

3. General pregnancy variables

a. **Maternal Age (whole years) at time of delivery**

_____ (number if unknown fill UNK)

b. **Race** (tick one, please tick other and state UNK, if unknown/uncertain)

- Black
- White
- Asian
- Other _____

c. **Ethnicity** (tick one, please tick other and state UNK if unknown/uncertain)

- d. Hispanic
- Not Hispanic
- Native Population
- Other _____

e. **Infant gender** (tick one, please tick other and state UNK if unknown/uncertain)

- Male
- Female
- Other _____

f. **Mode of delivery** (tick one, please tick other and state UNK if unknown/uncertain)

- Vaginal
- C-section:
- Other: _____

g. **Singleton pregnancy** (tick one, please tick other and state UNK, if unknown/uncertain)

- Yes
- No
- Other: _____

- h. **Parity (fill 1-4 each with full number based on the status at start of this pregnancy).** **Gravidity** is defined as the number of times that a woman has been pregnant and **parity** is defined as the number of times that she has given birth to a fetus, regardless of whether the child was born alive or was stillborn

(fill what you see in chart, if absent state UNK)

Gravidity/Parity reported

G.... P.....

1. **Prior Term Pregnancies**_____ (number or fill UNK if unknown)
2. **Prior Preterm Pregnancies (<37 wk)** _____ (number or fill UNK if unknown)
3. **Abortions/miscarriage (<20 wk)**_____ (number or fill UNK if unknown)
4. **Born Alive** _____ (number or fill UNK if unknown)

GESTATIONAL AGE ASSESSMENT

4. Recorded gestational age (from chart)

_____ (Number: weeks/days, if absent or unknown state UNK)

5. How was reported gestational age above assessed (tick one, and if unknown tick other and state UNK)

- Antenatal Maternal US
- LMP
- Infant Exam,
- Other (describe) _____

6. **Elements of GA available in the neonatal record** (including copy of maternal/delivery record in the neonatal chart: *only if available in neonatal chart, it is not the intention to find the maternal chart*). (tick one option on each line for a-l)

	Recorded	NOT recorded	Incomplete/uncertain	Comments/Issues
a. Intrauterine insemination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b. Embryo transfer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c. Certain LMP (LMP known)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d. Uncertain LMP (LMP not known)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e. First trimester US	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f. Second trimester US	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
g. Third trimester US	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
h. Fundal height (any)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
i. Fundal height in 2 nd trimester	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
j. Maternal physical exam in 1 st trimester	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
k. Birth weight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
l. Newborn GA by physical exam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

7. **Assessment of Gestational Age LOC based on GAIA Definition (Use Case Definition Checklist:see appendix 2):**

a. Level of certainty _____ (1,2,3,4,5 or UNK: unable to assess)

b. If unable to assign GA LOC, describe the reason(s):

Reason _____

SGA CASE DEFINITION SPECIFIC VARIABLES

8. Recorded infant birth weight (earliest at birth) (complete, if not recorded state UNK)

_____ (in grams)

9. Recorded weight percentile (complete if absent or unknown state UNK)

_____ (..th percentile)

10. Recorded birth weight/gestational age assessment (tick one):

- SGA (Small for gestational age)
- AGA (Appropriate for gestational age)
- LGA (Large for gestational age)
- Not recorded/unknown

