# HIV: GENERAL OVERVIEW AND THE IMPACT ON NUTRITION

# HIV: GENERAL OVERVIEW AND THE IMPACT ON NUTRITION

## ACF International Network and the link to HIV/AIDS

The ACF International Network currently intervenes in 43 countries around the world, with programmes which directly or indirectly tackle hunger and malnutrition. This is done through specialised feeding programmes, the provision of food aid, conducting nutrition surveys and developing surveillance systems to guide nutrition interventions and also through addressing the underlying root causes of hunger and malnutrition. Our specialised areas of intervention are in nutrition, food security, water/sanitation and health care, as well as programmes that aim to improve the quality of services provided by national and local authorities, for example Ministries of Health, Agriculture and Social Welfare, through capacity building. The ultimate aim of all programmes is to enable beneficiaries to regain their autonomy and self-sufficiency as soon as possible.

As part of the wider humanitarian community, the ACF International Network is increasingly active in trying to reduce the impact that the pandemic is having on the populations with which we work. In the treatment of severe malnutrition, HIV is challenging the traditional approaches as more children and carers present with severe forms of complicated malnutrition related to HIV and associated tuberculosis (TB). HIV/AIDS is not only a health issue, but has a profound impact in many spheres: political, social, human, environmental, economic and infrastructural.

The impact of HIV on malnutrition was highlighted for the ACF International Network during the food crisis in southern Africa in 2002/2003. This spurred the organisation to consider how programming could be better adapted in the HIV context. Whilst our responses have started with the treatment issues in the nutrition sector, it is recognised as essential to address also the pandemic at the earlier stages of prevention and mitigation. A large amount of literature exists on the various impacts of the pandemic, and ways in which humanitarian practitioners should take this into account, but the challenge is to translate this into practice and prioritise the needs. The situation requires the ACF International Network to re-examine traditional responses to hunger and malnutrition and mainstream HIV/AIDS throughout our country programmes. Our aim is to both prevent and treat malnutrition whilst enabling HIV infected and affected people to maintain the best quality of life they can, for as long as they can, through the added benefits brought about by optimal and appropriate nutrition, as a part of their overall HIV treatment package.

This report outlines the work that the ACF International Network has done in Malawi addressing nutrition responses to HIV/AIDS. It provides initial evidence that HIV is indeed an important factor in the cause of severe malnutrition and presents our operational research looking at the response of HIV-infected patients to therapeutic feeding. The research aims to help provide answers to the questions surrounding aspects of care that may need change or adaptation to best suit the needs of those infected with HIV and suffering severe malnutrition. This is followed with illustrations of our complementary activities that have been implemented to provide a more complete package of care addressing child and adult nutrition in light of the HIV/AIDS crisis in Malawi.

The report aims to give an overview of programmatic approaches, which, in a technical field that is constantly evolving with new information, offer a valuable platform from which to learn and take further steps forward. Results are not presented here in scientific format with full methodologies and statistical detail such as confidence intervals, but this information can be made available on request. The aim is purely to provide an outline of some approaches in nutrition and HIV, the different challenges we face and also the positive aspects that can encourage further development and progress in this field. Within the report we consider the different challenges faced by both children and adults.

The number of people living with HIV/AIDS (PLWHA) worldwide is now approximately 40 million, with southern Africa suffering the highest number of casualties. Across the globe, AIDS is responsible for an increasing number of deaths each year. In 2005, an estimated 2.8 million people died of AIDS, 380,000 of them children. In the same year, an estimated 2.3 million children remained living with the HIV virus, and an estimated 15 million AIDS orphans face serious threats to their food security, access to healthcare and education, greatly increasing their risk of malnutrition[1].

> *Globally, children under five years of age account for one in six AIDS-related deaths and one in seven HIV infections. As we enter the third decade of the epidemic, a child dies of an AIDS-related illness every minute of every day, and a young person contracts HIV every 15 seconds*[2].

Mother-to-child transmission (MTCT) of HIV accounts for the vast majority of children who are infected with HIV. In the last two decades, before the large roll out of prevention of mother to child transmission (PMTCT) programmes, approximately 30%-40% of HIV infected women transmitted the virus to their newborn babies[3]. These children have contracted the virus through vertical transmission, either in the womb during pregnancy, during the period of delivery or from being exposed to the virus over the period of breastfeeding. Many of them will suffer from malnutrition at some point in their lives, either as a direct physiological consequence of the virus, or from socio-economic effects from the impact of the virus at household level.

