**DATA ANALYSIS CODE BOOK MARCH 2023**

**AT BIRTH**

1. Umbilical Artery Resistance Index

Continuous variable (mean or median)

1. Maternal age
2. GA at birth (weeks) + (days)
3. Continuous variable
4. Birth Weight/Size for GA (centile)
5. Continuous variable (mean or median centile)
6. Birth weight (g)
7. Continuous variable
8. Child sex

1 = Male

2 = Female

1. Did the woman experience labour?

0 = No

1 = Yes

9=Unknown

1. If the woman experienced labour, what was the mode of onset of labour?

1=Spontaneous

2=Induced

9=Unknown

1. If labour was induced, what was the primary indication?

1=Fetal death

2=Abnormal fetal umbilical artery Doppler findings

3=Suspected fetal growth restriction

4=Reduced fetal movement

5=Gestational diabetes

6=Gestational hypertension

7=Preeclampsia/eclampsia

8=Placental abruption

9=Prelabour rupture of membranes

10=Oligohydramnios

11=Maternal medical condition

12=Post-term pregnancy

13=Other

99=Unknown

1. What was the final mode of birth?

1=Cephalic vaginal birth

2=Breech vaginal birth

3=Vacuum or forceps vaginal birth

4=Caesarean section before labour

5=Caesarean section during labour

9=Unknown

1. If final mode of birth was caesarean section, what was the primary indication?

5=Abnormal fetal presentation

6=Fetal distress

7=Gestational diabetes

10=Placental abruption

11=Placenta praevia

14=Failure of labour to progress

15=Cephalo-pelvic disproportion

16=Previous caesarean section

18=Other

99=Unknown

1. Postpartum haemorrhage

0=No

1=Yes

1. Postpartum preeclampsia/eclampsia

0=No

1=Yes

1. Anaemia requiring blood transfusion

0=No

1=Yes

1. Postpartum endometritis

0=No

1=Yes

1. Apgar score at 5 minutes

0-3 severely depressed

4-6 moderately depressed

7-10 excellent condition

1. If woman was ever referred to a high-risk clinic, did she comply with the referral at every occasion?

0=No

1=Yes

1. HR indication - High-risk Umbiflow reading

0=No

1=Yes

1. HR indication - Anaemia

0=No

1=Yes

1. HR indication - Suspected small for gestational age

0=No

1=Yes

1. HR indication - Suspected large for gestational age

0=No

1=Yes

1. HR indication - Gestational hypertension

0=No

1=Yes

1. HR indication - Pre-eclampsia/eclampsia

0=No

1=Yes

1. HR indication - Abnormal glucose screening

0=No

1=Yes

1. HR indication - Reduced fetal movement after 28 weeks

0=No

1=Yes

1. HR indication - Antepartum haemorrhage

0=No

1=Yes

1. HR indication - Abnormal fetal presentation

0=No

1=Yes

1. HR indication - Abnormal fetal lie

0=No

1=Yes

1. HR indication - Maternal medical condition

0=No

1=Yes

1. HR indication - Other condition

0=No

1=Yes

1. Other condition - please specify

List all the specifications

1. Gravidity (number of pregnancies including current pregnancy)

Continuous variable

1. Parity (number of all previous births ≥ 28 weeks)

Continuous variable

1. Abortions, miscarriages, TOP

Continuous variable

1. Mother’s home language

1=Northern Sotho/Sepedi

2=Zulu

3=Ndebele

4=Tsonga

5=Afrikaans

6=Swazi

7=Tswana

8=Xhosa

9=South Sotho

10=Venda

11=English

12=Other

1. Population group

1=Black/African

2=Coloured

3=Indian/Asian

1. Mother's highest level of education

1=Any primary schooling (Grades 1 – 7)

2=Any secondary school level (Grades 8 – 12)

4=Post-school education

1. Marital status

1=Single

2=Married

3=Co-habiting

4=Widowed

5=Separated

1. Mother's current employment

0=No

1=Yes

1. Type of employment

1=Piece jobs

2=Self-Employed

3=Part-time

4=Full-time

1. Social grant

1=Child support grant

2=Medical grant

1. Partner's highest level of education

1=Any primary schooling (Grades 1 – 7)

2=Any secondary school level (Grades 8 – 12)

