CURRENT STATUS OF PROTECTION, SUPPORT AND PROMOTION OF BREASTFEEDING IN FOUR AFRICAN COUNTRIES

Actions to Protect, Support and Promote Breastfeeding in Kenya, Namibia, Botswana, and Uganda

Based on a rapid review - 2 October to 3 November, 2000

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March 2001

(THE VIEWS EXPRESSED HERE ARE THOSE OF THE AUTHORS)

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LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
BFHI	Baby Friendly Hospital Initiative
BIG	Breastfeeding Information Group (Kenya)
BOBA	Botswana Breastfeeding Association
BFW	Breastfeeding Week
HIV	Human Immunodeficiency Virus
IBFAN	International Baby Food Action Network
IMCI	Integrated Management of Childhood Illness
IMR	Infant Mortality Rate
KEFAN	Kenya Food and Nutrition Network
MCH	Maternal and Child Health
MTCT	Mother to Child Transmission
NGO	Non Governmental Organisation
PMTCT	Prevention of Mother to Child Transmission
TBA	Traditional Birth Attendant
ULMET	Uganda Lactation Management Education Team
UN	United Nations
UNAIDS	United Nations AIDS Programme
UNICEF	United Nations Children's Fund
VCT	Voluntary Counselling and Testing
WABA	World Alliance for Breastfeeding Action
WBW	World Breastfeeding Week
WHA	World Health Assembly
WHO	World Health Organisation

PREFACE

As a result of concerns about declining action to protect, support and promote breastfeeding and young child feeding in Sub-Saharan Africa, both by governments and United Nations agencies, fact finding visits to four countries, were jointly planned between UNICEF ESARO and IBFAN Africa. The overall objective of the assignment was to review the situation of protection, support and promotion of breastfeeding in four countries – Botswana, Kenya, Namibia and Uganda, to try to determine reasons for the decline, and make recommendations on how the implementation of infant feeding policies in the region may be improved.

The visits were conducted by Michael Latham, Professor of International Nutrition, Cornell University and Mrs. Pauline Kisanga, Regional Coordinator, IBFAN Africa. The following report highlights some interesting and disturbing facts about the current status of breastfeeding in the countries visited.

This review clearly indicates that actions to protect, support and promote breastfeeding have declined very markedly in Botswana, Kenya, Namibia and Uganda, in recent years. Examples of the decline in support are outlined and include; lack of current efforts to continue the Baby Friendly Hospital Initiative, (BFHI); decline in activities which support the International Code of Marketing of Breastmilk Substitutes; dwindling support for World Breastfeeding Week activities; as well as the fact that the breastfeeding NGO's, once active, are now struggling to survive. The need for UNICEF, WHO and others to provide much greater support for both nutrition and breastfeeding is clearly illustrated in the report.

It was found that breastfeeding in all four countries remains the cultural norm, firmly imbedded in the community, and for almost all mothers, not breastfeeding is considered aberrant. The same cannot be said for exclusive breastfeeding, which as has been documented elsewhere, is of short duration and low prevalence. So much work needs to be done to advocate exclusive breastfeeding for 6 months and also in terms of support for breastfeeding, which has declined markedly in recent years.

There was close to unanimous agreement that the decline in support for breastfeeding was related to the HIV/AIDS pandemic sweeping these countries, including publicity based on scientific evidence, that mothers could infect their infants through breastfeeding. An important overall conclusion of the review of the four countries, especially in Kenya, and Botswana, is that there has been a massive spillover effect, in which concern for HIV/AIDS has been transferred into deterioration in actions to support breastfeeding. Two major factors were found to contribute to this. The first is a very widely held false view that almost all mothers who are HIV positive will infect their infants through breastfeeding. The second is a very low recognition at all levels of the extremely high risks resulting when, from birth, an infant in a poor family is formula fed (a risk that in fact has never been adequately determined in a poor African community).

The four countries were found to have a wide range of very different policies to address the problem of MTCT of HIV through breastfeeding. Policies on HIV/AIDS and prevention of MTCT have influenced the status of protection, support and promotion of breastfeeding

in each country. The report deals in some detail with the current status of national policies on mother-to-child transmission (PMTCT) and the possible implications for breastfeeding in that country. The fear is expressed that if the concerns about MTCT are translated into major heavily funded efforts to convince mothers to avoid all breastfeeding, either because they are HIV positive, or believe they may be HIV positive, the result will be disastrous for breastfeeding in Sub-Saharan Africa. The authors feel that without very convincing research and evaluation to show that such policies will do good, not harm, the above scenario needs to be most strongly resisted.

Recommendations for correcting the decline in protection, support and promotion of breastfeeding in each country are outlined specific to each country. The report also puts the risk of MTCT through breastfeeding into context and illustrates that the percentage of infants infected through breastmilk is relatively small compared to the total numbers of infants in Sub-Saharan Africa who would be adversely affected by a decline in breastfeeding. The report puts forward comprehensive policy considerations and looks at risk assessment considerations to assist health workers and counsellors. Alternative methods of Infant feeding for mothers infected with HIV are also discussed.

1. SUMMARY OF FINDINGS AND CONCLUSIONS PLUS COMMENTS ON MTCT OF HIV THROUGH BREASTFEEDING

In recent years we have been concerned about declining action to protect, support and promote breastfeeding and young child feeding in Sub-Saharan Africa, both by governments and United Nations agencies. UNICEF had been a major ally in the past. Children have the right to adequate nutrition, and for infants and young children, the key element of this is breastfeeding. IBFAN's long term commitment and effective campaigning of over 20 years has been for the rights of mothers to choose the best possible feeding method for their babies, in the full knowledge of the health and other benefits of breastfeeding, and with freedom from commercial pressure and misinformation which baby milk companies often use to promote breastmilk substitutes.

The United Nations agencies, and particularly UNICEF, have played major roles in the past, being very instrumental in spearheading global initiatives that have formed the basis for implementing infant feeding policies. These include, the International Code of Marketing of Breastmilk Substitutes (1981) and subsequent relevant World Health Assembly resolutions, the Ten Steps to Successful Breastfeeding in Health Facilities (1989), the Innocenti Declaration and the Convention of the Rights of the Child (1990); and in 1991 the Baby Friendly Hospital Initiative (BFHI) as a tool to implement the Ten Steps.

The overall objective of the assignment was to review the situation of protection, support and promotion of breastfeeding in four countries – Botswana, Kenya, Namibia and Uganda, to try to determine reasons for the decline, and make recommendations on how the implementation of infant feeding policies in the region may be improved.

The visits were conducted by Michael Latham, Professor of International Nutrition, Cornell University and Mrs. Pauline Kisanga, Regional Coordinator, IBFAN Africa.

We used a participatory approach holding interviews with relevant persons and organisations seeking their opinion and observing and reviewing actions to support breastfeeding particularly in the last 2-3 years. The visits lasted about one week in each country

1.1 FINDINGS AND CONCLUSIONS

1.1.1 Major Decline In Protection, Support And Promotion Of Breastfeeding

It is absolutely clear that actions to protect, support and promote breastfeeding have declined very markedly in Botswana, Kenya, Namibia and Uganda, in recent years. This conclusion is based on discussions with well over 100 knowledgeable persons in the four countries. These individuals represented a wide range of experience and expertise. They included a Minister for Health; a Member of Parliament; senior officers in the Ministries of Health; government officials in other ministries; NGO leaders; the UNICEF Representative in three countries, and

UNICEF programme officers in all four countries; WHO staff in all four countries; and many others.

Almost all agreed with the above conclusion, and many stated strongly that this decline in support for breastfeeding was very unfortunate, and that efforts should be taken to reverse and remedy it. We found, in recent years, a dwindling support by UNICEF for breastfeeding, at a time when governments have tighter budgets and reduced funding for breastfeeding because they see other priorities. The need for UNICEF, WHO and others to provide much greater support for both nutrition and breastfeeding is clear. In all four countries the Nutrition Units (or equivalent nutrition focal points) are weak, and are in dire need of strengthening. This often requires more well-trained staff, increased funding, and greater status within the government. This could be assisted if UNICEF offices had Nutrition Programme Officers, who as well as supporting breastfeeding could also be promoting dwindling activities in areas such as growth monitoring and promotion; immunisations; control of parasitic infections and diarrhoea; reduction of micronutrient deficiencies; improvement in food security; and others. New programmes such as IMCI and Early Child Development hold promise, and could be used in support of breastfeeding. They should embrace, and build on, activities such as BFHI, the Code, Breastfeeding Week, and the work of breastfeeding NGO's.

Examples of declining support for breastfeeding

Our reports on the four countries focus in some detail on specific areas where protection, support and promotion have declined since about 1995 in the four countries.

These include:

The Baby Friendly Hospital Initiative

Situation of BFHI in the countries differ. Namibia by 1995 was said to have all (or almost all) hospitals with maternity units declared "baby friendly," while Uganda, with far more units, had only one. But our concern is that this effort, generally regarded as successful, appears to have almost ceased, or is paralysed. In none of the four countries did we learn of current real efforts, either to promote BFHI in hospitals, or to monitor those that were certified and would benefit from support to continue to adhere to the ten steps. The "crisis," as well as the different efforts directed at PMTCT could be used as a springboard to reinitiate very strong support for BFHI. These were WHO and UNICEF initiatives that deserve support.

The WHO Code on Marketing of Breastmilk Substitutes

The Code and subsequent WHA resolutions are generally regarded as very important instruments that had an important impact, and greatly reduced overt promotion of infant formula by the Transnational Corporations who manufacture these products. Despite continuing serious infringements by these corporations, nevertheless with vigilance from IBFAN and others, there is now less overt advertising of breastmilk substitutes, and gone are the days when so called "milk nurses" promoted their wares uninterrupted in hospitals around the world.

The Code, and the amendments to it, remains effective instruments to prevent a decline in breastfeeding in those countries where it is the norm. Yet activities in support of the Code appear to have declined. The Code is at different stages of development, or in different forms, in the four countries visited. Uganda has a Code that was officially gazetted as law in 1997, but it is not well known nor enforced. Botswana drafted a Code in 1997, but this never led to legislation.

The WHO Code is well recognised in the three-guideline booklets on MTCT issued by UNAIDS/WHO/UNICEF in 1998. In fact because of concerns of MTCT through breastmilk, violations of the Code are more likely than ever to occur. Infant formula manufacturers now see an opportunity to subvert, or even nullify the Code, and this will be easier for them in countries that do not have Code legislation. The Code is as important as it ever was, and needs to be monitored and enforced. Yet, like activities in support of BFHI, our discussions in three of the countries led us to believe that actions in support of the Code were frozen, *in situ*, between 1995-1997, and little attention or action is taking place now. There is no evidence of strict monitoring or enforcement.

However in Kenya, there is renewed interest. Three persons (a Programme Officer from UNICEF; a paediatrician from Kenyatta National Hospital; and a lawyer from the office of the Kenya Attorney General) recently attended the IBFAN Code compliance course held regularly in Penang, Malaysia. As a result there is now some resolve to move the Code from the Bureau of Standards to the Ministry of Health where it belongs. If, and when that happens, the young woman lawyer from the Attorney General's Office is enthusiastic about drawing up legislation, leading to parliamentary approval, and real enforcement.

<u>World Breastfeeding Week</u>

World Breastfeeding Week is an activity initiated by the World Alliance for Breastfeeding Actions (WABA) soon after WABA was born ten years ago in the headquarters building of UNICEF in New York with the then Executive Director James Grant in attendance. Each year the WABA Steering Group decides on an appropriate topic for the week, and produces an action folder on breastfeeding in relation to the topic, including suggestions for community actions. Topics have included BFHI, the Code, breastfeeding as an environmental issue; the economics of breastfeeding; and now breastfeeding as a human right (2000) and others.

Breastfeeding Week is widely acknowledged to have been WABA's most successful action in support of breastfeeding; it is actively celebrated in over 130 countries north and south, east and west, each year, but not just in the capital cities, it often is in each small town, and in many rural villages. It is an important advocacy tool. The impact has never been evaluated, but is surely large. Often UNICEF and WHO country offices support BFW activities. In the past in many countries the Minister for Health launched the week, much publicity was gained, but more importantly local people at all levels of society (women, children and even men) were involved in action to protect, support and promote breastfeeding.

In the four countries we visited, Breastfeeding Week is still maintained and is supported by local NGO's. It is usually held in August, but Uganda (because support arrived late) was to hold its BFW in November 2000. However there has been dwindling support from the UN agencies, and because breastfeeding NGO's are weaker, and perhaps because of HIV/AIDS,

support for this important activity has dwindled in recent years. On the positive side, the Minister of Health in Botswana had made a speech in Gaberone to launch BFW. On the negative side, one UN Programme Officer was very denigrating about the value of Breastfeeding Week.

We believe support needs to be revived and strengthened. WABA certainly will continue to need at least a modest amount of funding from donor nations such as the Netherlands, Sweden and Norway, but surely also from WHO, UNICEF and perhaps other international agencies.

Breastfeeding Non-Government Organisations (NGO's)

In the past there were strong well-supported NGO's which worked to support breastfeeding and played active roles in terms of the Code, Breastfeeding Week and especially in assisting breastfeeding support groups for mothers. Many of these NGO's made very significant contributions in many different ways to protect, support and promote breastfeeding.

In the year 2000 we found, in all four countries, that these breastfeeding NGO's were in a pitiful state. Some have died; others struggle but have practically no funding or staff; others limp along led by individuals with no training in lactation management; and several have only stayed alive because one, or two unpaid volunteers have maintained a semblance of an NGO from their own residence. Our reports deal with this for each of the four countries. However examples may be useful. Both of us in the 1970's and 1980's knew of the work of the Breastfeeding Information Group (BIG) in Nairobi. It was internationally acclaimed. Two of the stalwarts in breastfeeding in UNICEF (Margaret Kyenkya and Helen Armstrong were leaders of BIG, and may even have "cut their breastfeeding teeth" there). Now "BIG" is "very small", ineffective, and is led by a man with no lactation management training. There may be reasons for this decline, but this is symptomatic of a very large and important problem. While governments and UN agencies are now giving more attention and more funding to NGO's in general in areas not related to breastfeeding (in emergency relief; in early child development; in AIDS, etc.) than they did in say 1995, the support to breastfeeding NGO's in these four countries is non-existent, or pitifully small. We believe it should be revived, enhanced and greatly strengthened.

Our report on one NGO in Uganda (ULMET) shows that with a modest level of support it could provide very important support for breastfeeding, and with training, its volunteers could be useful in MTCT counselling. The relatively few actions that were visible in the countries in support of breastfeeding were achieved through NGO's. But they have meagre resources for programmes as well as for institution building. It appeared that funds were not available unless monies passed through governments. There is a need to find ways to improve the institutional and financial bases of these NGO's.

1.1.2 A strongly based cultural support for breastfeeding, but exclusive breastfeeding was low

In terms of specific actions in support of breastfeeding there were differences between the four countries. Although some damage has been done in some quarters to the image of breastfeeding, nevertheless there was widespread agreement that in all four countries there

was strongly based cultural support for it. Breastfeeding in all four countries remains the cultural norm, firmly imbedded in the community, and for almost all mothers, not breastfeeding is considered aberrant. But parallel with this, there has been a marked decline in support services for breastfeeding. Mothers who have any breastfeeding related problems find it more difficult, than in the past, to get support and assistance.

The agreement that breastfeeding remains the accepted norm in all four countries is encouraging. This is because, although damage has been done, preventive measures could be taken to repair the damage, or even reverse the situation. This will require greatly enhanced commitments and support from UNICEF and WHO, but also from governments, NGO's and others.

However, it must be noted that the same cannot be said about exclusive breastfeeding in the region. In all the four countries, it was reported that the rates of exclusive breastfeeding at 3 and 6 months were very low, though much better in Uganda than in the other three countries. This observation has been reported for most countries in Africa (UNICEF ESARO report 1999).

1.1.3 Decline in support for breastfeeding is related to the HIV/AIDS pandemic

There was close to unanimous agreement that the decline in support for breastfeeding was related to the HIV/AIDS pandemic sweeping these countries, including publicity based on scientific evidence, that mothers could infect their infants through breastfeeding. An important overall conclusion of our visits to the four countries and especially in Kenya, and Botswana, is that there has been a massive spillover effect in which concern for HIV/AIDS has been transferred into deterioration in actions to support breastfeeding. Although totally unwarranted, there is a hidden unspoken fear that actions to promote breastfeeding might be construed as actions that worsen the HIV/AIDS situation in a country.

Two major factors contribute to this, both of which are discussed in this report. The first is a very widely held false view that almost all mothers who are HIV positive will infect their infants through breastfeeding. The second is a very low recognition at all levels (senior MOH officials, front line health workers, UN agency staff, the public and others) of the extremely high risks resulting when, from birth, an infant in a poor family is formula fed (a risk that in fact has never been adequately determined in a poor African community).

Here we wish to differentiate between a marked decline in actions in support of breastfeeding, and a decline in the prevalence and duration of breastfeeding. We are completely convinced that there is a decline in support for breastfeeding. We were not able to collect evidence to suggest, at this time, any very significant decline in the high prevalence, and long duration of breastfeeding normally practised in all four countries.

Perhaps mothers, and African families, have the wisdom to continue breastfeeding as usual, despite news of the current "dangers of breastfeeding." Some mothers have not received this "news," but many others have and are still choosing to maintain breastfeeding despite what they hear on the radio, read in the newspapers or learn from scientific studies via health workers.

There may have been a significant decline in breastfeeding, especially among more affluent mothers. We do not know. But it seems as if the next decade could be crucial, and possibly disastrous for breastfeeding in sub-Saharan Africa. That is, if the concerns about MTCT are translated into major heavily funded efforts to convince mothers to avoid all breastfeeding, either because they are HIV positive, or although not tested believe they may be HIV positive. Without very convincing research and evaluation to show that such policies will do good, not harm, the above scenario needs to be most strongly resisted.

Clearly the spillover impact of HIV/AIDS on breastfeeding differs between the four countries, and is probably somewhat related to the extent to which governments (often with influence from UN agencies and expatriate scientists) have moved in the direction of supporting, or recommending the use of formula as an important feeding method for mothers positive for HIV. So in this respect (as stated in our report) there is a difference between Botswana and Kenya on the one hand and Namibia on the other.

It is very important that serious actions be taken to prevent this spillover effect in which implementation of pilot projects, or larger programmes assisting HIV positive mothers to formula feed, results in substantial numbers of mothers who are HIV negative having doubts or fears about breastfeeding. They constitute the vast majority of mothers, for example Uganda data suggests that 88 percent of urban, and 95 percent of rural mothers attending antenatal clinics are HIV negative.

In some detail in Appendices 1 and 2 we discuss the need for risk assessment, and how such risks depend on different circumstances. If the only consideration is to reduce transmission of HIV through breastfeeding then mothers should not breastfeed if they are HIV positive. But if the objective of advice and policy is to do the most good or do the least harm, then the broad range of risks for mothers who opt not to breastfeed their infant from the day of birth, need to be very carefully considered. The pilot PMTCT projects now being undertaken in Botswana, Kenya and Uganda are large African experiments using human subjects. They need to be independently evaluated. It surely will be unethical to expand these interventions without a proper evaluation of the outcomes in terms of human wellbeing.

We discuss MTCT, and appropriate actions and policy in later pages. However, breastfeeding remains the norm, as it should be. There is no alternative. Very strong actions and commitment plus resources from UN agencies and political will by national governments are essential.

With new support for breastfeeding, the opportunity exists to take action, including advocacy and education, to increase substantially the extent of exclusive breastfeeding. This is said to be relatively high in Uganda but much lower than desirable in all four countries. Increased levels of exclusive breastfeeding would have tremendous benefits, irrespective of the HIV status of the mother. And it needs to be recognised that in the immediate future in these four countries, is it unlikely that the majority of pregnant women will be tested for HIV. In all four countries the majority of women, when tested, are found to be HIV negative (there is a wide range from 55% negative in cities in Botswana to 95% negative in rural Uganda).

Exclusive breastfeeding has great advantages for almost all mothers in sub-Saharan Africa. In all four countries we found inadequate knowledge of the Coutsoudis et al. Durban study

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showing that exclusive breastfeeding markedly lowers transmission of HIV through breastmilk. As has been stated later there is in general, an exaggerated belief in the likelihood that breastfeeding will infect an infant with the virus; and a very gross underestimate of the risks of formula feeding infants from birth in poor families.

1.1.4 Policies on HIV/AIDS and PMTCT have influenced the status of protection, support and promotion of breastfeeding

Policies on HIV/AIDS and PMTCT have greatly influenced the status of protection, support and promotion of breastfeeding in the four countries visited. Our visits to Kenya, Namibia, Botswana and Uganda revealed strikingly wide differences in the national policies directed at PMTCT. Yet the four countries all:

(1) Have a relatively high prevalence of pregnant women who are HIV sero- positive.
(2) Have strong breastfeeding cultures with extremely high prevalence of breastfeeding in early infancy.
(3) Have access to the same scientific literature on risks of HIV transmission, and on the risks of not breastfeeding.

An important question is why have countries responded so differently. Some countries do not have a clear national policy on PMTCT, but in all there are government agencies moving ahead with advice, or there are draft policies, or there have been parliamentary statements, and in three countries there are pilot projects on PMTCT. Our report deals in some detail with where, we believe, each of the four countries is in relation to a PMTCT national policy.

We provide here a rather crude, and somewhat generalised, assessment of the differences of <u>where</u> each country "is" on this issue.

(a) <u>Botswana</u> – Of the four countries, Botswana has the highest HIV prevalence rates, including in pregnant women, and has a much stronger economy than Kenya or Uganda. It has opted for a policy now described to be only in pilot areas, that will strongly promote VCT; and for positive mothers the provision of anti-retroviral drugs plus counselling to assist a choice of alternative feeding methods. It is clearly stated that these pilot sites, are in fact covering large populations and whole communities, and that there is an intention, soon to cover almost the whole country. Included in the "package" is free AZT for the last weeks of pregnancy but only for those who when seen in pregnancy then agree to formula feed their new baby exclusively from the day of birth. There are differing views as to whether women are mainly encouraged to opt for formula feeding, or whether balanced advice is being offered. What is apparent is that most health workers have a "biased" view believing that breastfeeding by an HIV positive mother will almost always lead to transmission to the infant; ignorance regarding exclusive breastfeeding as a protection; and very little ability to counsel a poor mother about the risks of not breastfeeding. We also heard no discussion about the fact that free formula provides an economic advantage for families who follow this option. There is no consideration being given to providing an equal incentive in food assistance for mothers who opt to breastfeed. From the early work in the pilot sites, there is great concern that mothers do not return to the clinics for their formula, and that the majority of mothers for many reasons (social, stigmatisation, and other difficulties)

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are both breast and formula feeding their babies. There are also reports of mothers sharing their AZT at home with their male partners. Plans to conduct monitoring are in place, but there is no independent evaluation planned, and the monitoring will not be able in any definitive way to obtain the data normally considered obligatory to move form a pilot project to a national programme. So, important data on adequacy of counselling; knowledge of counsellors on relative risks of the two main feeding options; extent to which formula is wrongly and even dangerously prepared; extent of non-exclusive formula feeding; and most importantly the possible negative health, nutritional and fertility outcomes of not breastfeeding are not being adequately collected. These data are important for evaluation, which we believe is essential.

(b) Kenya – Of the four countries, Kenya has the least clear, and accepted policy. It appears that different parts of the government; local NGO's; and many external donor supported large pilot trials are at different stages; and that there is a lack of "direction" and some confusion, which has filtered down to frontline health workers. They are often bewildered about what to advise their patients. On the one hand a 1997 Parliamentary Sessional Paper states that "women with HIV will be advised to avoid breastfeeding of children," and this was reinforced in June 2000 when the President assembled parliamentarians and urged them, in every speech and in every action to promote that AIDS policy. On the other hand, many who we interviewed stated that until the pilot projects provided strong evidence, breastfeeding as usual was what they would recommend and promote. In the middle is a huge disparate effort by scientists (local and foreign) to conduct PMTCT projects beyond the four sites supported by UNICEF. Each of the many new sites has different protocols and regimens, and most seem to have a narrow focus, which is to examine rates of transmission from mother to baby. Not one, that we learned of, has a central focus to examine the possible negative impacts of formula feeding (morbidity including diarrhoea, pneumonia, and other infections; mortality; economics of the family; birth spacing; problems in mixing the formula leading to malnutrition; difficulty in exclusive formula feeding leading to dangerous mixed feeding, etc.). We conclude that Kenya has some mechanisms in place for a policy, but no current national PMTCT policy. External forces, including research scientists and even UN agencies, not adequately familiar with average living conditions for the poor in Kenya, are adding to the confusion, and not sufficiently willing to slow down and consider the real outcome of the actions they recommend or introduce, before moving to much wider implementation. It is also unclear whether committees recommending policy to the government are well balanced including persons familiar with local conditions and with breastfeeding. Nor is it clear that the parliament or President will accept the recommendations of these committees.