Malnutrition and HIV infection are undeniably linked and together present a serious humanitarian and public health challenge in Southern Africa[4]. In countries that already suffer the chronic burden of malnutrition, the added impact of HIV, which covers largely similar geographical areas, is increasing the complexity of patterns of malnutrition despite steps being taken to address the common causal factors. It is now well documented in several countries with high national HIV prevalence that there is indeed a higher proportion of HIV infected children among those admitted for severe malnutrition in comparison to the HIV prevalence in the national population of a similar age group[5,6,7,8]. To date, country programmes to address severe malnutrition in childhood have been largely separate from HIV/AIDS treatment and care initiatives. Programmes addressing adult malnutrition are few. However, with the roll-out of Antiretroviral Therapy (ART) largely due to resources from the Global Fund, there is increasing need for integration of HIV and nutrition services, targeting on both population and individual basis. Adults as well as children must be reached, combining different approaches for targeting. Nutrition programmes provide an excellent platform for HIV awareness and the promotion of the benefits of knowing one's HIV status in relation to the prevention of malnutrition and the associated risk of mortality.

## Nutrition needs in HIV infection

Food of course is a fundamental need for everyone, but HIV positive children and adults have special nutritional needs. They need more energy to cope with extra losses during episodes of infection and high viral replication, and must ensure a balanced diet to cover for common micronutrient deficiencies associated with HIV infection[9]. For those on ART, a balanced diet is essential to aid the absorption, distribution and excretion of the drugs to maintain optimal levels for successful therapy. Surprisingly, having enough food and the right kind of food has been a long overlooked remedy in the fight against HIV/AIDS but is now thankfully rising on the international and public agenda. Many initiatives are now in place at community and regional level. In May 2007, the second Eastern and Southern Africa Regional Workshop for Nutrition and HIV was held in Nairobi to support national governments to integrate nutrition and HIV in one holistic package of care. It is now internationally recognised that as important as drugs and education are to combating HIV/AIDS, food is a primary defence that enables people to maintain healthier and more positive lives and must be included as an essential component of HIV services.

## Impact on childhood mortality

For HIV positive children in under-resourced countries, there is of course an increased risk from the common childhood diseases that can afflict all children, particularly those under five. Most children suffer from childhood illnesses, with the risk and outcome of infection often shaped by geography, poverty, socio-economic status and levels of immunity; the same factors directly linked with both malnutrition and HIV infection[10]. Although infectious diseases such as respiratory tract infections, diarrhoea, malaria, and measles are major killers of children, malnutrition is one of the most common childhood illnesses, contributing directly or indirectly to 60% of the more than 10 million child deaths each year[11].

One of the key barriers to common childhood infections and early childhood malnutrition is of course breastfeeding[12]. With early HIV prevention messages highlighting the transmission risk of HIV through breast milk, the culture of breastfeeding, the single most effective barrier against childhood mortality, has been threatened leading to increased risk of malnutrition and mortality in infants born to HIV positive mothers[13,14].

## The Affordable, Feasible, Acceptable, Sustainable and Safe Feeding (AFASS) Initiative

Due to the risk of HIV transmission from mother to child during the breastfeeding period, early public health messages supported the use of formula feeding to prevent transmission.[15] The emphasis was to recommend breast milk substitutes and only to breast feed if an 'affordable, feasible, acceptable, sustainable and safe' milk alternative was not available. In reality this meant having a reliable income for formula milk, and everything needed to support safe practice such as safe water, fuel and resources for sterilising, for up to two years. In resource limited settings this was a high expectation, and the introduction of formula feeding into breastfeeding cultures with poor levels of resources led to an increase of gastro-intestinal infections and mortality in infants and young children[16]. Steps have now been taken to address this situation with clearer messages emphasising the superior benefits of breastfeeding in under-resourced settings and easily-understood messages on what AFASS really entails.[17]. However, the earlier messages remain in the public domain, and it will take time for the full understanding of the balance of HIV transmission versus mortality risk to be clearly understood by both the public and health workers.

The progression of HIV infection is different in children from that seen in adults, with children having a more rapid deterioration to AIDS increasing their malnutrition risk. Studies that have been done looking at natural survival in childhood HIV infection show approximately 20% will have rapid progression of disease and die by the age of 12 months of age; 50% will die by the age of three and just a small proportion (<25%) will survive past five years of age[18,19,20]. It is essential that the babies and children who are vertically exposed to HIV are screened for the virus and offered preventative measures such as prophylactic cotrimoxazole[21] and optimal nutrition for prevention of infections and associated malnutrition. Even for those who are clinically 'well', stunting (low height for age) is common and apparent from as early as a few months showing the essential need for optimal nutrition from birth for all children infected with HIV even before clinical symptoms appear.[22]