

# NATIONAL QUALITY FORUM

## Measure Submission and Evaluation Worksheet 5.0

This form contains the information submitted by measure developers/stewards, organized according to NQF's measure evaluation criteria and process. The evaluation criteria, evaluation guidance documents, and a blank online submission form are available on the [submitting standards web page](#).

<b>NQF #:</b> 0470 <b>NQF Project:</b> Perinatal and Reproductive Health Project
(for Endorsement Maintenance Review) <b>Original Endorsement Date:</b> Oct 24, 2008 <b>Most Recent Endorsement Date:</b> Oct 24, 2008
<b>BRIEF MEASURE INFORMATION</b>
<b>De.1 Measure Title:</b> Incidence of Episiotomy
<b>Co.1.1 Measure Steward:</b> Christiana Care Health System
<b>De.2 Brief Description of Measure:</b> Percentage of vaginal deliveries (excluding those coded with shoulder dystocia) during which an episiotomy is performed.
<b>2a1.1 Numerator Statement:</b> Number of episiotomy procedures (ICD-9 code 72.1, 72.21, 72.31, 72.71, 73.6; ICD-10 PCS:0W8NXZZ,0WQNXZZ,10D07Z3,10D07Z4,10D07Z5,10D07Z6 ) performed on women undergoing a vaginal delivery (excluding those with shoulder dystocia) during the analytic period- monthly,quarterly, yearly etc.
<b>2a1.4 Denominator Statement:</b> All vaginal deliveries during the analytic period- monthly, quarterly, yearly etc. excluding those coded with a shoulder dystocia.
<b>2a1.8 Denominator Exclusions:</b> Women who have a coded complication of shoulder dystocia. In the case of shoulder dystocia, an episiotomy is performed to free the shoulder and prevent/mitigate birth injury to the infant.
<b>1.1 Measure Type:</b> Outcome, Process <b>2a1. 25-26 Data Source:</b> Administrative claims, Paper Records <b>2a1.33 Level of Analysis:</b> Facility
<b>1.2-1.4 Is this measure paired with another measure?</b> No
<b>De.3 If included in a composite, please identify the composite measure (title and NQF number if endorsed):</b> NA

<b>STAFF NOTES</b> <i>(issues or questions regarding any criteria)</i>
<b>Comments on Conditions for Consideration:</b>
<b>Is the measure untested?</b> Yes <input type="checkbox"/> No <input type="checkbox"/> If untested, explain how it meets criteria for consideration for time-limited endorsement:
<b>1a. Specific national health goal/priority identified by DHHS or NPP addressed by the measure (check De.5):</b> <b>5. Similar/related <u>endorsed</u> or submitted measures (check 5.1):</b> <b>Other Criteria:</b>
<b>Staff Reviewer Name(s):</b>

<b>1. IMPACT, OPPORTUNITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT</b>
Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All three subcriteria must be met to pass this criterion. See <a href="#">guidance on evidence</a> . <b>Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.</b>

(evaluation criteria)

**1a. High Impact:** H  M  L  I

*(The measure directly addresses a specific national health goal/priority identified by DHHS or NPP, or some other high impact aspect of healthcare.)*

**De.4 Subject/Topic Areas** (Check all the areas that apply): Perinatal

**De.5 Cross Cutting Areas** (Check all the areas that apply): Overuse

**1a.1 Demonstrated High Impact Aspect of Healthcare:** Affects large numbers, Frequently performed procedure

**1a.2** If "Other," please describe:

**1a.3 Summary of Evidence of High Impact** (Provide epidemiologic or resource use data):

Epidemiologic data has shown that episiotomy remains in high use despite the American Congress of Obstetrics & Gynecology recommendation limiting its use(ref ACOG). In 2,000, approximately 33% of vaginal births an episiotomy was used(ref Martin). A validation exercise of this measure performed in 2010 by the National Perinatal Information Center,demonstrated that the rate had fallen to 16.2% with tremendous inter center variation(4.3% to 34.6%).

**1a.4 Citations for Evidence of High Impact cited in 1a.3:** 1. ACOG- Practice Bulletin-"Episiotomy" No.71 2006  
2.Martin JA, Hamilton BE, Ventura SJ, Menacker F, Park MM. Births: final data for 2000. Natl Vital Stat Rep 2002;50(5):1–101. (Level II-3)

3. Internal data see validation exercise

**1b. Opportunity for Improvement:** H  M  L  I

*(There is a demonstrated performance gap - variability or overall less than optimal performance)*

**1b.1 Briefly explain the benefits (improvements in quality) envisioned by use of this measure:**

Episiotomy has been clearly linked with worse perineal tears and in turn its attendant complications. These are noted to include perineal pain, blood loss,and potential for wound break down/abscess formation and necrotizing fasciitis. Predicated on these concerns, ACOG has called for "restricted use of episiotomy".

**1b.2 Summary of Data Demonstrating Performance Gap** (Variation or overall less than optimal performance across providers):

**[For Maintenance –** Descriptive statistics for performance results for this measure - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.]

A systematic review comparing routine episiotomy with restrictive use reported that the groups varied between an overall incidence of 72.7% in the routine group versus 27.6% in the restricted-use group (ref Carli).A validation exercise of this measure performed in 2010 by the National Perinatal Information Center,demonstrated that the rate had fallen to 16.2% with tremendous inter center variation(4.3% to 34.6%). This wide variation in this overuse measure suggest that there is tremendous opportunity to improve care for women through pubic reporting.

