The scope of practice for newborn care in non-intensive hospital settings is ever changing, with obstetric care advances, shorter length of stay (LOS), and increased family-centered care. In response to the US Surgeon General’s call to support breastfeeding and Baby Friendly USA, more infants receive care in their mothers’ rooms. Newborn clinicians require skills including diagnostic expertise and critical thinking, adaptability and sensitivity, and an understanding of this critical period of infant bonding. They also require leadership skills to manage hospital policies and link families with targeted community resources.

This overview is based on the experience and research of a working group of the Academic Pediatric Association Newborn Nursery Special Interest Group (NN SIG), which consists of medical directors and physicians with expertise in newborn care from across the United States. The working group consisted of 17 newborn physicians ranging from young faculty to full professors at urban and rural academic and community hospitals in 17 cities and...
CLINICIANS PROVIDING DIRECT MEDICAL CARE TO NEWBORNS

Practitioners with varied educational backgrounds and expertise care for newborns during birth hospitalization. Depending on state law, nurse practitioners and physician assistants provide newborn care, with or without licensed physician supervision. Medical directors have responsibilities beyond direct patient care, which are summarized in Table 1.

All newborn clinicians should be well versed in taking a newborn’s history and performing an examination to identify common findings and rare anomalies. Examinations conducted in the presence of families provide reassurance that their newborns are healthy, facilitate family involvement, and allow questions to be addressed. Expertise accrued after caring for a high volume of newborns may prevent unnecessary or invasive testing or imaging. Newborn clinicians need to work as part of a multidisciplinary team that includes those mentioned above, obstetricians, nurses, nurse midwives, lactation specialists, social workers, case managers, and/or persons in training across the health professions. The clinical team shares the responsibility of educating families about routine care, providing anticipatory guidance, and considering birthing plans on the basis of varying beliefs, traditions, and values.

Newborn nursery medical directors should address care quality, expand knowledge through research and teaching, and stay current with changing guidelines by using resources such as the Academic Pediatric Association Better Outcomes through Research for Newborns (BORN) network, the NN SIG, and the American Academy of Pediatrics (AAP) Section on Hospital Medicine.

COMMON CLINICAL TOPICS

Newborn clinicians should be familiar with routine care, including recommendations for vitamin K administration to prevent hemorrhagic disease of the newborn, hepatitis B vaccination (HBV), and erythromycin ointment to prevent gonococcal ophthalmia neonatorum. In this section, 7 common topics are discussed in the context of current evidence and practices. Table 2 provides Web-based tools and resources.

Infant Feeding and Nutrition

The AAP, the Academy of Breastfeeding Medicine (ABM), and the US Surgeon General’s Call to Action emphasize the central role of clinicians in promoting and supporting breastfeeding. Approximately 80% of US mothers initiate breastfeeding, but <20% exclusively breastfeed for the recommended 6 months. In 2014, the Joint Commission added a core measure to track exclusive-breastfeeding rates for hospitals delivering ≥1100 infants annually. Hospitals should routinely promote exclusive breastfeeding and incorporate the World Health Organization and United Nations International Children’s Fund (WHO/UNICEF) “Ten Steps to Successful Breastfeeding.”

Policies that promote skin-to-skin (STS) immediately after delivery, breastfeeding within the first hour, and rooming-in with the mother are associated with increased breastfeeding initiation, duration, and exclusivity. The clinical team should offer families access to lactation specialists and community resources. Most pediatric training programs provide limited breastfeeding education, and attitudes and practices vary among pediatricians. Clinicians can obtain additional training by participating in the AAP Section on Breastfeeding, International Board Certified Lactation Consultant (IBCLC) certification, and the ABM.

Early, frequent feeding is critical for breastfeeding success, but it may be difficult for some mother-newborn dyads. Early hand expression (demonstrated by a trained lactation consultant or nurse), when compared with pumping in the first few postpartum days, is associated with longer breastfeeding duration and larger expressed breast milk volume. To prevent excess weight loss and dehydration, breastfed newborns should be monitored with daily weights, understanding that weight loss may be more pronounced in those born via cesarean delivery. The Newborn Weight Tool (Newt; Table 1), according to data from >160 000 newborns, allows clinicians to assess an infant’s weight in comparison with that of other newborns while taking into account his or her delivery mode and feeding method.

