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Secretary

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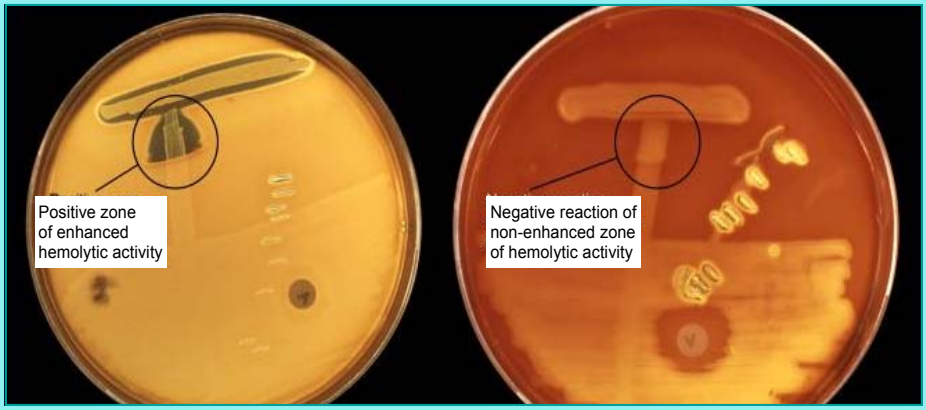
Prevention of Perinatal Group B Streptococcal (GBS) Disease

Revised CDC Guidelines; November 2010

In the 1970s, the bacterium group B *Streptococcus* (GBS) emerged as the leading cause of infectious early neonatal morbidity and mortality in the United States. Maternal colonization with GBS in the genitourinary or gastrointestinal tracts is the primary risk factor for disease. Revised guidelines for the prevention of early-onset GBS disease issued in 2002 recommended universal culture-based screening of all pregnant women at 35 to 37 weeks gestation to optimize the identification of women who should receive intrapartum antibiotic prophylaxis.[1]

Before active prevention was initiated, an estimated 7,500 cases of neonatal GBS disease occurred annually in the United States.



Positive for GBS **Not Positive for GBS**

Photo 1: This is a picture of the CAMP test used to identify GBS. Note the "arrowhead"-shape of the zone of enhanced hemolytic activity by the GBS (left) near the Staphylococcus streak, but not by the GAS (right). This means the bacterium on the left is GBS because it is producing a CAMP factor. See text for details. Photo credit: CDC PHIL.

As a result of prevention efforts, incidence of GBS has declined dramatically over the past 15 years, from 1.7 cases per 1,000 live births in the early 1990s to 0.34 to 0.37 cases per 1,000 live births in recent years. GBS has caused approximately 1,200 cases of early-onset invasive disease per year; approximately 70% of cases are among babies born at term (≥37 weeks gestation.)[2]

Further reduction occurred following the issuance of the recommendation for universal screening in 2002. However, GBS disease remains the leading infectious cause of morbidity and mortality among newborns in the United States.[2] The continued burden of disease and newly available data relevant to early-onset GBS disease prevention

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Prevention of Perinatal Group B Streptococcal Disease

prompted revision of the guidelines for early-onset GBS disease prevention.

Group B *Streptococcus*, or *Streptococcus agalactiae*, is a Gram-positive bacterium that causes invasive disease primarily in infants, pregnant or postpartum women. Infections in newborns occurring within the first week of life are designated early-onset disease. Late-onset infections occur in infants aged >1 week, with most infections evident during the first 3 months of life. These guidelines concern only early-onset disease.

Infants with early-onset GBS disease generally present with respiratory distress, apnea, or other signs of sepsis within the first 24 to 48 hours of life. The most common clinical syndromes of early-onset disease are sepsis and pneumonia; less frequently, early-onset infections can lead to meningitis.

Early-onset infections are acquired vertically through exposure to GBS from the vagina of a colonized woman. Neonatal infection occurs primarily when GBS ascends from the vagina to the amniotic fluid after onset of labor or rupture of membranes, although GBS also can invade through intact membranes. GBS can be aspirated into the fetal lungs, which in turn can lead to bacteremia. Infants also can become infected with GBS during passage through the birth canal; infants who are exposed to the organism through this route can become colonized at mucus membrane sites in the gastrointestinal or respiratory tracts, but these colonized infants generally remain healthy.

Pregnant women with GBS colonization were at least 25 times more likely than pregnant women with negative prenatal cultures to deliver infants with early-onset GBS disease.[3] In the absence of any intervention, an estimated 1% to 2% of infants born to colonized mothers develop early-onset GBS infections.[4] Approximately 10% to 30% of pregnant women are colonized with GBS in the vagina or rectum. GBS colonization during pregnancy can be transient, intermittent, or persistent. The gastro-intestinal tract serves as the primary reservoir for GBS and is the likely source of vaginal colonization. Heavy colonization, defined as culture of GBS from direct plating rather than from selective broth only, is associated with higher risk for early-onset disease. GBS identified in clean-catch urine specimens during any trimester is considered a surrogate for heavy maternal colonization and is associated with a higher risk for early-onset GBS disease.

Antibiotic Resistance of GBS

The widespread use of intrapartum antibiotic prophylaxis to prevent early-onset GBS disease has raised concern about the development of antibiotic resistance among GBS isolates. GBS continues to be susceptible to penicillin, ampicillin, and first-generation cephalosporins. However, isolates with increasing minimum inhibitory concentrations (MICs) to penicillin or ampicillin have been reported. Clinical and Laboratory Standards Institute guidelines[5] do not specify susceptibility breakpoints for cefazolin. They recommend that all isolates susceptible to penicillin be considered susceptible to cefazolin. As with the elevated MICs to penicillin and ampicillin, the clinical significance of higher MICs to cefazolin among GBS isolates remains unclear.

The proportions of GBS isolates with in vitro resistance to clindamycin or erythromycin have increased over the past 20 years. The prevalence of resistance among invasive GBS isolates in the United States ranged from 25% to 32% for erythromycin and from 13% to 20% for clindamycin in reports published during 2006 to 2009. Resistance to erythromycin is associated frequently, but not always, with resistance to clindamycin.

Culture-Based Versus Risk-Based Screening

Early guidelines recommended the use of one of two approaches to identifying women who should receive intrapartum

antibiotic prophylaxis: a risk-based approach or a culture-based screening approach. A large population-based study conducted during 1998 to 1999 demonstrated the superiority of culture-based screening over the risk-based approach to prevention of early-onset GBS disease.[6] The study found that culture-based screening resulted in the identification of a greater proportion of women at risk for transmitting GBS to their newborns. Furthermore, women with a positive antenatal GBS culture were more likely to receive intrapartum antibiotic prophylaxis than those women with a risk-based indication for chemoprophylaxis. In 2002, the Centers for Disease Control and Prevention (CDC) guidelines for GBS prevention were updated to recommend universal culture-based screening to determine which women should receive intrapartum GBS chemoprophylaxis. The CDC recommended that women with unknown GBS colonization status at the time of delivery be managed according to the presence of intrapartum risk factors.