(c) Namibia – While not "doing nothing," the Namibian government, despite the high prevalence of HIV is recommending no changes in traditional breastfeeding practices except to provide more encouragement for exclusive breastfeeding. Currently Namibia does not wish to alter the tradition of breastfeeding, until such time as it has evidence that advocating different feeding methods will be sustainable, can be applied universally and are not harmful. Namibia, up to now, does not favour pilot projects such as those supported by WHO and UNICEF to test alternative feeding methods for HIV positive mothers. It encourages family planning to reduce births of HIV positive babies; strong measures to control STD's including HIV; and continuing review of its policy.

(d) Uganda – This is a country that very much earlier than the other three, had a high prevalence of HIV; the President and government actively mobilized to advocate and educate and take preventive measures; and now HIV in pregnant women has fallen markedly to about 12% in Kampala and 5% in rural areas. The country, on the one hand, and in many quarters very much wishes not to undermine the norm of traditional breastfeeding, and on the other hand is concerned about MTCT, and is taking some preventive actions. It was here that the original research on nevirapine as a cheap relatively simple method of prevention was first tested. Uganda is now supporting vigorous PMTCT in seven pilot sites (three underway now in Kampala and four in the districts). These include anti-retrovirals plus VCT, and advice to HIV positive mothers to consider alternative feeding methods. The many possible alternative methods plus the advantages of breastfeeding are generally rather well described in their new draft policy on PMTCT. We have suggested some minor changes.

So as stated the four countries all have a very significant HIV problem; all have traditional embedded breastfeeding cultures; and all have access to scientific evidence on PMTCT. Yet the four countries have this wide range of very different policies to address the problem of MTCT of HIV through breastfeeding.

1.2 MOTHER TO CHILD TRANSMISSION (MTCT) THROUGH BREASTFEEDING

Misconceptions, exaggeration and inadequate knowledge has contributed negatively to the state of breastfeeding in the four countries

1.2.1 Introduction

The very best way, in our view, to reduce and prevent mother to child transmission of HIV is for couples who are HIV positive to avoid a pregnancy (or even where permissible and legal, to seek an early termination of pregnancy). We believe that aggressive, and vigorous counselling, and access to family planning for women who are HIV positive, or who think they might be HIV positive, are all very important. Clearly women, even if HIV positive, have a right to bear a child, and that right must be protected. But in all four countries there is much discussion about PMTCT, and we found often confused or conflicting policy recommendations. But prevention of mother to child transmission by publicity, counselling and other actions to promote birth control in HIV infected couples does not appear to be high on the agenda of any of the countries, with the possible exception of Uganda. We believe it should be, and that funds imaginatively spent by UNICEF, WHO, UNAIDS and UNFPA on this would be important. Prevention of conception of a potentially HIV infected baby, who would be destined to become an orphan should surely be a top agenda item in PMTCT programmes. Currently it is not.

1.2.2 Two routes of transmission - untested recommendations

It seems attention as well as human and capital resources are being diverted away from breastfeeding, and also from nutrition, even in the non-infected majority of the population because of an exaggerated view of breastfeeding in HIV/AIDS transmission.

We believe that the whole issue of PMTCT has resulted in a fusion of two forms of transmission. These are:

(1) Transmission *in utero*, or during the birthing process,
(2) Transmission through breastfeeding.

There are different actions needed to deal with each of these transmission routes. Here we are concerned mainly with the second route of transmission, which is through breastmilk.

By fusing the two transmission routes, we believe that sometimes wrong policies are advocated in terms of actions in regard to infant feeding. This unfortunate "linkage" appears to have its origins in the 1997 study in Thailand in which mothers were given AZT during the last weeks of pregnancy and were told "NOT TO BREASTFEED". But this was not a study in any way investigating transmission of HIV through breastmilk. The legacy of that study (good as it was in terms of retroviral drugs reducing *in utero* and birthing transmission) had nothing to add to our knowledge about transmission through breastmilk. But it appeared to "trigger" UNAIDS together with UNICEF and WHO into changing their policy guidelines on MTCT, including in relation to breastfeeding.

Because of this linkage, we found, on our mission that it was well nigh impossible to discuss breastfeeding without talking about PMTCT. Yet our task was in part to assess the status of protection, support and promotion of breastfeeding in general, not only in relation to HIV/AIDS.

We believe it would be useful in discussions, but also in policy considerations, to separate the modes of transmission of HIV from mother to baby. They call for very different actions. We cannot think of a truly appropriate analogy. But consider the use of amniocentesis, or similar methods to diagnose congenital abnormalities like Downs Syndrome in the foetus. These diagnostic methods, and decisions what to do prior to birth, are completely different from post delivery treatment of the infant who has the syndrome. A different set of specialists deals with each half of the problem.

So should we not devise language, and options, that separate (these two different) means of MTCT of HIV:

(1) In utero and during childbirth
(2) Through breastfeeding

Perhaps MTCT (IUC) and MTCT (BF) could be used. Virologists and obstetricians might be the major specialists dealing with MTCT (IUC). Lactation specialists, nutritionists and paediatricians with knowledge of breastfeeding are specialists best placed to deal with MTCT (BF).

1.2.3 Short duration of breastfeeding - untested strategy

Increasingly we see that a "compromise" is being recommended – a compromise between those advocating only formula from birth, and those supporting breastfeeding as usual. This alternative is short-duration exclusive breastfeeding, and then abrupt cessation, with

introduction either of alternatives, or family food. It is important to recognise that in developing countries this also is an almost untested strategy that has its own problems, and its own serious risks. Currently breastmilk even in the second year of life of an African infant provides around 55% of total energy, and a high percent of protein, fat and most micronutrients. How will this be replaced? Will early cessation of breastfeeding not lead to poor growth, and even severe malnutrition? Rutishauser in Uganda in 1975 showed that infants not breastfed in the second year of life had a 28% energy deficit, even though fed on a diet of matoke (plantain), legumes, some animal milk, plus fruits and vegetables.

Some MTCT projects (including in Uganda) are suggesting exclusive breastfeeding, and then rapid cessation when the infants are three months of age. If this advice is followed then one of the recognised alternatives to breastfeeding become essential, and are also largely untested among poor African mothers. It is not even certain that this is feasible, or what problems will arise, or result. We doubt that untested "policies" should be widely promulgated. We recommend these new regimens be carefully evaluated in true-life situations, without subsidisation or free formula, and only in small pilot studies.

In the MTCT pilot projects in Botswana, Uganda and Kenya a similar problem might exist for those provided with free infant formula for six months. What in the family diet will be used to replace that after six months of age – an age when in most infants 60-80 percent of energy usually comes from milk, mostly breastmilk in Africa? Some would suggest that animal milks be used to replace breastmilk or infant formula. But in many parts of Africa this is expensive for poor families, and may not always be available. And animal milks as infant foods can produce many of the same risks as infant formula.

Our mission did not include, as an objective, to assess the use of anti-retroviral or other drugs being used to prevent HIV transmission from mother to child in utero or during childbirth. However it is worth noting that research in Botswana, in collaboration with Harvard University will test the provision of AZT to infants who are breastfeeding for the first six months of life. It is hoped that this will reduce or even prevent HIV transmission through breastmilk. Should this prove to be so, this could lead Botswana, and other countries, to change their policies away from advice to formula feed.

1.2.4 Consideration of relative risks of breastfeeding versus formula (or alternative) feeding

We found in all four countries at almost every level of sophistication that knowledge of the relative risks of breastfeeding versus formula (or alternative feeding) was extremely poor. As stated, in general, there is an exaggerated belief in the risk of viral transmission through breastfeeding and a very much unappreciated knowledge of the high risks in formula feeding from birth in poor families. It seems vital that persons involved at all levels have a reasonable knowledge of these relative risks.

This lack of knowledge was extremely widespread and included highly placed officials in Ministries of Health; persons responsible for national AIDS policy; programme officers in UNICEF, WHO and UNAIDS; front line health workers; and not unexpectedly ordinary citizens.

We do not have as much knowledge of relative risks as we would like, but science provides us with some evidence, and we like to believe that actions, and medical advice should be evidence based.

There is no attempt here to review the literature but simply to state what is generally accepted by most of the scientific community.

i) Inadequate knowledge about the risk of HIV from mother to child through breastfeeding
Risks of viral transmission depends on several factors including the mother's viral load; when she was infected; whether she was infected postpartum; the duration of breastfeeding; the presence of mastitis; whether she has cracked nipples or the baby has stomatitis or other mouth lesions; and other factors. But in general it is stated that about 30% (ranges are quoted from 10%-35%) of HIV mothers will infect their infants *in utero*, during childbirth or through breastfeeding. The scientific view is that around two-thirds of these infections are *in utero* or during childbirth, and about one-third through breastfeeding.

How does this translate into women in these four countries who are attending an antenatal clinic whose staff were concerned about MTCT through breastfeeding. Our visits suggested the very highest percentages of HIV positive pregnant women were in Gaberone and Francistown in Botswana (with rates of around 40% positive). The rate in Botswana as a whole is unknown but perhaps 25-30%. The lowest levels were in rural Uganda with HIV infections in around 5% whereas in Kampala infection rates are 12% in pregnant women surveyed.

To take, as an example, a community with rather high prevalence rates of 30% in pregnant women: In this scenario if:

> 100 women attended the ANC and were tested
> 30 women would be HIV positive
> 10 women (that is 33% here) would transmit HIV to their infant
> 3 infants (30% of 10) would contract HIV through breastfeeding, if their mothers breastfed as normal.

For the policy maker at the top, and for the health worker or MTCT counsellor in the community, it is important to keep in mind these approximate numbers or percentages. Of course if HIV sero-positive prevalence rates were only 10%, then only 1% would get HIV through breastfeeding; but if mothers sero positive rates were 60% then 6% of infants are likely to be infected through breastfeeding rather than 3%.

The rough assessment is easy to calculate (it is only a rough estimation) by remembering that to get the percentage likely to be infected through breastmilk from the total attending the ANC with one third (33.3% infected) you calculate one-third, of one-third. Perhaps a chart illustrating this should be displayed in every maternity clinic in Africa.

(ii) Risks of formula feeding from birth in poor families in the four countries
The authors of a WHO collaborative study that was published in the Lancet in 1999 concluded that "Our results show that it will be difficult if not impossible, to provide breastmilk substitutes to children from underdeveloped populations." Their study showed that

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the risk of dying from infectious diseases in the first two months of life is six times greater in infants who are not breastfed than in those who are breastfed. And these data were from a pooled analysis from Brazil, Pakistan and the Philippines. These countries have lower IMR's than most sub-Saharan African countries. These research scientists could not use data from African studies because almost all infants there were breastfed.

A report from Linkages (USAID funded project) in which modelling was done using risks of MTCT transmission, versus risks of infant mortality in Africa also concluded that for the first four months of life, not breastfeeding presented much greater risks of mortality, than breastfeeding by HIV positive mothers.

A 1999 study in the British Medical Journal reported that newborn infants in Brazil who were not receiving breastmilk were 17 times more likely to present with pneumonia at hospital than those receiving breastmilk but no artificial milk. It should be noted that these are pneumonia cases, not diarrhoea, and so not related to contamination of water or infant formula. The results show the anti-infective properties of breastmilk.

The facts are, we do not have good data to know what the morbidity or mortality rates will be if large numbers of infants from poor families in sub-Saharan Africa are formula fed from the day of birth. But data from better off countries suggest that both morbidity and mortality rates would be very, very high. And sick children need good medical care, which is not widely available in many African countries. It is also now expensive for poor families, and is time consuming for mothers.

But raised rates of morbidity and mortality are not the only risks, nor the only disadvantages of formula feeding for poor mothers in Africa. Other risks or disadvantages include:

(a) Malnutrition, or disease, due to either over-dilution of infant formula, or wrongly reconstituting it.
(b) An early pregnancy, often within three months, for a mother who does not benefit from the anti-fertility benefits of breastfeeding. And the risk of having another HIV infected baby, also destined to become an orphan.
(c) Impoverishment, of an already poor family, because of the very high cost of infant formula, fuel and other supplies and the cost of increased medical care for formula fed babies.
(d) The very real danger of not having an assured supply of infant formula, at a time when her breasts have "dried up." Few health care facilities can maintain assured supplies of needed medicines. Can they maintain assured supplies of infant formula? What if supplies are not ordered, or orders are not filled: or if weather or other conditions interrupt transport? Any of these eventualities puts formula fed young infants at grave risk.
(e) Difficulties of exclusive formula feeding. In three African countries we visited where formula is being supplied free at pilot sites, a large percentage of mothers are either not adhering to instructions not to breastfeed, or are not coming back on time (or ever) to pick up new supplies of infant formula. The belief, at all the sites, is that mothers who had opted to formula feed, are frequently mixed feeding. It is known that mixed formula and breastfeeding is likely to transmit HIV much more than either exclusive breastfeeding or exclusive formula feeding.

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It needs to be recognised that well educated more affluent mothers in Africa can, and do, safely formula feed infants even from birth. They may face problems of stigmatisation, but they do have the attributes necessary for safe formula feeding. But, in most countries, the percentage of families enjoying good incomes and living conditions is small.

iii) The conditions that make formula feeding problematic or even dangerous include:

(a) Low education or illiteracy
(b) Low levels of household or personal hygiene
(c) Inadequate supply of water, contaminated water or difficulty getting enough water
(d) Difficulty in preparing formula, especially at night, with lack of good light
(e) Problems in obtaining fuel, or in boiling water
(f) Poor sanitation
(g) Lack of refrigeration or safe storage facilities
(h) Unavailability, or lack of knowledge, of family planning
(i) Poor access to decent health care
(j) Insufficient income to purchase adequate quantities of infant formula, and other needed supplies
(k) Difficulties in practising exclusive formula feeding because of family pressure, fear of stigmatisation or for other reasons.

1.2.5 Need for further research into suitable alternative feeding methods for mothers with HIV

We (Pauline Kisanga in IBFAN documents and Michael Latham in various journals) have discussed alternative feeding methods, and we strongly recommend that good studies of these alternative methods be funded and undertaken as soon as possible. These alternatives include:

(a) Modified animal milks for very young infants
(b) Unmodified animal milk to replace breastmilk for babies after exclusive breastfeeding for up to six months
(c) Expressed heat-treated own breastmilk
(d) Cross nursing (often called wet nursing)

The draft PMTCT Policy paper prepared in Uganda provides a reasonably good discussion of most of these alternative feeding methods. It concludes that HIV positive mothers after VCT, who then opt not to breastfeed as usual, should probably use one of these alternatives:

(a) Exclusive breastfeed for three months and then use an alternative feeding method.
(b) Consider using infant formula from birth.
(c) Consider using animal milk from birth.

We recommended that (a) be modified to state "Exclusive breastfeeding for up to six months, and when exclusive breastfeeding ends to use an alternative feeding method." Our report does not discuss alternative methods of infant feeding besides breastfeeding, modified short duration breastfeeding and infant formula. In the four countries visited these are the three feeding methods that are either being seriously discussed, or are actually being tried.

1.2.6 Conclusions

Similar views to ours were widely shared with us by many professionals with whom we discussed this in the four African countries. The medical doctor running the pilot PMTCT trials at Msambya Hospital in Kampala stated that to contemplate using infant formula in place of breastfeeding in rural districts of Uganda was unthinkable. Msambya Hospital, is a private hospital, serving better off Ugandans, and women enrolled in the PMTCT trial there are often not exclusively formula feeding, rates of acceptance of formula have been low, and more than once the supply of formula has run out during the first six months of the project.

Based on our findings, and the views of many professionals who really understand current conditions for most poor families in these four African countries, "going to scale" with formula feeding seems unsupportable. To do this without an independent thorough evaluation of the relative risks cannot be justified. Pilot sites are not truly "pilot sites," if they are not very thoroughly evaluated. The evaluation of relative risks of transmission of HIV do seem to be planned, and there is some monitoring in place. But we were not made aware of plans for any adequate evaluation of the relative risks for infants, mothers and families where the option was taken not to breastfeed in poor communities.

Among the recommendations in our final report covering ways to improve the status of breastfeeding, will be a strong recommendation that well designed independent evaluation of pilot PMTCT projects be planned and executed, and that these be done before wide expansion of these projects.

We support attempts to increase voluntary counselling and testing (VCT) where counselling can be provided by persons trained to assess relative risks of infant feeding methods. But VCT of this kind is not now widely available. And evaluation of the PMTCT pilot site results would provide all with better assessments of these risks.

After VCT, mothers have a right to be advised about the relative risks of alternative feeding options, to make a choice, and be assisted to fulfill their choice. But it should be understood that persons seeking advice from health facilities would usually ask the health worker which option he or she would follow. We all do that when we seek medical advice. This reinforces the importance first of knowing more about relative risks; second the need for evaluation of relative risks in typical communities; and third good training and proper understanding of risks by counsellors and health workers.

1.2.7 Recommendations

(1) Protection, support and promotion of breastfeeding

It is strongly recommended that UNICEF, WHO, the governments and other organizations having access to funding and resources, greatly increase the use of these to protect, support and promote breastfeeding in all four countries. The knowledge that HIV can be transmitted from mother to child should through breastfeeding, should not be a reason for diminished efforts in support of breastfeeding. Similarly, individuals working in various areas including health and nutrition; primary health care and reproductive health; and in other related disciplines should make greater efforts in favor of breastfeeding.

(2) Nutrition Units, nutrition focal points and nutrition activities

It is recommended that the government unit responsible for nutrition in all four countries be greatly strengthened; including increased numbers of well trained staff with knowledge of breastfeeding and related child health issues. National Interministerial Coordinating Committees on Nutrition need to exist and function properly.

(3) National Breastfeeding Coordinating Committees

It is recommended that National Breastfeeding Committees be established, or where they exist, be strengthened.

(4) The WHO International Code on Marketing of Breastmilk Substitutes

Both WHO and UNICEF should assist and encourage national governments to have legislation on the Code, and where such legislation exists to ensure that the law is fully implemented and violations monitored.

(5) The Baby Friendly Hospital Initiative (BFHI)

Because of greatly reduced effort in support of BFHI it is strongly recommended that WHO and UNICEF together with governments retrieve it from the shadows and ensure that all hospitals previously certified remain mother and baby friendly, and act to see that all hospitals with maternity units adhere to the 10 steps. To achieve this support may be needed for training of health workers.

(6) World Breastfeeding Week

It is recommended that governments with support from WHO and UNICEF, strongly support Breastfeeding Week activities because they are a major advocacy tool for breastfeeding.

(7) Exclusive Breastfeeding

It is recommended that great efforts be made to promote exclusive breastfeeding of infants for six months; that reasons for early cessation of exclusive breastfeeding be explored; and that health workers be knowledgeable about the benefits of exclusive breastfeeding. All this will require advocacy, publicity, promotion, education and training, and perhaps research.

(8) Breastfeeding Associations and NGO's

It is recommended that a variety of measures, be taken to support, strengthen and sometimes create Breastfeeding Associations and NGO's whose mission is to support breastfeeding. Such organizations should be encouraged, financially supported and assisted to work in collaboration with Nutrition Units, to strengthen their capacity including in areas, such as the Code, BFHI, Breastfeeding Week and in community support for breastfeeding mothers.

(9) Activities related to Mother to Child Transmission (MTCT) of HIV

In this report recommendations are made separately for each country, in the area of MTCT. However for all countries it is very strongly recommended that MTCT policies, and especially PMTCT pilot projects, be properly and independently evaluated. This is essential before any wide expansion is launched. It is also recommended that those responsible in each country for voluntary testing and counseling (VCT) be well trained, and be knowledgeable both of the extent of risks of HIV transmission through breastfeeding, and of the broad range

of risks for poor mothers in each country who chose not to breastfeed, or to reduce the duration of breastfeeding.

Based on our findings, and the views of many professionals who really understand current conditions for most poor families in these four countries, "going to scale" with formula feeding seems unsupportable. To contemplate this without an independent thorough evaluation of the relative risks cannot be justified. Pilot PMTCT sites, are not truly "pilot sites" if the outcomes of actions taken are not well assessed, and evaluated. Currently the evaluation of the relative risks of HIV transmission with alternative feeding methods seems to be planned in many projects, and some monitoring is in place. But we were not made aware of plans for any adequate evaluation of the relative risks for infants, mothers and families where the option was taken not to breastfeed in poor communities.

(10) UNICEF Nutrition Strengths and Weaknesses

It is strongly recommended that UNICEF make great efforts to ensure that it has one or more nutrition programme officers in each country, and that Health Programme Officers be given opportunities to receive training, and gain expertise both in nutrition, and in protection, support and promotion of breastfeeding. As is the case where Ministries of Health are weak in Nutrition, then support for breastfeeding is likely to be very weak. The same applies to UNICEF. It is also recommended that the UNICEF representative in all countries meet with all staff in the Country Office to ensure knowledge of UNICEF and national policies on MTCT are understood.

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2 KENYA, 2-6 October 2000

2.1 PROTECTION, SUPPORT AND PROMOTION OF BREASTFEEDING – CURRENT STATUS

There was complete agreement by staff from UNICEF, WHO, the Ministry of Health, Kenyatta National Hospital, and NGO's, that a broad range of actions and funding to assist protection, promotion and support of breastfeeding, have declined very markedly in recent years compared with the period from 1990-1995. There was general agreement that the HIV/AIDS situation in Kenya and knowledge that HIV can be transmitted through breastfeeding, accounts, at least in part for reduced activities in favour of breastfeeding. Most, but not all of those we discussed this with, agreed that this was not a good reason for lessened activities, and many felt that to the contrary there was a need for enhanced actions and funding to support and promote breastfeeding, especially exclusive breastfeeding. It is clear that many health professionals and others have a belief that the risks of transmission of HIV through breastmilk are higher than is actually the case. On the other hand the many risks of not breastfeeding seem to be under appreciated.

2.2 MOTHER TO CHILD TRANSMISSION (MTCT) OF HIV THROUGH BREASTMILK

Currently there is no national policy on PMTCT of HIV, nor is there a policy on breastfeeding in relation to HIV. A PMTCT committee has been established and is considering alternative policies. There is widespread agreement that in the end, widespread testing followed by appropriate counselling is needed, to allow mothers to make informed choices regarding infant feeding. However it is clear that the majority of health workers are not well informed either about the risks of transmission of HIV through breastfeeding, and even less on the risks of formula or other alternative feeding methods for poor mothers.

There is confusion in Kenya in part because Kenya Sessional Paper No. 4 of 1997 on AIDS in Kenya states. *"Women with HIV will be advised to avoid breastfeeding of children-------"* This was reinforced in instructions to Members of Parliament in June 2000. If this policy was implemented it would have disastrous consequences. It is unimaginable to consider a situation where thousands of Kenyan women were not breastfeeding.

The Ministry of Health has recently issued a poster entitled "HIV and Infant Feeding Practices Guidelines". This suggests Voluntary Counselling and Testing (VCT) and then for HIV positive mothers, an informed choice on feeding methods. As described below, pilot PMTCT projects have been initiated in Kenya. Prior to the beginning of the projects a training curriculum was developed, and that training of health workers and community mobilisation is ongoing. However, the guidelines for HIV positive mothers do not provide the health worker with clear enough guidelines to be used in counselling to help the mother in making a choice to breastfeed or not to breastfeed, based on her knowledge of relative risks. It is of utmost importance that these guidelines be supplemented with such information, which is then widely disseminated. We were informed that national guidelines on Home

Based Care and PMCT are being developed. In addition, the government aims to make VCT available up to health centre level throughout the country. This is supported by a large World Bank loan.

Pilot PMTCT projects are beginning in Homa Bay, Karatina and Nairobi. These are supported by UNICEF, WHO and UNAIDS, and the Ministry of Health. The US Centre for Disease Control is planning an independent similar project in Kisumu. It appears that the pilot projects in the 3 districts although well planned on paper, are being hastened into action without adequate assurances of success. Women attending ANC are being provided with VCT followed by AZT or Nevirapine for those who test positive and chose to receive antiretroviral therapy. Infant formula will be offered to mothers who choose not to breastfeed. Free formula will be provided which means the results cannot be considered to mimic real life conditions. Little consideration seems to be given to the fact that free formula is an economic benefit, and yet no similar economic benefit accrues to the breastfeeding group. The plans for follow up are awaiting information and decisions from the field testing. The most worrying concern is that there does not seem to be an adequate plan to monitor and adequately evaluate the relative risks such as difficulty of proper formula use in families with poor water supplies where there are no modern stoves to boil water and fuel costs are high; ability to mix formula in the night, and access to formula due to distance to supply centres. No plans are in place to collect sufficient data for a clear determination of risks and benefits. The ethical questions of providing anti-retroviral drugs for the benefit of the infant not of the mother (AZT will cease at 4 weeks after the baby is born) have not been addressed. It is important that health workers and others who provide counselling are knowledgeable about relative risks (see Appendix 2).

