

Section Two: Recommended Guidelines for Perinatal Care in Georgia

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Introduction to the Seventh Edition

This document, the Recommended Guidelines for Perinatal Care in Georgia, henceforth referred to as Guidelines, is the most comprehensive version to date. It is the culmination of work done by members and staff of the Regional Perinatal Centers and the Georgia Department of Public Health (DPH), Division of Maternal & Child Health Section.

This is the Third Edition under the title Recommended Guidelines for Perinatal Care in Georgia. These Guidelines were designed so that sections could be updated without having to issue an entirely new document. The DPH continues to rely on perinatal experts throughout Georgia to assist with the revision of the Guidelines and to keep them current.

These Guidelines are not a substitute for the rules and regulations of the Office of Regulatory Services, the Georgia Composite Medical Board, or the State Health Planning Agency. This is not a legal document but a set of recommendations which perinatal care facilities and practitioners may use for self-evaluation. Each medical facility and practitioner must make the best decisions possible within the limitations of any particular situation. Furthermore, all are invited to make suggestions for improving this document.

These Guidelines are intended to be a blueprint for the State Perinatal Health Care system, a system that will improve the quality of reproductive health care for women and perinatal health care for pregnant women and infants in Georgia. The DPH recognizes the need to develop a system that integrates the resources and energies of both the public, private and community sectors. This system must provide for coordination and direction at the state level and for responsibility for problem solving at the local level. It must account for all births in Georgia, and it must include preventive strategies that promote perinatal wellness. Public Authority (County or City) hospitals, private hospitals and physicians in private practice should be encouraged to participate voluntarily in a state perinatal system.

Our mission is to create and implement a perinatal system of care for all Georgians to assure that that the reproductive process results in the best possible outcome for families, mothers and infants.

Meanwhile, it is recommended that those who provide perinatal health care to Georgia's women and infants adopt the basic precepts of this document as part of their standard of practice. Hospitals and local health care networks are encouraged to develop their own policies, procedures and protocols that are not only compatible with these Guidelines, but also conform to and enhance the health care system for the entire state and not just the local network.

SECTION ONE: Strategy for Action

I. RATIONALE

Georgia continues to have a higher infant mortality rate than almost all other states and preventable maternal deaths still occur. For every infant who dies, many more suffer serious illness or permanent disability. Few families have the resources to pay the full cost of health care and special education for these children. The taxpayers are subsidizing a significant portion of the cost. Better organization of the State's perinatal health care system would result in fewer infant deaths, and better infant health and development.

II. GOALS

Georgia should have a system of perinatal health care (including health education) in which every woman of child-bearing age receives preconception care, every pregnant woman receives prenatal care, every child birth takes place at a facility with the appropriate level of care, and every postpartum family and infant receives the appropriate follow-up care.

III. ADMINISTRATIVE ISSUES

- Structure
 - A State and Regional Perinatal Committee should be established.
- Accountability
 - Accountability includes developing meaningful quality improvement programs, monitoring medical errors, and working to ensure patient safety.
 - This Perinatal Committee should develop a multidisciplinary approach that addresses not only the health problems of pregnant women and infants but societal and environmental problems that affect their health. This approach should seek commitment to the task of improving maternal and infant health from all parties, including payers.
 - A structure of perinatal care should include open communication and integrated decision making at all levels. There should be a cooperative relationship between the Perinatal Committee, governmental agencies and Regional Perinatal Centers.
 - There should be a formalized system that designates responsibility and accountability for health care for all births.
 - There should be a mechanism for designation and certification of facilities for level and competence of perinatal care. The designation of the level of care for facilities should be based on meeting established standards.
 - There shall be a total of twelve members, two from each RPC region. The members of the committee shall have a minimum of eight years of experience in neonatal health, maternal and child health or perinatal health. The members must have a bachelors degree, masters degree is preferred or a terminal degree. The

members shall meet three times annually with a two year term. The committee chair shall provide minutes of the meetings. It is recommended that the committee shall have administrative support to assist with meetings.

- **Data, Documentation and Evaluation**

- An ongoing perinatal information system should be developed for use in the design and implementation of programs to improve maternal and infant health.
 - Indicators for both processes (e.g., how many births are premature) must be identified to monitor the system of perinatal care.
 - The monitoring system should allow for comparisons over time as well as among similar perinatal hospitals, health districts, regional systems and other states.
 - A process should be developed to supervise the quality and completeness of data generated in all hospitals.
 - The evaluation of perinatal outcomes must include all births and all infants.

- **Financing Perinatal Care**

- Needs assessment and cost/benefit analyses of the perinatal care system should be done.
- A prioritization process should be developed to determine how resources should be allowed, based on the needs assessment and the cost/benefit analyses.
- An analysis of the cost of implementing a state perinatal plan, versus not implementing a state perinatal plan, should be developed.
- Financial support for perinatal health programs should be provided based on the prioritized needs and cost/benefits analysis and available resources.
- All programs should be monitored for effectiveness using objective criteria; state money should be allocated to provide this evaluation.

IV. HEALTH EDUCATION ISSUES

- A plan for health promotion and health education should be developed as a collaborative process with families, communities and health professionals.
- Health promotion and health education strategies should be age-specific and culturally appropriate.
- Men and women should be educated about strategies to lower the risk of poor pregnancy outcomes; these strategies, at the most general level, include:
 - For women, periodic health assessment emphasizing preconception care and early prenatal care.
 - For men and women, maintaining a healthy lifestyle and planning.

V. PATIENT CARE ISSUES

- People should have access to care, both out-patient and in-patient, in spite of medical and/or social problems.
- Outreach programs are needed
- Outreach programs should target teens and low-income women.
- Outreach programs (e.g., Children 1st) should make contact with the family of every newborn and should be coordinated to ensure no infant is missed and services are not duplicated. Regional Perinatal Centers refer high risk infants into this program.
- Access to outpatient/ambulatory care is essential to improve maternal and infant health.
 - Women of childbearing age should have access to:
 - Preconception care, including timely access to family planning service
 - Early verification of pregnancy and basic pregnancy care
 - Risk assessment and medical specialty referrals when necessary
 - Parenting education or referrals for parenting education
 - Referrals for bereavement counseling in cases of spontaneous abortion (miscarriage), fetal death (stillbirth) or infant death
 - Referral for social problems, (e.g., domestic violence)
 - Case management, follow-up and appropriate documentation
 - Every neonate/infant/mother should have a medical home capable of providing:
 - Well-child and preventive care, e.g., immunizations
 - Acute problem care
 - Medical specialty referrals when necessary
 - Referrals for early intervention (e.g., speech therapy, physical therapy) to detect and treat developmental delays
 - Case management, follow-up and appropriate documentation
- Access to the appropriate level of inpatient perinatal care should be assured
 - All perinatal care facilities should have policies in place consistent with these Guidelines.
 - All perinatal care facilities should be integrated into a system.
 - All perinatal care facilities should be classified by level of care. (Capabilities of Providers, **Appendix C**, Hospitals and Neonatal Level of Care, **Appendix D**)

- Every hospital providing perinatal services should have a written policy regarding consultation for pregnant women, neonates and the transport of pregnant women and neonates to a facility with the appropriate level of care. Access to the appropriate level of inpatient perinatal care should be assured: suggested medical criteria to consider are contained in **Appendix A3**.
 - The Six Regional Perinatal Centers (RPC's) designated by the Georgia DPH are under contract with DPH to provide coordination of transport services as well as to conduct continuing education throughout their regions. (See Appendix G for a map of the Regions). The Regional Perinatal Center Core Requirements can be obtained from the Perinatal Health Director, Office of Family and Community Health, DPH, 2 Peachtree Street, Atlanta, Ga. 30303-3186
 - Every hospital with perinatal services should establish a policy for newborn discharge. Implementing of this policy should be documented (**Appendix B**).
- Availability of qualified perinatal health care providers should be assured.
 - An appropriate mix of perinatal providers should be assured.
 - Distribution of providers should be assured.
 - Social worker services should be available to all perinatal patients and their families as part of the inter-disciplinary team providing perinatal care.
 - The Social worker should be able to:
 - Consult directly with the patient
 - Do a psychosocial evaluation of the patient
 - Provide information and referral to programs, e.g., Babies Can't Wait
 - Do multidisciplinary planning and coordination
 - Provide information on financial assistance and referral to Medicaid
 - Consult on protection of the patient's rights
 - Provide documentation in patient's chart
 - Perinatal care facilities should have a sufficient number of qualified personnel on a **24**-hour basis to provide emergency perinatal social work services.
 - Social workers experienced in perinatal services should be available for patient referrals from perinatal health providers.

- The perinatal social service provider should have the responsibility and the freedom to find cases, i.e., the provision of social work services should not be dependent upon or limited to referrals.

SECTION TWO - Preconception and Interconception Health Care

I. RATIONALE

The leading cause of infant mortality in the United States is birth defects. Most birth defects occur between 17 and 56 days after conception, often before recognition of pregnancy and the first prenatal visit. To have a significant positive impact on the health of women and infants, emphasis must be shifted from early prenatal care to preconception and interconception.

