HACKETTSTOWN REGIONAL MEDICAL CENTER
LABORATORY- POINT OF CARE POLICY MANUAL

POINT OF CARE CREATININE ASSESSMENT

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Effective Date: May 10, 2010
Cross Referenced:
Reviewed Date: 7/10;11/11;6/12
Revised Date:

Policy No: POC DI 0001
Origin: Point of Care Tests
Authority: Cristina Hom, MLS,ASCP Point Of Care Coordinator, Laboratory
Page: 1 of 4

SCOPE: Diagnostic Imaging – CatScan

PURPOSE:
Assessment of renal function using IRMA TRUpoint meter before giving the IV contrast treatment at the point of care.

DEFINITIONS:

1. EQC – Electronic Quality Control
2. LQC – Liquid Quality Control
3. AMR – Analytical Measurement Range
4. CR - Creatinine

POLICIES:

1. Any patient over the age of 60, all diabetics, all renal compromised patients and patients who received contrast injection less than 72 hours ago.
2. If result **is > 1.5mg/dl** a radiologist/physician must be consulted for further instruction.
3. Normal ranges is 0.6 – 1.0mg/dl.
4. Electronic Quality Control must be run once per shift on days and evenings and/or whenever the performance of the analyzer requires verification or the analyzer experiences a significant change in storage temperature (e.g. movement from a cold to a hot environment).
5. Liquid Quality Control – 2 levels must be run before a new lot of cartridges are put into use to verify proper shipping and equilibration condition and /or every 30 days whichever comes first. Both levels of liquid controls must be acceptable before patient test is run.
6. Temperature check will be run monthly to verify the instrument temperature control system is operating properly.
7. Split sample correlation is done every six month with another meter and with the reference analyzer for an alternative assessment. AMR is also verified every six months.
8. Yearly competency will be monitored by the Point of Care Coordinator.
9. To troubleshoot the meter please call the POCC in the lab or call ITC support at 1-800-631-5945. A back up meter is available in the lab if troubleshooting can not be done immediately or a patient can be drawn by the phlebotomist after ordering a STAT creatinine test.

STORAGE:
CR cartridges must be stored at 2-8°C/35 -46.4°F. The CR cartridges are stable through the expiration date indicated on the package label. The cartridges must be removed from the refrigerator prior to use and allow to sit at room temperature (15-30°C/59-86°F) for a minimum of 15 minutes. Date and time on the cartridges that have been pulled out from the refrigerator must be indicated on each pouch. Cartridges not used within 8 hours should be discarded.

Liquid QC must be refrigerated at all times. It may be removed just prior to use only.

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PATIENT TEST PROCEDURE:

1. Collect a fresh venous whole blood in a 1 ml lithium heparin syringe. **NOTE 1: DO NOT use frictionless or pulsating syringes that have plungers OR syringes that contain a mixing ball or non dissolving disk impregnated with heparin.**
   NOTE 2: when drawing a sample from an indwelling line, back flush and clear the line of IV fluids prior to sampling to remove anticoagulants or medications which might interfere with the test. 10 ml waste must be drawn first.
2. Touch the right hand edge of the screen to turn the analyzer **"ON".**
3. Enter **User ID** (employee badge #) via touch screen keypad and press **NEXT**.
4. Press **PATIENT TESTS**.
5. Insert a cartridge then compare the lot # and expiration date to the package. Press **NEXT**.
6. Press the top of the calibration gel cap firmly and quickly to dispense the calibrant and press **NEXT.** The calibrant must be done within 1 minute or the test is terminated and an Error message appears.
7. While the cartridge starts calibrating press the clipboard icon on the right. Enter the patient FIN #, touch the circle for male or female, and enter age in years and the GFR. Press **NEXT.**
8. When the calibration is complete twist and lifts the luer or cal cap to remove it from the injection port. **NOTE: If calibration of the cartridge fails, repeat with a new cartridge. If fail for the 2nd time, notify the POCC in the lab.**
9. Inject the sample with one quick motion making sure that that no air bubbles or the calibration gel are present in the sample path (if they are present remove them by lightly tapping the top of the syringe plunger) then press **NEXT**. Leave the collection device attached to the cartridge.
10. Result will automatically print. Enter this result in Cerner (see Documenting Results procedure).
11. When the test is complete, remove the cartridge with the collection device attached. Dispose of both in accordance with established guidelines.

