- The Nova Stat Strip Blood Glucose meter is UHB’s approved Glucometer for patient testing
- Operator certification status must be kept current
- Use **Universal Precautions** when testing as per hospital policy
- Follow **patient identification procedures** when testing as per hospital policy
- Run two level of **Quality Control** on every 24 hours
- **Clean and Disinfect** meter after every patient testing
• Nova StatStrip Meters are assigned to nursing units by the Point of Care Lab

• Staff should NOT move meters from their assigned units

• If a meter is needed in a particular unit, contact the Point of Care Lab immediately
Nova StatStrip Test: Strip Vials

STATSTRIP VIALS:
- Contain a desiccant to **protect against humidity**
- Must be **CLOSED** with its lid when not in use
- **Store at room temperature** between 15 to 40 degrees Centigrade (59 to 104 degrees Fahrenheit)
- **When opening a new vial** of strips, **write** on vial:
  - Date **Opened AND Date Expired**
  - Expiration date is **180 days from opening** or label expiration date, whichever is first
  - Initials **do not need** to be written on vial
When To Perform Quality Control Testing?

- **Every 24 hours** for each Meter (2 levels of Control – Level 1 and Level 3)
- When a **NEW VIAL** of test strips is **OPENED**
- **After** major maintenance or repair of the meter, i.e. **battery change**.
- When the **meter is dropped**
- When a **new meter** is used
- When **results are questionable** based on clinical signs & symptoms
- Whenever **problems** (storage, operator, instrument) are identified or anytime there is a concern
Control Solutions and Testing

- **Store at room temperature**, 15-30°C (59-86°F)
- Control vials **must be covered** with their lids when not in use
- When opening a new Control Solution **write on bottle:**
  - Date **Opened** AND Date **Expired**
  - Expiration Date is **90 days** from opening or label expiration date - whichever is first
  - Initials do **NOT** need to be written on vial
- Run **Level 1 and Level 3** controls each 24 hour period on each meter
- To test **Gently Mix** control solution vial before using
  - Discard **1st drop** of Control Solution
  - Use **2nd drop** of solution for testing
- After Control Testing select “**Meter Cleaned**” comment
Control Test Troubleshooting

• If a control level test is out of range:
  ➢ REPEAT CONTROL level test

• If control level test results are AGAIN out of range:
  ➢ OPEN a New Control vial and run test

• If control test results CONTINUE to be out of range:
  ➢ Open a New Strip vial and run test

• If control test results are STILL out of range:
  • Call Point of Care at ext. 1679 or the Bay Ridge Laboratory at 718 567-1158 for assistance during the day
  • Off hours: Go to Lab (2nd floor) and obtain a new meter
Patient Testing

• Starting a Test
  • Enter patient 7 digit identifier (Financial #)
  • Scan Stat Strip Vial
  • Identify specimen source (capillary, venous or arterial)

• Applying Blood Sample to Strip
  Maintain meter in a horizontal position to keep blood out of the meter
  • Discard 1st drop of blood. Use 2nd drop of blood.
  • Allow blood drop to touch the tip of the strip. Fill strip completely
  • Do not move finger from strip until meter countdown begins
  • NO re-application of blood once the testing has started

• Enter Comments After Each Patient Test
  • Can choose up to 3 comments
  • Highlight ALL desired comments AT ONCE and ‘Accept’
  • MUST select ‘Clean /Disinfect Meter’ as a comment
  • Always verify comments display on patient result screen and Accept again.
Patient Testing

• If Results Are Outside Unit Specific Action Range
  • Select Comment “Repeat test”
  • Test MUST be repeated to confirm results.
  • After confirmed repeat select needed comment(s) such as:
    Clean/Disinfected
    Initiate Hypoglycemia Protocol
    Caregiver Notified
    Send to lab
  • Follow appropriate protocol
Unit Specific Action Ranges

- **Pediatrics**: Less than 70 mg/dL – more than 200 mg/dL
- **NICU**: Less than 45 mg/dL – more than 150 mg/dL
- **Newborns on L&D and Mother/Baby Unit**
  - Less than 25mg/dL: birth to the 1st 4 hours of age
  - Less than 35 mg/dL: 4 to 24 hours of age
- **Ambulatory**: Less than 70mg/dL – more than 450 mg/dL
- **CTICU**: Less than 60 mg/dL – more than 120 mg/dL
- **Adult Medical/Surgical**: Less than 70 mg/dL – 450 mg/dL