II. GOALS

The goals of preconception health promotion are to prevent unintended pregnancy, identify risk factors, and assure availability of preconceptual care services to all women of childbearing age.

III. RECOMMENDED COMPONENTS OF PRECONCEPTION AND INTERCONCEPTION CARE

- **Assessment**
 - Patient assessment should include:
 - Individual medical, family and reproductive histories
 - Nutritional status/adequacy of diet
 - Drug exposures, including alcohol and tobacco
 - Social problems, e.g., domestic violence/abuse
 - Lab test should include:
 - Hemoglobin
 - Hematocrit
 - Rh status
 - Urine screen for protein and glucose
 - Papanicolaou cervical cytology (“Pap smear”)
 - Test for sexually transmitted infections (STI’s)
 - Tuberculosis skin test
 - All patients should be tested for Human Immunodeficiency Virus (HIV) using the OPT OUT approach.
 - If HIV positive, counseling and partner testing should be offered along with treatment
 - If negative, HIV prevention strategies should be reviewed including safe practices and avoidance of intravenous drugs
 - Immunity to rubella and hepatitis should be determined and immunizations provided as indicated
- **Education**

- In order to prevent neural tube defects such as spina bifida, it is of singular importance to provide advice to all women of childbearing age to ingest adequate amounts of folic acid supplementation in the preconceptional period.
 - Women of childbearing age should be advised to consume 0.4 mg of folic acid daily.
 - Women who have had a prior conception with a neural tube defect (NTD) should be advised to consume 4.0 of folic acid daily.
 - Women with diabetes, epilepsy and obesity should be evaluated to see if a larger dose of folic acid is necessary.
- It is imperative to stress the need for regular and consistent use of family planning methods. To allow for pregnancies to be anticipated; the patient and her partner should be encouraged to choose a method consistent with their values and lifestyle.
 - The patient and when possible informed about and encouraged to ask questions about options for contraception/family planning
 - The importance of early prenatal care should a pregnancy occur
 - Risk factors associated with birth defects and congenital illness
 - Patient education and specialty referrals should be based on risk factors and patient's needs (see Appendix F)

IV. THE ROLE OF HEALTH CARE PROVIDERS IN PRECONCEPTION AND INTERCONCEPTION CARE

- A preconception health promotion should be done by every provider of general and reproductive health care services and/or information for women of child-bearing age to include the adolescent.
- Creative opportunities to recruit women into preconception care include actions such as:
 - Advising patients with a negative pregnancy test about preconception care
 - Advising patients having evaluation of irregular menses about preconception care
 - Advising patients that any sexual active woman of child bearing age may be a candidate for preconception care
- Public awareness campaigns to create consumer demand for preconception and interception care should be encouraged.

SECTION THREE - Antepartum Care

I. RATIONALE

Access to prenatal care has long been associated with reduced infant and maternal mortality and morbidity. Encounters between a pregnant woman and her health care provider are “teachable moments” when a foundation can be laid for continued good health habits which will benefit both mother and infant.

II. GOALS

The goal of antepartum health care is to maintain or improve the mother’s health during pregnancy for her benefit and that of her infant.

III. PATIENT EDUCATION

- Each obstetric health care provider should afford the patient, and the father of her infant whenever possible, the opportunity to discuss the features of her care which should include, but not limited to:
 - The normal and expected course of pregnancy
 - Laboratory test and when they will be performed
 - Danger signs in pregnancy, including signs of preterm labor
 - Frequency of visits to her health care provider
 - Childbirth parenting classes
 - Options for labor and delivery including analgesia and anesthesia
 - Diet, weight gain, exercise, rest and fatigue
 - Avoidance of alcohol, tobacco products, and any drugs including natural remedies and over the counter medications approved by the health care provider
 - Working and the associated environment’s potential to affect the pregnancy
 - Plans for admission to hospital (by 28 weeks)
 - Labor recognition signs and what to do once it begins
 - Special regimens for women with co-morbidities, e.g., diabetes and HIV
 - Analgesia and recovery from labor as well as diet, weight loss, exercise, rest and fatigue following birth

- Obstetric care provider should encourage prospective parents to make plans for the ongoing care of their infant.
 - Resource materials should be available along with referrals for parenting classes or support groups
 - Permanent smoking cessation should be urged for prospective parents
 - Parents should be provided with information on the pros and cons of circumcision

- Breastfeeding should be encouraged. Benefits to both mother and infant should be discussed frequently. Adequate preparation and encouragement of the mother and family can result in a more successful breast-feeding experience.
 - Assess the mother's knowledge and attitudes about breastfeeding and provide appropriate education, e.g., assuring the mother that breastfeeding will meet her infant's need for the first 4-6 months and that there is no relation between breast size and ability to breastfeed
 - Refer the mother to appropriate sources for information and support, e.g., a lactation consultant, public health department and/or WIC
 - Encourage appropriate dietary intake and educate on additional needs during pregnancy and lactation
- Antepartum breast assessment should be performed to:
 - Examine the breasts for abnormalities or potential problems, e.g., inelastic breasts are more prone to engorgement.
 - Examine areolas and nipples for anatomic features that may need intervention, e.g., nipple inversion, previous breast reduction or augmentation surgeries and gross malformations.
 - Assess for contraindications to breast feeding, e.g., HIV status, long term drug therapy with a drug known to be harmful to infant if transmitted through breast milk, active disease that should be treated before infant can safely breastfeed, (TB, HSV).

IV. SURVEILLANCE

- At the first prenatal visit the patient's database should be established (if not established prior to conception), and should include:
 - A general medical history/risk appraisal
 - Gynecological/obstetrical history, including the date of the last menstrual period (LMP)
 - A social profile/history
 - Nutritional assessment including weight and Body Mass Index (BMI)
 - The estimated date of delivery (EDD) determined by the last menstrual period if known; if the date is not known or a size-date discrepancy exists, an ultrasound examination should be performed before 20 weeks
 - An assessment for allergies or adverse reactions to include latex products. The findings should be communicated to the Labor and Delivery team prior to admission, or as soon after admission as practicable
- The number of perinatal visits is predicated on the needs of the individual patient: complicated patients will require more visits than uncomplicated ones. Women should be

asked for indicators of risk at each visit. Refer (**Appendix B and C**) from Perinatal Guidelines or use NPIC data or both.

- At each visit assess the mother's nutritional status through her weight gain pattern, iron status and diet history.
- At each visit assess the mother's knowledge and attitudes about breastfeeding and provide appropriate encouragement and education.
- The following is a suggested schedule of medical tests for the pregnant patient:

6-8 weeks

- Urinalysis and culture
- Blood type and Rh type
- Antibody screen
- Rubella immunity hepatitis B screen (HbsAg) cervical cytology
- HIV screen
- Syphilis serology
- Gonorrhea and chlamydia cultures
- Oral glucose tolerance testing when there is history of macrosomic infant, malformed infant, fetal death; or first degree family history of diabetes

15-20 weeks

- Maternal serum alpha-protein (MSAFP), serum estriol and (HCG)
- Quad screens and sequential screens

26-28 weeks

- Hemoglobin and hematocrit
- Glucose challenge test
- Antibody screen if Rh negative
- Rh immune globulin therapy (300 mg) as indicated
- Repeat serology

35-37 weeks

- Group B streptococcus test; there are two equally acceptable strategies for testing and treatment based on late prenatal culture and clinical risk factors.

V. RISK OF GENETIC DISEASE/BIRTH DEFECTS

As genetic conditions assume more frequent association with unfavorable outcomes of pregnancy, it is essential that assessment for them be more thorough. Advances in medical research are providing means both to identify and possibly to treat genetic diseases and birth defects during the antepartum period.

- Perinatal care providers should be prepared to provide evaluation and either genetic counseling or referral to a genetic consultant when there is a significant risk of genetic disease or birth defect. See **Appendix F** for risk factors associated with genetic disease.
- Procedures that are available for detecting certain genetic disease or defects in the fetus include:
 - Ultrasound (U/S)
 - Amniocentesis with various analysis as indicated
 - Percutaneous Umbilical Blood Sampling (PUBS)
 - Chorionic Villus Sampling (CVS)

VI. FETAL SURVEILLANCE

Patient requiring more investigation or study for risk evaluation and monitoring may be advised to have one or more of the following procedures for fetal assessment:

- Nonstress test
- Amniotic fluid volume assessment
- Contraction stress test
- Biophysical Profile

VII. IMMUNIZATION DURING PREGNANCY

Immunization should be managed with established guidelines and recommendations for immunization therapy for the pregnancy patient. The Center for Disease Control and Prevention or one of the six RPC's may be consulted regarding appropriate immunization regimens for the pregnant patient.

VIII. PRETERM LABOR

The percentage of premature births has not decreased significantly and prematurity remains a major cause of infant mortality and morbidity. Although more premature infants survive due to advances in neonatal care, these children remain high risk for developmental disabilities.

- To the limited degree that preterm labor can be prevented or anticipated, it requires the active cooperation of the patient who must be taught the signs of preterm labor.

