

Prenatal Screening for Group B *Streptococcus*
(Non-pigmented broth, NAAT only for identification)

Annual Review:

Name/Title	Signature	Date

Revision History:

Revision #	Control #	Changes made to document section	Author	Date

Prenatal Screening for Group B <i>Streptococcus</i>: Non-pigmented broth, NAAT only			
Doc. No.:	Rev. No.:	Effective Date:	Page 2 of 8

Approval Signatures:

Approved by: _____ Date: _____

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Print Name and Title

Approved by: _____ Date: _____

Supervisor/Technical Specialist-Director

Print Name and Title

Approved by: _____ Date: _____

Quality Manager

Print Name and Title

Prenatal Screening for Group B <i>Streptococcus</i>: Non-pigmented broth, NAAT only			
Doc. No.:	Rev. No.:	Effective Date:	Page 3 of 8

Purpose/Principle:

The purpose of this document is to provide instructions for performing prenatal screening for Group B *Streptococcus* from appropriately collected vaginal/rectal specimens using non-pigmented enriched broth culture followed by nucleic acid amplification testing (NAAT).

Scope:

This document applies to laboratory assistants, technicians and technologists within the Division of Microbiology at XXXX.

Related documents:

1. Provider collection procedure for Prenatal Screening for Group B *Streptococcus* - # xxxx. Note: Procedure should specify the acceptable specimen is a vaginal-rectal swab and that swabs from other sites (e.g. cervical or perianal swabs only) are not acceptable. Procedure should list acceptable type of swab and transport medium.
2. Quality Control procedure for tube and plated media - # xxxx.
3. Procedure for the identification of streptococci - # xxxx.
4. Procedure for Group B *Streptococcus* NAAT from broth culture - # xxxx.
5. Notification procedure for positive Prenatal Screening for Group B *Streptococcus* - # xxxx.
6. Procedure for susceptibility testing of Group B *Streptococcus* - # xxxx.

Prenatal Screening for Group B <i>Streptococcus</i>: Non-pigmented broth, NAAT only			
Doc. No.:	Rev. No.:	Effective Date:	Page 4 of 8

Responsibility:

1. It is the responsibility of the technical staff of the microbiology laboratory to review and assure they are familiar with the processes outlined in this document which are within their job duties.
2. It is the responsibility of the technical specialist to keep this procedure updated and current with national standards/guidelines/recommendations.
3. It is the responsibility of the microbiology supervisor to accurately train and assess the competency of all microbiology staff involved in performing this procedure.
4. It is the responsibility of the microbiology data technologist to assure that reporting of all results is appropriate in all computer systems.
5. It is the responsibility of the technical director to approve this procedure on an annual basis.

Definitions:

N/A

Equipment/Materials:

1. Trans-Vag broth supplemented with 5% defibrinated sheep blood, LIM broth (or equivalent)
2. Sheep blood agar plate (or equivalent)
3. Sterile loops
4. Incinerator
5. Incubator

Prenatal Screening for Group B <i>Streptococcus</i>: Non-pigmented broth, NAAT only			
Doc. No.:	Rev. No.:	Effective Date:	Page 5 of 8

6. NAAT instrumentation and/or reagents

Quality Control:

Follow Quality Control procedures for tube and plated media - # xxxx.

Follow Quality Control procedures Group B *Streptococcus* NAAT - # xxxx.

Safety Precautions:

Use standard precautions when performing this procedure.

Procedure: (Appendix includes one-page flowchart)

1. Remove patient specimen (swab; swabs) from transport medium. Specimens should be processed within 4 days of collection. Specimens requiring more than 24 hr of transport time should be refrigerated until received and processed by the laboratory.
2. Inoculate swab(s) into a selective enrichment broth medium, such as Trans-Vag broth supplemented with 5% defibrinated sheep blood, LIM broth or equivalent.
3. Incubate inoculated selective broth for a minimum of 18-24 hours at 35-37°C in ambient air or 5% CO₂ as recommended by the manufacturer. The broth should display visible turbidity as an indicator of adequate specimen collection. A clear broth after 24 hours of incubation indicates failure to obtain a proper sample and a new specimen should be requested.
4. Conduct NAAT from incubated broth according to procedure - # xxxx.
5. Report as negative for Group B *Streptococcus* when no Group B *Streptococcus* has been identified by NAAT.

Prenatal Screening for Group B <i>Streptococcus</i>: Non-pigmented broth, NAAT only			
Doc. No.:	Rev. No.:	Effective Date:	Page 6 of 8

6. If Group B *Streptococcus* is identified by NAAT, report “Group B streptococcus positive” on the report.
7. If the positive specimen is from a penicillin-allergic patient at high risk for anaphylaxis, subculture the incubated broth to a sheep blood agar plate (e.g., tryptic soy agar with 5% defibrinated sheep blood) and incubate for a minimum of 18-24 hour at 35-37°C in 5% CO₂.
 - a. Inspect and identify colonies characteristic of Group B *Streptococcus* (i.e., gram-positive cocci, catalase negative, narrow zone of β-hemolysis or no hemolysis) using routine laboratory identification protocols. (Refer to procedure # xxxx – Procedure for the identification of streptococci).
 - b. Perform susceptibilities for clindamycin and erythromycin, including inducible clindamycin resistance, using appropriate laboratory susceptibility procedures. (Refer to protocol # xxxx – Procedure for susceptibility testing of Group B *Streptococcus*.)