When determining the safety of maternal medications, it is important to consider the drug indication, impact on lactation, solubility and transfer into breast milk, absorption by infant mucosa, and the potential effect on the infant. Most medications are compatible with breastfeeding, and evidence-based resources like LactMed (Table 2) can help clinicians. Maternal use of illicit substances, rising opioid-use disorder rates, and marijuana legalization present added challenges. Mothers in a stable treatment program and on opioid-maintenance therapy with methadone or buprenorphine should be encouraged to breastfeed on the basis of associated reductions in neonatal abstinence syndrome (NAS) duration and severity, and LOS (see the Maternal Substance Use and NAS section). The AAP and ABM do not support marijuana use among breastfeeding mothers because of the lipid-soluble properties of the psychoactive substance in marijuana, 9-tetrahydrocannabinol, and potential adverse effects on the developing brain.
All newborns should have outpatient follow-up within 2 to 3 days of discharge to support breastfeeding, assess weight loss, and monitor jaundice. Further studies are needed to understand the impact of donor milk and human-milk fortifier on late-preterm and term infants and the impact of pacifier and formula use on breastfeeding duration and exclusivity.

Hyperbilirubinemia
Up to 60% of term newborns develop jaundice in their first week. AAP guidelines provide strategies for addressing jaundice in infants born at ≥35 weeks’ gestation. Clinicians should examine all newborns for jaundice with the understanding that bilirubin prediction based solely on examination is unreliable. Therefore, hospitals may employ targeted or universal predischarge measurement of total serum bilirubin (TSB) and/or transcutaneous bilirubin (TcB). The risk of developing severe hyperbilirubinemia can be estimated by plotting TSB levels on the Bhutani nomogram or by using an online assessment tool such as BiliTool (Table 2). Although the Bhutani nomogram identifies infants of ≥35 weeks’ gestation who are at risk for significant hyperbilirubinemia, this tool should be used to inform, not dictate, clinical care. TcB measurements are best used when TSB levels are estimated to be <15 mg/dL and are relatively easy and painless; however, result discrepancies may occur in neonates of African descent, and levels may vary on the basis of the type of TcB meter being used.

Phototherapy, which is effective in treating unconjugated hyperbilirubinemia, has reduced the need for exchange transfusion. Current guidelines recommend that phototherapy be applied to the maximal body surface area with appropriate irradiance. In many hospitals, newer technology lights with higher irradiance and lower heat output have replaced the “double” and “triple” phototherapy of the past. Effective phototherapy can be delivered while avoiding mother-infant separation, and clinicians should be selective in its use. In addition to the well-known risks of insensible water loss and retinal damage, a concern for an increased risk of infantile cancer and a lower likelihood of exclusive breastfeeding at 4 months have been found among those with a history of phototherapy.

Discharge timing for jaundiced newborns should be based on the availability of outpatient office, laboratory, and home care services; and follow-up should be guided by gestational age (GA) and other clinical risk factors. Home phototherapy

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**TABLE 1** Recommended Skills and Responsibilities for Newborn Nursery Medical Directors

