AWHONN

PROMOTING THE HEALTH OF WOMEN AND NEWBORNS

WOMEN'S HEALTH AND PERINATAL NURSING CARE QUALITY REFINED DRAFT MEASURES SPECIFICATIONS

ASSOCIATION OF WOMEN'S HEALTH, OBSTETRIC AND NEONATAL NURSES

For Testing of Feasibility, Validity and Reliability

Published 2014

Contents

ABOUT AWHONN

Headquartered in Washington, DC, the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) is a leader among the nation's nursing associations, serving more than 24,000 healthcare professionals in the United States, Canada, and abroad and representing more than 350,000 nurses in our specialty.

AWHONN advances the nursing profession by providing nurses with critical information and support to help them deliver the highest quality care for women and newborns. Through its many evidence-based education and practice resources, legislative programs, research, and coalition work with like-minded organizations and associations, AWHONN is firmly established as the standard bearer for women's health, obstetric, and neonatal nurses.

AWHONN members are committed to delivering outstanding health care to women and newborns in hospitals, home health, and ambulatory care settings. As a consequence of the rich diversity of our members' knowledge, skill, expertise and dedication, AWHONN produces resources intended to achieve our mission to promote the health of women and newborns.

ACKNOWLEDGEMENTS

The Women's Health and Perinatal Nursing Care Quality (WHP-NCQ) draft measures were developed by the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) 2012 Women's Health and Perinatal Nursing Care Quality Measures Advisory Panel and were distributed for public review and comment. The advisory panel was charged with making recommendations to the Board of Directors concerning the priorities for measuring women's health and perinatal nursing care quality (NCQ) and with developing a set of NCQ measures. AWHONN gratefully acknowledges the time and expertise of the advisory panel members in the development of this document and introductory set of specified measures.

Women's Health and Perinatal Nursing Care Quality Measures Advisory Panel
Debra Bingham, DrPH, RN (Co-Chair)
Zola D. Golub, MEd, RN, IBCLC (Co-Chair)

Mary Ellen Boisvert, MSN, RN, CLC, CCE
Rita Brennan, DNP, RNC-NIC, APN/CNS
Donna Frye, MN, RN

AWHONN Staff
Lynn Erdman, MN, RN, FAAN, Chief Executive Officer
Brea Onokpise, MPH, CHES, Research Project Manager

Former AWHONN Staff
Karen Peddicord, PhD, RNC, Chief Executive Officer

AWHONN is grateful to the 2012, 2013, and 2014 AWHONN Board of Directors for their review and on-going oversight of the Women's Health and Perinatal Nursing Care (WHP-NC) Quality Measures Advisory Panel work.

2014 Board of Directors
President: Catherine H. Ivory, PhD, RNC-OB, MSN
President-Elect: Karen T. Harris, MSN, RN, WHNP-BC
Secretary-Treasurer: Geraldine "Geri" Tamborelli, MS, BSN, RN

Directors:
Carol Burke, SN, RNC-OB, C-EFM, APN/CNS
Jennifer L. Doyle, MSN, WHNP-BC
Susan Leavitt Gullo, MS, BSN, RN
Ashley L. Hodges, PhD, CRNP, WHNP-BC
Margaret B. Kennedy, PhD, MSN, RN
Suzanne L. Ketchem, MSN
Cynthia "Cyndy" Krening, MS, RNC-OB, C-EFM, CNS
Cheryl K. Roth, PhD, RNC, WHNP-BC, RNFA

Ex-Officio Directors:
Mimi Pomerleau, DNP, MSN, RNC-OB
Lynn Erdman, MN, RN, FAAN

2013 Board of Directors
President: Mimi Pomerleau, DNP, MSN, RNC-OB
President-Elect: Catherine H. Ivory, PhD, RNC-OB, MSN
Secretary-Treasurer: Kathleen Matta, MSN, IBCLC, RNC

Directors:
Carol Burke, MSN, RNC-OB, C-EFM
Rebecca L. Cypher, MSN, PNNP
Yvonne A. Dobbenga-Rhodes, MS, RNC-OB, CNS, CNS-BC
Jennifer Doyle, RN, MSN, WHNP
Betsy Kennedy, RN, MSN
Suzanne L. Ketchem, MSN
Linda Snell, DNS, RN, WHNP-BC
Raquel Walker, MSN, RNC-MNN

Ex-Officio Directors:
Rose L. Horton, RN, MSM
Karen Peddicord, PhD, RN

2012 Board of Directors
President: Rose L. Horton, RN, MSM
President-Elect: Mimi Pomerleau, DNP, MSN, RNC-OB
Secretary-Treasurer: Kathleen Matta, MSN, IBCLC, RNC

Directors:
Rebecca L. Cypher, MSN, PNNP
Emily Drake, IBCLC, RN, RNC, PhD
Yvonne A. Dobbenga-Rhodes, MS, RNC-OB, CNS-BC
Karen T. Harris, MSN, RNC, WHNP-BC
Catherine H. Ivory, PhD, RNC-OB, MSN
Suzanne L. Ketchem, MSN
Linda Snell, DNS, RN, WHNP-BC
Raquel Walker, RN-BC, MSN

Ex-Officio Directors:
Kathleen A. Hale, MS, RN, CE-BC
Karen Peddicord, PhD, RN

BACKGROUND

The actions of nurses have significant impact on patient outcomes. For that reason, measuring the quality of care provided by registered nurses is a vital component of health care improvement. The Board of Directors of the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) recognizes that the nurse's expert knowledge confers the authority to shape the care environment and to influence decisions of patients. AWHONN is the standard bearer for nurses who care for women and newborns in the United States. AWHONN's Board of Directors accepts the responsibility to guide efforts to measure the quality of care nurses provide to women throughout their lives, before, during, and after birth and to newborns up to 30 days of life.

AWHONN's pioneering efforts to develop nursing care quality (NCQ) measures is one of many actions AWHONN is undertaking to improve the health care provided to women and children. This document marks the public release of AWHONN's Women's Health and Perinatal Nursing Care Quality Refined Draft Measures.

In 2012, the AWHONN Board of Directors formed the Women's Health and Perinatal Nursing Care Quality (WHP-NCQ) Measures Advisory Panel to develop an introductory set of NCQ measures. Development of the NCQ measures is a multi-step, multi-year process occurring in four phases (Figure 1).

Phase I: The NCQ draft measure specifications and the description of the theoretical framework that guides the NCQ measurement work were published and the public comment period began on April 23, 2013 and ended August 1, 2013 (AWHONN, 2013). In January, 2014, AWHONN published a new position statement entitled, "Nursing Care Quality Measurement" (AWHONN, 2014).

Phase II: The NCQ draft measures were refined based on the public comments received. Subsequently, testing of the refined draft measures for feasibility, validity, and reliability will occur. AWHONN estimates that measurement testing will take 1–2 years to complete.

Phase III: The tested NCQ measures will be submitted to the National Quality Forum (NQF) for possible endorsement. Adjustments to electronic health records and procedure codes will be made by stakeholders.

Phase IV: The NCQ measures will be implemented and maintained. Identification and development of additional Women's Health and Perinatal NCQ measures will be ongoing.

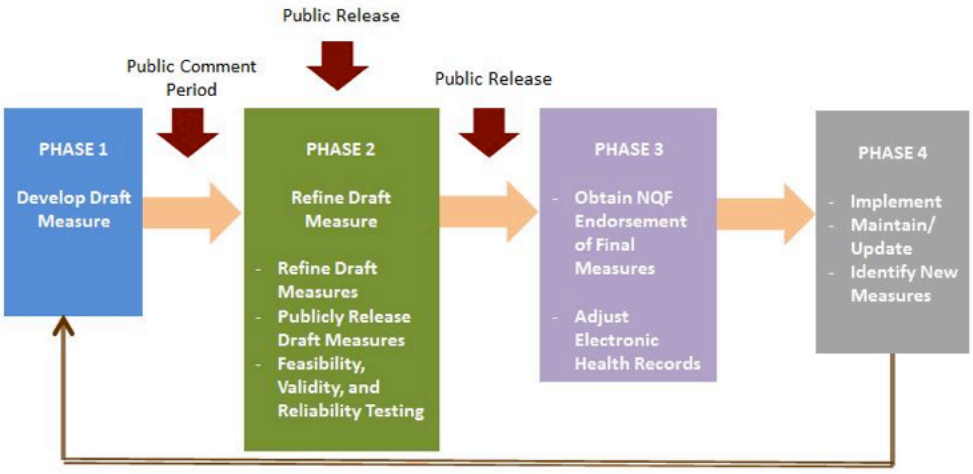

Figure 1. Timeline for development of nursing care quality (NCQ) measures.

Summary of Public Comment

During the 14-week public comment period, 144 individuals responded to the online survey, and three responses were received via email. Overall the comments were positive: 91% of the respondents rated the measures as "very important" or "important," 75% of the respondents rated the measures as "feasible," 90% of the respondents rated the measures as "relevant," 85% of the respondents rated the numerator as "appropriate," and 88% of the respondents rated the denominator as appropriate. Given the importance of the development of NCQ measures, the NCQ advisory panel reviewed every comment for each specific measure and all the general comments and determined appropriate actions.

The panel grouped the public comments into six categories:

1. Comments the panel agreed with;
2. Comments the panel disagreed with;
3. Comments that identified the need for education regarding the concept of independent and collaborative nursing care;
4. Comments that identified concerns that will be addressed in the course of measurement testing;
5. Comments that identified concerns regarding implementation; and
6. Positive comments.

The panel's actions within each of these categories are summarized below.

1. Comments the panel agreed with

When the panel agreed with the recommendation in a comment, the NCQ draft measure was modified to include the suggestion. For example, a comment about the numerator and denominator in NCQ Measure 05: Eliminating Supplementation of Breast Milk Fed Healthy, Term Newborns:

> "Should be birth hospital stay, not first 72 hours."

The panel modified the numerator and denominator of this NCQ draft measure.

2. Comments the panel disagreed with

The panel disagreed with a recommendation in a comment if that recommendation contradicted current research or evidence-based nursing care practices. For example, a comment about NCQ Measure 04: Duration of Uninterrupted Skin-to-Skin Contact:

> "This is a personal choice for mothers and some do not want to have skin-to-skin contact just like some do not want to breastfeed."

Researchers demonstrated that newborns have better outcomes, including stable temperature, heart rate, respiratory rate, and glucose levels, when they transition to extrauterine life while in skin-to-skin contact with their mothers and that skin-to-skin contact at birth is associated with higher rates of exclusive breastfeeding (Dabrowski, 2007; Hung & Berg, 2011).

Furthermore, the American Academy of Pediatrics concluded the following: "Recently, published evidence-based studies have confirmed and quantified the risks of not breastfeeding. Thus infant feeding should not be considered as a lifestyle choice but rather as a basic health issue" (AAP, 2012, p. e837).

Therefore, while these comments were considered, the measure was not modified by the panel.

3. Comments that identified the need for education regarding the concept of independent and collaborative nursing care

All of the measures received comments that identified the need for education concerning the concept of independent nursing care practice as distinct from collaborative nursing care practice. Some of the comments indicated the need for education concerning how nurses can and do respond when other members of the healthcare team are unfamiliar with evidence-based, high quality nursing care. For example, a comment about NCQ Measure 02: Second Stage of Labor: Mother-Initiated, Spontaneous Pushing:

> "The obstetrician or CNM may direct pushing and the nurse's decision to allow for mother initiated pushing cannot and will not supersede the medical provider's order or actions. This is therefore not a nursing measure because the nursing action depends upon the wishes of the medical provider. Consensus on delayed pushing or mother directed pushing has not been achieved among OB/GYN physicians and this will negatively impact the nursing measure."

The panel's response to this comment and other comments in this category is that nurses have a duty to safeguard the women, fetuses, and newborns they care for and to ensure that patients always receive high quality, evidence-based nursing care. Nurses are effective leaders and patient advocates who work independently and collaboratively to influence the clinical behaviors of other members of the healthcare team, especially if the plan of care is not consistent with the latest research evidence. The WHP-NCQ Measures Advisory Panel chose to give priority to the development of quality measures of independent nursing practice in order to highlight the connection between the nurse's care and the patient's outcome and to call attention to the characteristics of the effective and efficient healthcare team.

In addition, since nurses provide the majority of care to women in labor and following birth, the majority of the outcomes reflect the independent action of nurses. At a minimum, nurses are responsible to ensure that their independent nursing care is consistent with the latest research evidence for high quality care. Although initially the goals may appear unattainable, the nurse's responsibility is to strive for best outcomes by providing evidence-based nursing care. Also, nurses are the clinicians primarily responsible for writing and updating hospital policies and procedures so that they are consistent with the latest available research evidence. Nurses can lead successful conversations resulting in change and implement innovative programs to identify and eliminate the barriers to improved outcomes. Indeed, these activities do change the practice of physicians and other members of the healthcare team.

4. Comments that identified concerns that will be addressed in the course of measurement testing

Some of the comments were related to the specific goals of the measures and how to benchmark the measures. Since these measures are under development, the answers to these types of questions can only emerge over time. For example, a comment about the inclusion of a specific time standard in NCQ Measure 01: Triage of a Pregnant Woman and Fetus(es):

> "I don't think the standard should be 10 minutes."

The panel acknowledges that for this and some of the other measures, only limited evidence is available to guide measurement development decisions. However, the panel believes strongly that the NCQ measures require a goal statement; without a goal, the measures would be too difficult to interpret and analyze. In this and other situations where the current research evidence is limited, the panel based their decision concerning any specific measure specification on the consensus of the panel's expert opinion. All the measure specifications will be further analyzed and adjusted during measurement testing.

5. Comments that identified concerns regarding implementation

The panel's decision to develop this particular set of NCQ measures was grounded in the current research about best nursing practice. Neither the wide variety of settings in which nurses practice, nor the concomitant variation in the barriers to implementation constrained the panel's choices. Three types of implementation concerns were raised most often: current limitations of electronic medical records, adequate nurse staffing, and availability of equipment.

The majority of the comments regarding implementation cited the additional burden of data collection for nurses and referred to the fact that many electronic medical record systems do not capture the measure's specific nursing interventions. For example, a comment about NCQ Measure 08: Perinatal Grief Support:

> "EHR systems are not currently designed to run reports of this measure as specified in the numerator statement."

The panel's decisions regarding which measures are necessary and which elements of nursing care must be measured and documented are based on evidence of best practice and improved outcomes rather than on what is currently being captured in electronic medical record. The electronic systems must be adjusted to capture the data elements required to measure and track the quality of nursing care. AWHONN recommended that "electronic medical record charting programs be modified to incorporate and standardize the key components of nursing care" (AWHONN, 2014, p. 133).

Other comments related to implementation often expressed the necessity of adequate nurse staffing in order to achieve the quality measurement goal. For example, a comment about NCQ Measure 10: Labor Support:

> "I believe it is a laudable goal and worthy of strong consideration given the benefits, but is it possible with every single laboring woman in every single facility? Costs of staffing for this would be very high."

The panel recognizes that current staffing patterns in many hospitals do not meet AWHONN guidelines and consequently that providing high quality nursing care is challenging. However, as data generated by the NCQ measures demonstrate and validate the significant effect of evidence-based quality nursing practice on the quality of care patients receive from the healthcare team, it will become easier for healthcare leaders to justify and insist on appropriate nurse staffing.

Other comments related to implementation indicated that some of the NCQ measures would require some hospitals to purchase additional equipment. For example, a comment about NCQ Measure 12: Freedom of Movement during Labor:

> "We do not have the financial ability to purchase wireless EFM technology."

The panel acknowledges that some NCQ measures will require some hospitals to purchase additional equipment. However, the commitment to quality patient care and positive outcome must dictate the amount of equipment available.

6) Positive comments

All of the measures garnered more positive and supportive comments than negative and critical comments. All of the measures were highly rated by the majority of the respondents. Examples of positives comments include the following:

Measure 01: Triage of a Pregnant Woman and Her Fetus(es)

> "Triaging of problems impact the timing of delivery and often the outcome of the pregnancy."

Measure 03: Skin-to-Skin Is Initiated Immediately Following Birth

> "[Skin-to-skin] STS is exceptionally important to mother and baby in many ways as evidenced by research, notably infant physiological stabilization (thermal, metabolic, cardio, respiratory) and breastfeeding. Nursing support of STS is paramount to improving immediate, intermediate and long-term breastfeeding and other maternal/infant outcomes and thus a pillar/corner-stone of quality patient care."

Measure 06: Protect Maternal Milk Volume for Premature Infants Admitted to NICU

> "The evidence on outcomes of human milk feeding for premature infants is well documented. This measure is very important testament to the belief that nurses can support this important health intervention for the vulnerable infants."

