

CAPQuaM PQMP Perinatal Measure 1 Detailed Measure Specifications

A. Description

Describes whether or not at least one temperature was taken during the first 60 minutes of life (“Golden Hour”) for infants under 2500 grams.

B. Eligible Population

Numerator: Live-born neonates with a birthweight of less than 2500 grams (as identified by ICD-9-CM Principal or Other Diagnosis Codes in Table 1) who have their temperature taken within the first 60 minutes of life.

Denominator: Live-born neonates with birth weight of less than 2500 grams (as identified from either the medical record or by ICD-9-CM Principal or Other Diagnosis Codes in Table 1). Exclusions are noted below.

Table 1. Included Populations: ICD-9-CM Principal or Other Diagnosis Code Low Birthweight diagnosis codes

| | | | |
|-------|--------------------------|-------|--------------------------|
| 76400 | LIGHT-FOR-DATES WTNOS | 76490 | FET GROWTH RETARD WTNOS |
| 76401 | LIGHT-FOR-DATES <500G | 76491 | FET GROWTH RETARD <500G |
| 76402 | LT-FOR-DATES 500-749G | 76492 | FET GROWTH RET 500-749G |
| 76403 | LT-FOR-DATES 750-999G | 76493 | FET GROWTH RET 750-999G |
| 76404 | LT-FOR-DATES 1000-1249G | 76494 | FET GRWTH RET 1000-1249G |
| 76405 | LT-FOR-DATES 1250-1499G | 76495 | FET GRWTH RET 1250-1499G |
| 76406 | LT-FOR-DATES 1500-1749G | 76496 | FET GRWTH RET 1500-1749G |
| 76407 | LT-FOR-DATES 1750-1999G | 76497 | FET GRWTH RET 1750-1999G |
| 76408 | LT-FOR-DATES 2000-2499G | 76498 | FET GRWTH RET 2000-2499G |
| 76410 | LT-FOR-DATE W/MAL WTNOS | 76500 | EXTREME IMMATUR WTNOS |
| 76411 | LT-FOR-DATE W/MAL <500G | 76501 | EXTREME IMMATUR <500G |
| 76412 | LT-DATE W/MAL 500-749G | 76502 | EXTREME IMMATUR 500-749G |
| 76413 | LT-DATE W/MAL 750-999G | 76503 | EXTREME IMMATUR 750-999G |
| 76414 | LT-DATE W/MAL 1000-1249G | 76504 | EXTREME IMMAT 1000-1249G |
| 76415 | LT-DATE W/MAL 1250-1499G | 76505 | EXTREME IMMAT 1250-1499G |
| 76416 | LT-DATE W/MAL 1500-1749G | 76506 | EXTREME IMMAT 1500-1749G |
| 76417 | LT-DATE W/MAL 1750-1999G | 76507 | EXTREME IMMAT 1750-1999G |
| 76418 | LT-DATE W/MAL 2000-2499G | 76508 | EXTREME IMMAT 2000-2499G |
| 76420 | FETAL MALNUTRITION WTNOS | 76510 | PRETERM INFANT NEC WTNOS |
| 76421 | FETAL MALNUTRITION <500G | 76511 | PRETERM NEC <500G |
| 76422 | FETAL MALNUTR 500-749G | 76512 | PRETERM NEC 500-749G |
| 76423 | FETAL MAL 750-999G | 76513 | PRETERM NEC 750-999G |
| 76424 | FETAL MAL 1000-1249G | 76514 | PRETERM NEC 1000-1249G |
| 76425 | FETAL MAL 1250-1499G | 76515 | PRETERM NEC 1250-1499G |
| 76426 | FETAL MAL 1500-1749G | 76516 | PRETERM NEC 1500-1749G |
| 76427 | FETAL MALNUTR 1750-1999G | 76517 | PRETERM NEC 1750-1999G |
| 76428 | FETAL MALNUTR 2000-2499G | 76518 | PRETERM NEC 2000-2499G |

For codes 76400, 76410, 76420, 76490, 76500, birth weights should be verified from the medical record prior to including in measure.

EXCLUSIONS

Neonates who do not survive until the time limit of the measure (60 minutes after birth)

Neonates not born in hospital/medical care setting

Neonates with Anencephaly ICD-9-CM 740

Neonates with Comfort care (requires all of the features below):

Died within 48 hours of birth; AND

Received no respiratory support after arrival to the Level 2 or higher nursery other than blow by oxygen (i.e., did not receive CPAP, intubation, or CPR after arrival at Level 2 or higher nursery)

C. DATA SOURCES

A. Medical record (paper or electronic), may be utilized to identify:

The following data elements:

- i. Date and time of birth
- ii. Date and time of arrival to a Level 2 or higher nursery;
- iii. Date and time of first temperature upon arrival to that nursery;
- iv. Documentation that temperature was recorded
- v. Temperature and units of measurement
- vi. Race/ethnicity {preferred data source}
- vii. Mother's State and County of Residence and or zip code (preferred data source)
- viii. 5 minute Apgar score
- ix. Birth weight (preferred data source)
- x. Insurance type (optional data source)

B. Administrative data with revenue, billing and diagnosis codes, utilized to identify:

- i. ICD-9 codes to identify low birthweight infants and presence of anencephaly
- ii. OPTIONAL source for:
 - i. Date of birth
 - ii. Race/ethnicity
 - iii. Home zip code
 - iv. Whether child was inborn or transferred in
 - v. Birthweight range
 - vi. Insurance type and benefit plan (Preferred data source)

D. "CALCULATION" and Reporting

Step 1: Identify all live-born neonates born in a medical or birthing facility with a birthweight less than 2500 grams, using the aforementioned codes or recorded birth weights when practical.

