

North Florida South Georgia Veterans Health System

Point-of-Care Testing (POCT)

## Glucometer Initial Training

**Ancillary Testing Coordinators** North Florida South Georgia **Veterans** Health System

Sandra Pascual

Dolly A. Gonzalez

Jo Lynn Evans

Contact information located in the glucometer box

#### Limitations of the glucometer

The system is not to be used for the diagnosis or screening of diabetes mellitus

Only for the monitoring of the treatment of diabetes mellitus

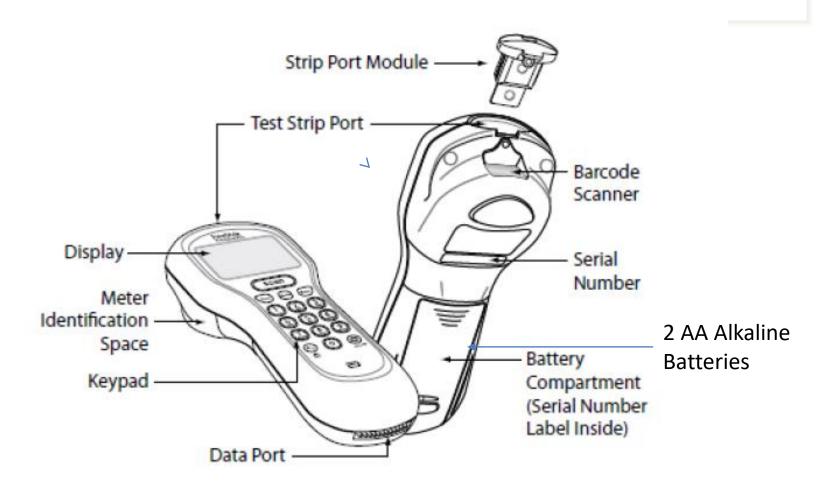
\*\*\*Very Important\*\*\*

## This meter is not FDA approved to be used on Critically III patients.

#### **Critically ill Patients**

- Patient on mechanical ventilation and requiring an FiO2 of >60% or CPAP of >8
- Hypotension requiring vasopressor support to maintain mean arterial pressure (MAP) >60 mmHg
- Hematocrit <15% or >65%.
- Requiring intravenous insulin infusion to maintain glucose control
- A diagnosis of any of the following: Shock, severe Hypotension, decompensated heart failure, diabetic ketoacidosis, metabolic acidosis with pH<7.2 and or lactic acidosis</li>
- Status epilepticus
- Patient on a balloon pump or other circulatory assist device
- Patients receiving massive transfusion protocol post cardiac arrest

