

# CHAIN Number

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## CHAIN / BREAST MILK Composition SUB-STUDY (BMC study)

BMC SITE NAME: \_\_\_\_\_

Time now: \_\_: \_\_

### ENROLMENT – COMMUNITY PARTICIPANT

Eligibility checklist		
Infant enrolled in CHAIN	<input type="checkbox"/> yes	<input type="checkbox"/> no
Infant aged between 7 days and below 6 months at CHAIN enrolment	<input type="checkbox"/> yes	<input type="checkbox"/> no
Mother currently breastfeeding	<input type="checkbox"/> yes	<input type="checkbox"/> no
Mother breastfed the infants in the past 5 days	<input type="checkbox"/> yes	<input type="checkbox"/> no
Consent to BMC sub-study	<input type="checkbox"/> yes	<input type="checkbox"/> no
All of the above must be YES to be eligible for BMC sub-study		
Name of FW		
Date of Consent	___/___/_____ <i>D D / M M / Y Y Y Y</i>	
Time of Consent	___:___ (hh:mm)	
Special Circumstances		
Mother is currently taking any nutrition supplements	<input type="checkbox"/> yes	<input type="checkbox"/> no
If yes, write names of the supplements the mother is taking: <i>(Ask to see the supplement packaging and write the name of supplement)</i>	<input type="checkbox"/> Unknown 1. 2. 3. 4.	
Time since mother took the last supplement?	<input type="checkbox"/> <1 hr <input type="checkbox"/> 1-3 hrs <input type="checkbox"/> 3-6 hrs <input type="checkbox"/> >6 hrs <input type="checkbox"/> Unknown	
Mother is currently taking any medicine	<input type="checkbox"/> yes	<input type="checkbox"/> no
Where did mother get medication from?	<input type="checkbox"/> Unknown <input type="checkbox"/> Hospital/clinic <input type="checkbox"/> Herbal/traditional <input type="checkbox"/> Pharmacy <input type="checkbox"/> Healer <input type="checkbox"/> Shop <input type="checkbox"/> Neighbour/friend	
If yes, list names of the medicine the mother is taking: <i>(Ask to see medicine and write the names of the medicine)</i>	<input type="checkbox"/> Unknown 1. 2. 3. 4.	
Mother is currently breastfeeding more than one child (e.g. twins)	<input type="checkbox"/> yes	<input type="checkbox"/> no

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Mothers Characteristic (currently collected in main CHAIN CRF)	
Age	<input type="checkbox"/> <18 years <input type="checkbox"/> >18 years
Education	<input type="checkbox"/> None <input type="checkbox"/> Some Primary <input type="checkbox"/> Completed Primary <input type="checkbox"/> Some Secondary <input type="checkbox"/> Completed Secondary <input type="checkbox"/> Above Secondary
HIV status in last 6 months	<input type="checkbox"/> Known + <input type="checkbox"/> Tested + <input type="checkbox"/> Tested - <input type="checkbox"/> Not Tested <input type="checkbox"/> Known -
If positive is mother on ART? <i>(If yes, ensure the names of the ART medications are listed under medications above)</i>	<input type="checkbox"/> yes <input type="checkbox"/> no
If positive is mother on cotrimoxazole or Septrin?	<input type="checkbox"/> yes <input type="checkbox"/> no
Mother's Anthropometry	MUAC: _____. ____ cm      Height: _____ . ____ cm Weight: _____. ____ kg
Participants birth order	____ of ____ live births
Age at first pregnancy	____ years <input type="checkbox"/> unknown
Marital status	<input type="checkbox"/> Married monogamous <input type="checkbox"/> Married polygamous <input type="checkbox"/> Stable relationship <input type="checkbox"/> Single <input type="checkbox"/> Unstable/complicated/separated relationship <input type="checkbox"/> Divorced <input type="checkbox"/> Widowed
Mother has any long-term (chronic) known illness?	<input type="checkbox"/> yes <input type="checkbox"/> no  <b>If yes, which disease?</b> <input type="checkbox"/> Diabetes <input type="checkbox"/> Alzheimer's disease <input type="checkbox"/> High blood pressure <input type="checkbox"/> Arthritis <input type="checkbox"/> Cancer <input type="checkbox"/> Obesity <input type="checkbox"/> Other (specify) _____
Has mother taken any of the following in last 7 days?	<input type="checkbox"/> Alcohol <input type="checkbox"/> IV drugs <input type="checkbox"/> Khat <input type="checkbox"/> Cannabis <input type="checkbox"/> Tobacco <input type="checkbox"/> None <input type="checkbox"/> Other (specify) _____
Infant characteristics (currently collected in main CHAIN CRF)	