Bacteriuria

GBS is found in the urine of 2% to 7% of pregnant women. GBS bacteriuria in a pregnant woman is a marker for heavy genital tract colonization, and maternal GBS bacteriuria (including pure and predominant growth of GBS in the urine) has been associated with GBS colonization and an increased risk for early-onset disease in the newborn. Although some women receive antibiotics to treat GBS bacteriuria during pregnancy, antibiotics do not eliminate GBS from the genitourinary and gastrointestinal tracts, and recolonization after a course of antibiotics is typical.[7] Maternal GBS bacteriuria at any point during pregnancy is a recognized risk factor for early-onset GBS disease and therefore has been included as an indication for intrapartum antibiotic prophylaxis since 1996.

In 2002, the guidelines[5] recommended that laboratory personnel report GBS present in any concentration in the urine. Most data on the risk for early-onset GBS disease among infants born to women with GBS bacteriuria are derived from studies of significant GBS bacteriuria (generally $>10^5$ colony-forming units per milliliter of urine.) Although lower concentrations ($<10^4$ cfu/ml) of GBS in the urine can be associated with vaginal-rectal colonization, relatively little data are available on the risk for early-onset GBS disease among infants born to women with low colony-count GBS bacteriuria. Routine screening for asymptomatic bacteriuria is recommended in pregnant women.[8] The identification of GBS through this screening represents an opportunity to detect women at high risk for transmitting GBS to their infants.

Specimen Collection and Processing for GBS Screening

Timing of Screening

Because GBS colonization status can change over the course of a pregnancy, the timing of specimen collection to determine colonization status is important. Because colonization can be transient, colonization early in pregnancy is not predictive of early-onset GBS disease. Late third trimester colonization status has been used as a proxy for intrapartum colonization. The negative predictive value of GBS cultures performed ≤5 weeks before delivery is 95% to 98%; however, the clinical utility decreases when a prenatal culture is performed more than 5 weeks before delivery because the negative predictive value declines.[9]

Specimen Collection

Swabbing both the lower vagina and rectum (through the anal sphincter) increases the culture yield substantially compared with sampling the cervix or the vagina without also swabbing the rectum. Studies have indicated that when women in the outpatient clinic setting collect their own vaginal-rectal screening specimens, with appropriate instruction, GBS yield is similar to when specimens are collected by a health-care provider.

The use of appropriate transport media helps sustain the viability of GBS in settings where immediate laboratory processing is not possible. GBS isolates can remain viable in transport media for several days at room temperature; however, the recovery of isolates declines during 1 to 4 days, particularly at high temperatures. Even when appropriate transport media are used, the sensitivity of culture is greatest when the specimen is stored at 4°C before culture and is processed within 24 hours of collection.

Procedures for collecting clinical specimens for culture of GBS at 35 to 37 weeks gestation

- Swab the lower vagina (vaginal introitus), followed by the rectum (i.e., insert swab through the anal sphincter) using the same swab or two different swabs. Cultures should be collected in the outpatient setting by the health-care provider or, with appropriate instruction, by the patient herself. Cervical, perianal, perirectal or perineal specimens are not acceptable, and a speculum should not be used for culture collection.

- Place the swab(s) into a nonnutritive transport medium, Amies with charcoal. GBS isolates can remain viable in transport media for several days at room temperature; however the recovery of isolates declines over one to four days, especially at elevated temperatures, which can lead to false-negative results. When feasible, specimens should be refrigerated before processing.

Specimen requisitions to the Laboratories Administration should indicate clearly that specimens are for group B streptococcal testing. Patients who state that they are allergic to penicillin should be evaluated for risk for anaphylaxis. Susceptibility testing for clindamycin and erythromycin

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should be ordered for women with a history of anaphylaxis: angioedema, respiratory distress, or urticaria after receiving penicillin or a cephalosporin.

Specimen Processing

Regardless of the test selected to identify GBS, use of an enrichment broth improves detection substantially. When direct agar plating is used instead of selective enrichment broth, as many as 50% of women who are GBS carriers have false-negative culture results. In our laboratory, the selective enrichment Todd-Hewitt broth supplemented with colistin (10 µg/ml) and nalidixic acid (15 µg/ml) [Lim broth][10] is used.

Following enrichment, the conventional means for identifying GBS is through isolation on subculture to blood agar plates and presumptive identification by the CAMP test or by serologic identification using latex agglutination with group B streptococcal antisera.

A majority of GBS produce a diffusible extracellular protein (CAMP factor) that acts synergistically with staphylococcal beta lysine to lyse erythrocytes. The CAMP test (see Photo 1) takes advantage of the capacity of GBS to produce this CAMP factor; most other hemolytic streptococci do not produce CAMP factor. This picture shows the growth and CAMP test of a GBS (left), and a group A Streptococcus (GAS) (right). On the top of the agar plate we have inoculated the plate with a Staphylococcus strain (horizontal streak). We then inoculated the GBS (on left) and GAS (on right) perpendicular to the "Staph" streak, making sure not to touch the two different organisms (Staph and Strep), but to come close to each other. The Staph is used because it produces a lysin that only partially lyses the red blood cells (called beta-lysin). The CAMP factor reacts with the partially lysed area of the blood agar plate to enhance the hemolytic activity.

Procedures for processing clinical specimens for culture of GBS

- Remove swab(s) from transport medium and inoculate into Todd-Hewitt broth supplemented with colistin (10 µg/ml) and nalidixic acid (15 µg/ml) [Lim broth].
- Incubate inoculated selective broth for 18 to 24 hours 35° to 37°C in ambient air or 5% CO_2.
- Subculture the incubated broth to an appropriate agar plate (e.g., tryptic soy agar with 5% defibrinated sheep blood, Colombia agar with colistin and nalidixic acid, or a commercial chromogenic agar). Inspect agar plates and identify organisms suggestive of GBS (e.g., narrow zone of beta hemolysis on blood agar, gram-positive cocci, catalase-negative, and/or hippurate-positive). Note that hemolysis can be difficult to observe, so typical colonies without hemolysis should also be further tested. If GBS is not identified after incubation for 18 to 24 hours, then reincubate plates overnight and examine for suspected GBS colonies.
- Among 265 GBS isolates from invasive early-onset cases that occurred in the 10 Active Bacterial Cores (ABCs) system areas during 2006 to 2008, a total of 4% were nonhemolytic (CDC, unpublished data, 2006 to 2008.)
- Various streptococcal grouping latex agglutination tests or other tests for GBS detection (e.g., GBS Accuprobe) may be used for specific identification, or the CAMP test can be employed for presumptive identification.

Antimicrobial Susceptibility Testing

Antimicrobial susceptibility testing of GBS isolates is crucial for appropriate antibiotic prophylaxis selection for penicillin-allergic women who are at high risk for anaphylaxis because resistance to clindamycin, the most common agent used in this population, is increasing among GBS isolates. In addition, appropriate methodologies for susceptibility testing are important because inducible clindamycin resistance can occur in some strains that appear susceptible in broth susceptibility tests. D-zone testing using the double-disk diffusion method has been used to identify isolates that are erythromycin-resistant and clindamycin-susceptible, yet have inducible resistance to clindamycin.[11] Isolates that are D-zone positive are considered to have inducible clindamycin resistance and are presumed to be resistant although the clinical significance of this resistance is not clear.