## Freestyle Precision Pro Glucometer Abbott

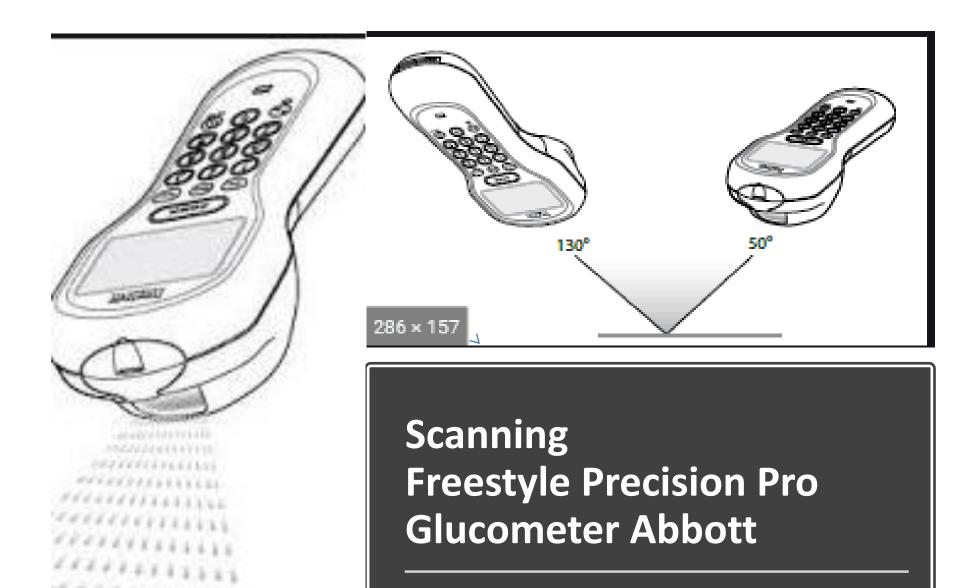


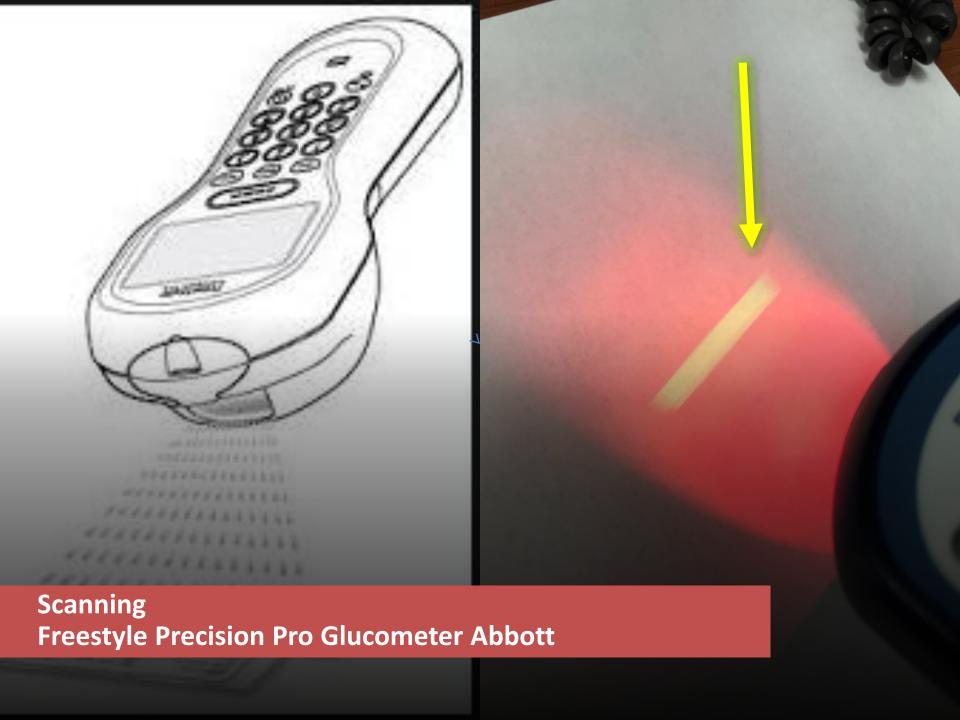
#### Freestyle Precision Pro Glucometer Serial Number

Serial Number









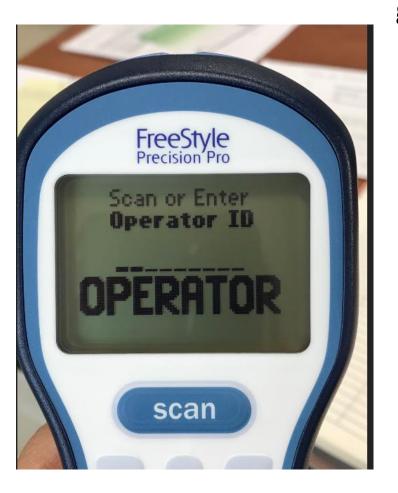
# Testing strips, control vials, and AA batteries are supplied by

## Supplies

Supply Chain Management.

These items are usually stock right next to the lancets in the supply room

### **Operator ID?**

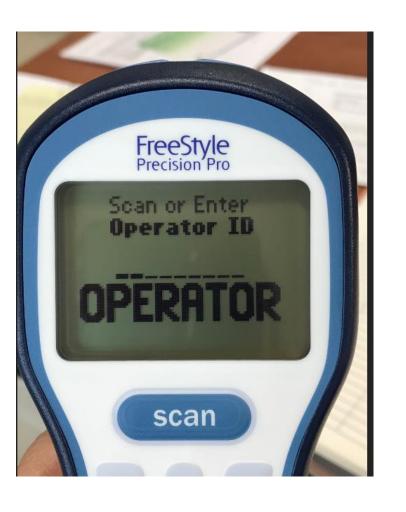


Operator IDs are used to access the glucometer to perform glucose testing.

This Operator ID or DUZ number is unique to each individual.

NEVER SHARE
OPERATOR NUMBER
WITH ANYONE

#### **Operator ID?**



After initial training the employee will be evaluated at:

- 6 months
- annually

Annual competency is required once a year to maintain an active certification.

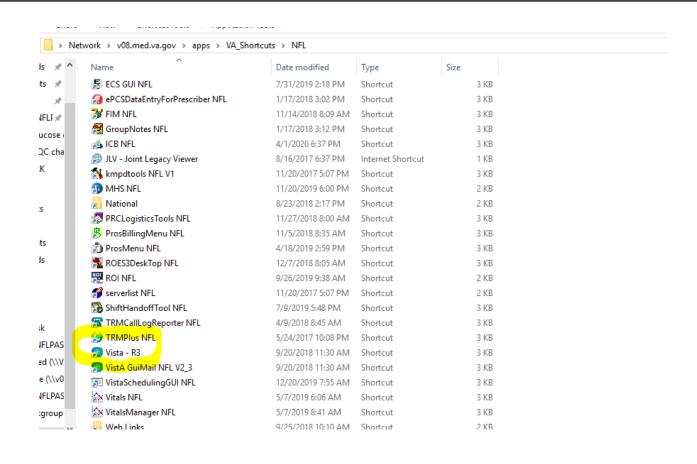
If competency is not performed, your account will automatically be lock out.