We were not fully briefed on several other trials on PMTCT either now in operation, or planned.

A National AIDS/STD Control Programme has been established. It is situated in the Ministry of Health but will coordinate activities of several ministries and other organisations both with control of AIDS and other STD's. It was only recently that the President of Kenya, His Excellency Mr. Daniel Arap Moi, stressed the very serious nature of the HIV/AIDS epidemic and outlined the importance of a mammoth campaign of information, education in all schools, training and other control measures. It is unclear whether the staff in the AIDS Programme are fully conversant with risks for infants of poor mothers who do not breastfeed. Also in the absence of a national policy on PMTCT and the confusion on appropriate guidelines, it is difficult for programme staff to speak with one voice.

It appeared to us that within the UN agencies, there is uncertainty, and no unified policy on PMTCT. The Kenya UNICEF representative, Dr. Nicholas Alipui, strongly expressed his concern that actions to reduce mother to child transmission of HIV were undermining breastfeeding, and that strong actions need to be taken to prevent a spillover effect. He stated strongly, that for most poor families in Kenya, and for other African countries with which he was familiar, formula feeding was not now a feasible option. He was aware of the research showing that exclusive breastfeeding reduced HIV transmission from mother to infant. In contract Programme Officers in UNICEF seemed not to share these views.

We were impressed, during our discussions at WHO, when the Family Health Officer

(Ms. Oduori) stated that WHO strongly favoured actions to influence mothers to breastfeed exclusively for six months. She also expressed serious concern for diminished support for breastfeeding in Kenya; the poor knowledge of health workers in regard to relative risks for HIV positive mothers in their choice of infant feeding practices. She was also concerned about evolving PMTCT policies which might recommend formula feeding for infants of HIV positive mothers.

2.3 NATIONAL INFANT FEEDING STEERING COMMITTEE

A multisectoral steering committee on infant feeding has existed since 1992 to coordinate activities in this area. However all said that it has been rather inactive since 1996, and does not have any defined agenda. It has assisted with the annual World Breastfeeding Week celebration, which is now celebrated in a modest way. Meetings of the committee are infrequent and few members are motivated to attend. In 1999 however, as a result of the work of this committee, the government of Kenya launched in the form of a poster a *"Summary Statement entitled National Policy on Infant feeding Practices"* The policy seems sound and supportive of breastfeeding. The policy refers to specific guidelines on infants of HIV infected mothers. The infant feeding statement now needs to be expanded to produce understandable guidelines, and good educational materials.

2.4 CODE ON THE MARKETING OF BREASTMILK SUBSTITUTES AND WHA RESOLUTIONS

A national code has been in existence in Kenya as a voluntary agreement since 1986. It is under the jurisdiction of the Kenya Bureau of Standards. Bureaux of Standards normally are more versed with food standards quality, and safety of the product, neither in enforcement of a code of conduct nor in monitoring of violations. Recently three persons from Kenya attended the IBFAN "Code Implementation Course" in Penang. These were a paediatrician from Kenyatta National Hospital, a UNICEF Programme Officer and a lawyer from the Attorney General's Office. The lawyer, Catherine Muma, is highly motivated to draft new legislation once she gets the go ahead. All agree that the code needs to be taken back from the Bureau of Standards to the Ministry of Health, who are more suited to implement any legislation. If, and when the Ministry of Health takes responsibility, Ms. Muma, is willing to review and update the voluntary code, and this then could move ahead following the country's legal process. So at the moment Kenya does not have a legal enforceable code. Interest in it waned between 1995-1999, but may now be revived. There is a lack of awareness of the International Code in many quarters. Recent training of the 3 persons is seen as a positive development.

2.5 BABY FRIENDLY HOSPITAL INITIATIVE

In the early 1990's some 232 out of 350 major maternity facilities in Kenya were certified baby friendly. There was much support for this process, from UNICEF, WHO, the national Government and NGO's. Since 1994, no new hospitals have been certified, and little monitoring has been done for adherence to the "Ten Steps to Successful Breastfeeding" for certified hospitals. In 1997 ten maternity hospitals were re-assessed, two of which lost their baby friendly status.

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In 1997 ten maternity hospitals were re-assessed, two of whichtheirbaby friendly status.

All of the evidence that we obtained leads us to believe that UNICEF, WHO and the government have all but ceased to promote BFHI. Yet BFHI is believed to have been a useful instrument to ensure that hospitals and health workers were supportive of breastfeeding, and health facility practices are likely to influence practices in communities. BFHI was a creation of WHO and UNICEF, so it is regrettable that these agencies are not now actively promoting BFHI.

In the era of HIV/AIDS, and with use of alternative infant feeding methods being introduced in hospital based PMTCT pilot projects, it seems very important that hospitals are baby friendly. By far the majority of mothers delivering babies in Kenya hospitals are HIV negative.

2.6 WORLD BREASTFEEDING WEEK

Since its inception in 1992 up to 2000, World Breastfeeding Week has been observed in Kenya. However, since about 1996, the event has been observed in a low-key manner. Before 1996, the event was large, often the Minister of Health participated, and there was much publicity and a wide variety of activities extending from the national to district level. In the last few years support for the event has diminished, it has become much less influential, and there are those in the UNICEF Kenya office who seem to doubt its value.

2.7 BREASTFEEDING NGO'S AND OTHER ORGANISATIONS

For over 20 years from the early 1980's, the Breastfeeding Information Group (BIG) in Nairobi was an effective world renowned NGO in support of breastfeeding. Now it is a small ineffective organisation, headed by a male acting Director who has no training in lactation management. Two of the leading professionals in breastfeeding in UNICEF (Margaret Kyenkya and Helen Armstrong) worked for BIG and may even have "cut their breastfeeding teeth" there. So the decline of BIG is a loss for Kenya. There may be reasons for its diminished stature, but this is symptomatic of a larger problem.

The Kenya Food and Nutrition Network, KEFAN, is a newer NGO, which started around 1992. It has two staff well trained, and knowledgeable of lactation management. But KEFAN has very limited resources. The Maendeleo ya Wanawake, is a very well established, very large women's organisation which has activities in every region. Over the years it has worked effectively on many women's issues. Its officers are interested in the possibility of playing a role in support of infant feeding. It will need resources including funds and recruitment of a knowledgeable staff member if it is to play a role in promoting breastfeeding.

Both NGO's have received small seed grants from IBFAN Africa and occasionally travel costs paid by UNICEF to attend regional training on infant feeding, but no funding given to undertake national activities.

2.8 HIV/AIDS NGO'S

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We were informed that there are over 30 HIV/AIDS NGO's, many of them international. We met with staff of the NGO Consortium (HIV/AIDS) who informed us of their work. Because the mission of most of these NGO's is to reduce HIV transmission, they often appear to fail to focus on the wellbeing of the whole family. Many of them will discourage mothers who are HIV positive from breastfeeding in order to reduce mother to child transmission. They tend to be unaware that there are many serious risks if poor mothers do not breastfeed their newborn infants. So mortality due to AIDS is their main concern. Mortality, due to other causes, such as diarrhoea and pneumonia, is not. There seems to be little understanding on the other risks associated with formula feeding including the risk of an early pregnancy with the possibility of the birth of another HIV infected infant, also destined to become an orphan. Unfortunately (we believe) there are 100 persons (including many expatriates) employed by AIDS NGO's for every one professional (none of whom are expatriates) working for breastfeeding NGO's in Kenya.

2.9 LACTATION MANAGEMENT TRAINING

Kenyatta National Hospital has since 1992 organised and run lactation management training courses. We view this as a very positive activity in support of breastfeeding. Currently three, two-week courses per year are held, each with about 25 participants, most of whom are health professionals, nutritionists and development workers. About one and half days are devoted to PMTCT. Because of resource difficulties and staff constraints, these courses mainly serve those living near Nairobi. It would be valuable if these courses could benefit participants from the districts.

2.10 RECOMMENDATIONS

2.10.1 Broad Actions to Protect, Support and Promote Breastfeeding

It is very strongly recommended that the Government, UNICEF, WHO, and others, take vigorous action and devote greatly increased resources to the protection, promotion and support of breastfeeding. It is important that all use advocacy, publicity, training and other means to reduce and even eliminate the widely held view that activities supporting breastfeeding are activities that may be worsening the HIV/AIDS pandemic.

It is recommended that the government, with help from UN agencies and NGO's, use all possible means to encourage all mothers to exclusively breastfeed their infants for as long as is possible up to about 6 months. This should be strongly stressed for mothers with HIV who choose to breastfeed. They need also to work together to establish a clear national policy on PMTCT of HIV/AIDS, and one which overrides the statement in Kenyan Sessional Paper, No. 4 of 1997, advising pregnant women with HIV infection to avoid breastfeeding their children. They need to communicate this policy adequately to all health workers in a practical way. It is recommended that the government take measures to greatly strengthen the national Infant Feeding Steering Committee, ensuring that it has the resources, staff capacity, the authority and the will to be a major player in ensuring sound infant feeding policies and practices in Kenya.

It is again strongly recommended that the Government, UNICEF, WHO and other international organisation make a concerted effort financially to support NGO's

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protecting, supporting and promoting breastfeeding, and involve them in relevant national activities meant to improve infant nutrition.

2.10.2 The WHO International Code

It is recommended that all involved actively work to establish a strong Kenya code with authority shifted from the Kenya Bureau of Standards, to the Ministry of Health. The Attorney General's office should be involved in reviewing the voluntary code, and in assisting the Ministry of Health to move it to legislation as quickly as possible. UNICEF and WHO should assist in these efforts but the Ministry of Health should spearhead the process.

2.10.3 The Baby Friendly Hospital Initiative (BFHI)

It is recommended that the government re-establish activities in support of BFHI, recognising that breastfeeding is as important in the era of AIDS as it was before, and that hospitals be fully supportive of breastfeeding and follow the 10 Steps. UNICEF and WHO should support this effort and monitor the status of hospitals certified as BFHI to ensure that they are compliant.

2.10.4 Breastfeeding Week

It is recommended that strong efforts be taken to revitalise and provide greater support for Breastfeeding Week. UNICEF and WHO should provide support.

2.10.5 Support for Breastfeeding NGO's

It is recommended that all involved find ways, including increased funding to strengthen NGO's promoting breastfeeding. Consider initiating work to involve Maendeleo ya Wanawake in breastfeeding promotion through their wide network, which extends to the districts and community levels. UNICEF support is particularly recommended in this area.

2.10.6 Lactation Management Training

It is recommended that ways be found to expand the work of Lactation Management Training done by Kenyatta National Hospital, including assisting with funding and resources to broaden the training to health workers from the districts.

2.10.7 Evaluation of PMTCT Pilot Projects

It is very strongly recommended that comprehensive monitoring and evaluation of the three PMTCT pilot projects be undertaken. This will require new resources to ensure independent and objective data collection. Reconsider the use of free infant formula especially when this makes the pilot experiment unreal, not replicable in the natural situation for poor families, and provides economic benefits for only one group of mothers. Without a proper independent evaluation of all benefits and risks, the expansion beyond pilot sites will be dangerous.

2.10.8 Training of Health Workers and HIV MTCT Counsellors

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There is an important need to greatly intensify training of health workers in matters relevant to breastfeeding, with special emphasis on exclusive breastfeeding, the code of marketing, and on the relative risks of alternative feeding choices for mothers with HIV. (See Appendix 2.)

2.10.9 Breastfeeding Support in Communities

It is recommended that the means be found to expand community support for breastfeeding through mother support groups and TBA training. This should make use of existing community based NGO's or others working on breastfeeding.

2.10.10 UNICEF Position

The UNICEF country office in Nairobi is the only office among the four countries that did not have a clear position on breastfeeding, even though the Country Representative is highly in favour of breastfeeding. It is strongly recommended that the staff should meet with the UNICEF Representative to agree on a position on infant feeding in relation to HIV and help guide the government in this aspect.

2.11 CONCLUSIONS

If there is one overall conclusion of our visit to Nairobi, it is the need for all, (the government, UNICEF, WHO, NGO's, the Media, and others) to greatly reduce or even eliminate the view that activities supporting breastfeeding are activities that may be worsening the HIV/AIDS crisis, or worse still, contributing to the spread of the pandemic. This belief is seriously undermining breastfeeding at a time when breastfeeding, especially exclusive breastfeeding, is needed more than ever before, for the health and wellbeing of infants, mothers and families.

Our recommendation is to strengthen efforts in favour of breastfeeding, not to decrease them. This will require funding and other resources, but also efforts to enlighten people at all levels –mothers, parents, health workers, and decision makers. Institutions of higher learning and others, international agencies, government ministries, and different NGO's working on breastfeeding or AIDS control, may also need to be sensitised on the facts and real benefits of breastfeeding and the risks and benefits of alternative feeding practices as we move into the 21st century.

Investigations to reduce MTCT of HIV supported by UNICEF are underway in three pilot sites. Other similar projects, also with external support are being undertaken, or are planned, in several other sites. The importance of comprehensive evaluation of implementation, but also of all benefits and risks, and of outcomes, way beyond just HIV transmission, cannot be over-emphasised. Without that, extension of these PMTCT actions to other areas will not be supportable. There is, beyond evaluation of risks and outcomes (morbidity, mortality, nutritional status, wellbeing of families, etc.) a need to consider the feasibility of extension in areas where free infant formula will not be provided.

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3 NAMIBIA, 8-13 October 2000

3.1 PROTECTION, SUPPORT AND PROMOTION OF BREASTFEEDING – CURRENT STATUS

Namibia still follows an infant feeding policy, which favours protection, promotion and support of breastfeeding. All Namibian maternity facilities became baby and mother friendly before 1996, and during this period, His Excellency Sam Nujoma, the President of Namibia himself, used to officiate when facilities became baby friendly.

However, staff in UNICEF, WHO, the Ministry of Health and elsewhere all agreed that, although breastfeeding is almost universally practised in Namibia, there had been a definite decline in the last few years in overt activities to protect, support and promote breastfeeding. The decline in action is probably due to a world-wide trend, and in Namibia, as elsewhere, has been influenced by the knowledge that HIV can be transmitted from mother to infant through breastfeeding. It was also clear that for many, including health professionals, there is a belief that the risks of transmission through breastmilk are higher than is in fact the case (see Appendix 2).

On the positive side WHO (in collaboration with UNICEF) is working with the Ministry of Health and Social Services in six districts where IMCI programmes include a component of breastfeeding, including six months of exclusive breastfeeding, with advice to continue breastfeeding to 24 months or beyond. IMCI Training Materials that have been adapted to the national needs will soon be available. This could be an opportunity to strengthen breastfeeding.

3.2 NATIONAL POLICY ON PMTCT, SPECIFICALLY AS IT RELATES TO BREASTFEEDING

Although there is no official written policy on PMTCT it was made clear to us by the Honourable Minister of Health herself; by the Director of the National AIDS Coordination Programme; and by the UNICEF and WHO Representatives, that Namibia at this time, had charted a course that all four supported. This includes that Namibia will, as in the past, very strongly support breastfeeding; will not be recommending, as a policy, that HIV-1 positive mothers use formula, or other alternative feeding methods, while recognising mothers rights to choose. Also, as of now, they will not be prescribing as a general policy, in the public sector, the use of Nevirapine or AZT for mothers or infants; and will not recommend routine Caesarean sections for pregnant women who are HIV positive. Namibia has no plans now to launch pilot projects testing alternative feeding methods and anti-retroviral drugs to reduce MTCT.

Namibia plans to look at the advantages and disadvantages of different options. There is a strong belief that decisions should be made based on risk assessment. Currently it is recognised that breastfeeding is, and always has been, the normal practice, and is culturally acceptable. There is a need for great caution "lest we allow the fear of HIV to cause confusion and even conflict, about breastfeeding." An active Technical Advisory Committee on HIV/AIDS is discussing the development of a national HIV/AIDS policy including one on PMTCT and HIV/infant feeding.

The clear message we received was that Namibia planned to proceed in an orderly manner, and not rush into a policy and actions that cannot be sustained. There is a belief, in Namibia, that some other African countries have rushed into action with new policies, and without due consideration with regard to their effectiveness, the harm they may cause, their cost nor their sustainability.

But there is equal recognition that Namibia cannot stand by, and do nothing. The government is taking strong measures to prevent HIV transmission. The Ministry of Health and UNICEF believe that voluntary family planning for women (and men) who have HIV is a first, and crucial action to prevent MTCT. We understood that even termination of pregnancy was being discussed by some.

Unlike many other countries, where there was disagreement about appropriate policies and where different methods to prevent MTCT were being tried in different areas, the current Namibia decision is to take a holistic, evidence based, approach. It seems that no new PMTCT policy will be initiated until it has been thoroughly explored. Then it needs to be clear that it can be implemented nation-wide, and can be sustained for the foreseeable future. Even with consideration of Nevirapine, the view is that it will be introduced only when there is assurance that it can be safely and universally applied and administered.

The conclusion we heard was that there would be no change in advice to mothers regarding breastfeeding, with the exception of strong emphasis on exclusive breastfeeding. So, as of now, Namibia is concentrating on prevention of HIV transmission. It is exploring all options to reduce MTCT, but will only take new action or issue new recommendations when a clear sustainable policy option is agreed upon, and one based on the evidence and consideration of real social and economic conditions of the majority of people in Namibia. This will only happen when such a new policy is acceptable to the Minister and other stakeholders; when the advantages of the new policy, and actions, are deemed to outweigh the risks; and when there is a belief that it can be implemented universally, and sustained.

Related to this is the intention to take steps to improve the nutrition of women and children which also may reduce their likelihood of contracting HIV, and the length they survive, if infected, plus the quality of their lives. Also to advocate condom use in family planning, rather than for example the pill, which only prevents pregnancy but not infection with STD including HIV. Also to expand the availability of treatment of STD's and of opportunistic infections; and to increase sex education, and research on sexual practices; to enhance sound mobilisation around the issues of AIDS, sexual practices and parenthood; and to enhance the availability of counselling.

We were informed that Namibia was the only country in Africa with a policy requiring a person who tests positive for HIV to disclose this to his or her sexual partner.

3.3 NAMIBIAN TECHNICAL ADVISORY COMMITTEE ON HIV/AIDS

This committee has been established to advise, and produce policies on all aspects of HIV/AIDS. Recommendations are expected to be made to the Minister of Health and Social Services, and to the government as a whole on many aspects of the epidemic, including on PMTCT where the two major issues are:

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a) The use of anti-retroviral drugs for pregnant women and newborn infants.
b) The appropriate policy around the issue of transmission of HIV from breastfeeding.

Clearly our mission relates to the second, not the first issue. As stated, as of October 2000 the recommendations from the Ministry of Health and Social Service are clearly that, counselling services are not in place and testing is not accessible to all, so it is difficult to talk of informed choice. However those relatively few mothers who are tested for HIV and found positive will receive counselling, and be informed of the relative risks, and possible feeding option choices. As a general rule, and for the majority who do not know their HIV status, the recommendation is that mothers should be supported to breastfeed and that exclusive breastfeeding should be encouraged and promoted.

The committee has broad representation from different Divisions in the Ministry of Health and Social Services; UN agencies (including UNICEF, WHO and UNAIDS); doctors in the private sector; and others. Some members of this committee may not fully agree with the cautious current policies outlined above, which as stated do seem to be views of the Minister of Health; the Director of the National AIDS Coordination Programme; and the UNICEF and WHO Representatives in Namibia.

But we are convinced that Namibia, unlike some other African countries has established a mechanism which will review the evidence and the options and recommend a policy that will be feasible and sustainable. This policy seems unlikely to be one that will result in a major "spillover" effect, which might then undermine breastfeeding as the cultural and normal means of infant feeding.

3.4 NATIONAL INFANT FEEDING STEERING COMMITTEE AND THE NUTRITION UNIT

Since 1993 Namibia has had a multisectoral infant feeding steering committee to coordinate all infant feeding activities, in response to the Innocenti Declaration. Its secretariat is in the Nutrition Unit, Ministry of Health and Social Services. This committee used to meet frequently, but in the last three years the meetings have become infrequent and fewer training sessions are being organised. This was attributed to the fact that all Namibian maternity hospitals are baby friendly, that a restructuring process is planned in the Ministry, and that there is a lack of adequate staff capacity. It was also suggested that previously a breastfeeding NGO had existed and it undertook some responsibility for lactation management training and counselling of mothers in health facilities and communities.

The Nutrition Unit now has only two professionals, and they have to oversee all the nutrition programme work in the country. There are no nutritionists in the regions. The staff of the Nutrition Unit undertake a wide variety of activities and admit that they do not have a problem of funding for breastfeeding activities from the Ministry or UNICEF. So the main problem is low staff capacity and the restructuring process. There is also lack of support to the unit because there is no functioning breastfeeding NGO (see 4.8).

3.5 CODE ON THE MARKETING OF BREASTMILK SUBSTITUTES AND WHA RESOLUTIONS

Namibia drafted its national legislation on the Code in 1995. This was moved through the legislative process but because of restructuring the process was halted. Currently the draft code has become a section in the new Public Health Act that is in the process of being developed, and for this reason it may take some time before the Act, and therefore the code, is passed. The draft may need some review as it may have been overtaken by time. Code compliance is high in Namibia with the exception of information materials from companies to general practitioners especially in private practice.

3.6 BABY FRIENDLY HOSPITAL INITIATIVE

In Namibia all 35 maternity facilities are said to be baby friendly. Some years ago there was a very strong commitment to this at the highest level; the policy and guidelines were developed and health workers from all hospitals were trained. All those with whom we discussed this issue stated that there are no free or low cost supplies in health facilities; health workers give health education to mothers during antenatal and post natal visits; mothers initiate breastfeeding; and over 90% are noted to be breastfeeding on discharge. The implementation of Step 10 -- "refer mothers to support groups—" has not been well implemented due to lack of NGO support except in Engela and Upuwo, where the population is nomadic." In these areas some community support for breastfeeding has been initiated.

However, training of health workers has declined in the last three years. The hospitals certified baby and mother friendly have not been re-assessed and therefore their current status is unknown. Although the commitment of the Government and of the UN agencies is still there, actions to protect, promote and support breastfeeding have declined.

3.7 EXCLUSIVE BREASTFEEDING

There was wide agreement that exclusive breastfeeding for more than about 2 to 3 months was uncommon among all population groups in Namibia. Almost all agreed that there would be benefit if it were possible to increase the length of exclusive breastfeeding in the population as a whole, and also for those mothers who are HIV1 positive.

There were considerable differences of opinion about the reasons why longer exclusive breastfeeding was not prevalent. Many stated that mothers working away from home would end exclusive breastfeeding when they return to their job. Currently the law provides 12 weeks of maternity leave, but many begin this some weeks before delivery. A few employers do provide "breastfeeding corners" where women can breastfeed at work. But this is not commonly done.

Others with experience in certain rural areas believed that some cultural groups had strong beliefs that undermined exclusive breastfeeding. These included a belief that goat's milk must be fed in the first 2 months to assure health and strength of the infant; that mothers felt it essential by 3 months of age to get the infant used to solid local foods; and that proper growth was impossible with breastmilk alone. Many agreed that water was believed by many mothers to be essential for very young babies especially in hot weather.

We concluded that there had been relatively little advocacy for exclusive breastfeeding in Namibia and that practically no research existed to discover how strong the resistance would be if health workers, TBA's, and others, advocated a longer duration of exclusive breastfeeding. We also concluded that efforts needed to be made to use information, education and support of mothers, to extend the prevalence of a longer duration of exclusive breastfeeding.

Mrs. Letha Itembu a lecturer in the University of Namibia School of Nursing expressed interest in having 4th year nursing students, during their practical training in the districts, conduct practical research on exclusive breastfeeding in different communities in Namibia. She might seek limited support from the Ministry or from UNICEF. She asked if perhaps technical support, especially in the design of an appropriate questionnaire or instrument, and advice might be obtained from the Program in International Nutrition at Cornell University. This might be negotiated.

3.8 BREASTFEEDING ASSOCIATION OF NAMIBIA AND OTHERS WHO PLAY A ROLE IN BREASTFEEDING

The Breastfeeding Association of Namibia, beginning in 1979, had volunteer breastfeeding counsellors working from the Windhoek Central Maternity wing which, at the time was a branch of Breastfeeding Association of South Africa. In 1991 after independence the Association became a registered NGO. It became more multiracial and it grew stronger under the leadership of Ms. Sharon Gorrelick, between May 1996 and September 1998. By this time it had at least 6 part time staff and over 34 volunteers and 100 mothers, who were trained as trainers and counsellors on lactation management, in order to support other mothers with breastfeeding and young child feeding. They worked as volunteers in communities and health facilities. The staff of the NGO also helped the Ministry of Health to train health workers and give health talks on infant feeding in health facilities. However, since 1998, for several reasons the NGO has disintegrated mainly because of lack of funds but also capacity to raise funds. Rosalia Ndakola seems to be the only active member who has survived in the organisation. She has continued the counselling activities from her home on a voluntary basis, due to lack of office facilities. She is a mother who has had 12 years of schooling, undergone training on Early Childhood Education and 40 hours of Lactation Management training. It is important to have breastfeeding NGO's to provide mothers with the needed support and to maintain the momentum for protection of breastfeeding as a general policy nationally. This NGO could be revived. In September 2000, the Association wrote a funding proposal to IBFAN Africa to revive its activities on protection, promotion and support of breastfeeding.