<table>
<thead>
<tr>
<th>Certifications and training</th>
<th>Have board certification in pediatrics or family medicine. Have Basic Life Support and Neonatal Resuscitation Program or Pediatric Advanced Life Support (or equivalent) certification.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality improvement and patient-safety skills</td>
<td>Promote care coordination (physicians, nurses, lactation consultants, and social services). Collaborate to enhance patient care, education, and safety. Set practice standards and support faculty and staff initiatives. Foster family-centered care. Be familiar with, update, and develop policies and procedures that guide patient care, working in collaboration with nursing, neonatology, and other newborn providers. Participate in other institutional continuous quality-improvement and patient-safety measures and research. Participate in collaborative research to increase the evidence base for newborn care (eg, Better Outcomes through Research for Newborns [BORN] network).</td>
</tr>
<tr>
<td>Communication skills</td>
<td>Have skills in communicating about unanticipated findings such as trisomy, disorders of sexual development, positive urine toxicology, and the need for transfer to higher-level care. Model and promote culturally effective family care that is responsive to the needs of the communities served. Protect patient confidentiality. Encourage vaccine promotion and be familiar with reasons for parental refusal. Address family concerns or complaints regarding the infant’s care. Address staff concerns about members of the clinical or ancillary teams. Build a consensus among newborn physicians and work collaboratively with nurse managers, obstetricians and gynecologists, primary care physicians, neonatologists, residents, medical students, nurses, and social workers.</td>
</tr>
<tr>
<td>Evaluation skills</td>
<td>Support and provide verbal and written feedback (ie, performance evaluations) for physicians, ancillary staff, medical students, and residents. Conduct faculty and staff performance reviews and be familiar with metrics (eg, relative value units and patient satisfaction scores). Develop professional performance improvement plans. Provide opportunities for professional and faculty development.</td>
</tr>
<tr>
<td>Committee and meeting responsibilities</td>
<td>Participate in clinically relevant hospital and local committees, and attend meetings on behalf of the newborn service. Possess leadership skills in strategic development and program planning, understand and influence others’ perspectives, and represent newborn faculty.</td>
</tr>
<tr>
<td>Service organization and operations</td>
<td>Have input on staffing requirements across disciplines, and oversee physician schedules and billing. Be familiar with budgets, service-line expenses, revenues (annual budget allocations and reductions), equipment, and other needed resources. Work collaboratively with senior leadership, including division chiefs and or department chairs and hospital administrative leaders. Contribute to community outreach and advocacy efforts related to maternal and child health topics, such as maternity care, infant mortality, and infant feeding.</td>
</tr>
<tr>
<td>Topic</td>
<td>Resources and Tools</td>
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<tr>
<td>-------------------------------</td>
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<tr>
<td>Newborn infection</td>
<td>CDC</td>
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<td>AAP</td>
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and nursing visitation, including the ability to assess TSB levels, are options for outpatient management.

Research reveals a complex genetic pattern that influences neonatal jaundice, including genetic mutations in glucose-6-phosphate dehydrogenase coding and polymorphisms related to enzymes involved in hepatic bilirubin uptake and conjugation. Further genetic research may influence future algorithms for hyperbilirubinemia risk assessment.

**Newborn Infections**

Group B streptococcus (GBS) remains the leading cause of neonatal sepsis and meningitis in the United States despite an 80% decline in early-onset GBS disease after routine use of intrapartum antibiotic prophylaxis. In 2010, the Centers for Disease Control and Prevention (CDC) updated guidelines for perinatal GBS disease prevention. In 2011, Puopolo et al described a predictive model based on maternal information to establish a probability guide for sepsis management; the resultant “Neonatal Sepsis Calculator” (Table 2) takes into account a newborn's clinical status. Evaluation and management of neonates at risk for sepsis varies, with some hospitals following the CDC guidelines and others using the “Neonatal Sepsis Calculator” or different combinations of laboratory tests, including complete blood counts with differentials, C-reactive protein levels, and blood cultures. Neonates born to mothers with chorioamnionitis are at increased risk for sepsis. Recently, the American College of Obstetricians and Gynecologists held a workshop on chorioamnionitis, which by definition is inflammation of the chorion and amnion, but in clinical practice refers to a “heterogeneous array of conditions.” The American College of Obstetricians and Gynecologists’ chorioamnionitis workshop panel suggested that use of intrapartum “chorioamnionitis” be discontinued and replaced with “Triple I”: intrauterine inflammation, infection, or both. Efforts to build a consensus on evaluation and management of chorioamnionitis and newborn sepsis are ongoing. Integrative use of rapidly resulting serum tests and biomarkers may augment future decision-making. Clinicians should consider logistical and medical consequences of treating newborns for presumed infection. For example, limited NICU space may require initial evaluation in a monitored nursery room. In certain circumstances, antibiotics may be administered to well-appearing, low-risk newborns in non-intensive settings. However, there are concerns about antibiotic overuse and the negative impact on the newborn microbiome.