Measure 07: Initial Contact with Mothers Following a Neonatal Transport

> "Separating mother/father and baby immediately after birth is emotionally and potentially physically damaging. In fact, the measure potentially can impact the entire family – including siblings, grandparents, and the like."

Measure 05: Eliminating Supplementation of Breast Milk Fed Healthy, Term Newborns

> "Staff education and old ways change best when standards are set by AWHONN, etc. Makes it so much easier for those of us that are on the front end of changing practices."

Measure 10: Labor Support

> "…I am a very strong advocate for this measure…I have observed many labor nurses…A large number of these nurses sit at the nurses' station and analyze the fetal heart monitor tracings. Infrequently they look in on the patients and ask how they are doing. To me, that is not providing nursing care. Rather, it is being a technician. Labor care should be holistic; the nurse certainly must assess the fetus and mother physiologically and intervene when complications develop. Labor, however can be painful and lonely. When nurses truly care for their patients, giving [a] massage, providing emotional support, labor becomes manageable and even can be remembered positively."

SUMMARY

Numerous changes were made to the set of NCQ draft measures released in 2013 (AWHONN, 2013). For example, Measures 10 and 11 were merged into one measure; the names of several of the measures were changed; the numerator and denominator inclusions and exclusions were adjusted; and descriptions and references were revised. These revisions represent only a sample of the changes were made, and it is not possible to list them all. The resultant NCQ refined draft measure specifications will undergo future adjustments and refinements during the next phase of testing for feasibility, reliability, and validity.

REFERENCES

American Academy of Pediatrics. (2012). Policy statement: Breastfeeding and the use of human milk. *Pediatrics 129*(3), e827-e841.

Association of Women's Health, Obstetric and Neonatal Nurses. (2013). Women's health and perinatal nursing care quality. Draft measures specifications. Washington, DC: Author. Retrieved from http://www.awhonn.org/awhonn/content.do;jsessionid=1CE7DC74ADCD43B7CCB5E69C18AA4E8E?name=02_PracticeResources/02_perinatalqualitymeasures.htm

Association of Women's Health, Obstetric and Neonatal Nurses. (2014). Nursing care quality measurement. AWHONN position statement. *Journal of Obstetric, Gynecologic, & Neonatal Nursing,* 43(1), 132–133. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/1552-6909.12276/pdf

Dabrowski, G. (2007). Skin-to-skin contact: giving birth back to mothers and babies. *Nursing For Women's Health,* 11(1), 64-71.

Hung, K. J., & Berg, O. (2011). Early skin-to-skin after cesarean to improve breastfeeding. *American Journal of Maternal/Child Nursing,* 36(5), 318-326.

Appendix A

Measure 01: Triage of a Pregnant Woman and Her Fetus(es)

Description

The triage of a pregnant woman at 20 weeks or more gestation is a brief, thorough, and systematic method to quickly determine the disposition of the woman and her fetus(es). The purpose of this measure is to increase the percentage of pregnant women who present to the labor and birth unit with a report of a real or perceived problem or an emergency condition who are triaged by a registered nurse or nurse-midwife within 10 minutes of arrival.

Size of Sample	A random sample chart review of the medical records of women who present to the labor and birth unit with a report of a real or perceived problem or an emergency condition during a one-month period. Minimum of 30 charts are to be reviewed during one month. If number is less than 30, audit all charts.
Data Collection	Retrospective chart review of 30 charts per month or all women triaged.
Numerator Statement	The number of pregnant women at greater than 20 weeks gestation and their fetuses presenting to the labor and birth unit for an unscheduled evaluation who were triaged within 10 minutes of arrival, and the triage included chief complaint documentation, maternal vital signs, pain score, pulse oximetry reading, assessment of contractions, measurement of fetal heart rate before, during, and after a contractions (if the woman is having contractions).
Denominator Statement	All pregnant women greater than 20 weeks gestation presenting to the labor and birth unit for labor or an emergency condition.
Denominator Exceptions	Denominator exceptions include the following: • The measure pertains only to women with a known or suspected pregnancy at 20 weeks gestation or greater. • Pregnant women presenting for outpatient services (lab, x-ray, non stress test, biophysical profile, etc.) will be excluded from the measure. • Patients with known fetal demise will be excluded from this measure. • Women presenting for scheduled procedures such as a scheduled induction or cesarean birth.

Supporting Guidelines & Other References	**GUIDELINES SUPPORTING PROMPT SCREENING, PRIORITIZATION, AND EMERGENT CARE** Systematic prioritization of how quickly a woman and her fetus(es) are evaluated must be performed in a timely manner whenever a pregnant woman presents to an obstetric unit unexpectedly. The Agency for Healthcare Research and Quality (AHRQ) supports the development and utilization of the Emergency Severity Index (ESI) as a triage tool for emergency care to prioritize the status of non-pregnant patients presenting for care (AHRQ, 2012). The ESI has not been modified or tested in the obstetric population. AWHONN, having identified the need for a more standardized approach to how triage is performed, is developing the Maternal-Fetal Triage Index (MFTI). The MFTI will guide the triage process for pregnant women and their fetuses. After women and fetuses have been triaged, they must receive a medical screening examination (evaluation) based on the priority assigned using the MFTI. The Emergency Medical Treatment and Labor Act (EMTALA) requires that a patient with a condition believed by the patient to be medically emergent presenting to a hospital's labor unit must receive a prompt medical screening examination by a qualified healthcare provider (Austin, 2011). The Guidelines for Perinatal Care reinforce EMTALA precepts and provide specific criteria related to the qualified medical provider and the medical screening examination for the pregnant woman (American Academy of Pediatrics [AAP] & American College of Obstetricians and Gynecologists [ACOG], 2012). The Joint Commission (TJC, 2010) addressed maternal death and the need for education regarding the care of the obstetric population. More recently, the National Quality Forum (NQF) established a quality measure (0495) to monitor time elapsed from the patient's arrival for emergency care until a decision is made to admit the patient (NQF, 2008a). A similar NQF measure (0496) is used to monitor patient arrival in an emergency department to the discharge time from the emergency department (NQF, 2008b). The intense focus of national organizations regarding the timeliness of emergency medical screening and provision of care signifies the need to systematically prioritize the care of women in need of an emergency evaluation. **LABOR AND BIRTH UNITS AS DESIGNATED EMERGENCY DEPARTMENTS** Emergency services performed in labor and birth units must adhere to national guidelines and standards (Simpson, 2005). Obstetric units must implement guidelines to establish essential time lines and define

Supporting Guidelines & Other References	triage process for screening and prioritizing the care of pregnant women who arrive for unscheduled evaluations (Angelini, 2000). A hospital with a large volume of births may have 1.2 to 1.5 times the number of women present to obstetric services for medical screening examination and emergency care (Paisley, Wallace, & Durant, 2011). **NURSING ASSESSMENT AND CARE OF THE MATERNAL FETAL DYAD** The medical screening examination (evaluation) for a pregnant woman requires assessment of the mother and fetus. Pregnancy results in significant physiologic and anatomic changes in every system of the female body. Evaluation of the pregnant woman and interpretation of diagnostics and plan of care must be based upon knowledge of the changes that occur with the pregnancy (Beaulieu, 2009). The complexity of the physiological and psychosocial implications of pregnancy highlights the necessity of an experienced and knowledgeable clinician to complete the history and physical assessment. Timely, accurate assessment with careful surveillance is critical to quickly identify complications and initiate appropriate interventions (Mahlmeister & Van Mullem, 2000). Regardless of the complaint, a pregnant woman presenting for emergency care must be assessed and fetal well-being must be documented prior to discharge. Fetal well-being must be confirmed by a reactive non-stress test, normal fetal heart rate tracing characteristics, or a biophysical profile (Angelini, 2000). Failure to accurately assess maternal-fetal status, appropriately treat an indeterminate or abnormal fetal heart tracing, correctly communicate maternal fetal status to the physician/midwife, and respond to or initiate chain of command are common sources of patient harm and obstetric malpractice claims (TJC, 2004). **VALUE OF THE NURSING ROLE** Nurses are often the first members of the healthcare team to detect abnormal findings or subtle signs and symptoms of developing complications with pregnant women and their fetuses. Often a role of the nurse is to alert the healthcare team required to meet the needs of the pregnant woman and her fetus. This coordination of the healthcare team has a direct effect on the ultimate outcome for the mother and her newborn (Mahlmeister & Van Mullem, 2000).

Importance	
Relationship to Desired Outcome	It is standard practice that patients presenting for emergency care are triaged by a nurse (AHRQ, 2012). The triage process generally involves a systematic, brief, clinical nursing assessment that focuses on identification of problems, clinical needs, and priority for care. For pregnant women, vital signs and fetal heart rate auscultation are an integral part of the initial assessment because they are indicators of the severity of illness and the urgency of the need for intervention. A timely and accurate assessment leading to identification of a maternal problem or indeterminate or abnormal fetal heart tracing should trigger assessment by an appropriate provider and improve time to treatment (Angelini & Mahlmeister, 2005). Increased identification and efficient treatment of a maternal or fetal issue should enhance maternal and newborn outcomes.
Opportunity for Improvement	TJC suggested that maternal outcomes could be improved by educating emergency room personnel about the possibility that a woman may be pregnant or may have recently been pregnant. TJC further indicated that knowledge of pregnancy may affect the diagnosis or appropriate treatment (2010). To improve neonatal outcomes, TJC recommended that facilities providing maternal newborn care implement the following: • Develop clear guidelines for patient care, including nursing protocols for the assessment of fetal heart rate. • Educate nurses, residents, nurse midwives, and physicians to use standardized communication regarding fetal heart rates. • Review organization policies regarding the availability of key personnel for emergency intervention. • Ensure that designated neonatal resuscitation areas are fully equipped and functioning. • Encourage a systematic ongoing evaluation of teamwork and the team response to clinical complications and emergencies to improve and support communication and collaboration between colleagues (TJC, 2004).

	RECOMMENDATION Regulations and guidelines for emergent care, including emergent care for obstetric patients, have been established. Prompt and accurate triage prioritization is the first step toward prompt and accurate evaluation by a qualified medical provider. To enhance the safety of the maternal-fetal dyad, within 10 minutes of arrival, pregnant women presenting for emergency care and their fetuses should have an initial assessment using a standardized tool (Paisley et al., 2011).
IOM Domains of Health Care Quality Addressed	Safe, Effective, Patient-Centered, Timely, Efficient, Equitable
Exception Justification	None
Harmonization with Existing Measures	Two quality measures highlight the significance of measuring the duration between the time a pregnant women presents to the perinatal service or emergency department with labor or an emergent condition and the time she is assessed by a qualified medical provider: 1. NQF Measure 0496 requires reporting of time that the patient presents to a dedicated Emergency Room for Service until discharge (NQF, 2008b). 2. NQF Measure 0495 requires that emergency services report the time lapse from when the patient arrived until the admitted patient leaves the emergency department (NQF, 2008a).

Designation	
Measure Purpose	- Quality Improvement - Accountability
Type of Measure	- Volume, Outcome, and Process
Level of Measurement	- Nurse - Facility-level
Care Setting	- Hospital (In- and Outpatient status)
Data Source	- Electronic Health Record (EHR) Data - Administrative Data/Claims (inpatient or outpatient claims) - Paper medical record - EMTALA or Central Log

DEFINITIONS

Triage—is the brief, systematic, assessment of the woman and fetus(es) performed when a pregnant woman presents for care. Triage allows for assignment of priority level for care and deployment of personnel and equipment as indicated by the priority level based on the identified clinical needs. Generally, the nurse carries out the triage (AHRQ, 2012). Triage is followed by the complete evaluation of the woman and fetus(es) by the physician, midwife, or registered nurse deemed a qualified medical provider (Angelini & Mahlmeister, 2005).

Evaluation—is the complete assessment of maternal and fetal well-being performed by the physician, midwife, or registered nurse deemed a qualified medical provider, which results in a determination of diagnosis, treatment plan, and dispensation status (discharge, admission, observation). The medical screening examination is the same as evaluation.

Timing—assessments of maternal and fetal well-being should be initiated within 10 minutes of the pregnant woman's arrival in a designated emergency department (Paisley et al., 2011).

Pregnant woman—refers to any woman who presents to a perinatal service or an emergency department for labor or an emergent condition with a known pregnancy.

Perinatal or emergency service—includes any hospital dedicated emergency department open to receive pregnant women with complaints of labor or emergent conditions.

Emergency medical condition (EMTALA)—is an emergency medical condition for which a patient presents with acute symptoms (including pain) of sufficient severity that in the absence of immediate medical attention could reasonably be expected to seriously jeopardize the patient's health or body functions or cause serious dysfunction of any body organ or part (Austin, 2011).

Qualified medical provider—is a licensed health care provider deemed competent by the medical staff of the organization to complete an emergency assessment (Angelini & Mahlmeister, 2005).

Medical screening exam—is used to reasonably determine whether an emergency medical condition exists and includes all necessary testing and on-call services within the capability of the hospital to reach a diagnosis that excludes the presence of an emergency medical condition (Austin, 2011).

Perinatal health care provider—may be an obstetrician, family medicine physician, certified nurse-midwife, or nurse practitioner.

REFERENCES

Agency for Healthcare Research and Quality. (2012). *Emergency severity index a triage tool for emergency department care* (Implementation handbook, version 4). Rockville, MD: Author.

American Academy of Pediatrics & American College of Obstetricians and Gynecologists. (2012). *Guidelines for perinatal care* (7th Ed.). Elk Grove Village, IL: American Academy of Pediatrics.

Angelini, D. (2000). Obstetric triage and advanced practice nursing. *Journal of Perinatal Neonatal Nursing, 13*(4), 1-12.

Angelini, D., & Mahlmeister, L. (2005). Liability in triage: Management of EMTALA regulations and common obstetric risks. *Journal of Midwifery & Women's Health, 50*(6), 472-478.

Austin, S. (2011). What does EMTALA mean to you? *Nursing Management*, *42*(9), 35-38.

Beaulieu, M. (2009). Failure to rescue as a process measure to evaluate fetal safety during labor. *American Journal of Maternal Child Nursing, 34*(1), 18-23.

National Quality Forum. (2008a). Median time from ED arrival to ED departure for admitted ED patients (NQF-endorsed measure 0495). Retrieved from http://www.qualityforum.org/QPS/QPSTool.aspx

National Quality Forum. (2008b). Median time from ED arrival to ED departure for discharged ED patients (NQF-endorsed measure 0496). Retrieved from http://www.qualityforum.org/QPS/QPSTool.aspx

Paisley, K., Wallace, R., & Durant, P. (2011). The development of an obstetric triage acuity tool. *Maternal Child Nursing, 36*(5), 290-296.

Simpson, K. R. (2005). Failure to rescue: implications for evaluating quality of care during labor and birth. *Journal of Perinatal Neonatal Nursing, 19*(1), 24-34.

The Joint Commission. (2004). Preventing newborn death and injury during delivery. *Sentinel Event Alert, 30*. Retrieved from http://www.jointcommission.org/assets/1/18/SEA_30.PDF

The Joint Commission. (2010). Preventing maternal death. *Sentinel Event Alert, 44*. Retrieved from http://www.jointcommission.org/assets/1/18/sea_44.pdf

Appendix B

Measure 02: Second Stage of Labor: Mother-Initiated, Spontaneous Pushing

Description

Mother-initiated, spontaneous pushing in the second stage of labor begins at the time the woman feels the urge to push. Spontaneous pushing is defined as a mother's response to a natural urge to push or a bearing down effort that comes and goes several times during each contraction. It does not involve timed breath holding or counting to 10.

Documentation in the medical record will reflect to the woman regarding the second stage of labor, the woman's report of feeling pressure or the urge to push prior to initiation of active pushing, and evidence of the nurse's support during the second stage of labor. In order to support the woman during the second stage of labor, the nurse will promote mother-initiated pushing and open-glottis pushing, assist the woman to maintain upright, gravity-neutral positions, and encouraging grunting, groaning, or vocalization during the push in response to contractions.

The goal is 100%.

Components

Size of Sample	Minimum of 30 randomly selected women in labor or all women in labor if population is less than 30.
Data Collection	Concurrent or retrospective chart review.
Numerator Statement	All women with a second stage of labor where documentation in the record provides evidence of mother-initiated, spontaneous pushing.
Denominator Statement	All women without a scheduled cesarean delivery, including women with epidural analgesia.
Denominator Exceptions	• Pregnant women whose birth is via planned cesarean delivery. • Women who give birth by non-planned cesarean delivery who have not completed the first stage of labor (less than 10cm dilated).

