



Wisconsin Association for Perinatal Care Levels of Care Self-Assessment Initiative

Level IV Neonatal Services

		GPC ref*	My facility
Level IV neonatal services	<p>A facility providing Level IV care has continuously available personnel and equipment to provide sustained life support and to provide comprehensive care for newborns at extremely high risk and those with complex and critical illnesses</p> <p>Designation should be based on clinical experience, as demonstrated by large patient volume, increasing complexity of care, and availability of pediatric medical subspecialists and pediatric surgical specialists</p>	15, 26	Y <input type="checkbox"/> N <input type="checkbox"/>
A. Administration			
1. Medical	Board certified pediatrician with subspecialty certification in neonatal-perinatal medicine	25	Y <input type="checkbox"/> N <input type="checkbox"/>
2. Nursing	Registered nurse should have experience and training in neonatal nursing as well as in the care of patients at high risk. Preferably should have an advanced degree.	32	Y <input type="checkbox"/> N <input type="checkbox"/>
B. Staffing			
1. Neonatal care	<p>Personnel qualified to manage the care of neonates with complex or critical illnesses, including emergencies, should be in-house.</p> <p>Should have continuously available personnel and equipment to provide sustained life support and to provide comprehensive care for newborns at extremely high risk and those with complex and critical illness.</p>	26	
a. Family practitioner		11	Y <input type="checkbox"/> N <input type="checkbox"/>
b. Neonatal nurse practitioner		12	Y <input type="checkbox"/> N <input type="checkbox"/>
c. Neonatologist	Should be continuously available for consultation 24 hours/d	12	Y <input type="checkbox"/> N <input type="checkbox"/>
d. Pediatric hospitalist		12, 26	Y <input type="checkbox"/> N <input type="checkbox"/>
e. Pediatrician	A general pediatrician should have the expertise to assume responsibility for acute, although less critical care, of newborns	11	Y <input type="checkbox"/> N <input type="checkbox"/>
2. Nursing	<p>Must possess demonstrated knowledge in the observation and treatment of newborns, including cardiorespiratory monitoring. The nurse should be specially trained and able to initiate, modify, or stop treatment when appropriate, according to established protocols, even when a physician or advanced practice nurse is not present.</p> <p>Should have specialty certification or advanced training and experience in the nursing management of neonates at high risk and their families. They should be experienced in caring for unstable neonates with multiorgan system problems and in specialized care technology. The nurse should be able to provide care for infants requiring inhaled nitric oxide therapy and high-frequency ventilation as well as care for the chronically technology-dependent infant</p>	32	Y <input type="checkbox"/> N <input type="checkbox"/>