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Date of sub-study enrolment	___/___/_____ D D / M M / Y Y Y Y
Date of birth	___/___/_____ D D / M M / Y Y Y Y
Is the date of birth	<input type="checkbox"/> true/recorded <input type="checkbox"/> estimated
Sex	<input type="checkbox"/> male <input type="checkbox"/> female
Birth details	<input type="checkbox"/> premature <input type="checkbox"/> born small <2.5kg <input type="checkbox"/> twin/multiple birth <input type="checkbox"/> born term <input type="checkbox"/> unknown
Gestational age	<input type="checkbox"/> known/recorded ___ weeks <input type="checkbox"/> estimated, reported ___ weeks <input type="checkbox"/> unknown

Birth weight	<input type="checkbox"/> known/recorded ___ . ___ Kg <input type="checkbox"/> estimated, reported ___ . ___ Kg <input type="checkbox"/> unknown
Birth length	<input type="checkbox"/> known/recorded, ___ . ___ cm <input type="checkbox"/> estimated, reported ___ . ___ cm <input type="checkbox"/> unknown
Mode of delivery	<input type="checkbox"/> unassisted vaginal delivery (normal) <input type="checkbox"/> assisted vaginal delivery (forceps) <input type="checkbox"/> c-section

**Infant feeding**

Breastfeeding frequency in the past 24 hrs?	<input type="checkbox"/> <4 times <input type="checkbox"/> 4-8 times <input type="checkbox"/> >8 times
Does mother avoid feeding the baby from one breast?	<input type="checkbox"/> yes <input type="checkbox"/> no
If YES, why?	<input type="checkbox"/> Pain <input type="checkbox"/> Other forms of discomfort <input type="checkbox"/> Baby preference <input type="checkbox"/> Other (specify) _____
List other liquids sometimes consumed by infant?	<input type="checkbox"/> Nothing <input type="checkbox"/> Water <input type="checkbox"/> Sweetened water <input type="checkbox"/> Juice <input type="checkbox"/> Soda/fizzy drinks <input type="checkbox"/> Tea/cocoa <input type="checkbox"/> Formula milk <input type="checkbox"/> Soups <input type="checkbox"/> Gripe water <input type="checkbox"/> Herbal medicine <input type="checkbox"/> Special milk/DF100 <input type="checkbox"/> Honey <input type="checkbox"/> Cow's milk <input type="checkbox"/> Others

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If YES to liquids, at what age did infant FIRST consume any liquids other than breast milk?	<input type="checkbox"/> Birth-day 5 <input type="checkbox"/> Day 5 – 2 weeks <input type="checkbox"/> >2 weeks to 1 month <input type="checkbox"/> 1 month – 3 months <input type="checkbox"/> >3 months
List other semi-solid foods consumed by infant?	<input type="checkbox"/> Porridge <input type="checkbox"/> Fruit purees <input type="checkbox"/> Vegetable purees <input type="checkbox"/> Others (list below) _____ _____
If YES to semi-solid foods, at what age did infant FIRST consume any semi-solids other than breast milk?	<input type="checkbox"/> Birth-day 5 <input type="checkbox"/> Day 5 – 2 weeks <input type="checkbox"/> >2 weeks to 1 month <input type="checkbox"/> 1 month – 3 months <input type="checkbox"/> >3 months
<b>Early initiation of breastfeeding</b>	
What did the child receive other than breastmilk in the first 3 days of life?	<input type="checkbox"/> sweetened water <input type="checkbox"/> formula/powdered milk <input type="checkbox"/> animal milk <input type="checkbox"/> fruit juice <input type="checkbox"/> tea <input type="checkbox"/> water <input type="checkbox"/> pure honey <input type="checkbox"/> glycerine <input type="checkbox"/> nothing <input type="checkbox"/> porridge/pulp <input type="checkbox"/> others
Feeding of colostrum at birth	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> unknown
How early was colostrum/breastfeeding initiated	<input type="checkbox"/> Within 1 hour of birth <input type="checkbox"/> Between 1-12 hours <input type="checkbox"/> >12 hours
Colostrum difficult to obtain	<input type="checkbox"/> yes <input type="checkbox"/> no