Supporting Guidelines & Other References	"Continuous support during labor from caregivers (nurses, midwives or lay individuals) may have a number of benefits for women and their newborns…Continuous support during labor has several benefits without any evidence of harmful effects" (American College of Obstetricians and Gynecologists [ACOG], 2003, p. 1449). "Continuously available labor support from a registered nurse (RN) is a critical component to achieve improved birth outcomes. Continuously available labor support promotes patient safety," including during the second stage of labor (Association of Women's Health, Obstetric & Neonatal Nurses [AWHONN], 2011, p. 665). "The specific goal is provide perinatal registered nurses, certified nurse-midwives (CNMs) and Canadian midwives with information necessary to optimize perinatal outcomes by the following means: empowering, preparing and supporting the woman and her family during the second stage of labor; promoting alternative and non-directed pushing techniques based on current evidence; and recognizing, responding to and evaluating the physiologic and psychological processes occurring during the second stage of labor" (AWHONN, 2008, p. 4).

Importance

Relationship to Desired Outcome	Perinatal nursing care, provided during the second stage of labor, affects maternal and neonatal outcomes (AWHONN, 2011). Maternal position in the second stage of labor can have an impact on the natural urge to push. Using a variety of positions helps the mother work with the fetus as it moves through the pelvis. Upright positions provide the advantage of gravity to help the mother move the fetus through the pelvis, and gravity-neutral positions may be more relaxing. Upright positions include standing, kneeling and squatting. Gravity-neutral positions include side-lying and hands-knees (Bianchi & Adams, 2009; Romano, & Lothian, 2008). "Proper positioning during second stage of labor enhances the comfort of laboring women and has the ability to promote fetal rotation and descent" (Bianchi & Adams, 2009, p. 45).
Opportunity for Improvement	Provide all laboring women with evidence-based, mother-initiated care during the second stage of labor to optimize perinatal outcomes.

IOM Domains of Health Care Quality Addressed	Safe, Effective, Patient-Centered, Timely, Efficient, Equitable
Exception Justification	The measure pertains only to women who experience the second stage of labor.
Harmonization with Existing Measures	There are no other measures for the second stage of labor.

Designation

Measure Purpose	- Quality Improvement
	- Accountability
Type of Measure	- Outcome or Process
Level of Measurement	- Nurse-level
	- Group-level
	- Facility-level
Care Setting	- Hospital – Labor & Delivery
Data Source	- Electronic Health Record (EHR) Data
	- Administrative Data/Claims (inpatient or outpatient claims)
	- Administrative Data/Claims (multiple-source)
	- Paper medical record

REFERENCES

American College of Obstetricians and Gynecologists. (2003). Dystocia and augmentation of labor. ACOG practice bulletin no. 49. *Obstetrics & Gynecology, 102*(6), 1445-1454.

Association of Women's Health, Obstetric and Neonatal Nurses. (2008). *Nursing care and management of the second stage of labor. Evidence-based clinical practice guideline* (2nd Ed). Washington, DC: Author.

Association of Women's Health, Obstetric and Neonatal Nurses. (2011). Nursing support of laboring women. Position statement. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 40(5)*, 665-6.

Bianchi, A. L., & Adams, E. D. (2009). Labor support during second stage labor for women with epidurals. *Nursing for Women's Health, 13(1)*, 39-47.

Romano, A., & Lothian, J. (2008). Promoting, protecting, and supporting normal birth: a look at the evidence. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 37(*1), 94-105.

ADDITIONAL RESOURCES

Bloom, S. L., Casey, B. M., Schaffer, J. I., McIntire, D. D., & Leveno, K. (2006). A randomized trial of coached versus uncoached maternal pushing during the second stage of labor. *American Journal of Obstetrics & Gynecology, 194*(1), 10-13.

Curl, M., Davies, R., Lothian, S., Pascali-Bonaro, D., Scaer, R., & Walsh, A. (2004). Overview: childbirth educators, doulas, nurses, and women respond to the six care practices for normal birth. *Journal of Perinatal Education, 13*(2), 42-50.

Green, J., Amis, D., & Hotelling, B. (2007). Care practice #3: continuous labor support. *Journal of Perinatal Education, 16*(3), 25-28.

Gulliver, B., Fisher, J., & Roberts, L. (2008). A new way to assess pain in laboring women: Replacing the rating scale with a "coping" algorithm. *Nursing for Women's Health, 12*(5). 404-408.

Gupta, J., Hofmeyr, G., & Smyth, R. (2012). Position in the second stage of labour for women without epidural anaesthesia. *Cochrane Database of Systematic Reviews, 5*: CD002006.

Hansen, S. L., Clark, S. L., & Foster, J. C. (2002). Active pushing versus passive fetal descent in the second stage of labor: *A randomized controlled trial. Obstetrics & Gynecology, 99*(1), 29-34.

Hodnett, E. D., Gates, S., Hofmeyr, G. J., & Sakala, C. (2012). Continuous support for women during childbirth. *Cochrane Database of Systematic Reviews, 10*: CD003766.

Hottenstein, S. & Brit Pipe, T. (2005). Continuous labor support: creating optimal birth experiences through theory-driven nursing care. *AWHONN Lifelines, 9*(3), 242-247.

Hunter, L. (2009). A descriptive study of "being with woman" during labor and birth. *Journal Of Midwifery & Women's Health, 54*(2), 111-118.

Ip, W. Y., Tang, C. S., & Goggins, W. B. (2009). An educational intervention to improve women's ability to cope with childbirth. *Journal of Clinical Nursing, 18*(15), 2125-2135.

Lothian, J. (2004). Promoting, protecting, and supporting normal birth. *Journal of Perinatal Education, 13*(2), 1-5.

Lu, M. C., Muthengi, E., Wakeel, F., Fridman, M., Korst, L. M., & Gregory, K. D. (2009). Prolonged second stage of labor and postpartum hemorrhage. *Journal of Maternal and Fetal Neonatal Medicine, 22*(3), 227-232. doi: 10.1080/14767050802676709

Payant, L., Davies, B., Graham, I. D., Peterson, W. E., & Clinch, J. (2008). Nurses' intentions to provide continuous labor support to women. *Journal of Obstetric, Gynecologic & Neonatal Nursing, 37*(4), 405-414.

Ruhl, C., Adams, E., Besuner, P., Bianchi, A., Lowe, N., Ravin, C.,...Simkin, P. (2006). Labor support: Exploring its role in modern and high-tech birthing practices. *AWHONN Lifelines, 10*(1), 58-65.

Sauls, D. (2006). Dimensions of professional labor support for intrapartum practice. *Journal of Nursing Scholarship, 38*(1), 36-41.

Shilling, T., & DiFranco, J. (2004). Care practices that promote normal birth #2: Freedom of movement throughout labor. *Journal of Perinatal Education, 13*(2), 11-15.

Simkin, P., & Bolding, A. (2004). Update on nonpharmacological approaches to relieve labor pain and prevent suffering. *Journal of Midwifery & Womens Health, 4(*6), 489-504.

Sampselle, C. M., Miller, J. M., Luecha, Y., Fischer, K. & Rosten, L. (2005). Provider support of spontaneous pushing during the second stage of labor. *Journal of Obstetric, Gynecologic & Neonatal Nursing, 34*(6), 695-702.

Simpson, K. R. (2006). When and how to push: Providing the most current information about second-stage labor to women during childbirth education. *Journal of Perinatal Education, 15*(4), 6-9.

Simpson, K. R., & James, D. C. (2005). Effects of immediate versus delayed pushing during second-stage labor on fetal well-being. *Nursing Research, 54*(3), 149-157.

Stark, M. A., & Jones, M. (2006). Advanced preparation and positive labor support create an optimal experience for normal birth. *Journal of Perinatal Education, 15(2), 4-7.*

World Health Organization, Department of Reproductive health and Research (1999). *Care in normal birth: A practical guide.* Geneva, Switzerland: Author.

Appendix C

Measure 03: Skin-to-Skin is Initiated Immediately Following Birth

Description

The purpose of this measure is to increase the percentage of healthy, term newborns who are placed in skin-to-skin contact with their mothers within the first five minutes following birth.

The goal is 100%.

Components

Size of Sample	Minimum of 30 randomly selected newborns or all newborns if population is less than 30.
Data Collection	Concurrent or retrospective chart review.
Numerator Statement	Healthy, term newborns (greater than 37 weeks 0 days gestation) that are placed skin-to-skin with their mother immediately at birth.
Denominator Statement	All healthy, term newborns (greater than 37 weeks 0 days gestation) born via vaginal or cesarean birth.
Denominator Exceptions	• Newborns of mothers who are not responsive, or are unstable following birth. • Newborns of mothers with a severe illness that prevents them from caring for their infants, e.g., sepsis. • Newborns with a diagnosis that requires admission to special care or neonatal intensive care unit at birth. • Newborns who are being adopted whose birth mothers choose not to initiate immediate contact.

Supporting Guidelines & Other References	The Joint Commission (TJC) announced that the Perinatal Care Core Measure Set was newly designated as one of their accountability measures (2012). Exclusive breast milk feeding is one of the quality measures within the Perinatal Care Core Measure Set, and uninterrupted skin-to-skin during the first two hours of life improves breastfeeding rates. Guidelines and evaluation criteria for the United States Baby-Friendly Hospital Initiative (2012) specify that all mothers should be given their infants to hold in skin-to-skin contact immediately after birth. "The warm chain is a set of ten interlinked procedures carried out at birth and during the following hours and days which will minimize the likelihood of hypothermia in all newborns"(World Health Organization [WHO], 1997, p. 8). Skin-to-skin contact is the third procedure in the warm chain: "Skin-to-skin contact is an effective method of preventing heat loss in newborns, whether they be full term or preterm babies. The mother's chest or abdomen is the ideal surface to receive the newborn…It can be kept in skin-to-skin contact with the mother while she is being attended to, during transfer to the postnatal ward, and for the first hours after birth" (WHO, 1997, p. 9).

Importance

Relationship to Desired Outcome	Researchers demonstrated that newborns have better outcomes, including stable temperature, heart rate, respiratory rate, and glucose levels, when they transition to extrauterine life and establish immediate skin-to-skin contact with their mothers (Dabrowski, 2007; Galligan, 2006; Hung & Berg, 2011; WHO, 1997). For mothers who choose to breastfeed, evidence demonstrates that skin-to-skin contact at birth is associated with higher rates of exclusive breastfeeding (Dabrowski, 2007; Hung & Berg, 2011).
Opportunity for Improvement	Perinatal registered nurses (RNs) have the opportunity to advocate for and promote uninterrupted skin-to-skin contact as the optimal condition for stable mothers and newborns.
IOM Domains of Health Care Quality Addressed	Safe, Effective, Patient-Centered, Timely, Efficient, Equitable
Exception Justification	Care of the unstable mother or newborn needs to take priority before skin-to-skin can be initiated.
Harmonization with Existing Measures	Supports guidelines and evaluation criteria for United States Baby-Friendly Hospital Initiative®.

Designation

Measure Purpose	- Quality Improvement - Accountability
Type of Measure	- Outcome or Process
Level of Measurement	- Nurse-level - Group-level - Facility-level
Care Setting	- Hospital – Labor & Delivery
Data Source	- Electronic Health Record (EHR) Data - Administrative Data/Claims (inpatient or outpatient claims) - Administrative Data/Claims (multiple-source) - Paper medical record

DEFINITIONS

Immediate Skin-to-Skin—is placing newborns directly on their mothers' bare skin within the first five minutes of birth.

Skin-to-Skin—is placing the naked newborn prone on the mother's bare skin.

REFERENCES

Baby-Friendly USA. (2012). Baby-friendly hospital initiative. Retrieved from http://www.babyfriendlyusa.org

Dabrowski, G. (2007). Skin-to-skin contact: giving birth back to mothers and babies. *Nursing For Women's Health, 11*(1), 64-71.

Galligan, M. (2006). Proposed guidelines for skin-to-skin treatment of neonatal hypothermia. *American Journal of Maternal Child Nursing, 31*(5), 298-306.

Hung, K. J., & Berg, O. (2011). Early skin-to-skin after cesarean to improve breastfeeding. *American Journal of Maternal/Child Nursing, 36*(5), 318-326.

The Joint Commission. (2012). Accountability measures. Retrieved from http://www.jointcommission.org/accountability_measures.aspx

World Health Organization. (1997). *Thermal protection of the newborn: A practical guide*. Geneva, Switzerland: Author.

ADDITIONAL RESOURCES

Ahmed, S., Mitra, S. N., Chowdhury, A. M., Camacho, L. L., Winikoff, B., & Sloan, N. L. (2011). Community kangaroo mother care: implementation and potential for neonatal survival and health in very low-income settings. *Journal of Perinatology, 31*(5), 361-367. doi: 10.1038/jp.2010.131

Bergman, N. (2005). More than a cuddle: Skin-to-skin contact is key. *Practising Midwife, 8*(9), 44.

Bramson, L., Lee, J., Moore, E., Montgomery, S., Neish, C., Bahjri, K., & Melcher, C. (2010). Effect of early skin-to-skin mother--infant contact during the first 3 hours following birth on exclusive breastfeeding during the maternity hospital stay. *Journal of Human Lactation, 26*(2), 130-137. doi: 10.1177/0890334409355779

Carfoot, S., Williamson, P., & Dickson, R. (2005). A randomised controlled trial in the north of England examining the effects of skin-to-skin care on breast feeding. *Midwifery, 21*(1), 71-79.

Caruana, E. (2008). Early skin-to-skin contact for mothers and their healthy newborn infants. *Journal of Advanced Nursing,* 62(4), 439-440. doi: 10.1111/j.1365-2648.2008.04669.x

Chiu, S. H., Anderson, G. C., & Burkhammer, M. D. (2005). Newborn temperature during skin-to-skin breastfeeding in couples having breastfeeding difficulties. *Birth, 32*(2), 115-121.

Conde-Agudelo, A., Belizán, J. M., & Diaz-Rossello, J. (2011). Kangaroo mother care to reduce morbidity and mortality in low birthweight infants. *Cochrane Database of Systematic Reviews, 3*, CD002771. doi: 10.1002/14651858.CD002771.pub2

Crenshaw, J. (2007). Care practice #6: No separation of mother and baby, with unlimited opportunities for breastfeeding. *Journal of Perinatal Education, 16*(3), 39-43. doi: 10.1624/105812407X217147

DiMenna, L. (2006). Considerations for implementation of a neonatal kangaroo care protocol. *Neonatal Network, 25*(6), 405-412.

Dodd, V. L. (2005). Implications of kangaroo care for growth and development in preterm infants. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 34*(2), 218-232.

Edwards, T. M., & Spatz, D. L. (2010). An innovative model for achieving breast-feeding success in infants with complex surgical anomalies. J*ournal of Perinatal & Neonatal Nursing, 24*(3), 246-253. doi:10.1097/JPN.0b013e3181e8d517

Erlandsson, K., Dsilna, A., Fagerberg, I., & Christensson, K. (2007). Skin-to-skin care with the father after cesarean birth and its effect on newborn crying and prefeeding behavior. *Birth, 34*(2), 105-114.

Forster, D., & McLachlan, H. L. (2007). Breastfeeding initiation and birth setting practices: a review of the literature. *Journal of Midwifery & Women's Health, 52*(3), 273-280.

Gouchon, S., Gregori, D., Picotto, A., Patrucco, G., Nangeroni, M., & Di Giulio, P. (2010). Skin-to-skin contact after cesarean delivery: An experimental study. *Nursing Research, 59*(2), 78-84. doi:10.1097/NNR.0b013e3181d1a8bc

Hake-Brooks, S., & Anderson, G. (2008). Kangaroo care and breastfeeding of mother-preterm infant dyads 0-18 months: A randomized, controlled trial. *Neonatal Network, 27*(3), 151-159.

Hunt, F. (2008). The importance of kangaroo care on infant oxygen saturation levels and bonding. *Journal of Neonatal Nursing, 14*(2), 47-51.

Ludington-Hoe, S. M. (2011). Thirty years of kangaroo care science and practice. *Neonatal Network, 30*(5), 357-362. doi:10.1891/0730-0832.30.5.357

Ludington-Hoe, S., Hosseini, R., & Torowicz, D. L. (2005). Skin-to-skin contact (kangaroo care) analgesia for preterm infant heel stick. *AACN Clinical Issues*, 16(3), 373-387.

McCain, G. C., Ludington-Hoe, S. M., Swinth, J. Y., & Hadeed, A. J. (2005). Heart rate variability responses of a preterm infant to kangaroo care. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 34*(6), 689-694.

Moore, E. R., & Anderson, G. C. (2007). Randomized controlled trial of very early mother-infant skin-to-skin contact and breastfeeding status. *Journal of Midwifery & Women's Health, 52*(2), 116-125.

Moore, E. R., Anderson, G. C., & Bergman, N. (2007). Early skin-to-skin contact for mothers and their healthy newborn infants. *Cochrane Database of Systematic Reviews, 3*, CD003519.

Mori, R., Khanna, R., Pledge, D., & Nakayama, T. (2010). Meta-analysis of physiological effects of skin-to-skin contact for newborns and mothers. *Pediatrics International, 52*(2), 161-170.