Consultant doctors work with both private and public hospitals. We had an opportunity to discuss breastfeeding with two paediatricians working at Rhino Park Private Hospital. They are a good resource in terms of conducting research in the area of breastfeeding and in using students from the Namibia University's faculty of Medical Health Sciences. Dr. Solly Amadhila, a paediatrician with long experience working in communities, and a former Permanent Secretary in the Ministry of Health, thinks that breastfeeding is the norm in Namibia but community support for breastfeeding is now weak.

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The University of Namibia (UNAM) has an annual intake of about 50-60 nursing students. Their curricula includes a 40 hours lactation management course and they spend their third college year in communities. These nursing students could be a great asset if they were provided with adequate training. However, there are now no lecturers who have themselves been trained on lactation management.

Catholic AIDS Action, established in 1998, is a strong organisation with a well-organised network in 12 out of 13 regions. It has over 150 volunteers who have some basic counselling on different subject matters including HIV/AIDS and TB but not breastfeeding. They mainly work in communities. The organisation also works in 15 hospitals and some schools. In a discussion with one of their senior staff, we discovered that the NGO has good working relationships with UNICEF and the Ministry of Health and would be interested to be involved in breastfeeding activities. It has recently signed a contract to receive funding from Bristol Myers Squibb (see 4.10).

3.9 NUTRITION IN NAMIBIA

We were not able to obtain a clear picture of the nutritional status of Namibian children. Paediatricians that we talked to stated that in Windhoek, many cases of nutritional marasmus, and kwashiorkor were admitted to hospital each month, and that the problem was much worse in many rural districts, especially in the north. Iron deficiency anaemia was prevalent in children. Certain cultural groups weaned their infants onto a diet largely of fermented dairy products which were low in iron content. Hookworm and malaria contributed to anaemia. Overt eye signs of xerophthalmia were rarely seen in Windhoek hospitals and we were told that with high "iodised salt" availability, IDD was now rare. But none of these findings are based on prevalence survey data.

The Ministry of Health and Social Sciences has a Nutrition Unit, or Sub Division of Food and Nutrition under the Division of Family Health, which is within the overall Directorate of Primary Health Care Services. The two nutrition staff members are Mrs. J. N. Amadhila (a Nurse-Midwife who did a short course in nutrition) and Ms. Marjorie van Wyk (a Dietitian trained at the University of Stellenbosch in South Africa, who has recently completed a Masters degree in Community Nutrition, at the University of Queensland, Australia). These two constitute the nutrition staff for the whole country. We understood that there are no nutritionists in the regions or districts.

The Food and Nutrition Unit has a rather broad range of duties to undertake including participation "in developing a policy on infant feeding and HIV/AIDS" and activities related to child feeding; working on IMCI; activities to improve utilisation of iodised salt. It also has involvement in a future food consumption and nutrition survey, finding means to address food insecurity, and others. But clearly there are insufficient staff, knowledge base and resources to undertake what needs to be done nationally. We conclude that nutrition services in Namibia are weak because staff strength and capacity are inadequate.

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3.10 FINANCIAL SUPPORT FROM INFANT FORMULA INDUSTRY

We were informed that Bristol Myers Squibb, one of the leading multinational manufacturers of infant formula had agreed to donate US $1.4 million to Catholic AIDS Action, a Namibian NGO. Bristol Myers Squibb is a corporation that has been found to violate the WHO International Code of Marketing of Breastmilk Substitutes. This large "donation" is being given (or laundered) through a newly formed organisation called "Secure the future BMS Outreach and Community Foundation." The Catholic Mission Board, in New York is working with, or affiliated to, this foundation. The contract is to allow Catholic AIDS Action to assist AIDS orphans in Namibia. Other NGO's in Namibia may also receive similar donations. It is our understanding that Bristol Myers Squibb is providing major donations to five other southern African countries through the same foundation.

Catholic AIDS Action is the largest NGO in Namibia, working on HIV/AIDS. It was founded in 1998 and is a subsidiary of the Namibian Catholic Action Conference. From all accounts they do excellent work in many communities, using a large number of volunteers and often working out of 15 Catholic Hospitals and Health Centres mainly in the northern areas of Namibia. We were told that persons in the Ministry of Health were aware of the donation, but not if the Minister of Health had been informed. The funds are to be used for work on AIDS orphans and not on infant formula.

Nevertheless the acceptance of such funding contravenes the spirit of the WHO Code. It may not be considered illegal in Namibia because Namibia as yet has no legally binding code. Nevertheless, this is extremely troubling because it is accepted that where a country does not have its own law on the code it abides by the WHO International Code until such time it has its own law. It is also well known that donations by formula companies are for the purpose of gaining influence and getting recognition through "association" with reputable organisations working in the area of child health and nutrition. This often later creates a serious conflict of interest. In this case the presence of a representative of Catholic AIDS Action on the Namibian Advisory Committee on HIV/AIDS may be inappropriate. It may also associate UNICEF with Bristol Myers as UNICEF funds some programmes of Catholic AIDS Action. Despite all this, the Catholic AIDS Action staff indicate that use of infant formula is not currently an option for poor families in Namibia, even if the mother is HIV positive. They strongly favour breastfeeding, especially exclusive breastfeeding even by poor mothers who are HIV positive.

3.11 RECOMMENDATIONS

3.11.1 Protection, Support and Promotion of Breastfeeding

It is strongly recommended that all organisations and individuals working in the area of infant nutrition and health; maternal and child health; reproductive health; primary health care and others make much greater efforts to do strenuous work in favour of breastfeeding. Organisations like UNICEF, WHO, the government and others having access to funding and resources should increase these for breastfeeding. The knowledge that HIV can be transmitted from mother to child should not be a reason for diminished efforts in support of breastfeeding.

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3.11.2 Prevention of Mother to Child Transmission (PMCT), Especially as it Relates to Breastfeeding

The current course that the Government of Namibia, with UNICEF and WHO support, is following in regard to PCMT (see 3.2) as it relates to breastfeeding appears logical and sensible, and we recommend that it continue to be followed. We strongly support policies that concentrate on AIDS prevention in the adult and adolescent population. We also recommend, that until an alternative policy is developed and agreed upon, it is wise that breastfeeding, especially exclusive breastfeeding continues to be encouraged and supported as the cultural norm for Namibia. For known HIV infected mothers, other than those who are well educated and have the resources and ability safely to practice an alternative method of infant feeding, exclusive breastfeeding should be encouraged. It should be vigorously promoted through enhanced community support for breastfeeding as the preferred first option. We also recommend that any new policy must be evidence based, showing advantages of the new policy, and that new actions outweigh the risks. We recommend that Namibia "stay the course," and not rush into a new policy that could create problems and not be sustainable and do this because of pressure from donors, outside critics, other African countries, and pharmaceutical and other multinational corporations.

3.11.3 Namibian Technical Advisory Committee on HIV/AIDS

Specific to PMTCT, through breastfeeding, it is strongly recommended that this committee moves forward with a policy on PMCT, taking account of what has been written in 4.2 above. In regard to consideration of recommendations on reducing MTCT through <u>not</u> breastfeeding, very careful consideration needs to be given to the risks of each feeding method among poor families in Namibia (see Appendices 1, 2 and 3). Based on current knowledge, our calculations are that of 100 pregnant women attending an ANC 30 might be expected to be sero-positive for HIV. Of these, perhaps 33% (10 infants) might then get infected *in utero*, during childbirth or through breastfeeding. Of these 10 infected infants, only 3 will have been infected through breastmilk, even with long duration breastfeeding. So with current conditions in Namibia only 3 out of every 100 infants born are likely to be infected with HIV through breastfeeding. This small number could be reduced by exclusive breastfeeding, and by modified short duration breastfeeding.

On the other hand, the risks for a poor mother formula feeding her infant need to be considered. This may be very unsafe if she is relatively uneducated; does not have clean running water or electricity in the home; has no turn-on stove or refrigerator; poor sanitation and little knowledge of personal hygiene, etc. Another consideration is the high cost of infant formula (estimated for Namibia, to be US $240.00 for 6 months), and its availability. Improper formula feeding is a potent cause of diarrhoea; estimates are that mortality rates from diarrhoea, pneumonia and other infections are 5 or 6 times higher in the first month of life for infants in poor countries who formula rather than bottle feed. Over-dilution of the formula is a common cause of PEM including nutritional marasmus. A mother who does not breastfeed, nor practice family planning, is likely to become pregnant within 3 months, and then risk having another baby who also may be infected with HIV, and also will become an orphan. It is recommended that this committee considers these risks – final decisions should be made on the basis of risk assessment.

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3.11.4 National Infant Steering Committee and Nutrition Unit

It is strongly recommended that the National Infant Steering Committee be strengthened and use its potential to work strenuously to improve infant nutrition. It can perhaps also broaden its mandate so as to serve as a National Interministerial Coordinating Committee on Nutrition with representatives from the key Ministries; from the university; from UN agencies; and from NGO's.

At the same time it is recommended that the Nutrition Unit in the MOHSS, and nutrition activities in general be greatly strengthened in Namibia. The Unit needs more well trained professional staff, and to have at least one, thoroughly knowledgeable in the area of infant feeding.

3.11.5 The WHO International Code on Marketing of Breastmilk Substitutes

It is strongly recommended that UNICEF and WHO encourage and assist the Ministry of Health to ensure that the Code, now becalmed in a not yet legislated Public Health Act, be updated, and rapidly passed as binding national legislation.

3.11.6 The Baby Friendly Hospital Initiative (BFHI)

UNICEF and WHO as "parents" of BFHI should retrieve it from the shadows, and goad the MOHSS to ensure that all hospitals previously certified remain mother and baby friendly, and that all new maternity units be visited, and actions taken to make certain they adhere to the 10 steps.

3.11.7 Exclusive Breastfeeding

It is recommended that great attention be given to promote exclusive breastfeeding as the optimum way of infant feeding in Namibia. This will require advocacy, publicity, promotion, education and training on the benefits of exclusive breastfeeding.

It is also recommended that rather simple research be undertaken to discover what the cultural and other hindrances there are to the adoption of a longer duration of exclusive breastfeeding than is now usually practised in most segments of society. As mentioned (in 3.7 earlier) the University of Namibia might be willing to do that, and it is recommended that UNICEF support any good proposal that they, or others, might submit in the area, including the possibility of collaborative work with an outside university.

3.11.8 NGO's Support of Breastfeeding

Because we believe that breastfeeding NGO's can play a very important role in support of mothers, we recommend that the Breastfeeding Association of Namibia be "reborn". It should be provided space in the Ministry of Health and Social Services; and receive funding from UNICEF and other donors both to cover costs, and to employ one or more qualified persons to reactivate the good work it previously did, and to seek other funding. As a beginning, a small amount of UNICEF support to Mrs. Rosalia Ndakola, the current leader (see 3.8 above) would be useful. We recommend that, if willing, Dr. Gabrielle Palm, now in general practice,

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be encouraged to assist the revival of this NGO. IBFAN Africa is also willing to provide support to strengthen its organisational and resource mobilisation capacity.

3.11.9 Infant Formula Industry Support

The WHO Code on Marketing of Breastmilk Substitutes is clearly a creation of WHO, whose World Health Assembly over the years has received reports on countries adherence to it, and has passed resolutions to strengthen it, and to close loopholes. UNICEF has also been a very major supporter of the Code, and has itself very stringently avoided all activities that may violate it. Earlier this year UNICEF's Executive Director issued a letter in which she clearly stated that UNICEF would not accept funds from those corporations that violate the Code.

As indicated above (see 3.10) we were informed that Catholic AIDS Action had signed a contract and would receive $1.4 million from Bristol Myers Squibb, a manufacturer of infant formula that violates the Code. We recommend that UNICEF and WHO seek clarification of this; and consider the appropriateness of working with, or supporting Catholic AIDS Action, when in fact that NGO has decided to violate the spirit of the Code. We do not doubt that Catholic AIDS Action is doing good work; we are assured that they will neither be accepting nor promoting the use of infant formula from this or any other manufacturer. But we, (Pauline Kisanga, working for IBFAN, an organisation that monitors Code compliance and is a guardian of the Code and Professor Michael Latham who has for over 35 years strongly opposed infant formula promotion, and was in Geneva at the meeting 20 years ago that gave birth to the Code), believe that Catholic AIDS Action is making an error. Its association with the formula industry will be misused by Bristol Myers Squibb and UNICEF, WHO and the Ministry of Health may be seen to be associated in this, even though funds are not passing from the Corporation directly to UNICEF, WHO nor MOHSS.

We understand the delicacy of the issue but recommend consideration of it by UNICEF and WHO, even if a final decision is made not to take any action against Catholic AIDS Action.

3.12 CONCLUSIONS

Our most important conclusion is that Namibia, at present, is not allowing the fear of MTCT of HIV through breastmilk to change its policy to protect, support and promote breastfeeding as Namibia's culturally acceptable, natural, healthy and beneficial way of infant feeding. We also conclude that in considering new policy in relation to this, in the era of AIDS, the government is acting prudently and sensibly (see 3.2 above). We are pleased also that both UNICEF and WHO appear fully to concur with the stance taken by the MOHSS and the government, and will be active in assisting if new policies can be developed on evidence based risk assessments, and ones that are affordable, holistic and sustainable. Unlike several other African countries, where the topic is highly divisive, most of those with whom we had discussions in Namibia shared the view that the government was acting sensibly and appropriately in its approach to new policies related to PMCT.

Our recommendations above suggest ways to strengthen protection, support and promotion of breastfeeding, and also to enhance the nutrition capabilities of the government, which now are relatively weak.

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4 BOTSWANA, 23-29 October 2000

4.1 PROTECTION, SUPPORT AND PROMOTION OF BREASTFEEDING – CURRENT STATUS

Of the four countries we visited Botswana has the highest mean per capita income. This is due to a relatively favourable balance of payments, mainly due to exports of diamonds and cattle products. It has had stability, a small population, and claims to have good governance. But mean per capita incomes and high GDP mask the fact that considerable inequity exists, and 47% of the population live below the poverty line; only 47% of women are literate and malnutrition is very prevalent. In children under 5 years of age 28.9% are stunted, 17.2% are underweight and 11.3% are wasted. On the positive side infant mortality rates are lower than in most sub-Saharan African countries. The current IMR is stated to be 37 per 1000 live births, having risen from 33 in the last three years, probably due to HIV/AIDS. We were also informed that about 85% of the population have "access to safe water." This is not running water in their homes, but at least a standpipe, or similar water supply not very far from their house.

Botswana like other African countries has a culture of breastfeeding. Between 1992-1995, breastfeeding advocacy reached its height, helped by the Baby Friendly Hospital Initiative spearheaded globally by WHO and UNICEF. The national Breastfeeding Authority of Botswana was formed during this period to plan and coordinate activities particularly training of health workers. This body met frequently. Although there was no specific NGO promoting breastfeeding, the Government formed the Breastfeeding Association of Botswana to assist the Ministry of Health in its breastfeeding activities. UNICEF, under its Nutrition Program used to support breastfeeding within its Growth Monitoring and Promotion component, providing substantial funding for training of health professionals, transforming hospitals to become "baby friendly"; and supporting assessments of hospitals. Seven of the Botswana's 84 maternity services became baby friendly between 1993-6.

Since 1998 the Government of Botswana has been implementing IMCI under the Ministry of Health's IPI/IMCI program supported by WHO in five districts-Francistown, SouthEast, Kalahari South and North, and Mahalape. This program has incorporated some breastfeeding educational messages, although the staff in charge of IMCI admit that more training on lactation management is needed. The program is chaired by the Chief of Health Services in the Ministry of Health, showing real political commitment. UNICEF is expected soon to initiate the community leg of IMCI. The program also undertakes supplementation with vitamin A for children aged 6 months to 6 years, for those with severe malnutrition, or who have low birth weight; and for those not breastfeeding. There is a plan to extend this initiative to all districts, although funding has been reduced.

However, there was agreement among all people we consulted from UNICEF, WHO, UNDP, various Ministries, the University, and other institutions that there has been a drastic decline in the last 3-4 years in activities and funding for actions to protect, support and promote breastfeeding. This downward trend, in Botswana, may be due to knowledge that HIV can be transmitted from mother to infant through breastfeeding.

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At the same time, the Nutrition Unit, in the Division of Family Health, has in the last three years suffered staff changes. The National Coordinator of Infant Feeding and later the Director of the Nutrition Unit, decided to leave for better opportunities elsewhere. Because both were very well trained on lactation management, and were strong breastfeeding advocates, this change had a negative impact on breastfeeding protection, promotion and support activities and may have contributed to this downward trend.

In Botswana it is evident that many, including health professionals, believe that the risks of HIV transmission through breastmilk are higher than is in fact the case (see appendix). This is also the reason why currently it is difficult for any breastfeeding activity to be funded, except within the context of PMTCT activities. Yet this is the time when actions to protect, support and promote breastfeeding need to be stepped up for those not infected with HIV. Many financial and human resources are directed to HIV/AIDS/PMTCT activities, and much less attention to nutrition improvement. In the Princess Marina Hospital, the largest hospital in Botswana and one of the pilot centres, breastfeeding is said to have been promoted before but not since the PMTCT pilot program started. The Nutrition Unit staff believes that since UNICEF ceased supporting Growth Monitoring and Promotion activities, it also stopped supporting breastfeeding activities.

It is also very evident that the actions of the Government of Botswana to concentrate on prevention of mother to child transmission (MTCT) of HIV has influenced a very major decline in activities to protect, support and promote breastfeeding. Everyone we consulted including those in UN agencies, physicians, high officials in the Ministry of Health, staff of the Nutrition Unit, and members of NGO's all agreed that this was so. There were some who felt that this major concentration on formula feeding and anti-retroviral drugs to prevent MTCT was so important that they did not believe considering the possible negative aspects of this policy was justified. In contrast others were concerned about the spillover effect of this policy, resulting in reduced support for breastfeeding especially among mothers who did not know their HIV status, but might be HIV negative. Few of those consulted seemed very knowledgeable both of the extent of the relative risks of transmission of HIV to the infant from breastfeeding, and practically no one seemed to have up to date information on the risks of infants in poor families if formula fed from birth.

4.2 PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV

A Botswana Cabinet Memorandum dated 15 September 1998 entitled "Prevention of Mother-to-Infant Transmission of HIV (Human Immunodeficiency Virus) and the establishment of a National HIV/AIDS Fund," has established the national policy for prevention of MTCT, and we were informed that this still is the basis for the government's policy.

This Memorandum describes in dramatic terms the overall situation of HIV/AIDS in Botswana; the fact that no country has a higher prevalence rate of HIV; and that "the scourge threatens the social, economic, cultural and political fabric of Botswana." The Memorandum then presents seven options and scenarios for the government on the basis of "recent advances" regarding treatment and drug prevention of HIV. The seven options discussed are:

(a) Do nothing (and wait for the epidemic to burn itself out)
(b) Treat all Batswana infected by HIV at an annual cost of 13 billion Pula (or US $2.2

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billion; based on a cost of Botswana Pula 61,662 [or about US $5200] per patient per year with 225,000 infected people in Botswana

(c) Treatment of mothers and married couples "in order to ameliorate the problem of orphaned children"

(d) Treat special groups such as "armed forces, civil servants, doctors, engineers and skilled miners." The rationale being that "the monthly cost of their replacement in terms of salaries alone, may be higher than the cost of their monthly treatments."

(e) Treatment of TB cases with HIV/AIDS in order to "protect the public from TB."

(f) Prevention of mother-to-infant transmission of HIV. "Prevention of mother-to-infant transmission of HIV is relatively simple. It can be achieved by giving the expectant mother one drug such as AZT."

The Cabinet Memorandum concludes that "Options A, B, C, D and E raise very difficult moral, equity and human rights issues. They require more time for analysis and research…" However "there is justification to proceed with option F, the prevention of mother-to-infant transmission of HIV."

The recommendations then include: "A policy for the introduction of essential drugs such as Zidovudene (AZT) in health facilities for prevention of mother-to-infant transmission of HIV" and further recommends "Funding to the tune of P16.5 million per annum for the implementation of the program for the prevention of mother-to-infant transmission of HIV."

The body of this Memorandum does not include a recommendation that infants if born to HIV positive mothers who receive AZT, also be formula fed. However Annex 1, attached to the Memorandum, deals with the Financial Implications of the Proposed Programme for the Prevention of Mother-to-Infant Transmission of HIV which includes under "Annual Costs" P 5,301,100 for "bottle feeding" out of a total budget of P 16,016,207. It is written that "Bottle feeding per child for 6 months (60% of the mothers affected) will cost P 700 per mother, a cost greater than cost of counselling and testing, AZT, follow-up visits, etc. combined."

It is reported that on 30th September 1998 the President of Botswana provided "an announcement of the program and estimated budget of 16 million Pula (approx. US$ 3 million), The same year UNAIDS "announced the AZT donation to 11 countries including Botswana through UNICEF."

In a Ministry of Health document entitled Mother-to-Child Transmission (MTCT) of HIV Infant Feeding Guidelines for the Health Worker (Revised July 2000) the Introduction (in full) states

"Some of the intervention strategies proven to contribute significantly to the reduction of MTCT are:

- The use of anti-retroviral drugs such as Zidovudine
- Avoidance of breastfeeding."

Following a description of the qualities of infant formula and a statement that the formula will be provided free for six months to mothers participating in the program, the guidelines include Table 1 showing the number of 500 gram cans of formula that mothers should receive, and use each month for 6 months.

Even though the Cabinet Memorandum mentions "bottle feeding" mothers participating are receiving information on feeding infant formula by cup not bottle. We believe this is a wise decision. The paper provides detailed instructions on how to feed an infant in this way, and some advice on MTCT counselling including:

1) Counsel the mother on the risk of HIV transmission through breastmilk and
2) Counsel the mother or couple on infant formula as a recommended replacement feeding method to help reduce the risk of MTCT of HIV through breastmilk.

The message on counselling continues with "Disadvantages of infant formula feeding method

- Nutrition close to but not best suitable for the baby
- More chance of food contamination
- No protective substances in the milk
- Less protection from infections to the baby
- Need time to prepare
- It costs money to buy fuel and prepare clean safe water for the preparation of the formula
- Improper preparation may lead to infant malnutrition, diarrhoea, constipation, or abdominal distension, and reduced bonding"

The document then states:

"If infant formula is not accepted and mothers/parents prefer to continue breastfeeding after counselling, support INFORMED DECISION on choice of infant feeding method." Some advice then is provided on proper positioning and proper attachment for breastfeeding and recommends "exclusive breastfeeding up to 3-4 months" and "early cessation of breastfeeding (3-6 months)" and "replacement feeding if the mother/parent decides to take this option."

The paper recommends for "HIV Negative Mothers/Parents" to breastfeed, and includes one page on the promotion, protection and support of breastfeeding. Finally there is advice "For mother/family/couple with unknown HIV status" including advantages of testing, and counselling mothers on infant feeding options, and advice to "support informed choice of infant feeding method."

These details from the Cabinet Memorandum to the Ministry of Health document on guidelines to health workers are provided to illustrate what gives the impression that this is in fact Botswana's PMTCT "policy." However the apparent "policy" is, as of October 2000, regarded still as the "Botswana PMTCT pilot project." This "Pilot Project" was launched in April 1999 in the cities of Gaborone and Francistown including "counselling and testing" offered to all pregnant women in government health facilities, and rapidly scaling up. We understand the program is now in operation in five districts and that all 23 districts will be included in the next year or two. All of this is being "integrated into ANC services." So the intention to expand, and extend the program very rapidly is clear, with the apparent suggestion that before very long almost all districts will be included.

A January 2000 review of the "Botswana MTCT Pilot Project study states in its Executive Summary:

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"The Botswanan Prevention of Mother-to-Child Transmission (MTCT) of HIV Program was launched in Gaborone and Francistown in April 1999. Voluntary counselling and testing was offered to all pregnant women in government health facilities. Oral AZT was provided to HIV-positive women starting at 34 weeks of pregnancy and during labour and AZT syrup was given to the babies born to HIV-positive mothers. The intervention also included infant feeding counselling and provision of infant formula to women who opt not to breastfeed. In the first 8 months of the program, out of 7,000 ANC clients, over 4,000 have been counselled, of which 46% have been tested, and 41% were found positive. To date, 221 women and 367 infants have received AZT.