Period 2 shows a significant drop in Episiotomy rate (-7.8 percent change in unweighted average rate).

**1b.3 Citations for Data on Performance Gap: [For Maintenance –** Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]

1.Carroli G, Belizan J. Episiotomy for vaginal birth. The Cochrane Database of Systematic Reviews 1999, Issue 3. Art. No.: CD000081. DOI: 10.1002/14651858.CD000081.

2. Internal data see validation exercise

**1b.4 Summary of Data on Disparities by Population Group: [For Maintenance –** Descriptive statistics for performance results for this measure by population group]

NA

**1b.5 Citations for Data on Disparities Cited in 1b.4: [For Maintenance –** Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]

NA

**1c. Evidence** (*Measure focus is a health outcome OR meets the criteria for quantity, quality, consistency of the body of evidence.*)  
**Is the measure focus a health outcome?** Yes  No  **If not a health outcome, rate the body of evidence.**

Quantity: H  M  L  I  Quality: H  M  L  I  Consistency: H  M  L  I

Quantity	Quality	Consistency	Does the measure pass subcriterion1c?
M-H	M-H	M-H	Yes <input type="checkbox"/>
L	M-H	M	Yes <input type="checkbox"/> IF additional research unlikely to change conclusion that benefits to patients outweigh harms: otherwise No <input type="checkbox"/>
M-H	L	M-H	Yes <input type="checkbox"/> IF potential benefits to patients clearly outweigh potential harms: otherwise No <input type="checkbox"/>
L-M-H	L-M-H	L	No <input type="checkbox"/>

**Health outcome** – rationale supports relationship to at least one healthcare structure, process, intervention, or service

**Does the measure pass subcriterion1c?**  
 Yes  IF rationale supports relationship

**1c.1 Structure-Process-Outcome Relationship** (*Briefly state the measure focus, e.g., health outcome, intermediate clinical outcome, process, structure; then identify the appropriate links, e.g., structure-process-health outcome; process- health outcome; intermediate clinical outcome-health outcome*):  
 This is a process measure.

**1c.2-3 Type of Evidence** (*Check all that apply*):  
 Clinical Practice Guideline

**1c.4 Directness of Evidence to the Specified Measure** (*State the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target population*):  
 The evidence is direct in that restricted use of episiotomy has been firmly linked to lower rates of perineal injury. Thus be decreasing the routine use of episiotomy one can directly influence the rate of perineal injury. This would apply to all women delivering vaginally and thus the there are no differences between the measure focus and target population.

**1c.5 Quantity of Studies in the Body of Evidence** (*Total number of studies, not articles*): A pubmed search, reveals 2160 articles on episiotomy of which 195 are reviews.

**1c.6 Quality of Body of Evidence** (*Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included in the evidence); and c) imprecision/wide confidence intervals due to few patients or events*): In its review of the subject, ACOG cites the "restricted use of episiotomy is preferable to routine use" as level A evidence. The research is too broad to address failings and limitations of individual studies.

**1c.7 Consistency of Results across Studies** (*Summarize the consistency of the magnitude and direction of the effect*): See above

**1c.8 Net Benefit** (*Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms*):  
 The lowest achievable rate of episiotomy remains unclear. Nonetheless as previously stated in our internal review 16.2% of women continue to undergo this procedure in 2010. The exact percentage of women who would directly benefit beyond avoidance of this procedure remains unclear.

**1c.9 Grading of Strength/Quality of the Body of Evidence.** Has the body of evidence been graded? Yes

**1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:** This was graded by ACOG.

**1c.11 System Used for Grading the Body of Evidence:** GRADE

**1c.12 If other, identify and describe the grading scale with definitions:**

**1c.13 Grade Assigned to the Body of Evidence:** A

**1c.14 Summary of Controversy/Contradictory Evidence:** None

**1c.15 Citations for Evidence other than Guidelines(*Guidelines addressed below*):**

Martin JA, Hamilton BE, Ventura SJ, Menacker F, Park MM. Births: final data for 2000. Natl Vital Stat Rep 2002;50(5):1–101. (Level II-3)

DeLee JB. The prophylactic forceps operation. Am J Obstet Gynecol 1920;1:34–44. (Level III)

Pomeroy RH. Shall we cut and reconstruct the perineum for every primipara? Am J Obstet Dis Women Child 1918;78:211–20. (Level III)

Thacker SB, Banta HD. Benefits and risks of episiotomy: an interpretive review of the English language literature, 1860-1980. Obstet Gynecol Surv 1983;38:322–38. (Level III)

DeFrances CJ, Hall MJ, Podgornik MN. 2003 National Hospital Discharge Survey. Advance data; No. 359. Hyattsville (MD): National Center for Health Statistics; 2005. Available at: <http://www.cdc.gov/nchs/data/ad/ad359.pdf>. Retrieved December 29, 2005. (Level II-3)

Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F, Munson ML. Births: final data for 2003. Natl Vital Stat Rep 2005;54(2):1–116. (Level II-3)

Coats PM, Chan KK, Wilkins M, Beard RJ. A comparison between midline and mediolateral episiotomies. Br J Obstet Gynaecol 1980;87:408–12. (Level II-1)