#### Operator ID Expiration message



Contact your nurse manager or nurse educator to schedule training

We are also here to assist you



Vista



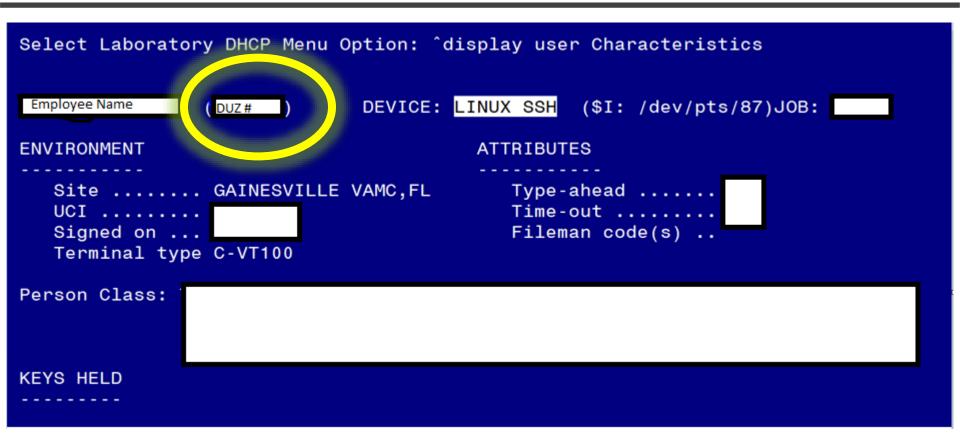
Vista

#### **^Display user characteristics**

#### Vista

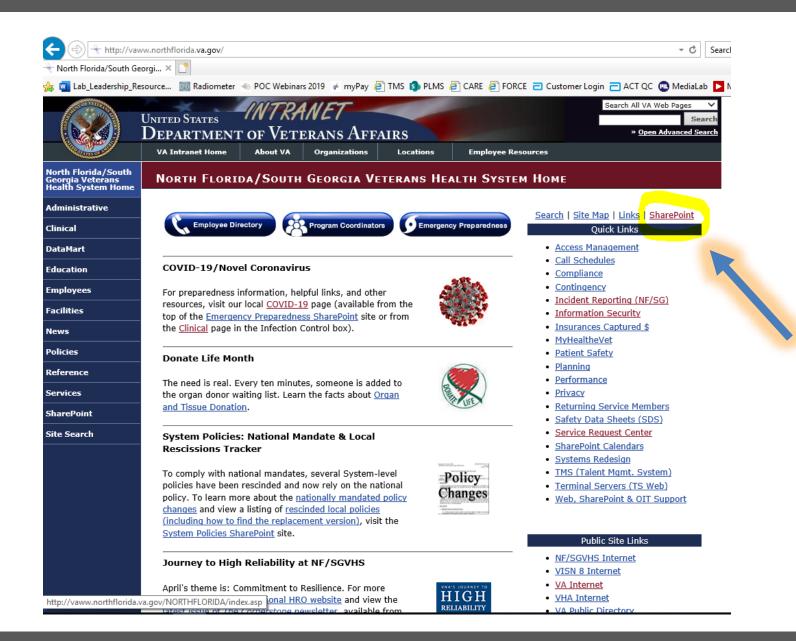
```
'^' to stop, or choose a number from 1 to 19 : ??
          Phlebotomy menu ...
   2
3
          Accessioning menu ...
          Process data in lab menu ...
   4
5
          Quality control menu ...
          Results menu ...
   6
          Information-help menu ...
          Ward lab menu ...
   10
          Microbiology menu ...
   11
          Supervisor menu ...
   LSM
          Lab Shipping Menu ...
You have PENDING ALERTS
          Enter "VA to jump to VIEW ALERTS option
Select Laboratory DHCP Menu Option: ^display user Characteristics
```

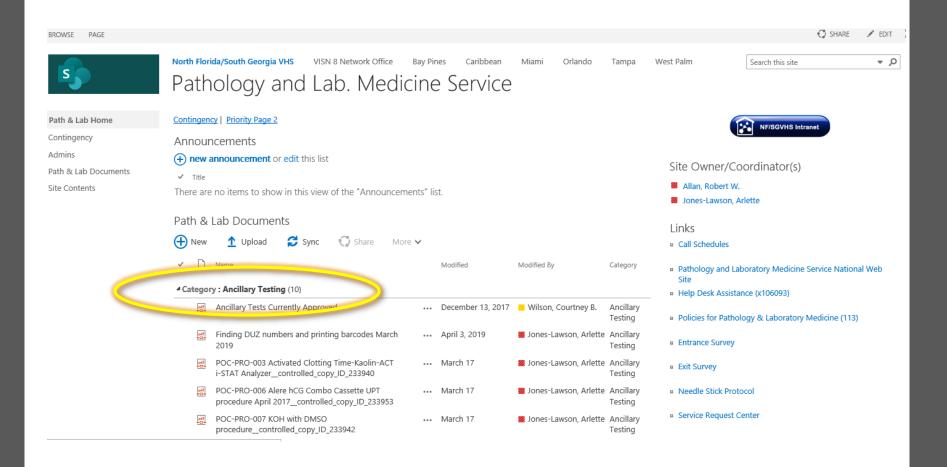
#### Vista



# Operator Code becomes inactive if you don't sign in into VISTA or CPRS within 90 days

 If you barely use CPRS or VISTA... sign-in once a month to keep it active.





	- Category . Ancinary Testing (10)					
	pdf_	Ancillary Tests Currently Approved	•••	December 13, 2017	Wilson, Courtney B.	Ancillary Testing
	pdf pdf	Finding DUZ numbers and printing barcodes March 2019	***	April 3, 2019	Jones-Lawson, Arlette	Ancillary Testing
	pdf	POC-PRO-003 Activated Clotting Time-Kaolin-ACT i-STAT Analyzer_controlled_copy_ID_233940	***	March 17	<b></b> Jones-Lawson, Arlette	Ancillary Testing
	pdf	POC-PRO-006 Alere hCG Combo Cassette UPT procedure April 2017_controlled_copy_ID_233953	***	March 17	✓ Jones-Lawson, Arlette	Ancillary Testing
	pdf	POC-PRO-007 KOH with DMSO procedure_controlled_copy_ID_233942	***	March 17		Ancillary Testing
	pdf	POC-PRO-010 Provider-Performed Testing (PPT) Policy_controlled_copy_ID_233961	***	March 17		Ancillary Testing
	pdf 	POC-PRO-012 Whole Blood Glucose Testing using Abbott Freestyle Precision Pro Point of Care System-New 2020_controlled_copy_ID_233937	***	March 17	Jones-Lawson, Arlette	Ancillary Testing
	pdf	POC-PRO-015 Blood Gases Radiometer Maintenance Procedure 2020_controlled_copy_ID_233945	***	March 17	<b></b> Jones-Lawson, Arlette	Ancillary Testing
	<u>pdf</u>	POC-PRO-016 Blood Gases Testing Using the Radiometer ABL-800 Series_controlled_copy_ID_233947	•••	March 17	✓ Jones-Lawson, Arlette	Ancillary Testing
	pdf -D-	SYS 113 02 System 113-02 ATC Protocol_controlled_copy_ID_233954	***	March 17	<b></b> Jones-Lawson, Arlette	Ancillary Testing

