Linking HIV to Nutrition, Food security and Livelihoods in Sub-Saharan Africa: Reviewing evidence, responses and gaps

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Overview of presentation

• Background and framework of review
• Evidence of linkages
• Gaps in knowledge/evidence
• Some programmatic and policy responses
• Suggested principles for policy and programme guidance
Bringing different perspectives

- Focus on relating development perspectives of food security and livelihoods to nutrition and HIV in health
- We use vulnerability as the connecting concept
- Initially focused on individual risk, health perspectives increasingly recognised vulnerability in prevention, care and impact mitigation
  - (limited analysis of impact, vulnerability attached to individual)
- Development also identified upstream causes as well as downstream impacts of HIV, often focused on households
  - (limited analysis of care, varying views of vulnerability)
- There have been difficulties in finding common languages for linking health and development, but the causal pathway and multiple dimensions/levels of vulnerability provides a compatible framework.
Breaking down the causal path

Vulnerability and resilience of people/individuals within a multi-level context

Upstream determinants
- Prevention

Midstream interactions
- HIV infection
- Treatment Care, support

Downstream impacts
- Health outcomes
  - Impact mitigation

Responses at multiple levels to support people, deal with HIV and to adapt
Levels and dimensions of peoples’ vulnerability and resilience

- Institutional environment legal/policy
- Economy and livelihoods
- Social group/community
- Inter-personal family/peers
- Individual, biological and psychological
Breaking down the causal path

Vulnerability and resilience of people/individuals within a multi-level context

Upstream determinants

HIV infection

Midstream interactions

Health outcomes

Downstream impacts

Prevention

Treatment Care, support

Impact mitigation

Responses at multiple levels to support people, deal with HIV and to adapt
The pathway of the virus goes through individual human beings (and crosses generations), but vulnerabilities and resilience are rooted in many levels/dimensions.

Nutrition also operates through bodies (and crosses generations), but vulnerabilities and resilience are rooted in food security, livelihoods and broader development.

The central issue is that interactions need to be analysed by looking at individuals within contexts.

Hence, we review linkages and responses in all three phases of the pathway from nutrition, to food security and then livelihoods.
Evidence of linkages
Nutrition – linkages with health

• Effects of malnutrition can be long-term and inter-generational

• Malnutrition and infections intertwine in vicious cycles

• Malnutrition lowers resistance to infection, weakens immune system, longer, more severe/frequent illness.

• Some evidence parasitic and infectious diseases interact with malnutrition, raising susceptibility to STIs
Upstream susceptibility

- HIV - people with poor diets are less resistant and more susceptible to infection

- Inadequate nutrition of mothers may raise risks of MTCT via pregnancy, birth or breast feeding

- Studies inconsistent:
  - Some show low serum Vit A is a predictor of MTCT
  - others that Vit A supplements only reduce pre-term delivery, risk of low birth weight, infant anaemia
  - but no effect of Vit A supplements on MTCT

- Some evidence Vit A deficiency is associated with increased risk of STDs for women, which can increase susceptibility to HIV infection
Upstream vulnerability

- Women more susceptible to HIV infection than men: male to female transmission is between 2 and 4x more efficient than female to male.

- Cultural norms (early marriage for women, dry sex..) make women more vulnerable to HIV

- Forced sex/rape can make HIV transmission more likely

- Malnutrition compromises physical development of girls, delaying puberty, slowing maturation of sexual organs, increases susceptibility to HIV
Mid and downstream

- HIV+ people with poor diets develop HIV-related disease more quickly and have raised nutritional requirements

- HIV infection increases energy needs of HIV-positive persons by 10-30%

- Malnutrition impairs immune functions and affects the immunological response to HIV infection

- Micronutrient deficiencies can accelerate progression and increase infectivity
Mid and downstream

• Nutrition interventions prevent/reverse weight loss and wasting, improve quality of life and prolong survival

• Micronutrient deficiencies may affect absorption and efficacy of ART

• People on ART receiving micronutrient supplementation show improved body weight, improved CD4 cell counts and faster recovery time
  – Malnourished patients starting ART are 6x more likely to die than patients who received adequate nutrition
  – However, sufficient data is not yet available micro-nutrient supplement-ARV interactions to make conclusive statements
Food security

• ... all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. Household food security is the application of this concept to the family level, with individuals within households as the focus of concern (FAO, 2003)

• Fluctuations in food availability can drive up food prices and making access more difficult for the most vulnerable