Procedures for clindamycin and erythromycin susceptibility testing of GBS isolates, when ordered for penicillin-allergic patients

- The Clinical and Laboratory Standards Institute (CLSI) recommends disk diffusion or broth microdilution testing for susceptibility testing of GBS.
- To ensure accurate results, laboratories should include a test for detection of inducible clindamycin resistance. The double-disk diffusion method (D-zone test) is recommended for testing erythromycin-resistant and clindamycin-susceptible GBS. And this is what we do in our Laboratory.
- Use a cotton swab to make a suspension from 18 to 24 hour growth of the organism in saline or Mueller-Hinton broth equal to a 0.5 McFarland turbidity standard.
- Within 15 minutes of adjusting the turbidity at room temperature, dip a sterile cotton swab into the adjusted suspension. The swab should be rotated several times and pressed firmly on the inside wall of the tube above the fluid level. Use the swab to inoculate the entire surface of a

plate of Mueller-Hinton agar with 5% sheep blood. After the plate is dry, use sterile forceps to place a clindamycin (2 µg) disk and an erythromycin (15 µg) disk 12 mm apart for D-zone testing (Note: This differs from recommended 15 to 26 mm for staphylococci and a disk dispenser cannot be used to place disks on the plate for streptococci testing).

- Incubate inoculated agar plate at 35°C in 5% CO_2 for 20 to 24 hours.
- Isolates with blunting of the inhibition zone around the clindamycin disk adjacent to the erythromycin disk (D-zone positive) should be considered to have inducible clindamycin resistance and are presumed to be resistant.

The following comment could be included in patient reports for isolates that show inducible clindamycin resistance: "This isolate is presumed to be resistant on the basis of detection of inducible clindamycin resistance. Clindamycin still might be effective clinically in some cases."

NOTE: Resistance to erythromycin is often but not always associated with clindamycin resistance. If an isolate is resistant to erythromycin, it might have inducible resistance to clindamycin, even if it appears susceptible to clindamycin. If a GBS isolate is susceptible to clindamycin, resistant to erythromycin, and testing for inducible clindamycin resistance has been performed and is negative (no inducible resistance), then clindamycin can be used for GBS intrapartum prophylaxis instead of vancomycin.

Recommendations

The following updated recommendations replace previous recommendations from CDC. These recommendations have been endorsed by the American Congress of Obstetricians and Gynecologists, the American Academy of Pediatrics, the American college of Nurse Midwives, the American Society for Microbiology, and the American Academy of Family Physicians.

- Women with GBS isolated from the urine at any time during the current pregnancy or who had a previous infant with invasive GBS disease should receive intrapartum antibiotic prophylaxis and do not need third trimester screening for GBS colonization. Women with symptomatic or asymptomatic GBS urinary tract infection detected during pregnancy should be treated according to current standards of care for urinary tract infection during pregnancy and should receive intrapartum antibiotic prophylaxis to prevent early-onset GBS disease.
- All other pregnant women should be screened at 35 to 37 weeks' gestation for vaginal and rectal GBS colonization.
- At the time of labor or rupture of membranes, intrapartum antibiotic prophylaxis should be given to all pregnant women who tested positive for GBS colonization, except in the instance of cesarean delivery performed before onset of labor on a woman with intact amniotic membranes.
- For circumstances in which screening results are not available at the time of labor and delivery, intrapartum antibiotic prophylaxis should be given to women who are <37 weeks and 0 days gestation, have a duration of membrane rupture ≥18 hours, or have a temperature of ≥100.4º F (≥38.0ºC) .
- In the absence of GBS urinary tract infection, antimicrobial agents should not be used before the intrapartum period to eradicate GBS genitorectal colonization, because such treatment is not effective in eliminating carriage or preventing neonatal disease and can cause adverse consequences.
- Intrapartum antibiotic prophylaxis to prevent early-onset GBS disease is not recommended as a routine practice for cesarean deliveries performed before labor onset on women with intact amniotic membranes, regardless of the GBS colonization status of the woman or the gestational age of the pregnancy.
- Women with positive intrapartum nucleic acid amplification testing (NAAT) results for GBS should receive antibiotic prophylaxis. NAAT testing is optional and might not be available in all settings.
- GBS colonization status should be determined by collecting both vaginal and rectal specimens at 35 to 37 weeks' gestation. A single combined vaginal-rectal specimen can be collected.
- To ensure proper testing of specimens, clinicians must inform laboratories when submitted urine specimens are from pregnant women.
- Antimicrobial susceptibility testing should be performed on antenatal GBS isolates from penicillin-allergic women at high risk for anaphylaxis because of a history of anaphylaxis, angioedema, respiratory distress, or urticaria following administration of penicillin or cephalosporin.
- GBS identification options are expanded to include a positive identification from chromogenic media and identification directly from enriched broth. NAAT, such as commercially available PCR assays, can also be used after enrichment, if laboratories have validated NAAT performance and instituted appropriate quality controls.
- A direct plating option can be included in addition to enriched culture. Direct plating has a lower sensitivity than enriched culture and should not be used as the sole means to identify GBS.
- Testing for inducible clindamycin resistance should be performed on antenatal GBS isolates that are susceptible to clindamycin, resistant to erythromycin, and are from penicillin-allergic women at high risk for anaphylaxis.

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- Laboratories should report GBS in urine culture specimens when present at concentrations of ≥104 colony-forming units/ml in pure culture or mixed with a second microorganism.

- Penicillin remains the agent of choice for intrapartum antibiotic prophylaxis, with ampicillin as an acceptable alternative.

- Penicillin-allergic women who do not have a history of anaphylaxis, angioedema, respiratory distress or urticaria following administration of a penicillin or a cephalosporin should receive cefazolin.

- Antimicrobial susceptibility testing should be ordered for antenatal GBS cultures performed on penicillin-allergic women at high risk for anaphylaxis because of a history of anaphylaxis, angioedema, respiratory distress or urticaria following administration of a penicillin or a cephalosporin . To ensure proper testing, clinicians must inform laboratories of the need for antimicrobial susceptibility testing in such cases.

- Penicillin-allergic women at high risk for anaphylaxis should receive clindamycin if their GBS isolate is susceptible to clindamycin and erythromycin, as determined by antimicrobial susceptibility testing; if the isolate is sensitive to clindamycin but resistant to erythromycin, clindamycin may be used if testing for inducible clindamycin resistance is negative. Penicillin-allergic women at high risk for anaphylaxis should receive vancomycin if their isolate is intrinsically resistant to clindamycin as determined by antimicrobial susceptibility testing, if the isolate demonstrates inducible resistance to clindamycin, or if susceptibility to both agents is unknown.

