Integration of CTC with strategies to address HIV/AIDS (Special Supplement 2)

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Home-Based Care (HBC) is now seen as the way forward for caring and supporting People Living With HIV/AIDS (PLWHA) and HIV affected households (30;31). Given the ever-increasing numbers of people infected and affected by HIV/AIDS, and the capacity limitations of the health structures in the countries where most of the cases are, home-based care is the only realistic response that can prevent the formal healthcare services from being swamped (30;32-37).

CTC offers several important opportunities to integrate the treatment of malnutrition with HBC and to support wider homebased strategies to address HIV/AIDS (37). The CTC approach to community-based support, mobilisation, case-finding and assistance provision, provides an appropriate entry point to support, strengthen and adapt existing social structures to better deliver HBC. New RUTFs specifically designed with appropriate levels of micro-nutrients, anti-oxidants, protein and energy can help improve the nutritional status of PLWHA (21;27;28;38-40). The addition of pro and pre-biotics to these RUTFs, to address HIV related diarrhoea and wasting, offers the potential for low cost effective therapeutic support either in combination with ARVs or alone (28).

Already in many countries, CTC programmes are working with and treating many PLWHA. For example, recent research in Malawi indicates that up to 30% of malnourished children are HIV positive. This research also indicates that when these severely malnourished children with HIV/AIDS are treated with RUTF in an outpatient programme, the majority can recover to normal nutritional status (38-40). For the past 8 months, research has been ongoing into how best CTC can be modified to maximise this potential for integration and synergy with existing HBC support mechanisms.

The move towards home based models

Health facilities in many affected countries do not have the capacity to deal with the high number of PLWHA(32-35). This is the case for Malawi which has 800,000 PLWHAs, including 65,000 children (41). In Malawi and many other African countries, community/family networks represent the primary sources of support for these
people. The appropriate implementation of community and home based care models could help strengthen existing family and community capacities to assist affected people and households, while simultaneously building local capacities.

All HBC models have in common a holistic view of the problems of PLWHA and their families and attempt to provide physical, psychological, social, palliative and spiritual care and support for infected/affected individuals and families (31;42;43). The CTC approach as implemented in Malawi, Sudan and Ethiopia has many features in common with such models:

1. CTC cares for people in their homes and can evolve to include a wide range of sectoral interventions. The opportunity costs associated with home care are less and this could help households and communities affected by HIV/AIDS maintain economic productivity.
2. CTC provides new, specially designed, therapeutic diets and medical protocols. There is emerging evidence that the provision of high quality therapeutic food may prolong productive life and increases the time to AIDS defining illness and death.
3. CTC provides a legitimate role for health care workers to establish a presence at community level. The stigma attached to HIV/AIDS in Malawi society makes identifying affected families very difficult. However, experience has shown that programmes that spend long periods researching and planning interventions, without providing visible assistance, rapidly become unpopular in Malawian villages.
4. CTC treats common complications of HIV/AIDS, such as acute malnutrition, in the home rather than in hospitals or therapeutic feeding centres. Home care has the potential to decrease the frequency and shorten the duration of inpatient admissions, helping to relieve pressure on hospitals. In addition, maintaining people in their home environment reduces exposure to foreign pathogens and should reduce the frequency of nosocomial infections.
5. CTC develops caring networks using a variety of mobilisation techniques, where possible integrating together existing support systems. Care and psycho-social support is easier to provide in familiar surroundings than in the hospital environment.
6. CTC identifies and develops existing social support networks. Caring for people in their community instead of removing them to hospital is more compatible with fundamental Bantu views of the interdependence of individuals, families and communities.

The risks of home based care

Caution must be exercised, as the inappropriate implementation of home based models also has the potential to compete with and undermine existing social support structures. An important finding of research in Malawi is that external support provided by NGOs can have extremely negative effects on more traditional/community-based sources of assistance to HIV affected households. There is often uncertainty around the long-term continuity of NGO's programmes. As external organisations target HIV affected households, family and community networks may gradually feel less responsible for the welfare of the sick. There is no guarantee that community support structures will re-emerge in the event of a withdrawal of external NGO-led programmes.
The philosophy behind CTC is (wherever possible) to work through and strengthen existing formal and non-formal systems and structures. Currently, research in Dowa, Malawi, is looking at how to maximise this potential and minimise the risks of damaging existing support mechanisms. The research also involves examining proxy indicators, used to target programmes in the absence of biological HIV testing, and to estimate the effectiveness of the existing CTC programme in identifying people and households affected by HIV and delivering appropriate and acceptable care. A central element in the research is to examine how best to use the legitimacy provided by the successful treatment of acute malnutrition to avoid the stigma associated with HIV.

