



**HIV: A CONVENIENT SHIELD FOR POOR
STANDARDS OF CARE?**

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In 2002 when the ACF International Network arrived in Malawi to respond to the Southern African food crisis, it was noted that there were an unusually high proportion of deaths amongst the children being admitted for severe acute malnutrition in comparison to the severity of the crisis. Initially it was felt that this may be related to the new approach taken by the ACF International Network of capacity building government structures to treat severe malnutrition rather than bringing in specially trained staff to run the therapeutic feeding units. Government staff were seriously overworked and resources were low with overcrowding a common occurrence in the nutrition units. At this time Malawi was suffering the consequences of the 'brain drain' as many qualified medical staff left the country for greener pastures and promises of more pay overseas. Indeed, with 25% of the global burden of disease, Africa now has approximately only 1-3% of the world's total number of health workers²⁷.

Large numbers of children with complicated malnutrition were being admitted to therapeutic feeding centres and a different pattern of recovery was noted to that usually seen in ACF International Network's therapeutic feeding centres used for the treatment of severe malnutrition. Cure rates were failing to meet the expected international standards including the benchmark of less than 10% mortality²⁸, children were taking longer to recover and mortality was occurring at unexpected stages of treatment. Once discharged, the same children and their siblings were returning with repeated episodes of malnutrition suggesting a reduced household capacity to meet familial nutrition requirements.

Initially, when the ACF International Network staff raised the concern of HIV affecting cure rates - a concern which was of no surprise to Malawian health workers - donor response was to imply that HIV may be a convenient shield for poor standards of care. It was therefore decided to collect countrywide data to gain valuable supporting evidence on HIV infection patterns in severely malnourished children and to guide the development of integrated nutrition and HIV care in a resource-limited setting. The aim was to quantify the extent and geographical distribution of childhood HIV infection in a representative range of NRU in Malawi. It also enabled the ACF International Network to assess the acceptability of HIV testing to carers of severely malnourished children in both urban and rural settings

✦ Collecting the evidence and establishing the impact

Data was collected in twelve NRU across the country, representative of each region, and within each region, representative of rural and urban centres. A team of fourteen nurses received specialist training on HIV counseling and testing and were responsible for collecting the data. This skill and knowledge capacity building was planned as a long-term benefit to study staff for use in their regular workplaces.

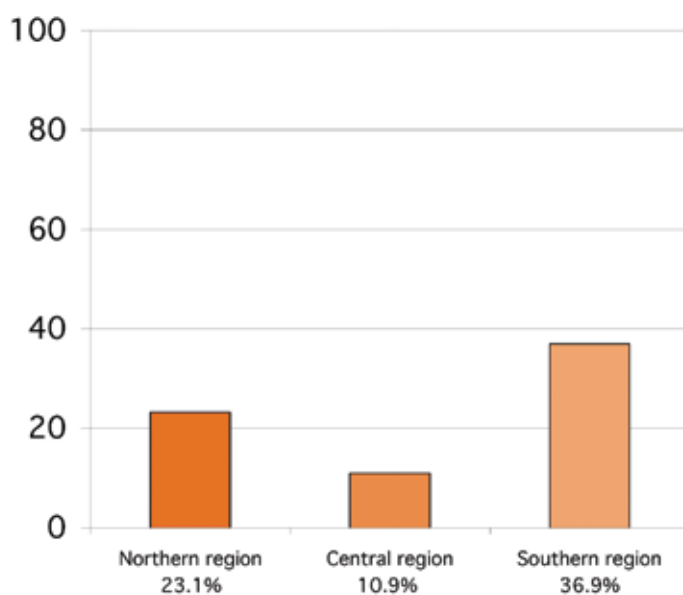
All children and their carers admitted to each of the twelve NRU over a two-week period in the dry season and a two-week period in the rainy season were offered HIV counseling and testing. Children under 15 months were excluded, to avoid difficulties with interpretation of false positive rapid test results, as more sophisticated tests were not available at this time. The two separate periods of testing were conducted due to the hypotheses that there would be a higher concentration of HIV-infected children with complicated malnutrition in the dry season than in the rainy season, when uncomplicated seasonal malnutrition related to food shortages would be prominent.