a. See Appendix I for recommended staffing			
b. Advanced practice nurse*	Available to staff for consultation and support on nursing care issues	33	Y <input type="checkbox"/> N <input type="checkbox"/>
c. Outreach	Nurse with special training to fulfill regional center responsibilities	33	Y <input type="checkbox"/> N <input type="checkbox"/>
d. Transport	Nurse with special training to fulfill regional center responsibilities	33	Y <input type="checkbox"/> N <input type="checkbox"/>
C. Services			
1. Neonatal components			
a. Neonatal resuscitation capability at every delivery per NRP guidelines	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 <u>immediately</u> available should have the skills required to perform endotracheal intubation and administer medications.	11, 13-14, 23-24	Y <input type="checkbox"/> N <input type="checkbox"/>
b. Evaluate and provide postnatal care to stable newborn infants > 35 weeks		11	Y <input type="checkbox"/> N <input type="checkbox"/>
c. Stabilize and provide care for infants born at or beyond 32 weeks gestation or at above 1500 grams who have physiologic immaturity or who are moderately ill with problems that are expected to resolve rapidly and are not anticipated to need subspecialty services on an urgent basis		12	Y <input type="checkbox"/> N <input type="checkbox"/>
d. Provide care for infants convalescing after intensive care		12	Y <input type="checkbox"/> N <input type="checkbox"/>
e. Provide comprehensive care for infants born < 32 weeks gestation and weighing < 1500g and infants born at all gestational ages and birth weights with critical illness		12	Y <input type="checkbox"/> N <input type="checkbox"/>
f. Provide sustained life support		12	Y <input type="checkbox"/> N <input type="checkbox"/>
g. Provide prompt and readily available access to a full range of pediatric medical subspecialists, pediatric surgical specialists, pediatric anesthesiologists, and pediatric ophthalmologists		12	Y <input type="checkbox"/> N <input type="checkbox"/>
h. Provide a full range of respiratory support that may include conventional ventilation and/or high-frequency ventilation and inhaled nitric oxide		12	Y <input type="checkbox"/> N <input type="checkbox"/>
i. Perform advanced imaging, with interpretation on an urgent basis, including computed tomography, magnetic resonance imaging, and echocardiography		12	Y <input type="checkbox"/> N <input type="checkbox"/>
j. Located within an institution with the capability to provide surgical repair of complex congenital or acquired conditions		13	Y <input type="checkbox"/> N <input type="checkbox"/>
k. Maintain a full range of pediatric medical subspecialists at the site		13	Y <input type="checkbox"/> N <input type="checkbox"/>
l. Maintain a full range of pediatric surgical specialists at the site		13	Y <input type="checkbox"/> N <input type="checkbox"/>

m. Maintain a full range of pediatric anesthesiologists at the site		13	Y <input type="checkbox"/> N <input type="checkbox"/>
n. Facilitate transport		13	Y <input type="checkbox"/> N <input type="checkbox"/>
o. Provide outreach education		13	Y <input type="checkbox"/> N <input type="checkbox"/>
2. Other medical and surgical	Require urgent access to a range of pediatric medical subspecialists Pediatric medical subspecialists and pediatric surgical specialists should be continuously available 24 hours per day	15, 26	
a. Anesthesiology		12, 15	Y <input type="checkbox"/> N <input type="checkbox"/>
b. Cardiology		26	Y <input type="checkbox"/> N <input type="checkbox"/>
c. Endocrinology		26	Y <input type="checkbox"/> N <input type="checkbox"/>
d. Cardiovascular surgery	Including cardiopulmonary bypass ± ECMO	15-16	Y <input type="checkbox"/> N <input type="checkbox"/>
e. Gastroenterology		26	Y <input type="checkbox"/> N <input type="checkbox"/>
f. Genetics		26	Y <input type="checkbox"/> N <input type="checkbox"/>
g. Hematology		26	Y <input type="checkbox"/> N <input type="checkbox"/>
h. Immunology		26	Y <input type="checkbox"/> N <input type="checkbox"/>
i. Infectious disease		26	Y <input type="checkbox"/> N <input type="checkbox"/>
j. Metabolism		26	Y <input type="checkbox"/> N <input type="checkbox"/>
k. Nephrology		26	Y <input type="checkbox"/> N <input type="checkbox"/>
l. Neurology		26	Y <input type="checkbox"/> N <input type="checkbox"/>
m. Ophthalmology	Including organized program for monitoring, treatment, and follow-up of ROP readily available	12, 15	Y <input type="checkbox"/> N <input type="checkbox"/>
n. Neurosurgery			Y <input type="checkbox"/> N <input type="checkbox"/>
o. Pathology		26	Y <input type="checkbox"/> N <input type="checkbox"/>
p. Orthopedics			Y <input type="checkbox"/> N <input type="checkbox"/>
q. Pulmonology		26	Y <input type="checkbox"/> N <input type="checkbox"/>
r. Otolaryngology			Y <input type="checkbox"/> N <input type="checkbox"/>
s. Radiology		15	Y <input type="checkbox"/> N <input type="checkbox"/>
t. Surgery		12, 15	Y <input type="checkbox"/> N <input type="checkbox"/>
u. Urology			Y <input type="checkbox"/> N <input type="checkbox"/>
3. Support			
a. Blood gas laboratory	Continuously available	50	Y <input type="checkbox"/> N <input type="checkbox"/>
b. Blood typing, cross matching, and availability	Available on a 24 hour basis	34	Y <input type="checkbox"/> N <input type="checkbox"/>
c. Clinical laboratory services		50	Y <input type="checkbox"/> N <input type="checkbox"/>
d. Echocardiography	Available on an urgent basis	12, 15	Y <input type="checkbox"/> N <input type="checkbox"/>
e. Infection control		34	Y <input type="checkbox"/> N <input type="checkbox"/>
f. Mechanisms for obtaining in-home nursing services			Y <input type="checkbox"/> N <input type="checkbox"/>
g. Nutrition	Registered dietitian or nutritionist	15, 35	Y <input type="checkbox"/> N <input type="checkbox"/>
h. Neonatal follow-up program		16	Y <input type="checkbox"/> N <input type="checkbox"/>
i. Occupational or physical therapy with neonatal expertise		35	Y <input type="checkbox"/> N <input type="checkbox"/>
j. Parent education program		310	Y <input type="checkbox"/> N <input type="checkbox"/>
k. Pastoral care		15, 35	Y <input type="checkbox"/> N <input type="checkbox"/>