11. Was subject diagnosed as SGA? (tick one)

- Yes
- No
- Uncertain/not recorded

12. Enter name of chart used to assess (please tick and complete)

- _____ Name of reference chart
- Reference chart not available /unknown

13. Elements of the LBW case definition in clinical or study record (tick one at each line)

Parameter	Evidence in Medical Record or Study Record			Comments
	Yes*	No*	Uncertain/ not recorded	
a. Newborn 0 to 28 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Recorded birth weight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Birth weight recorded as below 10 th percentile for age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Weight recorded in the first 24 hr of birth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Weight measured in the first 48 hrs of life (day 1 or 2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Electronic scale used*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Electronic scale graduated to 10 gr*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Electronic scale calibrated at least once a year*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. Electronic scale placed on a level, hard surface*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
j. Scale tared to zero gr*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
k. BW assessed as per health care facilities SOP which fulfills: NB weight within 24 hrs of birth + use of electronic scale which is graduated to 10 g + scale is calibrated at least once a year + scale is placed on a level, hard surface + scale tared to 0 grams.*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
l. Used spring scale *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
m. Electronic or spring scale graduated to at least 50 gr*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
n. Electronic or spring scale is calibrated at least once a year, or more often if moved*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
o. Electronic or spring scale is tared to zero gr or 0.00 Kg*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
p. BW assessed as per health care facilities SOP which fulfills: NB weight within 24 hrs of birth + use of electronic or spring scale graduated to at least 50 g + scale is calibrated at least once a year + scale tared to 0 gr or 0.00 Kg*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
q. Used dial or color coded scale*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

r. Proxy measure of weight used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
s. Proxy used was: Chest circumference	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
t. Proxy used was: Foot length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
u. Proxy used was Mid upper arm circumference	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. Proxy used was: Difference between adult weight with and without newborn in arms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
w. Baby noted to be small but no actual Birth Weight recorded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
x. Documentation of actual Birth Weight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
y. Documentation of Gestational Age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
z. Documentation of BW/GA assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*yes means recorded evidence in chart or because of hospital procedures protocol (for calibration of scales/taring or type of scale), No means evidence of absence.

QUALITY ASSESSMENT CASE DEFINITION

14. Case abstractor's best assessment of LOC for SGA is (Use Case Definition Checklist in appendix 1):

a. Level of certainty _____ (1,2A/B,3A/B,4,5 or UNK: unable to assess)

b. If unable to assign LOC, describe the reason(s):

Reason _____

15. PI's assessment of LOC for SGA (Use Case Definition Checklist in appendix 1):

a. Level of certainty _____ (1,2A/B,3A/B,4,5 or UNK: unable to assess)

b. If unable to assign LOC, describe the reason(s):

Reason _____

16. Other comments:

Appendix 1:
Small for Gestational Age (SGA)
Guide for LOC assignment for SGA (check all that are present)

SGA (small for gestational age) definition: weight below 10th percentile for gestational age as assessed against a validated global, regional or local standard. These use a gender specific reference population. A recent meta-analysis identified 26 commonly cited reference charts, which include the 10th percentile cut point to define SGA status. The majority of the available reference populations were from North America (n = 12) with some from Europe (n = 6) and Asia (n = 5), and few from Africa (n = 2) and South America (n = 1). The majority of the charts used LMP dates to define gestational age reported to the nearest week, while some used ultrasound or best obstetric estimate.

Levels of Certainty

Level 1

1. Weight below 10th percentile for gestational age

AND

2. The following used in assessment of weight:
- Newborn weighed within 24 hours of birth
 - Weight assessed using a calibrated electronic scale with 10 g resolution

AND

3. The following for assessment of gestational age:
- Certain LMP or IUI or embryo transfer date AND confirmatory ultrasound in first trimester
- OR
- First trimester ultrasound

Level 2A

1. Weight below 10th percentile for gestational age

AND

2. The following used in assessment of weight
- Newborn weighed within 24 hours of birth on *any* scale with a ≤ 50 g resolution, tared to zero and calibrated

AND

3. The following for assessment of gestational age:
- Certain LMP with first or second trimester ultrasound
- OR

- Certain LMP with first trimester physical exam¹

Level 2B

- 1. Weight below 10th percentile for gestational age

AND

- 2. The following used in assessment of weight

- Newborn weighed within 24 hours of birth on *any* scale with a ≤ 50 g resolution, tared to zero and calibrated

AND

- 3. The following assessment of gestational age

- Uncertain LMP with second trimester ultrasound

Level 3A

- 1. Weight below 10th percentile for gestational age

AND

- 2. The following used in assessment of weight

- Infant weighed within the first 48 hours of life
- Newborn weighed on *any* scale with a ≤ 50 g resolution, tared to zero and calibrated

AND

- 3. The following assessment of gestational age

- Certain LMP with third trimester ultrasound
OR
- Certain LMP with confirmatory 2nd trimester fundal height
OR
- Certain LMP with birthweight
OR
- Uncertain LMP with first trimester physical exam

