

283.520 Accu-Chek Inform II 3.2023 Adapted for WTVAHCS

Copy of version 1.0 (approved and current)

Last Approval or
Periodic Review Completed 2/20/2024

Next Periodic Review
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Printed By Elizabeth Treece

Organization West Texas VAHCS

Comments for version 1.0

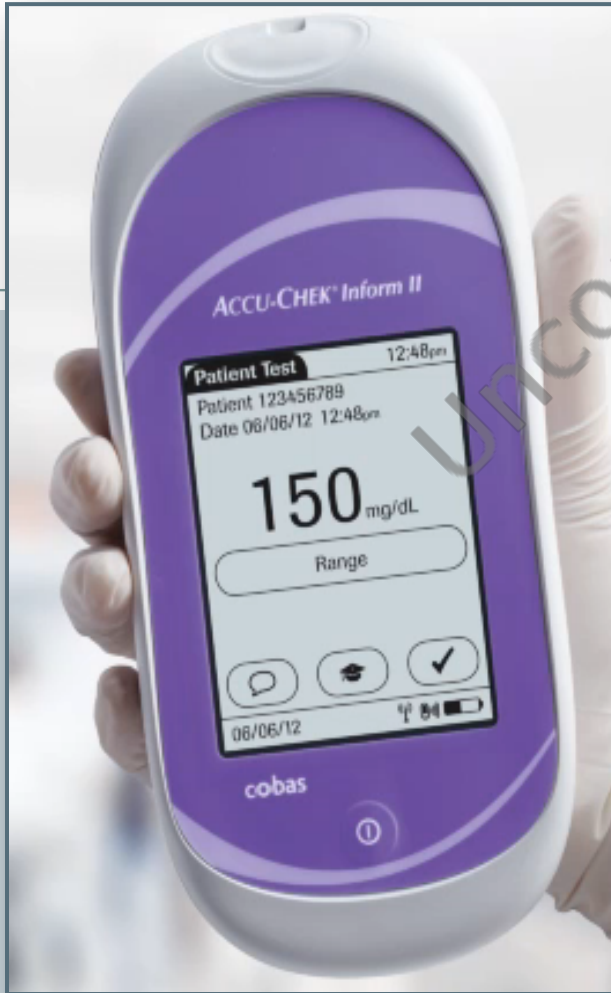
Initial version Training PowerPoint

Approval and Periodic Review Signatures

Type	Description	Date	Version	Performed By	Notes
Approval	Lab Director	2/20/2024	1.0	<i>yahyaalshimali</i> JohnYahya Elshimali	

Version History

Version	Status	Type	Date Added	Date Effective	Date Retired
1.0	Approved and Current	Initial version	2/14/2024	2/20/2024	Indefinite



Accu-Chek Inform II

Uncontrolled copy

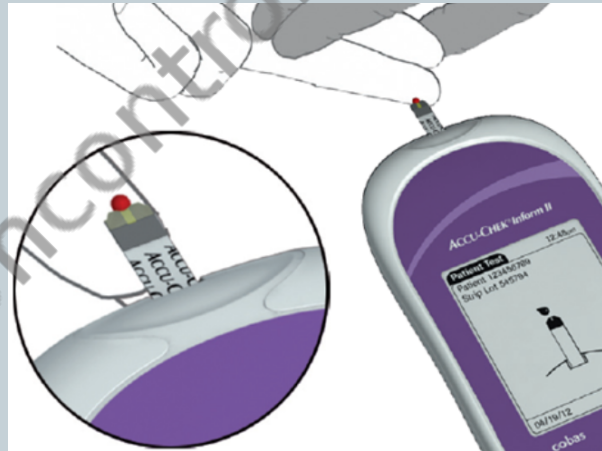
Training

- This is part 2 of 4 parts for initial training.
- Part 1 is reading and acknowledging the official procedure.
- This is part 2.
- Part 3 is taking the exam attached to this PowerPoint at medtraining.org
- Part 4 is receiving your operator ID from the Ancillary Testing Coordinator and successfully running both levels of controls with the ATC or your supervisor using your operator ID.
- You may demonstrate the controls to the ATC via TEAMS.
- When you finish parts 1-3 contact the ACT via email at elizabeth.treece@va.gov or calling extension 7232. Your operator ID will be emailed to you.