- The recommended dosing regimen of penicillin G is 5 million units intravenously, followed by 2.5 to 3.0 million units intravenously every 4 hours . The range of 2.5 to 3.0 million units is recommended to achieve adequate drug levels in the fetal circulation and amniotic fluid while avoiding neurotoxicity. The choice of dose within that range should be guided by which

Laboratory Statistics

Reported by the
Laboratories Administration
covering results from the month of
September 2010

ENTERIC BACTERIOLOGY

GENUS SEROVAR	SEX	AGE	#	JURISDICTION
CAMPYLOBACTER				
	M	51	1	OUT OF STATE
CAMPYLOBACTER JEJUNI				
	F	0	1	ALLEGANY
	F	3	1	ALLEGANY
	M	25	1	ALLEGANY
	U	58	1	BALTIMORE
	U	47	1	BALTIMORE
	F	65	1	BALTIMORE
	F	33	1	BALTIMORE
	M	58	1	BALTIMORE
	M	0	1	MONTGOMERY
	F	38	1	OUT OF STATE
	F	32	1	OUT OF STATE
	M	48	1	OUT OF STATE
CAMPYLOBACTER LARI				
	M	57	1	BALTIMORE
	M	71	1	TALBOT
CAMPYLOBACTER SPECIES PRESENT. ISOLATE SENT TO CDC FOR IDENTIFICATION.				
	M	39	1	OUT OF STATE
ESCHERICHIA COLI, SEROTYPE 0157:H7				
	M	53	1	OUT OF STATE
ESCHERICHIA COLI, SEROTYPE O157:H7				
	M	3	1	ANNE ARUNDEL
	M	3	1	BALTIMORE
	F	3	2	BALTIMORE
	F	1	1	BALTIMORE
SALMONELLA				
	F	51	1	BALTIMORE CITY
	M	45	1	BALTIMORE CITY
	F	1	1	CECIL
	F	86	1	FREDERICK
	F	59	3	FREDERICK
	F	54	1	FREDERICK
	F	29	1	FREDERICK
	F	53	1	MONTGOMERY
	F	0	1	MONTGOMERY
	F	0	1	OUT OF STATE
	F	25	1	OUT OF STATE
	F	1	1	OUT OF STATE
	M	63	1	OUT OF STATE
	M	3	1	OUT OF STATE
	M	89	1	WASHINGTON
SALMONELLA SER. 4,5,12:I:-				
	M	50	1	HARFORD
	F	4	1	OUT OF STATE
SALMONELLA SER. ENTERITIDIS				
	U	2	1	BALTIMORE
	F	10	1	BALTIMORE
	M	81	1	BALTIMORE
	M	63	1	BALTIMORE
	M	51	1	BALTIMORE
	U	0	1	BALTIMORE CITY
	F	0	2	BALTIMORE CITY
	F	51	1	BALTIMORE CITY
	F	31	1	BALTIMORE CITY
	F	25	1	BALTIMORE CITY
	F	16	2	BALTIMORE CITY
	F	8	2	BALTIMORE CITY
	F	3	1	BALTIMORE CITY
	F	2	1	BALTIMORE CITY
	F	0	1	BALTIMORE CITY
	M	67	1	BALTIMORE CITY
	M	58	2	BALTIMORE CITY
	M	55	2	BALTIMORE CITY
	M	53	1	BALTIMORE CITY
	M	46	2	BALTIMORE CITY
	M	27	1	BALTIMORE CITY
	M	24	1	BALTIMORE CITY
	M	16	1	BALTIMORE CITY
	M	10	1	BALTIMORE CITY
	M	2	1	BALTIMORE CITY
	M	1	1	BALTIMORE CITY
	M	0	1	BALTIMORE CITY
	F	77	1	CARROLL
	M	9	1	CARROLL
	M	5	1	CARROLL
	M	50	1	FREDERICK
	F	59	2	HARFORD
	M	72	2	HARFORD
	F	0	1	MONTGOMERY
	F	64	1	OUT OF STATE
	F	51	1	OUT OF STATE
	F	45	1	OUT OF STATE

formulations of penicillin G are readily available in order to reduce the need for pharmacies to specially prepare doses.

- Erythromycin is no longer an acceptable alternative for intrapartum GBS prophylaxis for penicillin-allergic women at high risk for anaphylaxis.

At the Laboratories Administration, culture and antimicrobial susceptibility testing of GBS from pregnant women is provided by the Public Health Microbiology Division. For further questions on this topic please call the Division at 410-767-6125.

This article was compiled by Dr. Jafar Razeq.

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F	41	1	OUT OF STATE
F	17	1	OUT OF STATE
F	1	1	OUT OF STATE
M	47	1	OUT OF STATE
M	32	1	OUT OF STATE
M	31	1	OUT OF STATE
M	22	1	OUT OF STATE
M	1	1	OUT OF STATE
U	0	1	PRINCE GEORGE'S
F	7	1	UNKNOWN
SALMONELLA SER. HEIDELBERG			
M	8	1	OUT OF STATE
M	5	1	OUT OF STATE
SALMONELLA SER. JAVA			
M	4	1	BALTIMORE CITY
SALMONELLA SER. JAVIANA			
F	91	1	ANNE ARUNDEL
U	21	1	MONTGOMERY
F	91	1	OUT OF STATE
F	63	1	OUT OF STATE
SALMONELLA SER. LONDON			
F	23	1	KENT
SALMONELLA SER. NEWPORT			
F	66	1	BALTIMORE
M	0	1	BALTIMORE
F	86	1	OUT OF STATE
F	10	1	OUT OF STATE
F	3	1	OUT OF STATE
M	53	1	OUT OF STATE
F	45	1	WICOMICO
SALMONELLA SER. ORANIENBURG			
F	26	1	BALTIMORE
F	34	1	OUT OF STATE
SALMONELLA SER. PANAMA			
F	2	2	MONTGOMERY
SALMONELLA SER. PARATYPHI A			
M	52	1	BALTIMORE
M	59	1	BALTIMORE CITY
F	30	9	OUT OF STATE
SALMONELLA SER. SAINTPAUL			
U	0	1	ANNE ARUNDEL
M	1	4	BALTIMORE CITY
SALMONELLA SER. TYPHI			
M	44	1	OUT OF STATE
SALMONELLA SER. TYPHIMURIUM			
F	0	1	BALTIMORE
F	41	1	BALTIMORE CITY
M	41	1	BALTIMORE CITY
M	46	1	CALVERT
F	39	1	MONTGOMERY
M	2	1	MONTGOMERY
F	19	1	OUT OF STATE
F	9	1	OUT OF STATE
F	3	1	OUT OF STATE
M	1	1	OUT OF STATE
U	13	1	PRINCE GEORGE'S
F	24	1	PRINCE GEORGE'S
F	66	1	TALBOT
F	6	1	WASHINGTON
SALMONELLA SPECIES PRESENT. SENT TO CDC FOR SEROTYPING.			
U	0	1	OUT OF STATE
F	15	1	OUT OF STATE
F	64	1	HARFORD
SHIGELLA FLEXNERI II:3,4			
U	3	1	BALTIMORE CITY
SHIGELLA SONNEI			
F	27	3	BALTIMORE
F	3	1	BALTIMORE
F	5	1	OUT OF STATE
M	35	1	OUT OF STATE
M	28	1	OUT OF STATE
F	20	1	WASHINGTON
VIBRIO ALGINOLYTICUS			
M	12	2	OUT OF STATE
VIBRIO FLUVIALIS			
M	66	1	BALTIMORE CITY
M	45	1	BALTIMORE CITY