• (Macro-context matters, but as analysis focused on individuals, households and communities we have not explored this in depth)
Food security

• Downstream impacts of AIDS can reduce food availability through morbidity and mortality causing
  – household and rural labour shortages
  – reductions of households’ cultivated land,
  – loss of skills
  – decay of infrastructure

• Gender and age-based inequities in intra-household food distribution can impact on access and make poor women and children particularly vulnerable to hunger
  – (though some evidence suggests young boys are less nourished than young girls...)
Food security

- Adequate food increases the period positive people can live healthily without treatment

- ARV treatment is less effective and more difficult to adhere to without adequate food

- Coping strategies where food variety and frequency of meals are reduced can increase nutrition related vulnerabilities in HIV and AIDS

- Limited access to clean water and unhygienic cooking facilities increase vulnerability to infections, nutritional and overall food insecurity
Food security

- There is some evidence that some orphans are often more food insecure and less healthy than non-orphans.

- Children and orphans have increased vulnerability to food insecurity when they reside in households with at least one sick adult.

- Such children are more likely than non-affected children to drop out of school and girls more so.

- Food insecurity progressively increases with the number of orphans in a household.
Livelihoods - upstream

- Certain livelihoods can increase vulnerability to infection (sex workers, military, migrants, fisherfolk, truckers, miners, traders and informal sector workers)

- Mobility and migration greatly enhances vulnerability, can compromise ARV access and adherence, as well as raise vulnerability to other impacts of ill health

- Street children’s livelihoods are often particularly risky, lacking social or legal protection
Livelihoods - midstream

• Sickness impacts on concentration, energy and resourcefulness to generate or maintain a livelihood

• HIV related stigma at work, or in the market, can lead to loss of income/jobs

• HIV positive people are often denied access to credit or insurance due to discriminatory policies and poor regulatory frameworks

• Positive people, their children or family can experience precarious access to social support networks, where stigma is strong and reciprocity capacity weak
Livelihoods downstream

- Declining personal assets and stores of physical strength, with reducing ability to fall back on ones labour

- Morbidity and mortality linked household labour shortages, lower incomes and demand, loss of skills (school drop out and deaths), falling savings & investment etc.

- Clustering of impacts in pockets of most vulnerable groups can increase inequality

- The most marginalised and vulnerable are likely to be most affected by livelihood shocks/stresses resulting from HIV
Gaps in knowledge/evidence
Gaps in evidence: Nutrition

- The impact of pre-existing malnutrition on HIV susceptibility in HIV negative people

- The degree to which malnutrition in PLWH increases the efficacy (with raised viral load) of horizontal disease transmission between adults

- Improved information of micronutrient supplements for HIV positive individuals (generally)

- Role of ART in exacerbating micronutrient deficiencies through the promotion of weight gain, which increases nutritional requirements

- Most nutrition-relevant research in the context of AIDS needs to better link clinical nutrition research with development research and program managers
Gaps in evidence: Food security

• Long term options for sustaining food security within affected households and communities

• Integration between short-term nutritional support and long-term strategies to ensure food security?

• The cost-effectiveness of different interventions to improve nutrition and reduce HIV related vulnerabilities of PLWH and their households

• The implications for scaling up such interventions
Gaps in evidence: Livelihoods

- Need more research on non-sedentary populations (migrants, fisherfolk, etc.)

- How services can be tailored and sustainable for mobile populations

- Considerations of both receiving, sending and transit areas

- More research on resilience and vulnerability in risky informal sector livelihoods (e.g. sex work/transactional sex and street children’s livelihoods)
Gaps in research methodology

- Limited number of longitudinal studies

- Limited number of inter-disciplinary and multi-method studies (incl. behavioural, epidemiological, anthropological, economic, political science)

- Further research needed on local variation and how lessons can be drawn for wider application

- Creative thinking needed to go beyond household as unit of analysis, e.g.:
  - household clusters
  - occupational groups
  - mapped networks
Gaps in research methodology

- Better inclusion of gender and age lenses

- More needed on differential impacts, responses, policy and programmatic implications for men and women, by age groups

- Development of methods that capture mobility and related vulnerability linkages

- Better adaptation and applications of livelihood frameworks for urban and changing contexts
Some programmatic and policy responses
Nutrition responses for PLWH

- In many places, PLWH are given nutritional counselling, vitamin supplements and/or other nutritional supplementation,

- This includes people on ART being given food supplements to improve their health as well as to support their adherence.