Who helped mother initiate breastfeeding?	<input type="checkbox"/> Nurse/midwife <input type="checkbox"/> Organised lactation support group <input type="checkbox"/> Infant's grandmother <input type="checkbox"/> Sister <input type="checkbox"/> Other family member <input type="checkbox"/> No one
How many children has she breastfed before this infant	<input type="checkbox"/> None/first child <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> More than 3
Is mother currently pregnant	<input type="checkbox"/> yes, confirmed <input type="checkbox"/> no <input type="checkbox"/> suspected pregnancy <input type="checkbox"/> unknown

**Breast assessment (as observed at the time of assessment)**

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<p>Does the right breast look healthy?</p>   <p>Does the left breast look healthy?</p>	<p><input type="checkbox"/> yes                      <input type="checkbox"/> no</p> <p>IF no, Nipples are cracked</p> <p><input type="checkbox"/> slight    <input type="checkbox"/> severe with bleeding</p> <p><input type="checkbox"/> yes                      <input type="checkbox"/> no</p> <p>IF no, Nipples are cracked</p> <p><input type="checkbox"/> slight    <input type="checkbox"/> severe with bleeding</p>
<p>Size and shape of nipples</p>	<p>Right nipple</p> <p><input type="checkbox"/> inverted                      <input type="checkbox"/> flat</p> <p><input type="checkbox"/> pointed on one end    <input type="checkbox"/> round (normal)</p> <p>Left nipple</p> <p><input type="checkbox"/> inverted                      <input type="checkbox"/> flat</p> <p><input type="checkbox"/> pointed on one end    <input type="checkbox"/> round (normal)</p>
<p>Size and shape of breast</p>	<p>Right breast</p> <p><input type="checkbox"/> large</p> <p><input type="checkbox"/> engorged and painful</p> <p><input type="checkbox"/> full / rounded (normal)    <input type="checkbox"/> flat / deflated</p> <p><input type="checkbox"/> small</p> <p>Left breast</p> <p><input type="checkbox"/> large</p> <p><input type="checkbox"/> engorged and painful</p> <p><input type="checkbox"/> full / rounded (normal)    <input type="checkbox"/> flat / deflated</p> <p><input type="checkbox"/> small</p>
<p>Dripping milk</p>	<p><input type="checkbox"/> yes                      <input type="checkbox"/> no</p>
<p>Signs of inflammation or infection (<i>tick all that apply</i>)</p>	<p><input type="checkbox"/> redness                      <input type="checkbox"/> swollen                      <input type="checkbox"/> None</p> <p><input type="checkbox"/> painful                      <input type="checkbox"/> fever/feeling ill</p> <p><input type="checkbox"/> warm to the touch    <input type="checkbox"/> thickening of breast tissue</p>
<p>Pain, burning or discomfort during breastfeeding</p>	<p><input type="checkbox"/> yes    <input type="checkbox"/> no</p>

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Breast oozes with milk mixed with pus or blood	<input type="checkbox"/> yes <input type="checkbox"/> no If yes, which breast <input type="checkbox"/> right <input type="checkbox"/> left <input type="checkbox"/> both
Mother noticed anything wrong with breast?	<input type="checkbox"/> yes <input type="checkbox"/> no If yes, comment:
Mother thinks breast milk is sufficient for her baby?	<input type="checkbox"/> yes <input type="checkbox"/> no
Bottle feeding?	<input type="checkbox"/> yes <input type="checkbox"/> no If yes, what is fed in a bottle? (tick all that apply) <input type="checkbox"/> breast milk at room temperature <input type="checkbox"/> warmed breast milk <input type="checkbox"/> animal milk <input type="checkbox"/> Formula milk <input type="checkbox"/> Other liquids e.g. Juices, etc.
Does the mother currently use hand expression?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> rarely <input type="checkbox"/> on occasion <input type="checkbox"/> often IF yes, why: <input type="checkbox"/> relieve engorgement <input type="checkbox"/> collect milk to feed the infant at a later time <input type="checkbox"/> aid in stimulation/production of milk

*Breastfeeding assessment to be completed for all mothers and used to support feeding technique for all mothers at the end of the sample collection.*