Romano, A. M. (2007). Research summaries for normal birth. *Journal of Perinatal Education, 16*(4), 70-74.

Smith, K. M. (2007). Sleep and kangaroo care: Clinical practice in the newborn intensive care unit: where the baby sleeps. *Journal of Perinatal & Neonatal Nursing, 21*(2), 151-157.

Teckenberg-Jansson, P., Huotilainen, M., Polkki, T., Lipsanen, J., & Jarvenpaa, A. (2011). Rapid effects of neonatal music therapy combined with kangaroo care on prematurely-born infants. *Nordic Journal of Music Therapy, 20*(1), 22-42.

Trotter, S. (2005). Skin-to-skin contact: Therapy or treatment? *RCM Midwives, 8*(5), 202-203.

Velandia, M., Matthisen, A. S., Uvnäs-Moberg, K., & Nissen, E. (2010). Onset of vocalinteraction between parents and newborns in skin-to-skin contact immediately after elective cesarean section. *Birth, 37*(3), 192-201. doi:10.1111/j.1523-536X.2010.00406.x

Appendix D

Measure 04: Duration of Uninterrupted Skin-to-Skin Contact

Description

The purpose of this measure is to increase the percentage of healthy, term newborns of stable mothers who receive uninterrupted skin-to-skin contact for at least 60 minutes. All routine procedures and assessments should be performed while the newborn is skin-to-skin with the mother. Procedures that require separation of the mother and infant, such as bathing and weighing, should be delayed until after the initial period of skin-to-skin contact.

The goal is 100%.

Components

Size of Sample	Minimum of 30 randomly selected newborns or all newborns if population is less than 30.
Data Collection	Concurrent or retrospective chart review.
Numerator Statement	Healthy, term newborns (greater than 37 weeks 0 days gestation) that are provided with sustained and uninterrupted skin-to-skin contact with their mothers for at least 60 minutes as soon as possible after birth. Skin-to-skin contact should be initiated within the first five minutes of birth.
Denominator Statement	All healthy, term newborns (greater than 37 weeks 0 days gestation) born via vaginal or cesarean birth.
Denominator Exceptions	• Newborns of mothers who are not responsive or are unstable at delivery. • Newborns of mothers with a severe illness that prevents them from caring for their infants, e.g., sepsis. • Newborns with a diagnosis that requires admission to special care or neonatal intensive care unit at birth. • Newborns who are being adopted whose birth mothers choose not to initiate immediate contact.

Supporting Guideline & Other References	The Joint Commission (TJC) announced that the Perinatal Care Core Measure Set was newly designated as one of their accountability measures (2012). Exclusive breast milk feeding is one of the quality measures within the Perinatal Care Core Measure Set, and uninterrupted skin-to-skin during the first two hours of life improves breastfeeding rates. Guidelines and evaluation criteria for the United States Baby-Friendly Hospital Initiative (2012) specify that all mothers should be given their infants to hold in skin-to-skin contact immediately after birth. "The warm chain is a set of ten interlinked procedures carried out at birth and during the following hours and days which will minimize the likelihood of hypothermia in all newborns" (World Health Organization [WHO], 2003, p. 8). Skin-to-skin contact is the third procedure in the warm chain: "Skin-to-skin contact is an effective method of preventing heat loss in newborns, whether they be full term or preterm babies. The mother's chest or abdomen is the ideal surface to receive the newborn…It can be kept in skin-to-skin contact with the mother while she is being attended to, during transfer to the postnatal ward, and for the first hours after birth" (WHO, 1997, p. 9).

Importance

Relationship to Desired Outcome	Researchers demonstrated that newborns have better outcomes, including stable temperature, heart rate, respiratory rate, and glucose levels, when they transition to extrauterine life and establish immediate skin-to-skin contact with their mothers (Dabrowski, 2007; Galligan, 2006; Hung & Berg, 2011; WHO, 1997). For mothers who choose to breastfeed, evidence demonstrates that skin-to-skin contact at birth is associated with higher rates of exclusive breastfeeding (Dabrowski, 2007; Hung & Berg, 2011).
Opportunity for Improvement	Perinatal registered nurses have the opportunity to advocate for and promote uninterrupted skin-to-skin contact as the optimal condition for stable mothers and newborns.
IOM Domains of Health Care Quality Addressed	Safe, Effective, Patient-centered, Timely, Efficient, Equitable
Exception Justification	The priority is to provide care to unstable mothers and/or newborns prior to initiating skin-to-skin contact.
Harmonization with Existing Measures	Supports guidelines and evaluation criteria for United States Baby-Friendly Hospital Initiative.

Designation	
Measure Purpose	- Quality Improvement - Accountability
Type of Measure	- Outcome or Process
Level of Measurement	- Nurse-level - Group-level - Facility-level
Care Setting	- Hospital- Labor & delivery, postpartum, well newborn nursery
Data Source	- Electronic Health Record (EHR) Data - Administrative Data/Claims (inpatient or outpatient claims) - Administrative Data/Claims (multiple-source) - Paper medical record

DEFINITONS

Immediate Skin-to-skin—is placing newborns directly on their mothers' bare skin within the first five minutes of birth.

Skin-to-skin—is placing the naked newborn prone on the mother's bare skin.

Uninterrupted skin-to-skin—is skin-to-skin contact that is continuous and not stopped for the purpose of providing routine care.

REFERENCES

Baby-Friendly USA. (2012). Baby-friendly hospital initiative. Retrieved from http://www.babyfriendlyusa.org

Dabrowski, G. (2007). Skin-to-skin contact: giving birth back to mothers and babies. *Nursing For Women's Health, 11(1), 64-71.*

Galligan, M. (2006). Proposed guidelines for skin-to-skin treatment of neonatal hypothermia. *The American Journal of Maternal Child Nursing, 31*(5), 298-306.

Hung, K. J., & Berg, O. (2011). Early skin-to-skin after cesarean to improve breastfeeding. *The American Journal of Maternal Child Nursing, 36*(5), 318-326.

The Joint Commission. (2012). Accountability measures. Retrieved from http://www.jointcommission.org/accountability_measures.aspx

World Health Organization. (1997). *Thermal protection of the newborn: A practical guide*. Geneva, Switzerland: Author.

ADDITIONAL RESOURCES

Ahmed, S., Mitra, S. N., Chowdhury, A. M., Camacho, L. L., Winikoff, B., & Sloan, N. L. (2011). Community kangaroo mother care: implementation and potential for neonatal survival and health in very low-income settings. *Journal of Perinatology, 31*(5), 361-367. doi: 10.1038/jp.2010.131

Bergman, N. (2005). More than a cuddle: Skin-to-skin contact is key. *Practising Midwife, 8*(9), 44.

Bramson, L., Lee, J., Moore, E., Montgomery, S., Neish, C., Bahjri, K., & Melcher, C. (2010). Effect of early skin-to-skin mother--infant contact during the first 3 hours following birth on exclusive breastfeeding during the maternity hospital stay. *Journal of Human Lactation, 26*(2), 130-137. doi: 10.1177/0890334409355779

Carfoot, S., Williamson, P., & Dickson, R. (2005). A randomised controlled trial in the north of England examining the effects of skin-to-skin care on breast feeding. *Midwifery, 21*(1), 71-79.

Caruana, E. (2008). Early skin-to-skin contact for mothers and their healthy newborn infants. *Journal of Advanced Nursing,* 62(4), 439-440. doi: 10.1111/j.1365-2648.2008.04669.x

Chiu, S. H., Anderson, G. C., & Burkhammer, M. D. (2005). Newborn temperature during skin-to-skin breastfeeding in couples having breastfeeding difficulties. *Birth, 32*(2), 115-121.

Conde-Agudelo, A., Belizán, J. M., & Diaz-Rossello, J. (2011). Kangaroo mother care to reduce morbidity and mortality in low birthweight infants. *Cochrane Database of Systematic Reviews, 3*, CD002771. doi: 10.1002/14651858.CD002771.pub2

Crenshaw, J. (2007). Care practice #6: No separation of mother and baby, with unlimited opportunities for breastfeeding. *Journal of Perinatal Education, 16*(3), 39-43. doi: 10.1624/105812407X217147

DiMenna, L. (2006). Considerations for implementation of a neonatal kangaroo care protocol. *Neonatal Network, 25*(6), 405-412.

Dodd, V. L. (2005). Implications of kangaroo care for growth and development in preterm infants. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 34*(2), 218-232.

Edwards, T. M., & Spatz, D. L. (2010). An innovative model for achieving breast-feeding success in infants with complex surgical anomalies. *Journal of Perinatal & Neonatal Nursing, 24*(3), 246-253. doi:10.1097/JPN.0b013e3181e8d517

Erlandsson, K., Dsilna, A., Fagerberg, I., & Christensson, K. (2007). Skin-to-skin care with the father after cesarean birth and its effect on newborn crying and prefeeding behavior. *Birth, 34*(2), 105-114.

Forster, D., & McLachlan, H. L. (2007). Breastfeeding initiation and birth setting practices: a review of the literature. *Journal of Midwifery & Women's Health, 52*(3), 273-280.

Gouchon, S., Gregori, D., Picotto, A., Patrucco, G., Nangeroni, M., & Di Giulio, P. (2010). Skin-to-skin contact after cesarean delivery: An experimental study. *Nursing Research, 59*(2), 78-84. doi:10.1097/NNR.0b013e3181d1a8bc

Hake-Brooks, S., & Anderson, G. (2008). Kangaroo care and breastfeeding of mother-preterm infant dyads 0-18 months: A randomized, controlled trial. *Neonatal Network, 27*(3), 151-159.

Hunt, F. (2008). The importance of kangaroo care on infant oxygen saturation levels and bonding. *Journal of Neonatal Nursing, 14*(2), 47-51.

Ludington-Hoe, S. M. (2011). Thirty years of kangaroo care science and practice. *Neonatal Network, 30*(5), 357-362. doi:10.1891/0730-0832.30.5.357

Ludington-Hoe, S., Hosseini, R., & Torowicz, D. L. (2005). Skin-to-skin contact (kangaroo care) analgesia for preterm infant heel stick. *AACN Clinical Issues, 16*(3), 373-387.

McCain, G. C., Ludington-Hoe, S. M., Swinth, J. Y., & Hadeed, A. J. (2005). Heart rate variability responses of a preterm infant to kangaroo care. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 34*(6), 689-694.

Moore, E. R., & Anderson, G. C. (2007). Randomized controlled trial of very early mother-infant skin-to-skin contact and breastfeeding status. *Journal of Midwifery & Women's Health, 52*(2), 116-125.

Moore, E. R., Anderson, G. C., & Bergman, N. (2007). Early skin-to-skin contact for mothers and their healthy newborn infants. *Cochrane Database of Systematic Reviews, 3*, CD003519.

Mori, R., Khanna, R., Pledge, D., & Nakayama, T. (2010). Meta-analysis of physiological effects of skin-to-skin contact for newborns and mothers. *Pediatrics International, 52*(2), 161-170.

Romano, A. M. (2007). Research summaries for normal birth. *Journal of Perinatal Education, 16*(4), 70-74.

Smith, K. M. (2007). Sleep and kangaroo care: Clinical practice in the newborn intensive care unit: where the baby sleeps. *Journal of Perinatal & Neonatal Nursing, 21*(2), 151-157.

Teckenberg-Jansson, P., Huotilainen, M., Polkki, T., Lipsanen, J., & Jarvenpaa, A. (2011). Rapid effects of neonatal music therapy combined with kangaroo care on prematurely-born infants. *Nordic Journal of Music Therapy, 20*(1), 22-42.

Trotter, S. (2005). Skin-to-skin contact: Therapy or treatment? *RCM Midwives, 8*(5), 202-203.

Velandia, M., Matthisen, A. S., Uvnäs-Moberg, K., & Nissen, E. (2010). Onset of vocalinteraction between parents and newborns in skin-to-skin contact immediately after elective cesarean section. *Birth, 37*(3), 192-201. doi:10.1111/j.1523-536X.2010.00406.x

Appendix E

Measure 05: Eliminating Supplementation of Breast Milk Fed, Healthy, Term Newborns

Description

The purpose of this measure is to reduce the percentage of healthy, term, newborns fed any breast milk who receive supplementation with water, glucose water, or formula without medical indication during their hospital stays.

The goal is 0%.

Components

Size of Sample	Minimum of 30 randomly selected newborns fed any breast milk or all newborns fed any breast milk if population is less than 30.
Data Collection	Retrospective chart review of discharged newborns.
Numerator Statement	Healthy, term (equal to or greater than 37 weeks 0 days gestation), newborns fed any breast milk who receive supplementation with water, glucose water, or formula from birth to discharge.
Denominator Statement	Healthy, term, newborns fed any breast milk who have no medical indication for supplementation with water, glucose water, or formula from birth to discharge.

Denominator Exceptions	Healthy, term, newborns fed any breast milk with a medical indication for supplementation from birth to discharge. For the purpose of this measure, the medical indication for supplementation exclusion is the same as the excluded populations delineated by the Joint Commission (TJC): 1. ICD-9-CM Other Diagnosis Codes for galactosemia 2. Patients transferred to another hospital 3. Documented Reason for Not Exclusively Feeding Breast Milk **The following acceptable maternal medical conditions:** • HIV infection • Human t-lymphotrophic virus type I or II • Substance abuse and/or alcohol abuse • Active, untreated tuberculosis • Taking certain medications, i.e., prescribed cancer chemotherapy, radioactive isotopes, antimetabolites, antiretroviral medications and other medications where the risk of morbidity outweighs the benefit of breast milk feeding • Undergoing radiation therapy • Active, untreated varicella • Active herpes simplex virus with breast lesions • Admission to Intensive Care Unit (ICU) postpartum • Adoption or foster home placement of newborn • Previous breast surgery, i.e., bilateral mastectomy, bilateral breast reduction or augmentation where the mother is unable to produce milk • Breast abnormality, i.e., hypoplasia, tumor, etc. where the mother is unable to produce breast milk • Surrogate delivery resulting in placement of the newborn with another person who will assume care of the newborn after discharge (TJC, 2014)

Supporting Guidelines & Other References	**Increasing the rate of exclusive breastfeeding is a public health imperative.** The World Health Organization and the United Nations Children's Fund state that maternity and newborn services should "give newborn infants no food or drink other than breast milk unless medically necessary" (Gagnon, Leduc, Waghorn, Yang, & Platt, 2005, p. 397). "The AAP recommends exclusive breastfeeding for about 6 months, with continuation of breastfeeding for 1 year or longer as mutually desired by mother and infant, a recommendation concurred to by the WHO and the Institute of Medicine" (American Academy of Pediatrics [AAP], 2012, p. e832). "Recently, published evidence-based studies have confirmed and quantified the risks of not breastfeeding. Thus, infant feeding should not be considered a lifestyle choice but rather as a basic health issue" (AAP, 2012, p. e837). **Unnecessary in-hospital supplementation ends exclusive breastfeeding** "The first step in reaching this goal [improving breastfeeding exclusivity] is to increase breastfeeding exclusivity in the first few days after birth. It is therefore discouraging that, in our cohort of women receiving WIC, almost 80% of breastfed infants received supplemental formula while in the hospital. Furthermore, 87% of these infants received supplementation that was not medically necessary, according to the ABM criteria" (Tender et al., 2009, p. 15). "Together with extensive policy and practice support for exclusive breastfeeding, evidence shows that in-hospital formula supplementation affects breastfeeding duration and exclusivity adversely" (Biro, Sutherland, Yelland, Hardy, & Brown, 2011, p. 302). "Formula supplementation of breastfed newborns in hospital remains commonplace in developed countries, with prevalence estimates ranging from 6% to 78%" (Biro et al., 2011, p. 302).

Importance	
Relationship to Desired Outcome	Early supplementation without medical indication ends exclusive breastfeeding and is unequivocally associated with shorter duration of any breastfeeding. For the short- and long-term health of mothers and infants, healthcare providers must endorse exclusive breastfeeding and reject the use of supplementation (unless medically necessary) from birth to discharge.
Opportunity for Improvement	"In summary, formula supplementation of healthy newborn infants in hospital is commonplace despite widespread recommendation to the contrary" (Gagnon et al., 2005, p. 398). "Improving caregivers' knowledge about breastfeeding and the medical indications for supplementation as well as implementing supportive hospital practices are important steps in minimizing unnecessary supplementation" (Biro et al., 2011, p. 305). "Formal staff training should not only focus on updating knowledge and techniques for breastfeeding support but also should acknowledge the need to change attitudes and eradicate unsubstantiated beliefs about the supposed equivalency of breastfeeding and commercial infant formula feeding" (AAP, 2012, p. e835). "Although there is consensus among health professionals that it is rare for a mother to truly have insufficient milk, nurses in this study reported this as a common reason for supplementing" (Gagnon et al., 2005, p. 402). "Modification is likely to be maximized if nurses receive up-to-date information on optimal approaches to deal with breastfeeding problems, assessment of infant behavior as it relates to needs for formula supplementation, and approaches to reduce maternal fatigue and unit policies supporting nonsupplementation" (Gagnon et al., 2005, p. 404).
IOM Domains of Health Care Quality Addressed	Safe, Effective, Patient-Centered, Timely, Efficient, Equitable
Exception Justification	Excepting the very few healthy, term breastfeeding newborns with a medical indication for supplementation from the denominator is in line with the WHO/UNICEF statement that maternity and newborn services should "give newborn infants no food or drink other than breast milk, unless medically indicated" (World Health Organization [WHO], 1998, p. 5).