l. Pharmacology		15, 26	Y <input type="checkbox"/> N <input type="checkbox"/>
m. Pharmacy services		35	Y <input type="checkbox"/> N <input type="checkbox"/>
n. Radiology services		50	
1) X-ray	Available on a 24 hour basis	26, 35	Y <input type="checkbox"/> N <input type="checkbox"/>
2) Ultrasound	Available on a 24 hour basis	26, 35	Y <input type="checkbox"/> N <input type="checkbox"/>
3) Computed tomography	Available on an urgent basis	12, 15, 26	Y <input type="checkbox"/> N <input type="checkbox"/>
4) Magnetic resonance imaging	Available on an urgent basis	12, 15, 26	Y <input type="checkbox"/> N <input type="checkbox"/>
o. Respiratory therapy			
1) Experienced personnel capable of providing CPAP and/or mechanical ventilation continuously available		35	Y <input type="checkbox"/> N <input type="checkbox"/>
2) Medical, nursing, or respiratory therapy staff with demonstrated ability to intubate the trachea, manage assisted ventilation, and decompress a pneumothorax should be available continually		267	Y <input type="checkbox"/> N <input type="checkbox"/>
3) Provide a full range of respiratory support that may include conventional ventilation and/or high-frequency ventilation and inhaled nitric oxide		12, 15	Y <input type="checkbox"/> N <input type="checkbox"/>
p. Social work	Master's prepared	15, 34	Y <input type="checkbox"/> N <input type="checkbox"/>
q. Speech-language pathologist (skilled in evaluation and management of neonatal feeding and swallowing disorders)		35	Y <input type="checkbox"/> N <input type="checkbox"/>
4. Outreach/transport			
a. If geographic constraints for land transportation exist, availability of rotor and fixed-wing transport services		15	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
D. Education			
1. In-service sessions covering diagnosis and management of perinatal emergencies, as well as the management of routine problems and family-centered care		35	Y <input type="checkbox"/> N <input type="checkbox"/>
2. Regularly scheduled multi-disciplinary conferences at which patient care issues are presented and discussed	Examples include quality committee for obstetric and pediatric services, discharge or follow-up planning group, multidisciplinary rounds, case conference, morbidity/mortality conference, etc. (The conference should include representatives from 2 or more disciplines.)	35	Y <input type="checkbox"/> N <input type="checkbox"/>
E. Quality assurance	Data collection to assess outcomes within facility and to compare with other levels	15	
1. Data collection, storage, and retrieval		10, 37, 66	Y <input type="checkbox"/> N <input type="checkbox"/>
2. Initiation of quality improvement programs		10, 66	Y <input type="checkbox"/> N <input type="checkbox"/>
3. Coordinated quality improvement programs with referring facilities	Strongly recommended		Y <input type="checkbox"/> N <input type="checkbox"/>
4. Membership in a multi-institutional collaborative quality improvement database	Beyond government mandated databases, e.g., CMS, vital records	37	Y <input type="checkbox"/> N <input type="checkbox"/>
F. Policies, procedures, and protocols			
1. Formal transport plans with referring hospitals		79	Y <input type="checkbox"/> N <input type="checkbox"/>