Step 2: Record relevant attributes:

- a. Record ICD-9 comorbid diagnoses.
EXCLUDE those with anencephaly (ICD-9-CM 740xx).
- b. Record:
 - i. Date and time of birth.
 - ii. Birthweight.
 - iii. 5 minute Apgar score

EXCLUDE if: child not born in a medical facility

Step 3: Record the following additional data elements for all eligible neonates:

- i. Race
- ii. Ethnicity
- iii. Insurance type (Medicaid, Commercial, Uninsured)
- iv. Benefit category (HMO, PPO, Medicaid Primary Care Management Plan, Fee for Service, Other)
- v. Zip Code, State and County or equivalent area of Mother's residence. Record FIPS if available
- vi. Evidence child received comfort care only (when appropriate). **EXCLUDE** if so.
- vii. Documentation child was eligible for and received therapeutic hypothermia (when appropriate). **EXCLUDE** if identification of eligibility and plan for therapeutic hypothermia were in place within 60 minutes.

Step 4: Identify and record:

- i. Time of first documented temperature taken
- ii. Value of first temperature taken
- iii. Units that temperature was recorded in. If in Fahrenheit calculate Celsius as $C=(F-32)*5/9$
- iv. Infant age at time of first temperature

Step 5: Calculate how long after the child's birth the first temperature was taken.

Step 6: Note whether or not the temperature was taken within the first 60 minutes after birth. If no temperature recorded, **exclude if infant died in the first 60 minutes after birth.**

Step 7: Calculate the percent of first temperatures that occur within the first 60 minutes of life as $100 * \text{numerator events/denominator}$. Report to 2 decimal places.

Step 8. Using eligible births and qualified temperatures, repeat step 8 to report for each stratification category listed below, using the following data elements:

- i. Birthweight (3 birthweight categories: <999 grams; 1000-1499 grams; 1500-2499 grams)
- ii. Perform stratifications as indicated herein (report for each stratum where denominator ≥ 15):
 - a. Race and ethnicity (Using White non hispanic, Black non Hispanic, Hispanic, Asian/Pacific Islander, other)
 - b. Insurance type (Public/Medicaid, Private/Commercial, None/Other)
 - c. Admission source (use 3 categories: inborn, transported, transferred from newborn nursery)

Location of delivery

APPLY THESE RULES IN ORDER. STOP WHEN CATEGORIZED

- i. Categorize location of delivery as birthing room if:
 1. Location was identified as delivery room on the labor and delivery suite but was not an operating room
OR
 2. Location was identified as a birthing room or equivalent
OR
 3. Infant was a vaginal delivery other than a multiple gestation AND Operating Room or equivalent (C-section room would be an example of an equivalent to an operating room) is not specified as location.
- ii. Otherwise categorize location as OPERATING ROOM if:
 1. Location was identified as an operating room or equivalent, OR
 2. If neonate was delivered by c-section, OR
 3. If infant was a multiple gestation (and location is unspecified) OR
 4. If location is identified as Emergency Department OR other
- d. 5 minute Apgar score (Apgar of 5 or less versus 6 or more)
- e. Benefit Category (HMO, PPO, Medicaid Primary Care Management Plan, Fee for service, Other)
- f. Urban Influence Code(1) or UIC. (2013 urban influence codes available at: <http://www.ers.usda.gov/data-products/urban-influence-codes.aspx#.UZUvG2cVoj8> .

Use mother's place of residence to determine UIC. State and County names can be linked or looked up directly or zip codes can be linked to County indirectly, using the Missouri Census Data Center (<http://mcdc.missouri.edu/>).

- g. Level of Poverty in the County of Residence. The percent of all residents in poverty by county are available from the US Department of Agriculture at <http://www.ers.usda.gov/data-products/county-level-data-sets/download-data.aspx> Our stratification standards are based on 2011 US population data that we have analyzed with SAS 9.3.

Using Mother's state and county of residence (or equivalent) or FIPS code, use the variable PCTPOVALL_2011 to categorize into one of 5 Strata:

- i. Lowest Quartile of Poverty if percent in poverty is $\leq 12.5\%$
 - ii. Second Quartile of Poverty if percent in poverty is $> 12.5\%$ and $\leq 16.5\%$
 - iii. Third Quartile of poverty if percent in poverty is $> 16.5\%$ and $\leq 20.7\%$
 - iv. First upper quartile (75th-90th) if percent in poverty is $> 20.7\%$ and $\leq 25.7\%$
 - v. Second upper quartile ($> 90^{\text{th}}$ percentile) if percent in poverty exceeds 25.7%
- iii. Repeat stratifications a-g within birthweight categories (report for all strata for which denominator ≥ 15)