The Review states that:

"Despite the general good functioning of the program, several issues of concern were identified:

- IEC messages have been unclear and insufficient;
- Community support for the program and for HIV+ women has not been generated;
- Counselling in ANC is inadequate, in terms of availability, content and quality;
- Only one-half of ANC clients have been counselled and one-half of those have agreed to HIV testing;
- Only about one-third of the women who have entered the programme so far have received what is considered an adequate dose of AZT;
- Fear of HIV test results inhibit promotion and acceptance of the programme;
- Health workers are not always clear on the messages on infant feeding to be conveyed;
- Follow-up of clients is inadequate;
- The monitoring system is complicated and perceived as cumbersome."

The Review also claims that the Botswana MTCT pilot project is "the only population-based MTCT pilot project in Africa," and one being integrated into existing ANC services.

We provide this amount of detail about the Botswana MTCT pilot project because:

(1) It is clear that the intention of the government is rapidly to expand the programme and to make available these prevention methods (AZT plus infant formula) to all HIV positive mothers in almost all districts within about 2 years. This appears to be planned while continuing to call this a "Pilot Programme."

(2) The extension of the project is planned without conducting at the first sites what we regard as adequate monitoring or evaluation (see below).

(3) The MTCT pilot project is having a very important negative influence on protection, support and promotion of breastfeeding in Botswana, an unfortunate influence on parents, health workers and others.

(4) There are inadequate plans for careful detailed evaluation, beyond just on HIV transmission. This is needed and should include detailed data on morbidity, nutritional status, birth spacing, economic impacts on families, compliance to feeding choices (mixed feeding rather than either exclusive formula or breastfeeding), social factors and others.

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Inadequate evaluation may lead "reviewers" to conclude that the project is successful, and this may influence other African countries to adopt similar preventive measures, including countries that can ill afford to do so, and where risks of negative effects of not breastfeeding may be much greater than in Botswana.

In fact the project, as described elsewhere in this report may lead to large increases in morbidity and mortality; actually increase MTCT of HIV because many mothers will mix formula and breastfeeding; and result in many other serious problems.

From various sources, including a project review conducted in January 2000, we learned of many issues of concern. These included:

(1) Lack of involvement of the communities in planning the project.
(2) Inadequate information provided to the communities involved, with the result that the objectives and details of the project are very unclear to potential ANC clients resulting in little community support.
(3) A much smaller percentage (about 50%) of ANC attendees agreeing to HIV testing than was anticipated.
(4) Grossly inadequate counselling of mothers including many mothers not counselled; poor quality of counselling; counselling by staff not trained in MTCT of HIV/infant feeding.
(5) Only about 33 percent of women in the program have received adequate doses of AZT.
(6) Large numbers of participants are apparently not exclusively formula feeding; many do not come regularly for their formula supplies; and many admit that for a variety of reasons they breastfeed their babies as well as formula feed.
(7) Grave concern about stigmatisation, because formula feeding is being associated with HIV status.
(8) Mothers admitting that their male partners take their AZT, or some of it, thus reducing the dose taken by the target mothers.
(9) Follow-up of participants at health facilities is inadequate.
(10) Apparent lack of recognition that mothers not breastfeeding have very early return of fertility, may get pregnant within 3 months, and then have another infant at risk of HIV and who will become an orphan.
(11) Inadequate counselling for mothers who chose not to participate and who breastfeed their infants, and apparently get no specific breastfeeding support.
(12) Insufficient planning, or preparation, for expanding the project into rural areas where the situation will be very different from that in the cities.

Several people told us that health workers in Botswana were confused about MTCT, felt they were receiving conflicting messages, and were uncertain about government policies on PMTCT. We were informed that many of these health workers, and others, did not believe that many women would agree not to breastfeed their infants, in part, because the culture is to breastfeed. Thus not breastfeeding would stigmatise mothers, sometimes causing problems with their partners, and families, but also in the community. There were also strongly expressed views that mothers who, at the clinic, agreed to adopt exclusive formula feeding, in practice would also breastfeed, so in the end the majority might be using mixed feeding. This, of course, is the feeding option most likely to lead to HIV infection in the infant.

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We heard less about resistance of mothers to take AZT themselves, and to provide AZT syrup to their infants. However there is apparently a growing belief that AZT causes the skulls of infants to be abnormally thin, or what some termed "crackling skulls." Whether this unsubstantiated belief will spread, and lead to widespread non-compliance, is unknown.

Many pregnant women have become convinced that taking AZT during pregnancy will reduce HIV transmission *in utero* and during childbirth. But a condition of eligibility to receive anti-retrovirals (usually AZT) during the latter weeks of pregnancy, is that mothers agree they will not breastfeed their infants. Many mothers would prefer to make this decision after the birth of their baby. There is no good medical reason for this stricture, which links anti-retrovirals with post-natal feeding.

Very many pregnant women, who are counselled, refuse HIV testing (over 50% so far in Gaberone and Francistown). The women have been introduced to an environment where they have been counselled to believe that infant formula is a good option for feeding infants of HIV positive mothers. If untested mothers ask for free formula because they fear they have HIV, this will be refused. This places women in a dilemma. An unknown proportion may well decide to use formula (or mixed feeding), they will not receive anti-retroviral drugs and they will need to purchase their own infant formula. This may provide serious economic problems for them, and their families, and all the other risks of not breastfeeding. Yet most of these will be mothers who could safely breastfeed their infants because in fact they are HIV negative. The impact, in terms of spillover effects for HIV negative women is unpredictable, but likely to be large. The Botswana policy presents a new scenario for Africa.

4.3 NATIONAL BREASTFEEDING AUTHORITY AND THE NUTRITION UNIT OF BOTSWANA

Botswana had a body called the “Breastfeeding Authority of Botswana”, a national committee, in which UNICEF, WHO, other organisations and Ministries were members. This was a multi-sectoral committee set up between 1993-4 in response to the Innocenti Declaration. Its role was planning, implementation and coordination of infant feeding programmes, including the BFHI, World Breastfeeding Week and community support for breastfeeding. The Authority used to meet frequently, until 1996/7, when the activities greatly dwindled and soon the meetings stopped. A few activities such as the celebration of World Breastfeeding Week, have continued at a low key level and undertaken mainly by a few in the Nutrition Unit. The new Head of the Nutrition Unit, appointed in 1999, has interest in breastfeeding and if the programme is financially supported there is potential to speed up actions to protect, support and promote breastfeeding.

4.4 WHO CODE ON THE MARKETING OF BREASTMILK SUBSTITUTES AND THE WHA RESOLUTIONS

Botswana developed its draft national code in 1996, as the “first draft proposal of regulations on the marketing of breast milk substitutes” which are Amendments to Section 13 (1). In addition, the Food Control Act of 1993, includes two other amendments via two regulations: regulations for foods for infants and children, and regulations on processed cereal based foods for infants, young children, and children. The two regulations are being adapted from the Codex Alimentarius Standards.

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The draft, although fairly sound, needs to state clearly that "for the purpose of these regulations the Baby Milk industry will not sit on the National Food Control Board" and it also needs to specify that staff of the Nutrition Unit, and a breastfeeding NGO be members of the Board. The monitoring of the national code should be done in collaboration with the Nutrition Unit and the Breastfeeding NGO, and formula industries should not be included in the code monitoring committee.

It appears to us that the spirit of the Code is being violated in Botswana. This results from the decision made in Botswana, to use proprietary infant formula (mainly NAN made by Nestle and SIMILAC made by Ross-Abbott). Apparently this was contrary to advice from UNICEF which was advocating generic formula. Now hospitals in Botswana involved with PMTCT activities are openly displaying these proprietary infant formula cans, and the communities see mothers using free proprietary formula in their homes. They learn that this NAN and SIMILAC was provided free by the leading government hospitals. Recently Nestle (South Africa) has requested Ministry of Health permission to visit Botswana public and private health facilities every six weeks to provide nutrition education. If permitted, this would be a violation of the Code.

4.5 BABY FRIENDLY HOSPITAL INITIATIVE AND OTHER BREASTFEEDING ACTIVITIES

Seven of Botswana's 84 maternity health facilities have been baby friendly since 1997. However, since then there has not been progress in this area. Reasons given for this include lack of resources including financial and human, in the last 3-4 years. The other more common reason is the HIV pandemic

Training of health workers in lactation management has been minimal in the last three years. The seven hospitals, all certified before 1997, have not been re-assessed and their current status is unknown. Although the Government and WHO and UNICEF, in principle, are not opposed to breastfeeding or BFHI, they are not providing resources to implement actions either to support BFHI nor to protect, promote and support breastfeeding.

The Assistant Director of Health Services admitted that World Breastfeeding Week is less visible than before. However in 2000, the Minister of Health made a statement about breastfeeding being the right of the mother and child. Before 1997, WBW was well supported by the UN, but now support has declined, and in 2000, UNICEF was able to support activities in only one district, Malipulole.

4.6 EXCLUSIVE BREASTFEEDING

The policy in Botswana is to recommend 6 months of exclusive breastfeeding. This is stated in the draft Code and in information materials given to mothers. There was however, a wide agreement that exclusive breastfeeding for more than about 2 to 3 months was uncommon among all population groups in Botswana. Current data shows exclusive breastfeeding by only 29% of mothers at three months and mean duration of breastfeeding is 20 months (BFHS 1996). Almost all agreed that there would be benefit if it were possible to increase the length of exclusive breastfeeding in the population as a whole, and also for those mothers who are HIV1 positive, who opt to breastfeed.

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Asked about why longer exclusive breastfeeding was not prevalent, many stated that mothers working away from home would end exclusive breastfeeding when they return to their job. Currently the law provides 84 days of paid maternity leave, but many begin this some weeks before delivery and the private sector fails to honour this law. They often provide maternity leave at 25% pay and many mothers therefore find it financially difficult to take all the leave due to them.

Expression of breastmilk is stated to be not culturally acceptable. Employers do not provide "breastfeeding corners" where women can breastfeed at work. One-hour breastfeeding breaks are said to be allowed each day until the baby is about one year. The staff of the Ministry of Labour think this is only sometimes used for breastfeeding or childcare. Talking to the staff of the Ministry of Labour, we found that they are not aware of the new ILO Convention on Maternity Protection, which has increased maternity leave from 12 to 14 weeks. Advocacy is needed for ratification of the Convention.

Teenage pregnancy is relatively high in Botswana (16% of pregnancies at 15-19 years of age), and many infants are left with grandparents while the mothers continue in school or work in the city. A youth programme for those 12-29 years of age, is building a Multipurpose Centre, that has included a plan for a crèche for young mothers. The government would benefit its youth, if adequate breastfeeding and young child feeding advice were included in this project.

With so few activities protecting, supporting and promoting breastfeeding, there is relatively little advocacy for exclusive breastfeeding in Botswana. There is also no reported study of exclusive breastfeeding. There now is an opportunity to undertake this, through the Nursing or Home Economics programs at the University.

4.7 BOTSWANA BREASTFEEDING ASSOCIATION -BOBA

Until 1999 there was no Non-Governmental Organisation (NGO) that addressed the issue of breastfeeding in Botswana. One that existed was a Government NGO, established out of the interest of a few health workers who needed a forum to strengthen actions to protect, support and promote breastfeeding in the country.

The Botswana Breastfeeding Association (BOBA), is a new NGO, formed in 1999, made possible with seed grants from IBFAN Africa using funds from the Netherlands's Directorate General for International Development (DGIS). It was only formally registered in 2000. Any health and community worker can become a member provided they comply with the NGO constitution, which forbids taking funding from "Baby Milk" industries. The NGO has a very qualified leader and very able members, including some from the WHO and the Nutrition Unit.

This NGO has supported the Ministry of Health with lactation management training and other breastfeeding activities, especially World Breastfeeding Week. It has prepared a project proposal, which includes training of health workers, formation of mother support groups, and some simple research activities in the area of infant feeding. A second proposal has also recently been sent to IBFAN Africa for strengthening of organisational capacity.

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It would be beneficial to Botswana, if the government, UNICEF and WHO were to support the activities of this NGO. Where possible the NGO could be contracted to undertake work on behalf of the Nutrition Unit where capacity in certain areas may not be available. If some reliable source of funding could be found for at least the first few years, then there is a good chance that the NGO can survive. The only source of funding at present is member contributions.

4.8 RECOMMENDATIONS

4.8.1 Protection, Support and Promotion of Breastfeeding

It is strongly recommended that UNICEF, WHO, the government and others having access to funding and resources, increase these for breastfeeding. The knowledge that HIV can be transmitted from mother to child should not be a reason for diminished efforts in support of breastfeeding. Similarly all organisations and individuals working in the area of infant nutrition and health; maternal and child health; reproductive health; primary health care and others should make much greater efforts to do strenuous work in favour of breastfeeding.

4.8.2 Prevention of Mother to Child Transmission (PMCT), Especially as it Relates to Breastfeeding

Botswana, perhaps unwittingly, is undertaking a huge real life experiment by encouraging the wide use of infant formula for new-borns, which is a first for poor families in sub-Saharan Africa. Because this is an "experiment" it is vital that its consequences be determined.

We therefore, very strongly recommend that a careful, well-conducted independent evaluation be planned and executed. This should be done, and the results be well reviewed by the government, and independent knowledgeable scientists and policy makers, before what is now termed a "pilot project" is extended to other areas of the country. We recommend that this evaluation include a careful assessment of all possible risks. The importance of assessing community views; counselling; compliance to different feeding regimens; impacts on economies of families; and birth spacing; as well as mortality, morbidity and nutritional status of young children, cannot be over-emphasised.

It is further recommended that decision makers remain open-minded, and willing on the basis of new evidence to change their current recommendations which are that HIV positive pregnant women opt for both anti-retroviral treatment, followed by artificial feeding of their infants. Research may, for example, show (a) that anti-retrovirals provided to infants are safe, and prevent or reduce infection through breastfeeding and (b) that exclusive breastfeeding (now known to markedly reduce transmission) for six months leads to very low transmission through breastmilk.

Current plans if fulfilled, could result in Botswana becoming the first African country where a large percentage of women get tested for HIV. If this happens, then we recommend, as the first high priority action to prevent MTCT, greatly enhanced emphasis on family planning, to reduce pregnancies in HIV positive women.

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4.8.3 Breastfeeding Authority of Botswana and the Nutrition Unit

It is strongly recommended that the National Breastfeeding Committee be strengthened; because of its potential to work to improve infant nutrition. It could then perhaps broaden its mandate so as to serve as a National Inter-ministerial Coordinating Committee on Nutrition with representatives from the key Ministries; from the university; from UN agencies; and from NGO's.

At the same time it is recommended that the Nutrition Unit in the MOHSS, and nutrition activities in general be greatly strengthened in Botswana. The Unit staff need more training and exposure to regional and international events to make them better able to deal with challenging issues such as breastfeeding in the context of HIV. The breastfeeding coordinator and other relevant staff of the nutrition unit in particular, need to be highly knowledgeable about the Code of Marketing as they execute their work on PMTCT.

4.8.4 The WHO International Code on Marketing of Breastmilk Substitutes

The WHO International Code on Marketing of Breastmilk Substitutes is very important in all countries implementing the PMTCT pilot projects because of anticipation of increased formula industry activity in these countries. It is strongly recommended that UNICEF and WHO encourage and assist the Ministry of Health to ensure that the draft Code becomes law as soon as possible and is monitored, for better implementation of the PMTCT. It is recommended that a legal officer and the officer in charge of the Food Control Board be sent to the Code implementation course in Penang to enhance their legal understanding of the Code, and the spirit in which the code was formulated.

4.8.5 The Baby Friendly Hospital Initiative (BFHI)

UNICEF and WHO as "parents" of BFHI should retrieve it from the shadows, and goad the MOHSS to ensure that all hospitals previously certified remain mother and baby friendly, and that all new maternity units be visited, and actions taken to make certain they adhere to the 10 steps. Training of health workers is a prerequisite for a sound BFHI.

4.8.6 Exclusive Breastfeeding

Because rates of exclusive breastfeeding are very low in Botswana, we recommend that studies be conducted to ascertain the reasons for this. Investigations are needed to find what are the obstacles to increasing the prevalence and duration of exclusive breastfeeding. It is recommended that UNICEF and WHO consider funding such studies which could quickly, and relatively cheaply be undertaken by faculty and students from the University of Botswana (either from the Nursing or Home Economics Departments) perhaps in collaboration with a foreign university.

It is also recommended that the Ministry of Health, with assistance from NGO's and others, should give great attention to promotion of exclusive breastfeeding to about 6 months, as the optimum method of infant feeding. This will require advocacy, publicity, promotion, education and training on the benefits of exclusive breastfeeding.

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4.8.7 NGO'S Support of Breastfeeding

Because we believe that breastfeeding NGO's can play a very important role in support of mothers, we recommend that the Botswana Breastfeeding Association be supported and utilised to backup the responsibilities of the Nutrition Unit on breastfeeding and infant feeding in general. This will reduce the workload of the Nutrition Unit and at the same time strengthen the capacity of the Unit in certain aspects of infant feeding including training, implementation of the Code of Marketing, BFHI and community support for pregnant and lactating mothers.

The Government is encouraged to support BOBA by facilitating funding of a full time person who can coordinate and strengthen it on a full time or part time basis. We recommend that the current president of the Breastfeeding Association of Botswana, being experienced in lactation management be temporarily contracted to strengthen breastfeeding activities in the country in light of the demand for counselling on HIV/infant feeding in the pilot projects at this time.

4.9 CONCLUSIONS

An important overall conclusion of our visit, and many interviews, is that there has been a massive spillover effect in which concern for HIV/AIDS has resulted in deterioration of support for breastfeeding. There seems to be such a strong desire to avoid transmission of HIV from mother to child through breastfeeding, that there is tremendous reluctance to consider in any logical, or serious way, that there are serious risks involved for a large proportion of those infants who are formula fed from the day of birth. We even sensed a "moral indignation" that we could invite discussion of relative risks and that for a proportion of poor HIV infected mothers there might be fewer risks if she chose to breastfeed, rather than formula feed her infant. Again and again we were asked how anyone could look into the face of a mother who had an HIV infected infant, if we had influenced her to breastfeed. It was rare that we could find interest in discussing the reverse – that is of an infant dying of diarrhoea, or pneumonia or malnutrition, a death that might have been avoided if the infant had been breastfed.

Inadequate consideration is being given to preventing the obvious possibility that the recommendation that HIV positive mothers formula feed their infants, will spillover into the uninfected population who still constitute the majority of mothers. Where only a tiny minority of pregnant women are tested many uninfected mothers may believe they are infected, and then replace breastfeeding with breastmilk substitutes, which they will need to purchase themselves.

Finally the importance of careful well conducted independent evaluation of Botswana's "pilot" PMTCT projects cannot be over-emphasised. This is an unprecedented African experiment which involves large numbers of human subjects, including Botswana's first generation of 21st century citizens. Are the recommended treatment and feeding methods doing more good than harm, is a vital question which needs to be answered.

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5 UGANDA, 29 OCTOBER TO 4 November 2000

5.1 PROTECTION, SUPPORT AND PROMOTION OF BREASTFEEDING – CURRENT STATUS

Uganda is a country where breastfeeding is very much a part of the culture. It served as the African cradle for research on young child feeding. Like other African countries, it is a life style and a normal way of feeding infants and young children. A mother who is not breastfeeding a young child is frowned on by parents, friends and neighbours. Likewise, breastfeeding has been protected promoted and supported in Uganda for many years.

The period between 1992-1995 was the height of the global initiative led by WHO and UNICEF including the initiation of the Baby Friendly Hospital Initiative. It was also the period of much activity in support of breastfeeding in Uganda, including training. Breastfeeding activities were coordinated by a BFHI Steering Committee on Infant and Young Child Nutrition formed to oversee BFHI activities. This is now the legal Committee, overseeing the legislated Code of Marketing of Breastmilk Substitutes, which became law in 1997. Both UNICEF and WHO used to be very supportive of breastfeeding activities. For example many health workers were trained in 25 out of 48 districts and hospitals were prepared to become baby friendly, although only one hospital (Mbale hospital) was certified baby friendly. A number of other hospitals were declared "committed". This was achieved with the help of the Uganda Lactation Management Education Team, ULMET, a national NGO, formed in 1989, and which has been promoting breastfeeding ever since.

However today things are very different. All persons that we interviewed agreed that actions to protect, support and promote breastfeeding have seriously declined, although mothers have resisted this trend and are continuing to breastfeed without much support. The BFHI Steering Committee on Infant and Young Child Nutrition has not met for a long time. The reason for this is not clear but the decline in activities is probably due to several factors, including low staff capacity in the Nutrition Unit, lack of funding, shifting priorities especially within the UNICEF country programme, and also the dilemma about infant feeding in the context of HIV.

Strong efforts to protect, support and promote breastfeeding are undertaken by one breastfeeding NGO, the Uganda Lactation Management Education Team, ULMET. It has 40 members, most of them doctors, nurses, teachers and mothers. These conduct breastfeeding education and training at Mulago Hospital. They have formed 4 mother support groups and supervise them, and support the Ministry of Health with training.

There is also some support for breastfeeding in the IMCI programme that is being initiated in almost all districts, but the programme receives little backup from the Nutrition Unit because of low staff capacity. A U.S. 34 million dollar five year World Bank funded project (the “child project”), that currently covers 25 districts, also has a component on breastfeeding but lacks adequate technical support for this component and it could benefit by contracting the services of ULMET.

The weak status of the Nutrition Unit in the Ministry of Health, and the lack of a nutritionist in the UNICEF country office may have also contributed to the state of breastfeeding in

Uganda. The current Uganda policy of decentralisation and a sector wide approach, has reduced the strength of the Nutrition Unit from 7 to 3 staff members, a Principal Nutrition Officer, and 2 nutritionists. Nutrition has also been downgraded from the level of a "Department" to that of a small "unit" under a large Department of Health Services, which has under it-divisions, sections and units. We highlight this weakness as it could affect efforts to improve action in breastfeeding.

Although the former Department of Nutrition developed a fairly sound nutrition programme in 1998 the implementation of this has been frustrated due to low staff capacity and lack of funding. Some success has been achieved in the area of prevention of micronutrient deficiencies, especially vitamin A and IDD, through vitamin A supplementation for children 0-6 years and iodination of salt. Visible goitre rates remain high among school children. Guidelines for implementation of anaemia control and for treatment of severe malnutrition are being developed in collaboration with Mwanamugimu Nutrition Unit.

There is a great need to strengthen activities in support of breastfeeding and this will be dependent on strengthening of the Nutrition Unit in terms of status within the Ministry of Health, staff capacity and funding plus support for ULMET.

5.2 MOTHER TO CHILD TRANSMISSION (MTCT) OF HIV THROUGH BREASTMILK

The HIV/AIDS pandemic in Uganda is very well recognised as a momentous problem, creating a crisis that influences development itself. H.E. President Yoweri Musevini has received almost universal praise for publicising AIDS, and having his government inform the public about it, and taking measures to reduce transmission. As a result, Uganda is one of the few African countries where the prevalence of persons HIV positive is stated to have declined by as much as 50% in the last 10 years. In "urban areas sero-prevalence rates have declined by approximately 50% from 30% in 1992 to 12% in 1999", and in rural areas from around 10% to 5% currently. Declining trends have been most marked in the 15-24 years age group. It is believed that many activities have contributed to this reduction including information, education and communication at all levels, and diagnosis and treatment of other sexually transmitted diseases.

Despite this relative success Uganda was estimated to have 1,438,000 people living with HIV/AIDS at the end of 1999, and 110,000 AIDS deaths in 1999. The current estimate is that Uganda has 1,100,000 orphans under 15 years of age.

A Government of Uganda, UNICEF, UNAIDS document dated May 2, 2000 entitled "Prevention of Mother to Child Transmission of HIV/AIDS and Women's Rights to Safer Sex" clearly outlines proposed initiatives to prevent MTCT during the period 2001-2005. That document states that 70% of MTCT is believed to occur *in utero* and during labour and delivery, and only about 30% during breastfeeding. The prevalence of HIV among pregnant women attending antenatal clinics is now stated to be about 5% in rural areas and 15% in urban areas.

It needs to be recognised that, although important, only a relatively small proportion of women attending ANC's will transmit HIV to their infants through breastfeeding. This can

be illustrated for 100 women attending an ANC in an urban setting with 12% sero positive and 33% MTCT.

Of 100 women	
Number sero-positive	12
Number of infants with MTCT (all methods of transmission)	4
Number of infants infected through breastfeeding	1.3

So only 1 or 2 infants out of 100 mothers attending antenatal clinics in urban areas are likely to become infected through breastfeeding. In rural areas with a sero-prevalence of 5% only about 1 infant out of 200 would be infected through breastfeeding. If 30% of pregnant women were HIV positive about three infants would be infected through breastfeeding.