Is how you verify that your glucometer is working correctly and provide you with accurate results



Controls are good for

Ninety (90) Days

from when they are opened and need to be dated with both

Opened and Expiration date.



Always!!!!

Write on the vial

Open and Expiration dates.

It's a Joint Commission Requirement

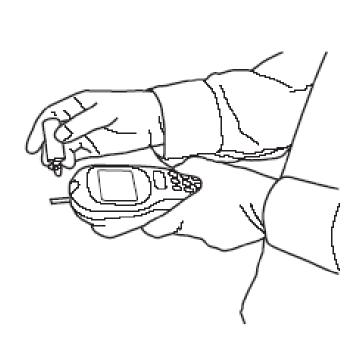


Control testing should be performed in the following circumstances:

- Required once every 24 hours
- If a patient test has been repeated and the blood glucose results are still lower or higher than expected.
- When troubleshooting the glucometer
- Whenever the glucometer has been dropped.



## Running QC







#### **Quality Control Notes**

- Invert the control solution bottle a few times
- Always keep the meter horizontal during testing.
- The glucometer will not let you run patients until QC has been performed for that day.
- QC results in a "Pass" or "Fail"



#### If QC Fails...

- Repeat control level
- If it Fails...
- Open a new set of controls
- If it still fails...
- Glucometer might have issues.
- Contact us immediately



#### Glucose Patient Testing

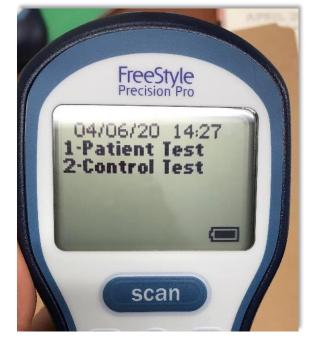
Patient Identification

Always!!!!

Use 2 identifiers:

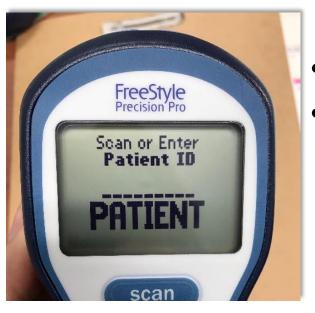
**Full Name** 

Full Social Security Number (SSN)



#### **Patient Testing**

Select "Patient Test"



- Scan patient wristband.
- •Scanning is highly recommended!!!

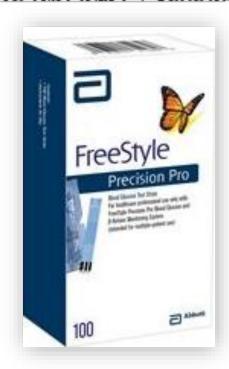
# Freestyle Precision Pro Glucometer Abbott

**Glucometer Strip** 

#### FreeStyle Precision Pro Blood Glucose Test Strip



1



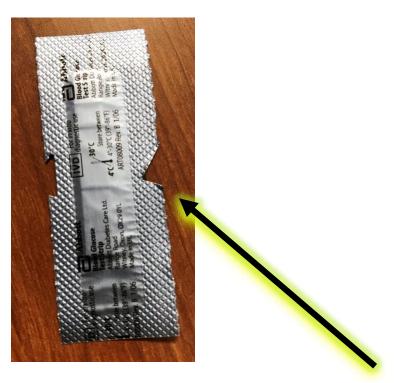




#### Scan strip

- Do not use test strips after expiration date.
- Do not use test strips that are damaged in any way.
- Do not use the test strip if the foil packet has a puncture or tear in it.
- Use the same scanned strip for testing



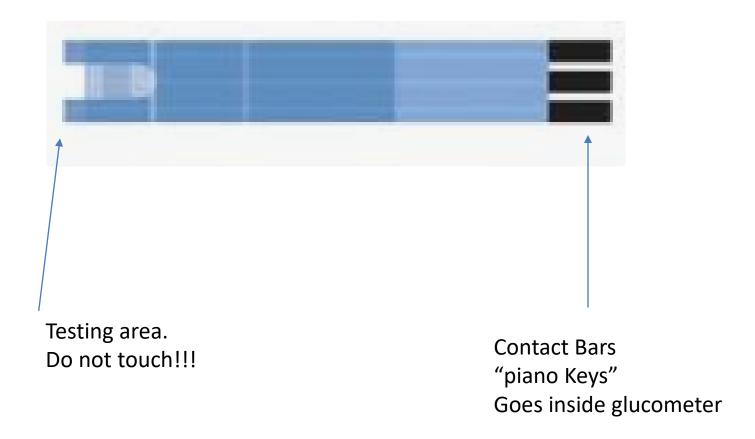


- To open strips hold with left hand with barcode facing away from you.
- Grab the lower tip of the notch (see arrow) and tear left and down.
- You should see a print resembling piano keys.
- Handle the strip by the middle, do not touch the testing area and connectors





## **Testing Strip**



- Capillary blood from a finger is the specimen of choice
- •Venous and arterial whole blood with lithium heparin, sodium heparin and EDTA are acceptable.