OUTLINE

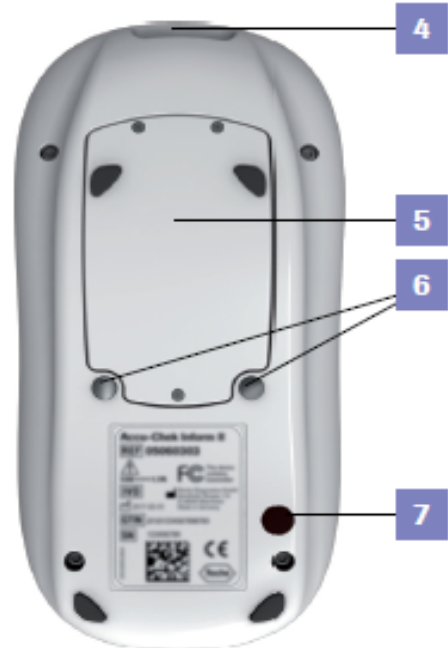
- Meter Overview & Supplies
- Operator and Patient ID Entry
- Quality Controls (QC)
- Safety Precautions
- Specimen Collection
- Patient testing
- Results and Result Reporting
- Limitations and Interferents
- Cleaning and Disinfecting
- Procedure

Inform II Meter Highlights



- Results are accurate and precise
- 0.6 microliter test sample
- Fast 5 second test time
- 30-600 mg/dL assay range