The use of anti-retroviral drugs during pregnancy, and at delivery has been pioneered in Uganda and has been shown to markedly reduce MTCT *in utero* and during childbirth. Exclusive breastfeeding in a study in South Africa markedly reduced transmission through breastfeeding.

The Uganda Ministry of Health in October 2000 issued a new policy entitled "National Policy and Guidelines on Feeding of Infants and Young Children of HIV Positive Mothers in Uganda." This 32-page document is a useful review of the HIV situation and of MTCT including a literature review. It outlines national policies on rights to health and good nutrition including the 1981 WHO "International Code of Marketing of Breast-milk Substitutes;" the 1990 "Innocenti Declaration" on breastfeeding; and the launching of the "Baby Friendly Hospital Initiative" in 1991. It also quotes sections from the reports of the Convention on the Rights of the Child (1991), "The World Declaration on Nutrition," "The World Food Summit" (1996) and "The World Summit on Social Development and Fourth World Conference on Women" (Beijing 1995). All have highlighted the importance of breastfeeding in child survival and development, and urge governments and communities to support women to breastfeed.

The Uganda policy states that the objectives of its policy are:
1. To reduce HIV transmission through breastfeeding
2. To promote child survival among children born to HIV infected mothers.

It continues with 5 "Policy Issues":

Policy Issue 1 is "Promotion, protection and support of breastfeeding" which provides an outline of the benefits of breastfeeding and stresses that "breastfeeding should continue to be promoted, protected and supported."

Policy Issue 2 is "Prevention and control of HIV through breastfeeding while ensuring optimal nutrition for infants and young children of HIV infected mothers" and stresses that "HIV mothers and their partners shall be empowered and supported to prevent HIV transmission through breastfeeding and to ensure optimal nutrition of their infants and children." In discussing this Policy, risks of transmission of HIV through breastfeeding are outlined and the need is stressed for universal VCT availability to allow mothers to make an informed choice of infant feeding method.

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Policy Issue 3 is "Promotion of child survival among children born to HIV positive mothers," and Policy Issue 4 covers "Prevention of subsequent pregnancies in HIV infected mothers."

Finally, Policy Issue 5 "Advocacy on feeding of infants and young children of HIV positive mothers" warns that a lack of understanding by policy makers, health care providers and communities could lead to inappropriate decisions on infant feeding, and that these could result in "adverse effects on transmission of HIV in children and child survival. It highlights this policy as being that "Policy makers, health care providers and communities shall be informed and supported to take appropriate actions regarding the feeding of infants and young children of HIV positive mothers."

This is followed by 10 pages entitled "Description of 6 Infant Feeding Options" in table form with columns providing (a) Type of feeding, (b) Advantages, (d) Disadvantages, (d) Indications.
These infant feeding options in the order in which they are described are:
Option 1 Exclusive breastfeeding for 3 months
Option 2 Heat treated expressed breastmilk
Option 3 Wet nursing
Option 4 Commercial infant formula
Option 5 Modified animal milks
Option 6 Unmodified animal milks
Option 7 Full cream milk powder

Finally on page 23 the report has "Recommendations for feeding babies born to HIV positive mothers in Uganda." These are:

(a) 0-3 months of age
- Exclusive breastfeeding for not more than 6 months with accelerated complementary feeding
- Use of unmodified animal milks
- Use of commercial formula

(b) 3-6 months of age
Stop option 1 at 3 months and continue with either options 2-7

(c) 6-12 month age group
"After 6 months the replacement feed alone may not be adequate. Therefore there is a need to introduce other foods."

The PMTCT program is being initiated at 3 pilot sites in Kampala and in 4 other districts. It is recognised that the programme "is very dependent on establishing excellent voluntary counselling and testing (VCT) services for all pregnant women attending ANC's in the selected programme sites." Those women who are tested and found positive will be offered anti-retrovirals from the 36th week of pregnancy, and at delivery, plus anti-retrovirals for her infant. She will also be informed about infant feeding options, as described in the draft policy document.

As UNICEF consultants, and in our own capacity, we were asked by Dr. Saul Onyango (Uganda Coordinator of the PMTCT Program) and others in the Ministry of Health, as well as by Dr. Michel Sidibe (UNICEF Country Representative) to provide comments on the draft policy.

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We were pleased to do this, recognising as we discussed the Uganda policy, that the document was excellent, and the policies well laid out. Our recommendations were in part influenced by our visit to one of the pilot sites (Nsambya Hospital in Kampala) and discussion with the Field Coordinator of the PMTCT project at that site. As well as suggestions for minor changes in the "National Policy and Guidelines…" draft document, we have also recommended the importance of careful detailed evaluation of the PMTCT pilot implementation at each site. (See Appendix 5.2)

Policy makers, but also health workers and counsellors, need to understand the risks of breastfeeding and of alternative feeding methods used by HIV infected mothers. As stated earlier, mothers mainly transmit HIV to their infants *in utero*, and during delivery, and a minority through breastfeeding. Decisions about interventions to reduce MTCT need to be based on risk assessment. The risks of transmission through breastfeeding have been discussed above. The many disadvantages of artificial feeding have been widely discussed in many publications, and apply to all societies. But in terms of rates of serious morbidity and mortality, it is recognised that risks are much higher in poor households with inadequate sanitation, unsafe and scarce water supplies, no refrigerator, poor health services and little knowledge of hygiene.

Infant formula is not affordable to most Ugandan mothers, and if provided free the mechanisms for an assured supply often do not exist. There is also a need for equipment, fuel, potable water, time, knowledge, accessible decent healthcare, and some education. A major concern is that formula feeding from the day of birth will result in great increases in child morbidity, malnutrition and mortality. Data from other developing countries show that infants who are not breastfed are likely to have mortality rates from diarrhoea, acute respiratory infections, and other infectious diseases five to ten times higher than breastfed babies in the first few months of life.

A recent study showed that infants in better off countries than Uganda, who are not breastfed have a six-fold greater risk of dying from infectious diseases in the first two months of life compared with those who are breastfed. The authors of this WHO collaborative study conclude that "our results show that it will be difficult, if not impossible to provide breastmilk substitutes to children from underdeveloped populations." Some of the same risks apply also to infants fed on animal milks, or only breastfed for a few weeks.

Evaluation

We very strongly recommend that careful independent monitoring and evaluation of the policy be planned and executed. Of special importance, is to evaluate the benefits and risks of the use of commercial infant formula feeding by poor mothers.

In some selected areas where formula is being offered as part of PMTCT projects, it is important to evaluate their success or failure. As well as formative research such as that in Zambia to ascertain whether mothers can satisfactorily formula feed (i.e., mix it properly; feed at night; avoid contamination; afford the formula, paraphernalia, fuel, utensils, etc.), it is important that careful evaluation be done to determine:

(a) Extent to which mothers really exclusively formula feed (Nduati's study in Kenya shows this is difficult). Mixed feeding offers the highest risk of transmission, and needs to be assessed and documented.

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(b) Morbidity data – recording of illness such as diarrhoea, pneumonia, other infections, etc. - collected monthly or from records; attendance for health care
(c) Mortality rates – especially deaths due to infections and malnutrition
(d) Monthly recording of weight or weight gain
(e) Economic implications for the family – does it reduce food eaten by other children, mother, etc.; does it divert income, which might be spent on health care; childcare; school fees, etc.
(f) Duration of amenorrhoea as a proxy for return of fertility, or record of onset of next pregnancy (expected to be much earlier in mothers not breastfeeding)
(g) Social and cultural aspects – For example stigmatisation (is formula feeding identifying mother as HIV positive, etc.)
(h) Impact on infant feeding practices by mothers in the community who are not HIV-1 positive (spillover effects)
(i) Assured availability of formula (sporadic availability puts infants at great risk)
(j) Over-dilution of formula leading to malnutrition including nutritional marasmus
(k) Evidence of influence of the formula industry on mothers feeding choice
(l) Impact on mothers psychological state (early discontinuation of breastfeeding has been shown to cause serious depression in mothers)
(m) Others

It will also be important to evaluate other infant feeding options selected by mothers. There is a general belief that most mothers will choose either breastfeeding or use of infant formula. However at some sites, especially where animal milks are available and less costly than infant formula, that may be an option that some mothers chose. Evaluation of the advantages and disadvantages of this method will also be important. Similar data collection, for evaluation purposes, will be important in situations where PMTCT actions lead mothers to attempt short duration breastfeeding (perhaps for three months).

In new rural sites, to allow for monitoring and evaluation, it would be useful to obtain baseline information before implementing new PMTCT measures. This would include knowledge and attitudes in communities concerning HIV, MTCT, and views on infant feeding options. Similarly data needs to be collected on the quality of VCT; and the knowledge of counsellors, health workers, including midwives and TBA's about MTCT and the relatively small risk of transmission of HIV through breastfeeding and the risks of not breastfeeding in their communities, including the problem of stigmatisation. Then as the programme is implemented continued monitoring is essential, and periodic independent evaluation needs to be planned and implemented.

A well conducted evaluation of the PMTCT projects in the pilot sites is essential, before consideration be given to expand the programme to other areas.

Providing HIV positive mothers with a choice of breastfeeding, formula feeding or other alternatives should be based on RISK ASSESSMENT. Currently there are no data from Uganda or good data, such as suggested above, from anywhere in Africa on the risks resulting from formula feeding from the day of birth in infants from poor families. Similarly there are no good data either on use of animal milks from birth, or on short duration breastfeeding.

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5.3 CODE OF MARKETING OF BREAST MILK SUBSTITUTES AND THE RELEVANT WHA RESOLUTIONS

Uganda in 1997 legalised the International Code of Marketing of Breastmilk Substitutes (Regulations No. 76. "The Food and Drugs (Marketing of infant and young child Foods) Regulations, 1997", under section 42 of the Food and Drugs Act. Cap 271.) The Regulations were to come into force three months after the date of publication in the Government Gazette, however most of the "players" who we interviewed were not aware until very recently of the enactment of these regulations. This means that the regulations have not been communicated to policy makers, health workers, the general public or the manufacturers. The legislation needs to be widely communicated perhaps through a new national launching. Policy makers, health workers and those charged with monitoring (usually the Health Officers of the Ministry of Health) and the Infant and Young Child Committee, need training on the Code and on Lactation Management. They will then be better qualified to monitor its implementation and possible industry violations.

The legislation is adequately strong, covering prohibition of industry funding to health workers, dealing with offences and penalties, and describing the work of the "infant and young child committee." The committee's composition is sound including women's groups, religious organisations, universities, the medical profession, policy makers and trade and industry. It is desirable to include membership from NGO's that promote breastfeeding.

After conducting a rapid perusal of the legislation, our belief is that the legislation is sound, it needs to be widely distributed and policy makers sensitised. Some recommended changes and additions to the Uganda Code are included in Appendix 5.1, but after some discussion we feel that doing a review now may delay implementation of the national law and therefore suggest that a review be planned after a few years, not now.

5.4 BABY FRIENDLY HOSPITAL INITIATIVE AND RELATED ACTIONS

Uganda has very many health facilities that offer maternity services. However, only one of these has been certified as baby friendly. This was in about 1995, and since then there has been little action regarding BFHI.

On the positive side, WHO has recently provided financial support to implement the safe motherhood initiative and hence some breastfeeding activities as part of its policy to address Nutrition and Reproductive Health. In 1999, in collaboration with WHO, about 12 national trainers were trained in breastfeeding counselling.

This year, WHO has encouraged the Ministry of Health to form a steering team to organise the World Breastfeeding Week 2000. In collaboration with UNICEF, they are drawing up a training module on breastfeeding that will incorporate aspects of breastfeeding and lactation management, BFHI, IMCI and HIV/infant feeding. The WHO has trained one medical doctor in nutrition for the Mwanamugimu Nutrition Centre at the Mulago Hospital, in an effort to strengthen nutrition in the country.

WHO is a key partner in PMTCT, and agrees that the monitoring component of the programme needs to be improved, and that efforts to train health workers on HIV/infant

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feeding must be accelerated. Infant feeding counselling in the context of HIV is almost non-existent and this could contribute to a spillover, in a country where there is much risk of not breastfeeding. WHO also agrees that an independent evaluation of pilot PMTCT projects is essential.

There is a need to revive BFHI by intensifying health facility based training of health workers and developing community support, possibly via the new IMCI programme that will eventually cover the whole country. UNICEF seems to have done little in support of BFHI in the last 3-4 years. It is hoped that it can reverse this position.

5.5 EXCLUSIVE BREASTFEEDING

In Uganda breastfeeding is the cultural norm and very well established. We were informed that 97% of mothers, in both urban and rural areas, breastfeed for 6 months and 65% continue breastfeeding for about 23 months. Exclusive breastfeeding is reported to be 68% at 4 months, and varies from 18-40 % at about 6 months. These are among the highest rates in Africa. Prevalence of bottle-feeding for infants less than 6 months of age is only 6%.

Uganda has a sound policy on breastfeeding. As a general rule exclusive breastfeeding of up to 6 months is advocated nationally, although specific community support for breastfeeding is generally low. There are only 4 mother support groups, all formed by ULMET. We visited one which exhibits high commitment but with practically no resources such as information materials on support of breastfeeding. Greater efforts need to be made in this area. In Swaziland community support for breastfeeding has increased the levels of exclusive breastfeeding at four months from 26% in 1995 to 53% in 2000.

It should therefore be possible, in Uganda to improve the rates and duration of exclusive breastfeeding with some improved community support. However, with the decline in growth monitoring and promotion, and low immunisation rates, there is concern that education of mothers may also be negatively affected as these programmes had often been used as entry points for health education in MCH. The planned community based IMCI may provide an opportunity for conducting small formative studies on infant feeding practices for community planning and for promoting exclusive breastfeeding. We conclude that with intensified education of mothers through health care and community based services the rates of exclusive breastfeeding in Uganda could be significantly improved.

5.6 ULMET, (UGANDA LACTATION MANAGEMENT EDUCATION TEAM)

The Uganda Lactation Management and Education Team (ULMET), was formed in 1989, with the objective of protecting, promoting and supporting breastfeeding and appropriate weaning methods so as to ensure proper nutrition, growth and development of Ugandan children. It has managed to do this by advocacy, training, breastfeeding and nutrition counselling, and networking. ULMET is affiliated to the International Baby Food Action Network (IBFAN).

Membership of ULMET is open to all individuals 18 years and above who subscribe to the objectives of ULMET. Currently, this NGO has 40 members, among them doctors, nurses, midwives, nutritionists, social workers, teachers and mothers. Most of the members are

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based in Mulago Hospital in Kampala and a few in Mbale and Mbarara Hospitals.

All ULMET members have received an 18-hour course of training. In addition, some members have taken the WHO Breastfeeding Counselling Course and three are Master Trainers with experience in BFHI training and assessment, and in Code Training, Monitoring and Implementation. They have requested training in breastfeeding counselling and in HIV/infant feeding.

Below we outline some of the contributions of ULMET to breastfeeding in Uganda

- ULMET members have contributed to the development of the Uganda Code of Marketing of Breastmilk Substitutes; the HIV and Infant Feeding Policy; and the HIV and Infant Feeding Guidelines. Every year, ULMET organises and celebrates World Breastfeeding Week. Since 1998, ULMET has organised the Dr Cicely Williams Memorial Lecture, which is delivered by an outstanding person in health and nutrition. The purpose of the lecture is to recognise the late Dr Cicely Williams' contribution to health and nutrition. ULMET members have regularly given talks on breastfeeding on the radio. The talks are broadcast in English and Luganda. More recently, there is pressure on ULMET to pay for the talks and yet the costs are high.

- The Lactation Clinic at Mulago Hospital: ULMET has over the years run the Lactation Clinic, which offers breastfeeding-counselling services to women in and around Kampala. This lactation Clinic could serve as an education centre for mothers waiting for MCH services at Mulago MCH clinics, if it had better facilities. With donor support (perhaps from UNICEF, WHO, or the World Bank) the hospital could provide space and a more adequate facility for this important service to breastfeeding mothers.

- The NGO has 4 active Mother Support Groups (Kansanga, Bunya, Nankulabye and Kalelwe). The groups consist of 30 to 40 mothers, interested in breastfeeding.

We visited, Kansanga, one of these groups where mothers participate in community education on breastfeeding, nutrition and immunisation, using a variety of methods including music, dance and drama. Mothers carry their children with them to these group activities. They hold their functions at Kansanga Primary School, where they are able to influence young advocates to join these groups. However the mothers need recognition and support with resources such as information materials.

With more resources and funding ULMET could be a force in greatly strengthening action for breastfeeding, establishing more mother support groups, and extending its influence to other parts of Uganda.

5.7 INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS (IMCI) AND ITS ROLE IN BREASTFEEDING

The Ministry of health launched the IMCI approach to child survival and development in 1995. Under this approach IMCI is promoting 16 key household behaviours, the first two of which relate to breastfeeding, namely:

(a) Breastfeed exclusively up to 6 months (mothers found to be HIV positive require counselling about possible alternatives to breastfeeding).

(b) Starting at six months of age, feed children freshly prepared energy and nutrient rich complementary foods, while continuing to breastfeed up to two years, or longer.

Dr. Henry Wamani, employed by WHO as National Professional Officer/IMCI in the Uganda Ministry of Health was hopeful that IMCI could help protect breastfeeding in the era of HIV/AIDS. He told us of information collected showing that exclusive breastfeeding in many areas of Uganda is more prevalent, than in many neighbouring countries. We were told that in many areas water or pre-lacteal feeds were common, but if that was ignored often 50% of mothers used nothing but breastmilk for 3-4 months. A recent study in two districts showed 40% exclusively breastfeeding at 6 months in two districts.

It is admitted by him, and others in the Ministry of Health, that Growth Monitoring and the use of GM/Health charts is now low in Uganda; and that immunisation rates have markedly declined. It is hoped that IMCI and the new World Bank Nutrition and Early Childhood Development Project might raise these rates in the next few years.

5.8 WORLD BANK NUTRITION AND EARLY CHILDHOOD DEVELOPMENT PROJECT

We were informed by various persons with whom we met that the Government of Uganda and The World Bank had in 1999 signed an agreement whereby IBRD would provide Uganda with a US $34 million 5 year loan for a new Nutrition and Early Childhood Development Project. Several of our informants in UN agencies, in the government (including an influential member of parliament), in the university and others were either critical of the project, believing it had been "imposed on Uganda" or were of the opinion that it did not adequately build on existing activities and institutions. Those in UNICEF and the Ministry of Health arranging our visit had not planned for us to meet with persons in the Coordination Office of this project.

However on reading some documents relating to the project we learned that in fact it does include activities that could help protect, support and promote breastfeeding. Certainly, to us, one of the first and most important aspects of "early childhood development" would be exclusive breastfeeding for 6 months, and the introduction of other foods while continuing breastfeeding for 24 months or longer. Breastfeeding, as an issue not only of feeding but importantly also of care, needs special recognition.

We were therefore pleased on the Saturday morning before our departure to meet with Dr.John Mutumba, the Project Coordinator of this project. The objectives of the World Bank supported project are:

1. To create awareness in families and communities of children's rights and needs.
2. To build on the knowledge and skills of families and communities so as to provide proper health care, appropriate child nutrition, early child development and protection.
3. To increase the skills and capacity of families and communities to mobilise resources and manage their own income generating activities, thereby enhancing their ability to care for children.

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Dr. Mutumba, who is a nutritionist, stressed that he intended breastfeeding and growth monitoring to be the most important activities of the project in the communities. He showed us documentation including the training manual and a booklet containing essential messages for improving early childhood care and development in Uganda, both of which have sound information on breastfeeding.

The main strategy to achieve these objectives will be through communities and families, and utilising NGO's in the districts. There is a statement that one strategy consists of "supporting ongoing national programmes that are related to the growth and development of children." However there are no plans for example to strengthen the Nutrition Unit in the Ministry of Health, the nutrition activities at Mulago Hospital or Makerere University, nor of other institutions.

However Dr. Mutumba was convincing that an important part of the project will be strengthening and supporting NGO's already working in districts and communities. These are institutions that he believes will still be working in these communities even if the World Bank Project ends five years from now. So this heavily funded project could in fact be one means of strengthening breastfeeding and nutrition activities in Uganda. It would be mutually beneficial if this so called "Child Project" could utilise members of ULMET and staff at Mulago Hospital who are knowledgeable about breastfeeding support.

5.9 RECOMMENDATIONS

5.9.1 Strengthening Support for Breastfeeding and Nutrition

As described above, nutrition in Uganda is weak and fragmented. This is reflected by the small number of trained nutritionists in the Ministry of Health, and the low level of the Nutrition Unit in the Ministry's hierarchy; the lack of any academic training in nutrition at a university level; and the fact that those few professionals trained, or knowledgeable in nutrition work in different institutions; are often not well informed of the work of other sectors in nutrition; and do not have a proper forum to meet regularly. This is of concern to us because strong coordinated nutrition policies and actions are important if there is to be a strengthening of protection, support, and promotion of breastfeeding.

It is recommended that the Government of Uganda take strong actions in support of breastfeeding. To achieve this it is important that nutrition in Uganda be strengthened. We recommend that a first step be taken by calling together a forum of persons in the government, university, NGO's and private sector, with the hope that this leads to regular meetings of the group both to exchange information, and where possible collaborate.

It is also recommended that nutrition be strengthened in the Ministry of Health both by increasing the number of trained staff; by including more senior staff; and most important, by raising the status of the nutrition unit perhaps to be headed by a Commissioner, or at least Assistant Commissioner of Health.

The establishment of an academic unit dealing with nutrition in the Faculty of Medicine or elsewhere at Makerere University is also recommended. Finally, UNICEF should have a

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staff member trained in nutrition, and knowledgeable about breastfeeding. We understand that a nutrition staff member is being recruited.

The government with support from UNICEF and WHO should make strong efforts to minimise or reverse the spillover impact resulting from concern that breastfeeding is a major cause of transmission of HIV to infants. This has undoubtedly contributed to a decline in support for breastfeeding.

5.9.2 The WHO International Code

As stated earlier in this report, Uganda does have a Code enacted in 1997, but this has neither been publicised nor enforced, and could benefit from small modifications. We recommend that, with assistance from UNICEF and WHO, the relevant staff should receive training on Code and Lactation Management, and finally the new Code should be publicised and strictly enforced and monitored. After a few years of use it may then be reviewed, amended, and rewritten to improve its effectiveness.

5.9.3 The Baby Friendly Hospital Initiative (BFHI)

Although Uganda has a breastfeeding culture, and in the past a good record of support for breastfeeding, nevertheless Uganda failed to widely implement BFHI. WHO and UNICEF as initiators of BFHI, should work with the Ministry of Health to attempt to ensure that as many hospitals as possible follow the 10 steps and become certified BFHI hospitals.

5.9.4 Exclusive Breastfeeding

Although duration of exclusive breastfeeding is stated to be longer in Uganda than in many neighbouring countries, nevertheless great attention should be given to promote exclusive breastfeeding for the first six months of an infant's life. It is recommended that this be undertaken by the Ministry of Health, but also enhanced in the many areas where IMCI is being implemented, and also as part of the new World Bank project. Included in these efforts should be advocacy, promotion, education and training. Research into the reasons why optimum exclusive breastfeeding is uncommon is recommended.

5.9.5 NGO's Support for Breastfeeding

As described in the body of this report, Uganda has a well established NGO which over many years has been effective in support of breastfeeding including a Lactation Clinic at Mulago Hospital in Kampala and a number of mother support groups. We strongly recommend that actions be taken to strengthen the various activities of ULMET. This should include support from the government, UNICEF and WHO including financial support, training, and in the case of the Lactation Clinic, provision of better physical space.

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5.9.6 Prevention of Mother to Child Transmission (PMTCT) of HIV as it Relates to Breastfeeding

As described in this report, Uganda is developing a national policy on PMTCT and is currently launching pilot PMTCT projects in Kampala and in three districts. We have recommended some changes in the actual policy guidelines. We very strongly recommend that these pilot projects be adequately monitored, and carefully independently evaluated. We further recommend that there is no extension of implementation in pilot sites until this evaluation has been completed, and the results very carefully reviewed. This evaluation needs to include a careful assessment of the relative risks first of HIV transmission from breastfeeding and second of the many negative risks for infants and families in poor families as a result of not breastfeeding (see Appendix 2). We also recommend a careful assessment of proper use of alternative feeding methods (including whether exclusive formula feeding is practised); of effectiveness of counselling; on ability of health workers to assess relative risks; and on community support for alternative infant feeding methods.

We also recommend that steps be taken to assess the extent of the spillover effects, and the implications of this for infants of the 90 percent, or more, of mothers who are not infected with HIV, and who would be advised to breastfeed exclusively for six months, and continue breastfeeding for as long as desired into the second year.