LIQUID QC PROCEDURE:

1. Touch the right hand edge of the screen to turn the analyzer **"ON".**
2. Enter **User ID** (employee badge #).
3. Press **QC Test** on the **Main Menu**.
4. Select **Liquid** on the QC Test Options.
5. Insert a cartridge then compare the lot # and expiration date to the package. Press **NEXT**.
6. Select control level 1 or 2 with the appropriate control lot number.
7. Press the top of the calibration gel cap firmly and quickly to dispense the calibrant and press **NEXT.** The calibrant must be done within 1 minute or the test is terminated and an Error message appears.
8. Upon completion of cartridge calibration, remove the cal cap and immediately attach the syringe containing the control material onto the luer lock injection port of the cartridge.

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9. Inject the sample with one quick motion making sure that that no air bubbles or the calibration gel are present in the sample path (if they are present remove them by lightly tapping the top of the syringe plunger) then press **NEXT**. Leave the collection device attached to the cartridge.
10. Result will automatically print. Enter this result in the QC log sheet making sure that the value is within the range limit. If failed, repeat with another sample.
11. Repeat the steps 5 thru 9 for the next control level.
12. When the test is complete, remove the cartridge with the collection device attached. Dispose of both in accordance with established guidelines.

Electronic Quality Control (EQC):

1. Enter User ID (employee badge #).
2. Press **QC Test** on the **Main Menu**.
3. Press **EQC** to initiate the test.
4. The result for an EQC test is either "Passed" or "Failed". If failed, repeat the test.
5. Record on the daily QC sheet.

To Enter New Lot of Cartridges:

1. Enter User ID (employee badge #).
2. Press **SETTINGS**
3. Press **TEST**
4. Choose **LOT ENTRY** then hit **EDIT.**
5. CR will appear on the screen. Press **NEXT**.
6. Choose **NEW** then hit **EDIT**.
7. Type **LOT # (in letters) exactly as it appears on the package** then hit **NEXT**.
8. Enter **CAL CODE exactly as it appears on the package** then hit **NEXT**.
9. Verify all entries are correct then hit **NEXT**.
10. Go back to the main **MENU** by pressing **DONE.**

Documenting Results:

1. After completing the POC test, the DI Technologist will access the Point of Care Results Entry in Cerner.
2. Input/select correct patient and encounter, verifying the patient by two forms of identification.
3. Select the Test Site as HRMC POC
4. Select the Orderable as POC Creatinine
5. Enter the date and time of the test.
6. Enter the user name of the person performing the test
7. Enter the ordering physician. The ordering physician will be the Radiologist reading the CT and will be based on the criteria listed above.
8. Click on Procedure and enter the numerical value for the Creatinine and GFR then verified.

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NOTE:

1. If after entering the value, a red indicator appears indicating a Critical Result, the result must be communicated to the Radiologist within the time frame specified in Policy PC07 Critical Tests & Critical Results/Values (45 minutes). Right click on the numerical value to add comments. Include which Radiologist was notified, the time, and the actions i.e. test performed without contrast, referring physician notified, etc.
2. If an error had occurred in entering the result, call a laboratory tech to make the correction. Make a copy of the result print out from IRMA meter and fax to the lab at 6805. Give the laboratory tech the name and time of the Radiologist/physician whom the corrected result was notified to.

LIMITATIONS:

1. Improper collection and/or handling of blood specimens can cause pre-analytical error.
2. Incorrect heparin type in the syringe.
3. Improper sample mixing.
4. Improper sample storage.
5. Delay in analysis.

REFERENCES:

IRMA TRUPoint Blood Analysis System, User Manual, ITC