TOTAL 162

ISOLATES - REFERENCE

GENUS SPECIES SOURCE	#	JURISDICTION
STAPHYLOCOCCUS AUREUS		
BLOOD	1	BALTIMORE CITY

TOTAL 1

ISOLATES - MISCELLANEOUS

GENUS SPECIES SOURCE	#	JURISDICTION
ACHROMOBACTER XYLOSOXIDANS		
SPUTUM	1	WASHINGTON
BACILLUS CEREUS		
BLOOD	1	BALTIMORE CITY
VAGINAL	1	MONTGOMERY
ACINETOBACTER LWOFFI		
SPUTUM	3	BALTIMORE
ALCALIGENES SPECIES		
BLOOD	1	BALTIMORE CITY
BACILLUS SPECIES		
BLOOD	1	BALTIMORE CITY
CLOSTRIDIUM SPECIES		
BLOOD	1	BALTIMORE CITY

ENTEROCOCCUS AVIUM		
BLOOD	1	BALTIMORE CITY
ENTEROCOCCUS CASSELIFLAVUS		
BLOOD	1	BALTIMORE CITY
GARDNERELLA VAGINALIS		
VAGINAL	2	PRINCE GEORGE'S
KLEBSIELLA PNEUMONIAE		
VAGINAL	1	PRINCE GEORGE'S
STAPHYLOCOCCUS AUREUS		
WOUND	1	BALTIMORE
BLOOD	2	BALTIMORE CITY
BRONCHIAL	2	BALTIMORE CITY
CSF	1	BALTIMORE CITY
LUNG TISSUE	2	BALTIMORE CITY
THROAT	1	BALTIMORE CITY
WOUND	1	BALTIMORE CITY
ABSCESS	1	CARROLL
NASAL	4	CARROLL
VAGINAL	1	PRINCE GEORGE'S
WOUND	1	PRINCE GEORGE'S
VAGINAL	1	TALBOT
STAPHYLOCOCCUS HAEMOLYTICUS		
BLOOD	1	BALTIMORE CITY
STAPHYLOCOCCUS, COAGULASE NEGATIVE		
WOUND	1	BALTIMORE
BLOOD	2	BALTIMORE CITY
WOUND	1	BALTIMORE CITY
EAR	1	CARROLL
EYE	1	CARROLL
STREPTOCOCCUS, BETA HEMOLYTIC NON-GROUP A		
THROATS	9	ALLEGANY
STREPTOCOCCUS, BETA HEMOLYTIC GROUP B		
VAGINAL	2	ANNE ARUNDEL
CERVIX	1	PRINCE GEORGE'S
VAGINAL	1	PRINCE GEORGE'S
VAGINAL	14	PRINCE GEORGE'S
STREPTOCOCCUS INTERMEDIUS		
BLOOD	1	BALTIMORE CITY
STREPTOCOCCUS ORALIS		
CSF	1	BALTIMORE CITY
TOTAL	**65**	

SEXUALLY TRANSMITTED DISEASES

GENUS SPECIES	SEX	#	JURISDICTION
SYPHILIS SEROLOGY			
	F	1	ALLEGANY
	F	1	ANNE ARUNDEL
	F	5	BALTIMORE
	M	7	BALTIMORE
	F	16	BALTIMORE CITY
	M	29	BALTIMORE CITY
	U	1	BALTIMORE CITY
	M	1	CALVERT
	M	1	CHARLES
	M	1	FREDERICK
	M	1	HARFORD
	M	3	HOWARD
	F	3	MONTGOMERY
	M	11	MONTGOMERY
	F	6	PRINCE GEORGE'S
	M	20	PRINCE GEORGE'S
	M	2	WASHINGTON
	F	2	WICOMICO
	M	3	WICOMICO
TOTAL	**114**		
CHLAMYDIA TRACHOMATIS			
	F	2	ALLEGANY
	M	3	ALLEGANY
	F	22	ANNE ARUNDEL
	M	7	ANNE ARUNDEL
	F	22	BALTIMORE
	M	17	BALTIMORE
	U	1	BALTIMORE
	F	12	BALTIMORE CITY
	M	18	BALTIMORE CITY
	F	6	CALVERT
	M	2	CALVERT
	U	1	CAROLINE
	F	2	CARROLL
	M	1	CARROLL
	F	2	CECIL
	M	2	CECIL
	F	13	CHARLES
	M	8	CHARLES
	U	1	CHARLES
	F	6	DORCHESTER
	M	1	DORCHESTER
	F	4	FREDERICK
	M	5	FREDERICK
	F	1	GARRETT
	M	1	GARRETT
	F	7	HARFORD
	M	2	HARFORD
	F	4	HOWARD
	M	6	HOWARD
	F	1	KENT
	M	2	KENT
	F	11	MONTGOMERY
	M	6	MONTGOMERY
	F	58	PRINCE GEORGE'S
	M	64	PRINCE GEORGE'S
	U	1	PRINCE GEORGE'S
	F	2	QUEEN ANNE'S
	F	3	SAINT MARY'S
	M	4	SAINT MARY'S
	F	4	SOMERSET
	M	2	SOMERSET
	F	3	TALBOT
	M	2	TALBOT
	F	5	WASHINGTON
	M	7	WASHINGTON
	F	27	WICOMICO
	M	12	WICOMICO
	M	3	WORCESTER
TOTAL	**396**		
NEISSERIA GONORRHOEAE			
	M	1	BALTIMORE
	M	1	BALTIMORE CITY
	F	1	DORCHESTER
	M	4	MONTGOMERY
	F	6	PRINCE GEORGE'S
	M	8	PRINCE GEORGE'S
TOTAL	**21**		

PENICILLIN-RESISTANT GONORRHEA

REPORTED QUARTERLY 10-01-10 TO 12-31-10

SEX	AGE	#	JURISDICTION
M	19	1	BALTIMORE
F	25	1	PRINCE GEORGE'S
M	21	1	PRINCE GEORGE'S
F	20	1	PRINCE GEORGE'S
M	24	1	PRINCE GEORGE'S
M	49	1	PRINCE GEORGE'S
M	31	1	PRINCE GEORGE'S
F	20	1	PRINCE GEORGE'S
M	20	1	PRINCE GEORGE'S
F	17	1	PRINCE GEORGE'S
TOTAL		**10**	

MYCOBACTERIOLOGY

ISOLATE	SEX	AGE	#	JURISDICTION
ACID-FAST BACILLUS				
	M	68	1	BALTIMORE CITY
AEROBIC ACTINOMYCETE				
	M	76	1	WICOMICO
MYCOBACTERIUM ABSCESSUS				
	F	79	1	BALTIMORE
	F	46	1	BALTIMORE CITY
	M	64	2	WICOMICO
MYCOBACTERIUM AVIUM COMPLEX				
	F	49	1	ANNE ARUNDEL
	F	68	1	ANNE ARUNDEL
	F	84	1	ANNE ARUNDEL
	M	49	1	ANNE ARUNDEL
	F	68	1	BALTIMORE
	F	77	1	BALTIMORE
	F	28	1	BALTIMORE CITY
	F	38	2	BALTIMORE CITY
	F	67	1	BALTIMORE CITY
	F	72	1	BALTIMORE CITY
	M	45	1	BALTIMORE CITY
	M	46	2	BALTIMORE CITY
	M	74	1	BALTIMORE CITY
	M	77	2	BALTIMORE CITY
	U	46	1	BALTIMORE CITY
	M	63	1	CALVERT
	M	76	1	CALVERT
	F	84	2	CECIL
	M	87	2	FREDERICK
	F	67	2	HARFORD
	F	29	1	OUT OF STATE
	F	92	1	OUT OF STATE
	M	40	1	PRINCE GEORGE'S
	F	76	1	TALBOT
	M	65	1	TALBOT
	M	80	1	TALBOT
	M	47	1	WASHINGTON
	M	79	1	WASHINGTON
	M	43	1	WICOMICO
	M	66	1	WICOMICO
	M	71	1	WICOMICO
MYCOBACTERIUM FORTUITUM COMPLEX				
	F	72	1	BALTIMORE
	M	55	1	BALTIMORE