Bodner-Adler B, Bodner K, Kaider A, Wagenbichler P, Leodolter S, Husslein P, et al. Risk factors for third-degree perineal tears in vaginal delivery, with an analysis of episiotomy types. J Reprod Med 2001;46:752–6. (Level II-3)

Riskin-Mashiah S, O’Brian Smith E, Wilkins IA. Risk factors for severe perineal tear: can we do better? Am J Perinatol 2002;19:225–34. (Level II-2)

Helwig JT, Thorp JM Jr, Bowes WA Jr. Does midline episiotomy increase the risk of third- and fourth-degree lacerations in operative vaginal deliveries? Obstet Gynecol 1993;82:276–9. (Level II-2)

Shiono P, Klebanoff MA, Carey JC. Midline episiotomies: more harm than good? Obstet Gynecol 1990;75:765–70. (Level II-2)

Oboro VO, Tabowei TO, Loto OM, Bosah JO. A multicentre evaluation of the two-layered repair of postpartum perineal trauma. J Obstet Gynaecol 2003;23:5–8. (Level I)

Grant A, Gordon B, Mackrodt C, Fern E, Truesdale A, Ayers S. The Ipswich childbirth study: one year followup of alternative methods used in perineal repair. BJOG 2001;108:34–40. (Level II-2)

Gordon B, Mackrodt C, Fern E, Truesdale A, Ayers S, Grant A. The Ipswich Childbirth Study: I. A randomised evaluation of two stage postpartum perineal repair leaving the skin unsutured. Br J Obstet Gynaecol 1998;105: 435–40. (Level I)

Kettle C, Hills RK, Jones P, Darby L, Gray R, Johanson R. Continuous versus interrupted perineal repair with standard or rapidly absorbed sutures after spontaneous vaginal birth: a randomised controlled trial. Lancet 2002;359:2217–23. (Level I)

Mahomed K, Grant A, Ashurst H, James D. The Southmead perineal suture study. A randomized comparison of suture materials

and suturing techniques for repair of perineal trauma. *Br J Obstet Gynaecol* 1989;96:1272–80. (Level I)

Mackrodt C, Gordon B, Fern E, Ayers S, Truesdale A, Grant A. The Ipswich Childbirth Study: 2. A randomised comparison of polyglactin 910 with chromic catgut for postpartum perineal repair. *Br J Obstet Gynaecol* 1998;105:441–5. (Level I)

Grant A. The choice of suture materials and techniques for repair of perineal trauma: an overview of the evidence from controlled trials. *Br J Obstet Gynaecol* 1989;96:1281–9. (Level III)

Ketcham KR, Pastorek JG 2nd, Letellier RL. Episiotomy repair: chromic versus polyglycolic acid suture. *South Med J* 1994;87:514–7. (Level III)

Hankins GD, Hauth JC, Gilstrap LC 3rd, Hammond TL, Yeomans ER, Snyder RR. Early repair of episiotomy dehiscence. *Obstet Gynecol* 1990;75:48–51. (Level III)

Barranger E, Haddad B, Paniel BJ. Fistula in ano as a rare complication of mediolateral episiotomy: report of three cases. *Am J Obstet Gynecol* 2000;182:733–4. (Level III)

Myles TD, Santolaya J. Maternal and neonatal outcomes in patients with prolonged second stage of labor. *Obstet Gynecol* 2003;102:52–8. (Level II-3)

Bodner-Adler B, Bodner K, Kimberger O, Wagenbichler P, Mayerhofer K. Management of the perineum during forceps delivery. Association of episiotomy with the frequency and severity of perineal trauma in women undergoing forceps delivery. *J Reprod Med* 2003;48:239–42. (Level II-3)

Hartmann K, Viswanathan M, Palmieri R, Gartlehner G, Thorp J, Lohr KN. Outcomes of routine episiotomy: a systematic review. *JAMA* 2005;293:2141–8. (Level III)

Eason E, Labrecque M, Wells G, Feldman P. Preventing perineal trauma during childbirth: a systematic review. *Obstet Gynecol* 2000;95:464–71. (Meta-Analysis)

Fenner DE, Genberg B, Brahma P, Marek L, DeLancey JO. Fecal and urinary incontinence after vaginal delivery with anal sphincter disruption in an obstetrics unit in the United States. *Am J Obstet Gynecol* 2003;189:1543–50. (Level II-3)

Robinson JN, Norwitz ER, Cohen AP, McElrath TF, Lieberman ES. Epidural analgesia and third- and fourth-degree lacerations in nulliparas. *Obstet Gynecol* 1999;94:259–62. (Level II-3)

Sartore A, De Seta F, Maso G, Pregazzi R, Grimaldi E, Guaschino S. The effects of mediolateral episiotomy on pelvic floor function after vaginal delivery. *Obstet Gynecol* 2004;103:669–73. (Level II-2)

MacArthur C, Bick DE, Keighley MR. Faecal incontinence after childbirth. *Br J Obstet Gynaecol* 1997;104:46–50.