- Maternal administration of corticosteroids benefits neonatal survival and may limit morbidities associated with preterm delivery. Regimens for corticosteroid administration are available through the National Institutes of Health (NIH) **or** from one of the RPC's.

SECTION FOUR - Intrapartum Care

I. RATIONALE

Through most of history, childbirth was a leading cause of death among women. Many infants did not survive the process. Science has afforded modern medicine the means to make maternal mortality from childbirth rare and reduce infant mortality to a minimum in some segments of the population.

II. GOAL

The goal of intrapartum care is to maintain or improve the mother's health status so that she will have a healthy infant and the birth will be without complications. Alternatively, the goal is to identify potential complications and take action to minimize the negative effects on the mother and her infant.

III. HOSPITAL STAFFING

- Each delivery should be attended by an obstetrician, or a physician with obstetrical privileges or a certified nurse midwife (all three are considered birth attendants).
- The birth attendant should be present at the hospital or immediately available by telephone and able to arrive within 30 minutes of being summoned.
- Anesthesia personnel should be present in the hospital at all times or immediately available by telephone and able to arrive within 30 minutes of being summoned.
- There should be at least one registered professional nurse present whenever a patient is in the labor area.
- Responsibility for identification and resuscitation of a distressed neonate should be assigned to a qualified health professional. A health professional trained in neonatal resuscitation should be in attendance at every delivery.
- All facilities performing surgery should conform to the Association of Operating Room Nurses (AORN) "Standards of Nursing Practice. Pertinent Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) standards should supersede AORN standards (See **Appendix H** for Internet sites).
- Each facility should have written plans for the perinatal department to follow in emergencies such as natural disasters, bomb threats or fire. These plans should include directions for communications and staffing in emergencies.

IV. PRENATAL RECORD

The hospital should require submission of a copy of the prenatal record following the first prenatal visit or as soon as the patient determines where the delivery will occur preferably before 34 weeks. These records should be accessible to the obstetric department at all times.

V. ADMISSION

- Pertinent information from the prenatal record should be recorded on the nursing admission note. Such information should include, but not be limited to:
 - Blood group, RH
 - Presence of irregular antibodies or hepatitis B surface antigen
 - Results of sexually transmitted infections (STI) and other diagnostic tests to include Group B Strep (GBS) status
 - HIV status
 - Therapeutic measures prescribed
 - Complications of pregnancy
 - Mode of Transport
 - Ambulance Yes/No
 - Immunization Status (Tdap, Influenza and MMR)
- Other information which may be recorded on the nursing admission note includes, but is not limited to:
 - Reason for admission
 - Date and time of the patient's arrival
 - Date and time of notification of the birth attendant
 - Time seen by the birth attendant
 - Condition of both the mother and fetus
 - Labor and membrane status
 - Presence of bleeding
 - Fetal activity
 - History of allergies, including allergies or reactions to latex
 - Time and content of the most recent meal ingested
 - Medications taken by the patient
 - Desires for cord blood banking
 - Immunization status, Tdap, Influenza, MMR
- A physical examination should be done upon admission and recorded within **24** hours and should include, but is not limited to:

- Assessment of maternal blood pressure, pulse, respiration and temperature
- Appropriate point of care laboratory testing as defined by hospital policy
- Frequency, duration and quality of uterine activity including uterine resting tone
- Estimated fetal weight, fetal heart rate (FHR), and evidence of fetal well being
- When indicated and if there are no contraindications, e.g., bleeding, qualified nursing may perform the initial pelvic exam to evaluate cervical dilatation, effacement and station
- The use of analgesia/anesthesia should be discussed with the patient and consent for anesthesia should be obtained if the patient desires such measures.
- Following the initial physical exam, the birth attendant should be informed of all findings including, but not limited to:
 - Contraction frequency, duration and intensity
 - Uterine resting tone
 - Fetal baseline heart rate and variability
 - Presence of accelerations
 - Status of membrane
 - Presence of bleeding
 - The patient's emotional status (such as how she is coping with labor/contractions) and her needs and desires
- Orders regarding admission, diagnostic, and therapeutic measures should be given by the birth attendant.
- All necessary consent forms should be signed, witnessed, and attached to the record.

VI. ANESTHESIA

The choice and availability of analgesia depends on the experience and judgment of the birth attendant, the circumstances of labor and delivery, and the personal presence of the patient.

- Regional anesthesia should be administered only after:
 - The patient has been examined by a birth attended or, when appropriate, qualified nursing personnel
 - The maternal and fetal status and progress of labor have been evaluated by the birth attendant
 - The birth attendant concurs with the initiation of the anesthetic and is readily available to supervise the labor and manage any complications that may rise

- The patient's vital signs should be assessed and documented at regular intervals by a qualified member of the health care team and in accordance with the hospital's policy.
- In consultation with the anesthesia service, the obstetrics department (OB) should establish policies and procedures governing the use of anesthetic agents for pain management. These should include, but not limited to:
 - The qualifications and responsibilities of persons who administer the anesthetic agents for pain management.
 - The judicious use of patient monitoring equipment.
 - Identification of the types and levels of agent which may be used for pain management.

VII. Term Labor

- A birth attendant should see the patient within a reasonable amount of time, as determined by the patient's obstetric and medical conditions.
- Appropriate licensed nursing personnel should be responsible for:
 - Observing the patient
 - Following the progress of labor
 - Monitoring and recording the patient's vital signs and FHR
- The method and frequency of FHR monitoring during labor should be based on risk factors; guidelines published by the American Congress of Obstetricians and Gynecologist (ACOG) and/or the Association for Women's Health Obstetric Neonatal Nursing (AWHONN) Guidelines and delineated OB department policy.
 - It has been shown that with a 1:1 nurse/patient ratio, intermittent auscultation during labor is equivalent to continuous electronic FHR monitoring.
 - There are no data to demonstrate optimal time intervals for intermittent auscultation of low-risk patient.
 - If continuous electronic fetal monitoring (EFM) is employed for the low risk patient the FHR should be recorded periodically (ACOG Practice Bulletin # 106 2009).
- When electronic FHR monitoring is selected as the method of fetal assessment, birth attendant and other obstetric personnel attending the patient should be qualified to interpret abnormalities.
 - In the event of differences in interpretation, an established hospital protocol for the resolution of such a conflict should be followed.

- According to ACOG publications, the FHR should be evaluated every 30 minutes during the active first stage of labor and at least every 15 minutes during the second stage of labor.
- The at-risk or high-risk patient should be monitored continuously (ACOG Practice Bulletin # 106 July 2009).
 - The FHR, as displayed using EFM should be evaluated every 15 minutes during the active first stage of labor and every 5 minutes during the second stage of labor.
 - Internal mode EFM should be utilized only after assessment of HIV and/or Herpes Simplex Virus (HSV) status is completed. Risks/benefits should be considered.
 - Obstetric department policies should define the fetus who is “at risk” or is “high risk” (**Refer to Appendix F for a list of risk factors**).

VIII. INDUCTION AND AUGEMENTATION

The decision to deliver before 39 weeks of gestation should be based on appropriate medical (maternal or fetal) indications when the risks of continuing the pregnancy outweigh the risk of delivery. Effective induction of labor, defined as the initiation of labor solely for convenience, is not recommended. Inductions prior to 39 weeks gestation should be performed under limited conditions.

- Labor should be induced or augmented only after:
 - A thorough examination of both mother and fetus has been done by the birth attendant
 - The indications for and methods of induction or augmentation have been documented by the birth attendant
- A physician with privileges to perform cesarean sections should be present in the hospital, or immediately available by telephone and able to arrive within 30 minutes of being summoned.
- Personnel who are familiar with the effects of oxytocin and who are able to identify both maternal and fetal complications should be in attendance during the administration of oxytocin.
- When oxytocic agents are being administered, FHR and uterine contraction monitoring is recommended for high-risk patients should be employed.
- Hospitals should develop their own policies, procedures and protocols for determining indications and contraindications for the induction of labor and may include the following situations:

- Indications for induction of labor:
 - Pregnancy induced hypertension
 - Premature rupture of membranes
 - Chorioamnionitis
 - Suspected fetal jeopardy as evidenced by biochemical or biophysical indications
 - Maternal medical problems such as diabetes mellitus, renal disease, chronic obstructive pulmonary disease
 - Fetal demise
 - Logistic factors such as risk labor, distance from hospital
 - Post-term gestation

- Contraindications for induction of labor:
 - Pregnancy prior to 39 weeks unless appropriate maternal or fetal indication are present
 - Placement or vasa previa
 - Abnormal fetal lie
 - Cord presentation
 - Prior classical uterine incision
 - Active genital herpes
 - Pelvic structural deformities
 - Invasive cervical carcinoma
 - Presenting part above pelvic inlet

- If amniotomy is chosen:
 - The station of the head and its application to the cervix should be assessed by the birth attendant and cord presentation ruled out
 - The FHR should be assessed and documented prior to and immediately after the procedure

IX. CESAREAN DELIVERY

- There should be the capability to perform an emergency cesarean section within 30 minutes of the decision to perform such a delivery.
- Qualified operating room nurses as well as the anesthesia, obstetric, and neonatal resuscitation personnel required must be either in the hospital or readily available.

