



Prime-Age Adult Morbidity and Mortality in Rural Rwanda:

Which households are affected and what are their strategies for adjustment?



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Outline

- **Context**
- **Objectives**
- **Data**
- **Results**
 - Prevalence
 - Characteristics of affected households and individuals
 - Effects on agricultural activities of the household
 - Strategies to deal with stress
- **Conclusions**



Context

- **Civil war/genocide leading to social and economic disruption**
- **HIV/AIDS increasing throughout region, including rural areas**
- **Need for understanding and response**
 - Government of Rwanda and other countries
 - NGOs
 - Intl. Organizations
 - Donors



Objectives

- **Identify characteristics of affected households (HH) and individuals**
- **Identify agricultural strategies of affected HHs**
 - Gender dimensions of those strategies
- **Analyze implications of HH strategies for interventions/programs**



Data

MINECOFIN households surveys (6000 hhs)

- **2001 Living Conditions Survey**

MINAGRI households surveys: (1500 hhs)

- **2000-2002 Seasonal Production data**
- **2001 Demographic data**
- **2002 Illness & Death data**



Definitions

Prime age adults: Adults between 15 and 60 years of age

- **“Prime” for economic activity**
- **“Prime” for sexual activity and risk of contracting HIV**

Chronically ill adults: Adults who have been ill ≥ 3 months in past 12 months

Death: Retrospective for 4 years

Illness: Retrospective for 12 months



What differentiates HIV/AIDS from other shocks?

- Prolonged rather than sudden in nature
- Confounding effects of other diseases
- Implications of the HIV status of one member for other members
- Societal reactions (stigmatization)



Results: Prevalence of mortality and morbidity

- Deaths: 222 households (15%)
 - Prime age death due to illness: 67 households (5%)
 - Prime age due to other causes: 26 households (2%)
- Current chronic illness:
 - Prime age adult: 95 households (8%)
- Current chronic illness and a death: 6 hhs (0.5%)
- Two adults chronically ill: 9 hhs (0.7%)

Are HH with death or chronic illness different from other HH in rural Rwanda?

Detail	All other HHs	Type of hhs with difference	Indicator
Land Area	0.16 ha	HHs w/female Chronic. Ill	0.13
Dependency ratios	1.22	HHs w/female Chronic. Ill	0.86 but 2.12 when ill dep.
Number of cattle	1.65	HH with ill or deceased female or with ill male	0.52 or less
Avg. Expenditures	66,500	HHs w/female who died from illness	45,290
Poverty Quintiles: % on lower two	38%	HHs w/female who died from illness	62%

Characteristics of those ill or deceased

Adults deceased due to illness

- More likely to have non-ag activity as primary income source
 - 20% of males who died had such income source compared to 7% overall
- Older than average
 - 37 years compared to 29 years old
 - Only 21% in 15-24 age group compared to 50% overall
- Period unable to work: 23 months (avg.)

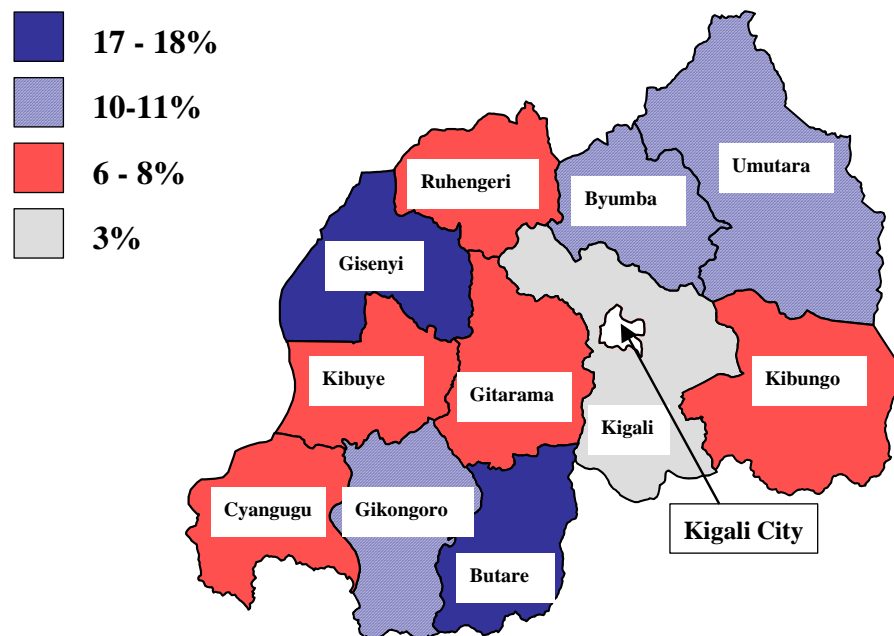
Chronically ill adults

- 72% Female
- More likely to be heads or spouses
- Older than average
 - 36 years compared to 29 years
 - Only 28% in 15-24 age group
- Period unable to work: 5 months (avg)