Walsh CJ, Mooney EF, Upton GJ, Motson RW. Incidence of third-degree perineal tears in labour and outcome after primary repair. *Br J Surg* 1996;83:218–21. (Level II-2)

Fleming N, Newton ER, Roberts J. Changes in postpartum perineal muscle function in women with and without episiotomies. *J Midwifery Womens Health* 2003;48:53–9. (Level II-2)

Thranov I, Kringelbach AM, Melchior E, Olsen O, Damsgaard MT. Postpartum symptoms. Episiotomy or tear at vaginal delivery. *Acta Obstet Gynecol Scand* 1990;69:11–5. (Level II-3)

Macarthur AJ, Macarthur C. Incidence, severity, and determinants of perineal pain after vaginal delivery: a prospective cohort study. *Am J Obstet Gynecol* 2004;191:1199–204. (Level II-2)

Signorello LB, Harlow BL, Chekos AK, Repke JT. Postpartum sexual functioning and its relationship to perineal trauma: a

retrospective cohort study of primiparous women. Am J Obstet Gynecol 2001;184:881–7; discussion 888–90. (Level II-2)

Abraham S, Child A, Ferry J, Vizzard J, Mira M. Recovery after childbirth: a preliminary prospective study. Med J Aust 1990;152:9–12. (Level II-2)

Isager-Sally L, Legarth J, Jacobsen B, Bostofte E. Episiotomy repair—immediate and long-term sequelae. A prospective randomized study of three different methods of repair. Br J Obstet Gynaecol 1986;93:420–5. (Level I)

Upton A, Roberts CL, Ryan M, Faulkner M, Reynolds M, Raynes-Greenow C. A randomised trial, conducted by midwives, of perineal repairs comparing a polyglycolic suture material and chromic catgut. Midwifery 2002;18:223–9. (Level I)

Bowen ML, Selinger M. Episiotomy closure comparing enbucrilate tissue adhesive with conventional sutures. Int J Gynaecol Obstet 2002;78:201–5. (Level II-1)

Nocon JJ, McKenzie DK, Thomas LJ, Hansell RS. Shoulder dystocia: an analysis of risks and obstetric maneuvers. Am J Obstet Gynecol 1993;168:1732–7; discussion 1737–9. (Level II-3)

Rockner G, Wahlberg V, Olund A. Episiotomy and perineal trauma during childbirth. J Adv Nurs 1989;14:264–8. (Level II-2)

Poen AC, Felt-Bersma RJ, Dekker GA, Deville W, Cuesta MA, Meuwissen SG. Third degree obstetric perineal tears: risk factors and the preventive role of mediolateral episiotomy. Br J Obstet Gynaecol 1997;104:563–6. (Level II-2)

Signorello LB, Harlow BL, Chekos AK, Repke JT. Midline episiotomy and anal incontinence: a retrospective cohort study. BMJ 2000;320:86–90. (Level II-2)

De Leeuw JW, Vierhout ME, Struijk PC, Hop WC, Wallenburg HC. Anal sphincter damage after vaginal delivery: functional outcome and risk factors for fecal incontinence. Acta Obstet Gynecol Scand 2001;80:830–4. (Level II-2)

Anthony S, Buitendijk SE, Zondervan KT, van Rijssel EJ, Verkerk PH. Episiotomies and the occurrence of severe perineal lacerations. Br J Obstet Gynaecol 1994;101:1064–7. (Level II-3)

Combs CA, Murphy EL, Laros RK Jr. Factors associated with postpartum hemorrhage with vaginal birth. Obstet Gynecol 1991;77:69–76. (Level II-2)

Carroli G, Belizan J. Episiotomy for vaginal birth. The Cochrane Database of Systematic Reviews 1999, Issue 3. Art. No.: CD000081. DOI: 10.1002/14651858.CD000081. (Meta-Analysis)

**1c.16 Quote verbatim, the specific guideline recommendation** (Including guideline # and/or page #):  
Restricted use of episiotomy is preferable to routine use of episiotomy.

**1c.17 Clinical Practice Guideline Citation:** ACOG Practice Bulletin no. 71 April 2006

**1c.18 National Guideline Clearinghouse or other URL:** NA

**1c.19 Grading of Strength of Guideline Recommendation.** Has the recommendation been graded? Yes

**1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:** ACOG

**1c.21 System Used for Grading the Strength of Guideline Recommendation:** GRADE

**1c.22 If other, identify and describe the grading scale with definitions:**

**1c.23 Grade Assigned to the Recommendation:** a

1c.24 Rationale for Using this Guideline Over Others: [see above](#)

Based on the NQF descriptions for rating the evidence, what was the developer's assessment of the quantity, quality, and consistency of the body of evidence?

1c.25 Quantity: [High](#) 1c.26 Quality: [Moderate](#) 1c.27 Consistency: [High](#)

Was the threshold criterion, *Importance to Measure and Report*, met?

(1a & 1b must be rated moderate or high and 1c yes) Yes  No

Provide rationale based on specific subcriteria:

**For a new measure if the Committee votes NO, then STOP.**

**For a measure undergoing endorsement maintenance, if the Committee votes NO because of 1b. (no opportunity for improvement), it may be considered for continued endorsement and all criteria need to be evaluated.**

## 2. RELIABILITY & VALIDITY - SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (**evaluation criteria**)

Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate field. Supplemental materials may be referenced or attached in item 2.1. See [guidance on measure testing](#).