Harmonization with Existing Measures	"The decision of The Joint Commission to adopt "Exclusive Breast Milk Feeding" as a Perinatal Care Core Measure establishes the rate of exclusive breastfeeding during the hospital stay as a critical measure of the quality of care provided by a medical facility" (AAP, 2012, p. 835) As a nursing care quality measure, "Eliminating Supplementation of Breast Milk Fed Healthy, Term Newborns" focuses on the nurse's significant influence on reducing inappropriate supplementation of breastfeeding newborns. By not providing unnecessary supplementation to breastfeeding newborns, the nurse supports exclusive breastfeeding and preserves the mother's choices in the days, weeks, and months following discharge.

Designation

Measure Purpose	- Quality Improvement
	- Accountability
Type of Measure	- Outcome or Process
Level of Measurement	- Nurse-level
	- Group-level
	- Facility-level
Care Setting	- Hospital
Data Source	- Electronic Health Record (HER) Data
	- Administrative Data/Claims (inpatient or outpatient claims)
	- Administrative Data/Claims (multiple-source)
	- Paper medical record

REFERENCES

American Academy of Pediatrics. (2012). Policy statement: Breastfeeding and the use of human milk. *Pediatrics 129*(3), e827-e841.

Biro, M.A., Sutherland, G.A., Yelland, J.S., Hardy, P., & Brown, S. J. (2011). In-hospital formula supplementation of breastfed babies: A population-based survey. *Birth, 38*(4), 302-310.

Gagnon, A.J., Leduc, G., Waghorn, K., Yang, H., & Platt, R. W. (2005). In-hospital formula supplementation of healthy breastfeeding newborns. *Journal of Human Lactation, 21*(4), 397-405.

Tender, J.A., Janakiram, J., Arce, E., Mason, R., Jordan, T., Marsh, J.,...Moon, R. Y. (2009). Reasons for in-hospital formula supplementation in breastfed infants from low-income families. *Journal of Human Lactation, 25*(1), 11-17.

The Joint Commission. (2014). PC-05a: Exclusive breast milk feeding considering mother's choice. In *Specifications manual for Joint Commission national quality measures* (v2014A). Retrieved from http://manual.jointcommission.org/releases/TJC2014A/MIF0170.html

World Health Organization. (1998). Evidence for the ten steps to successful breastfeeding. Geneva, Switzerland: Author. Retrieved from http://whqlibdoc.who.int/publications/2004/9241591544_eng.pdf

Appendix F

Measure 06: Protect Maternal Milk Volume for Premature Infants Admitted to the NICU

Description

The purpose of this measure is to increase the percentage of mothers of premature newborns admitted to the neonatal intensive care unit (NICU) who receive a breast pump, receive the appropriate instruction and support from a registered nurse, and have the nurse remain with them throughout the first pumping session within six hours post-birth.

Components of appropriate instruction and support must include the following:

- Providing a hospital-grade, electric, double breast pump
- Correctly fitting the breast pump shields and teaching how to check for continued correct fit
- Giving clear, evidence-based instruction about how often and how long to pump and expected milk volumes
- The nurse remaining with the mother throughout the entirety of her first pumping session lasting approximately 15 minutes

The goal is 100%.

Components

Size of Sample	Minimum of 30 randomly selected mothers whose premature newborns are admitted to the NICU or all of these mothers if population is less than 30.
Data Collection	Concurrent or retrospective chart review.
Numerator Statement	Within six hours post-birth, mothers (including mothers who may not have considered the option to breastfeed prior to birth) whose premature newborn (less than 37 weeks 0 days gestation) is admitted to NICU at birth are provided a hospital-grade electric breast pump and instruction on how to use it by a registered nurse who remains with them throughout the initial pumping session lasting 15 minutes.
Denominator Statement	Mothers whose premature newborns are admitted to the NICU at birth.
Denominator Exceptions	• Mothers who are not responsive during the six hours post-birth. • Mothers with a severe illness that precludes pumping within six hours post-birth.

Supporting Guidelines & Other References	**"The potent benefits of human milk are such that all preterm infants should receive human milk"** (American Academy of Pediatrics [AAP], 2012, p. e831). "There are several significant short-and long-term beneficial effects of feeding preterm infants human milk. Lower rates of sepsis and NEC… fewer hospital readmissions for illness in the year after NICU discharge… lower long-term growth failure and neurodevelopmental disabilities… improved neurodevelopmental outcomes… lower rates of severe retinopathy of prematurity… lower rates of metabolic syndrome… in adolescents, lower blood pressures and low density lipoprotein concentrations and improved leptin and insulin metabolism" (American Academy of Pediatrics [AAP], 2012, p. e831). "Health care providers should ensure that human milk and breastfeeding are priorities in the NICU" (Spatz, 2012, p. 138). "A critical period for high doses of human milk feedings is the first 14 to 28 days post-birth, when several studies have demonstrated a dose-response relationship between the amount of human milk received by VLBW and ELBW infants and specific clinical morbidities including enteral feed intolerance, nosocomial infection, NEC, CLD, ROP, and total number of morbidities during the NICU stay. The mechanism by which the feeding of high doses of human milk impacts morbidities during this critical period is linked to structural and functional changes in the gastrointestinal tract that occur as enteral feedings are advanced" (Meier, Engstrom, Patel, Jegier, & Bruns, 2010, p. 220). **"One of the main factors that impede the use of breast milk for the nutrition of preterm infants is the availability of breast milk"** (Kelley, 2012, p. 267). "An abundant milk volume ensures that the infant has access to exclusive human milk feedings and facilitates the transition to feeding at breast during and after the NICU stay, whereas maternal milk volume problems compromise these goals. Initiating, establishing and maintaining an adequate milk volume is, however, a demanding task for mothers of premature infants. These mothers are breast pump-dependent, meaning that they must rely on the breast pump to replace the sucking stimulation and milk removal functions of a healthy breastfeeding infant. As such, their needs are

	very different from those of a mother who is an occasional breast pump user, and can depend upon her infant to provide the necessary autocrine stimulus required for milk production" (Meier, 2010, p. 227). In order to realize the dose-response benefits of using human milk as the primary diet for premature infants in the NICU, and given the current controversy, expense, and other significant challenges related to acquiring human donor milk, nurses must prioritize the initiation, establishment and maintenance of maternal milk volume. For a mother whose premature newborn is admitted to NICU at birth, the nurse must ensure that she receives a breast pump and appropriate instruction and support for its use within six hours post-birth (Meier et al., 2010). "Numerous factors that are unique to these women, such as an ineffective breast pump, improperly fitting breast shields, infrequent pump use, or ending a pumping session before all of the available milk is removed, can compromise this transition. Similarly, the intense stress, fatigue, and pain in these early days can down-regulate prolactin via the dopaminergic prolactin inhibiting factor" (Meier et al., 2010, p. 228). "The two most significant practice changes that are associated with increased breast milk production in preterm mothers...The first is to increase the education and support available to the parents of premature infants related to breastfeeding. The second is to increase the healthcare team's knowledge base regarding the benefits of breast milk for preterm infants and the ways to support the mother while pumping" (Kelley, 2012, p. 271).

Importance

Relationship to Desired Outcome	In order to realize the dose-response benefits of using human milk as the primary diet for premature infants in the NICU, and given the current controversy, expense, and other significant challenges related to acquiring human donor milk, nurses must prioritize the initiation, establishment and maintenance of maternal milk volume.
Opportunity for Improvement	"In the United States, infant mortality could be reduced by 21% if all infants received the recommended 6 months of exclusive human milk feedings" (National Association of Neonatal Nurses [NANN], 2012, p. 57).
IOM Domains of Health Care Quality Addressed	Safe, Effective, Patient-Centered, Timely, Efficient, Equitable
Exception Justification	The rare cases in which a mother is not able to take part in a pumping session are clear exceptions.

Harmonization with Existing Measures	There are no other measures that address prioritizing maternal milk volume to ensure human milk is primary diet of premature infants in the NICU.

Designation	
Measure Purpose	- Quality Improvement
	- Accountability
Type of Measure	- Outcome or Process
Level of Measurement	- Nurse-level
	- Group-level
	- Facility-level
Care Setting	- Hospital
Data Source	- Electronic Health Record (EHR) Data
	- Administrative Data/Claims (inpatient or outpatient claims)
	- Administrative Data/Claims (multiple-source)
	- Paper medical record

REFERENCES

American Academy of Pediatrics. (2012). Policy statement: Breastfeeding and the use of human milk. *Pediatrics, 129*(3), e827-e841.

Kelley, L. (2012). Increasing the consumption of breast milk in low-birth-weight infants. *Advances in Neonatal Care, 12*(5), 267-272.

Meier, P. P., Engstrom, J.L., Patel, A. L., Jegier, B.J., & Bruns, N.E. (2010). Improving the Use of human milk during and after the NICU stay. *Clinics of Perinatology, 37*(1), 217-245.

National Association of Neonatal Nurses Board of Directors. (2012). Position statement: The use of human milk and breastfeeding in the neonatal intensive care unit. *Advances in Neonatal Care, 12*(1), 56-60.

Spatz, D. L. (2012). Innovations in the provision of human milk and breastfeeding for infants requiring intensive care. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 41*(1), 138-143.

ADDITIONAL RESOURCES

Ahmed, A. H., & Sands, L. P. (2010). Effect of pre- and post-discharge interventions on breastfeeding outcomes and weight gain among premature infants. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 39*(1), 53-63.

Appendix G

Measure 07: Initial Contact with Parents Following a Neonatal Transport

Description

The purpose of this measure is to increase the percentage of mothers who receive a phone call from the referral hospital's neonatal intensive care unit (NICU) nurse within four hours of infant arrival to the referral hospital.

The goal is 100%.

Components

Size of Sample	Minimum of 30 randomly selected infants or all infants if population less than 30.
Data collection	Retrospective chart review or electronic medical record report.
Numerator Statement	Number of infants transported to another hospital whose mothers receive a phone call from the referral hospital's neonatal intensive care unit (NICU) nurse within four hours of infant arrival to the referral hospital. • Time of arrival at the referring hospital • Status on arrival, update on condition • What is anticipated to happen (i.e., procedures, tests, monitoring) • Parents' questions addressed. Reinforce contact information. Update of maternal status as appropriate. • Inform parents that they may call the unit for an update at any time. • Document all components of discussion in the medical record.
Denominator Statement	Total number of infants transported into the hospital.
Denominator Exceptions	• Mother unable to participate due to severe illness or death. • Exclude return transport to community hospital.

Supporting Guideline & Other References	Although it is preferred that high-risk mothers be transferred during the antepartum period, infants frequently are transferred after birth (America Academy of Pediatrics [AAP] & America College of Obstetricians & Gynecologists [ACOG], 2012). After the infant has been transferred to the referring hospital, communication with the parents about the infant's status is crucial. Nurses must facilitate this communication (AAP & ACOG, 2012; Karlsen, 2006). Parental stress, particularly maternal stress, associated with having an infant admitted to the NICU has been well documented (Aagaard & Hall, 2008; Docherty, Miles, & Holditch-Davis, 2002; Feely et al., 2008; Jubinville, Newburn-Cook, Hegadoren, & Lacaze-Masmonteil, 2012; Melnyk, Crean, Feinstein, & Fairbanks, 2008; Morey & Gregory, 2012; Pinelli, 2000; Schnenk & Kelley, 2010). Although, few researchers have addressed maternal stress as it relates to neonatal transport and separation, it is logical that stress may be heightened when the infant and mother are separated due to transport. Researchers that have evaluated nursing care, parent communication, and neonatal transport advocate that nurses are positioned to offer therapeutic conversations that can benefit families, especially mothers who are separated from their infants (Hogan & Logan, 2004; Thomas, 2011). Boutilier (2007) described how nurses conduct hand-offs between each other to facilitate a smooth transition. A standard reporting mechanism such as SBAR has been successful in nurse-to-nurse hand-offs. A similar approach should be considered when communicating post-transport with parents. Communication with parents is a nursing care function that has tremendous impact. This is especially true when the mother and infant are cared for in separate hospitals. This measure documents that important work.

Importance

Relationship to Desired Outcome	Although there are no randomized controlled studies to support early communication between nurse and parents, there are data to support that this is a stressful time for mothers. The maternal relationship with her infant is disrupted when the infant is admitted to the NICU, let alone transferred to another hospital. Numerous authors have studied the stressful effects of having an infant admitted to the NICU (Aagaard & Hall, 2008; Docherty, Miles, Holditch-Davis, 2002; Feely, Zelkowitz, Charbonneau, Cormier, Lacroix & Marie, 2008; Jubinville, Newburn-Cook, Hegadoren, & Lacaze-Masmonteil, 2012; Melnyk, Crean, Feinstein, & Fairbanks, 2008; Pinelli, 2000; Schnenk, & Kelley, 2010).This information and logic suggests this is a benefit to parents when separated from their infants.
Opportunity for Improvement	Enhance parental communication when infant transferred to an outside facility.
IOM Domains of Health Care Quality Addressed	Safe, Effective, Patient-Centered, Timely, Efficient, Equitable
Exception Justification	Phone conversation with parents not achievable.
Harmonization with Existing Measures	No other measure exists for neonatal transport related to communication with parents in neonatal transport.

Designation

Measure Purpose
- Quality Improvement
- Accountability

Type of Measure
- Outcome or Process

Level of Measurement
- Nurse-level
- Group-level
- Facility-level

Care Setting
- Hospital

Data Source
- Electronic Health Record (EHR) Data
- Administrative Data/Claims (inpatient or outpatient claims)
- Administrative Data/Claims (multiple-source)
- Paper medical record

REFERENCES

Aagaard, H., & Hall, E. O. (2008). Mothers' experiences of having a preterm infant in the neonatal care unit: A meta-synthesis. *Journal of Pediatric Nursing, 23*(3), e26-e36.

American Academy of Pediatrics & American College of Obstetricians and Gynecologists. (2012). *Guidelines for perinatal care* (7th ed.). Elk Grove Village, IL: American Academy of Pediatrics.

Boutilier, S.(2007). Leaving critical care: Facilitating a smooth transition. *Clinical Dimension, 26*(4), 137-142.

Docherty, S. L., Miles, M. S., Holditch-Davis, D. (2002). Worry about child health in the mothers of hospitalized medically fragile infants. *Advances in Neonatal Care, 2*(2), 84-92.

Feely, N., Zelkowitz, P., Charbonneau, L., Cormier, C., Lacroix, A., & Marie, C. S. (2008). Assessing the feasibility and acceptability of an intervention to reduce anxiety and enhance sensitivity among mothers of very lover birth-weight infants. *Advances in Neonatal Care, 8*(5), 276-84.

Hogan, D. L., & Logan, J. (2004). The Ottawa model of research use: A guide to clinical innovation in the NICU. *Clinical Nurse Specialist, 18(*5), 255-261.

Jubinville, J., Newburn-Cook, C., Hegadoren, K., & Lacaze-Masmonteil, T. (2012). Symptoms of acute stress disorder in mothers of premature infants. *Advances in Neonatal Care, 12*(4), 246-253.

Karlsen, K. A. (2006). *The S.T.A.B.L.E. program*. Park City, UT: Author.

Melnyk, B. M, Crean, H. J., Feinstein, N. F. & Fairbanks, E. (2008). Maternal anxiety and Depression after a premature infant's discharge from the neonatal intensive care unit. *Nursing Research, 57*(6), 383-394.

Morey, J. A., & Gregory, K. (2012). Nurse-lead education mitigates maternal stress and enhances knowledge in the NICU. *The American Journal of Maternal Child Nursing, 37(3),* 182-191.

Pinelli, J. (2000). Effects of family coping and resources on family adjustment and parental stress in the acute phase of the NICU experience. *Neonatal Network, 19*(6), 27-37.

Schnenk, L. K. & Kelley, J. H. (2010). Mothering an extremely low birth-weight infant. *Advances in Neonatal Care, 10*(2), 88-97.

Thomas, J. (2011). The circle of caring model for neonatal transport. *Neonatal Network, 30*(1), 14-20.