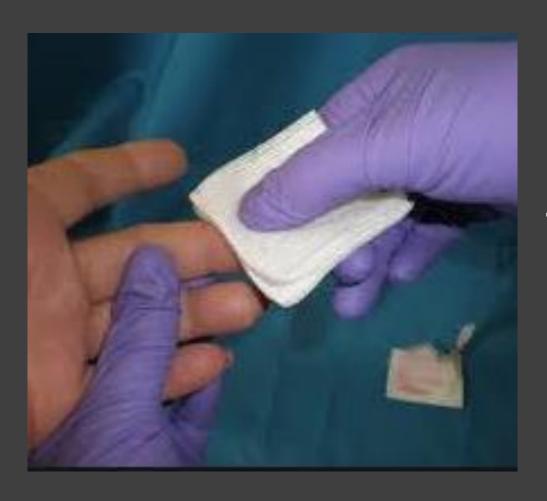






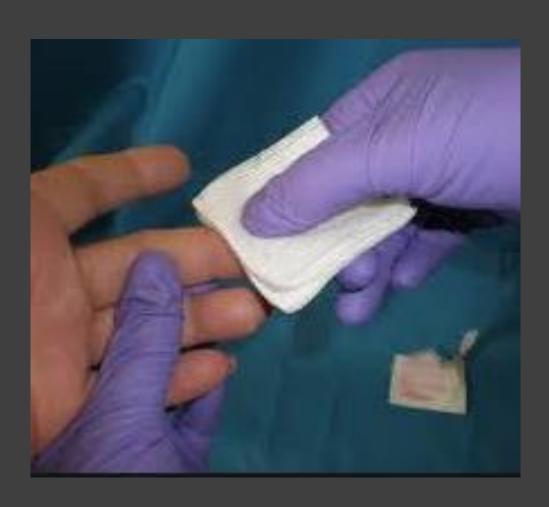
- Capillary blood from a finger is the specimen of choice
- •Venous and arterial whole blood with lithium heparin, sodium heparin and EDTA are acceptable.
- •Clear arterial lines before blood is drawn and dosed on the strip. Avoid air bubbles. Mix thoroughly and perform within 30 min.
- •Venous and capillary blood may differ in glucose concentration by as much as 20%, depending on the time of blood collection after food intake.

- Perform hand hygiene and put on disposable gloves
- Hold patient's arm downward to allow blood to flow to fingertip, choose site, usually side of the fingertip is less painful
- Clean site with alcohol or soapy water, allow to dry, use single use lancet to puncture side of finger.
- Gently squeeze finger to get large hanging drop of blood



The most important part of fingerstick technique

Wipe off the first drop of blood!!!!!!

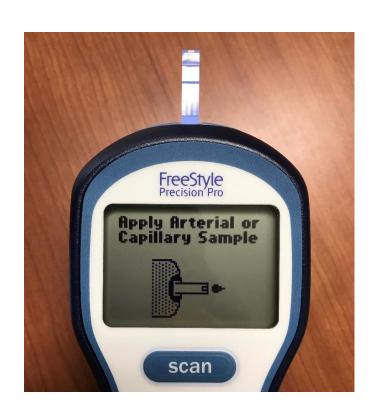


## Never scoop the blood!!!

Blood will get inside strip port and damage the glucometer



## When to apply the sample?



Do not apply blood to the strip until the screen says:

Apply sample

- Always keep the meter horizontal during testing
- •Finger stick samples must be tested immediately

#### Specimen Collection and Handling (Cont'd)

Once the test has been completed, the result will be displayed on the screen

Expected/Reference Range: 65-99 mg/dL

Reportable Range: 20 – 500 mg/dL

 If result is outside of Reportable Range, it will be displayed as <20 or >500

## **Critical Results NF/SG**

## <50 or >500 mg/dL

- Resolve discrepancies with laboratory glucose testing.
- Document in Critical Value Template.

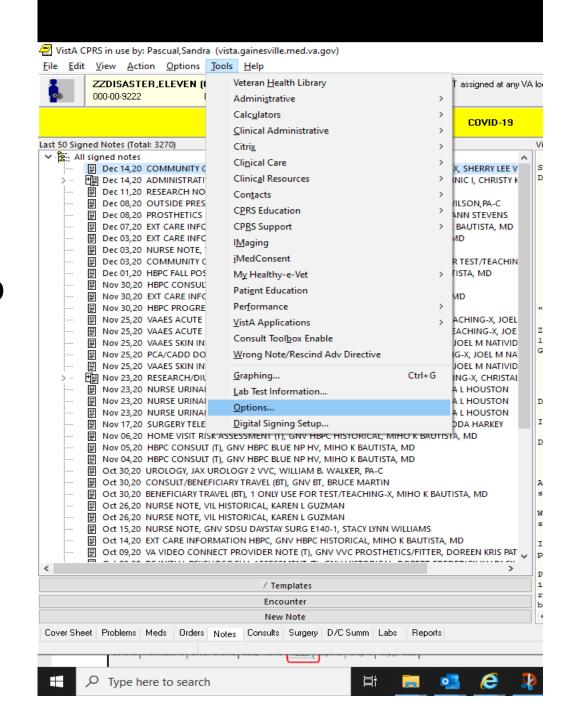
This is mandatory!!!!