5.10 CONCLUSION

Uganda deserves praise for having taken strong successful actions to reduce the transmission of HIV in the population as a whole. This was largely based on mobilisation to advocate, and then educate people to take preventive measures. As a result the percentage of pregnant women with HIV has gone down, and thus mother to child transmission has been reduced. The Ministry of Health has launched a project to reduce MTCT in several pilot sites. It is important that this be carefully evaluated before expanding into other areas.

As in other countries there has been a marked decline in actions to protect, support and promote breastfeeding, and this is in part due to the HIV/AIDS pandemic, and an exaggerated view of the likelihood of transmission through breastfeeding. Nutrition in the Ministry of Health is weak, with inadequate staff and resources, and this contributes to poor support for breastfeeding. There is an established breastfeeding NGO, which could play a more important role if it received more support.

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APPENDICES TO ALL COUNTRY REPORTS

APPENDIX 1

MTCT THROUGH BREASTFEEDING -- POLICY CONSIDERATIONS

The very best way, in our view, to reduce and prevent mother to child transmission of HIV is for couples who are HIV positive to avoid a pregnancy (or even where permissible and legal, to seek an early termination of pregnancy). We believe that aggressive, and vigorous Counselling, and access to family planning for women who are HIV positive, or who think they might be HIV positive, are all very important. Clearly women, even if HIV positive, have a right to bear a child, and that right must be protected. But in all four countries there is much discussion about PMTCT, and we found often confused or conflicting policy recommendations. But prevention of mother to child transmission by publicity, counselling and other actions to promote birth control in HIV infected couples does not appear to be high on the agenda of any of the countries, with the possible exception of Uganda. We believe it should be, and that funds imaginatively spent by UNICEF, WHO, UNAIDS and UNFPA on this would be important. Prevention of conception of a potentially HIV infected baby, who would be destined to become an orphan should surely be a top agenda item in PMTCT programmes. Currently it is not.

We believe that the whole issue of PMTCT has resulted in a fusion of two forms of transmission. These are:

(1) Transmission *in utero*, or during the birthing process,
(2) Transmission through breastfeeding.

There are different actions needed to deal with each of these transmission routes. Here we are concerned mainly with the second route of transmission, that is, through breastmilk.

By fusing the two transmission routes, we believe that sometimes, wrong policies are advocated in terms of actions in regard to infant feeding. This unfortunate "linkage" appears to have its origins in the 1998 study in Thailand in which mothers were given AZT during the last weeks of pregnancy and were told "NOT TO BREASTFEED". But this was not a study in any way investigating transmission of HIV through breastmilk. The legacy of that study (good as it was in terms of retrovirals reducing *in utero* and birthing transmission) had nothing to add to our knowledge about transmission through breastmilk. But it appeared to "trigger" UNAIDS together with UNICEF and WHO into changing their policy guidelines on MTCT, including in relation to breastfeeding.

Because of this linkage we found on our mission that it was well nigh impossible to discuss breastfeeding without talking about PMTCT. Yet our task was in part to assess the status of protection, support and promotion of breastfeeding in general, not only in relation to HIV/AIDS. So attention, and also, human and capital resources are being diverted away from breastfeeding, and also from nutrition, even in the non-infected majority of the population.

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We believe it would be useful in discussions, but also in policy considerations, to separate the modes of transmission of HIV from mother to baby. They call for very different actions. We cannot think of a truly appropriate analogy. But consider the use of amniocentesis, or similar methods to diagnose congenital abnormalities like Downs Syndrome in the foetus. These diagnostic methods, and decisions what to do prior to birth, are completely different from post delivery treatment of the infant who has the syndrome. A different set of specialists deals with each half of the problem.

So should we not devise language, and options, that separate these (two different) means of MTCT of HIV:

(1) In utero and during childbirth
(2) Through breastfeeding.

Perhaps MTCT (IUC) and MTCT (BF) could be used. Virologists and obstetricians might be the major specialists dealing with MTCT (IUC). Lactation specialists and paediatricians with knowledge of breastfeeding are specialists best placed to deal with MTCT (BF).

Our report will discuss alternative methods of infant feeding besides breastfeeding; modified short duration breastfeeding; and infant formula. However in the four countries visited these are the three feeding methods, which are either being seriously discussed, or are actually being tried.

We (Pauline Kisanga in IBFAN documents and Michael Latham in various journals) have discussed alternative feeding methods, and we strongly recommend that good studies of these alternative methods be funded and undertaken as soon as possible. These alternatives include:

(a) Modified animal milks for very young infants
(b) Unmodified animal milk to replace breastmilk for babies after exclusive breastfeeding for up to six months
(c) Expressed heat-treated own breastmilk
(d) Cross nursing (often called wet nursing)
(e) Milk banking, or human milk donations.

The draft PMTCT Policy paper prepared in Uganda provides a reasonably good discussion of most of these alternative feeding methods. It concludes that HIV positive mothers after VCT, who then opt not to breastfeed as usual, should probably use one of these alternatives:

(a) Exclusive breastfeed for three months and then use an alternative feeding method.
(b) Consider using infant formula from birth.
(c) Consider using animal milk from birth.

We recommended that (a) be modified to state "Exclusive breastfeeding for up to six months, and when exclusive breastfeeding ends to use an alternative feeding method."

Increasingly we see that a "compromise" is being recommended – a compromise between those advocating only formula from birth, and those supporting breastfeeding as usual. This

alternative is short-duration exclusive breastfeeding, and then abrupt cessation, with introduction either of alternatives, or family food. It is important to recognise that in developing countries this also is an almost untested strategy, that has its own problems, and its own serious risks. Currently breastmilk even in the second year of life of an African infant provides around 55% of total energy, and a higher percent of protein, fat and most micronutrients. How will this be replaced? Will early cessation of breastfeeding not lead to poor growth, and even severe PEM? Rutishauser in Uganda in 1975 showed that infants not breastfed in the second year of life had a 28% energy deficit, even though fed on a diet of matoke (plantain), legumes, some animal milk, plus fruits and vegetables.

In the MTCT pilot projects in Botswana, Uganda and Kenya a similar problem might exist for those provided with free infant formula for six months. What in the family diet will be used to replace that after six months of age – an age when in most infants 60-80 percent of energy usually comes from either breastmilk or infant formula. Some would suggest that animal milks be used to replace breastmilk or infant formula. But in many parts of Africa this is expensive for poor families, and may not always be available. And animal milks as infant foods can produce many of the same risks as infant formula.

Some MTCT projects (including in Uganda) are suggesting exclusive breastfeeding, and then rapid cessation when the infants are three months of age. If this advice is followed then one of the recognised alternatives to breastfeeding become essential, and are also largely untested among poor African mothers. It is not even certain that this is feasible, nor what problems will arise, or result. We doubt that untested "policies" should be promulgated. We recommend these new regimens be carefully evaluated in true life situations, without subsidisation or free formula.

Our mission did not include, as an objective, to assess the use of anti-retroviral or other drugs being used to prevent HIV transmission from mother to child in utero or during childbirth. However it is worth noting that research in Botswana, in collaboration with Harvard University will test the provision of AZT to infants for the first six months of life. It is hoped that this will reduce or even prevent HIV transmission through breastmilk. Should this prove to be so, this could lead Botswana, and other countries, to change their policies away from advice to formula feed.

Consideration of relative risks of breastfeeding versus formula (or alternative) feeding

We found in all four countries at almost every level of sophistication that knowledge of the relative risks of breastfeeding versus formula (or alternative feeding) was extremely poor. As stated, in general, there is an exaggerated belief in the risk of viral transmission through breastfeeding and a very much unappreciated knowledge of the high risks in formula feeding from birth in poor families. It seems vital that persons involved at all levels have a reasonable knowledge of these relative risks.

This lack of knowledge was extremely widespread and included highly placed officials in Ministries of Health; persons responsible for national AIDS policy; programme officers in UNICEF, WHO and UNAIDS; front line health workers; and not unexpectedly ordinary citizens.

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We do not have as much knowledge of relative risks as we would like, but science provides us with some evidence, and we like to believe that actions and medical advice should be evidence based.

There is no attempt here to review the literature but simply to state what is generally accepted by most of the scientific community.

(a) Risk of HIV from mother to child through breastfeeding

This depends on several factors including the mother's viral load; when she was infected; whether she was infected postpartum; the duration of breastfeeding; the presence of mastitis; whether she has cracked nipples or the baby has stomatitis or other mouth lesions; and other factors.

But in general it is stated that about 30% (ranges are quoted from 10%-35%) of HIV mothers will infect their infants *in utero*, during childbirth or through breastfeeding. The scientific view is that around two-thirds of these infections are *in utero* or during childbirth, and about one-third through breastfeeding.

How does this translate into women in these four countries who are attending an antenatal clinic whose staff are concerned about MTCT through breastfeeding. Our visits suggested the very highest percentages of HIV positive pregnant women were in Gaberone and Francistown in Botswana (with rates of around 40% positive). The rate in Botswana as a whole is unknown but perhaps 25-30%. The lowest levels were in rural Uganda with HIV infections in around 8% whereas in Kampala infection rates are 14% in pregnant women surveyed.

To take, as an example, a community with rather high prevalence rates of 30% in pregnant women: In this scenario if:

100 women attended the ANC and were tested
30 women would be HIV positive
10 women (that is 33% here) would transmit HIV to their infant
3 infants (30% of 10) would contract HIV if their mothers breastfed as normal.

For the policy maker at the top; for the health worker or MTCT counsellor in the community it is important to keep in mind these approximate numbers or percentages. Of course if HIV sero-prevalence prevalence rates were only 10%, then only 1% would get HIV through breastfeeding; but if mothers sero positive rates were 60% then 6% of infants are likely to be infected through breastfeeding rather than 3%.

The rough assessment is easy to calculate (it is only a rough estimation) by remembering that to get the percentage likely to be infected through breastmilk from the total attending the ANC you calculate one-third, of one-third, of one-third. Perhaps a chart illustrating this should be displayed in every maternity clinic in Africa.

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(b) Risks of formula feeding from birth in poor families in the four countries

The authors of a WHO collaborative study published in the Lancet in 1999 concluded that "Our results show that it will be difficult if not impossible, to provide breastmilk substitutes to children from underdeveloped populations." Their study showed that the risk of dying from infectious diseases in the first two months of life is six times greater in infants who are not breastfed than in those who are breastfed. And these data were from a pooled analysis from Brazil, Pakistan and the Philippines. These countries have lower IMR's than most sub-Saharan African countries. These research scientists could not use data from African studies because almost all infants there were breastfed.

A report from Linkages (USAID funded project) in which modelling was done using risks of MTCT transmission, versus risks of infant mortality in Africa also concluded that for the first four months of life, not breastfeeding presented much greater risks of mortality, than breastfeeding by HIV positive mothers.

A 1999 study in the British Medical Journal reported that newborn infants in Brazil who were not receiving breastmilk were 17 times more likely to present with pneumonia at hospital than those receiving breastmilk but no artificial milk. It should be noted that these are pneumonia cases, not diarrhoea, and so not related to contamination of water or infant formula. The results show the anti-infective properties of breastmilk.

The facts are we do not have good data to know what the morbidity or mortality rates will be if large numbers of infants from poor families in sub-Saharan Africa are formula fed from the day of birth. But data from better off countries suggest that both morbidity and mortality rates would be very, very high. And sick children need good medical care, which is not widely available in many African countries. It is also now expensive for poor families, and is time consuming for mothers.

But raised rates of morbidity and mortality are not the only risks, nor the only disadvantages of formula feeding for poor mothers in Africa.

Other risks, or disadvantages include;

(a) Malnutrition, or disease, due to either over-dilution of infant formula, or wrongly reconstituting it.
(b) An early pregnancy, often within three months, for a mother who does not benefit from the anti-fertility benefits of breastfeeding. And the risk of having another HIV infected baby, also destined to become an orphan.
(c) Impoverishment, of an already poor family, because of the very high cost of infant formula, and the cost of increased medical care for formula fed babies.
(d) The very real danger of not having an assured supply of infant formula, at a time when her breasts have "dried up." Few health care facilities can maintain assured supplies of needed medicines. Can they maintain assured supplies of infant formula? What if supplies are not ordered, or orders are not filled: or if weather or other conditions interrupt transport? Any of these eventualities puts formula fed young infants at grave risk.
(e) Difficulties of exclusive formula feeding. In three African countries we visited where formula is being supplied free at pilot sites, a large percentage of mothers

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are either not adhering to instructions not to breastfeed, or are not coming back on time (or ever) to pick up new supplies of infant formula. The belief, at all the sites, is that mothers who had opted to formula feed, are frequently mixed feeding. It is known that mixed formula and breastfeeding is likely to transmit HIV much more than either exclusive breastfeeding or exclusive formula feeding.

It needs to be recognised that well educated more affluent mothers in Africa can, and do, safely formula feed infants even from birth. They may face problems of stigmatisation, but they do have the attributes necessary for safe formula feeding.

The conditions that make formula feeding problematic or even dangerous include:

(a) Low education or illiteracy
(b) Low levels of household or personal hygiene
(c) Inadequate supply of water, contaminated water or difficulty getting enough water
(d) Difficulty in preparing formula, especially at night, with lack of good light
(e) Problems in obtaining fuel, or in boiling water
(f) Poor sanitation
(g) Lack of refrigeration or safe storage facilities
(h) Unavailability, or lack of knowledge, of family planning
(i) Poor access to decent health care
(j) Insufficient income to purchase adequate quantities of infant formula, and other needed supplies
(k) Difficulties in practising exclusive formula feeding because of family pressure, fear of stigmatisation or for other reasons.

Conclusions

Similar views to ours were widely shared with us by many professionals with whom we discussed this in the four African countries. The medical doctor running the pilot PMTCT trials at Msambya Hospital in Kampala stated that to contemplate using infant formula in place of breastfeeding in rural districts of Uganda was unthinkable. Msambya Hospital, is a private hospital, serving better off Ugandans, and women enrolled in the PMTCT trial there are often not exclusively formula feeding, rates of acceptance of formula have been low, and more than once the supply of formula has run out during the first six months of the project.

Based on our findings, and the views of many professionals who really understand current conditions for most poor families in these four African countries, "going to scale" with formula feeding seems unsupportable. To do this without an independent thorough evaluation of the relative risks cannot be justified. Pilot sites are not truly "pilot sites," if they are not very thoroughly evaluated. The evaluation of relative risks of transmission of HIV do seem to be planned, and there is some monitoring in place. But we were not made aware of plans for any adequate evaluation of the relative risks for infants, mothers and families where the option was taken not to breastfeed in poor communities.

Our report strongly recommends that well designed independent evaluation of pilot PMTCT projects be planned and executed, and that these be done before wide expansion of these projects.

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We support attempts to increase voluntary Counselling and testing (VCT) where Counselling can be provided by persons trained to assess relative risks of infant feeding methods. But VCT of this kind is not now widely available. And evaluation of the PMTCT pilot site results would provide all with better assessments of these risks.

After VCT, mothers have a right to be advised about the relative risks of alternative feeding options, to make a choice, and be assisted to fulfill their choice. But it should be understood that persons seeking advice from health facilities would usually ask the health worker which option he or she would follow. We all do that when we seek medical advice. This reinforces the importance first of knowing more about relative risks; second the need for evaluation of relative risks in typical communities; and third good training and proper understanding of risks by counsellors and health workers.

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APPENDIX 2

MTCT THROUGH BREASTFEEDING -- RISK ASSESSMENT CONSIDERATIONS FOR HEALTH WORKERS AND COUNSELLORS

The authors of a WHO collaborative study published in the *Lancet* in 1999 concluded that, "Our results show that it will be difficult if not impossible, to provide breastmilk substitutes to children from underdeveloped populations." Their study showed that the risk of dying from infectious diseases in the first two months of life is six times greater in infants who are not breastfed than in those who are breastfed. And these data were from a pooled analysis from Brazil, Pakistan and the Philippines. These countries have lower IMR's than most sub-Saharan African countries. These research scientists could not use data from African studies because almost all infants there were breastfed.

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The facts are we do not have good data to know what the morbidity or mortality rates will be if large numbers of infants from poor families in sub-Saharan Africa are formula fed from the day of birth. But data from better off countries suggest that both morbidity and mortality rates would be very, very high. And sick children need good medical care, which is not widely available in many African countries. It is also now expensive for poor families, and is time consuming for mothers.

Risk of transmission of HIV from mother to infant through breastfeeding

All over the world, but particularly in sub-Saharan Africa, HIV and AIDS are seriously affecting women of reproductive age. In 1998, an estimated 590,000 infants worldwide acquired HIV-1 from their mothers; 90% of these infants were in Africa. Transmission of HIV from mother to child mainly occurs *in utero* and during delivery, but in a few cases it happens through breastfeeding. Increased attention is being focused on strategies to prevent vertical transmission of HIV. These strategies need to be based on risk assessment and on cost effectiveness analysis. Interventions are aimed at preventing transmission *in utero* and during delivery or during breastfeeding. Here we discuss only the appropriate infant feeding practices for HIV-1 infected mothers living in poor households in sub-Saharan Africa.

In many African countries, the HIV and AIDS pandemic is a major tragedy of unprecedented proportions that is increasingly affecting mothers and their children. However, even

responsible health agencies have tended to exaggerate the role of breastfeeding in transmission.

Research has shown that exclusive breastfeeding for 4 months, and possibly longer, greatly reduces the transmission of HIV from mother to child through breastfeeding. It is possible that an infant exclusively breastfed for 4 to 6 months will have a healthy intact gut, which may reduce likelihood of transmission of HIV well beyond 6 months if breastfeeding continues. In contrast the young infant fed infant formula or other animal milk products has a "damaged" intestinal mucosa, more prone to infection with the virus.

We found in all four countries visited that there was a grossly exaggerated belief in transmission rates, even by senior and well trained staff in the government and in UN agencies. It is generally agreed, based on several reviews of the literature, that in a country or community where 30% of pregnant women were found to be sero-positive for HIV-1, then only three of the 100 infants born to mothers attending an antenatal clinic would be HIV infected through breastfeeding. If only 10% of mothers were HIV positive only one of 100 infants born would be infected through breastfeeding.

If breastfeeding is undermined, or reduced in the whole population, because of fear of HIV transmission through breastfeeding, it means that 97 out of 100 babies could suffer adversely, for the sake of three babies who might be infected through breastfeeding. The risks of not breastfeeding, especially infant formula feeding, are discussed below.

Accepted Model of MTCT

Ante-Natal Clinic	Sero-positive for HIV	Sero-positive for HIV
100 pregnant women	If: 30%	If: 10%
Then		
33.3% MTCT	10 infants	3.3 infants
33.3% through breastfeeding	3.3 infants	1.1 infants

This is sometimes stated as 1/3, of 1/3 of 1/3 – if 1/3 are sero-positive; and 1/3 have MTCT; but only 1/3 of this is due to breastfeeding. You end with only about three infants out of 100 infected with HIV through breastfeeding where 30% of mothers at ANC are infected, and only one infant in 100 if 10% of mothers infected.

The conclusion is that a very small percentage of infants born in sub-Saharan Africa in say the year 2001 will in fact be infected with HIV through breastfeeding. In many West African countries less than 1%; and even in countries with high sero-prevalence rates fewer than 3% of all babies born will be infected in this way. Therefore if fear of this problem leads to a spillover effect reducing breastfeeding in a country or community, the negative effects will far out weigh the benefit.

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Risks of formula feeding from the day of birth for poor mothers in Sub-Saharan Africa

By far the majority of mothers in sub-Saharan Africa are relatively poor. From time immemorial almost all were breastfed, often into the second year. For mothers, there are great difficulties in managing satisfactorily to formula feed an infant from the day of birth, until such time as the infant can be sustained on family food. Infant formula is very expensive in relation to incomes of most African families.

The conditions that make formula feeding problematic or even dangerous include:

(a) Low education or illiteracy
(b) Low levels of household or personal hygiene
(c) Inadequate supply of water, or difficulty getting enough water, or contaminated water
(d) Difficulty in preparing formula, especially at night, with lack of good light
(e) Problems in obtaining fuel, or in boiling water
(f) Poor sanitation
(g) Lack of refrigeration or safe storage facilities
(h) Unavailability, or lack of knowledge, of family planning
(i) Poor access to decent health care
(j) Insufficient income to purchase adequate quantities of infant formula, and other needed supplies
(k) Difficulties in practising exclusive formula feeding because of family pressure, fear of stigmatisation or for other reasons.

When several of these conditions exist for a mother who is HIV positive, the risks of choosing to formula feed rather than breastfeed are compounded, and almost always the risks outweigh the smaller risk of transmission of HIV through breastfeeding.

Some of the adverse consequences include:

(1) Morbidity. Vastly increased rates of morbidity (especially infectious diseases) such as diarrhoea, pneumonia, etc. Breastmilk has anti-infective properties. Infants formula does not. The water used to prepare infant formula often contains pathogenic organisms. Stored infant formula made using boiled water may become contaminated in the household. Recent research showed that babies who were not breastfed had a 17 times greater risk of getting pneumonia, than those who are breastfed.

(2) Mortality. Much higher risk of mortality (death of the infant). Research has shown that in the first month of life there is often a five times greater risk of a formula fed baby dying than a breastfed baby in developing countries.

(3) Malnutrition. Considerably higher rates of malnutrition, including severe nutritional marasmus. This may be related both to infections, but also to over-dilution of infant formula often because the mother cannot afford to buy sufficient formula, or being illiterate or uneducated, cannot follow mixing instructions.

(3) Worsening poverty. The high cost of infant formula (about U.S. $140 for the first 6 months) is often 50-70% of the country's minimum wage. Families with

low incomes, especially if there are other children, may become grossly impoverished.

(4) because of the cost of sufficient formula. This may have a serious negative impact on the nutrition, the health and the wellbeing of the other children, and of the whole family.

(5) Birth spacing. Intensive breastfeeding delays, by several months, the onset of ovulation and therefore prevents an early pregnancy in mothers not practising family planning. If a mother formula feeds from the day of birth, she is at risk of becoming pregnant within three months of delivery. This may adversely effect the health of the HIV positive mother; it provides the risk of having another infant who may be HIV positive, and who is destined to be an orphan.

(6) Assured supplies. Once a mother has established formula feeding, her own breastmilk will have "dried up." If for any reason supplies of infant formula are not assured, then the risk to the very young infant are high. In many African countries supplies of common medicines do not regularly reach hospitals for various reasons; supplies of other goods do not reach more remote areas because of road conditions, etc. For mothers who breastfeed there is an assurance that this food is available for her infant. Mothers who chose to formula feed need to have a completely reliable and secure access to infant formula. Health workers need to be confident that in their health unit this assurance is certain.

Exclusive formula feeding

It is generally agreed that MTCT of HIV is reduced both by exclusive formula feeding or exclusive breastfeeding. Mixed feeding (both formula and breast) leads to a higher risk of infection for the infant. In several studies, even with a good deal of Counselling, and with free regular supply of formula, it has been reported that many mothers do not exclusively formula feed, and therefore add a risk of transmission, much higher than exclusive breastfeeding. Reasons for these difficulties vary. It may be that the mother breastfeeds when neighbours visit, or in public to avoid stigmatisation. It may be that she sleeps with her baby who then breastfeeds at night. In three African countries where PMTCT pilot projects are being started, it was reported that many mothers come irregularly for their supplies of infant formula, and that many mothers are using mixed feeding (that is not exclusively formula feeding).

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APPENDIX 3

ALTERNATIVE METHODS OF INFANT FEEDING FOR MOTHERS INFECTED WITH HIV

Every pregnant woman who knows she is HIV positive has a difficult decision to make, but the choice not to breastfeed is much more problematical for poor women living in developing countries, than affluent well educated women. Poor women often have inadequate access to resources. These not only include those necessary to obtain sufficient breastmilk substitutes, plus equipment, fuel and potable water to prepare it safely, but also knowledge, healthcare, and time. Many women do not have access to, or knowledge of, birth control measures. A mother not breastfeeding is much more likely soon to get pregnant again, further endangering her own health and that of the next infant, who is also at risk of HIV, and of becoming an orphan.

If an infant could be shown to be HIV positive at birth, then the best choice for the mother would almost always be to breastfeed her infant. In most cases this early definitive diagnosis is not possible, and antibody tests are positive, even though this is not an indication that the infant has been born infected with the virus.

The policy in most countries in Africa (at least on paper) is to provide pregnant women with voluntary testing for HIV and Counselling (VTC). For those who chose to be tested and to be informed of the results, then Counselling should be offered. In most programmes, including many pilot projects, the only two infant feeding choices offered for those testing positive for HIV, are either formula feeding or breastfeeding. Other alternatives are seldom suggested or offered.