- Indication for an expeditious delivery (thirty minutes or less) include, but are not limited to:
 - Severe fetal distress
 - Hemorrhage from placenta previa
 - Abruption placenta
 - Prolapsed umbilical cord
 - Uterine rupture

X. VAGINAL BIRTH AFTER CESAREAN DELIVERY (VBAC)

- Hospitals should develop policies and procedures for the care of patients with previous cesarean deliveries.
- Unless there are contraindications to vaginal delivery, women who have had one previous low transverse cesarean delivery should be counseled during the prenatal period and encouraged to attempt labor in their current pregnancy.
- A woman should not be forced to undergo a trial of labor.

XI. OPERATIVE VAGINAL DELIVERY

- According to ACOG publications, indications for operative vaginal delivery are either fetal or maternal; they include:
 - Presumed fetal jeopardy
 - Indicated shortening of the second stage
 - Failure to deliver spontaneously after a prolonged second stage (occasionally, fetal malposition, deflexion and asynclitism may lead to arrest of descent or excessive prolongation of the second stage)
- In the second stage of labor, when the following times are exceeded without continuing progress, the risks and benefits of allowing labor to continue should be assessed.
 - Nulliparas: > 3 hours with a regional anesthetic or > 2 hours without a regional anesthetic
 - Multiparas: > 2 hours with a regional anesthetic or > 1 hour without a regional anesthetic
- Maternal indications for operative vaginal delivery include, but are not limited to:
 - Patients who need to avoid voluntary expulsive efforts, e.g., those with certain cardiac or cerebrovascular diseases
 - Patients whose expulsive efforts are not adequate, e.g., those with certain pulmonary or neuromuscular diseases

- Patients who are exhausted or uncooperative
- Conditions necessary to attempt operative vaginal delivery include but are not limited to:
 - Adequate anesthesia
 - Appropriate maternal-fetal size relationship
 - Complete cervical dilatation, ruptured membranes and engaged fetal head
 - An experienced person performing or supervising the procedure
 - Empty urinary bladder except when outlet forceps are used
 - Appropriate position of patient
 - Presence of a person experienced in neonatal resuscitation
- If vacuum extraction is the preferred method, the hospital should have a policy for the type of vacuum and its use; relative contraindications for vacuum extraction include:
 - Prematurity
 - Suspected macrosomia
 - Suspected fetal coagulation defect
 - Non vertex presentation
- Indication for operative vaginal delivery, including the position and station of the vertex at the time of application, should be specified in a detailed operative description in the patient's medical record.
- Operative vaginal delivery should be abandoned if it does not proceed easily.

X. DELIVERY ROOM

- At least one person whose primary responsibility is for the newborn and who is capable of initiating neonatal resuscitation should be present at every delivery. Either that person or someone else who is immediately available should have the skills required to perform a correct resuscitation, including endotracheal intubation and administration of medications. This resuscitation should be performed according to the American Heart Association and American Academy of Pediatrics Neonatal Resuscitation Program.
- Apgar scores should be obtained and recorded one minute and five minutes after delivery of the neonate. For the neonate whose Apgar score at five minutes is less than seven (7), repeat Apgar determination every five minutes until the score is seven (7) or greater or twenty minutes have elapsed.
- Unquestionable means of identification should be applied to every infant before leaving the delivery room; such identification should remain on this infant until the infant leaves the hospital.

- Transition of the neonate usually occurs within the first 6-12 hours after birth, during which time the condition of the neonate should be closely monitored. Vital signs, perfusion, and tone should be monitored and documented every 30 minutes until stable for 2 hours.
- Administration of Vitamin K and eye prophylaxis may be delayed until 1 hour of life to facilitate maternal-infant bonding and early breastfeeding.
- It is not necessary for a neonate who appears healthy to leave the mother for this transition period, if the facilities needs for their observation are in the mother's recovery or postpartum area and there are adequate nursing personnel to observe and document the status of the neonate.
- The healthy newborn should be placed skin to skin with the mother immediately upon delivery to encourage early breastfeeding and bonding.
- The father and other supporting persons designated by the mother may remain during the immediate postpartum period.
- Parents should be encouraged to interact with the neonate unless such interaction is precluded by maternal or neonate complications.
- Breast milk is the best source of nutrition for infants. Breastfeeding should be encouraged in the immediate postpartum period, unless one of the few but absolute contraindications to breastfeeding is present.
- The healthy newborn should be placed on his/or her back to sleep whether in the postpartum or recovery area with the mother or in the nursery.

SECTION FIVE - Postpartum Care

Medical and other interventions are available to reverse or minimize the negative impact of health and development problems identified during postpartum.

I. GOAL

Postpartum care should enable the mother and infant to recover from labor as quickly and comfortably as possible, and it should facilitate mother-infant bonding through family-centered care. It should prepare the family to care for the newborn at home, and it should link the family to follow-up medical care and social support services when needed.

II. POSTPARTUM CARE

The mother should be encouraged to have as much physical contact with the infant as soon as possible. Mother-Baby couplet care or rooming-in should be encouraged.

- Postpartum care of the mother should be based on patient acuity, type of delivery and physician and nursing judgment.
- Immediate (first hour after delivery) care consists of the following:
 - Evaluation of the amount of vaginal bleeding and uterine tone
 - Observing for hematoma and hemorrhage
 - Administering agents to prevent postpartum hemorrhage and atony
 - Monitoring blood pressure and pulse every 15 minutes x 1 hour
 - Providing appropriate analgesia as ordered
 - Initiating skin to skin and breastfeeding, when appropriate
- After the first hour, the following care and evaluation should be provided:
 - Encouraging early ambulation, initially with assistance, to decrease incidence of thrombophlebitis
 - Allowing a shower after ambulation and food as the patient desires
 - Teaching appropriate perinatal care (perineal care)
 - Assessing the adequacy of voiding
 - Evaluating maternal temperature, and if elevated, notifying the birth attendant
 - Assessing “latch on” and encouraging frequent feedings
 - Providing breast care and facilitating breastfeeding
 - For the non-breastfeeding mother, support breasts with a well fitted brassiere or use a breast binder and if engorgement occurs, treat with ice packs and/or appropriate doses of analgesics.

- Administering Rh immune globulin to the unsensitized Rho (D) negative woman who delivers an Rho (D) or Du positive infant.
- Assess infectious immunity.
 - Determine the rubella status of the patient and immunize the rubella susceptible patient with the rubella vaccine in the postpartum period.
 - If hepatitis B (HbsAg) test is positive (testing should be documented in the patient's chart or ordered as soon as possible), inform the patient and give specific information about the baby (test and vaccinate), household contacts (vaccinate), and sexual contacts (vaccinate).
- When a postpartum sterilization has been requested by the patient, consent should have been decided prior to the birth of the baby with appropriate education provided to the family.
 - Immediate postpartum sterilization may be performed if:
 - The mother's condition is stable
 - No maternal complications have occurred
 - Anesthesia status is stable
 - If tubal sterilization necessitates induction of regional or general anesthesia, the patient's condition should be evaluated by the anesthesiologist
- The newborn should be screened for metabolic disorders and hemoglobinopathies:
 - Ideally the blood sample should be collected between **24-48** hours after birth. If the infant is discharged prior to **24** hours:
 - The hospital or birthing center must still collect a blood sample for newborn screening before discharge regardless of the age of the infant.
 - Parents should be given verbal and written instructions to have the baby retested by seven (7) days of age. (Pamphlets about this can be obtained from the Genetics Consultant in the Maternal and Child Health Program.
 - If early discharge is desired, the Georgia Guidelines for Early Newborn Discharge, found in Appendix B, are recommended.
 - Follow-up plans for mother and infant should be confirmed with their care providers. Follow-up usually occurs at 4-6 weeks post-delivery for the mother with a medical review and physical examination. Newborns may require earlier follow-up depending on gestational age at birth, time of discharge and as directed by a primary care provider.

- The responsibility for instructing the mother and father and/or predominant care-providers, about care of the infant at home should be assigned to qualified staff members. (See Appendix B for items that may be included in discharge education).
- Mother should be encouraged and assisted to continue breastfeeding. Instructions, particularly for the first time mothers should include:
 - Maternal medications, illness, use of OTC medication and tobacco products.
 - Positioning techniques
 - Latching on and removing the baby from the breast
 - Frequency and length of feeds
 - Signs of hunger and signs of satiety
 - Feeding on demand
 - Elimination patterns: void and stools
 - Nutritive sucking versus comfort sucking
 - Returning to work and maintaining milk supply
 - Breast care creams not routinely needed while breastfeeding
 - Sore or tender nipples should be air dried. Soreness persisting after the first week: contact a lactation specialist
 - Contact with soap or any drying substance should be avoided. Nipples should be patted dry, not rubbed.

SECTION SIX - PERINATAL INFECTIONS

I. RATIONALE

Infections may affect the mother or the neonate or both during the perinatal period. The perinatal care teams should practice and promote meticulous surgical and patient care techniques. Women who have had a complicated pregnancy and/or labor, or a cesarean delivery are at higher risk for infection. Therefore, communication among the providers of care is essential.