Newborn clinicians should be familiar with the rationale for routine screening of pregnant women for syphilis, gonorrhea, chlamydia, and herpes simplex, hepatitis B, and human immunodeficiency viruses. The 2015 AAP Red Book provides detailed information on managing newborns who are exposed to these and other infections. Clinicians also should be familiar with their departments of public health and infectious disease reporting requirements. Prevention of hepatitis B virus infection is critical, and clinicians should be able to explain the reasons for universal newborn vaccination, particularly to families that refuse HBV. Hepatitis B immunoglobulin and HBV, when given in the first 12 hours of life to infants born to hepatitis B surface antigen-positive mothers, are highly effective in preventing neonatal infection. The AAP recommends that all pregnant women be tested for HIV to reduce pediatric infection. Newborn clinicians should be familiar with current guidelines for antiretroviral therapy and consult pediatric HIV specialists for proper management.

**Maternal Substance Use and NAS**

Rising rates of NAS are well documented, with the majority of cases attributable to chronic opioid use during pregnancy. Determining which mothers should undergo toxicology testing remains controversial. Prenatally and at delivery, all mothers should be screened by their histories. Many obstetric groups use risk-based testing, whereas others conduct universal testing because of high-opioid-use rates. Studies show the highest NAS risk with long-acting opioid exposure in late gestation, especially when combined with benzodiazepines, serotonin-specific reuptake inhibitors, or nicotine. Hospitals need policies to address all care aspects for substance-exposed neonates. Using a standard NAS-treatment protocol shortens LOS and pharmacological treatment duration and amount. Policies that use a multidisciplinary approach should address staff training, targeted versus universal drug testing, indications for abstinence scoring, supportive care, feeding plans, pharmacologic treatment, and designated care areas. Current recommendations are to monitor infants who are exposed to short-acting substances for at least 3 days and up to 4 to 7 days for long-acting substances such as methadone or buprenorphine. Designated care areas vary; some hospitals use high-cost NICUs, non-intensive settings, or both. Extended stays for mothers can be accomplished by converting the room charge from mother to infant on the mother-infant unit or by transferring the couplet to an inpatient pediatric service. When ongoing couplet care is not possible, some hospitals use low-acuity nursery space to monitor affected newborns.

In symptomatic infants, conditions mimicking NAS such as sepsis, hypoglycemia, and hypocalcemia should be considered. Supportive measures include a low-stimulation environment, swaddling, gentle handling, strategic positioning, kangaroo care, and soothing techniques. Thresholds for initiating medication depend on the NAS tool being used. The Finnegan Neonatal Abstinence Scoring Tool is the most commonly used. Morphine and methadone solutions are used when maximized environmental measures have failed to sufficiently control withdrawal symptoms, and patients typically are discharged when treatment is no longer necessary. Standardized treatment thresholds for newborns who are at high risk for NAS, breastfeeding promotion, and rooming-in with a combined inpatient-outpatient–weaning model have been effective. Hospitalized infants who require medication should be monitored with pulse oximetry and/or cardiorespiratory monitoring to detect apnea, bradycardia, seizures, and cardiac
arrhythmias that may occur with NAS or oversedation from pharmacotherapy. Once symptoms are stable for at least 48 hours, weaning the medication dose by 10% to 20% every 24 to 72 hours is recommended. Outpatient weaning is acceptable when local resources allow for safe and effective care. After discharge, all infants with a history of substance exposure and/or NAS should be monitored for developmental, behavioral, and social concerns within the medical home context. When possible, drug-dependent mothers should be screened for depression, given their increased risk.