Yet there are several alternatives besides formula feeding and routine breastfeeding. Some of these warrant practical research before they can be recommended. This topic has been discussed in detail in a paper entitled "Alternative Infant Feeding Methods for Mothers with HIV" (Latham, M.C. *Ind. J. Nutr. Dietet.* 36, 131-149, 1999).

The alternatives discussed briefly below are:

1) Formula feeding from birth with no breastfeeding
2) Routine breastfeeding, including six months of exclusive breastfeeding
3) Modified breastfeeding
4) Expressed heat-treated own breastmilk
5) Wet nursing
6) Milk banks, milk clubs and milk donations
7) Animal milk or homemade formula.

(1) Formula feeding from birth with no breastfeeding. The many disadvantages, and harmful outcomes, of artificial feeding have been widely documented, and apply to all societies, and at all levels of affluence and poverty. But in terms of rates of serious morbidity and

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mortality, it is recognised that risks are much higher in poor households with inadequate sanitation, unsafe scarce water supplies, no refrigeration, poor health services and little knowledge of hygiene. As a result the advice regarding infant feeding for a mother infected with HIV might be different if she is affluent compared with if she is poor. It is always very uncomfortable where advice regarding important health actions is openly stated to be different for rich compared with poor people. But it is a grotesque reality that the world is plagued by inequity, and that the gap between rich people and poor people, rich nations and poor nations is widening.

The risks related to formula feeding by mothers who are from poor families have been discussed in Appendix 2. Also discussed are the difficulties of exclusive formula feeding, and the greater risk of transmission if mixed formula and breastfeeding is used.

(2) Routine breastfeeding, including six months of exclusive breastfeeding. There is no dispute that breastfeeding is the normal natural way to feed young infants; it is nearly universally practised in Africa; it is culturally acceptable; and it has nutritional and health advantages everywhere. Under conditions of poverty, associated with poor hygiene, and much morbidity from infectious diseases the anti-infective, immunological, nutritional and other benefits of breastfeeding are especially important.

As discussed elsewhere, exclusive breastfeeding for the first few months appears to greatly reduce the transmission of HIV from mother to child through breastfeeding. At six months of age breastfeeding would usually be supplemented with other foods. In theory the longer the duration of breastfeeding the longer the exposure of the infant to the virus (see discussion of modified breastfeeding below).

(3) Modified breastfeeding. As stated earlier a shorter duration of breastfeeding would be expected to reduce somewhat the risk of transmission. As stated the higher risks of morbidity and mortality for non-breastfed infants are higher in the first few months of life. So as an alternative feeding method, some would suggest six months of exclusive breastfeeding, and then abrupt weaning onto other foods perhaps including infant formula or animal milk. Abrupt weaning has seldom been satisfactorily tried, and may create problems. Another alternative would be to cease "breastfeeding" at 4 or 6 months, but then for the mother to express and heat-treat or boil her own breastmilk and feed it to her infant from a cup, while introducing other foods gradually. Other ways of modified breastfeeding may also be appropriate (for example breastfeeding for only 12 months in a society where 24 months of breastfeeding is usual).

(4) Expressed heat-treated own milk. All over the world, unrelated to HIV, mothers have for some years learned how to express their breastmilk either manually or using a breast pump. The milk is used for their own baby or donated for use by another baby. In the former case this may be done regularly for mothers who go out to work and then have a babysitter to provide the milk to her infant. Before the AIDS pandemic it was done in hospitals for medical reasons when the baby could not breastfeed but would benefit from breastmilk and not infrequently, including in some African health facilities where mothers expressed their breastmilk to be used for other babies in special need. Mothers in hospitals in South Africa, Lesotho and Zimbabwe had no difficulty expressing their breastmilk in large quantities for many days to feed their own, or other, babies. There was no cultural contraindication.

Apparently in Chile it has been possible on a very large scale to implement a programme

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of breastmilk expression for working women. The milk is kept on ice and used the next day for the baby while the mother is at work. Some mothers "exclusively" breastfeed in this way.

The Human Immunodeficiency Virus (HIV) is very fragile; it does not survive in adverse conditions and so is relatively easy to destroy. This is one of the reasons why the virus is not transmitted except during intimate sexual contact, in transfer of blood or human issues from person-to-person or from mother to foetus or infant. It is reported that heat treating breastmilk to 62.5°C and maintaining that temperature for 30 minutes will destroy the virus. Boiling even for a short time will have the same effect. Depending on the temperature to which it is heated, and the length of heating, there may be some loss of the many anti-infective properties of breastmilk. These are properties not possessed by infant formula or animal milk.

Mothers who are HIV-positive and who choose not to breastfeed because of the risk of HIV transmission to their infants would be well served if the possibility of using their own heat treated expressed breastmilk could be made possible. There seems no good reason why, in the near future, it could not be a realistic option, clearly feeding expressed breastmilk is very much superior to infant formula; the product is locally "manufactured", the procedure will have benefits to the mother's health; and will reduce her likelihood of an early pregnancy.

What is urgently needed is applied research; testing of imaginative methods; and then pilot testing in the field. Because this research has not been conducted, mothers now are probably not well placed to attempt this method.

Some argue that expressing and heat treating breastmilk is too difficult, or not feasible. These are often the same people who are in favour of formula feeding by HIV positive mothers in Africa. We agree that successful use of expressed heat treated breastmilk is not easy, but we might argue that it is not more difficult than formula feeding, and it has other advantages. These include a secure supply of a superior product, and one that is available at all times, is locally "manufactured", and does not require careful mixing. A great advantage for poor families is that it does not require purchase, which may further impoverish the whole family. Formula requires an adequate good supply of water. Both methods require fuel, utensils and some skills.

(5) Cross nursing or wet nursing. Wet nursing is as old as history and until this century was, and still is, one of the ways of saving a baby whose mother died in childbirth. Later in many countries, north and south, it provided wealthy mothers an alternative to breastfeeding their own babies, and was widely used. Of the alternatives to breastfeeding for HIV infected women undoubtedly wet nursing is likely to be the one most influenced by cultural obstacles and personal views. Therefore it certainly should not be recommended where it is culturally unacceptable or where particular women consider it to be an unacceptable option.

It some cultures breastfeeding another woman's baby either partially or completely is acceptable, and may be a normal practice. Most often this is done by "family" members, but this may include a very large extended family, or it may be extended also to friends. The extent to which the widely used practice of commercial wet nursing is still practised has not been recently reviewed. Mutual agreement for a mother to pay another woman to cross-nurse her baby should not be totally precluded. It could provide money for poor women, and it could help the local economy.

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If serious consideration is being given by a country or a community, or by a group of women, to cross-nursing as a feeding method by HIV infected mothers then consideration needs to be given to the risks to the "donor" of breastmilk, to the infant, and to the mother of the infant. There are also economic considerations. We do not believe that there is a valid reason to state that there must be "no payment involved."

Wet nursing, and cross-nursing as many prefer to call it, warrants reconsideration, and new research, in the context of the AIDS pandemic. It is stated that an HIV negative woman has a risk of becoming infected by breastfeeding an HIV positive baby. No research exists to show the extent of this risk, which almost certainly is very small. In theory it is likely that nipple lesions in the woman and mouth lesions in the baby would increase the risk of transmission. So cracked nipples or infant stomatitis might be reasons for not cross-nursing, or for temporarily discontinuing it. But similarly one might say that carrying a baby with weeping scabies might put a babysitter at risk of HIV if the babysitter has scabies, or any skin lesion.

(6) Milk banks, milk clubs and milk donations. There is a large literature on milk banks which have been in operation in many countries for decades. These banks sometimes provide a mother the opportunity to bank and then use her own milk for her own infant. But most of the banked milk usually comes from donors who have expressed their milk and provided it to the bank. Most banks have rigid qualifications for donors.

The feasibility of wide scale milk banking in non-industrialised countries as an alternative to breastfeeding in HIV positive women has not been adequately examined. But surely, parallel with the large trials of use of commercial formula supported by UNAIDS / WHO / UNICEF in several countries, a serious evaluation of milk banks is justified. Can this method be economically competitive with other alternative strategies? We do not know.

There clearly are major advantages for mothers using human milk from a milk bank over using infant formula. There are also advantages for African countries. The product is locally manufactured not imported; the "industry" would use local labour not foreign labour; but above all human milk is superior to infant formula. If milk banks are established it is important that donors be screened for HIV and that the milk is appropriately heat treated. Research is needed to pilot test milk banking in a number of countries. It may be possible locally to organise donations of milk without formal milk banking.

It could be visualised that a small "club", or community-based group, could be formed and consist of equal numbers of HIV infected and non-infected mothers. For example in a community five HIV positive women and five HIV negative women might form a "club". Full information and adequate Counselling would be provided to all ten women. A real incentive for such "clubs" would be support by governments, NGO's or UN agencies including perhaps small payments to donors. If the payments were even 25% of the cost of commercial formula, this would pump money into village economies, and provide income for low-income women. It would be a boost to the local economy.

(7) Animal milk or homemade formula Cows' milk is the most commonly used animal milk consumed by humans in most countries. It is the basis for infant formula. Other animal

milks for example goat, sheep, camel and buffalo are available in some countries and all have been suggested as an alternative to commercially manufactured breastmilk substitutes.

All of them differ very markedly from human milk and none are suitable unmodified for feeding young infants. Sweetened condensed milk and non-fat dried skimmed milk cannot be adequately or easily modified to be made safe for infant feeding.

On the other hand in some parts of Africa families keep cows, and other animals for milking; or fresh locally produced milk is available in local shops or markets; or UHT milk may be sold. If these are to be fed, as an alternative to breastmilk, for young infants all have to be modified. The modification, often consisting of dilution and addition of sugar and micronutrients, makes them more suitable, but not ideal for infant feeding. Manufactured infant formulae are also mainly "modified forms of cows milk", and are also less ideal than breastmilk.

If animal milks are to be used, almost all the possible caveats, and potential problems, discussed in relation to infant formula need to be considered. If a choice is being made between infant formula and modified milk, an important consideration will be the relative cost at the local level, and the absolute assurance that whichever product is chosen will always be available and accessible.

With unmodified cows' milk the infant would receive inadequate amounts of iron, vitamin C and taurine. Non-human milk may also lead to intestinal blood loss. So iron deficiency anaemia could be a problem.

Conclusion

There is much need for research to test under normal field conditions many of these alternative feeding methods. Pilot trials in which free infant formula is provided to one group does not mimic real life situations, and also provides a bias, in favour of the formula fed group who get an economic incentive, one not usually given to the group who opt to breastfeed.

The discussion above does not include consideration of important related issues including the importance of strict adherence to the WHO Code of Marketing of Breastmilk Substitutes, nor the topic of generic versus commercially identified formula.

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APPENDIX 4

MINISTRIES AND ORGANISATIONS VISITED AND PERSONS INTERVIEWED

1.1 BOTSWANA

ORGANIZATION	5.11 NAMES OF PEOPLE
UNICEF Botswana	Dr. T. Bishaw, Program Officer, Health and Nutrition
Ministry of Health and Social Services	Dr. P. Mazonde, Director of Health Services Dr. Manyeneng, Assistant Director PHC
Nutrition Unit	Mrs. Kabo Mompati, Director Nutrition, Food & Nutrition Mrs. Matsapa Phegelo, Food Science and Techonology Mrs. Jacinta Sibiya, National Coordinator of Infant Feeding, member MTCT reference group Ms Lenkuetse Gabaitsewe, Nutrition, Maternal and Child Health Ms. Onalema H. Ntchebe, Nutrition Ms. Patience Mazhani, Nutrition – Micronutrient and IMCI Dr. Benedicta Mduma, Nutrition Advisor-Micronutrients
UNDP	Mr. Macharia Kamau, Country Representative
Home Economics Department, University of Botswana	Dr. S. Mahgoub, Head Ms. Segametsi D. Maruapula, Lecturer
WHO Country Office	Dr. T. Guerma – WHO Country Representative Mrs. Theresa Shashane, National Program Officer, Community Based Services Dr. Phanuel Habimana, WHO Medical Officer in MOHSS
National AIDS Program	Ms. Rose Mandevu, National Manager, AIDS/STD
HIV/AIDS and Infant Feeding Pilot Projects	Mrs. Gladys Lebogang Mogapi, Program Manager, PMTCT
Havard/Botswana Studies, Partnership for HIV Research and Education	Dr. Ibou Thior, Project Director

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Nursing Department, University of Botswana	Dr. Sheila Tlou, Head of Department Dr. K.D. Mogobe, Lecturer Nursing Education Mr. E.M. Ncube – Lecturer, Nursing Education and Coordination for WHO Collaborating Centre
Princess Marina Hospital	Dr. Alexander Mushi, Paediatrician Julia Sebuoia Bura, Dietician Mamo Mokala, Dietician Kgomotso Molemele, Dietician Veronica Molefe, Midwife Wame Katse, Midwife M.K. Maphorisa, Registered Nurse B. Rannofe, Registered Nurse
Youth and Culture Ministry of Labour	Mrs. Grace Mphetolang Ms. Dorcas Vista
Food Control Unit	Mr. H.H. T. Tarimo, Head Food Control Unit
Botswana Breastfeeding Association	Mrs. Dikoloti Morewane, Chairperson Mrs. Magdalena Abuse, Vice Chairperson Mrs. S. Mosweu, Member Treasurer Mrs. S. Maruapula, Publishing officer Ms. L. Gabaitime (FNU) Mrs. T.O. Slasko, Member FNU Mrs. J. Sibiya, Member FNU Mrs. K. Mompati FNU Ms. Theresa Shashane, National Program Officer, Community Based Services, WHO

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4.2 KENYA

Ministries and Organisations visited and people met in Kenya include:

UNICEF Kenya Country Office UNICEF Regional Office	Dr. Nicholas K. Alipui, Kenya UNICEF Country Representative, Dr. Marinus Gotink, Chief Health and Program Officer, Dr. Jane Muita, Programme Officer, HIV/AIDS Dr. Olivia Yambi, Regional Nutrition Advisor, ESARO Ms. Benta Shako, Programme Officer Mr. Arjan de Wagt, Assistant Programme Officer, ESARO
Ministry of Health, Division of Primary Health Care	Ms. Pam Malebe, Nutrition Programme Officer
NASCOP – National AIDS/STD Control Programme	5.11.1 Dr. John Adungosi, Coordinator Dr. Micah Kisod
PMTCT Committee	Dr. Dorothy Mbori Ngucha, Nairobi University Dr. Maina, Kahindo (FHI) Mr. Charles Mwai-Horizons project Dr. Samuel Kalibala-Horizons project Dr. Kevin DeCock-CDC Dr. Elizabeth Murum-CDC Dr. Jane Muita-UNICEF
Kenya Food and Nutrition Action network, KEFAN	Ms. Joyce Meme, Co-Director Ms. Anna Awori, Co-Director
Lactation Management Centre, Kenyatta National Hospital	Prof. Rachel Musoke, Paediatrics Ward Ms. Mary W. Kabugi- OBS. Ward Ms. Joyce A. Oduor-Gynaecology Ward Ms. Gladys. A. Omwake, Coordinator, Lactation Centre
The World Health Organization	Ms. Tabitha Oduori, Chief Nursing officer, in charge of Family Health in WHO
Breastfeeding Information Group, BIG:	Mr. Daniel Otieno, Director, BIG Ms. Timina Malala, BIG Counselor
Members of the National Infant Feeding Steering Committee:	Ms. Pam Malebe, Ministry of Health Ms. Anna Awori, KEFAN Ms. Joyce Meme, KEFAN Prof. Rachel Musoke, KNH Ms. Timina Malala, BIG Counsellor
NGO Consortium (HIV/AIDS)	Ms. Margaret Gatei Ms. Esther Gatua

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Maendeleo ya Vanawake organisation, Kenya:	Ms. Bernadette Wanyonyi-Musundi, Executive Director Ms. Dorcas Amolo, Programme Officer Ms. Nellie Luchemo, Programme Officer
Attorney General office	Ms. Catherine Muyeka Muma, Senior State Counsel
HIV/AIDS/INFANT FEEDING PILOT PROJECTS	Dr. Dorothy Mgecha

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4.3. NAMIBIA

Organisations Visited and Persons Interviewed in Namibia include:

ORGANIZATION	NAMES OF PEOPLE
UNICEF Namibia Office	Ms. Marie-Pierre Poirier, UNICEF Representative Mr. Detlef Palm, Program Officer Dr. Tesfaye Shiferaw, Program Officer, Health and Nutrition Mr. Jens Greger, Assistant Program Officer, Health
Ministry of Health and Social Services	Dr. Libertina Amadhila, Hon. Minister of Health and Social Services Ms. Ella Shihepo, Director, Family Health Section Mrs. Justina Amadhila, in charge of Nutrition Unit Mrs. Marjorie van Wyk, Program Officer, Nutrition Unit Dr. Taati Ithindi-Shipanga, Paeditrician, Regional Medical Officer, Khomas Region, Windhoek Ms. Martha Gebhardt, Program Officer, reproductive health
UNAIDS	Ms. Mulunesh Tennagashaw, Country Program Advisor
National AIDS Coordination Program	Mr. Abner Xoagub, Director
University of Namibia (UNAM)	Mrs. Letha Itembu, Lecturer, Faculty of Medical Health Sciences
Rhino Park Private Hospital and other physicians	Dr. Solly N. Amadhila, Superintendent Rhino Park Private Hospital, Paediatrician and former Permanent Secretary Ministry of Health Dr. J. Baard, Paediatrician Dr. Gabrielle Palm, Physician
WHO Country Office	Dr. Doyin Oluwole, Country Representative, Namibia
Catholic AIDS Action	Dr. Lucy Y. Steinetz
HIV/AIDS/Infant Feeding Pilot Projects	Dr. Dorothy Mgecha
Breastfeeding Association of Namibia	Ms. Rosalia Ndakola

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4.4. UGANDA

Organisations visited and persons met in Uganda include:

Organisations	Names of people
UNICEF Uganda	Mr.Michel Sidibe – UNICEF Representative Mr. Neil McKee, Section Chief Mr. Guy Clarysse, Program Officer, information systems Dr. Kari Egge, Deputy Representative Dr. Mbulawa Mugabe, Program Officer PMTCT.
Ministry of Health	Dr. Sam Okware, Commissioner of Health Services (Community Health) Dr. D.K.W. Lwamafa, Commissioner for Health Services (Disease Control) Dr. Henry Wamani, WHO – IMCI National Officer, Ms. Ursula Wangwe, Nutrition Ms. Christina Orone, Nutrition Ms. Barbara Tembo, Nutrition Dr. Samali Bananaka, Aids control Ms. Baziba Monic, ULMET Dr. Saul H.M. Onyango, Program Manager, PMTCT.
WHO	Dr. Martinus Desmet, WHO Planning Advisor, Acting Representative Dr. Esther Aceng, Programme officer
Child Health and Development Centre	Dr. Philippa Musoke Dr. Lora Guy
Parliament	Hon. Sr. Bakoko Bakoru Zoe, MP Arua District
Mulago Hospital	Dr. Gelasius Mukasa, Dean of Faculty of Pediatrics Dr. Elizabeth Kiboneka Dr. Harufa Bachou Dr. Sam Laboga Dr. Charles Karamagi
ULMET	Dr. Charles Karamagi, Chairperson, ULMET Ms. Edith Nshimye, Secretary Ms. Jessica Mulinde, Member Ms. Molly Asiimwe, Member Ms. Esther Adong, Member Ms. Margaret Musoke, Member Ms. Theresa Mwanje, Member Ms. Gladys Njuba, Treasurer Ms. Winnie Bagundirire, Member Ms. Harriet Abo, Member Ms. Monica Bazibu, Member Ms. Daphine Masaba, Deputy Chairperson Ms. Restituta Namusoke, Member Ms. Juliet Kayongo, Member Ms. Florence Akugizibwe, Member Ms. Barbara Tembo, M.O.H Ms. Alice Ssemwogerere, Member Ms. Mary Lukyamuzi, Mother support group Organizer/coordinator Ms. Rosemary Muwawu, ASS. Secretary

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Nutrition and Early childhood Development Project (MOH) (World Bank "Child Project")	Dr. John F.K. Mutumba, Project Coordinator
Nsambya Hospital, Kampala	Dr. Michele Magoni, Coordinator PMTCT Project
Regional Centre for Quality of Health Care	Dr. Robert Mwadime, Advisor

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APPENDIX 5 (FOR UGANDA)

APPENDIX 5.1

Recommended Changes and Additions to the Uganda Code

The Uganda code is a strong code that needs to be implemented immediately without the need for immediate review. Some suggestions are recommended as part of a future review to remove some controversies and errors as follows:

1. Give more consideration to World Health Assembly Resolutions relating to infant and young child feeding, that have helped to close the gaps that existed in the 1981, International Code of Marketing.

One of these resolutions, states: "Ensure that the small amounts of breastmilk substitutes needed for the minority of infants who require them in maternity wards and hospitals are made available through the normal procurement channels and not through free or subsidised supplies".

2. State clear aims of the regulations and specify the ages of the child to whom the legislation applies. The regulation now includes both infants and young children and defines a young child as 12 to 60 months of age. Uganda may have to prepare itself for some opposition from the baby milk industry.

In the context of HIV, it may be important to stress that the legislation does not prohibit availability or sale of infant feeding products in the market. It only prohibits all forms of promotion.

3. Correct some errors as in the definition of "health care services on page 214; by removing "point of sale", and on page 225 (17.7-manufacturers are not permitted to give any type of information material to communities or to general public. They are permitted to give factual materials to health workers).

4. On page 13, include a clause that makes the Government responsible for development of educational materials so that there is less need for industry materials.

5. Add the following statement: "In accordance with article 62 of the WHO constitution, the Government will communicate to the WHO every two years, on the progress made on implementation of, and the compliance to the Code, by industry"

These recommended changes should await a future review.

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APPENDIX 5.2

Comments on October 2000 Ministry of Health Paper: National Policy and Guidelines on Feeding Infants and Young Children of HIV Positive Mothers in Uganda

The October 2000 draft "National policies and guidelines on feeding of infants and young children of HIV positive mothers in Uganda" is an excellent document. We have only minor recommendations, which we make to amend the well-reasoned policy. These include the importance of adding to the list of disadvantages of commercial infant formula; the need to reconsider the recommendation on exclusive breastfeeding for three months, rather than for longer; and not including "normal" breastfeeding in the table of infant feeding options.

We also wish very strongly to recommend that careful independent monitoring and evaluation of the policy be planned and executed. Of special importance is to evaluate the benefits and risks of the use of commercial infant formula feeding by poor mothers.

Suggestions for modifications or changes

1. Option 4 Commercial Infant Formula (page 16)
   Under disadvantages we suggest adding:
   - May result in five times higher morbidity from infections such as diarrhoea, pneumonia, etc.
   - Higher mortality rates
   - Danger of supply not being assured puts infant at risk
   - More rapid return of maternal fertility and risk of early pregnancy
   - Difficulties to prepare at night in houses lacking electricity and turn-on stoves

2. Option 1 Exclusive Breastfeeding for 3 months (page 13 and page 23)
   We believe that in the context of poor households in Uganda, and research evidence, the length of exclusive breastfeeding should be either:
   (a) Be extended to 6 months, or be written as
   (b) At least 3 months of exclusive breastfeeding, and if possible longer exclusive breastfeeding up to 6 months of age.

3. Use of unmodified animal milk
   This is one of three recommendations, and seems to be unwarranted because of its disadvantages.

4. Routine or normal breastfeeding
   Much of the paper from Page 1-12 provides excellent material on the importance and advantages of breastfeeding as the "cornerstone of infant feeding and child survival in Uganda." But routine breastfeeding which might include exclusive breastfeeding for up to 6 months followed by long duration breastfeeding (to at least 12 months) is not included as any of the 6 "infant feeding options." We believe it should be included, and should, of course, under Disadvantages state "the longer the duration of breastfeeding, the greater risk of HIV transmission." But we believe that for many mothers in poor families with poor resources, the risk of early cessation of breastfeeding, may have risks for infant, mother and family greater than the estimated risk of HIV transmission. We should not underestimate the fact that normal breastfeeding from age 6-12 months usually provides
   more than 50% of the energy (calories); some 70% of the protein; over 60% of the fat; and over 50% of almost all essential vitamins and minerals.

   For poor families it is not easy to provide these using family foods. So mothers who may not be able to follow the useful guidelines on page 23 might be advised to continue breastfeeding well beyond 6 months.

Finally on the basis of discussions with many persons in Uganda, and a visit to the PMTCT site at the Nsambya Hospital we heard almost unanimous views that the option of commercial infant formula was not a feasible option for poor mothers especially in rural areas. All seemed to agree that very few mothers would accept this option (there have been low acceptance rates by more affluent women attending Nsambya Hospital which is a private hospital) and that the likelihood of many of the few acceptors practising exclusive formula feeding was relatively remote.

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