When a child was found to be HIV positive, the carer was counseled, and referrals for ongoing care were made. This included referrals to treatment centres providing ART and opportunistic infection treatment; community home based care groups; prevention of mother to child transmission initiatives; voluntary counseling and testing centres; orphan care centres; and palliative care services.

🌟 Results

570 carers and their children were offered HIV counseling and testing. Acceptability and uptake was high with 91.7% of carers consenting for their children to be tested and 70% of carers accepting testing for themselves. Overall HIV prevalence amongst children tested was 21.6% and there was wide variation between individual NRU. Geographical prevalence variations were significant between the three regions with the highest prevalence being in the south (36.9%). HIV prevalence was also significantly higher in urban areas than in rural areas.

Figure 1 Geographical distribution of HIV prevalence



A child in a Southern region NRU has almost five times the likelihood of being HIV positive than a child in a Central region NRU.

HIV prevalence is higher by a factor of 2.5 in urban areas (32.9%), than in rural areas (13.2%).

Children in urban NRU are three times more likely to be HIV positive than children in rural NRU. This difference is partly due to the fact that the hospitals in urban settings are usually larger referral centres, which take children who have been transferred from other units with complications. Such referred patients are more likely to be the children with HIV.

As expected, NRU HIV prevalence rates were lower in the rainy/hungry season (18.4%) than in the dry/post-harvest season (30.9%) when malnutrition would not normally be commonplace in the population.

For those who did not consent to testing, the main reasons given included the need to consult husbands or feeling that they were not sick and therefore did not want to be tested. Where children were positive but the mother had refused testing, the implications of the child's results were clearly explained.

Regional and seasonal variation

The geographical prevalence patterns of HIV in the NRU, not surprisingly, reflect the adult regional and urban/rural variations recorded in the 2004 Malawi Demographic and Health Survey. However, these findings have important practical implications.

Firstly there is a need for efficient resource utilization. Knowledge of underlying clinical infections contributing to SAM means that agencies can target and allocate food supplies and medication more accurately. NRU with high HIV prevalence are likely to need larger food allocations as infected children are likely to stay longer in the programme. Similarly they will need greater access to antiretrovirals, cotrimoxazole and medications for opportunistic infections than areas of low prevalence.

Secondly the wide variation in HIV prevalence rates is likely to explain, at least in part, the wide variation in NRU outcomes. It has been noted by the ACF International Network during support of the NRU that rural units have generally had lower mortality rates and higher cure rates than the urban NRU²⁹. Whilst to date this has been attributed to overcrowding and poor staff to patient ratio in the urban centres, the contribution made by coexisting HIV in SAM to high mortality and morbidity rates cannot be overlooked. Since HIV infection directly affects all of the principal NRU outcomes (nutritional cures; deaths; rates of weight gain)³⁰, the background rates of HIV prevalence in children being treated for SAM need to be taken into account when assessing the performance of an individual NRU. Although SPHERE standards³¹ for therapeutic feeding programmes previously stated that mortality rates should not be above 10%, there has been recognition by many working in the field that these standards may not be attainable in areas of high HIV prevalence, especially where there is poor access to paediatric HIV treatment programmes (personal communication Malawi Research Dissemination Meeting Blantyre, January 2007). This will be revisited later when looking at the clinical research.

Numerically there were more HIV positive children presenting in the rainy season, but proportionately more admitted in the dry season. As hypothesised, it can therefore be presumed that the NRU are treating children with complications from HIV infection throughout the year, but with a threefold increase in positive admissions (amongst the drastic increase in HIV negative admissions) during the rainy 'hungry' season when food insecurity becomes the major contributory factor.