M	37	1	PRINCE GEORGE'S
M	79	1	WASHINGTON
MYCOBACTERIUM GORDONAE			
M	58	1	BALTIMORE CITY
M	94	1	HARFORD
M	35	1	MONTGOMERY
M	85	1	MONTGOMERY
MYCOBACTERIUM KANSASII			
M	65	1	BALTIMORE CITY
M	68	2	BALTIMORE CITY
M	67	1	OUT OF STATE
MYCOBACTERIUM TUBERCULOSIS			
M	34	1	BALTIMORE
F	39	1	BALTIMORE CITY
M	26	1	CHARLES
M	25	1	MONTGOMERY
M	38	1	MONTGOMERY
M	61	1	MONTGOMERY
U	50	1	MONTGOMERY
F	26	1	OUT OF STATE
F	41	1	OUT OF STATE
F	76	1	OUT OF STATE
M	56	1	OUT OF STATE
F	39	1	PRINCE GEORGE'S
MYCOBACTERIUM TUBERCULOSIS COMPLEX			
F	37	1	BALTIMORE
F	87	1	BALTIMORE
M	25	1	BALTIMORE
M	34	5	BALTIMORE
F	39	1	BALTIMORE CITY
M	34	1	BALTIMORE CITY
M	58	2	BALTIMORE CITY
M	79	1	BALTIMORE CITY
M	26	2	CHARLES
F	44	2	MONTGOMERY
M	32	6	MONTGOMERY
M	50	6	MONTGOMERY
M	54	1	MONTGOMERY
M	67	3	MONTGOMERY
M	76	1	MONTGOMERY
F	21	4	OUT OF STATE
F	26	3	OUT OF STATE
F	76	2	OUT OF STATE
F	39	1	PRINCE GEORGE'S
PARTIALLY ACID FAST BACILLI SEEN.			
M	57	2	HARFORD
RAPIDLY GROWING MYCOBACTERIA			
F	69	1	CARROLL
SCOTOCHROMOGENIC MYCOBACTERIA			
M	61	1	MONTGOMERY

TOTAL 115

MYCOBACTERIUM SUSCEPTIBILITY RESULTS

12 ISOLATES IDENTIFIED
2 DRUG RESISTANT STRAINS FOUND

#	JURISDICTION	DRUG(S)
1	PRINCE GEORGE'S	ISONIAZID STREPTOMYCIN
1	SOMERSET	ISONIAZID

[A] TWO ISOLATES FROM THE SAME PATIENT
[B] PROBABLE FOR M. BOVIS
[C] MEETS CASE DEFINITION OF MULTI-DRUG TUBERCULOSIS (MDRTB)

Mycobacterium tuberculosis complex consists of:

M. tuberculosis	*M. africanum*
M. bovis	*M. microti*
M. bovis, BCG	*M. canettii*

PARASITOLOGY

GENUS/SPECIES	#	JURISDICTION
BLASTOCYSTIS HOMINIS		
	1	MONTGOMERY
	1	PRINCE GEORGE'S
	2	PRINCE GEORGE'S
CHILOMASTIX MESNILI		
	1	MONTGOMERY
	1	HOWARD
DIENTAMOEBA FRAGILIS		
	3	PRINCE GEORGE'S
ENDOLIMAX NANA		
	1	MONTGOMERY
	4	PRINCE GEORGE'S
	1	FREDERICK
	1	PRINCE GEORGE'S
	3	FREDERICK
	3	PRINCE GEORGE'S
	1	MONTGOMERY
	3	PRINCE GEORGE'S
	3	MONTGOMERY
ENTAMOEBA COLI		
	2	PRINCE GEORGE'S
	2	FREDERICK
	4	BALTIMORE CITY
	1	PRINCE GEORGE'S
	1	HOWARD
	3	PRINCE GEORGE'S
	1	BALTIMORE CITY
	1	MONTGOMERY
	3	PRINCE GEORGE'S
	1	FREDERICK
ENTAMOEBA HARTMANNI		
	2	MONTGOMERY
	1	ANNE ARUNDEL
ENTEROBIUS VERMICULARIS		
	1	TALBOT
	1	MONTGOMERY
	1	CARROLL
	1	PRINCE GEORGE'S
GIARDIA LAMBLIA		
	2	FREDERICK
	1	PRINCE GEORGE'S
	3	BALTIMORE CITY
	1	HOWARD
	2	BALTIMORE CITY
	3	PRINCE GEORGE'S
	2	MONTGOMERY
HOOKWORM		
	1	PRINCE GEORGE'S
HYMENOLEPIS NANA		
	1	FREDERICK
IODAMOEBA BÜTSCHLII		
	3	MONTGOMERY
	1	BALTIMORE CITY
	1	MONTGOMERY
	1	BALTIMORE CITY
PLASMODIUM FALCIPARUM		
	1	BALTIMORE CITY
SCHISTOSOMA MANSONII		
	1	PRINCE GEORGE'S
TRICHURIS TRICHIURA		
	1	PRINCE GEORGE'S

TOTAL 80

WATER MICROBIOLOGY

	# TESTED	# NON-COMPLIANT
COMMUNITY	0	0
NON-COMMUNITY	446	107
TOTAL	**446**	**107**

FOOD PROTECTION

	TOTALS
FOOD	
NUMBER OF SAMPLES	44
NOTABLE PATHOGENS:	
CAMPYLOBACTER SP.	2
ENTEROCOCCUS	34
E. COLI	26
MRSA	48
SALMONELLA SP.	3
VRE	2
CRABMEAT	
NUMBER OF SAMPLES	0
EXCEEDING STANDARDS[1]	0
SHELLFISH	
NUMBER OF SAMPLES	0
EXCEEDING STANDARDS[2]	0
TOTAL STANDARDS EXCEEDED	0
SHELLFISH GROWING WATERS	
NUMBER OF SAMPLES	10
TOTAL NUMBER OF SAMPLES	**169**