NOTE: As NAAT is more sensitive than culture, on occasion subcultures of broths may not recover Group B *Streptococcus* in order to perform susceptibility testing. In this case report “No Group B *Streptococcus* recovered for the performance of susceptibility testing.” The clinician may be directed to the CDC guidelines for prophylaxis of patients colonized with Group B *Streptococcus* for which susceptibility is unknown.

Format:

N/A

Prenatal Screening for Group B <i>Streptococcus</i>: Non-pigmented broth, NAAT only			
Doc. No.:	Rev. No.:	Effective Date:	Page 7 of 8

Reference:

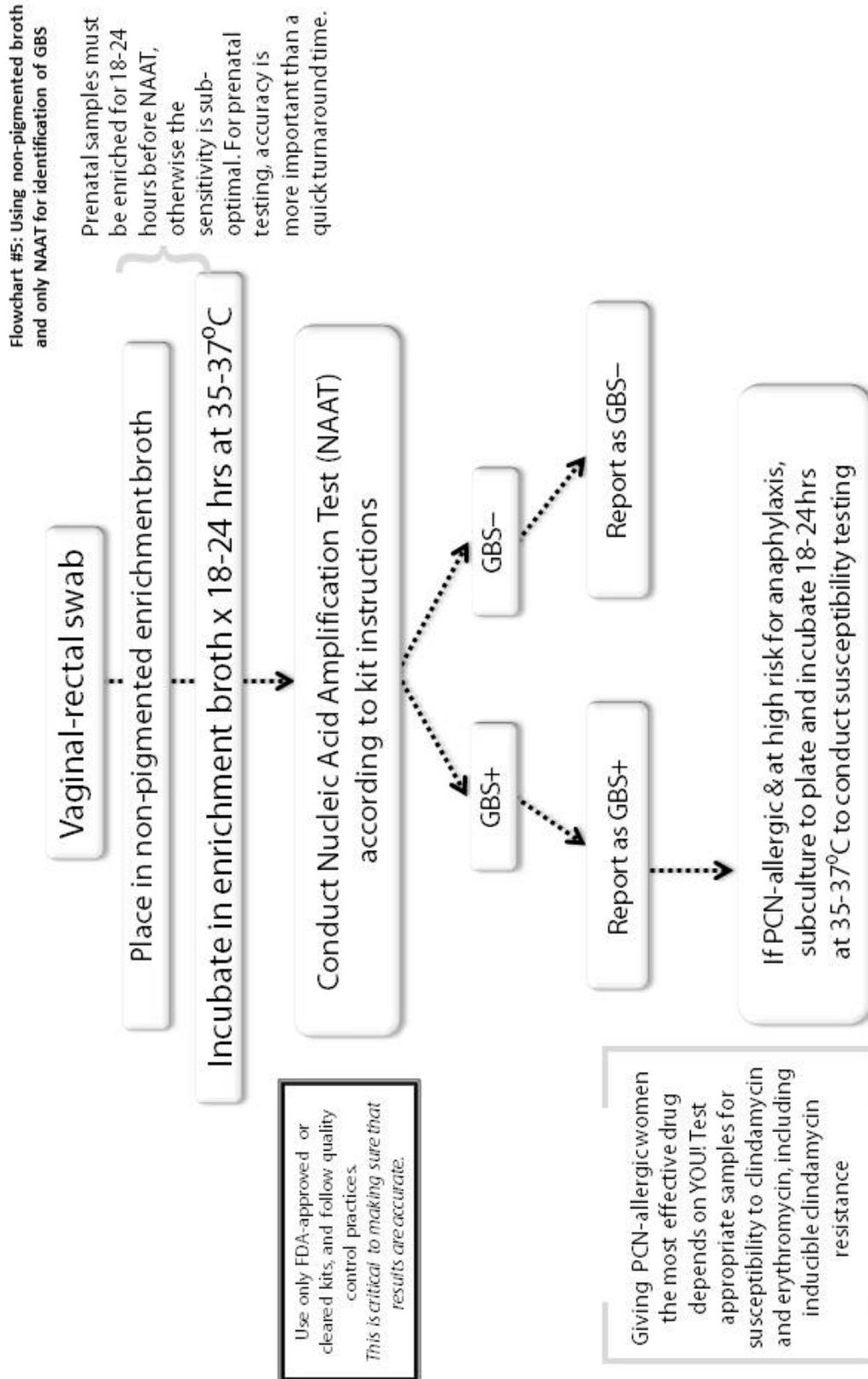
MMWR Recomm Rep. 2010 Nov 19;59(RR-10):1-36. Prevention of perinatal group B streptococcal disease--revised guidelines from CDC, 2010. Verani JR, McGee L, Schrag SJ; Division of Bacterial Diseases, National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention (CDC).

Experts from the American Society for Microbiology (ASM) and the Centers for Disease Control and Prevention's (CDC) *Streptococcus* Laboratory co-authored this document.*

For more GBS laboratory resources, visit <http://www.cdc.gov/groupbstrep>

**Collaboration does not imply HHS/CDC endorsement of ASM*

Appendix: Flow diagram for Prenatal Screening for Group B *Streptococcus*: Non-pigmented broth, NAAT only for identification.



For more information, see <http://www.cdc.gov/groupb/step/lab>
 CDC. Prevention of perinatal group B streptococcal disease. Revised guidelines from CDC, 2010. *MMWR*. 2010;59(RR-10):1-32.