<table>
<thead>
<tr>
<th>Action Range</th>
<th>Comment Code</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out of Instrument Reportable Range</td>
<td>Repeat Test</td>
<td>Repeat test to confirm result</td>
</tr>
<tr>
<td>&lt; 10 or &gt; 600 mg/dL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confirmed Result</td>
<td>Caregiver Notified and Send to Lab</td>
<td>Send specimen to Laboratory</td>
</tr>
</tbody>
</table>

Repeat Test if Outside Action Range to Confirm Results
## Use of Common Codes For Action Ranges

<table>
<thead>
<tr>
<th>Unit</th>
<th>Action Range</th>
<th>Comment Code</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adult – Inpatient</strong></td>
<td>&lt; 70 or &gt; 450mg/dL</td>
<td>Repeat Test</td>
<td>Repeat test to confirm result</td>
</tr>
<tr>
<td></td>
<td>Confirmed Result</td>
<td>Caregiver Notified</td>
<td>Initiate Inpatient Hypo/Hyperglycemia Protocol</td>
</tr>
<tr>
<td>NICU</td>
<td>&lt; 45 or &gt; 150mg/dL</td>
<td>Repeat Test</td>
<td>Repeat test to confirm result</td>
</tr>
<tr>
<td></td>
<td>Confirmed Result</td>
<td>Caregiver Notified</td>
<td>Initiate NICU Hypo/Hyperglycemia Protocol</td>
</tr>
<tr>
<td>Newborn</td>
<td>&lt; 25 or &gt; 150mg/dL 0 - 4 hrs</td>
<td>Repeat Test</td>
<td>Repeat test to confirm result</td>
</tr>
<tr>
<td></td>
<td>&lt; 35 or &gt; 150mg/dL 4-24 hrs</td>
<td>Confirmed Result</td>
<td>Caregiver Notified Initiate Newborn Hypo/Hyperglycemia Protocol</td>
</tr>
<tr>
<td>Pediatric</td>
<td>&lt; 70 or &gt; 200mg/dL</td>
<td>Repeat Test</td>
<td>Repeat test to confirm result</td>
</tr>
<tr>
<td></td>
<td>Confirmed Result</td>
<td>Caregiver Notified</td>
<td>Initiate Pediatric Hypo/Hyperglycemia Protocol</td>
</tr>
<tr>
<td>CTICU</td>
<td>&lt; 60 or &gt; 120mg/dL</td>
<td>Repeat Test</td>
<td>Repeat test to confirm result</td>
</tr>
<tr>
<td></td>
<td>Confirmed Result</td>
<td>Caregiver Notified</td>
<td>Initiate CTICU Intensive Insulin Infusion Protocol</td>
</tr>
</tbody>
</table>
## Clean & Disinfect Meter With Hospital Approved Disinfectant

### After Each Patient Test A 2-Step Process

<table>
<thead>
<tr>
<th>Clean Meter</th>
<th>Disinfect Meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Wear protective gloves</td>
<td>• Use fresh Clorox bleach germicidal wipe, thoroughly wipe surface of the meter (top, bottom, left &amp; right sides)</td>
</tr>
<tr>
<td>• Make sure test strip is removed from meter</td>
<td>• Avoid the bar code scanner &amp; electrical connector when wiping</td>
</tr>
<tr>
<td>• Lay meter on flat surface</td>
<td>• Ensure meter surfaces stay wet for a minimum of 3 minutes and is allowed surfaces to air dry for an additional 1 minute</td>
</tr>
<tr>
<td>• Obtain a fresh germicidal wipe or Clorox Bleach (hospital approved)</td>
<td>• Dispose gloves into appropriate container</td>
</tr>
<tr>
<td>• Wipe external surface of meter thoroughly with the fresh wipe</td>
<td></td>
</tr>
<tr>
<td>• Discard used wipe &amp; gloves into appropriate container</td>
<td></td>
</tr>
</tbody>
</table>
Isolation Precautions

- Use Universal Precautions
- Clean and Disinfect Statstrip Glucometer *AFTER EACH PATIENT use*
- Use a separate Statstrip meter based on clinical situations (e.g. Hemodialysis)
POCT Glucose Results Documentation

Results & interventions are documented in HealthBridge Flowsheet /Point of Care Testing
Critically Ill Patients
For the Purposes of Glucose Point of Care Testing

*CAPILLARY FS CAN BE used for all patients including critically ill patients*

For the Purposes of Glucose Point of Care Testing:

“Critically Ill” patients are those with:

- **Unstable hemodynamics** — low perfusion index, use of vasopressor, presence of edema and low mean arterial pressure
- **Decompensated heart failure** New York Heart Association Class IV
- **Severe Dehydration** as a result of diabetic ketoacidosis or hyperglycemic hyperosmolar non-ketotic syndrome
- **Arterial occlusive disease**