II. Goals

Prevention is the ultimate goal in dealing with perinatal infections. Specific diseases and risks require prompt diagnosis and diligent treatment to minimize the impact on the mother and her newborn.

III. INFECTION PREVENTION AND CONTROL

- All patient care and environmental services personnel should be instructed in and required to adhere to the following general hospital policies and procedures.
 - Prevention and control of infection, especially hand hygiene
 - Employee health and safety: based on Federal Occupational Safety and Health Administration (OSHA)
 - Medical waste management plan and exposure control plan
 - Centers for Disease Control and Preventions Universal Precautions (CDC-UP)
 - Prevention of Healthcare Associated Infections
 - Cleaning and decontamination of the environment and patient care equipment
 - Procedures for laundering, making linens packs, and delivering linen to the nursery areas
- Prevention of infections requires a multifaceted approach to include all of the above recommendations as well as:
 - Breastfeeding procedures
 - Limiting invasive procedures
 - Limiting the number of visitors
 - Cohorting infants colonized with the same pathogen
 - Judicious use of antimicrobial therapy
- Each hospital should establish dress codes for personnel who enter the labor and delivery and nursery areas.

- There are no data indicating a significant difference between home and hospital laundering of scrubs
 - Sterile, long sleeved gowns should be worn by personnel having direct contact with sterile field during vaginal deliveries, obstetric surgical procedures and surgical procedures in the nursery or neonatal intensive care unit (NICU).
 - Personnel in the nursery should wear long sleeved cover gowns when holding an infant. The gown can be discarded after use or maintained exclusively for the same infant and changed on a regular basis.
- Prenatal screening for infections should be done:
 - In conjunction with admission assessment, antepartum records should be reviewed for the results of test for STIs, hepatitis B (HBsAg), HIV (if performed), and GBS colonization (if performed - see Appendix E)
 - For patients with no prenatal care, these screening tests should be performed as part of an admission assessment.
 - Neonatal care providers should be advised of abnormal findings from these test.
- Special precautions should be taken with patients with known or suspected infections.
 - Pregnant patients, who have transmissible infections and who need to be admitted to the hospital should be segregated in a private room in accordance with established CDC-UP infection policies.
 - Laboring patients with known or suspected infectious process should be admitted to a private room in accordance with established infection control policies and CDC-UP.
 - Perinatal patients with a known or suspected infectious process should be managed according to established recommendations and guidelines which may include Regional Perinatal Center consultants where indicated.
 - Clean GYN cases may be admitted to antepartum/postpartum beds in accordance with established infection control policies.
 - The following perinatal infections are frequently encountered and associated with increased incidence of infectious morbidity for the parturient and/or the newborn patients. Department guidelines for management of these patients should be adopted based on established recommendations and consultations with Regional Perinatal Centers:
 - Pyelonephritis
 - Premature rupture of amnion

- Clinical choriamnionitis
- Group B streptococcal disease (see appendix E)
- Tuberculosis
- Bacteremia
- Endometritis
- Mastitis
- Epidemic puerperal sepsis
- Septic pelvic thrombophlebitis
- HIV (See the National Institute of Health Guidelines: Maternal HIV Risk Reduction)
- Pertusis
- Influenza

Appendix A-1

PERINATAL CONSULTATION AND TRANSPORT GUIDELINES: GEORGIA

Every hospital with perinatal services shall have a written policy regarding consultation for pregnant women and neonates and the transport of pregnant women and neonates to the appropriate level of care. Such policy shall provide:

- Medical criteria
- Identification of hospitals to which consultation and transport maybe made with documentation and mutual consent between the participating institutions
- Mechanism for transport services

Each regional perinatal center shall be responsible for documenting the presence of this policy in hospitals within its region and report the presence of this documentation to the Department of Public Health/Maternal and Child Health Section/Office of Family and Community Health.

Appendix A-2

Suggested Parameters for Implementing Guidelines for Neonate/Maternal Transport

The appropriate medical staff of each hospital will develop a medical criteria for consultation and referral of pregnant women and neonates.

- Transport should be considered when the resources are immediately available to the maternal and fetal or neonatal patient are not considered to be adequate to deal with the patient's actual or anticipated condition. There should be mutual agreement between obstetric and pediatric personnel in each hospital to assure internal consistency. The level of obstetrical care should not exceed the level of care for the newborn in a single institution. The criteria developed by each hospital for consults and referrals should serve as guide to support the physician's assessment in a specific case and are not intended to describe the standard of care.
- Exceptions from the criteria are acceptable in those instances where qualified medical persons determine such an exception is appropriate and the basis for such determination is documented in the parent's record.
- It is emphasized that the criteria for consultation and referral based on the availability of facilities, equipment, and personnel appropriate to manage that patient at the receiving hospital. The criteria developed for each perinatal hospital will be unique to that hospital. These criteria will be made available for review and documentation by the maternal and neonatal directors of the Regional Perinatal Center regardless of the hospitals if the hospitals involved in the referral.

Each hospital should develop an identifiable mechanism for transporting the perinatal patients. All policies must comply with Emergency Medical Treatment and Active Labor Act (EMTALA). The transport policy should address:

- Pre-transport stabilization
- Coordination of appropriate communications between referral and receiving physicians
- Identification of appropriate transport services
- Initiation of the transport services

Each hospital should develop consultation and transport agreements. These agreements may be completed under a letter of mutual consent between referral and receiving hospitals. A sample written agreement is provided (Appendix A-4)

A referring hospital's personnel may develop transport agreements with more than one receiving hospital. The selection of the receiving hospital is at the discretion of the personnel of the referring hospital. It is suggested that the most discretion of the personnel of the referring hospital. It is suggested that the most important determinant in the selection process should be presence of available and accessible care at the receiving hospital appropriate to the patient's need. The presence of an agreement between a referring and receiving hospital does not mandate that an individual patient of necessity be transported to the particular hospital. Each regional perinatal center shall be responsible for documenting the presence of this policy in hospitals within its region and report this documentation to the appropriate office in the DPH.

These policies should be reviewed every three years or as the capabilities of the involved facilities change. These changes should be communicated to the Regional Perinatal Center.

Assistance in implementing these guidelines is available by contacting personnel at the Regional Perinatal Center and may be found in the Guidelines for Perinatal Care, Seventh Edition, 2012 published by the American Academy of Pediatrics and the American College of Obstetrics and Gynecology.

**American Academy of Pediatrics
141 Northwest Point Road Elk
Grove Village, IL 60009-0927**

**American College of Obstetrics and Gynecologist
409 12th Street SW
Washington, DC 20024-2188**

Appendix A-3

Suggested Medical Criteria when Determining the Need for Consultation or Transport of the Maternal/Neonatal Patient

The following lists of criteria are to be considered when determining the need for consultation or transport. It is recognized that each situation is unique and nothing can substitute for the individual physician's evaluation and judgment. These criteria are offered as a guide to support the development of consultation and transport criteria for the individual hospital.

Maternal Conditions

Obstetrical Conditions

- Premature rupture of the membranes (between 20-24 weeks)
- Preterm labor
- Severe Pre-eclampsia, or other hypertensive complications
- Multiple gestation
- Third trimester vaginal bleeding (20 to 34 weeks)

Medical Complications

- Serious infection
- Cardiovascular disease including poorly controlled chronic hypertension
- Poorly controlled diabetes mellitus
- Endocrine disorder including hyperthyroidism
- Renal disease with deteriorating function or increasing hypertension
- Drug overdose or addiction
- Acute and chronic liver disease
- Cancer in pregnancy
- Neurologic disorder (cerebral aneurism, encephalitis, history of cranial hemorrhage, etc)
- Collagen vascular disease
- Maternal pulmonary disease
- Coagulopathy
- Maternal pulmonary disease complicated by pulmonary insufficiency

Surgical Complications

- Trauma requiring intensive care or requiring a procedure that may result in on set **premature labor**

- Acute abdominal emergency

Fetal Conditions

- Need for antenatal fetal evaluation when there is question about fetal condition or well being
- Congenital anomalies that may require surgery
- Complicated antenatal genetic problems
- Isoimmunization with or without hydrops
- Intrauterine growth restriction, severe with oligohydramnois

Neonatal Conditions

- Preterm infant less than 34 weeks or less than 1800 grams
- Persistent respiratory distress
- Respiratory failure from any cause
- Conditions requiring sub-specialty consultations, special diagnostic procedures or surgery
- Cardiac disorders requiring special diagnostic procedures or surgery
- Suspected sepsis, meningitis, or other serious neonatal infections
- Hypoglycemia
- Seizures
- Hypoxemia with evidence of encephalopathy or other organ involvement
- Drug withdrawal

Appendix A-4

SAMPLE

Perinatal Consultation/Transport Agreement

In accordance with the Perinatal Consultation/Transport Guidelines: Georgia, we agree to accept on a case by case basis appropriate neonatal/maternal transports from (HOSPITAL). Appropriate transfers include but are not limited to those which:

- The (name of sending hospital) has provided treatment within its capacity to minimize the risk to the health of the maternal patient and the unborn child.
- The (name of receiving hospital) has an available space and appropriate personnel to treat the condition and the physician has agreed to accept the transfer. The appropriate hospital transfer record will be completed as per policy prior to discharge including the name of the accepting physician.
- Information has been given to (name of receiving hospital) regarding the patient's emergency condition, preliminary diagnosis, test results and treatment provided.
- The transfer is conducted using appropriate personnel and transport equipment.