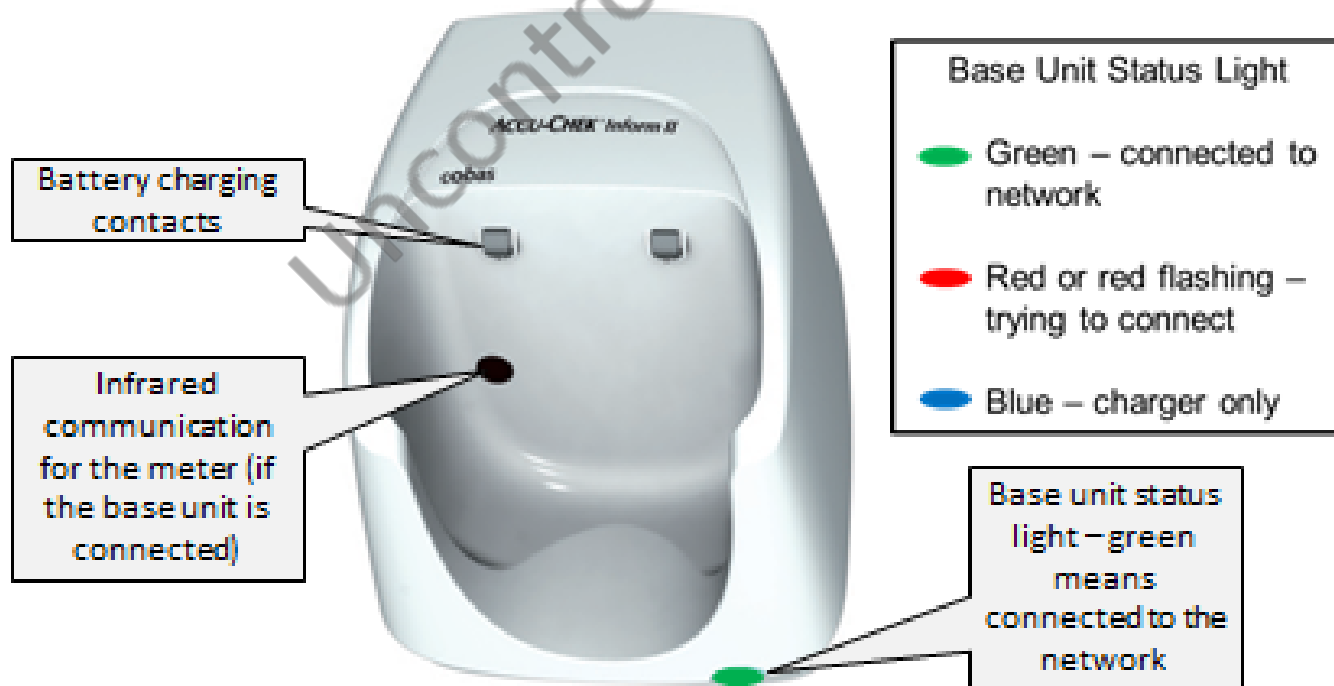
Meter Overview



- 1 Test strip port
- 2 Touch screen- sealed, easy to clean
- 3 On/Off button
- 4 Barcode Scanner
- 5 Battery Compartment
- 6 Charging contacts
- 7 Infrared window- for communicating with base units (keep clean)

Base Unit Overview

Base Unit Design – Accu-Chek® Inform II

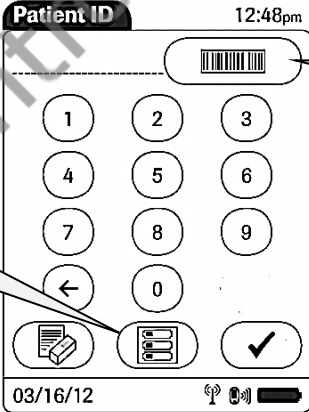


The meter should always be in a base unit when not testing patients so:

1. Results post immediately to CPRS
2. The battery stays charged
3. Meter errors do not occur frequently

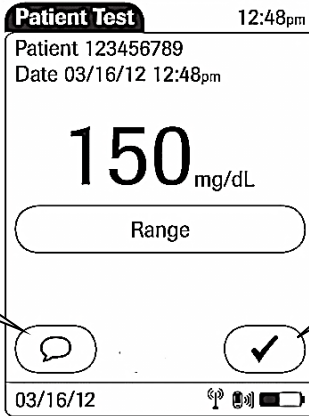
Navigating Meter

To display “Menu” use menu icon button on the screen.



To “Scan” use barcode icon button.

To apply “Comments” use comment icon button.



In most screens, to “Forward” to next screen use check mark icon on the screen.

Test Strip Storage

- Store at **Room Temperature** (heat & humidity sensitive)
- Keep lid tightly closed when not in use
- DO NOT put test strip bottle in pockets
- Only take out the number of strips you need for testing
- Strips can be used until the expiration date printed on bottle
- DO NOT relabel bottle or discard after opening
- Run QC each 24 hours of use before testing patients.
- **Run QC on EVERY NEWLY Opened Strip Bottle**



X CITATION

Common Joint Commission Citation

Quality Control (QC) material not labeled with opened and new expiration dates

Additional Supplies

- **Accessory Box**—Not available at all testing sites.
 - Skin preparation pad (Alcohol)
 - Lancet device
 - Gauze pads
 - Requests for replacement boxes should be called to Ancillary Testing,
 - **Gloves**



Operator Inform ID Entry

OPERATOR LOG-IN

- Each operator is given his/her own unique log in code following initial training.
- Initial training is online. After confirmation of training, barcode will be emailed to you.
- **DO NOT** give your code out to anyone (other nursing staff, students, providers, etc.) – you are liable and will be held responsible if borrower makes a mistake, as it is your name attached to the result in the patient's chart



Patient ID Entry

- BEFORE testing verify correct patient with 2 unique identifiers
- Always SCAN armband when possible: more accurate, faster, minimal risk of invalid ID entry
 - When scanning, hold meter 4-6 inches away from barcode
- If barcode won't scan, print a new armband
- If armband still won't scan or the patient does not have an armband, enter patient's 9 digit ID manually
- **VERIFY** correct patient ID is shown on screen BEFORE performing the test.



Patient ID Entry

USE OF “FAKE” OR EMERGENCY ID

Use of “fake” patient IDs are NOT acceptable. Operators using random ID numbers (all zeros, 12345..., etc.) for patient testing will be counseled and may be removed from the testing system if abuse continues.

