

# HIV/AIDS AND POVERTY IN HOUSEHOLDS WITH CHILDREN SUFFERING FROM MALNUTRITION: THE ROLE OF SOCIAL SECURITY IN MOUNT FRERE<sup>1</sup>

MICHAEL J. SAMSON\*

THE MOUNT FRERE AREA in the Eastern Cape suffers one of the highest rates of child malnutrition in South Africa as well as one of the poorest take-up rates for the Child Support Grant. This case study explores how HIV/AIDS and other long-term chronic illnesses together with extreme poverty affect households with children suffering from severe malnutrition. It examines the role of social security in supporting or failing to support these households as they cope with the impact of HIV/AIDS.

Concentrating on households with children hospitalised for

---

\* Director of Research, Economic Policy Research Institute.

<sup>1</sup> This paper is part of the more comprehensive research report "Social Security Transfers, Poverty and Chronic Illness in the Eastern Cape." This report was published on 21 May 2002 by the Economic Policy Research Institute (EPRI). The project was carried out by EPRI and Oxford University's Social Disadvantage Research Centre (SDRC). The University of the Western Cape's School of Public Health (SPH) carried out the field research. The project leader was Robert van Niekerk (SDRC). Other members of the team included: Michael Noble (SDRC), Maria Sigala (SDRC), Nonzwakazi Sogaula (SPH), David Sanders (SPH), Debra Jackson (SPH), Kenneth Mac Quene (EPRI), Michael Samson (EPRI), Ingrid van Niekerk (EPRI), Carolyn Green (EPRI) and Allison Stevens (EPRI).

severe malnutrition purposively focuses (and biases) the study towards the poorest households in the country, particularly in the context of the study's location in Mount Frere. Child malnutrition is highly correlated with paediatric AIDS, which in turn is highly correlated with the presence of other HIV/AIDS-infected individuals in the household. Some of the most severe consequences of the HIV/AIDS pandemic are evident in these households. This paper analyses the link between HIV/AIDS and malnutrition, assessing the role of poverty and the mitigating impact of the social security system.

### 1. HIV/AIDS AND CHILD MALNUTRITION

The Kagera household impact study identifies how the presence of HIV in the household raises the likelihood of exposure to other infections, which in turn, raises the risk of malnutrition for young family members. "Morbidity and malnutrition," states Ainsworth and Semali (2000:6, 10) "have a synergistic relationship. Illnesses such as tuberculosis, diarrhoea, and measles, have well-documented biological effects on worsening children's nutritional status, while severely malnourished children have higher morbidity and mortality." Malnutrition in and of itself can cause immuno-suppression in young children by inhibiting host defences, impairing tissue repair functions, and compromising the body's ability to resolve attacks of acute diarrhoea (Thea *et al.*, 1993). It is therefore difficult, even with HIV-positive infants, to distinguish whether the cause of increased immuno-suppression is the virus or the resulting malnutrition. "In either event," states Thea *et al.* (1993:1701), "the cyclic effects of diarrhoea, malnutrition, and immune dysfunction can produce an accelerated downward course" for infected infants with persistent diarrhoea.

Some medical studies, such as that conducted by Taha *et al.* (1995:1027) in urban Malawi, indicate that "maternal HIV infection is the main determinant of mortality in the first 30

months of life.” The mortality rate of children born to HIV-infected mothers in this study was 3 times higher than those born to sero-negative mothers (36 per cent as compared with 12 per cent), even though many of these infants had normal birth weights. Children born to sero-negative mothers had a higher probability of survival over their first 30 months while children born to sero-positive mothers were more likely to die from pneumonia, fever, failure to thrive and diarrhoea (Taha, 1995:1024).

Meyers *et al.* (2000:224-226) assessed both the HIV and nutritional status of 92 per cent of all children under the age of five admitted to the Chris Hani Baragwanath Hospital (CHB) in Soweto, South Africa from June to December of 1997 (507 of 549 admitted). The study found an HIV prevalence of 22.9 per cent. Of the 507 children tested, 66.9 per cent of the uninfected children were well nourished compared to only 34.3 per cent of the children who were HIV positive. A total of 29.4 per cent of the infected children had marasmus (emaciation) or marasmus-kwashiorkor (protein-energy malnutrition with oedema) as compared with 4.7 per cent of the uninfected children. Without citing diarrhoea as a factor, this study noted that “infectious disease and associated malnutrition were the most common reasons for admission in HIV infected children.” At the time of death, 76 per cent of the infected children who died were malnourished and over 50 per cent were severely malnourished. Of those who died uninfected with HIV, 53 per cent were nutritionally compromised but only two were severely malnourished (Meyers *et al.*, 2000:228).

Bailey *et al.* (1999:537), in a study of over 500 children in the Democratic Republic of Congo, found that mothers' HIV status had a direct affect on their ability to care for their children. “In Congo,” according to Bailey’s 1999 study, “uninfected children of sero-positive mothers suffer nearly twice the incidence of persistent diarrhoea as uninfected children of sero-negative

mothers and the incidence of infant diarrhoea increases with severity of maternal disease.” Bailey *et al.* (1999) concluded that the mother’s disease led to “increased risk in their children for under-nutrition, diarrhoea, and respiratory infections that would likely retard growth progression.” The infected children also suffered significantly more stunting (low height for age), wasting (low weight for height) and under-nutrition than did their uninfected cohorts ages 0 to 18 months. Persistent diarrhoea was strongly associated with malnutrition and HIV infection in Congolese children as it was for the children in Soweto.

