Happy Women's Day
Assisting mothers in the Neonatal Unit at Chris Hani Baragwanath Hospital to bring expressed breastmilk from home

Dr Zola Ncube
Let's start with a little story

• Meet Thandeka.
  • 20 year old mom of a 12 month old beautiful baby boy who is an ex-prem at 32 weeks CA 10/12.
  • Her child has been admitted for the second time with severe acute malnutrition
  • She is unemployed
  • She doesn’t have an ID
  • She doesn’t have access to water and electricity
  • She does not always have money for formula
  • She had intended to breastfeed but she says she did not get the support she needed and therefore stopped trying.
• Current South African breastfeeding guidelines demand that hospitals promote exclusive breastfeeding.

• What are the systems in place that will achieve the goals stipulated in the South African breastfeeding guidelines?
Meet Thandi

- She is Thandeka’s sister
- She is a 24 year old new mother,
- She delivered prematurely at 28 weeks gestation. Her baby weighed 1200g.
- She wants to breastfeed her baby as she knows about all the benefits of breastfeeding and she also understands her financial situation as she too is unemployed.
• To achieve exclusive breastfeeding is difficult to achieve for preterm infants whose mothers cannot stay over with them during their long stays.

• Infants are sometimes starved during the night if no expressed breast milk (EBM) is available, since formula feed provision is frowned upon.

• This quality improvement project (QIP) aimed to improve the availability of EBM in the neonatal high care units at Chris Hani Baragwanath Hospital, by supporting mothers to bring EBM collected at home.
<table>
<thead>
<tr>
<th><strong>Hospital feeding policy</strong></th>
<th><strong>What is happening in the neonatal wards</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mothers are shown how to breastfeed and how to maintain lactation even if they should be separated from their infants</td>
<td>There is not much support given to the mothers as the nursing staff is overwhelmed</td>
</tr>
<tr>
<td>Mothers are taught how to express their breastmilk by hand and how to feed their infants using a cup.</td>
<td>The mothers usually teach each other how to express as there is not enough staff to do this.</td>
</tr>
<tr>
<td>Newborn infants are given no food or drink other than breastmilk unless medically indicated.</td>
<td>Most infants in the neonatal wards are being mix fed</td>
</tr>
<tr>
<td>Mothers are discouraged from giving their infants any food or drink other than breastmilk until their infants are six months old.</td>
<td>There is often no conversation with the mothers when collecting formula feeds while they are known to breastfeed.</td>
</tr>
<tr>
<td>Supplements/ replacement feeds are only given to infants only if medically indicated or if the mother is unable to breastfeed due to a justifiable reason and if feeding expressed breastmilk, feeding donated breastmilk or wet nursing is not possible</td>
<td>The nurse responsible for issuing milk hardly finds out the reasons for the mother requesting formula feeds. The mothers usually queue and tell the nurse how much formula they want. There is often minimal engagement between the mother and staff.</td>
</tr>
<tr>
<td>Breastmilk substitutes used in the facility are concealed from public view</td>
<td>The preNan bottles are displayed for the mothers to see.</td>
</tr>
<tr>
<td>Mothers are strongly recommended to avoid mixed feeding</td>
<td>This is often not done.</td>
</tr>
</tbody>
</table>
## Pre intervention audit: Feeding practices at CHBAH neonatal unit

<table>
<thead>
<tr>
<th>Wards</th>
<th>EBM</th>
<th>Mixed feeding</th>
<th>Formula feeding</th>
<th>DBM</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ward 66</td>
<td>39(35%)</td>
<td>39(35%)</td>
<td>32(30)</td>
<td>0</td>
<td>110</td>
</tr>
<tr>
<td>NICU IHC</td>
<td>1(9%)</td>
<td>5(45%)</td>
<td>4(36%)</td>
<td>1 (9%)</td>
<td>11</td>
</tr>
<tr>
<td>TICU</td>
<td>5(12%)</td>
<td>20(48%)</td>
<td>12(30%)</td>
<td>4(10%)</td>
<td>41</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>45(27%)</strong></td>
<td><strong>64(40%)</strong></td>
<td><strong>52(32%)</strong></td>
<td><strong>5(0.03%)</strong></td>
<td><strong>162</strong></td>
</tr>
</tbody>
</table>
# Feeding practices in HIV exposed babies in neonatal unit at CHBAH 30 October 2018

<table>
<thead>
<tr>
<th>Wards</th>
<th>EBM</th>
<th>No EBM charted</th>
<th>EFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ward 66</td>
<td>5 (29%)</td>
<td>6 (35%)</td>
<td>6 (35%)</td>
</tr>
<tr>
<td>NICU &amp; TICU</td>
<td>5 (27%)</td>
<td>8 (44%)</td>
<td>5 (27%)</td>
</tr>
<tr>
<td>TOTALS</td>
<td>10 (29%)</td>
<td>14 (40%)</td>
<td>11 (31%)</td>
</tr>
</tbody>
</table>
Systems that may facilitate the expression of breastmilk