Level 3B

- 1. Weight below 10th percentile for gestational age

AND

- 2. The following used in assessment of weight

- Infant weighed within the first 48 hours of life
- Newborn weight assessed by measuring the difference between an adult holding the infant and the adult being weighed alone on *any* scale

AND

- 3. The following assessment of gestational age
-

- Uncertain LMP with fundal height
OR
- Uncertain LMP with newborn physical assessment
OR
- Uncertain LMP with birthweight

Level 4

- Baby noted to be small, but no actual weight
- Baby with GA assessed only by infant examination
- Diagnosis extracted from billing codes or chart, with no documentation of actual BW or GA

Level 5

- No evidence of SGA or a confirmed diagnosis other than SGA.

Appendix 2

Gestational Age Assessment Guide

Definitions of terms used:

Intrauterine insemination (IUI) – A procedure in which a fine catheter is inserted through the cervix into the uterus to deposit a sperm sample directly into the uterus, to achieve fertilization and pregnancy.

Embryo transfer – The procedure in which one or more embryos are placed in the uterus or fallopian tube.

Ultrasound (U/S):

- 1st trimester ($\leq 13 \frac{6}{7}$ weeks).

- 2nd trimester scan ($14 \frac{0}{7}$ – $27 \frac{6}{7}$ weeks).

- 3rd trimester ($28 \frac{0}{7}$ + weeks).

LMP (last menstrual period) – GA is calculated from the first day of the mother's LMP. If LMP and U/S do not correlate, default to U/S GA assessment.

***Certain LMP:** (LMP date + 280 days): Use LMP if within 7 days at ≤ 14 weeks; within 14 days at ≤ 26 weeks; within 21 days beyond 26 weeks.

***Uncertain LMP – first trimester** ($\leq 13 \frac{6}{7}$ weeks by LMP): Use the approximate date of the last menstrual period (LMP) if corroborated by physical exam, or a first trimester ultrasound. If there is a discrepancy of >7 days between the LMP and the first trimester ultrasound, the ultrasound-established dates will take preference over LMP for gestational age dating.

***Uncertain LMP – second trimester** ($14 \frac{0}{7}$ – $27 \frac{6}{7}$ weeks by LMP): Use the approximate date of the LMP if corroborated by physical exam including fundal height, or a second trimester ultrasound. If there is a discrepancy of >10 days between the LMP and the second trimester ultrasound, the ultrasound-established dates will take preference over LMP for GA dating.

***Uncertain LMP – third trimester** >28 weeks – third trimester ultrasound.

***No LMP date:** If menstrual dates are unknown, the ultrasound established dates will be used for gestational age dating or 2nd trimester fundal height and/or newborn physical examination.

Pregnancy symptoms– nausea, fatigue, tender swollen breasts, frequent urination.

Antenatal Physical Examination– pelvic bimanual examination confirming enlarged uterus.

Newborn Physical Examination– New Ballard Score – physical and neurological assessment.

Fundal Height (FH) in cms

Birth Weight (BW) in grams

GA Levels of Certainty (check all that are present)

Level 1

1. Certain LMP* or intrauterine insemination (IUI) date or embryo transfer (ET) date with confirmatory 1st trimester scan ($\leq 13\ 6/7$ weeks).

OR

2. 1st trimester scan ($\leq 13\ 6/7$ weeks).

Level 2A

1. Certain LMP* with 2nd trimester scan (14 0/7 weeks to 27 6/7 weeks). If LMP and U/S do not correlate, default to U/S GA assessment.

OR

2. Certain LMP* with 1st trimester physical examination.

Level 2B

Uncertain LMP with 2nd trimester scan (14 0/7 weeks to 27 6/7 weeks).

Level 3A

1. Certain LMP with 3rd trimester scan – 28 0/7 weeks +.

OR

2. Certain LMP with confirmatory 2nd trimester FH.

OR

3. Certain LMP with birth weight.

OR

4. Uncertain LMP with 1st trimester physical examination.

Level 3B

1. Uncertain LMP with FH.

OR

2. Uncertain LMP with newborn physical assessment.

OR

3. Uncertain LMP with Birth weight.