Sending Hospital

Receiving Hospital

CEO/President/ Date

CEO/President/ Date

Obstetric Medical Director/Date

Obstetric Medical Director/Date

Pediatric Medical Director/Date

Pediatric Medical Director/Date

Appendix A-5

REGIONAL PERINATAL CENTERS

Albany - Phoebe Putney Memorial Hospital

Maternal Transport - 1-800-887-5224

Neonatal Transport - 1-800-633-9053

Atlanta - Grady Memorial Hospital

Maternal Transport - 1-800 381-6661 Neonatal

Neonatal Transport - 404-325-6600 (Egelston Hospital)

Augusta - Medical College of Georgia

Maternal Transport - 1-706-721-2687 Neonatal

Neonatal Transport - 1-888-721-2687 –NICU (6428)

Columbus - The Medical Center

Maternal Transport - 1-706-571-1280

Neonatal Transport - 1-706-571-1019

Macon - The Medical Center of Central Georgia

Maternal Transport - 1-800-537-2285

Neonatal Transport - 1-800-732-1886

Savannah - Memorial Medical Center

Maternal Transport - 1-877-871-3737

Neonatal Transport - 1-912-350-7737 - 1-866-425-4893

Appendix B

GEORGIA GUIDELINES FOR EARLY NEWBORN DISCHARGE, LATE PRETERM DISCHARGE, MINIMAL CRITERIA FOR NEWBORN DISCHARGE AND RECOMMENDATIONS FOR DISCHARGE EDUCATION

Postpartum medical care and observation for the newborn within the hospital have proven to be beneficial. The hospital stay has provided for the stabilization and treatment of the infant after the delivery, for the identification of immediate and potential medical problems, for the instruction of the parents in the care of the infant and for a sufficient period of rest for the mother to recover. Traditionally, a forty-eight to seventy-two hour hospital stay is necessary to carry out these responsibilities. The length of stay should be based on several factors including; health of the mother, health and stability of the newborn, ability of the mother to care for herself and her newborn, adequacy of support systems at home, and access to appropriate follow-up care.

The DPH, Maternal and Child Health Section recognizes the timing of discharge should be the decision of the healthcare provider caring for the mother and her newborn. A shortened hospital stay (less than 48 hours after delivery) for healthy term newborns, can be accomplished, but is not appropriate for every mother and newborn. Although most newborns that are discharged early do well, studies show that some infants are at increased risk for medical problems requiring rehospitalization. Recent experience in Georgia's hospitals with perinatal services reflect that some newborns at high risk for medical problems related to early discharge are leaving the hospitals prior to twenty-four hours following birth.

The following guidelines for newborns discharged prior to forty-eight hours after birth have been developed to identify infants who may be candidates for early discharge and minimize the risk of medical problems resulting from this practice. It is recommended that the medical staff of every hospital with a perinatal service establish a policy for newborn discharge and provide for appropriate documentation of the implementation of the policy. It is recognized that close coordination among the physician, nursing services and hospital administrative staff working in an orderly fashion is required to make the practice of early newborn discharge safe for the mother and infant. Additional hospital resources and personnel may be necessary to accomplish this when an infant is not a candidate for early discharge. An opportunity for maternal bonding and feeding should be assured for at least forty-eight (48) hours. A mechanism should be provided for the mother to remain in residence during this time.

The following criteria for selection of newborns for early discharge should serve as guidelines. Reasonable medical judgment by the newborn's physician may result in posting discharge of infants who meet these criteria.

The following minimum criteria should be met before a newborn is discharged from the hospital after an uncomplicated pregnancy, labor, and delivery. These guidelines shall serve as a guideline. Reasonable medical judgment by the newborn's physician may result in minor deviations from these guidelines.

Minimum Criteria for Newborn Discharge:

- Antepartum, intrapartum and postpartum course for mothers and fetuses should be without significant complication
- Gestational age of 37 complete weeks or greater
- Newborn vital signs are documented to be normal and stable for the 12 hours before discharge, including a respiratory rate 60 breaths per minute, a heart rate of 100-160 beats per minute, and an axillary temperature of 97.7-99.3 in an open crib with suitable clothing
- Infant has urinated and has passed at least one stool spontaneously
- The infant has completed at least two successful feedings
- If bottle feeding the infant should be observe actual feeding and able to demonstrate coordinate suck, swallowing, and infant satiety should be observe, actual feeding and document the observation in the medical records
- Physical examination should reveal no abnormalities that require continued hospitalization
- If a circumcised newborn male, there is no evidence of excessive bleeding for at least 2 hours
- The clinical significance jaundice, if present before discharge, has been determined, and appropriate managements of follow up plans have been arranged
- Maternal and infant lab tests have been reviewed, including the following:
 - Maternal syphilis, HBsAg, and HIV status
 - Umbilical cord or newborn blood type and direct Coombs test results, if clinically indicated
 - Metabolic screening in accordance with the latest Georgia guidelines. If a test was performed prior to 24 hours of milk feeding, a system for repeating the test during the follow-up visit must be in place
- Initial hepatitis B vaccine has been administered or an appointment scheduled for its administration as indicated by the infant's risk status and according to the current immunization schedule.
- Hearing screen has been completed according to hospital protocol.
- A physician-directed source continuing medical care (medical home) is identified. For newborns discharged before discharged before 48 hours after delivery an appointment should be made for the infant to be examined within 48 hours of discharge.

- Appropriate referrals made to community resources and programs or through referrals made by the hospital social worker

Discharge of Late Preterm Infant

- The timing of discharge for the late preterm infant should be individualized and based on the infant's ability to thermoregulate and feed appropriately. In most instances this cannot be ascertained before 48 hours after delivery. In addition to meeting the aforementioned criteria, late preterm infants should not be discharged until there has been:
 - Accurate determination of gestational age
 - Demonstration of 24 hours of successful feeding by breast or bottle. An infant with weight loss greater than 2-3% of birth weight per day or a maximum of 7% of birth weight should be assessed for dehydration prior to discharge
 - If breast feeding there should be a formal observation of feedings at least twice daily.
 - A follow-up visit to medical home schedule for 24-48 hours after discharge
 - Documentation that the infant has passed the car seat study to observe for apnea, bradycardia or oxygen desaturation. It is suggested that preterm infants should have a period of 90-120 minutes (or longer if time for travel home exceeds this amount) in a car seat before discharge.

Discharge Education

The family's knowledge, ability, and confidence to provide appropriate care of the infant are documented by the fact that training and information has been received in the following areas:

- Appropriate urination and stooling frequency for the infant
- Umbilical cord, skin and newborn genital care
- Temperature assessment and measurement with a thermometer
- Signs of illness and common newborn problems, particularly jaundice
- Infant safety to include safe sleep environment, car seat safety, maintaining a smoke-free environment
- Appropriate hand hygiene
- Additional educational items may need to be included based on the infants individual conditions

Appendix C

Capabilities of Health Care Providers in Hospitals Delivering Basic, Specialty and Subspecialty Care*		
Level of Care	Capabilities	Health Care Provider Types
BASIC	<ul style="list-style-type: none"> • Surveillance and care of all patients admitted to the obstetric service • An established triage system for identifying patients of high risk who should be transferred to a specialty or subspecialty hospital • Proper detection and initial care of unanticipated maternal-fetal problems that occur during labor and delivery • Capability to begin an emergency cesarean delivery within an interval based on the timing that best incorporates maternal and fetal risks and benefits • Availability of appropriate anesthesia, radiology, ultrasonography, laboratory and blood bank services on a 24 hour basis • Care of postpartum conditions • Ability to make transfer arrangements in consultation with physicians at higher level receiving hospitals • Provision of accommodations and policies that allow families, including their children, to be together in the hospital following the birth of an infant • Data collection, storage and retrieval • Initiation of quality improvement programs, including efforts to maximize patient safety 	<p>Family physicians, obstetricians, laborists, hospitalists, certified nurse midwives, nurse practitioners, advanced practice registered nurses, physician assistants, surgical assistants, anesthesiologists, and radiologists</p>
Specialty	Provision of basic care services plus care of appropriate women at high risk and fetuses, both admitted and transferred from other facilities	All basic health care providers, plus sometimes maternal medicine specialists
Subspecialty	Provision of all basic and specialty care services, plus evaluation of new technologies and therapies	All specialty health care providers, plus maternal fetal medicine specialists

Regional Subspecialty Perinatal Care Center	<ul style="list-style-type: none"> • Provision of comprehensive perinatal healthcare services at and above those of subspecialty care facilities • Responsibility for regional perinatal health care service organization and coordination, including the following areas: <ul style="list-style-type: none"> • Maternal and Neonatal Transport • Regional outreach support and education programs • Development and initial evaluation of new technologies and therapies • Training of healthcare providers with specialty and subspecialty qualifications and capabilities • Analysis and evaluation of regional data, including perinatal complications and outcomes 	All subspecialty health care providers, plus other subspecialists, including obstetric and surgical subspecialists
*All institutions providing perinatal care should be capable of providing neonatal resuscitation and stabilization		