- Lodger facility for breastfeeding mothers
  - Patient numbers are too high to accommodate
- To allow longer visiting times:
  - Depends on the mother's ability to get transport
- Increase the time given to express
  - Facilitating more mothers to receive expressing bottles to express at home
Current day – day feeding routine

- There is a nurse responsible for giving feeds to the babies in the respective areas.
- Their responsibilities included:
  - Getting the total numbers of EBM, formula feeds and DBM
  - Ordering the milk orders from the milk room
  - Administering the feeds
  - Collecting the expressed breastmilk from the mothers
  - Washing the expressing bottles after feeds
  - Taking the bottles to the milk room for sterilization
  - Collecting the bottles from the milk room
  - Counselling the mothers about breastfeeding and showing them how to express
The plan of action

• As part of the QIP, low-cost bottles were sought.
• Issues of adequate bottle sterilisation and the refrigeration, labelling and distribution of EBM were to be addressed.
• Increased individual and group support for breastfeeding was to be offered to mothers.
Finding the perfect home expressing bottle

<table>
<thead>
<tr>
<th>PRODUCT CATALOGUE NUMBER</th>
<th>PRODUCT DESCRIPTION</th>
<th>NAPPI CODE</th>
<th>PACK SIZE</th>
<th>PACK PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FC</td>
<td>Sinapi Feeding Cup</td>
<td>-</td>
<td>100</td>
<td>R 3,830.00</td>
</tr>
<tr>
<td>EFB</td>
<td>Enteral Feeding Bottle</td>
<td>699142* 001</td>
<td>50</td>
<td>R 2,495.50</td>
</tr>
<tr>
<td>SBM3</td>
<td>Sinapi Breast Milk Bottle 125m</td>
<td>0</td>
<td>100</td>
<td>R 1,849.00</td>
</tr>
<tr>
<td>SBM4</td>
<td>Sinapi Breast Milk Bottle 250m</td>
<td>0</td>
<td>100</td>
<td>R 2,260.00</td>
</tr>
</tbody>
</table>
Infection control measures
Fridge space and storage
ALL ABOUT EXPRESSING

WHO NEEDS TO EXPRESS BREASTMILK?
- If your baby is not able to breastfeed,
- When you are not available to breastfeed.

WHY MUST YOU EXPRESS BREASTMILK?
- To leave enough breastmilk for your baby for the times you will not be available,
- To teach your breast to make milk for your baby and increase milk supply.

HOW DO I START EXPRESSING?
- Start as soon as possible on arriving to the ward,
- Introduce yourself to the nurse in your cubicle and let her know that you wish to breastfeed. Ask her to direct you to the “milk-responsible” nurse.
- You will receive an expressing cup that you will use to express your breastmilk. Ask for assistance if you have not expressed breastmilk before or if you are having problems with expressing breastmilk.
- You should take an expression glass bottle home when you leave the ward. You will express your breast

BENEFITS OF BREASTFEEDING

WHAT CAN BREASTFEEDING DO FOR YOU AND YOUR BABY?
- Lowers the chances of your baby getting an ear infection; diarrhoea and serious colds,
- Lowers the risk of your baby having bowel problems like stomach infections,
- Lowers the chances of your baby dying suddenly while sleeping,
- It lowers the chances of your baby problems such as eczema and asthma,
- It lowers the chances of your baby being obese and having diabetes later on in life,
- It lowers the chances of your child having blood cancers,
- It has been noted to improve the growth of your baby’s brain,
- It helps your baby grow better,
- It is easily digested compared to formula,
- It is cheaper than formula saving you about R660.00 per month,
- It helps you bond with your baby,
- It lowers your chance of getting breast and ovarian cancer.

FEEDING POLICY AT CHRIS HANI BARAGWANATH HOSPITAL

WELCOME TO NEOnatal UNIT

WHAT FEEDS SHOULD MY BABY GET?
- Your baby is admitted to our unit which recommends exclusive breastfeeding for your baby.
- The feeding choice you have selected for your baby will be respected.

HOW OFTEN AND HOW MUCH MILK DOES MY BABY NEED?
- Your baby should be given feeds every three hours.
- It is very important to make sure your baby gets enough feeds throughout the day and night.
- If you are struggling to express enough milk during the day, then ask for the expressing bottle from the milk nurse so you can express at home and bring that expressed milk to hospital the next day.