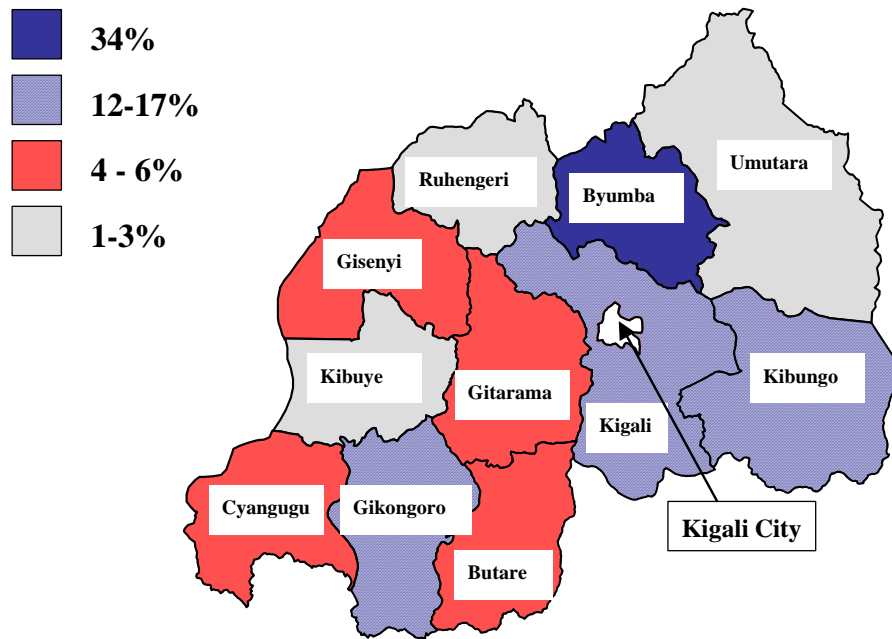
Characteristics of prime age adults who have died or are chronically ill compared to other adults, 2001

<u>Characteristic</u>	<u>Deceased adults</u>	<u>Ill adults</u>	<u>All other adults</u>
Average age	37	36	29
% of people in 15-24 age group	21	28	50
% female	50%	72%	56%
Education: % with complete primary or higher	21	27	26
Household head or spouse (% of adults)	53	77	48
Primary income earning activity is non-agric.	13	4	4
Period unable to work due to illness (average # of months)	23	5	na
Sample counts	73	112	4229

Figure 1: Rural Deaths Due to Illness, (Percent of National Total, by Province)



**Figure 2: Rural Adult Chronic Illness,
(Percent of National Total, by Province)**



Effects of mortality or morbidity on household agricultural activities

Adult death

- Reduced farm labor (59%)
- Reduced farm skills (9%)
- Lost access to land (6%)
- No effects (for those who have been inactive for at least year or whose primary activity was non-ag) (25%)

Chronically ill adult

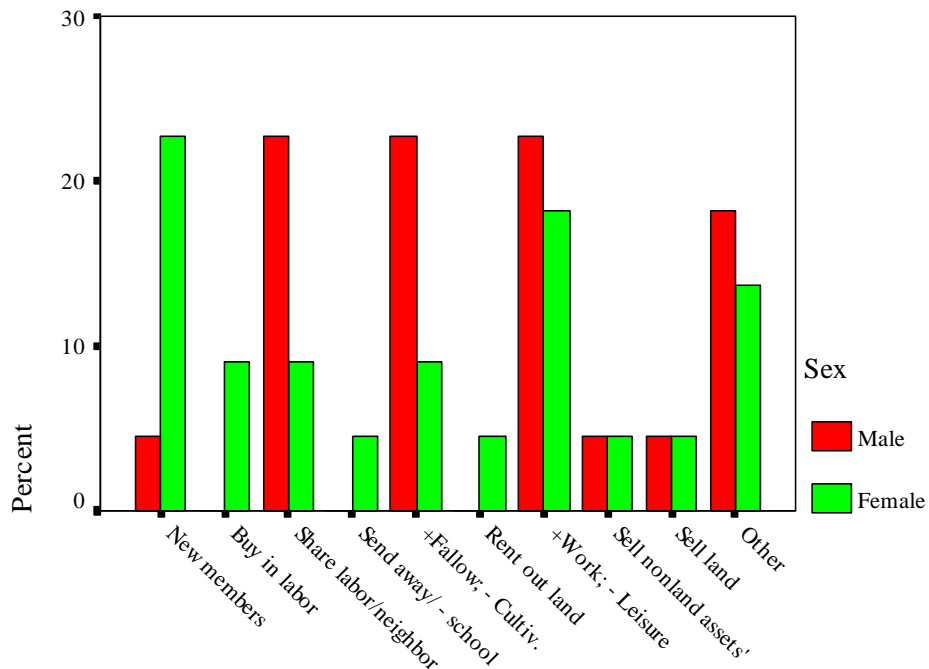
- Reduced farm labor (80%)
- Lost land (2%)
- Reduced farm skills (2%)
- No effects (for those who have been inactive for at least year or whose primary activity was non-ag) (25%)