Emergency ID “999-99-9999” may be used in Emergency situations only.

Immediately after testing with this ID, you must follow-up with the Ancillary Testing Office and provide updated patient ID and details of emergency for documentation. No follow-up will be considered improper testing and may result in retraining and/or glucometer lockout.

It is **REQUIRED** that operators contact the Ancillary Testing office when the emergency ID is used. Ext 7232. Phone is only covered 7am to 3:30pm M-F.

Unauthorized Meter Use

EMPLOYEE TESTING

Employee self-testing or testing of another employee is **NOT Acceptable except via Occupational Health.**

All tests performed here in the health care center, with facility equipment, must be associated with a doctor's order. If you have a diabetic condition or feel ill, please visit employee health so that the testing can be ordered by a provider

Performing Quality Controls

- Control specimens must be analyzed by personnel who routinely perform patient testing
 - This does not imply that every operator or shift must perform QC daily; perform QC at the required frequencies (i.e. 1 time per day) and rotate among testing personnel. Each person doing patient testing must run QC at least once per year.
- **Always perform QC with the meter on a flat surface to prevent QC solutions from entering the strip port**

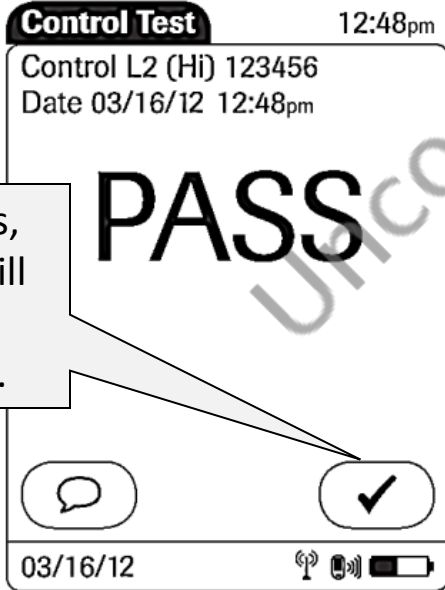


Performing Quality Controls

QC testing must be performed:

- Each day (24 hours) of patient testing with two levels of QC
- When a new bottle of test strips is opened
- If the lid is left open on the bottle of test strips
- If the Inform meter has been dropped or when you want to check the performance of the system
- When the test strips or control solutions have been exposed to heat, humidity or cold

Quality Control Results



If QC passes, you must still attach comments.

If QC fails, you must enter a comment. The comment icon will be flashing. You will not be able to proceed until you add a comment.



03/16/12

Comments

- Up to 3 comments can be attached to each result.
- Daily usually with QC the comments indicating that the temperature and humidity are in range should be attached to the results. The thermometer-hygrometer should be next to the base unit.
- The “Cleaned Meter” should be attached to all results where the meter is cleaned. HINT: clean and disinfect every time.

QC Failure Troubleshooting Steps

1. Verify controls are not expired
2. Verify low control (L1) has not been substituted for the high control (L2) and vice versa
3. Repeat out of range control
4. Replace controls and repeat
5. Replace strips and repeat
6. If still unresolved, contact Ancillary Testing Dept, ext. 7232 to troubleshoot or exchange the meter.

Unit Will Not Charge

- Check to see if it has been set all the way done in the base. The contact points are small.
- If it is all the way down and does not partially charge within an hour contact the Ancillary Testing Coordinator. The battery has probably reached the maximum number of charges.
- A new meter will be sent to your location.
- If you are at the main campus, you may bring the meter to the lab and exchange it for another.
- ATC will determine the problem, usually a bad battery.

Base Unit

- Base units and ports are configured together.
- Base Units are not “Plug and Play”. Changing out a base unit requires Biomed and technical support from the interface software provider.
- Do not attempt to borrow a base unit from another location and connect to your port. The software will not recognize it at your location.
- You may carry your meter to another base unit to download.