WHAT IF I AM HIV POSITIVE?
- If you are HIV positive, there is a chance of transmitting HIV to your baby through the breastmilk, however, if you are on treatment and taking it correctly, the chances of transmitting HIV to your baby is small.
HOW TO HAND EXPRESS

1. Wash hands with soap and water,
2. Make sure you are sitting comfortably,
3. Hold your breast just behind the areola,
4. Squeeze the breast gently using the thumb and the rest of fingers in a C shape (figure 1 & 2)
5. Release the pressure then repeat, building up a rhythm,
6. Continue until the milk comes out.
   Don’t be discouraged if milk flow is slow in the beginning, it will improve with practice,
7. When no more drops of milk come out, then try a different section of the breast or swap to the other breast; move fingers closer/further from the nipple,
8. Hold the container below the breast to catch the milk as it flows,
9. It usually takes 20-30 minutes to completely empty both breasts.
10. You may give the expressed breastmilk directly or store it in the fridge or a cool place.
11. Label expressed breastmilk with yours or your baby’s name; date you expressed and the ward your baby is in.

HOW TO HAND EXPRESS CONT...

Figure 1

Figure 2

HOW TO INCREASE MILK SUPPLY

1. Express at least 10 times a day including at night,
2. Try to relax when expressing,
3. Plan to manage your levels stress levels. While having your baby admitted to the ward is very stressful, being informed about your baby’s condition, and being involved as much as possible with your baby will help manage some of this stress,
4. Spending time with your baby before expressing will help improve milk supply,
5. Maintain a balanced diet,
6. Stay well hydrated, drink at least 8 glasses of water a day,
7. Remember, if you are given medication to help improve milk supply you should still continue expressing
8. REMEMBER YOU ARE AWESOME AND DOING A GOOD JOB!!

HOW DO I STORE BREASTMILK?

- In the fridge: 2-5 days
- In a cool place: 6 hours

Chris Hani Baragwanath hospital
011 933 8000
26 Chris Hani Rd
Diepkloof 319-jq
Johannesburg
www.chrishanibaragwanathhospital.co.za
## Counselling

<table>
<thead>
<tr>
<th>All new mothers in the unit</th>
<th>All the mothers that were mixed feeding and breastfeeding</th>
<th>All the mothers that are formula feeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>• They were asked about their feeding choice,</td>
<td>• I showed them how to express,</td>
<td>• I asked them why they opted to formula feed,</td>
</tr>
<tr>
<td>• they were counselled based on their feeding choices.</td>
<td>• I encouraged them to take the expressing bottle home to enable them to express at home,</td>
<td>• I counselled them about the benefits of breastfeeding,</td>
</tr>
<tr>
<td></td>
<td>• I advised them on what to do to improve milk supply,</td>
<td>• All those mothers who wanted to try breastfeeding were supported. I showed them how to express and encouraged them to take the expression bottle at home to continue expressing at home.</td>
</tr>
<tr>
<td></td>
<td>• I prescribed Maxalon to those who were struggling to increase milk supply despite expressing frequently.</td>
<td></td>
</tr>
</tbody>
</table>

Putting it all together
The number of expressing bottles taken home from the neonatal wards

Week 1  Week 2  Week 3

0  10  20  30  40  50  60

Ward 66  NICU & TICU
### Post intervention analysis: Feeding practices at CHBAH 28 Nov 2018

<table>
<thead>
<tr>
<th>Feeding method</th>
<th>Ward 66</th>
<th>TICU</th>
<th>NICU SHC</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBM</td>
<td>62 (39)</td>
<td>16 (5)</td>
<td>10 (1)</td>
<td>88 (45)</td>
</tr>
<tr>
<td>Mixed feeding</td>
<td>2 (39)</td>
<td>2 (20)</td>
<td>2 (5)</td>
<td>6 (64)</td>
</tr>
<tr>
<td>Formula feeding</td>
<td>41 (32)</td>
<td>17 (12)</td>
<td>4 (4)</td>
<td>62 (52)</td>
</tr>
<tr>
<td>DBM</td>
<td>0 (0)</td>
<td>3 (4)</td>
<td>0 (1)</td>
<td>3 (5)</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>105 (110)</td>
<td>38 (41)</td>
<td>16 (11)</td>
<td>159 (162)</td>
</tr>
</tbody>
</table>
| Results | The numbers of mothers bringing EBM from home increased exponentially.  
| Exclusive breastfeeding rates in the unit increased from 45/162 infants (28%) to 88/159 (55%), since infants were offered the home collected EBM at night.  
| Mothers reported feeling more supported with initiating as well as maintaining breastfeeding. |
| Successes | The home expression bottle system was established and functioning well |
| Failures | There was no consistency in breastfeeding support |
| Future consideration | Lactation specialist to help support the mothers more consistently. |
What participants and staff thought about the project

- Mothers

- Nurses

- Dieticians

- Doctors
Lessons learnt

Communication skills
Organisation skills
Thinking outside the box
Thank you

- Prof Saloojee
- Neonatal team: Dr Nakwa and other neonatal consultants, registrars, interns, nursing staff, Sr Majozi
- Dietetics department