4=Post-school education

99=Unknown

1. Partner's current employment

0=No

1=Yes

1. Type of employment

1=Piece jobs

2=Self-Employed

3=Part-time

4=Full-time

1. Monthly household income

1=R 0 - R 2000

2=R 2001 - R 4000

3=R 4001 - R 6000

4=R 6001 - R 8000

5=R 8000 +

6=Don't know

1. Partner's reported HIV status

0=Unknown

1=Negative

2=Positive

1. Description of neighbourhood

1=Formal township

2=Informal settlement/ Squatter

3=Urban/City

4=Rural

1. Access to running water

1=Communal tap

2=Inside house

3=Inside yard

4=Water tank

1. Access to toilet

1=Flushing toilet

2=Pit latrine/Bucket

1. Electricity at home

0=No

1=Yes

1. Functional fridge at home

0=No

1=Yes

1. Television at home

0=No

1=Yes

1. Telephone available at home

0=No

1=Yes

1. Own cell phone

0=No

1=Yes

1. Computer at home

0=No

1=Yes

1. Access to internet

0=No

1=Yes, at home

2=Yes, at other places

3=Yes, on my phone

1. Family own a car

0=No

1=Yes

1. House made of brick & cement

0=No

1=Yes

1. Renting

0=No

1=Yes

1. Stay in an RDP house

0=No

1=Yes

BREASTFEEDING PRACTICES

1. Ever breastfeed or try to breastfeed

0=No

1=Yes

1. If No, reason

1=Baby was too small or unwell

2=Mother unwell

3=Perceived insufficient breastmilk

4=Other: Baby wouldn't suck for no apparent reason or HIV status

5=Personal circumstances (e.g., other demands, return to work)

1. Early initiation of breastfeeding

1=Immediately

2=Never (baby was fed pumped milk)

3=Prefer not to answer

1. Early initiation of breastfeeding (time)

1=After 1 hour following birth

2=Within 1 hour after birth

1. Fed breast milk from a bottle or a cup

0=No

1=Yes

1. How did you feed your baby from birth until 6 months

1=Breast milk only with some feeding directly from the breast and some expressed breast milk but no formula feeding up to baby's current age

2=Breast milk only directly from the breast (no expressed breast milk and no formula feeding) from birth to baby's current age

3=Formula milk only, but previously also breast milk

4=Breast milk and formula feeding (baby received some formula before his/her current age but still received some direct or expressed breast milk at his/her current age)

5=Formula feeding only (baby did not receive any breast milk between birth and his/her current age)

6=Breast milk and formula feeding (baby received some formula before current age but also received direct/expressed breast milk and donor milk)

7=Breast milk (directly from the breast/ expressed breast milk and donor breast milk), but no formula feeding up to baby's current age

1. Infant feeding from birth until 6 months

1=Exclusive breastfeeding (1,2,7)

2=Replacement feeding (5)

3=Mixed feeding (4,6)

4= Formula feeding only, but previously exclusive breastfeeding (3)

1. Currently breastfeeding

0=No

1=Yes

1. Continued breastfeeding

1=Continued breastfeeding

1. Timing of breastfeeding cessation (continuous and categorical)

1=0-3 months

2=4-6 months

3=7-12 months

4=12-18 months

1. Timing of introducing formula (continuous and categorical)

1=0-3 months

2=4-6 months

3=7-12 months

4=13-18 months

1. Main reason for introducing formula

1=Needed to return to work

2=Baby wouldn't suck for no apparent reason

3=The right time/age to change

4=Insufficient milk to satisfy the baby

5=Baby not gaining weight

6=Other reason

7=Mastitis or breast abscess

8=Painful breasts or sore nipples

9=Baby wouldn't suck because unwell or low birth weight

10=Milk dried up

1. Water or glucose water

0=No

1=Yes

1. Age\_months given

Continuous

1. Tea, juice

0=No

1=Yes

1. Age\_months given

Continuous

1. Cow's milk

0=No

1=Yes

1. Age\_months given

Continuous

1. Semi-solids eg cereals,porridge

0=No

1=Yes

1. Age\_months given

Continuous

1. Solids eg vegetables, fruit

0=No

1=Yes

1. Age\_months given

Continuous

1. Protein eg meat, eggs, peanut butter, cheese, yoghurt, fish

0=No

1=Yes

1. Age\_months given

Continuous

**MEDICAL CONDITIONS AT BIRTH**

1. Baby admitted to the neonatal unit in the first week of life

0=No

1=Yes

1. Neonatal diagnosis

1=Respiratory Distress Syndrome (RDS) / Hyaline Membrane Disease (HMD)

2=Jaundice

3=Other

1. Baby ever taken any prescribed medications (birth to first visit)

0=No

1=Yes

1. NVP started

1=Yes

1. AZT started

1=Yes

1. Rating mother's general health

1=Good

2=Very good

3=Excellent

4=Fair

5=Poor

1. Infections post-partum

1=Yes

1. Complications / illnesses post-partum

1=Yes

1. Taking any prescribed medication

1=Yes

**FOOD SECURITY ASSESSMENT**

1. Statements best describes the food eaten in your household in the past 12 months

1=You and other household members always had enough of the kinds of food you wanted to eat

2=You and other household members had enough to eat, but not always the kinds of food you wanted.

3=Sometimes you and other household members did not have enough to eat.

4=Often you and other household members didn't have enough to eat.