The management of NAS continues to challenge newborn clinicians. Mothers with substance use disorders often have mental health comorbidities and high rates of child protective and law enforcement involvement. The effects of NAS, perinatal substance exposure, and the home environment on brain development have not clearly been delineated. Researchers need to define additional NAS risks related to exposure and explore safe, effective, and cost-efficient models of care.

**Neonatal Hypoglycemia**

The newborn clinician should be skilled in the recognition and management of neonatal hypoglycemia (NH) and familiar with various management guidelines from the ABM, the AAP, and the Pediatric Endocrine Society. Preventative measures for at-risk infants include use of STS immediately after birth and feeding initiation within 30 to 60 minutes followed by on-demand feedings. Clinicians must carefully monitor newborns given the potential for adverse effects of NH on neurodevelopment. At-risk infants include those who were born to mothers with diabetes, are large or small for GA, are preterm, those who were exposed to antenatal betamethasone or are experiencing perinatal stress, and those with a family history of genetic forms of hypoglycemia or syndromes associated with hypoglycemia, such as Beckwith Wiedemann.

Initial glucose screening for asymptomatic, at-risk infants is recommended 30 minutes after the first feeding or within 2 hours of birth, but the ideal timing and frequency of screening has not been determined. Some experts advocate delaying screening in asymptomatic infants until after the physiologic nadir and “physiologic glucose homeostasis,” which occurs between 1 and 2 hours of life. The brain preferentially uses glucose for energy, but alternative fuel sources include plasma ketones and lactate. The availability of such alternative fuel sources may be neuroprotective, however, ketone levels may be suppressed in high-risk neonates. Relatively low in the first 24 hours, ketone levels typically rise by day 2 to 3 in breastfed infants, but not in formula-fed infants, or those with hyperinsulinism.

For asymptomatic newborns, the absolute value of serum glucose (SG) defining NH has been debated. A previously acceptable definition of NH was a SG <40 mg/dL, but experts now recommend maintaining levels >45 to 47 mg/dL. The Pediatric Endocrine Society notes the SG nadir to be 55 to 60 mg/dL by 1 to 2 hours and rising to >70 mg/dL by day 2 to 3. Accurate SG measurement presents its own challenges. Point of care (POC) SG meters are known for their limitations at low levels, with margins of error as high as 10 to 15 mg/dL. Cutoffs for normal newborn values are often below the accuracy limit for POC devices. “LO” readings require emergent attention and often correspond to critical SG levels of <10 mg/dL. Delays in assays can reduce SG by up to 6 mg/dL per hour, therefore, it is essential to process samples quickly to avoid factiously low measurements.

The need for intravenous dextrose in asymptomatic newborns is limited to the subset that fails to maintain normal glucose levels with breast milk or formula intake. In contrast, infants who are symptomatic and hypoglycemic require emergent intravenous access and dextrose treatment. Harris et al presented a novel treatment approach using 40% dextrose gel massaged into an infant’s buccal mucosa, and some centers found reductions in NH treatment failures and NICU transfers. Further evaluation is indicated for any persistent hypoglycemia beyond 48 hours. NH remains an area rich in opportunities for quality improvement and research.

**The Late-Preterm Infant**

The late-preterm infant (LPI), who is born between 34 and 36 6/7 weeks’ gestation, is at increased risk for temperature instability, infection, respiratory distress, apnea, hypoglycemia, feeding difficulties, weight loss, jaundice, and developmental delays when compared with the term infant. The LPI birth rate is currently 6.3%, and contributing factors include an increase in the number of pregnant women >35 years old, use of assisted reproductive technologies, electronic fetal monitoring and prenatal ultrasonography surveillance, and resulting increased medical intervention. The average LOS and cost of birth hospitalization for LPIs is 8.8 days and $26,054, compared with 2.2 days and $2061 for term infants, and the mortality rate is 4 times that of term infants.

