HACKETTSTOWN REGIONAL MEDICAL CENTER LABORATORY – POINT OF CARE POLICY MANUAL

Urine Dipstick in Health Start Clinic

Effective Date: August 7, 2006 Policy No: POC OB 0003 Cross Referenced: Origin: Point of Care Tests

Reviewed Date: 3/11;6/12;6/13; 6/15 **Authority:** Dr. Jun Li, M.D. PhD

Laboratory Medical Director

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SCOPE; Health Start Clinic/OB

<u>**PURPOSE**</u>: To provide prenatal screening information regarding the status of carbohydrate metabolism, kidney and liver function, acid-base baseline and urinary tract infection.

POLICIES:

1. Documentation of patient's results will be placed on the patient's chart.

- 2. Quality controls must be run at least each day that patient testing is performed and results must be entered in the QC log sheet. Days that there is no patient testing will be clearly marked on the sheet with an "X" across the date/s.
- 3. Log sheets will be sent to the Laboratory at the end of each month and POCC will review these QC/patient log sheets on a monthly basis.
- 4. Only use the color chart that comes from each bottle of the reagent strips.
- 5. Standard precautions must be observed and disposable gloves must be worn.
- 6. A color blind screen test must be taken thru Employee Health before getting certified to perform this test.

PRINCIPLES:

GLUCOSE: Because of its value in the detection and monitoring of diabetes mellitus, the glucose test is the most frequent chemical analysis performed on urine. Early diagnosis of diabetes mellitus through blood and urine glucose tests provides a greatly improved prognosis.

PROTEIN: Of the routine chemical tests performed on urine, the most indicative of renal disease is the protein determination. Its presence does require additional testing to determine whether the protein represents a normal or a pathologic condition. Normal urine contains very little protein: usually < 10mg/dl or 150mg per 24 hrs. excreted.

LEUCOCYTES: One of the most frequent findings in the routine urinalysis is the presence of leukocytes, indicating a possible infection of the urinary tract. The chemical test measures the concentration of leukocytes and the manufacturer recommends that quantization is done by microscopic examination. An additional advantage to the chemical leukocytes test is that it will detect the presence of leukocytes that have been lysed and would not appear in the microscopic examination.

NITRITE: The reagent strip for nitrite provides a rapid screening test for the presence of urinary tract infection. It is not designed to replace the urine culture as the primary test for diagnosing and monitoring bacterial infection. The nitrite test is valuable for detecting initial bladder infection because patients are often asymptomatic or have vague symptoms that would not lead the physician to order a urine culture.

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EXPECTED VALUES:

Glucose: Negative Protein: Negative Nitrite: Negative Leukocytes: Negative

PATIENT PROCEDURES:

1. Collect fresh urine specimen in a clean and dry container. Mix well before testing.

- 2. Remove one reagent strip from a bottle and replace cap immediately. Put a date on the bottle when first opened. Completely immerse the reagent strip in the fresh urine and remove immediately to avoid dissolving out reagents. Run the edge of the strip against the rim of the urine container to remove excess urine.
- 3. Hold the strip in a horizontal position to prevent mixing of chemical from the reagent areas.
- 4. Compare reagent areas to the color chart on the bottle label. Hold the strip close to color blocks and match carefully. **NOTE**: **Proper read time is critical for optimal results.**
- 5. Log results on the patient's chart and log sheet.

NOTE: Only the glucose, protein, nitrite and leukocytes results are recorded on the patient's charts but QC Level 1 & Level 2 are run on all 10 analytes of the Chemstrips.

QUALITY CONTROL PROCEDURES:

- 1. Remove controls from the refrigerator and allow them to reach room temperature prior to testing.
- 2. Verify that the lot number given on the QC log sheet matches the lot number on the vials of Dropper Plus Urine Dipstick. Start a new log sheet for a new lot number of the QC or the Chemstrip. **Put a date on both vials when they are first opened.** Controls are stable until the expiration date stated on the vial if kept refrigerated, otherwise one month at room temperature from when they are first opened.
- 3. Gently swirl the controls to assure good mixing. Do not shake. Open the vial cap and apply one drop of The Dropper Plus on each pad to assure good pad saturation. Remove excess control by tilting the reagent strip on its edge on a paper towel or gauze to prevent run-off/bleeding of the reagents from pad to pad. Each pad should be thoroughly moistened.
- 4. Compare reagent areas to the color chart on the bottle label according to time specified. **Proper read time is critical** for optimal results. Repeat this procedure for both controls.
- 5. Record the results on the QC log sheets with date and signature of the clinician performing the tests.
- 6. Promptly recap the Chemstrip bottle and return the control vials in the refrigerator for storage.
- 7. Dispose of Chemstrips properly.

REFERENCED:

- 1. Susan King Strasinge, Urinalysis and Body Fluids, Edition #2, 1989
- 2. Bayer Multistix 10 SG package strips.
- 3. Quantimetrix The Dropper Plus Urine Dipstick Control package inserts