Appendix H

Measure 08: Perinatal Grief Support

Description

The purpose of this measure is to increase the percentage women who are offered support for grief responses after perinatal loss. Perinatal loss is defined as a fetal or neonatal death that occurs in an obstetric or neonatal unit.

The goal is 100%.

Components

Size of Sample	All losses that meet criteria.
Data Collection	Retrospective chart review.
Numerator Statement	Women presenting to an obstetric unit who experience a perinatal loss are provided bereavement support and end of life care as evidenced by the following: **Prior to birth** - Develop a plan and identify parents' wishes. The plan should provide opportunity to "bond" with infant: • Allow parents to see and hold the infant • Encourage parents to name the infant • Provide religious/cultural rituals/ceremonies (e.g., baptism or dedication) and spiritual care and support (e.g., Chaplain) • Plan for resuscitation/withdrawal of support when a live birth that may be incompatible with life is expected **After birth.** Develop a plan for aftercare: • Create memories by offering a memento that may include any of the following: o Take photo of infant/family as parents desire o Offer for family to hold infant as desired; allow family time alone with infant o Create hand/feet molds and/or prints o Create a birth announcement o Create a memory box; place mementos such as blanket, hat, tape measure, lock of hair in box Arrange other support services as needed, such as social work or financial counselor:

Numerator Statement	• Provide anticipatory guidance for discussing loss with family, friends, and community • Provide referral to local or online bereavement support groups • Provide anticipatory guidance for arrangement for body (according to state laws) Document support measures offered in the medical record.
Denominator Statement	Total number of women presenting to obstetrical unit who experience a perinatal loss.
Denominator Exceptions	• Women who refuse supportive services with documentation of refusal in the medical record. • Women who die during childbirth. • Exclude dilation and evacuation and elective terminations.

Supporting Guideline & Other References	The American Academy of Pediatrics (AAP) and the American College of Obstetricians and Gynecologists (ACOG) (2007) affirmed the needs of families experiencing perinatal loss. The Agency for Healthcare Research and Quality (ARHQ) has developed the following guidelines: 1. Evidenced based benefits of palliative care programs on patient/family quality of life (2009) 2. Late intrauterine fetal death and stillbirth (2011a) 3. Management of stillbirth (2011b). These guidelines include the need for support for families experiencing loss. 4. Sibling support in end of life care (2011c) The meta-analysis by Flenady and Wilson highlights the lack of randomized controlled trials on this topic. Numerous agencies and organizations have endorsed bereavement and end of life support. The overwhelming consensus is that the role of the nurse is not only to provide emotional support for parents, but also to help them create memories (Agency for Healthcare Research and Quality, 2011, 2009; American Academy of Pediatrics & American College of Obstetricians and Gynecologists, 2007; Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN), 2013). AWHONN described holistic nursing care for this population (2013). Spiritual and cultural factors and type of loss affect the emotional response of the family, and individualized care is required. Nurses play an important role in bereavement support, and this nursing care can and should be defined, measured, and benchmarked. Referral to palliative care or even the existence of a palliative care program within an institution can also be measured.

Importance

Relationship to Desired Outcome	Although few randomized controlled studies demonstrate the benefit of bereavement support, case studies and expert opinion suggest that such support is beneficial to the emotional well-being of the woman and her family experiencing perinatal loss.

Opportunity for Improvement	Provide consistent bereavement support for all women.
IOM Domains of Health Care Quality Addressed	Patient-centered; Efficient
Exception Justification	Wishes of the parents need to be respected.
Harmonization with Existing Measures	No other measure exists for perinatal bereavement.

Designation

Measure Purpose	- Quality Improvement - Accountability
Type of Measure	- Outcome or Process
Level of Measurement	- Nurse-level - Group-level - Facility-level
Care Setting	- Hospital; L&D, Postpartum/Mother-Baby, Neonatal Intensive Care units.
Data Source	- Electronic Health Record (EHR) Data - Administrative Data/Claims (inpatient or outpatient claims) - Administrative Data/Claims (multiple-source) - Paper medical record

REFERENCES

Agency for Healthcare Research and Quality. (2009). Best evidence statement (BESt). Evidenced based benefits of palliative care programs on patient/family quality of life. *National Guideline Clearinghouse*. Retrieved from http://www.guideline.gov/content.aspx?id=15124

Agency for Healthcare Research and Quality. (2011a). Late intrauterine fetal death and stillbirth. *National Guideline Clearinghouse*. Retrieved from http://www.guideline.gov/content.aspx?id=25672

Agency for Healthcare Research and Quality. (2011b). Management of stillbirth. *National Guideline Clearinghouse*. Retrieved from: http://www.guideline.gov/content.aspx?id=14337&search=stillbirth

Agency for Healthcare Research and Quality. (2011c). Best evidence statement (BESt). Sibling support in end of life care. *National Guideline Clearinghouse*. Retrieved from http://guidelines.gov/content.aspx?id=34045

American Academy of Pediatrics & American College of Obstetricians and Gynecologists. (2007). *Guidelines for perinatal care* (6th ed.). Elk Grove Village, IL: American Academy of Pediatrics.

Association of Women's Health, Obstetric and Neonatal Nurses (2013). Perinatal loss. In *Perinatal orientation and education program* (3rd ed.). Washington, DC: Author.

Flenady, V., & Wilson, T. (2008). Support for mothers, fathers and families after perinatal death. *Cochrane Database of Systematic Reviews*, 1, CD000452.

ADDITIONAL RESOURCES

Bennett, J., Dutcher, J., & Snyders, M. (2011). Embrace: addressing anticipatory grief and bereavement in the perinatal population. *Journal of Perinatal Neonatal Nursing, 25*(1), 72-76.

Black, B. P. (2011). Truth telling and severe fetal diagnosis: a virtue ethics perspective. *Journal of Perinatal Neonatal Nursing, 25*(1), 13-20.

British Association of Perinatal Medicine (2010). Palliative care (supportive and end of life care). A framework for clinical practice in perinatal medicine. Retrieved from http://www.bapm.org/.../Palliative_care_final_version_%20Aug10.pdf

Canadian Paediatric Society. (2011). Guidelines for healthcare professionals supporting families experiencing a perinatal loss. Retrieved from http://www.cps.ca/en/documents/position/supporting-families-experiencing-perinatal-loss

Kobler, K. and Limbo R. (2011). Making a case: creating a perinatal palliative care service using a perinatal bereavement program model. *Journal of Perinatal Neonatal Nursing, 25*(1), 32-41.

Lathrop, A and VandeVusse L. (2011). Continuity and change in mother's narratives of perinatal hospice. *Journal of Perinatal Neonatal Nursing, 25*(1), 21-31.

Leuthner, S. and Jones, E. L. (2007). Fetal concerns program. A model for perinatal palliative care. *The American Journal of Maternal Child Nursing, 32*(5), 272-278.

Lohr, K.N. (Ed.). (1990). Medicare: *A strategy for quality assurance*. Washington, D.C.: National Academy Press.

Moore, T., Parrish, H. and Black, B. P. (2011). Interconception care for couples after perinatal loss: A comprehensive review of the literature. *Journal of Perinatal Neonatal Nursing, 25*(1), 44-51.

Moro, T., Kavanaugh, K., Savage, T.A., Reyes, M.R., Kimura, R., & Bhat, R. (2011). Parent decision making for life support for extremely premature infants: from the prenatal through end-of-life. *Journal of Perinatal Neonatal Nursing, 25*(1), 52-60.

Roose, R. E., & Blandford, C.R. (2011). Perinatal grief and support spans the generations: Parents' and grandparents' evaluation of an intergenerational perinatal bereavement program. *Journal of Perinatal Neonatal Nursing, 25*(1), 77-85.

Rosenbaum, J. L., Smith, J.R. and Zollfrank, Reverend (2011). Neonatal end-of-life spiritual support care. *Journal of Perinatal Neonatal Nursing, 25*(1), 61-69.

Sumner, L. H., Kavanaugh, K. and Moro, T. (2006). Extending palliative care into pregnancy and the immediate newborn period. *Journal of Perinatal Neonatal Nursing, 2*(1), 113-116.

Weinhold, O. (2007). Development of the perinatal concerns program. Care of mothers after diagnosis of fatal infant anomalies. *American Journal of Maternal Child Nursing, 32*(1), 30-35.

Widger, K. and Picot, C. (2008). Parents' perceptions of the quality of pediatric and perinatal end-of-life care. *Pediatric Nursing, 34*(1), 53-58.

Appendix I

Measure 09: Women's Health and Wellness Coordination throughout the Life Span

Description

The purpose of this measure is to increase the percentage women who are offered annual health and wellness screening in the ambulatory care setting.

The goal is 100%.

Components

Size of Sample	A random sample of women offered annual health and wellness screening. Minimum of 30 charts per facility are to be reviewed.
Data Collection	Retrospective chart or electronic record review.
Numerator Statement	Women offered annual health and wellness screening and education appropriate for life stage and age. Document support measures offered in the medical record as evidenced by the following: • Immunizations by age are up-to-date • Screening examination and education are appropriate for age and life stage • See attached recommendations, Table I1
Denominator Statement	Total number of women greater than or equal to 18 years of age presenting to the ambulatory clinic for a well visit.
Denominator Exceptions	Women less than 18 years old. Women diagnosed with condition prior to screening will be exempt from that screening. Women who are pregnant. Women with problem-oriented healthcare visit.

Supporting Guideline & Other References	The contribution of registered nurses to women's health and wellness screening and care coordination has been noted by several organizations. The American Nurses Association (ANA) recognizes and promotes the integral role of registered nurses in the care coordination process to improve care quality and outcomes across patient populations and healthcare settings while stewarding the efficient and effective use of healthcare resources (2012). • Patient-centered care coordination is a core professional standard and competency for all registered nursing practice. Based on a partnership guided by the healthcare consumer's and family's needs and preferences, the registered nurse is integral to patient care quality, satisfaction, and the effective and efficient use of health care resources. Registered nurses are qualified and educated for the role of care coordination, especially with high risk and vulnerable populations (ANA, 2012, p. 1). • In partnership with other healthcare professionals, registered nurses have demonstrated leadership and innovation in the design, implementation, and evaluation of successful team-based care coordination processes and models. The contributions of registered nurses performing care coordination services must be defined, measured and reported to ensure appropriate financial and systemic incentives for the professional care coordination role (ANA, 2012, p. 1). Additionally, the Institute of Medicine (IOM, 2010) recognized the immense contribution nurses have in the nation's healthcare initiatives. Recommendations of the IOM include the following: • Nurses should practice to the full extent of their education and training. • Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression. • Effective workforce planning and policy making require better data collection and an improved information infrastructure. • Nurses should be full partners with physicians and other health care professionals in redesigning health care in the United States.

	The first three recommendations support the need for nurses to be engaged in coordination of women's health. Numerous agencies and organizations provide recommendations for women's health screenings and immunization (Agency for Healthcare Research and Quality [AHRQ], 2012; American College of Obstetricians and Gynecologists [ACOG], 2010; American Heart Association [AHA], 2012; Association of Reproductive Health Professionals, 2011; Centers for Disease Control and Prevention [CDC], 2012; Family Violence Prevention Fund, 1999; The Joint Commission [TJC], 2008; U.S. Department of Health and Human Services [DHHS], 2012). The 2013 Healthcare Effectiveness Data and Information Set includes several health and wellness measures appropriate for women's health care (National Committee for Quality Assurance [NCQA], 2013). Many of these screenings, such as those for immunizations and health promotion for the population, can be accomplished independently by nurses. In 2004, the National Quality Forum (NQF) published nurse sensitive indicators that included areas for standard development: • Care of all patient populations, including pediatric, geriatric, and chronically ill patients • Care delivered longitudinally (across the continuum),including health promotion/disease prevention and end-of-life care • Patient education • Coordination and integration of care, including case management • Access to and equity of nursing care provided • Efficiency of nursing care, including stewardship of resources Many of these measures are not yet in place. This AWHONN measure addresses several of these areas. Nurses can and should promote health and wellness in women through consistent screening assessments at well visits.

Importance	
Relationship to Desired Outcome	Despite numerous recommendations, one consolidated measure for women's health and wellness coordination across the life span does not exist. The 2012 National Quality Forum Perinatal and Reproductive Health Measures do not include measures that address women outside of pregnancy and the postpartum period.
Opportunity for Improvement	Ensure that women have an opportunity for nurse-driven wellness screening and immunizations across the reproductive life span.
IOM Domains of Health Care Quality Addressed	Safe, Effective, Efficient, Patient-centered, Equitable, Timely
Exception Justification	Women less than 18 years of age follow pediatric screening requirements. Women who are in treatment for specific indicator will be exempt from that indicator. Pregnant women are exempt, as they should follow recommendations for pregnancy. Women who present with problems will have limited, problem-focused visits rather than wellness examinations and screening.
Harmonization with Existing Measures	No other measure exists for comprehensive women's health in the ambulatory setting.

Designation	
Measure Purpose	- Quality Improvement - Accountability
Type of Measure	- Outcome or Process
Level of Measurement	- Nurse-level - Group-level - Facility-level
Care Setting	- Ambulatory care setting
Data Source	- Electronic Health Record (EHR) Data - Administrative Data/Claims (inpatient or outpatient claims) - Administrative Data/Claims (multiple-source - Paper medical record

REFERENCES

Agency for Healthcare Research and Quality. (2012). Guide to clinical preventive services, 2012. Recommendations of the U.S. Preventive Services Task Force. Rockville, MD: Author. Retrieved from http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/guide/abstract.html

American College of Obstetricians and Gynecologists. (2010). Screening for depression during and after pregnancy. ACOG committee opinion no. 453. Washington, DC: Author. Retrieved from http://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Obstetric_Practice/Screening_for_Depression_During_and_After_Pregnancy

American Heart Associations. (2012). About heart disease in women. Dallas, TX: Author. Retrieved from http://www.goredforwomen.org/home/about-heart-disease-in-women/

American Nurses Association. (2012). Care coordination and nurse's essential role. ANA position statement. *Nursing World*. Retrieved from http://nursingworld.org/MainMenuCategories/Policy-Advocacy/Positions-and-ResolutionsANAPositionStatements/Position-Statements-Alphabetically/Care-Coordination-and-Registered-Nurses-Essential-Role.html

Association of Reproductive Health Professionals. (2011). Handbook on female sexual health \ and wellness. Washington, DC: Author. Retrieved from http://www.arhp.org/Publications-and-Resources/Clinical-Practice-Tools/Handbook-On-Female-Sexual-Health-And-Wellness

Centers Disease Control and Prevention. (2012). Adult immunization schedules United States, 2014. Atlanta, GA: Author. Retrieved from http://www.cdc.gov/vaccines/schedules/hcp/adult.html

Family Violence Prevention Fund. (1999). Preventing domestic violence: Clinical guidelines on routine screening. San Francisco, CA: Author. Retrieved from http://new.vawnet.org/Assoc_Files_VAWnet/screpol.pdf

Institute of Medicine. (2010). Future of nursing leading change advancing health. Washington, DC: National Academy of Science. Retrieved from http://www.iom.edu/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx

National Committee for Quality Assurance. (2013). Healthcare effectiveness data and information set. Washington, DC: Author. Retrieved from http://www.ncqa.org/HEDISQualityMeasurement/HEDISMeasures/HEDIS2013.aspx

National Quality Forum. (2004). National voluntary consensus standards for nursing-sensitive care: An initial performance measure set. Washington, DC: Author. Retrieved from http://www.qualityforum.org/Publications/2004/10/National_Voluntary_Consensus_Standards_for_Nursing-Sensitive_Care__An_Initial_Performance_Measure_Set.aspx

National Quality Forum. (2012). Endorsement summary: Perinatal and reproductive health measures. Washington, DC: Author. Retrieved from http://www.qualityforum.org/Projects/n-r/Perinatal_Care_Endorsement_Maintenance_2011/Perinatal_and_Reproductive_Healthcare_Endorsement_Maintenance_2011.aspx

The Joint Commission. (2008). Improving and measuring osteoporosis management. Oakbrook Terrace, IL: Author. Retrieved from http://www.jointcommission.org/measure_development_initiatives.aspx

U.S. Department of Health and Human Services, Office on Women's Health. (2012). Fitness and nutrition. Washington, DC: Author. Retrieved from http://www.womenshealth.gov/fitness-nutrition/index.html

Women's Health & Wellness Coordination throughout the Life Span

Immunizations (CDC, 2012)	**19–21 years**	**22–26 years**	**27–49 years**	**50–59 years**	**60–64 years**	**≥65 years**
Influenza	One dose annually					
Tetanus, diphtheria, pertussis (Tdap/ TD)	Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 years					
Human papillomavirus (HPV)	3 doses					
Zoster						1 dose
Measles, Mumps, Rubella (MMR)	Rubella immunity for women of childbearing age should be determined. 1 or 2 doses if lack documentation of vaccination or no evidence of previous infection					1 dose if risk factors present
Pneumococcal	1 or 2 doses if risk factors present					1 dose
Meningococcal	1 or more doses if risk factors present					
Hepatitis A	2 doses if risk factors present					
Hepatitis B	3 doses if risk factors present					
Screening & education	**19–21 years**	**22–26 years**	**27–49 years**	**50–59 years**	**60–64 years**	**≥65 years**
Reproductive health & planning (AHRQ, 2012; Association of Reproductive Health Professionals, 2011)	Contraception, pregnancy planning, peri-menopause (ages >45 years), sexual health. Folic acid supplement for women planning pregnancy or capable of becoming pregnant (AHRQ, 2012).			Menopause, sexual health	Sexual health	
Blood pressure (AHRQ, 2012)	Screen every 2 years with BP <120/80. Screen every year with SBP of 120–139 mmHg or DBP of 80–90 mmHg.					
Cholesterol (US HHS, 2012) & Lipid Disorder (AHRQ, 2012)	Starting at age 20, test regularly if at increased risk for heart disease (US HHS, 2012).		Ages ≥45 years with increased risk heart disease, strongly recommended (AHRQ, 2012).			
Heart health education (weight management, fitness & exercise, diet, risk factors, signs & symptoms MI (US HHS, 2012; AHA, 2012)	Educate all women on prevention of heart disease, risk factors, healthy lifestyle.					
Diabetes (AHRQ, 2012) (excludes pregnancy)	Screen for diabetes in asymptomatic women with sustained BP > 135/80.					