STANDARDS

[1]CRABMEAT FRESH

ESCHERICHIA COLI AT < 36 MPN/100 GRAMS
STANDARD PLATE COUNT AT < 100

[2]SHELLFISH

FECAL COLIFORMS AT < 230 MPN/100 GRAMS
STANDARD PLATE COUNT AT < 500,000 PER GRAM

VIRUS ISOLATION

ISOLATE	SEX	AGE	#	JURISDICTION
ADENOVIRUS				
	F	28	1	BALTIMORE
	M	5	1	GARRETT
HERPES SIMPLEX VIRUS TYPE 1				
	F	27	1	BALTIMORE
	F	23	1	PRINCE GEORGE'S
	M	20	1	PRINCE GEORGE'S
	U	42	1	BALTIMORE CITY
	F	31	1	BALTIMORE CITY
	F	37	1	BALTIMORE CITY
	F	44	1	BALTIMORE CITY
	M	18	1	BALTIMORE CITY
	F	19	1	BALTIMORE CITY
HERPES SIMPLEX VIRUS TYPE 2				
	F	34	1	BALTIMORE CITY
INFLUENZA A VIRUS				
	M	3	1	ALLEGANY
	M	0	1	ANNE ARUNDEL
	F	26	1	MONTGOMERY
	M	2	1	PRINCE GEORGE'S
	F	1	1	BALTIMORE CITY
	F	1	1	BALTIMORE CITY
	M	1	1	BALTIMORE CITY
INFLUENZA B VIRUS				
	M	63	1	BALTIMORE
MUMPS VIRUS				

VIRAL POLYMERASE CHAIN REACTION (PCR)

ISOLATE	SEX	AGE	#	JURISDICTION
HERPES SIMPLEX VIRUS TYPE 1				
	F	18	1	ALLEGANY
	F	47	1	BALTIMORE
	U	19	1	BALTIMORE CITY
HERPES SIMPLEX VIRUS TYPE 1				
	F	18	1	ALLEGANY
	F	20	1	BALTIMORE CITY
	F	21	1	BALTIMORE CITY
	F	22	1	BALTIMORE CITY
	M	23	1	BALTIMORE CITY
	M	27	1	BALTIMORE CITY
	F	28	1	FREDERICK
	F	21	1	HARFORD
	M	21	1	MONTGOMERY
	U	20	1	PRINCE GEORGE'S
	F	20	1	PRINCE GEORGE'S
	F	21	2	PRINCE GEORGE'S
	M	20	1	PRINCE GEORGE'S
	M	21	1	PRINCE GEORGE'S
	F	28	1	SOMERSET
	F	20	1	WICOMICO
	F	22	1	WICOMICO
HERPES SIMPLEX VIRUS TYPE 2				
	F	23	1	ALLEGANY
	F	22	1	ANNE ARUNDEL
	F	26	1	BALTIMORE
	M	26	1	BALTIMORE
	M	28	1	BALTIMORE
	M	33	1	BALTIMORE
	M	38	1	BALTIMORE
	F	0	1	BALTIMORE CITY
	F	17	1	BALTIMORE CITY
	F	19	1	BALTIMORE CITY
	F	21	1	BALTIMORE CITY
	F	23	1	BALTIMORE CITY
	F	24	2	BALTIMORE CITY
	F	30	2	BALTIMORE CITY
	M	0	1	BALTIMORE CITY
	M	21	1	BALTIMORE CITY
	M	26	1	BALTIMORE CITY
	M	29	1	BALTIMORE CITY
	M	35	1	BALTIMORE CITY
	M	49	1	BALTIMORE CITY
	M	50	1	BALTIMORE CITY
	F	31	1	CECIL
	F	20	1	CHARLES
	F	23	1	FREDERICK
	M	26	1	HARFORD
	F	25	1	MONTGOMERY
	M	0	1	MONTGOMERY
	M	47	1	MONTGOMERY
	F	25	1	PRINCE GEORGE'S
	F	33	1	PRINCE GEORGE'S
	F	37	1	PRINCE GEORGE'S
	F	41	1	PRINCE GEORGE'S
	F	44	1	PRINCE GEORGE'S
	M	26	1	PRINCE GEORGE'S
	M	44	1	QUEEN ANNE'S
	F	22	2	WICOMICO
INFLUENZA 2009 A/H1				
	F	0	1	ANNE ARUNDEL
	M	6	1	ANNE ARUNDEL
	U	41	1	BALTIMORE
	F	1	1	BALTIMORE CITY
	M	1	1	BALTIMORE CITY
	M	23	1	BALTIMORE CITY
	F	36	1	CHARLES
	F	82	1	CHARLES
	F	27	1	MONTGOMERY
	F	0	1	PRINCE GEORGE'S
	F	26	1	PRINCE GEORGE'S
	F	28	1	PRINCE GEORGE'S
	M	2	2	PRINCE GEORGE'S
INFLUENZA A(H3)				
	M	0	1	ANNE ARUNDEL
	M	49	1	ANNE ARUNDEL
	M	24	1	BALTIMORE
	M	72	1	BALTIMORE
	F	1	1	BALTIMORE CITY
	F	2	1	BALTIMORE CITY
	F	29	1	BALTIMORE CITY
	F	50	1	BALTIMORE CITY
	F	55	1	BALTIMORE CITY
	M	0	1	BALTIMORE CITY
	M	18	1	BALTIMORE CITY
	M	39	1	BALTIMORE CITY
	M	47	1	BALTIMORE CITY
	M	5	1	BALTIMORE CITY
	M	7	1	BALTIMORE CITY
	F	68	1	CHARLES
	U	30	1	MONTGOMERY
	F	32	1	PRINCE GEORGE'S
	M	0	2	PRINCE GEORGE'S
	M	3	1	PRINCE GEORGE'S
INFLUENZA B VIRUS				
	M	54	1	BALTIMORE
	M	63	1	BALTIMORE
	M	0	1	BALTIMORE CITY
TOTAL			**95**	

VIRAL HEPATITIS

ORGANISM	# SPECIMENS	# POSITIVES	JURISDICTION
HEPATITIS A			
	1	0	PRINCE GEORGE'S
SUBTOTAL	**1**	**0**	
HEPATITIS B			
	52	0	ALLEGANY
	147	0	ANNE ARUNDEL
	51	0	BALTIMORE
	305	2	BALTIMORE CITY
	6	0	CALVERT
	13	1	CARROLL
	137	1	CECIL
	6	0	CHARLES
	37	0	FREDERICK
	11	0	GARRETT
	30	1	HARFORD
	33	2	HOWARD
	386	3	MONTGOMERY
	355	13	PRINCE GEORGE'S
	17	0	SAINT MARY'S
	3	0	SOMERSET
	9	0	TALBOT
	37	0	WASHINGTON
	64	0	WICOMICO
SUBTOTAL	**1,699**	**23**	
HEPATITIS C			
	46	4	ALLEGANY
	162	22	ANNE ARUNDEL
	60	3	BALTIMORE
	163	28	BALTIMORE CITY
	7	0	CALVERT
	13	0	CARROLL
	72	12	CECIL
	9	0	CHARLES
	39	1	FREDERICK
	14	0	GARRETT
	57	1	HARFORD
	14	2	HOWARD
	83	0	MONTGOMERY
	187	9	PRINCE GEORGE'S
	17	2	SAINT MARY'S
	3	0	SOMERSET
	9	0	TALBOT
	10	1	WASHINGTON
	9	0	WICOMICO
SUBTOTAL	**974**	**85**	
TOTALS	**2,674**	**108**	

RABIES

SOURCE	#	JURISDICTION
CAT	1	KENT
	1	MONTGOMERY
FOX	1	CHARLES
RACCOON	2	BALTIMORE
	1	FREDERICK
	1	WICOMICO
SKUNK	1	CHARLES
	1	DORCHESTER
	1	SAINT MARY'S
	1	TALBOT
TOTAL POSITIVES	**11**	
TOTAL SPECIMENS	**202**	