- Emerging evidence suggests that ready-to-use therapeutic food (RUFT) can prolong life and slow progression of HIV related disease

- However, we still don’t know enough about micronutrients-ART interactions
Responses in food security/livelihoods

- Many NGOs projects supporting food and livelihood security of PLWH and their broader communities (Oxfam, CARE, Concern, C-SAFE, LISAR, JFFLS)

- These programmes often include the provision of productive inputs and HIV awareness raising activities for the community

- Various ‘HIV-responsive’ agricultural interventions being implemented:
  - conservation farming
  - post-harvest and processing technologies
  - agricultural support and training
  - provision of credit and loan schemes
  - promotion of agro-biodiversity and indigenous knowledge

- However, there is often limited systematic evidence of their broader effectiveness or lasting impact
Challenges in integrated programmes

- These remain primarily small scale, with little known about the effects or impacts on HIV related resilience/vulnerability or about the prospects for scale-up

- Some responses treat communities in general terms or rely on broad HIV interventions, such as awareness raising, which have not been convincingly shown to result in behaviour change

- We do know that peer-education by trained and matched peers in targeted social (or occupational) groups can change attitudes and behaviours

- The quality, depth and targeting of integrated interventions are crucial to have an impact
Social Protection

- Objective of social protection: reduce the economic and social vulnerability of poor, vulnerable and marginalised groups and to enhance the social status and rights of the marginalised.

- Where multiple objectives are involved, social protection is most effective when linked to issue-specific services and programmes (e.g. education, HIV and AIDS programmes).

- It may be particularly important for reducing the vulnerability and building resilience of key marginalised groups in relation to HIV.

- Whilst there is yet no clear consensus of what is covered within social protection, some interventions, which could address HIV related vulnerability, include:
  - transfers (such as food, cash and inputs)
  - education and training (particularly around prevention, nutrition and life skills for orphans)
  - access to financial resources (micro-credit, savings and insurance)
Cash or food? – it depends...

- Cash can be cost-effective, but it needs to take account of relative prices and supply costs of alternatives, financial staff and ‘hidden costs’ of accessing markets. *Choice* may be the main benefit of cash for empowering vulnerable people to respond and manage with their personal priorities and build resilience and status.

- Old age pension and foster care grants can play an important role in providing a longer-term social safety net to affected households and children affected by AIDS.

- Food assistance alone will not address the additional needs from HIV and AIDS, but it can play an important role within a broader range of strategies.

- Combining food with HBC can be practical and well-targeted; food can be nutritionally fortified, but cash may allow access to a broader range of products in markets.

- Food for education has positive impact on absolute school enrolment; in programmes that also add provision of take-home rations for girls, their enrolment rates have been sustained and drop-out rates declined.
Micro finance

- Evidence from microfinance linked to HIV prevention have not been proved to be effective although some well-targeted (e.g. for poor young women) projects show promising changes in behaviour.

- Few current micro-credit programmes reach positive people; some ‘integrate HIV’ by simply combining HIV awareness activities with microfinance projects, without significantly deeper analysis.

- Innovation in microfinance to support HIV-affected or vulnerable people should be encouraged, but with close scrutiny of discrimination that may result in exclusion of those affected by HIV.
Targetting

• Arguments *not to* target on the basis of HIV or AIDS are common and emotive – particularly in relation to children affected by HIV and AIDS – but they make an HIV specific analysis and response more problematic.

• We know that:
  – certain kinds of orphan contexts make them more vulnerable
  – certain marginalised livelihoods create high vulnerability to infection
  – PLWH are often marginalised and, when poor, particularly vulnerable.

• To help *most* vulnerable children, we need to support their household and carers (older carers were until recently neglected), but they also have limitations in reaching people in *the most vulnerable* situations

• Evidence suggests that communities are better than governments or formal NGOs at targeting and reaching those in need, but communities have sometimes proven effective in discrimination and it can also introduce bias and leakage

• Too narrow targeting can precipitate harmful stigmatisation, but too broad targeting tends to diffuse impact
Gaps in current targeting

- Highly vulnerable groups, falling outside of standard social constructs of gender, lifestyles and morality often get missed in community based livelihood and food security programmes.

- Small children and older teens are often ignored in formal targeting, which misses out on important opportunities for addressing gendered intergenerational dynamics in the reproduction of poverty, HIV and gender ‘constructs’.

- Gender differentiation in children is a neglected area and ‘children’ are often seen as a gender neutral category, with the same needs and vulnerabilities.