Safety Precautions

- Observe Standard Safety Precautions (including wearing of gloves, proper disposal of contaminated material, no food or drink in testing area, etc.)
- Adhere to safe work practices (including no manual recapping of needles)
- Adhere to biohazard safety precautions when disposing of test material
- Patient home-use meters may NOT be used for diagnosis or treatment provided by VA employees. This includes continuous monitor meters.
- Adhere to the patient contact precautions for isolation patients
 - Take only what you need in the room for testing.

Specimen Collection

- Primary sample type used is capillary (fingerstick). Venous and arterial are also acceptable.
- Only lithium heparin, sodium heparin, or EDTA anticoagulants may be used. No other anticoagulants should be used.
- Care should be taken when samples are collected from indwelling lines. Make sure lines are flushed properly to avoid contamination from the line.

Rule of Thumb: A result is only as good as the specimen used to obtain that result

How to Properly Collect a Fingertick Sample

1. SELECT THE FINGER SITE

Select the side of the fingertip that has not been lanced recently.

Each test should be performed from a new skin puncture. The middle or ring finger is preferred. Do Not use an old puncture site.



2. DISINFECT THE PUNCTURE SITE

Hands must be clean. Wash hands with soap & water or cleanse the puncture site with alcohol pad. Let the site dry completely before puncturing.

Alcohol or other skin preparation ingredients may interfere with the glucose test chemistry and cause a falsely elevated reading.



3. OBTAIN ADEQUATE BLOOD FROM THE PUNCTURE SITE

Hold the puncture site downward and gently apply intermittent pressure to the surrounding tissue. Strong repetitive pressure (milking) should not be applied; it may cause tissue-fluid contamination.



Patient Testing

1. Enter your operator ID and press ✓
2. Select “Patient Test”
3. Scan strip bottle barcode
4. Enter the patient’s 9-digit ID by scanning armband
5. When prompted insert strip
6. Keeping meter horizontal, apply a drop of blood to the front edge (yellow dosing area) of the test strip. Blood will be pulled into the test strip. The meter beeps and measurement begins.
NOTE: Do not place the meter on bed or bedding
7. Once the test is completed, the result displays
8. Enter at least the CLEANED METER comment.
9. Dispose of strip, clean and disinfect meter, and replace in base unit

Isolation Areas

While outside isolation rooms:

1. Dress in appropriate PPE
2. Gather glucometer supplies for testing
3. Turn on glucometer, enter operator ID and scan test strip lot barcode printed on strip bottle
4. Remove strip from vial and immediately recap vial. (Only take the number of strips you need to perform testing.) Leave strip bottle outside of isolation room.

After entering room:

5. Within 3 minutes, scan/enter patient ID into meter and perform glucose testing

How do glucometer results get to CPRS?

You must place the meter in the base unit to send results to CPRS and to charge the battery. **Turn off the meter prior to placing in base unit.** Each location has only 1 download station. There may be other charging stations. The download station has 2 cables coming out the back.

Approximately 5 minutes after docking the meter, patient results should appear in CPRS under the “Labs” tab

Exceptions and delays to this process do occur when:

- **The “Invalid, will repeat” comment was used**
- **Incorrect patient ID was entered**
- **Patient does not have an applicable admission or encounter at the time of test performance**
- **For outpatients, a primary care provider is not assigned or current or the meter is docked after the encounter is closed.**
- **For inpatients, a primary or attending provider is not assigned or current**

Meter Comments

Once a patient test result is displayed, you will be given the option to enter a comment. There are 7 comments available to you:

- **PROCESS ERROR**– this comment should only be used when you feel there has been an error in testing and you **DO NOT** want the test results to be uploaded into the patient's record in CPRS
- **WASH PT HAND REPEAT**- used if you suspect there is sugar contamination that was not cleaned off.
- **LAB DRAW**-results indicated need for lab backup.

Meter comments continued

- Notified RN– abnormal/critical results
 - CLEANED METER—should be done EVERY TIME
 - Temp 3-42 C
 - Humidity 10-90
-
- Temperature and humidity meters are found next to the base station.