Stable LPIs typically are admitted to Level 1 nurseries, often in a mother-infant unit. Providers should understand that these infants are preterm and require close monitoring. Special precautions to prevent hypothermia include thorough drying, hat and warm blanket use, STS, and delaying the first bath until 6 to 24 hours after birth. Special precautions to prevent hypothermia include thorough drying, hat and warm blanket use, STS, and delaying the first bath until 6 to 24 hours after birth. Special precautions to prevent hypothermia include thorough drying, hat and warm blanket use, STS, and delaying the first bath until 6 to 24 hours after birth. For asymptomatic newborns, the absolute value of serum glucose (SG) defining NH has been debated. A previously acceptable definition of NH was a SG <40 mg/dL, but experts now recommend maintaining levels >45 to 47 mg/dL. The Pediatric Endocrine Society notes the SG nadir to be 55 to 60 mg/dL by 1 to 2 hours and rising to >70 mg/dL by day 2 to 3. Accurate SG measurement presents its own challenges. Point of care (POC) SG meters are known for their limitations at low levels, with margins of error as high as 10 to 15 mg/dL. Cutoffs for normal newborn values are often below the accuracy limit for POC devices. “LO” readings require emergent attention and often correspond to critical SG levels of <10 mg/dL. Delays in assays can reduce SG by up to 6 mg/dL per hour, therefore, it is essential to process samples quickly to avoid factiously low measurements.

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LPIs when compared with term infants. Research is needed to prevent long-term morbidity. Continued family and provider education is needed regarding the short- and long-term risks for LPIs and the implications for clinical management.

**Newborn Bedside Surgical Procedures**

The following 3 bedside procedures are commonly performed during the birth hospitalization: circumcision, accessory digit ligation, and sublingual frenotomy. Providers performing these procedures should be credentialed as required by the hospital medical staff. Every procedure should involve informed consent, Universal Protocol, effective analgesia, and sterile techniques when appropriate. Before elective procedures, newborns should be clinically well for >12 hours. Staff should monitor for bleeding, infection, swelling, and other procedure-specific complications. Elective procedures should be avoided when there are known risk factors associated with excess bleeding such as thrombocytopenia, a family history of heritable bleeding disorders, or when parents refuse intramuscular vitamin K.

Circumcision, the most common newborn procedure worldwide, is typically performed by using the Gomco or Mogen clamp or the Plastibell device. Although obstetricians commonly perform this procedure, there are benefits to having pediatricians perform circumcisions. The AAP statement on circumcision reviews the risk and benefits and justifies access to circumcision. A recent study showed that early circumcision was not associated with adverse effects on breastfeeding. The procedure, however, remains controversial because of concerns about a child's right to self-determination. Procedural anesthesia and analgesia are recommended and often consist of a penile nerve block with lidocaine sometimes accompanied by oral sucrose. Afterward, medication is not standard practice given the lack of evidence for persistent, postoperative pain. Clinicians should avoid circumcision and consult pediatric urology for infants with penile anomalies including hypospadias, epispadias, and significant penile torsion.

Accessory digit removal, mainly for cosmetic reasons, is performed typically by suture ligation. Risks include infection, poor cosmetic result, and neuroma formation. Limited evidence suggests that placement of a surgical clip with ligation of distal tissue may be associated with improved outcomes. Operative digit removal with nerve dissection has excellent cosmetic and neurologic outcomes, but is neither practical nor cost-effective, requiring anesthesia and its associated risks. Infants whose accessory digits have a thickened or short stalk should be referred to a pediatric surgeon for removal.

No position statements or guidelines on ankyloglossia management are available from the AAP or the American Academy of Otolaryngology. A comprehensive literature review by the Agency for Healthcare Research and Quality concludes that frenotomy is associated with maternally reported breastfeeding improvement. Harmful effects are rare, with the most common complications being self-limited bleeding, scarring, and recurrent tongue-tie. The ABM, which recommends that all neonates be assessed for ankyloglossia, notes that conservative management may be sufficient. When deemed necessary, bedside frenotomy should be performed by a trained clinician. Current evidence does not support the use of more complex procedures (such as laser therapy) over simple frenotomy or division of the labial frenulum to improve breastfeeding. Infants with a thick, fleshy, or short frenulum should be referred to a pediatric otolaryngologist for evaluation.