Appendix D

Definitions, Capabilities, and Health Care Provider Types: Neonatal Levels of Care		
Level of Care	Capabilities	Health Care Provider Types¹
Level I: Well Newborn Nursery	<ul style="list-style-type: none"> • Provide neonatal resuscitation at every delivery • Evaluate and provide postnatal care to stable term newborns • Stabilize and provide care to infants born at 35-37 weeks of gestation who remain physiologically stable • Stabilize newborn infants who are ill and those born before 35 weeks of gestation until transfer to a higher level of care 	Pediatricians, family physicians, nurse practitioners, and other advanced practice registered nurses
Level II: Special Care Nursery	<p>Level I capabilities plus:</p> <ul style="list-style-type: none"> • Provide care for infants born at 32 weeks of gestation or later and weigh 1,500 grams or more who have physiologic maturity or who are moderately ill with problems expected to resolve rapidly and are not anticipated to need subspecialty services on an urgent basis • Provide care for infants convalescing after intensive care • Provide mechanical ventilation for brief duration (less than 24 hours) or continuous positive airway pressure or both • Stabilize infants born before 32 weeks of gestation and weigh less than 1,500 grams until transfer to a neonatal intensive care facility 	Level I care providers plus Pediatric hospitalists, neonatologists and neonatal nurse practitioners
Level III: Neonatal Intensive Care Unit	<p>Level II capabilities plus:</p> <ul style="list-style-type: none"> • Provide sustained life support • Provide comprehensive care for infants born before 32 weeks of gestation and weigh less than 1,500 grams and infants born at all gestational ages and birth weights with critical illness • Provide prompt and readily available access to a full range of respiratory support that may include conventional mechanical ventilation and/or high frequency ventilation and inhaled nitric oxide 	Level II providers plus: Pediatric medical subspecialist*, pediatric surgeons, pediatric anesthesiologists[€], and pediatric ophthalmologists[€]

	<ul style="list-style-type: none"> • Perform advanced imaging, with interpretation on an urgent basis, including computerized tomography, magnetic resonance imaging and echocardiography 	
Level IV: Regional Neonatal Intensive Care Unit	Level III capabilities plus: <ul style="list-style-type: none"> • Located within an institution with the capability to provide surgical repair of complex congenital or acquired conditions • Maintain a full range of pediatric medical subspecialists, pediatric surgical subspecialists, and pediatric anesthesiologists at the site • Facilitate transport and provide outreach education 	Level III health care providers plus: Pediatric surgical subspecialists

*Although the American Academy of Pediatrics uses both functional and numerical designations to describe levels of neonatal care, for the purpose of clarity, functional designations are used to denote levels of perinatal care and numerical designations are used to denote neonatal levels of care.

¹Includes all health care providers with relevant experience, training and demonstrated competence

[€]At the site or at a closely related institution by prearranged consultative agreement

Levels of neonatal care. Policy statement. American Academy of Pediatrics. Committee on Fetus and Newborn. Pediatrics 2012;130:587-97

Appendix F

Risk Identification

Refer to Guidelines for Perinatal Care 7th edition. Appendices B and C
NPIC Medical Diagnoses Codes

Appendix G

Maps of Georgia's Counties, Health Districts, and Regions

There are three maps on the following pages:

The **first** map shows Georgia's 159 counties and 18 Health Districts. Georgia law provides for a Board of Health in each county. The Boards of Health are made up of local government officials, one or more local physicians, nurses and consumers. Health Districts are administrative districts established by the state Department of Public Health; each District is headed by a District Health Officer who is a physician. Sixteen Health Districts are made up of two or more counties. The other three are single county Health Districts: Fulton-3-2; Dekalb-3-5; and Clayton -3-3.

The **second** map shows Georgia's 159 counties and Six Perinatal Regions (Atlanta, Augusta, Macon, Columbus, Albany, and Savannah). The Perinatal Regions were established by the Department of Public Health in cooperation with six teaching hospitals: Grady Memorial in Atlanta, Georgia Regent Medical Center in Augusta, The Medical Center of Central Georgia in Macon, The Medical Center in Columbus, Phoebe Putney in Albany, and Memorial Medical Center in Savannah.

The Regions reflect the hospital referral patterns for high risk pregnant women and newborns. Each of the six hospitals has a Regional Perinatal Center which has contracts with the state and receives funding to care for high risk pregnant women and infants as well as to train staff from other hospitals in perinatal care, especially for high risk patients.

The **third** map shows Health Districts and Perinatal Regions. The Health Districts are numbered and the Perinatal Regions are shaded so that the viewers can see which Regions contain the Health Districts. Several Health Districts are divided between two or more Perinatal Regions.

- The Atlanta Perinatal Region included all of Health Districts 1-1; 1-2; 2; 3-1; 3-2; 3-3; 3-4; and 3-5 plus two counties from Health District 4, Henry and Fayette.
- The Albany Perinatal Region includes all Health Districts 8-2; about half of Health District 8-1; and two counties from Health District 7, Randolph and Clay.
- The Augusta Perinatal Region contains all of Health District 6 and 10; and one county from Health District 5-2, Washington.
- The Columbus Perinatal Region contains most of the counties from Health Districts 4 and 7.

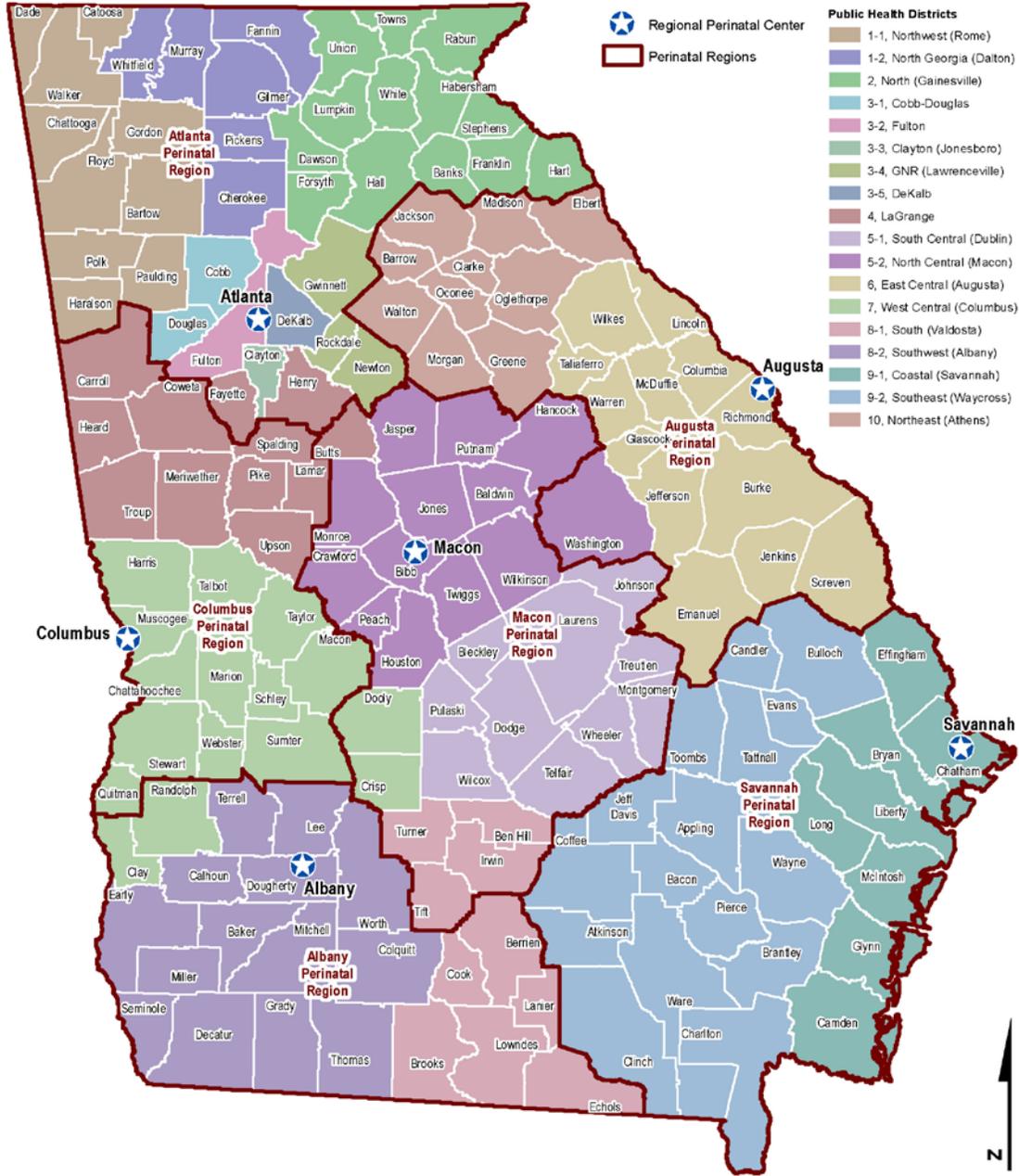
The Macon Perinatal Region contains all of the counties in Health Districts 5-1; all but one county from Health District 5-2; two counties from Health District 7, Dooly and Crisp; four

counties from Health District 8-1, Turner, Tift, Irwin, and Ben Hill; and one county from Health District 4, Butts

The Savannah Perinatal Region contains all of the counties in Health Districts 9-1; 9-2; and 9-3. It has no counties from any other Health District.