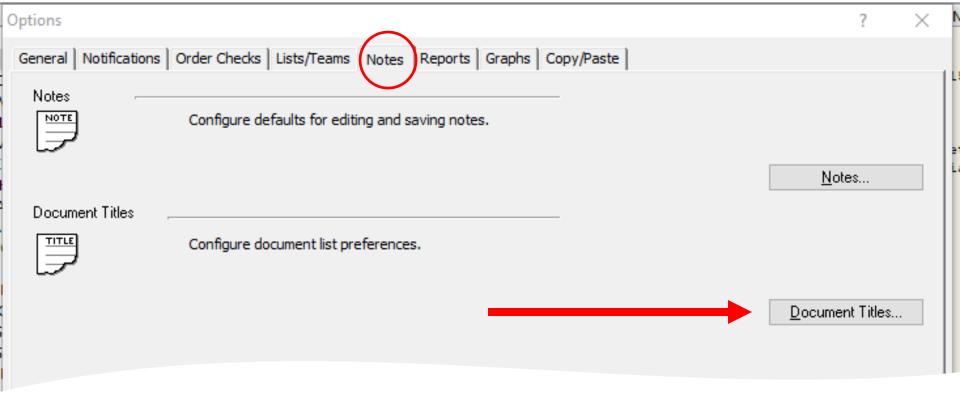
Policy: 113-4 Point of care Glucose Critical Value follow up

 It is mandatory to document glucose result, notification of the result and action taken (treatment) using the Critical Value Template

2 Reminder Dialog Template: CRITICAL VALUE (T)	
© Lab Value	
Name of Critical Lab(s) *	
Time unit notified of results *	
Time unit notified of results *	
Critical Lab Result(s) *	
Time physician notified of critical result(24 hr clock)	
Time physician notified *	
Name of Physician Notified *	
Provider Read Back:*[] Yes [] No	
Patient Treated/Action Taken: * Tyes Tyes Tyes Tyes Tyes Tyes Tyes Tyes	
Critical Value Tompleto	
Critical Value Template	
☐ Check here if author is different than staff notified of critical result.	

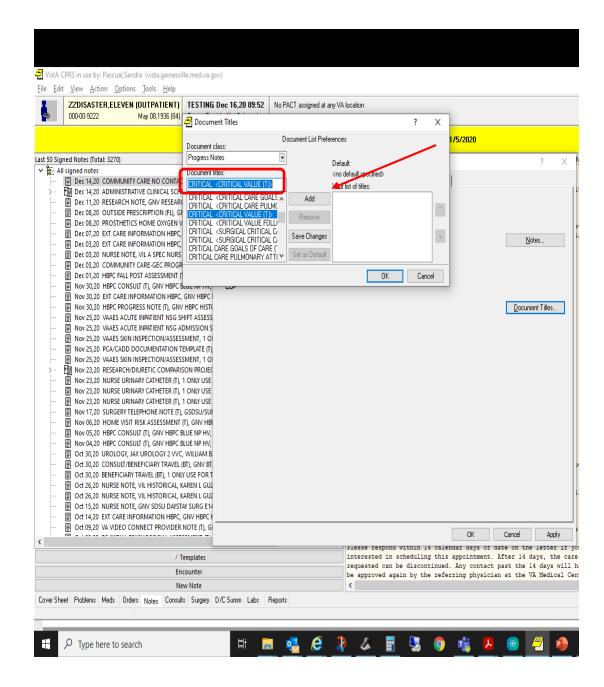
- For easy access to the Critical Lab values template:
  - Click on tools
  - Options



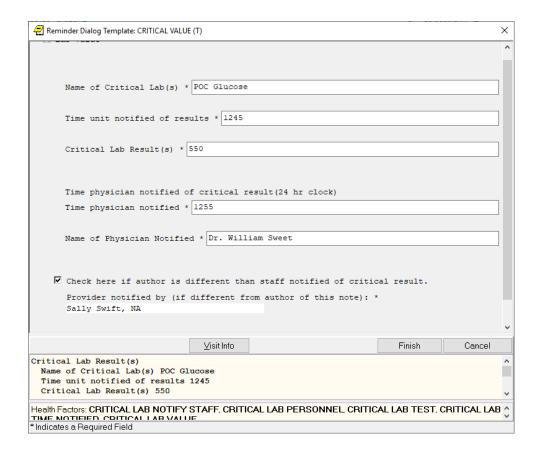


- For easy access to the Critical Lab values template:
  - Click on tools
  - Options

- Click on Notes
- Document titles
- Search: Critical value and select:
  - Critical value (T)
- And Add



Fill out the template with all the required information



- Be accurate with the value
- Do not use brand names like Accucheck, etc

### **Comment Codes**

Comment Code Reference Guide		
Code	<u>Description</u>	
1	Repeat test	
2	Procedure error	
3	Treated patient	
4	Notified RN/MD	