Women's Health & Wellness Coordination throughout the Life Span

Breast cancer- self exam & mammography (AHRQ, 2012)	Breast self-exam; promote and support breastfeeding					
		Ages 40–49 individualize	Age 50–74 Screen every two years			
Cervical cancer (AHRQ, 2012)	Ages 21–65 screen with cytology every 3 years					
Colorectal cancer (AHRQ, 2012)						
Screening & education	**19–21 years**	**22–26 years**	**27–49 years**	**50–59 years**	**60–64 years**	**≥65 years**
Substance use (tobacco, alcohol, prescription and non-prescription drugs, herbs, illegal substances (AHRQ, 2012)	Ask about tobacco use. Provide tobacco cessation interventions to those who use tobacco product. Review all medical and supplement use. Evaluate for signs & symptoms of illicit drug use. Screening strategies appropriate for clinical setting and population.					
Domestic violence (Family Violence Prevention Fund, 1999)	Culturally competent routine screening should be done whether or not symptoms or signs present or provider suspects abuse has occurred.					
Depression and mental health (ACOG, 2010)	Screen for depression during & after pregnancy with appropriate tool (ACOG, 2010).			Any positive finding should prompt appropriate referral to mental health specialist		
	Any positive finding should prompt appropriate referral to mental health specialist					
Osteoporosis (AHRQ, 2012; TJC, 2008)	Education on prevention age related & secondary causes bone loss					Screen ≥65 yrs
	Women <65 years with risk; postmenopausal women.					

Appendix J

Measure 10a: Continuous Labor Support

Description

The purpose of this measure is to increase the percentage of women in labor who receive continuous, non-pharmacologic labor support customized to meet their physical and emotional needs provided by a registered nurse (RN) or by a certified doula who follows the guidance of the RN.

The goal is that 100%.

Components

Size of Sample	Minimum of 30 randomly selected women or all women if the population is less than 30.
Data Collection	Randomly selected retrospective chart review.
Numerator Statement	The number of women with spontaneous or induced labor with documentation in the medical record of continuous labor support.
Denominator Statement	All women without scheduled cesareans who are admitted to a labor and birth unit for intrapartum care. Includes women admitted for an induction or augmentation of labor.
Denominator Exceptions	• Women who are admitted to a labor and birth unit for reasons other than intrapartum care. • Women with scheduled cesareans.

Supporting Guideline & Other References	"Continuously available labor support from a registered nurse (RN) is a critical component to achieve improved birth outcomes…Continuously available labor support promotes patient safety, including in the second stage of labor" (Association of Women's Health, Obstetric and Neonatal Nurses [AWHONN], 2011, p. 665). "Continuous support during labor from caregivers (nurses, midwives or lay individuals) may have a number of benefits for women and their newborns…Continuous support during labor has several benefits without any evidence of harmful effects" (American College of Obstetrics and Gynecology [ACOG], 2003, p. 1449)."

Importance

Relationship to Desired Outcome	Labor is a dynamic event in a woman's life during which she needs adequate emotional and physical support and comfort. Non-pharmacologic methods of supporting and comforting women in labor have been shown to be therapeutic and to have an impact on women's experiences and birth outcomes (Stark & Jones, 2006). Researchers suggested that providing comfort and support to women in labor improves birth outcomes (Hodnett, Gates, Hofmeyr, & Sakala, 2012; Kardong-Edgren, 2001; Thacker & Stroupe, 2000). However, the number of women who have access to non-pharmacologic labor support interventions provided or supervised by an RN is not known currently. In a Cochrane Review of 22 trials (n=15,288 women), Hodnett and colleagues showed that women allocated to continuous support were more likely to have • A spontaneous vaginal birth (RR 1.08, 95% confidence interval (CI) 1.04 to 1.12) • Shorter labors (MD -0.58 hours, 95% CI -0.85 to -0.31)

	These women were less likely to have: • Intrapartum analgesia (RR 0.90, 95% CI 0.84 to 0.96) • Dissatisfaction (RR 0.69, 95% CI 0.59 to 0.79) • Cesarean (RR 0.78, 95% CI 0.67 to 0.91) • Instrumental vaginal birth (fixed-effect, RR 0.90, 95% CI 0.85 to 0.96) • Regional analgesia (RR 0.93, 95% CI 0.88 to 0.99) • Infants with low five-minute Apgar scores (fixed-effect, RR 0.69, 95% CI 0.50 to 0.95). In the studies included for review, continuous support was provided by hospital staff (such as nurses or midwives), women who were not hospital employees and had no personal relationship to the laboring woman (such as doulas or women who were provided with a modest amount of guidance), or by companions of the woman's choice from her social network (such as her husband, partner, mother, or friend) (Hodnett et al., 2012). Continuous support during labor has not been shown to cause harm and has been shown to have benefits for women and infants (ACOG, 2003). "Three work-sampling studies of intrapartum nursing care found that nurses spent only 6% to 12% of their time providing supportive care and only 11% to 39% of their time providing direct care" (Gagnon & Waghorn, 1996; Gale, Fothergill-Bourbonnais, & Chamberlain, 2001; McNiven, Hodnett, & O'Brien-Pallas, 1992). Current overuse and variation in cesarean rates are associated with variations in clinical practice patterns rather than the characteristics of women giving birth or women's choices (Kozhimannil, Law, & Virnig, 2013; Main et al., 2006; Main, et al., 2012).

Opportunity for Improvement	It is currently unknown how many women have access to continuous labor support provided or supervised by an RN. Labor support education for RNs, physicians, and midwifes. Women with continuous labor support are more likely to report satisfaction with their childbirth experience (Hodnett et al., 2012).
IOM Domains of Health Care Quality Addressed	Safe, Effective, Patient-Centered, Timely, Efficient, Equitable
Exception Justification	Women with a scheduled surgical birth are not typically in labor.
Harmonization with Existing Measures	There are no other quality measures for labor support.

Designation

Measure Purpose
- Quality Improvement
- Accountability

Type of Measure
- Process

Level of Measurement
- Nurse-level
- Group-level
- Facility-level

Care Setting
- Hospital Labor and Delivery Unit

Data Source
- Chart review

DEFINITIONS

Non-Pharmacologic Labor Support--includes physical and emotional nursing interventions that support a woman who is in labor to enhance her physical comfort, confidence in her ability to give birth, and sense of being cared for and being safe. A registered nurse or other members of the care team with licenses must supervise non-licensed individuals performing labor support interventions, e.g., a doula. Individuals must have evidence-based knowledge concerning how to perform and customize non-pharmacologic labor support interventions. Non-pharmacologic labor support nursing interventions include the following:

- Be in the room with the woman continuously;
- Encourage the woman to labor in positions of her choice, e.g., walk or use balance ball;
- Use guided imagery and therapeutic breathing;
- Use touch therapy, such as a back rub, leg massage, or counter pressure;
- Use hydrotherapy in a tub or shower;
- Apply warm or cool compresses to various parts of the woman's body;
- Use aromatherapy;
- Provide emotional support: verbally encourage, reassure, and praise the woman and provide easy to understand information about how labor is progressing and how she and her baby are doing;
- Support the woman's nutritional needs; and
- Advocate for the woman by helping her to articulate her wishes to others.

(Hodnett et al., pg. 7, 2011; Sleutel, 2002; Sleutel, 2003).

REFERENCES

American College of Obstetricians and Gynecologists. (2003). Dystocia and augmentation of labor. ACOG practice bulletin no. 49. *Obstetrics & Gynecology, 102*(6), 1445-1454.

Association of Women's Health, Obstetric and Neonatal Nurses. (2011). Nursing support of laboring women. Position statement. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 40*(5), 665-6.

Gagnon & Waghorn. (1996). Supportive care by maternity nurses: a work sampling study in an intrapartum unit. *Birth, 23*(1), 1-6.

Gale, J., Fothergill-Bourbonnais, F., & Chamberlain. (2001). Measuring nursing support childbirth. American *Journal of Maternal and Child Nursing, 26*(5), 264-71.

Hodnett, E. D., Gates, S., Hofmeyr, G. J., & Sakala, C. (2012). Continuous support for women during childbirth. *Cochrane Database of Systematic Reviews, 10*: CD003766.

Kardong-Edgren, S. (2001). Using evidence-based practice to improve intrapartum care. *Journal of Obstetric, Gynecologic and Neonatal Nursing*, *30*(4), 371-375.

Kozhimannil, K. B., Law, M. R., & Virnig, B. A. (2013). Cesarean delivery rates vary tenfold among US hospitals; Reducing variation may address quality and cost issue. *Health Affairs, 32(3), 527-35.*

Main, E. K., Moore, D., Farrell, B., Schimmel, L. D., Altman, R. J., Abrahams, C.,...Sterling, J. (2006). Is there a useful cesarean birth measure? Assessment of the nulliparous term singleton vertex cesarean birth rate as a tool for obstetric quality improvement. *American Journal of Obstetrics and Gynecology*, *194*(6), 1644–1651.

Main, E. K., Morton, C. H., Melsop, K., Hopkins, D., Giuliani, G., & Gould, J. B. (2012). Creating a public agenda for maternity safety and quality in cesarean delivery. *Obstetrics and Gynecology, 120*(5), 1194–1198.

McNiven, P., Hodnett, E., O'Brien-Pallas, L. L. (1992). Supporting women in labor: A work sampling study of the activities of labor and delivery nurses. *Birth, 19*(1), 3-8.

Sleutel, M. R. (2002). Development and testing of the Labor Support Scale. *Journal of Nursing Measurement, 10*(3), 249–262.

Sleutel, M. R. (2003). Intrapartum nursing: Integrating Rubin's framework with social support theory. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 32*(1), 76–82.

Stark, M. A., & Jones, M. (2006). Advanced preparation and positive labor support create an optimal experience for normal birth. *Journal of Perinatal Education, 15*(2), 4-7.

Thacker, S. B., & Stroupe, D. F. (2000). Continuous electronic fetal heart rate monitoring for fetal assessment during labor. *Cochrane Database of Systematic Reviews, 2*: CD000063.

ADDITIONAL RESOURCES

Association of Women's Health, Obstetric and Neonatal Nurses. (2008). *Nursing care and management of the second stage of labor. Evidence-based clinical practice guideline* (2nd Ed). Washington, DC: Author.

Bianchi, A. L., & Adams, E. D. (2009). Labor support during second stage labor for women with epidurals. *Nursing for Women's Health, 13*(1), 39-47.

Curl, M., Davies, R., Lothian, S., Pascali-Bonaro, D., Scaer, R., & Walsh, A. (2004).Overview: childbirth educators, doulas, nurses, and women respond to the six care practices for normal birth. *Journal of Perinatal Education, 13*(2), 42-50.

Green, J., Amis, D., & Hotelling, B. (2007). Care practice #3: continuous labor support. *Journal of Perinatal Education, 16*(3), 25-28.

Hottenstein, S. (2005). Continuous labor support: creating optimal birth experiences through theory-driven nursing care. *AWHONN Lifelines, 9*(3), 242-247.

Hunter, L. (2009). A descriptive study of "being with woman" during labor and birth. *Journal of Midwifery & Women's Health, 54*(2), 111-118.

Lothian, J. (2004). Position paper: promoting, protecting, and supporting normal birth. *Journal of Perinatal Education, 13(*2), 1-5.

Payant, L., Davies, B., Graham, I., Peterson, W., & Clinch, J. (2008). Nurses' intentions to provide continuous labor support to women. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 37*(4), 405-414.

Romano, A., & Lothian, J. (2008). Promoting, protecting, and supporting normal birth: a look at the evidence. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 37*(1), 94-105.

Ruhl, C., Adams, E., Besuner, P., Bianchi, A., Lowe, N., Ravin, C.,...Simkin, P. (2006). Labor support: exploring its role in modern and high-tech birthing practices. *AWHONN Lifelines, 10*(1), 58-65.

Sauls, D. (2006). Dimensions of professional labor support for intrapartum practice. *Journal of Nursing Scholarship, 38*(1), 36-41.

Shilling, T., & DiFranco, J. (2004). Care practices that promote normal birth #2: freedom of movement throughout labor. *Journal of Perinatal Education, 13*(2), 11-15.

Sleutel, M. R. (2000). Intrapartum nursing care: A case study of supportive interventions and ethical conflicts. *Birth, 27*(1), 38-45.

Sleutel et al., (2007). Nurses' views of factors that help and hinder their intrapartum care. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 36*(3), 203-11.

World Health Organization, Department of Reproductive health and Research (1999). *Care in normal birth: A practical guide*. Geneva, Switzerland: Author.

Appendix J

Measure 10b: Partial Labor Support

Description

The purpose of this measure is to increase the percentage of women who receive non-pharmacologic labor support from a registered nurse (RN) at least once every hour during intrapartum labor care.

The goal is 100%.

Components

Size of Sample	Minimum of 30 randomly selected women or all women if population is less than 30.
Data Collection	Randomly selected retrospective chart review.
Numerator Statement	The number of women with spontaneous or induced labor where documentation indicates that the woman received at least one non-pharmacologic nursing intervention to support labor every hour for the duration of the first stage of labor. Refer to the definition of labor support and technical information on how to calculate the numerator.
Denominator Statement	All women without scheduled cesareans who are admitted to a labor and birth unit for intrapartum care. Includes women admitted for an induction or augmentation of labor.
Denominator Exceptions	• Women who are admitted to a labor and birth unit for reasons other than intrapartum care. • Women with scheduled cesareans
Supporting Guideline & Other References	"Continuously available labor support from a registered nurse (RN) is a critical component to achieve improved birth outcomes...Continuously available labor support promotes patient safety" (Association of Women's Health, Obstetric and Neonatal Nurses [AWHONN], 2011, p. 665). "Continuous support during labor from caregivers (nurses, midwives or lay individuals) may have a number of benefits for women and their newborns....Continuous support during labor has several benefits without any evidence of harmful effects" (American College of Obstetricians and Gynecologists [ACOG], 2003, p. 1449).

Importance	
Relationship to Desired Outcome	Labor is a dynamic event in a woman's life during which she needs adequate emotional and physical support and comfort. Non-pharmacologic methods of supporting and comforting women in labor have been shown to be therapeutic and to have an impact on women's experiences and birth outcomes (Stark & Jones, 2006). Researchers suggested that providing comfort and support to women in labor improves birth outcomes (Hodnett, Gates, Hofmeyr, & Sakala, 2012; Kardong-Edgren, 2001; Thacker & Stroupe, 2000). However, the number of women who have access to non-pharmacologic labor support interventions provided or supervised by an RN is not known currently. In a Cochrane Review of 22 trials (n=15,288 women), Hodnett and colleagues showed that women allocated to continuous support were more likely to have • Spontaneous vaginal birth (RR 1.08, 95% confidence interval (CI) 1.04 to 1.12) • Shorter labors (MD -0.58 hours, 95% CI -0.85 to -0.31) These women were less likely to have: • Intrapartum analgesia (RR 0.90, 95% CI 0.84 to 0.96) • Dissatisfaction (RR 0.69, 95% CI 0.59 to 0.79) • Cesarean (RR 0.78, 95% CI 0.67 to 0.91) • Instrumental vaginal birth (fixed-effect, RR 0.90, 95% CI 0.85 to 0.96) • Regional analgesia (RR 0.93, 95% CI 0.88 to 0.99) • A baby with a low five-minute Apgar score (fixed-effect, RR 0.69, 95% CI 0.50 to 0.95). In the studies included for review, continuous support was provided by hospital staff (such as nurses or midwives), women who were not hospital employees and had no personal relationship to the laboring woman (such as doulas or women who were provided with a modest amount of guidance), or by companions of the woman's choice from her social network (such as her husband, partner, mother, or friend) (Hodnett et al., 2012).

