The Calculations of Gestational Age for 969 TIDES Women, 21NOV2016

TIDES have recruited total 969 women to participant in the study. Of those, 804 live births have been reported.

The gestational age data

There are 790 children reported in the Birth Record Review. 789 have records on their gestational age in weeks and days.

The last menstrual period (LMP) data

The LMP data was reported in

1. Question 5 in the first trimester questionnaire (Q5\_LMP).
2. TIDES tracking database (LMP).

The estimated due date (EDD) data

The EDD data were reported in the tracking database by two methods:

1. EDD estimated by LMP (EDD).
2. EDD estimated by Ultrasound(US\_EDD).

The calculations of estimated LMP

Data cleaning

1. Check missing values on LMP and EDD data.
2. Check through all LMP and EDD data to validate the LMP and EDD dates.

Calculation

To calculate the estimated LMP:

\* ---- Step 1

For 789 women who reported the gestational age in the birth record review,

*TIDES\_Women\_LMP* = GestAgeEstLMP (Date of delivery – gestational age (days));

\* ---- Step 2

For 180 women without birth record data:

1. Calculated ultrasound EDD estimated LMP: USestLMP =US\_EDD – 280;
2. Calculated EDD estimated LMP: EDDestLMP=EDD – 280;

Diff\_USlmp\_LMP = difference of USestLMP and reported LMP.

\* ---- Step 2a, 57 women if their reported

Q5\_LMP = LMP then *TIDES\_Women\_LMP*=LMP;

\* ---- Step 2b, 52 women if their reported

(Q5\_LMP ne LMP) and (-**10**  < Diff\_USlmp\_LMP < **10**) then *TIDES\_Women\_LMP*=LMP;

\* ---- Step 3, 13 women who were missing on both of LMP and Q5\_LMP:

*TIDES\_Women\_LMP* = USestLMP;

\* *----* Step 4, for remaining 58 women who were missing on the ultrasound EDD,

If the differences between their reported LMP and EDD estimated LMP ( EDDestLMP ) < 10 days then *TIDES\_Women\_LMP* = EDDestLMP;

The calculations of estimated gestational ages

Gestational age at birth

\* --------- Step 1;

For 789 with the birth record review, GestAge\_birth\_days = record of gestational age.

For 180 without the birth record review,

\* --------- Step 2, for those if they have child DOB reported then

GestAge\_Birth\_days=Child DOB - TIDES\_Women\_LMP;

\* --------- Step 3 , for those if they did not have child DOB reported but have ultrasound EDD then

GestAge\_Birth\_days = EDD\_US - TIDES\_Women\_LMP;

\* --------- Step 4, for those if they only have LMP estimated EDD then

GestAge\_Birth\_days = EDD - TIDES\_Women\_LMP;

\* --------- Gestational age at birth by WEEKS as decimal;

GestAge\_Birth\_wks=GestAge\_Birth\_days / **7**;

Gestational age at Urine / Serum date

GestAge\_U1=T1\_UrineDate-TIDES\_Women\_LMP;

GestAge\_U2=T2\_UrineDate-TIDES\_Women\_LMP;

GestAge\_U3=T3\_UrineDate-TIDES\_Women\_LMP;

GestAge\_B1=T1\_BloodDate-TIDES\_Women\_LMP;