Persistent diarrhoea, according to Thea *et al.* (1993:1700), is likely to occur earlier in infected than in uninfected infants. In their prospective study of over 400 Zairian infants, 45 deaths occurred in infants whose HIV status was known. Of these deaths, 24 per cent were due to persistent diarrhoea and 91 per cent occurred in HIV-infected children. Diarrhoea was the leading cause of death in the cohort (36 per cent) but for HIV positive children, the mortality rate from diarrhoea increased by 11 fold. Children whose mothers were symptomatic of AIDS had higher incidence of diarrhoea though the risk of persistent diarrhoea also increased for uninfected infants whose mothers had died of AIDS (but not those whose mothers were sick). The risk of persistent diarrhoea increased for infected infants as well if the mother was either symptomatic or had died of AIDS (Thea *et al.*, 1993:1698, 1701).

Thea *et al.* (1993:1701), like Bailey *et al.* (1999), asserted that morbidity “and by implication mortality, was related to the ability of the mother to care for her infant and maintain infant hygiene and nutrition, especially during episodes of acute diarrhoea needing increased attention. Episodes of acute, recurrent, and persistent diarrhoea occurred significantly more frequently among infected infants than among uninfected controls”. The significance here lies in the fact that such

“repeated episodes of acute diarrhoea often lead to increasingly severe protein-energy malnutrition, specific micronutrient deficiency...or a combination of the two” (Thea *et al.*, 1993:1700-1701).

Even if the child is uninfected with the virus, the mother’s illness with AIDS-related infections is likely to create a situation in which the child is more susceptible to diarrhoea which in turn leads to malnutrition. This compromises the child’s ability to resolve the acute diarrhoea, increasing the child’s risk of death. If the child is also infected, her system will tend to be immuno-suppressed not only by malnutrition but by the virus as well, further raising the risk of death. Interventions that delay the morbidity and mortality of the HIV-infected mother could thus significantly contribute to the long-term survival of uninfected children of infected mothers (Thea *et al.*, 1993:1701).

Data regarding malnutrition in AIDS-affected households or AIDS-infected children must be regarded cautiously. In many of the countries cited by these studies, protein-energy malnutrition was prevalent prior to the AIDS epidemic. Nevertheless, it is clear that paediatric AIDS brings with it symptoms of weight loss and protracted diarrhoea. Failure to thrive is the most consistent symptom afflicting HIV-infected children (Kurawige *et al.*, 1993:94-95).

The literature on policy options grapples with the role of directly targeting AIDS-affected households. Over (1999:8) suggests that targeted support should be broadly based. Where equity is the concern, it is important to “target assistance efforts to the poorest orphans, regardless of the cause of their parents’ death.” Ainsworth and Semali (2000:31-32) go further, suggesting that interventions should be targeted to the poorest households. Health interventions targeted to children on the basis of a recent adult death in the household would arbitrarily exclude many children with equally severe poverty-related health problems, while expending resources on children in households

that have adequate means. Mutangadura (2000:26) argues for a broader distribution of social welfare assistance, independent of the immediate cause of poverty, and highlights the resulting improvements in child welfare, nutrition and access to education.

## 2. THE MOUNT FRERE CASE STUDY

### *(a) The Study Sample*

The study sample includes a total of 30 households consists/consisting of 103 adults (37 men and 66 women) and 134 children (71 boys and 62 girls). The mean age of the adults was 36; the average age of the children was seven years. They lived in Mount Frere, part of region E of the Eastern Cape. The region is comprised of former areas of the Transkei Bantustan with two magisterial districts called Kwabacha and Tabankulu.

### *(b) The Demography of Poverty in the Eastern Cape*

The Eastern Cape has a high prevalence of poverty, chronic illness (including those associated with HIV/AIDS), and infant and child mortality. The poverty rate in the Eastern Cape is 74.3 per cent compared to 45 per cent for South Africa as a whole. The Eastern Cape's Human Development Index of 0.596 is the second lowest in South Africa, and compares to 0.628 for the entire country (UNDP, 2000). The Eastern Cape also has South Africa's highest infant mortality rate, numbering 55 of every 1000 live births compared to a national average of 41 per 1000 (DSD, 2000:73). This underdevelopment is linked to the high proportion of the population living in rural areas - 63.4 per cent of the population live in non-urban areas (DSD, 2000:73).

Only 22 per cent of households in the Eastern Cape have access to safe water from an internal household tap compared to (an itself very low) South African average of 40 per cent. Only 30 per cent of households receive electricity direct from

the authority, the lowest in the country and compared to a national average of 55 per cent. The use of paraffin as an alternative heating source constitutes 37 per cent of the total, again the highest use of such a heating source in the country. Only 31 per cent of households have refuse removed weekly by the local authority with 23 per cent of households registering no refuse disposal compared to a South African average of 11 per cent (DSD, 2000).

The broader population is dispersed across the rural areas, with no defined centre and thus the inaccessibility of transport has a dramatic effect on the ability of users to access government services. The Eastern Cape has the highest rate of unemployment in the country at 48.5 per cent with only 50.8 per cent of males and 49.2 per cent of females being economically active (DSD, 2000). This high rate of unemployment makes households heavily dependent on remittances and government support through social security.

### *(c) Sample Selection*

The 30 households in the sample were selected from households with a child with severe malnutrition admitted to either Mary Terese or Sipetu hospitals in the Mount Frere Health District (Mount Frere and Ntabankulu Sub-Districts). These children were accompanied by their parents for the duration of their hospital stay and it was during this time that consent was obtained from the parents for recruitment into the study.

A total of 43 households were recruited and 30 were successfully contacted. 26 of the households were recruited from Sipetu hospital (Ntabankulu sub-district), which is consistent with higher rates of malnutrition recorded in this sub-district. The field researcher conducted home visits to each household between the months of September and December 2001.