The perinatal health planning process is somewhat complicated by the way the Health Districts are divided among the Perinatal Regions as well as by the division of responsibility between the state, counties and the division of roles between the Department of Public Health and the Department of Community Health, which administers Medicaid, and pays for more than half the births in the state.

Georgia Public Health Districts and Regional Perinatal Centers and Regions

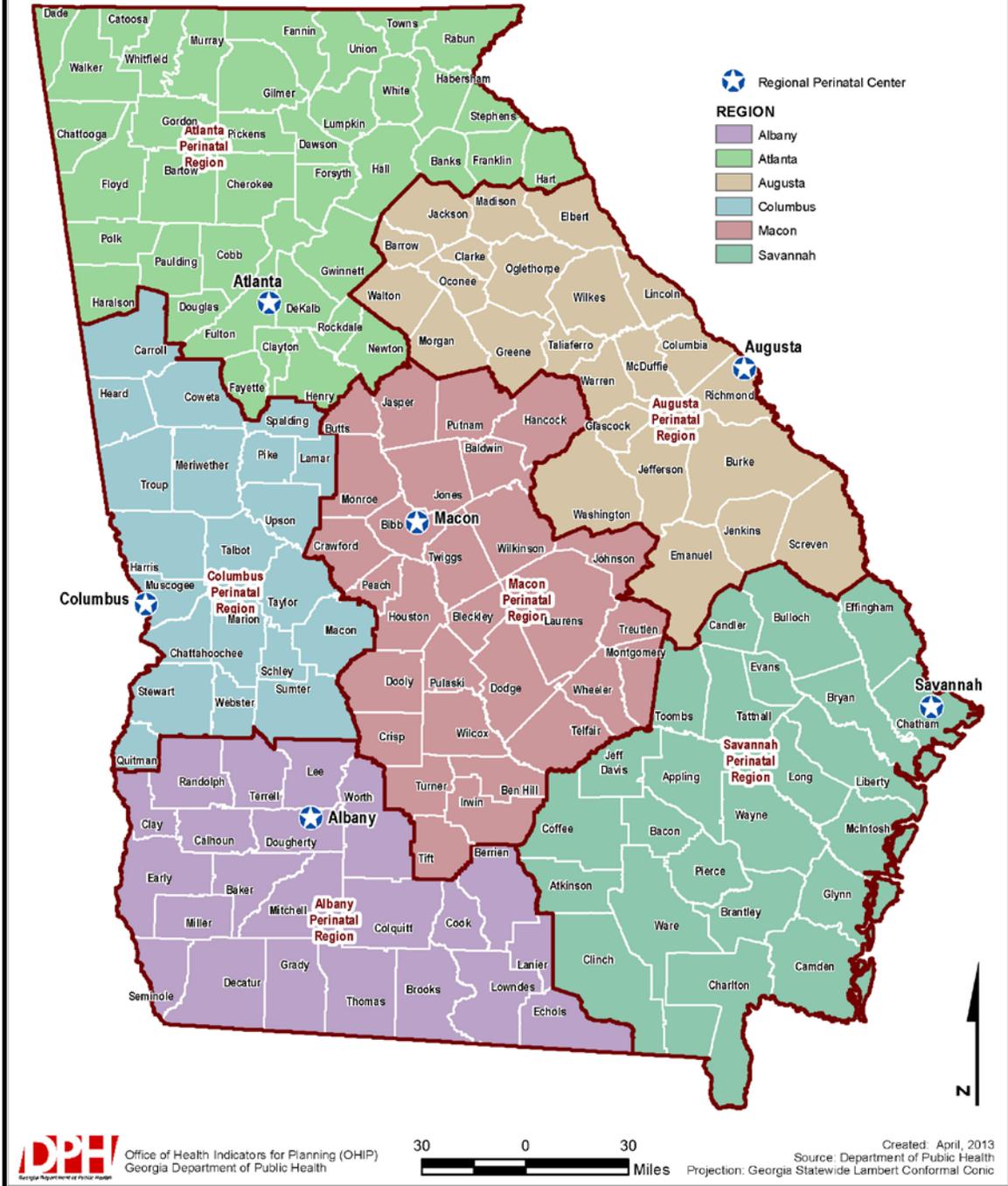


Office of Health Indicators for Planning (OHIP)
Georgia Department of Public Health



Created: April, 2013
Source: Department of Public Health
Projection: Georgia Statewide Lambert Conformal Conic

Georgia Regional Perinatal Centers and Perinatal Regions



Appendix H

USEFUL INTERNET SITES RELATED TO MATERNAL AND INFANT HEALTH

Maternal and Child Health Sites

1. Child Development and Health Supervision Guidelines for Health Professionals
<http://www.brightfutures.org>
2. Developmental Disabilities
<http://www.add.org>
3. Early Childhood Development
<http://zerotothree.org>
4. G-CAPP
<http://gcapp.org/>
5. March of Dimes Birth Defects Foundation
<http://www.marchofdimes.com>
6. National Center for Education in Maternal and Child Health
<http://www.ncemch.org>
7. National Institute of Child Health and Human Development:
<http://www.nimh.nih.gov/index.shtml>
8. National Women's Health Information Center
<http://www.womenshealth.gov>
9. Obstetrics and Gynecology
<http://www.obgyn.net>
10. Pregnancy and Infant Development
<http://www.babycenter.com>

General Health Research Sites

1. Alternative Health Networks
<http://www.alternatehealth.net/>
2. American Public Health Association
<http://www.apha.org>
3. Centers for Disease Control
<http://www.cdc.gov>
4. Georgia Hospital Association
<http://www.gha.org>
5. Georgia State Government (Current laws, Code, General Assembly updates, bills and resolutions)
<http://www.ganet.org>
6. The Joint Commission for Accreditation of Health care Organizations
<http://www.jointcommission.org>
7. National Guidelines Clearinghouse
<http://www.guidelines.gov>
8. National Library of Medicine
<http://www.nlm.nih.gov>
9. New England Journal of Medicine
<http://www.nejm.org>

Health Policy Sites

Agency for Health Care Policy and Research

1. <http://www.ahcpr.gov>
2. Alpha Center
<http://www.ac.org>
3. Electronic Policy Network
<http://epn.org/idea/health.html>
4. Georgia Policy Council for Children and Families/Family Connections
<http://www.pccf.satte.ga.us./results>
5. Health Affairs
<http://wwwprojhope.org/HA>
6. Institute for Child Health Policy
<http://www.ichp.ufl.edu>
7. Medical Policy Analysis
<http://www.familiesusa.org>

Health Professional Sites

1. American Academy of Pediatrics
<http://www.aap.org>
2. American Academy of Pediatrics, Georgia Chapter
<http://gaaap.org>
3. American College of Nurse Midwives
<http://www.midwife.org>
4. American Congress Obstetricians and Gynecologists
<http://www.acog.org>
5. Association of Women's Health, Obstetric and Neonatal
<http://www.awhonn.org>
6. Association of Women's Health, Obstetric and Neonatal, Georgia Chapter
<http://www.awhonn.org/awhonn/section.by.state.do?state=Georgia&name=Chapter-News%5CAlbany--Central-Georgia--Chapter>
7. Association of Operating Room Nurse
<http://aorn.org>
8. Association of PeriAnesthesia Nurses
<http://www.aspan.org>
9. Doulas of North America
<http://www.dona.org>
10. Georgia OBGYN Society
<http://georgiaobgyn.org>
11. Georgia Academy of Family Physician
<http://www.gafp.org>
12. National Association of Neonatal Nurses
<http://www.nann.org>

Risk Factor Sites

1. CDC National Center for the Injury Prevention and Control
<http://www.cdc.gov/injury/>
2. Domestic Violence
<http://www.cdc.gov/ViolencePrevention/index.html>
<http://www.ovw.usdoj.gov/domviolence.htm>
3. Fetal Alcohol Syndrome
<http://www.well.com/user/woa/fsfas.htm>
4. GA WIC
<http://wic.ga.gov/>
5. HIV and AIDS
<http://www.cdc.gov/hiv/resources/factsheets/us.htm>
6. Maternal and Child Health
<http://health.state.ga.us/programs/family/index.asp>
7. Office of Disease Prevention and Health Promotion
<http://odphp.osophs.dhhs.gov>
8. Prevent Child Abuse American
<http://www.preventchildabuse.org/index.shtml>
9. Smoking Cessation
<http://www.cdc.gov/Features/PregnantDontSmoke/>
10. Sudden Infant Death Syndrome
<http://sids.org/>
<http://sids-network.org>