Review Results

If you need to review a result prior to entry into CPRS or during downtime:

The first screenshot shows the 'Main Menu' screen with the time 12:48 pm. It has three main buttons: 'Patient Test', 'Control Test', and 'Review Results'. A play button is at the bottom right. The date 03/17/21 and status icons are at the bottom.

The second screenshot shows the 'Glucose Results' screen with the time 12:48 pm. It displays a list of results for 'All -- 01/17/21 -- mg/dL'. The results are:



Time	Rslt	ID
7:15 pm	74	123456789ABC
5:32 pm	229	123456789ABC
2:25 pm	290	QC L2
12:15 pm	79	56789ABC1234
11:46 am	65	QC L1
10:01 am	74	Linearity L3

Below the list are buttons for 'Patient' and 'QC', and navigation arrows (back, list, forward). The date 03/17/21 and status icons are at the bottom.

The third screenshot shows the 'Glucose Results' screen with the time 12:48 pm. It displays a list of results for 'All -- 01/17/21 -- mg/dL'. The results are:

Time	Rslt	ID
7:15 pm	74	123456789ABC
5:32 pm	229	123456789ABC
2:25 pm	FAIL	QC L2
12:15 pm	79	56789ABC1234
11:46 am	PASS	QC L1
10:01 am	74	Linearity L3

Below the list are buttons for 'Patient' and 'QC', and navigation arrows (back, list, forward). The date 03/17/21 and status icons are at the bottom.

- 1 From the *Main Menu* screen touch *Review Results*. All stored test results are displayed in a sequential list.
- 2 Touch  or  to scroll up or down in the list. The results are grouped by date.

X CITATION

Common Joint Commission Citation

Documentation notifying provider of Critical Result not completed or missing required information

Critical Value Documentation for Glucose

**Critical Values include results <55 or >450 mg/dL
Includes “HI” and “LO” results**

PER Joint Commission, VA, and CAP Regulations:

- **Critical values MUST be IMMEDIATELY communicated to the provider assigned to the patient**
- Acceptable providers include physicians, dentists, nurse practitioners, clinical pharmacists, physician assistants, and registered nurses engaged in the provision of care and/or treatment of the patient.
- This verbal or phone communication of the critical value(s) to the provider must be documented in a “Critical Glucose POC Test Result” note in CPRS.

Extreme Patient Results

- Any result **less than 30 mg/dL** will show as “LO” on your glucometer
- Any result **greater than 600 mg/dL** will show as “HI” on your glucometer
- To obtain a numerical result for these patients, specimen should be sent to the main laboratory
- **These results are considered Critical Values** and should be treated as such.

Questionable Results

If a patient is experiencing symptoms that are not consistent with the blood glucose result obtained, it is recommended you:

- Repeat the test following procedures as described or send a green-top tube to the lab for confirmation PRIOR to treatment
- Notify provider of concerns
- Repeat controls to verify correct meter function.
- Consider equipment LIMITATIONS AND INTERFERENCES

Limitations & Interferents

The AccuChek meter cannot be utilized in any patient defined as “critically ill”

- WTVAHCS, for the purpose of glucose point-of-care testing, has defined critically ill as.
- Mean Arterial Pressure (MAP) of <65mmHg
- Use of IV vasopressors to maintain blood pressure such as dopamine.

at the time of the whole blood glucose draw or finger stick.

For these patients, a venous or arterial sample must be drawn and sent to the clinical lab for glucose measurement by traditional methodology.

Limitations & Interferents

Sample type:

There are significant differences between venous, capillary (fingerstick), and arterial blood glucose levels, with the venous glucose level tending to be the lowest of these three sources. These differences may be even greater depending on time elapsed since the individual has consumed food, etc. Such differences may be as much as 70 mg/dL. Unusual sample sites for capillary puncture, such as forearm, ear lobe, etc. may NOT be used for glucose testing, as even bigger differences may occur.

Limitations & Interferents

Shock or peripheral perfusion problems

When a patient is in shock and/or has peripheral perfusion problems, these differences are even greater. (Blood loss from trauma could be one cause). The normal processes by which glucose and other substances are distributed throughout the system are impaired. Capillary samples should not be used for these patients.