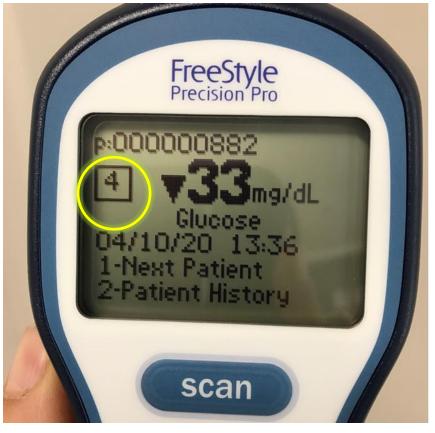
#### **Comment Codes**

Comment Code Reference Guide		
Code	<u>Description</u>	
1	Repeat test	
2	Procedure error	
3	Treated patient	
4	Notified RN/MD	

Required
 when
 obtaining a
 critical value

### **Comment Codes**





## What to do during an emergency

To be used when no patient ID is readily available

Use all Zeros or all 9's 000-00-0000 999-99-9999

- Never use consecutive numbers!!!!!
- After the emergency it is required to send an encrypted email with the full name and full social of the patient to the Ancillary Testing Coordinators

### **Ancillary Testing Coordinators email**

## VHANFLATC@va.gov

Or call us to the government phone listed in the glucometer box

## Dock glucometers!!

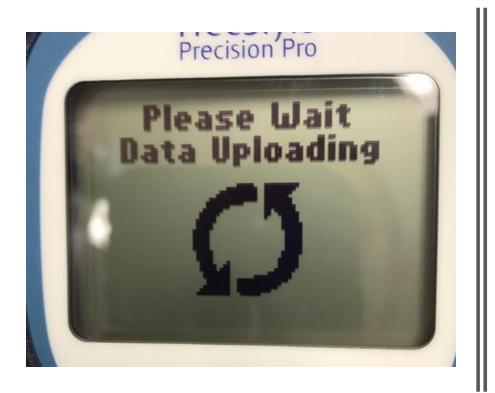


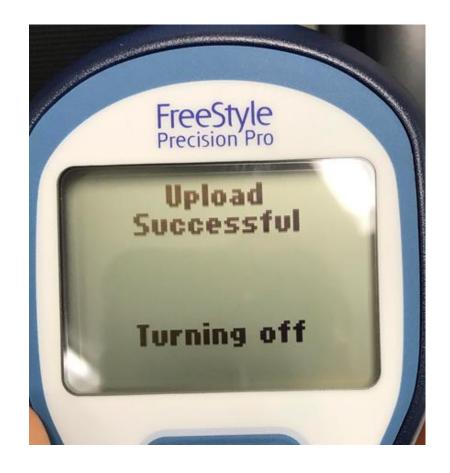
#### Docking Glucometer:

- Provides a route for transferring data or configurations
- Upload patient's results to the chart
- Provides accountability of all glucometers

Glucometers are required to be docked as often as possible after patient testing or once every 24 hours

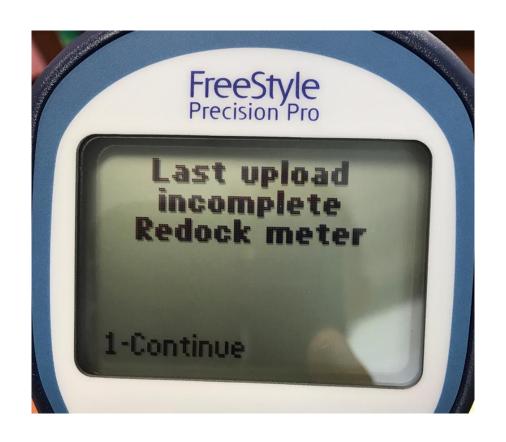
## Docking glucometer





## Docking issues





## Docking issues

- >Try to dock the glucometer again
- ➤ Inspect the docking station to make sure is not broken or dust particles blocking the docking port
- ➤ Restart /Reboot the computer connected to the docking station
- ➤ If this doesn't fix the communication issue. Contact the ATC office.
  - ➤ Write down the EE number of the PC connected to the docking station

## Missing Glucometer



Glucometer can save up to 2,500 social security numbers with results



Notify the nurse manager immediately



Look everywhere



Notify VA police, and Information Security Officer (ISO)



Notify the Ancillary Testing Coordinators

## Flagged Results

## The following results will not cross to the patient's chart immediately

- Critical values
- Patient ID errors
- Results ran within 15 minutes of each other
- Patient's without appointments
- Tests ran by operators with invalid operator code

## Procedure for Isolated patients

## Procedure Isolated patients

#### Use a plastic bag for glucose meters to protect the instrument

- 1. Place instrument inside plastic bag with strip port pointing toward the open end of the bag.
- 2. Prepare the glucometer for patient testing
- 3. Apply capillary blood
- 4. Once the result is obtained enter a comment /action if needed into the meter, remove and discard used test strip.
- 5. Remove and discard one glove
- 6. Remove the meter from the bag with the free hand. Remove and discard the second glove.
- 7. Using new pair of gloves, disinfect the glucose meter using a bleach wipe, and hand hygiene protocol to wash hand.



### Maintenance

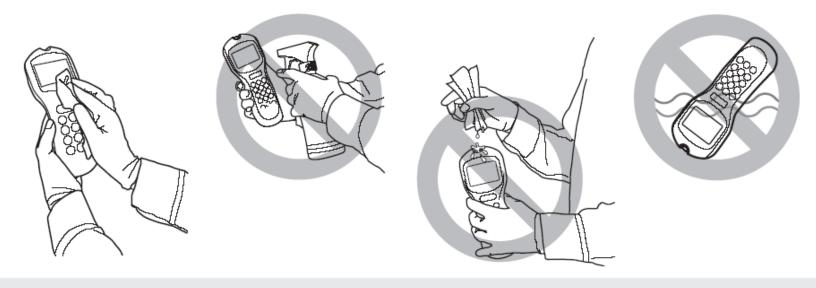




Reusable medical equipment.

