |
| c. Expired Glucose Strips: | Yes | No |
| d. After changing reagents for blood gas device: | Yes | No |

17. If you answered yes to any of the options in question 14, please indicate action to be taken according to the ward protocol?

- a. Very high or low blood glucose: _____
- b. Expired urine dipsticks: _____
- c. Expired glucose strips: _____
- d. After change of reagents for blood gas device: _____

Please elaborate if needed: _____

18. Do you have access to the manufacturer's manual on how to use glucose meters, urine dipsticks and blood gas devices (whichever is applicable to you)?

- a. Yes, we always have access to manuals
- b. I am not sure where the manuals are kept
- c. We do not have access to any of the manuals
- d. Other _____

19. If a student mistakenly left the dipstick or glucose strips open for a number of hours; what action would you take to check if the strips are not damaged by air exposure?

- a. Use the strips and close the container for future use
- b. Document and report to the ward manager and request a new box of strips to use
- c. Continue using them, no other action
- d. Other: _____

20. Which of the following do you think is very important before performing any point of care test in the ward?

- a. Patient preparation
- b. Confirmation of all results
- c. Documenting time of last meal
- d. Following supervisor's example

21. Which of the following does not artificially influence (interfere) with a blood glucose reading?

- a. Excess dirt on the skin
- b. Wetness of the hands
- c. Very low blood pressures
- d. Fasting state of the patient

22. In a patient who is very dehydrated and shocked, which method should you use to test their blood glucose?

- a. Glucose meter
- b. Blood gas analyser
- c. Laboratory glucose
- d. Other: _____

23. If you did a glucose or urine test on a patient, and lost the paper you wrote in, what would you do next?

- a. Check in the records book
- b. Check on the device history (glucose meter)
- c. Repeat the test
- d. Other: _____

24. Does this ward/clinic have a book/system to record all glucose and/or urine results to maintain a paper trail/ corroborate what is entered in the patient file?

- a. Yes, we do have a recording book for all our tests
 - b. No one forgets to write in the file, we do not need a recording book
 - c. I don't know if there is a recording book
 - d. Other: ☐ _____
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25. Do you think glucose/ blood gas meters always give accurate results like those from the laboratory?

- a. Yes
- b. Most of the time
- c. Sometimes
- d. Not sure

26. Do you know how to check if the device/s is/are still accurate or need to be replaced?

- a. I do not know
- b. Run control solutions

- c. Run calibration solutions
 - d. It is not my role to check accuracy of the device/s
27. Where do you send or who do you call when your device is faulty/not working properly?
- a. I send it to: _____
 - b. I call: _____
 - c. The Sister in charge deals with such issues
 - d. We replace it with another one or send samples to the laboratory
 - e. We borrow from another ward
28. Does this ward keep a record of how often the devices fail, and the actions taken?
- a. Yes, we have a log book
 - b. I don't know of any such log book
 - c. I am not sure if we have a recording system
29. Do you think it is important to know how often device maintenance is done? Please indicate by selecting one number on the scale below.

Not important

Very important

0 1 2 3 4 5

30. How often do you think maintenance on the glucose meters should be performed?
- a. Monthly
 - b. Every 3 months
 - c. Every 6 months
 - d. Every year

Thank you for your time.