Limitations & Interferents

Diabetic ketoacidosis (DKA):

When a patient has a very high blood glucose (hyperglycemic-hyperosmolar state, ketotic or non-ketotic), the usual ways glucose moves between red cells and plasma, and between venous and capillary spaces, are changed. Capillary samples should not be used for these patients. Even a venous sample tested on a glucose meter may be unreliable.

Limitations & Interferents

Time delay between POC test and draw of Clinical Laboratory specimen:

A person's glucose level is continuously changing. In addition, treatment (insulin, orange juice, food, exercise, etc.) may have been administered between collection of the two samples.

Hematocrit should be between 10 and 65% for testing on this meter.

Limitations & Interferents

Specific interferences may cause false overestimation of glucose results:

- Triglycerides >1800 mg/dL
- Galactose >15 mg/dL
- Ascorbic acid >3 mg/dL

Maltose does **NOT** interfere with this test method

Common & Preventable Test Errors

- Patient's hands Not Clean
- Alcohol Not Completely Dry
- Incorrect/Invalid Patient ID Entered
- Storing Test Strips Incorrectly
- QC Bottle Dating - Unlabeled/Unreadable
- Ignoring Test Interferences & Limitations



Good Specimen = Good Result

X CITATION

Common Joint Commission Citation

Not properly disinfecting meter after testing

Cleaning & Disinfecting Meters

Cleaning vs. Disinfecting

CLEANING - removes germs, dirt, and impurities from surfaces or objects. This process does not necessarily kill germs, but by removing them, it lowers their numbers and the risk of spreading infection.

DISINFECTING - kills germs on surfaces or objects. Disinfecting works by using chemicals to kill germs on surfaces or objects. (Super Sani-Cloth, Sani-Cloth, Dispatch Bleach Wipe, etc)

Alcohol swabs are acceptable for cleaning, but not for disinfecting meters between patients

It is best to use 2 of the above wipes, 1 for cleaning and 1 for disinfection. It is acceptable to use alcohol for cleaning followed by 1 of the above disinfecting wipes.

Cleaning/Disinfecting Meters

To ensure patient safety and meet FDA requirements, our glucometer policy requires meters to be cleaned and disinfected after each patient use.

Current hospital approved wipes include:

- **Super-Sani Cloth:** 2-minute contact time.
- **Sani Cloth:** 3-minute contact time
- **CaviWipes 2 minute contact**
- **Dispatch Bleach Wipe:** 3-minute contact time for use with C. Difficile patients.

Cleaning/Disinfecting Meters

- Always wear gloves
- Make sure meter is powered off and place on a level surface to ensure that NO liquid enters the test strip port
- Remove a hospital approved wipe from its packaging and squeeze out excess solution
- To clean, gently wipe the outside of the meter and carefully wipe around the test strip port area and then wipe dry with a tissue.
- Then disinfect meter, gently wipe the outside of the meter and carefully wipe around the test strip port area.
- After appropriate contact time, wipe meter dry with gauze or soft cloth. Do not leave wet, as this can damage the screen and possibly the meter.

Meter Maintenance

- Other than cleaning, no maintenance is required.
- If you have a meter that is malfunctioning or damaged, **please contact the Ancillary Testing Department, ext. 7232** as soon as possible. You may also email Elizabeth Treece or send an IM.
- DO NOT put in a work order
- DO NOT place stickers or tape on the meters. The adhesive can harbor bacteria.

Proficiency & Competency

- Competency verification is required after initial training, prior to patient testing, and annually. Six month and Annual competency is verified by a medtraining.org quiz and quality control/proficiency test performance.
- Proficiency testing (PT) is required by the VA and accreditation agencies. PT includes performing the test on blind samples, which are evaluated 2-3 times per year. All trained operators are responsible for performing PT as requested by the laboratory.

Test your knowledge

- Take the initial training as assigned. It is moving to medtraining.org and will be this PowerPoint and an exam
- Run controls on glucometer with instructor
- You must have your own barcode to get credit for this



Credits

- Training developed at St. Louis VAHCS.
- Modified for use at West Texas VAHCS.