**S.1 Measure Web Page** (In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained). Do you have a web page where current detailed specifications for this measure can be obtained? [Yes](#)

**S.2 If yes, provide web page URL:** [Http://www.npic.org/NQF\\_Project/NQF\\_Episiotomy\\_Rate.php](http://www.npic.org/NQF_Project/NQF_Episiotomy_Rate.php)

**2a. RELIABILITY. Precise Specifications and Reliability Testing:** H  M  L  I

**2a1. Precise Measure Specifications.** (The measure specifications precise and unambiguous.)

**2a1.1 Numerator Statement** (Brief, narrative description of the measure focus or what is being measured about the target population, e.g., cases from the target population with the target process, condition, event, or outcome):

[Number of episiotomy procedures \(ICD-9 code 72.1, 72.21, 72.31, 72.71, 73.6; ICD-10 PCS:0W8NXZZ,0WQNXZZ,10D07Z3,10D07Z4,10D07Z5,10D07Z6 \) performed on women undergoing a vaginal delivery \(excluding those with shoulder dystocia\) during the analytic period- monthly,quarterly, yearly etc.](#)

**2a1.2 Numerator Time Window** (The time period in which the target process, condition, event, or outcome is eligible for inclusion): [Inpatient delivery stay.](#)

**2a1.3 Numerator Details** (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, codes with descriptors, and/or specific data collection items/responses):

[Any vaginal delivery with one of the ICD-9 codes for episiotomy- 72.1, 72.21, 72.31, 72.71, 73.6 \(ICD-10 PCS:see 2a.](#)

**2a1.4 Denominator Statement** (Brief, narrative description of the target population being measured):

[All vaginal deliveries during the analytic period- monthly, quarterly, yearly etc. excluding those coded with a shoulder dystocia.](#)

**2a1.5 Target Population Category** (Check all the populations for which the measure is specified and tested if any): [Maternal Care](#)

**2a1.6 Denominator Time Window** (The time period in which cases are eligible for inclusion):

[Inpatient delivery stay.](#)

**2a1.7 Denominator Details** (All information required to identify and calculate the target population/denominator such as definitions, codes with descriptors, and/or specific data collection items/responses):

[Any woman with a vaginal delivery calculated by either MS DRG 774,775,767,768](#)

<p><b>2a1.8 Denominator Exclusions</b> (<i>Brief narrative description of exclusions from the target population</i>):  <a href="#">Women who have a coded complication of shoulder dystocia. In the case of shoulder dystocia, an episiotomy is performed to free the shoulder and prevent/mitigate birth injury to the infant.</a></p> <p><b>2a1.9 Denominator Exclusion Details</b> (<i>All information required to identify and calculate exclusions from the denominator such as definitions, codes with descriptors, and/or specific data collection items/responses</i>):  <a href="#">Vaginal deliveries coded with shoulder dystocia, ICD-9 code 660.41, 660.42( ICD-10 CM : 066.0)</a></p>
<p><b>2a1.10 Stratification Details/Variables</b> (<i>All information required to stratify the measure results including the stratification variables, codes with descriptors, definitions, and/or specific data collection items/responses</i>):  <a href="#">NA</a></p> <p><b>2a1.11 Risk Adjustment Type</b> (<i>Select type. Provide specifications for risk stratification in 2a1.10 and for statistical model in 2a1.13</i>): <a href="#">No risk adjustment or risk stratification</a>    <b>2a1.12 If "Other," please describe:</b></p> <p><b>2a1.13 Statistical Risk Model and Variables</b> (<i>Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development should be addressed in 2b4.</i>):  <a href="#">NA</a></p> <p><b>2a1.14-16 Detailed Risk Model Available at Web page URL</b> (or attachment). Include coefficients, equations, codes with descriptors, definitions, and/or specific data collection items/responses. Attach documents only if they are not available on a webpage and keep attached file to 5 MB or less. NQF strongly prefers you make documents available at a Web page URL. Please supply login/password if needed:  <a href="#">URL</a>  <a href="http://www.npic.org/NQF_Project/NQF_Episiotomy_Rate.php">Http://www.npic.org/NQF_Project/NQF_Episiotomy_Rate.php</a>  <a href="#">NA</a></p>
<p><b>2a1.17-18. Type of Score:</b></p> <p><b>2a1.19 Interpretation of Score</b> (<i>Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score</i>): <a href="#">Better quality = Lower score</a></p> <p><b>2a1.20 Calculation Algorithm/Measure Logic</b>(<i>Describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.</i>):</p> <p><b>2a1.21-23 Calculation Algorithm/Measure Logic Diagram URL or attachment:</b></p>
<p><b>2a1.24 Sampling (Survey) Methodology.</b> If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate):  <a href="#">NA</a></p>
<p><b>2a1.25 Data Source</b> (<i>Check all the sources for which the measure is specified and tested</i>). If other, please describe:  <a href="#">Administrative claims, Paper Records</a></p> <p><b>2a1.26 Data Source/Data Collection Instrument</b> (<i>Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.</i>): <a href="#">UB92 claims data.</a></p> <p><b>2a1.27-29 Data Source/data Collection Instrument Reference Web Page URL or Attachment:</b>    <a href="#">URL</a>  <a href="http://www.npic.org/NQF_Project/NQF_Episiotomy_Rate.php">Http://www.npic.org/NQF_Project/NQF_Episiotomy_Rate.php</a></p>



**2a1.30-32 Data Dictionary/Code Table Web Page URL or Attachment:**

**2a1.33 Level of Analysis** (Check the levels of analysis for which the measure is specified and tested): Facility

**2a1.34-35 Care Setting** (Check all the settings for which the measure is specified and tested): Hospital/Acute Care Facility

**2a2. Reliability Testing.** (Reliability testing was conducted with appropriate method, scope, and adequate demonstration of reliability.)