2. Criteria for consults for higher level of care			Y <input type="checkbox"/> N <input type="checkbox"/>
3. Criteria for practice credentials for attending physicians		22	Y <input type="checkbox"/> N <input type="checkbox"/>
4. Criteria for practice of allied health professionals (e.g., nurse practitioners)		22	Y <input type="checkbox"/> N <input type="checkbox"/>
5. Method of risk identification and assessment for consult/transport		79	Y <input type="checkbox"/> N <input type="checkbox"/>
6. Disaster preparedness and evacuation plan		54	Y <input type="checkbox"/> N <input type="checkbox"/>
7. Discharge planning		306	Y <input type="checkbox"/> N <input type="checkbox"/>
8. Early discharge		306	Y <input type="checkbox"/> N <input type="checkbox"/>
9. Family-centered and culturally sensitive care		2	Y <input type="checkbox"/> N <input type="checkbox"/>
10. Formal transport plans with receiving hospitals		79	Y <input type="checkbox"/> N <input type="checkbox"/>
11. Infant abduction policy		305	Y <input type="checkbox"/> N <input type="checkbox"/>
12. Initial evaluation of newborn by physician		281	Y <input type="checkbox"/> N <input type="checkbox"/>
13. Newborn security system		305	Y <input type="checkbox"/> N <input type="checkbox"/>
14. Ongoing care of newborn	Including late preterm care recommendations.	16	Y <input type="checkbox"/> N <input type="checkbox"/>
15. Policies and procedures to ensure the readiness of neonatal resuscitation equipment and personnel	(also to provide periodic review and evaluation of the effectiveness of the system)	267	Y <input type="checkbox"/> N <input type="checkbox"/>
16. Prioritized list of known or anticipated maternal and fetal complications requiring routine, urgent, and emergency delivery room presence of individual(s) qualified in all aspects of newborn resuscitation		267	Y <input type="checkbox"/> N <input type="checkbox"/>
17. Protocols for CPAP and mechanical ventilation			Y <input type="checkbox"/> N <input type="checkbox"/>
18. Sibling visitation policy		304	Y <input type="checkbox"/> N <input type="checkbox"/>
19. Stabilization (transitional care) of newborn		283	Y <input type="checkbox"/> N <input type="checkbox"/>

*GPC ref. American Academy of Pediatrics and American College of Obstetricians of Gynecologists. (2012). *Guidelines for Perinatal Care, 7th Edition*.

Comments: _____

* Advanced Practice Registered Nurses

Trends in neonatal and maternal care have resulted in the increased use of advanced practice registered nurses. Included in this category are the neonatal, perinatal, and women's health clinical nurse specialist and the neonatal and women's health nurse practitioner. An advanced practice registered nurse is prepared, according to nationally recognized standards, by the completion of an educational program of study and supervised practice beyond the level of basic nursing. As of January 1, 2000, this preparation must include the attainment of a master's degree in the nursing specialty. Nurses without a graduate degree who entered the profession before the year 2000, but are credentialed advanced practice registered nurses or certificate-prepared (nongraduate) nurse practitioners, should be allowed to maintain their practice and are encouraged to complete their formal graduate education.

Source: American Academy of Pediatrics and American College of Obstetricians and Gynecologists. (2012). *Guidelines for Perinatal Care, 7th Edition*. Elk Grove Village, IL/Washington, DC: American Academy of Pediatrics/American College of Obstetricians and Gynecologists, page 27.