Newborn bedside procedures require trained clinicians, timely completion, consideration of parental requests, maintenance of necessary equipment, and staffing. Additional challenges include variability in clinician procedural training and insurance reimbursement. In many hospitals, minor surgical procedures are performed by obstetricians or surgical specialists, requiring processes for care coordination. Further research is needed in postoperative pain control, long-term benefits of frenotomy, and the use of an ankyloglossia assessment tool. For all of these procedures, updated technique articles and simulation modules would be helpful.

**NEWBORN SCREENING**

Through state newborn screening programs, >12,500 US infants annually are identified with conditions for which early identification and treatment lead to significant reductions in morbidity and mortality. Clinicians should be familiar with state-specific regulations and policies to ensure that infants receive all appropriate screenings before discharge. Follow-up for most screening tests will occur after discharge; therefore, hospitals should have mechanisms in place to ensure that abnormal results receive timely and appropriate follow-up.

The Health Resources and Services Administration now publish recommendations on screening for heritable disorders in newborns. The current Uniform Recommended Newborn Screening Panel contains 32 core disorders and 26 secondary disorders. Although all states screen for the core conditions, the methodology, follow-up, oversight, and addition of new tests varies among states. Fifteen states include conditions outside of their mandates, such as HIV and glucose-6-phosphate dehydrogenase deficiency.

The inclusion of newborn hearing screening to the panel brought POC testing to state screening programs, which shifted the responsibility for test management, cost, and follow-up from state laboratories to birthing centers. Abnormal hearing is one of the most common conditions identified through newborn screening programs, but there is variability in surveillance. Nearly half of the infants who fail testing are lost to follow-up.

The addition of critical congenital heart disease screening to the panel in 2011 brought added responsibility to newborn physicians. Failure of the critical congenital heart disease screen requires immediate evaluation and necessitates the availability of an experienced pediatric echocardiography technician and rapid review by a pediatric cardiologist.
Mistrust of the medical community and government may lead some families to decline testing; thus, the provider should be prepared to address questions and concerns. Concerns about privacy of remaining blood samples and informed consent led to the Newborn Screening Reauthorization Act of 2014, which changed the way blood spots are stored and used for research.1,27

ANTICIPATORY GUIDANCE

Guidance on safe sleep, optimal feeding practices, skin and umbilical cord care, recognition of jaundice, signs of illness, and fall prevention should be incorporated into clinical care and modeled throughout the hospitalization.2 The clinical team should assess families for risk factors and consult with social workers and child protective services when indicated. Information about signs and symptoms of postpartum depression and relevant community resources should be provided to mothers.1,27 Minimum criteria for infant discharge include stable vital signs for >12 hours in an open crib, at least 2 successful feedings, passage of stool, age-appropriate voiding, and screening for jaundice or other medical problems.1 Before discharge, families should receive counseling on the prevention of abusive head trauma and sudden infant death syndrome, car safety seats, and reasons for urgent care. Communication between the hospital and primary care providers is essential, especially for those with complex medical or social needs. A family should identify a medical home, and outpatient follow-up should occur within 2 to 3 days of discharge on the basis of GA and discharge age, jaundice risk level, feeding adequacy and method, and weight loss amount.1,27

CONCLUSIONS

As clinical practice continues to advance technologically, newborn clinicians and nursery medical directors will need to expand their skills and maintain a broad knowledge base. Clinical efforts in 1 area, such as breastfeeding and rooming-in, unexpectedly may be at odds with other efforts, such as preventing excess weight loss and maintaining adequate glucose levels. The newborn clinician is in a unique position to work across disciplines to orchestrate care so that all newborns receive the best care possible. A number of tools and resources are available to help clinicians care for and transition newborns from the hospital to the outpatient setting. Newborn care is a growing field with many exciting opportunities for collaborative work in quality improvement, models of care, and research.

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