Cleaning and disinfecting the exterior surface of the meter is required after each patient use.

## Cleaning the glucometer





IMPORTANT: If a pre-packaged wipe is used for cleaning, excess fluid should be squeezed out to keep liquid from entering the monitor. Permanent damage could occur.

# Cleaning/ Disinfecting the Glucometers

- Glucometers need to be cleaned with Hydrogen Peroxide or Clorox Wipes after each patient or QC.
- Remove excess liquid from wipe; do not get liquid in strip port.
- Allow to dry thoroughly after cleaning and before docking

## **Proficiency Testing**

 We are a College of American Pathologist (CAP) accredited facility

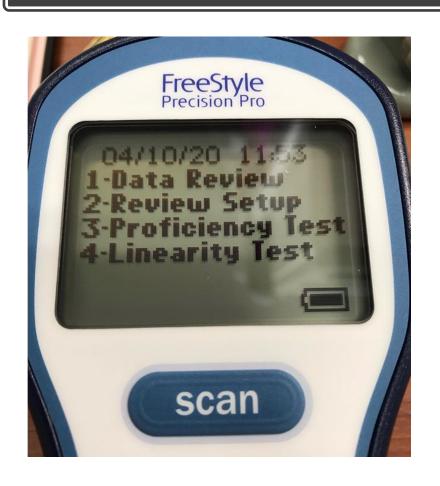
 Testing of PT samples <u>must be performed by</u> personnel who perform patient testing.

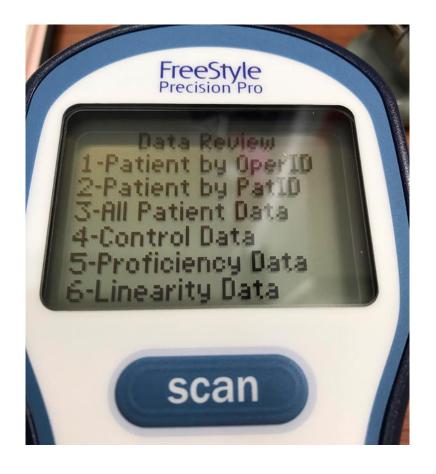
## Self Testing is not allowed!!!

 It is against the VA Rules of Behavior and Occupational Health Service Policy to self test or test a co-worker

 Employee needs to visit Employee Health or the Emergency Department

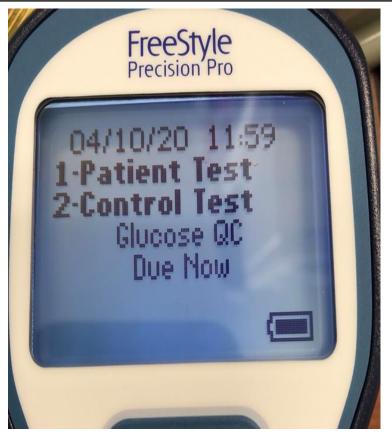
## Downtime procedure





#### How to backlight the screen







### Let's do some testing!

#### If you need assistance raise your hand

• Today your Operator Code and the patient ID will be the card with

the barcode

- Run QC
  - Level Low
  - Level High
- Patient Testing





1. How often should you perform maintenance?

#### After each patient

# 2. How long is the quality control solution good for after opening?

# 90 days

### 2... What information is documented on the vials?

# Open & Expiration dates

# 3. What are the critical values for the glucometer for NF/SG Veterans Health System?

**<50** 

>500

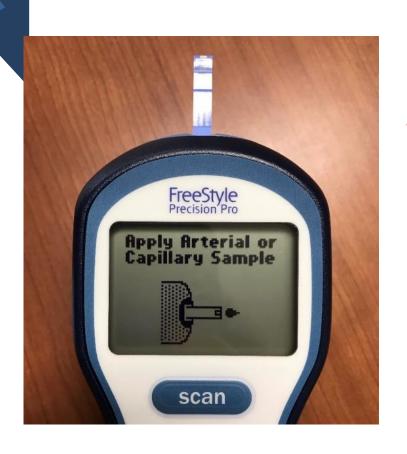
4. What is the most important part of fingerstick testing?

## Wipe off the first drop of blood

### 5. How often should you download/dock your meter

# As often as possible, After each patient testing

#### 6. When should you apply the blood to the strip?



When it tells you to apply the sample

7. When is it mandatory to enter a comment code after testing a patient?

# When the result is a Critical Value

8. In computer downtime situation, the glucose results will not be transmitted to the patient's electronic records. How can you retrieve the patient's results from the glucometer device? How do you document the results during the downtime situation?

#### Menu Data Review

Follow your ward/clinic protocol contingency plan during computer downtime

9. Where can you find your operator ID or DUZ number?

### VISTA \*Display user characteristics

10. If you experience any problems with the glucometer or docking station, who do you notify? Where can you find their numbers?

#### Sandra, Dolly, and Lynn ATC

**Glucometer box** 

11. There is limitations to the procedure and the use of the glucometer. For what patients the glucometer is not intended to be used to perform glucose testing?

#### **Critically ill Patients**

Any Questions?

Sandra Pascual
Dolly A. Gonzalez
Jo Lynn Evans

VHANFLATC@va.gov

Contact information located in the glucometer box