**Efficacy of RUTF in treating HIV infected malnourished children**

In Malawi, many nutritional support programmes for PLWHAs use mixed flour blends which, when made into porridge, have a low nutrient density. These supplements are not ideal to meet the increased nutritional requirements appropriate for HIV infected people, especially HIV infected children (44;45). Blended flours require considerable cooking and therefore labour to collect firewood; cooking destroys many of the vitamins making it difficult to use these foods to deliver the high doses of vitamins and antioxidants required to slow the progression of HIV/AIDS and the energy density is low making it particularly difficult for children, with their small stomach capacity, to eat a sufficient quantity to meet their increased nutritional requirements. The use of RUTF has overcome many of these limitations. RUTF is energy dense, can be made with the appropriate balance of micronutrients, and does not require cooking. Thus vitamins are preserved and no additional labour demands are placed on families.

Home Treatment with RUTF has been shown to be effective in Malawi, where in the 2001-2002 hungry season, the Queen Elizabeth Central Hospital in Blantyre, used home care with RUTF to replace the phase 2 inpatient treatment after the initial phase 1 stabilisation (39). Eighty percent of the children receiving a full diet of RUTF reached their 100% weight for height goal, including 59% of HIV positive children and 95% of all HIV negative children (39). Similar encouraging results were observed for the 2002-2003 hungry season in seven different sites in Malawi with 80% of children recovered within an average of 6 weeks including 56% of HIV positive children (38-39).

In Malawi, a 'Nutriset' produced recipe of RUTF is also used for the nutritional rehabilitation of malnourished TB and HIV infected adults by MSF-Luxembourg (46). The impact of this protocol has not yet been evaluated but empirical observations have indicated that most of these adults are gaining weight (46).

At present in Malawi, the production of RUTFs from locally available grains and pulses, at a small district hospital, is being investigated. Such locally produced RUTFs will be cheaper (probably less than one-third of the price of the commercial product) and by stimulating local agricultural markets and manufacturing industry, may be better able to integrate the support for PLWHA into local economies.

Research is also taking place into the addition of synbiotics (a combination of high dose acid resistant probiotics and prebiotics) to RUTF (28). It is hoped that current trials will demonstrate that these new synbiotic enhanced RUTFs are effective tools, allowing further reduction in mortality and morbidity and speeding the recovery of those malnourished HIV infected children (see section 4.3) (47).

The introduction of ARV treatments for the HIV infected in Africa will also demand special attention to nutritional status. Research has shown that this treatment in itself can aggravate nutritional problems such as wasting and cause other problems related to fat deposition (48). Ready to use supplementary and therapeutic foods could help ensure stable nutritional status throughout treatment.

**Integrating responses to HIV related nutritional problems**
Grandparents often take over the care of AIDS orphans in South Sudan.

The HIV pandemic is changing the face of malnutrition and reinforcing the need to combine both relief and development responses. As well as contributing to massive mortality and morbidity, HIV/AIDS increases and changes the spectrum of underlying vulnerabilities. Combined with underdevelopment, it increases the risk of acute events to promote malnutrition (49) both directly through infection and indirectly, through increasing poverty and vulnerability and decreasing economic reserves. In countries such as Malawi, for example, up to 35% of severely malnourished children are now HIV positive. Children aged between 6 and 36 months form a high proportion of the caseload as a consequence of mother to child transmission of HIV (36). The proportion of orphans is also increasing and in the Dowa CTC programme, 9.3% of admissions were orphans (unpublished data).

CTC's combination of emergency and developmental principles is well adapted to a mixed emergency and development response. For example, in Dowa, CTC treated thousands of acutely malnourished people in a few months, whilst reinforcing the capacity of local health systems, families and community, to take care of malnourished patients, including those infected by HIV. Importantly it also demonstrated that the formal health services have the capacity to treat wasted individuals with relatively small opportunity costs to their families. This has all encouraged local people, traditional leaders and even traditional practitioners, to refer cases of malnutrition to the CTC access points early, and in far greater numbers. This community-based case finding and referral system requires no input from either Concern or the MoH and is sustainable. Ensuring the MoHP clinic system has the capacity to continue the delivery of RUTF and the OTP protocols though their clinic system is the next step, and so far, the signs are good. Local MoHP staff are now running most aspects of the programme, including all OTP distributions, and are comfortable and enthusiastic with the prospect of taking it over entirely. The strong links developing between the CTC nutrition, food security and HIV strategies for Dowa district, and the establishment of local RUTF production in the district, will hopefully further increase the chances that the local communities can sustain the project.

**Conclusion**

In many affected countries, HIV/AIDS will increasingly add to the burden of acute and chronic food insecurity and malnutrition. Early and appropriate nutritional support can mitigate its impact by prolonging the period of active life for affected people. CTC includes most activities recognized as optimal components of a home-based care model and provides a useful entry point for stigma-free home based care for PLWHA. The development of locally produced, probiotic enhanced RUTFs offers further potential for an exciting and safe new therapeutic agent to address nutritional and diarrhoeal problems in HIV infected people.

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