**2a2.1 Data/Sample** (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

Testing was performed by analyzing data from 12 NPIC/QAS member hospitals for Period 1 : 10/1/08-9/30/09 and Period 2: 10/1/09-3/31/10. For Period 1 totalled 66,306 eligible deliveries and 9,626 episiotomy cases, Period 2: 31,496 eligible deliveries and 4,259 episiotomy cases.

**2a2.2 Analytic Method** (Describe method of reliability testing & rationale):

Testing was performed by analyzing data from 12 NPIC/QAS member hospitals for Period 1 : 10/1/08-9/30/09 and Period 2: 10/1/09-3/31/10. For Period 1 totalled 66,306 eligible deliveries and 9,626 episiotomy cases, Period 2: 31,496 eligible deliveries and 4,259 episiotomy cases.

**2a2.3 Testing Results** (Reliability statistics, assessment of adequacy in the context of norms for the test conducted):

For Period 1, 7 of 9 responding hospitals (63.4%) confirmed the coding on the sample episiotomy cases matched exactly with the medical record. One hospital had a discrepancy of 1 case and the second hospital did not indicate the degree of discrepancy. 8 of 9 (89%) indicated they felt the administrative data set was a consistent and reliable source of episiotomy data. For Period 2, 11 hospitals responded; 4 of the 11 (36.6%) found all cases, with and without episiotomies to be correctly coded. The remaining 7 found 1-4 cases with codes not matching documentation, evenly split between those with and without episiotomies.

**2b. VALIDITY. Validity, Testing, including all Threats to Validity:** H  M  L  I

**2b1.1 Describe how the measure specifications** (measure focus, target population, and exclusions) **are consistent with the evidence cited in support of the measure focus** (criterion 1c) **and identify any differences from the evidence:**

Testing was performed by analyzing data from 12 NPIC/QAS member hospitals for Period 1 : 10/1/08-9/30/09 and Period 2: 10/1/09-3/31/10. For Period 1 totalled 66,306 eligible deliveries and 9,626 episiotomy cases, Period 2: 31,496 eligible deliveries and 4,259 episiotomy cases.

**2b2. Validity Testing.** (Validity testing was conducted with appropriate method, scope, and adequate demonstration of validity.)

**2b2.1 Data/Sample** (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

In addition to auditing their sample of cases, hospitals were asked to rate the reliability, validity, feasibility and usability of this measure

**2b2.2 Analytic Method** (Describe method of validity testing and rationale; if face validity, describe systematic assessment):

In addition to auditing their sample of cases, hospitals were asked to rate the reliability, validity, feasibility and usability of this measure

**2b2.3 Testing Results** (Statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity, describe results of systematic assessment):

In period 2, 9 of 11 hospitals (81.8%) indicated they felt episiotomy rate is a valid measure of the quality of care at a hospital; the other 2 felt the measure was valid but should be looked at at the provider level since providers will determine whether to perform an episiotomy or not

**POTENTIAL THREATS TO VALIDITY.** (All potential threats to validity were appropriately tested with adequate results.)

**2b3. Measure Exclusions.** (Exclusions were supported by the clinical evidence in 1c or appropriately tested with results demonstrating the need to specify them.)

**2b3.1 Data/Sample for analysis of exclusions** (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

In the case of shoulder dystocia, an episiotomy is performed to free the shoulder and prevent/mitigate birth injury to the infant. This based on expert opinion nonetheless the incidence of this is estimated to be 1%

**2b3.2 Analytic Method** (Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference):

NA

**2b3.3 Results** (Provide statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses):

NA

**2b4. Risk Adjustment Strategy.** (For outcome measures, adjustment for differences in case mix (severity) across measured entities was appropriately tested with adequate results.)

**2b4.1 Data/Sample** (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

NA

**2b4.2 Analytic Method** (Describe methods and rationale for development and testing of risk model or risk stratification including selection of factors/variables):

NA

**2b4.3 Testing Results** (Statistical risk model: Provide quantitative assessment of relative contribution of model risk factors; risk model performance metrics including cross-validation discrimination and calibration statistics, calibration curve and risk decile plot, and assessment of adequacy in the context of norms for risk models. Risk stratification: Provide quantitative assessment of relationship of risk factors to the outcome and differences in outcomes among the strata):

NA

**2b4.4 If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment:** NA

**2b5. Identification of Meaningful Differences in Performance.** (The performance measure scores were appropriately analyzed and discriminated meaningful differences in quality.)