Breastfeeding assessment (Observed)			
<i>Positioning</i>		<i>Attachment</i>	
Baby's head and body in line	<input type="checkbox"/> yes <input type="checkbox"/> no	More areola seen above baby's top lip	<input type="checkbox"/> yes <input type="checkbox"/> no
Baby held close to mother's body	<input type="checkbox"/> yes <input type="checkbox"/> no	Baby's mouth open wide	<input type="checkbox"/> yes <input type="checkbox"/> no
Baby's whole body supported	<input type="checkbox"/> yes <input type="checkbox"/> no	Lower lip turned outward	<input type="checkbox"/> yes <input type="checkbox"/> no
Baby approaches breast nose to nipple	<input type="checkbox"/> yes <input type="checkbox"/> no	Baby's chin touches breast	<input type="checkbox"/> yes <input type="checkbox"/> no
<i>Suckling</i>		<i>Mother</i>	
Slow deep sucks with pauses	<input type="checkbox"/> yes <input type="checkbox"/> no	Mother looks healthy	<input type="checkbox"/> yes <input type="checkbox"/> no
Cheeks round when suckling	<input type="checkbox"/> yes <input type="checkbox"/> no	Mother relaxed and comfortable	<input type="checkbox"/> yes <input type="checkbox"/> no
Baby releases breast when finished	<input type="checkbox"/> yes <input type="checkbox"/> no	Bonding with baby	<input type="checkbox"/> yes <input type="checkbox"/> no
Mother notices signs of oxytocin reflex (milk dripping by itself)	<input type="checkbox"/> yes <input type="checkbox"/> no		
Mothers Diet			

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Is mother currently on nutrition programme	<input type="checkbox"/> Yes <input type="checkbox"/> No
Mothers dietary habits	<input type="checkbox"/> Mixed diet <input type="checkbox"/> Vegetarian but with milk <input type="checkbox"/> Strictly vegetarian <input type="checkbox"/> Others

What time did mother take breakfast this morning? ( <i>indicate approximate time</i> )	__ __ : __ __ (hh:mm) <input type="checkbox"/> None
List all foods and liquids consumed as part of breakfast (include liquids)	<input type="checkbox"/> None 1. 2. 3. 4. 5.
What time did you eat dinner last night? ( <i>estimated time</i> )	__ __ : __ __ (hh:mm) <input type="checkbox"/> None
List all foods and liquids consumed as part of dinner (include liquids)	<input type="checkbox"/> None 1. 2. 3. 4. 5.
List all foods and liquids consumed as snacks between dinner and breakfast (during the night)	<input type="checkbox"/> None 1. 2. 3. 4.

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In the past 7 days, did the mother consume at least 1 tablespoon of the following food?			
<b>If yes, how many times?</b>		Number of times	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
Pulses	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
Nuts and seeds	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
Dairy	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
Meat, poultry and fish	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
Eggs	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
Dark green leafy vegetables	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
Yellow fruits and vegetables	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
Other fruits and vegetables			

Breastmilk collection	
Breastmilk collection attempted	<input type="checkbox"/> yes <input type="checkbox"/> no
Date of collection	___/___/_____ <i>D D / M M / Y Y Y Y</i>
Time of collection (start)	___:___ (hh:mm)
Time of collection (end)	___:___ (hh:mm)
More than 20ml was collected using only the first breast?	<input type="checkbox"/> yes <input type="checkbox"/> no
Amount of milk sample collected from first breast?	___mL
Which breast was used	<input type="checkbox"/> right <input type="checkbox"/> left



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<p><b><u>If second breast was used, total milk</u></b>                  volume obtained after full hand expression                  of 2<sup>nd</sup> breast</p>	<p>___mL    <input type="checkbox"/> Not applicable</p>
<p>Unable to collect 20ml breastmilk sample                  why?</p>	<p><input type="checkbox"/> insufficient milk in the breast  <input type="checkbox"/> difficulty in expressing  <input type="checkbox"/> other (specify) _____</p>
<p>How to best describe the milk collection                  process</p>	<p><input type="checkbox"/> Milk flow was fast and easy  <input type="checkbox"/> Milk flow was slow and difficult</p>
<p>Was mother experienced in hand                  expression</p>	<p><input type="checkbox"/> Experienced    <input type="checkbox"/> Not experienced</p>

<p>CRF Completed by (Initials) – to be signed when                  complete.  <i>Do not sign if any fields are empty</i></p>	<p>____</p>	<p>Date</p> <p style="text-align: center;">                 ___/___/_____  <small>D D / M M / Y Y Y Y</small> </p>	<p>Time</p> <p style="text-align: center;">____:____</p>
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