- Targeting households will not be enough to effectively reach street children and others most vulnerable, such as those selling sex or injecting drugs.
Suggested principles for policy and programme guidance
WHAT’S THE PROBLEM?

• Vulnerability is at the heart of the problem – not necessarily the roots
  – It plays a part, but so do many other gendered aspects and dynamics in different spheres (such as health, economics, culture..)

• Aim for a clear, open, framing of the issue – allowing you to link it to others’
  – Vulnerability is shared between health promotion and livelihoods frameworks. This is a good reason to focus on it as a meeting point in the problem analysis, but be clear how it may be understood differently – and particularly by vulnerable people, whose perceptions are crucial in their agency and vulnerability itself.

• HIV and livelihoods link in both directions, but not symmetrically
  – Be clear that links between the areas are neither symmetrical nor simultaneous.
WHAT’S THE SOLUTION?

• Don’t just turn around the problem tree
  The first point in defining a strategic solution is that it is not the same as the absence, or negation, of the problem, i.e.: $\text{Solution} \neq \sim \text{Problem}$.

• Look beyond vulnerability: Build on peoples’ resilience
  Strengthen people’s ability to respond to situations of vulnerability better and more safely rather than propping up dying livelihoods.

• Be extremely careful in generalising
  Technical solutions are testable and replicable only in “controlled environments”. In real contexts, we know very little about how they might work, or translate into different contexts.

• Learn from what has worked and look for the unexpected
  Mimic HIV’s strategy; look for unexpected solutions and stimulate millions of small innovations, as well as shared learning, at many levels.

• Draw the links with HIV positive people at the heart of solutions
  Integration across strategies can best be done with positive people drawing the locally significant links from their perspective.
WHO? (...to reach)

Reach the right people for the right purpose!

- **Nutritional security** matters particularly for:
  - pregnant mothers,
  - unborn, infants;
  - girl children; and
  - HIV positive people
  
  *Nutritional interventions* mainly become relevant where food security is a problem and where knowledge and skills can be strengthened through relevant channels.

- **Food security** is primarily a matter of sustainable livelihoods, but can be a real problem, and mitigated through *social protection* for:
  - the very poor
  - OVC
  - elderly people and
  - chronically ill/disabled

- **Livelihoods** of particular groups may need particular attention, such as:
  - poor women (widows, divorcees, sex workers);
  - HIV positive people;
  - households with orphans and vulnerable children; and
  - disadvantaged youth (incl. street children/youth)
WHO? ...to reach (contd.)

- “Act across the generations”
  Elderly people do guide and care for children, but it would be naïve to expect them to meet the full needs for sexual and life-skills education of growing children, or to assume that they can or should be asked to assume the full burden of care unaided.

- “Scale matters – in the right proportions”
  Even when an epidemic is generalised, it is essential to reach the most vulnerable groups effectively (for prevention, care and mitigation) along with broader efforts for wider populations groups, but they need heavier investment.

- “The need for integration is proportional to target group focus – and inversely proportional to scale”
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WHERE?

• **Context is more than location**
  You can find some people in some ‘place’ sometimes, but you might engage them better through social ‘spaces’ or reach them in different ways, through their peers, the media or the market.

• “**Mobility connects economies and communities, but liberates or alienates individuals**”
  Factoring in the external linkages in the analysis and programming can be a major improvement, both on vulnerability and resilience.

• “**Meet at the crossroads and services**”
  Aim to reach mobile people in strategic locations, based on a thorough understanding of their mobility and livelihoods.

• **Reach out to the marginalised; make services and resources more accessible**
  Community-based solutions are important, but remember that communities are good at discrimination.
WHEN?

- “Now! – it only gets harder later

- “Don’t just teach a child how to fish, but also about condoms”
  Remember the intergenerational cycles are key and children grow up faster than programmes deliver.
HOW?

• It is not only ‘what’, but ‘how’, you scale up
  It is less a matter of replicating solutions, services packages or projects, but more a case of *scaling up enabling processes*, and access to diverse resources and support.

• Integration – under one roof, between the houses or in synchronised parallel? *(All is fair in love and war)*
  There are benefits and drawbacks with each. Internally integrated programmes by one institution may dilute specific expertise and sustainability; the more co-operative or co-ordinated approaches may trade off tailored joined-up solutions against diversity and flexibility.

• Policy coherence nationally to enable integration locally
  Policy needs to be ‘joined up’ in the sense of inter-sectoral coherence at the macro-level working in tandem and interaction with a plethora of integrated, collaborative and/or co-ordinated actions at multiple levels, where incentives are not perverse.