Strategies

- **Stress on farm labor**
 - Reliance on social networks (shared labor)
 - Hiring/bringing in labor when possible
 - Cultivate less land
 - Possible reduction in labor intensive soil fertility, anti-erosion, productivity measures
- **Assets**
 - Land rental/loaning increase, but constrained by tenure issues
 - Asset sales (land, livestock, particularly during illness)
 - Rely on social networks (loans, gifts) to survive

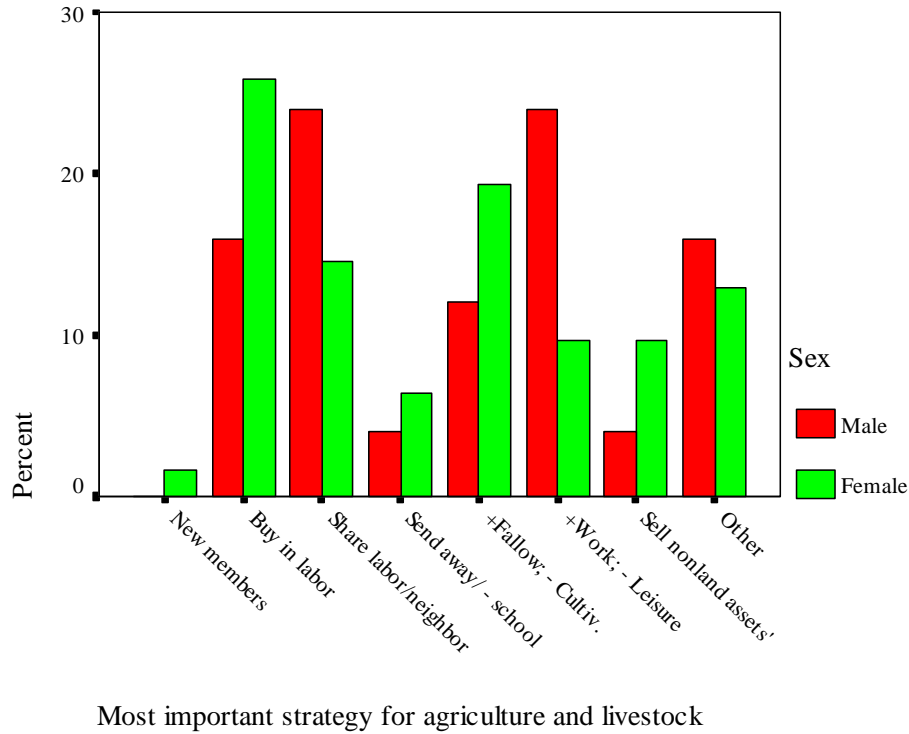
• Are there gender dimensions to these strategies?

Figure1: Most important strategies for households with a deceased prime age adult, for those households with strategies, by sex of person affected



Most important strategy for agriculture and livestock

Figure 2: Most important strategies for households with a chronically ill prime age adult, for those households with strategies, by sex of person affected



Strategies for illness versus death

During illness, the selling of assets and lowering of income earning potential through those sales is more frequent than after a death

Implication:

- Intervene prior to death

Problem: Stigmatization of those with HIV/AIDS and desire of HH to hide it as long as possible

For households with a male death or illness, reliance on social networks is higher

With female death, higher likelihood of bringing in a new member (spouse)

Implication:

- Reinforce rural social networks

Problem: Interventions designed for a specific group may introduce strains on networks



Limitations/Future research

- Panel data is needed to assess the effects of the strategies chosen, and to empirically evaluate the statements on effects and strategies
- However, cannot just look at long term effects for design of interventions, but must try to understand what happens during illness and after death, and design interventions with that knowledge

But in the meantime, work with households to see what they are doing and how successful their strategies are given their environment and asset base, and what interventions might increase their chances of success/survival



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