**2b5.1 Data/Sample** (Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

Data was obtained from 12 National Perinatal Information Center/Quality Analytic Services(NPIC/QAS) member hospitals that are a subset of our larger membership. The data are from their submitted discharge abstract data submitted quarterly to NPIC/QAS as part of an ongoing quality evaluation process. There were two periods of time analyzed: 10/1/08-9/30/09 and 10/1/09-3/31/10

**2b5.2 Analytic Method** (Describe methods and rationale to identify statistically significant and practically/meaningfully differences in performance):

T-Test for changes in the episiotomy rate and laceration rate for the 12 hospitals between Time1 and Time2 show a significant drop in the episiotomy rate; the laceration rate also dropped but not significantly.

Pearson function shows a significant inverse correlation between decreasing episiotomy rate and laceration rate in Time2.

**2b5.3 Results** (Provide measure performance results/scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance):

T-Test for changes in the episiotomy rate and laceration rate for the 12 hospitals between Time1 and Time2 show a significant drop in the episiotomy rate; the laceration rate also dropped but not significantly.

Pearson function shows a significant inverse correlation between decreasing episiotomy rate and laceration rate in Time2.

**2b6. Comparability of Multiple Data Sources/Methods.** (If specified for more than one data source, the various approaches

result in comparable scores.)

**2b6.1 Data/Sample** (Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

NA

**2b6.2 Analytic Method** (Describe methods and rationale for testing comparability of scores produced by the different data sources specified in the measure):

NA

**2b6.3 Testing Results** (Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in the context of norms for the test conducted):

NA

**2c. Disparities in Care:** H  M  L  I  NA  (If applicable, the measure specifications allow identification of disparities.)

**2c.1 If measure is stratified for disparities, provide stratified results** (Scores by stratified categories/cohorts): NA

**2c.2 If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain:**

NA

**2.1-2.3 Supplemental Testing Methodology Information:**

[Attachment](#)

[Episiotomy validation results.xlsx](#)

**Steering Committee: Overall, was the criterion, *Scientific Acceptability of Measure Properties*, met?**

(Reliability and Validity must be rated moderate or high) Yes  No

Provide rationale based on specific subcriteria:

**If the Committee votes No, STOP**

### 3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (**evaluation criteria**)

**C.1 Intended Purpose/ Use** (Check all the purposes and/or uses for which the measure is intended): [Public Reporting](#), [Quality Improvement \(Internal to the specific organization\)](#), [Quality Improvement with Benchmarking \(external benchmarking to multiple organizations\)](#)

**3.1 Current Use** (Check all that apply; for any that are checked, provide the specific program information in the following questions): [Public Reporting](#), [Quality Improvement with Benchmarking \(external benchmarking to multiple organizations\)](#), [Quality Improvement \(Internal to the specific organization\)](#)

**3a. Usefulness for Public Reporting:** H  M  L  I

(The measure is meaningful, understandable and useful for public reporting.)

**3a.1. Use in Public Reporting - disclosure of performance results to the public at large** (If used in a public reporting program, provide name of program(s), locations, Web page URL(s)). If not publicly reported in a national or community program, state the reason AND plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement: **[For Maintenance – If not publicly reported, describe progress made toward achieving disclosure of performance results to the public at large and expected date for public reporting; provide rationale why continued endorsement should be considered.]**

[This measure has been previously used with a time limited endorsement. Public reporting was not required and therefore information does not exist. This is a currently endorsed NQF measure so we suspect some systems/collaboratives are reporting this measure across their participating hospitals. NPIC/QAS currently reports this rate to its member hospitals in the Quality Indicator](#)

section of their Quarterly Reports ([www.npic.org](http://www.npic.org))

**3a.2. Provide a rationale for why the measure performance results are meaningful, understandable, and useful for public reporting.** If usefulness was demonstrated (e.g., focus group, cognitive testing), describe the data, method, and results: *Most hospitals feel their rates are accurate and valid but will audit their data if they vary from the average and want to focus their QI activity on this measure. Hospitals use their reports to monitor their rates and rates will often decrease just by the mere fact that attention is being paid to an NQF endorsed measure.*

**3.2 Use for other Accountability Functions (payment, certification, accreditation).** If used in a public accountability program, provide name of program(s), locations, Web page URL(s): *Though theoretically amenable to these functions, as an absolute appropriate rate has yet to be determined. We therefore would discourage this use.*

**3b. Usefulness for Quality Improvement:** H  M  L  I   
*(The measure is meaningful, understandable and useful for quality improvement.)*

**3b.1. Use in QI.** If used in quality improvement program, provide name of program(s), locations, Web page URL(s):  
**[For Maintenance –** *If not used for QI, indicate the reasons and describe progress toward using performance results for improvement].*

*This is a currently endorsed NQF measure so we suspect some systems/collaboratives are reporting this measure across their participating hospitals. NPIC/QAS currently reports this rate to its member hospitals in the Quality Indicator section of their Quarterly Reports ([www.npic.org](http://www.npic.org))*

**3b.2. Provide rationale for why the measure performance results are meaningful, understandable, and useful for quality improvement.** If usefulness was demonstrated (e.g., QI initiative), describe the data, method and results:  
*Episiotomy is broadly viewed by women and rates are simple to understand. In study of NPIC hospitals they were asked as to meaningfulness. In period 2, 9 of 11 hospitals (81.8%) indicated they felt episiotomy rate is a valid measure of the quality of care at a hospital; the other 2 felt the measure was valid but should be looked at at the provider level since providers will determine whether to perform an episiotomy or not. Most hospitals feel their rates are accurate and valid but will audit their data if they vary from the average and want to focus their QI activity on this measure. Hospitals use their reports to monitor their rates and rates will often decrease just by the mere fact that attention is being paid to an NQF endorsed measure.*