CHLAMYDIOPHILIA PSITTACI

(CHLAMYDIA)

REPORTED QUARTERLY
NO REPORT THIS MONTH

VIRAL DISEASE ASSESSMENT - HIV

LYMPHOCYTE PHENOTYPING
(METHOD - FLOW CYTOMETRY)

DATES Quarterly comparison 2009-2010	% CD4 LYMPHOCYTES <14%	14%-28%	≥29%	TOTAL
10/01/2010 - 12/31/2010	110	352	259	**721**
10/01/2009 - 12/31/2009	123	400	308	**831**

NEWBORN & CHILDHOOD SCREENING

PRESUMPTIVE POSITIVES

DISORDERS	#
PHENYLKETONURIA (PKU)	1
MAPLE SYRUP URINE DISEASE (MSUD)	5
HOMOCYSTINURIA	14
TYROSINEMIA	7
ARGININEMIA	1
CITRULLINEMIA	0
GALACTOSEMIA	2
BIOTINIDASE DEFICIENCY	13
HYPOTHYROIDISM	81
HEMOGLOBIN -DISEASE	16
HEMOGLOBIN -BENIGN	574
CONGENITAL ADRENAL HYPERPLASIA (CAH)	8
CYSTIC FIBROSIS	2
FATTY ACID OXIDATIONS	5
ORGANIC ACIDEMIAS	7
ACYLCARNITINE - BORDERLINE	5
ACYLCARNITINE - OTHERS	0

MONTHLY TOTALS

# OF SPECIMENS SCREENED	12,960
NUMBER OF TESTS	767,737
% UNSATISFACTORY SPECIMENS	3.3

2010 YEAR-TO-DATE CONFIRMED CASES

CONDITIONS	# CONFIRMED
MEDIUM CHAIN ACYL-CoA DEHYDROGENASE DEFICIENCY (MCAD)	2
SHORT CHAIN ACYL-CoA DEHYDROGENASE DEFICIENCY (SCAD)	9
ELEVATED FORMIMINOGLUTAMIC ACID (FIGLU)	1
3-METHYLCROTONYL-COA CARBOXYLASE DEFICIENCY (3-MCC)	3
METHYLMALONIC ACIDEMIA (MMA)	1
GLUTARIC ACIDURIA TYPE 1 (GA-1)	1
BRANCHED CHAIN KETOACIDOSIS (BCK/MSUD)	1
GALACTOSE EPIMERASE DEFICIENCY	2
GALACTOSEMIA - VARIANT -DG	4
GALACTOSEMIA - UNKNOWN VARIANT	1
PARTIAL BIOTINIDASE DEFICIENCY	2
PROBABLE BIOTINIDASE CARRIER	3
PROBABLE GN	2
CONGENITAL ADRENAL HYPERPLASIA-SALT WASTING	2
CONGENITAL ADRENAL HYPERPLASIA-UNCLASSIFIED	1
HYPOTHYROIDISM - PRIMARY	16
OTHER HYPOTHYROIDISM	10
TBG DEFICIENCY	9
SICKLE CELL DISEASE -SS	37
SICKLE CELL DISEASE -SC	25
SICKLE CELL DISEASE -S BETA THALASSEMIA	6
SICKLE CELL DISEASE- BETA 0 THALASSEMIA	1
SICKLE CELL DISEASE-SV	1
SICKLE CELL TRAIT	1
HEMOGLOBIN VARIANT	1
CYSTIC FIBROSIS	5
CFTR-RELATED METABOLIC SYNDROME (CRMS)	1
TRANSIENT TYROSINEMIA	5

ENVIRONMENTAL CHEMISTRY

SAMPLE TYPES	# NON-COMPLIANT	# TESTED
ASBESTOS		
AIR	0	0
BULK	14	16
AIR QUALITY		
$PM_{2.5}$	0	504
RADIATION		
AIR/CHARCOAL FILTERS	0	40
MILK	0	0
WIPES	0	44
RAW WATER	0	10
VEGETATION	0	0
OTHER	0	0
DRINKING WATER		
METALS		
COMMUNITY	7	13
NON-COMMUNITY	18	27
PRIVATE WELLS	21	111
PESTICIDES & PCBs		
COMMUNITY	0	48
NON-COMMUNITY	0	18
PRIVATE WELLS	0	1
VOLATILE ORGANIC COMPOUNDS		
COMMUNITY	0	92
NON-COMMUNITY	0	49
PRIVATE WELLS	1	28
RADIATION		
COMMUNITY	0	21
NON-COMMUNITY	0	0
PRIVATE WELLS	5	16
INORGANICS		
COMMUNITY	0	14
NON-COMMUNITY	3	116
PRIVATE WELLS	6	130
FOOD CHEMISTRY		
SUSPECTED TAMPERING	0	0
MICROSCOPIC FILTH	0	0
LABELING	0	0
SURVEILLANCE	0	13
CHEMICAL CONTAMINATION	0	0
TOTAL	**75**	**1,311**

VIRAL LOAD SPECIMENS

HIV-1 RNA COPIES/ML	$<10^3$	10^3—10^4	10^4—10^5	$>10^5$	TOTALS
ALLEGANY	7	2	0	0	9
CARROLL	0	0	1	0	1
MONTGOMERY	66	9	8	3	86
PRINCE GEORGE'S	96	18	16	9	139
WASHINGTON	12	3	1	0	16
WICOMICO	2	0	1	1	4
SUBTOTALS	183	32	27	13	255
DEPT. OF CORRECTIONS	12	0	1	1	14
TOTALS	**195**	**32**	**28**	**14**	**269**

HIV ANTIBODY SCREENING

SUBMITTER	TOTAL SPECI-MENS	# EIA POSITIVE	% EIA POSITIVE	# WB POSITIVE	% WB POSITIVE
CORRECTION FACILITY JUVENILE	63	0	0.00%	0	0.00%
CORRECTIONAL INSTITUTIONS	268	2	0.75%	2	100.00%
FAMILY PLANNING (NON-GOVT)	118	0	0.00%	0	0.00%
HEALTH CENTERS (NON-GOVT)	543	55	10.13%	52	94.55%
HLTH DEPT, NON-STD, FAM PLAN	371	0	0.00%	0	0.00%
HLTH DEPT, NON-STD, OB/GYN	92	0	0.00%	0	0.00%
HLTH DEPT, NON-STD, OTHER	533	53	9.94%	52	98.11%
HLTH DEPT, STD CLINICS	1,180	13	1.10%	11	84.62%
HOSPITAL, OTHER	113	8	7.08%	8	100.00%
HOSPITAL, PUBLIC	37	0	0.00%	0	0.00%
LABORATORIES (NON-HOSPITAL)	398	7	1.76%	6	85.71%
PEDIATRIC - CHILD HEALTH	8	0	0.00%	0	0.00%
PRIVATE PHYSICIANS	1	0	0.00%	0	0.00%
PRIVATE STUDENT HEALTH CTRS	18	0	0.00%	0	0.00%
PUBLIC STUDENT HEALTH CTRS	259	0	0.00%	0	0.00%
TOTALS	**4,002**	**138**	**3.45%**	**131**	**94.93%**

MAILING LABEL

Critical Link
c/o Georgia Corso, Room L-15
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