However, for **FS >600 mg/dL a serum sample must be drawn**
Using the Nova Stat Strip Meter

• Collect **Arterial or Venous** blood sample
• Perform glucose on the Nova Stat Strip

**Procedure:**

- Collect blood in a **lithium heparin collection device** (ABG syringe)
- Draw **appropriate discard sample** to clear the arterial or venous line before drawing a blood sample for testing.
- Sample must be tested **within 30 minutes** from collection.
- **Identify specimen source** as Arterial or Venous
- Place blood sample on Nova Stat Strip and follow testing procedure
Send a whole blood specimen to the Lab

Procedure:

• Collect blood in a grey top tube or add on a glucose test to an arterial or venous blood gas sent to lab.

• Draw appropriate discard sample to clear the arterial or venous line before drawing a blood sample.
Morning fingerstick glucose is checked at or after 7:00 a.m., unless clinically indicated or per unit policy or prescriber’s order (Rehabilitation, OB, Critical Care, etc.).

**Finger stick glucose must be checked:**
- Within 1 hour prior to administering prandial or correction insulin.
- If it is more than 1 hour since the time of the test and insulin administration, test again.
Care of Visitors and Employees

• Use of the Glucose Meter is **Not** for Screening

• **Do NOT** use the Glucose Meter to check a visitor’s or employee’s blood glucose

  ➢ Employees or visitors who are **ill MUST be Referred to the ED immediately**
All Operators must follow the re-certification schedule and recertification test performance requirements:

1. Initial Certification
2. Renew in 6 months, and then again in 6 months, then....
3. Annually

Re-certification Steps - Go to: http://www.downstate.edu/ogm/

Step 1: Review the Re-certification presentation
Step 2: Complete the Post Test
Step 3: Upon successfully completion of the Post test, print your Certificate of Completion for your records.
Step 4: Complete two levels of controls and one patient test on your unit immediately after completing the exam
# Troubleshooting Meters and Patient Identification

<table>
<thead>
<tr>
<th>Possible Problem</th>
<th>Recommended Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scanning of barcode or manual entry of strip lot number, QC lot number or Operator ID number in error</td>
<td>Check and re-scan or manually re-enter Patient Financial Number</td>
</tr>
<tr>
<td>Scanning or manual entry of Patient Medical Record Number instead of Patient Financial Number</td>
<td>Check and re-scan or manually re-enter Patient Financial Number</td>
</tr>
<tr>
<td>Glucometer did not obtain patient registration information from Hospital Registration System because meter was not docked (wired) or battery low preventing communication (wireless).</td>
<td>Dock meter to allow glucometer to obtain updated patient registration and financial identifier information.</td>
</tr>
<tr>
<td>Error in manual entry of Patient Financial Number</td>
<td>Check and re-scan or manually re-enter Patient Financial Number</td>
</tr>
<tr>
<td>Use of an unreadable or damaged Patient Financial Number barcode</td>
<td>Check, reprint Patient ID barcode and re-scan or manually re-enter Patient Financial Number</td>
</tr>
</tbody>
</table>
| Glucometer testing must be performed prior to patient registration because of an Emergency situation | Applies ONLY to ED, NICU, L&D and CATH Lab areas. Non-Registered Patient Procedure to be followed.  
**ALL other units may NOT perform testing with INVALID, NEW or NOT IN SYSTEM patient financial numbers. Operator MUST investigate and correct before testing.** |
Status of Good Glucose Meter

- Meter Ready - Can be used for testing
- Patient data has been transferred to HB
- The Meter is connected to the wireless
- Meter is placed on the docking station
- Battery is Charging
What is the problem with this FS monitor?

- Data transfer is not completed
- The wireless connection is not established
- Missing wireless network symbol

If yellow triangle icon is visible for a prolonged period of time:

_Do not use meter until it displays “Meter Ready”_

- Remove the battery from back
- Wait a minute
- Place battery back into the meter
- Place the meter into the docking station to reset the meter
POC Pointers

• **Serial numbers** starting with 19 (on back of meter) = wireless meter
  • (17 & 18 = non wireless & docking is required for the result to go into HB)

• **Check meter label** – “Docking Required” Must be docked in a docking station for results to go to HB

• If you see a **blue cable** attached to docking station = connects to network

• What do the three lights on the docking station mean?
  • Left light=network cable
  • Middle light= information going back and forth to network
  • **Red light**=charging. **Green**=fully charged
Thank you for viewing the POC Glucose Training presentation

Click here to take the Post-Test