**Overall, to what extent was the criterion, Usability, met?** H  M  L  I   
**Provide rationale based on specific subcriteria:**

#### 4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (**evaluation criteria**)

**4a. Data Generated as a Byproduct of Care Processes:** H  M  L  I

**4a.1-2 How are the data elements needed to compute measure scores generated?** *(Check all that apply).*

Data used in the measure are:

*Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims)*

**4b. Electronic Sources:** H  M  L  I

**4b.1 Are the data elements needed for the measure as specified available electronically** *(Elements that are needed to compute measure scores are in defined, computer-readable fields):* *ALL data elements in electronic claims*

**4b.2 If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources:**

**4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences:** H  M  L  I

**4c.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during testing and/or operational use and strategies to prevent, minimize, or detect. If audited, provide results:**

NQF #0470 Incidence of Episiotomy

Prior to Q4, 2008 ICD-9 coding updates, the repair of a laceration could be coded with clear indication that the laceration was the result of a tear of an episiotomy. This sample of hospitals successfully petitioned CMS to update the codes to include 73.6 Episiotomy, allowing hospitals to clearly identify the episiotomy and the repair procedure. We assume this coding convention has been adopted and therefore the susceptibility to inaccuracies, errors and unintended consequences is small. For our sample, in Period 1, the 9 responding hospitals that re-abstracted a 5% sample of their episiotomy cases found a very high degree of match between the administrative data and abstracted data. 7 of 9 had an exact match; 1 hospital had a 1 case discrepancy and the second hospital said the discrepancy was small but did not identify the count. In Period 2, 4 of the 11 hospitals had no discrepancy in their coding of cases with or without an episiotomy. The 7 hospitals with errors the count of errors was from 1 to 4 cases split between cases with and without episiotomies. The overall rate of coding error was on less 3%.

4d. Data Collection Strategy/Implementation: H  M  L  I

A.2 Please check if either of the following apply (regarding proprietary measures):

4d.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues (e.g., fees for use of proprietary measures):

See above.

Overall, to what extent was the criterion, *Feasibility*, met? H  M  L  I

Provide rationale based on specific subcriteria:

**OVERALL SUITABILITY FOR ENDORSEMENT**

Does the measure meet all the NQF criteria for endorsement? Yes  No

Rationale:

If the Committee votes No, STOP.

If the Committee votes Yes, the final recommendation is contingent on comparison to related and competing measures.

**5. COMPARISON TO RELATED AND COMPETING MEASURES**

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure before a final recommendation is made.

5.1 If there are related measures (either same measure focus or target population) or competing measures (both the same measure focus and same target population), list the NQF # and title of all related and/or competing measures:

**5a. Harmonization**

5a.1 If this measure has EITHER the same measure focus OR the same target population as [NQF-endorsed measure\(s\)](#): Are the measure specifications completely harmonized? Yes

5a.2 If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden:

**5b. Competing Measure(s)**

5b.1 If this measure has both the same measure focus and the same target population as NQF-endorsed measure(s): Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible):

These are all the same submitted by the same person, myself

**CONTACT INFORMATION**

NQF #0470 Incidence of Episiotomy

<b>Co.1 Measure Steward (Intellectual Property Owner):</b> <a href="#">Christiana Care Health System, 4755 Ogletown-Stanton Road, Newark, Delaware, 19718</a>
<b>Co.2 Point of Contact:</b> <a href="#">Matthew, Hoffman, MD MPH, mhoffman@christianacare.org, 302-733-6610-</a>
<b>Co.3 Measure Developer if different from Measure Steward:</b> <a href="#">National Perinatal Information Center, 225 Chapman St. Suite 200, Providence, Rhode Island, 02905</a>
<b>Co.4 Point of Contact:</b> <a href="#">Matthew, Hoffman, MD MPH, mhoffman@christianacare.org</a>
<b>Co.5 Submitter:</b> <a href="#">Matthew, Hoffman, MD MPH, 302---</a> , <a href="#">National Perinatal Information Center</a>
<b>Co.6 Additional organizations that sponsored/participated in measure development:</b>
<b>Co.7 Public Contact:</b> <a href="#">Matthew, Hoffman, MD MPH, 302-733--</a> , <a href="#">National Perinatal Information Center</a>

**ADDITIONAL INFORMATION**

<b>Workgroup/Expert Panel involved in measure development</b> Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
Ad.2 If adapted, provide title of original measure, NQF # if endorsed, and measure steward. Briefly describe the reasons for adapting the original measure and any work with the original measure steward:
<b>Measure Developer/Steward Updates and Ongoing Maintenance</b> Ad.3 Year the measure was first released: <a href="#">2011</a> Ad.4 Month and Year of most recent revision: Ad.5 What is your frequency for review/update of this measure? Ad.6 When is the next scheduled review/update for this measure?
Ad.7 Copyright statement:
Ad.8 Disclaimers:
Ad.9 Additional Information/Comments:
Date of Submission (MM/DD/YY): <a href="#">11/03/2011</a>