1. You and other household members worried that food would run out before you got money to buy more

0=No (Never true)

1=Yes (Sometimes true & Often true)

1. The food that you and other household members bought just didn't last, and there wasn't any money to get more

0=No (Never true)

1=Yes (Sometimes true & Often true)

1. You and other household members couldn't afford to eat balanced meals

0=No (Never true)

1=Yes (Sometimes true & Often true)

1. In the past 12 months, did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food

0=No

1=Yes

97a. How often did this happen

0=No (Only 1 or 2 months)

1=Yes (Some months but not every month & Almost every month)

1. In the past 12 months, did you personally ever eat less than you felt you should have because there wasn't enough money to buy food

0=No

1=Yes

1. In the past 12 months, did you personally lose weight because you didn't have enough money for food

0=No

1=Yes

1. In the past 12 months, did you or other adults in your household ever not eat for a whole day because there wasn't enough money for food

0=No

1=Yes

100a. How often did this happen

0=No (Only 1 or 2 months)

1=Yes (Almost every month & Some months but not every month)

1. Household Adult Food Security Raw Score/Scale of 10

Continuous variables

Mean/median per group

1. Household Adult Food Security Status (categorical)

1=High food security among adults (Raw score zero)

2=Marginal food security among adults (Raw score 1-2)

3=Low food security among adults (Raw score 3-5)

4=Very low food security among adults (Raw score 6-10)

**LIFESTYLE BEHAVIOUR**

1. Do you smoke cigarettes

0=Do not smoke

1=Yes

1. Since your baby was born, how often do you drink alcohol

1=2 to 3 times a week

2=Once a week

3=Less than monthly

4=2 to 3 times a month

5=About once a month

6=Never

**CD4 and HVL**

1. Latest CD4 (only Continuous)
2. Latest Viral load (only continuous)
3. Current ART

1=Atrioza

2=Aluvia; TDF-EFU-3TC; Luvigel & other

**MATERNAL MENTAL HEALTH**

1. Little interest or pleasure in doing things

1=Not at all

2=Several days

3=More than half the days

4=Nearly every day

1. Feeling down, depressed or hopeless

1=Not at all

2=Several days

3=More than half the days

4=Nearly every day

**CHILD MEDICAL CONDITIONS**

1. Child had malnutrition/Kwashiorkor

1=Yes

1. Child had diarrhea

1=Yes

1. Child had difficulty in breathing

1=Ye

1. Child once admitted for any illness in the hospital

1=Yes

1. Visited any health care facility because the child was ill

1=Yes

1. Child currently need or use medicine prescribed by a doctor or nurse

1=Yes

1. Child limited in any way in his or her ability to do the things most children of the same age can do

1=Yes

1. Child have any kind of developmental problem, disability for which he/she needs or gets special treatment or stimulation

1=Yes

**COVID RELATED**

1. Number of people earning an income per month

1=One

2=Two

3=More than two

4=None

1. Have you, the study child, or other household member tested positive for COVID-19

1=Yes

1. Number of household members tested positive for COVID-19

1=One member

2=Two members

1. Person(s) tested positive for COVID-19

1=Mother of the study child

2=Father of the study child

3=Mother and Father of the study child

4=Other child

5=Other household member

1. Mother of the study child fully recover from COVID

1=Yes

1. Father of the study child fully recover from COVID

1=Yes

1. You / another household member lose your / their job due to COVID-19

1=Yes

1. The person(s) who lost the job

1=Mother

2=Father

3=Mother and Father

1. Impact did COVID-19 on household income

1=Household income reduced to zero

2=Increased household income

3=No impact on household income

4=Reduced household income

1. COVID-19 related assistance received

1=COVID grant

2=Increased child support grant due to COVID

3=COVID grant and Increased child support grant due to COVID

4=UIF

5=Food parcels

1. Thinking of the period of the COVID-19 pandemic, did you and your household members have enough food to eat

1=Always

2=Most of the time

3=Sometimes

4=Never

1. How often are you and your family members eating food that you used to eat before the COVID-19 pandemic

1=Always

2=Most of the time

3=Sometimes

4=Never

**IGMCD Screening**

1. concerns about child's development

1=yes

1. Expressive Language

0=Age-appropriate development

1=Delay

2=Significant delay

1. Receptive Language

0=Age-appropriate development

1=Delay

2=Significant delay

1. Gross Movements

0=Age-appropriate development

1=Delay

2=Significant delay

1. Fine Movements

0=Age-appropriate development

1=Delay

2=Significant delay

1. Relating

0=Age-appropriate development

1=Delay

2=Significant delay

1. Play activities

0=Age-appropriate development

1=Delay

2=Significant delay

1. Self-help activities

0=Age-appropriate development

1=Delay

2=Significant delay

**BAYLEY Categorical data**

1. Categorical analysis for cognitive, language and motor

0=Normal

1=Mild

2=Moderate