	Continuous support during labor has not been shown to cause harm and has been shown to have benefits for women and infants (ACOG, 2003). "Three work-sampling studies of intrapartum nursing care found that nurses spent only 6% to 12% of their time providing supportive care and only 11% to 39% of their time providing direct care" (Gagnon & Waghorn, 1996; Gale, Fothergill-Bourbonnais, & Chamberlain, 2001; McNiven, Hodnett, & O'Brien-Pallas, 1992). Current overuse and variation in cesarean rates is associated with variations in clinical practice patterns rather than the characteristics of the women giving birth and women's choices (Kozhimannil, Law, & Virnig, 2013; Main et al., 2006; Main, et al., 2012).
Opportunity for Improvement	It is currently unknown how many women have access to at least one labor support intervention every hour provided by an RN. Labor support education for RNs, physicians, and midwifes. Women with continuous labor support are more likely to report satisfaction with their childbirth experience (Hodnett et al., 2012).
IOM Domains of Health Care Quality Addressed	Safe, Effective, Patient-Centered, Timely, Efficient, Equitable
Exception Justification	Women with a scheduled surgical birth are not typically in labor.
Harmonization with Existing Measures	There are no other quality measures for labor support.

Designation	
Measure Purpose	- Quality Improvement
	- Accountability
Type of Measure	- Process
Level of Measurement	- Nurse-level
	- Group-level
	- Facility-level
Care Setting	- Hospital Labor and Delivery Unit
Data Source	- Chart review

DEFINITIONS

Non-Pharmacologic Labor Support—includes physical and emotional nursing interventions that support a woman who is in labor to enhance her physical comfort, confidence in her ability to give birth, and sense of being cared for and being safe. A registered nurse or other members of the care team with licenses must supervise non-licensed individuals performing labor support interventions, e.g., a doula. Individuals must have evidence-based knowledge concerning how to perform and customize non-pharmacologic labor support interventions. Non-pharmacologic labor support nursing interventions include the following:

- Be in the room with the woman continuously;
- Encourage the woman to labor in positions of her choice, e.g., walk or use balance ball;
- Use guided imagery and therapeutic breathing;
- Use touch therapy, such as a back rub, leg massage, or counter pressure;
- Use hydrotherapy in a tub or shower;
- Apply warm or cool compresses to various parts of the woman's body;
- Use aromatherapy;
- Provide emotional support: verbally encourage, reassure, and praise the woman and provide easy to understand information about how labor is progressing and how she and her baby are doing;
- Support the woman's nutritional needs; and
- Advocate for the woman by helping her to articulate her wishes to others.

(Hodnett et al., pg. 7, 2011; Sleutel, 2002; Sleutel, 2003).

Some Labor Support--is the determination that a woman in labor did or did not receive non-pharmacologic labor support nursing intervention(s) each hour. If she did receive at least one labor support intervention every hour, record yes. If she did not receive at least one labor support intervention every hour, record no. One no means the woman must not be classified as having received some labor support intervention(s) every hour when she was in labor.

REFERENCES

American College of Obstetricians and Gynecologists. (2003). Dystocia and augmentation of labor. ACOG practice bulletin no. 49. *Obstetrics & Gynecology*, 102(6), 1445-1454.

Association of Women's Health, Obstetric and Neonatal Nurses. (2011). Nursing support of laboring women. Position statement. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 40*(5), 665-666.

Gagnon, A. J., & Waghorn, K. (1996). Supportive care by maternity nurses: A work sampling study in an intrapartum unit. *Birth, 23*(1), 1-6.

Gale, J., Fothergill-Bourbonnais, F., & Chamberlain. (2001). Measuring nursing support during childbirth. *American Journal of Maternal Child Nursing, 26*(5), 264-71.

Hodnett, E., Gates, S., Hofmeyr, G., & Sakala, C. (2012). Continuous support for women during childbirth. *Cochrane Database of Systematic Reviews, 10*: CD003766.

Kardong-Edgren, S. (2001). Using evidence-based practice to improve intrapartum care. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 30*(4), 371-375.

Kozhimannil, K. B., Law, M. R., Virnig, B. A. (2013). Cesarean delivery rates vary tenfold among US hospitals; reducing variation may address quality and cost issue. *Health Affairs, 32*(3), 527-35.

Main, E. K., Moore, D., Farrell, B., Schimmel, L. D., Altman, R. J., Abrahams, C.,...Sterling, J. (2006). Is there a useful cesarean birth measure? Assessment of the nulliparous term singleton vertex cesarean birth rate as a tool for obstetric quality improvement. *American Journal of Obstetrics and Gynecology, 194*(6), 1644–1651.

Main, E. K., Morton, C. H., Melsop, K., Hopkins, D., Giuliani, G., & Gould, J. B. (2012). Creating a public agenda for maternity safety and quality in cesarean delivery. *Obstetrics and Gynecology, 120*(5), 1194–1198.

McNiven, P., Hodnett, E., O'Brien-Pallas, L. L. (1992). Supporting women in labor: A work sampling study of the activities of labor and delivery nurses. *Birth, 19*(1), 3-8.

Sleutel, M. R. (2002). Development and testing of the Labor Support Scale. *Journal of Nursing Measurement, 10*(3), 249–262.

Sleutel, M. R. (2003). Intrapartum nursing: Integrating Rubin's framework with social support theory. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 32*(1), 76–82.

Stark, M., & Jones, M. (2006). Advanced preparation and positive labor support create an optimal experience for normal birth. *Journal of Perinatal Education, 15*(2), 4-7.

Thacker, S. B., & Stroupe, D. F. (2000). Continuous electronic fetal heart rate monitoring for fetal assessment during labor. *Cochrane Database of Systematic Reviews, 2*: CD000063.

ADDITIONAL RESOURCES

Association of Women's Health, Obstetric and Neonatal Nurses. (2008). *Nursing care and management of the second stage of labor. Evidence-based clinical practice guideline* (2nd Ed). Washington, DC: Author.

Bianchi, A. L., & Adams, E. D. (2009). Labor support during second stage labor for women with epidurals. *Nursing for Women's Health, 13*(1), 39-47.

Curl, M., Davies, R., Lothian, S., Pascali-Bonaro, D., Scaer, R., & Walsh, A. (2004).Overview: childbirth educators, doulas, nurses, and women respond to the six care practices for normal birth. *Journal of Perinatal Education, 13*(2), 42-50.

Green, J., Amis, D., & Hotelling, B. (2007). Care practice #3: continuous labor support. *Journal of Perinatal Education, 16*(3), 25-28.

Hottenstein, S. (2005). Continuous labor support: creating optimal birth experiences through theory-driven nursing care. *AWHONN Lifelines, 9*(3), 242-247.

Hunter, L. (2009). A descriptive study of "being with woman" during labor and birth. *Journal of Midwifery & Women's Health, 54*(2), 111-118.

Lothian, J. (2004). Position paper: promoting, protecting, and supporting normal birth. *Journal of Perinatal Education, 13*(2), 1-5.

Romano, A., & Lothian, J. (2008). Promoting, protecting, and supporting normal birth: a look at the evidence. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 37*(1), 94-105.

Ruhl, C., Adams, E., Besuner, P., Bianchi, A., Lowe, N., Ravin, C.,... Simkin, P. (2006). Labor support: exploring its role in modern and high-tech birthing practices. *AWHONN Lifelines, 10*(1), 58-65.

Sauls, D. (2006). Dimensions of professional labor support for intrapartum practice. *Journal of Nursing Scholarship, 38*(1), 36-41.

Shilling, T., & DiFranco, J. (2004). Care practices that promote normal birth #2: freedom of movement throughout labor. *Journal of Perinatal Education, 13*(2), 11-15.

Sleutel, M. R. (2000). Intrapartum nursing care: A case study of supportive interventions and ethical conflicts. *Birth, 27*(1), 38-45.

Sleutel et al., (2007). Nurses' views of factors that help and hinder their intrapartum care. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 36*(3), 203-11.

World Health Organization, Department of Reproductive health and Research (1999). *Care in normal birth: A practical guide*. Geneva, Switzerland: Author.

Appendix K

Measure 11: Freedom of Movement during Labor

Description

The purpose of this measure is to increase the percentage of women with term pregnancies (greater than 37 weeks and 0 days gestation) who experience freedom of movement during labor.

Registered nurses (RN) provide advice, support, and encouragement to women so they may be empowered to take advantage of the full range of positioning options when they are in labor. RNs encourage, without limitation, women's access to positions that are restful and comfortable for them.

The goal is 100%.

Components

Size of Sample (A)	At least 30 randomly selected observations of women without epidural analgesia in the first stage of labor.
Data Collection (A)	Randomly selected times of observation. Be sure to perform observations on night and day shifts and on all days of the week.
Numerator Statement (A)	The percentage of women without an epidural admitted for intrapartum care who are laboring in a location other than a bed. For example, women who labor in a rocking chair, on a birthing ball, in a shower, in a tub, or walking. Refer to the definition of freedom of movement and technical information on how to calculate the numerator.
Denominator Statement (A)	All women in the first stage of labor without epidural analgesia and without scheduled cesareans.
Denominator Exceptions (A)	• All women on therapeutic bed rest due to a medical condition (e.g., preeclampsia, preterm labor). • Women in the second stage of labor. • Women with scheduled cesareans.
Supporting Guideline & Other References	Lamaze International (Shilling, & DiFranco, 2004).

Size of Sample (B)	At least 30 randomly selected observations of women with epidural analgesia in the first stage of labor.
Data Collection (B)	Randomly selected times of observation. Be sure to perform observations on both night and day shifts and on all days of the week.
Numerator Statement (B)	The percentage of women with epidural analgesia admitted for intrapartum care who are laboring in a location other than supine. For example, women who labor in the left or right lateral position, hand-knees, or semi-sitting. Refer to the definition of freedom of movement and technical information on how to calculate the numerator.
Denominator Statement (B)	All women in the first stage of labor with epidural analgesia and without scheduled cesarean births.
Denominator Exceptions (B)	• All women on therapeutic bed rest due to a medical condition (e.g., preeclampsia, pre-term labor). • Women in the second stage of labor. • Women with scheduled cesareans.
Supporting Guideline & Other References	Lamaze International (Shilling, & DiFranco, 2004).

Importance

Relationship to Desired Outcome	Freedom of movement should be an option for women since it is known to enhance the ability of some women to cope with the pain of labor (Shilling & DiFranco, 2004). Using a variety of positions makes it easier for the woman to work with her body and with the fetus as the fetus moves through the pelvis. Upright positions allow gravity to assist the mother to move the fetus through the pelvis and gravity-neutral positions may be more relaxing. Upright positions include standing, kneeling, and squatting. Gravity-neutral positions include side-lying and hands-knees. (Bianchi & Adams, 2009; Romano & Lothian, 2008).

Opportunity for Improvement	Most women do not experience freedom of movement when they are in labor. Even women who require continuous fetal monitoring can experience freedom of movement in labor if fetal monitor telemetry is available.
IOM Domains of Health Care Quality Addressed	Safe, Effective, Patient-Centered, Timely, Efficient, Equitable
Exception Justification	Measuring the number of women out of bed during second stage of labor is a separate quality measure. Women in premature labor may need therapeutic bed rest.
Harmonization with Existing Measures	There are no other measures for freedom of movement in labor.

Designation	
Measure Purpose	- Quality Improvement - Accountability
Type of Measure	- Process
Level of Measurement	- Nurse-level - Group-level - Facility-level
Care Setting	- Hospital – Labor & Delivery
Data Source	- Random Observations

DEFINITIONS

Freedom of Movement During Labor—allows a woman to choose a labor position that is most comfortable for her. Registered nurses are integral to this process: they suggest alternatives and support the woman in choosing positions that are most conducive to her individualized needs and tailored to her current stage and phase of labor. Walking, moving, and changing po-

sitions are all important options to facilitate freedom of movement. Resting places other than beds, such as rocking chairs and birthing balls, may be suggested. RNs provide advice, support, and encouragement to women to empower them to take advantage of the full range of options during labor. Women should have unlimited access to positions that are restful and comfortable for them. Registered nurses should be knowledgeable about positioning techniques for women with epidural analgesia, and they play a key role in supporting position changes that facilitate the birth process, promote maternal comfort, and maintain patient safety.

Freedom of movement during labor is calculated by randomly selecting different times of the day (including day and night shifts and all days of the week) and counting the number of women laboring in a location other than a bed and the number of women laboring in a bed. Include at least 50 randomly selected observations of women in the first stage of labor. Add the number of women not laboring in bed to those laboring in bed to determine the total number of women observed. Divide the number of women laboring in a location other than a bed by the total number of women observed to determine the percentage of women who labored out of bed during the observation periods.

REFERENCES

Bianchi, A., & Adams, E. D. (2009). Labor support during second stage labor for women with epidurals. *Nursing for Women's Health, 13*(1), 39-47.

Romano, A. M., & Lothian, J. A. (2008). Promoting, protecting, and supporting normal birth: A look at the evidence. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 37*(1), 94-104.

Shilling, T., & DiFranco, J. (2004). Care practices that promote normal birth #2: Freedom of movement throughout labor. *Journal of Perinatal Education, 13*(2), 11-15.

ADDITIONAL RESOURCES

American College of Obstetricians and Gynecologists. (2003). Dystocia and augmentation of labor. ACOG practice bulletin no. 49. *Obstetrics & Gynecology, 102*(6), 1445-1454.

Association of Women's Health, Obstetric and Neonatal Nurses. (2011). Position Statement: *Nursing Support of Laboring Women*. Washington, DC: Author.

Association of Women's Health, Obstetric and Neonatal Nurses. (2008). *Nursing care and management of the second stage of labor. Evidence-based clinical practice guideline (*2nd ed.). Washington, DC: Author.

Association of Women's Health, Obstetric and Neonatal Nurses. (2011). Position statement: Nursing support of laboring women. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 40*(5), 665–666.

Curl, M., Davies, R., Lothian, S., Pascali-Bonaro, D., Scaer, R., & Walsh, A. (2004).Overview: childbirth educators, doulas, nurses, and women respond to the six care practices for normal birth. *Journal of Perinatal Education, 13*(2), 42-50.

Green, J., Amis, D., & Hotelling, B. (2007). Care practice #3: continuous labor support. *Journal of Perinatal Education, 16*(3), 25-28.

Gupta, J., Hofmeyr, G., & Smyth, R. (2012). Position in the second stage of labour for women without epidural anaesthesia. *Cochrane Database of Systematic Reviews, 5*, CD002006

Hodnett, E., Gates, S., Hofmeyr, G., & Sakala, C. (2007). Continuous support for women during childbirth. *Cochrane Database of Systematic Reviews, 3*:CD003766.

Hottenstein, S. (2005). Continuous labor support: creating optimal birth experiences through theory-driven nursing care. *AWHONN Lifelines, 9*(3), 242-247.

Hunter, L. (2009). A descriptive study of "being with woman" during labor and birth. *Journal of Midwifery & Women's Health, 54*(2), 111-118.

Lothian, J. (2004). Position paper: promoting, protecting, and supporting normal birth. *Journal of Perinatal Education, 13*(2), 1-5.

Payant, L., Davies, B., Graham, I., Peterson, W., & Clinch, J. (2008). Nurses' intentions to provide continuous labor support to women. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 37*(4), 405-414.

Ruhl, C., Adams, E., Besuner, P., Bianchi, A., Lowe, N., Ravin, C.,...Simkin, P. (2006). Labor support: exploring its role in modern and high-tech birthing practices. *AWHONN Lifelines, 10*(1), 58-65.

Sauls, D. (2006). Dimensions of professional labor support for intrapartum practice. *Journal of Nursing Scholarship, 38*(1), 36-41.

Sleutel, M. (2003). Intrapartum nursing: Integrating Rubin's framework with social support theory. *Journal of Obstetric, Gynecologic and Neonatal Nursing, 32*(1), 76-82.

Stark, M., & Jones, M. (2006). Advanced preparation and positive labor support create an optimal experience for normal birth. *Journal of Perinatal Education, 15*(2), 4-7.

World Health Organization, Department of Reproductive health and Research (1999). Care in normal birth: *A practical guide*. Geneva, Switzerland: Author.

AWHONN

PROMOTING THE HEALTH OF
WOMEN AND NEWBORNS

2000 L Street, NW, Suite 740
Washington, DC 20036
www.awhonn.org