HIV/AIDS and the Agricultural Sector:

Anticipating the Consequences

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Major Research & Policy Question:

- If Donors Provided an Additional $1 billion to Combat AIDS, how should it be allocated:
  - To ARV treatment?
  - To improved nutrition programs?
  - To agricultural & rural development?
  - To investment in vaccines?
  - To community-driven development programs?

Outline

- PART I: what do we know about how households respond to prime-age death
- PART II: consideration of "response strategies" to improve resistance / resilience

Characteristics of MSU household surveys

Country	Sample size	Year(s) of surveys	Panel or cross-sectional
Kenya	n=1422 n=1266	1997, 2000, 2002	Panel
Malawi	n=420 n=372	1990, 2002	Panel
Mozambique	n=4908	2002	Cross-section
Rwanda	n=1395	2002	Cross-section
Zambia	n=6922	2001, 2004	Panel

Finding #1

Afflicted households/individuals are not random

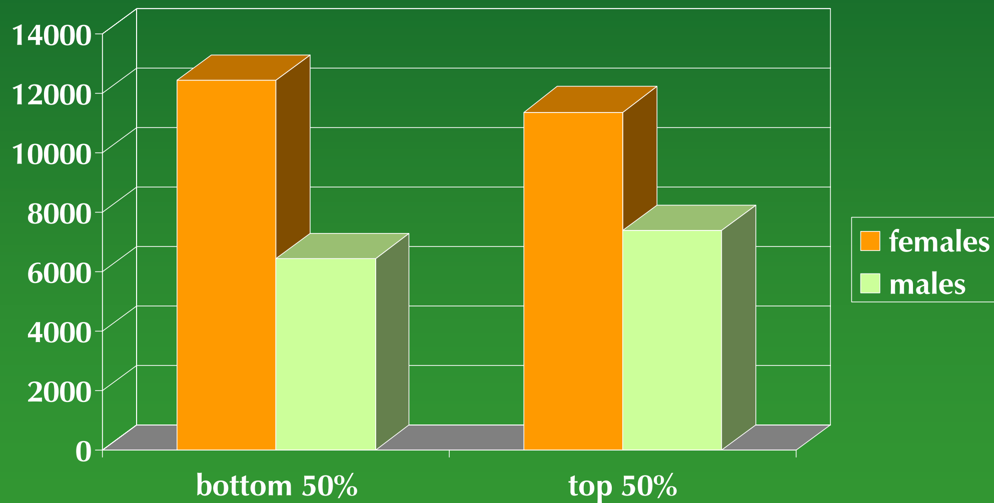
- Early 1990s: positively correlated with income, wealth, education, mobility
- Still the case in some countries (e.g., Zambia)
- Recent evidence in other countries: increasingly concentrated among the poor (e.g., Kenya, South Africa)

Income Status (2000) of Households Incurring a Prime-age Death between 2000-2003, rural Zambia

	Deceased prime-age males	Deceased prime-age females
Poorest 25%	17.0	22.7
2nd quartile	20.9	20.4
3rd quartile	32.2	29.6
Wealthiest 25%	29.9	27.3

Finding 2: 60% of PA mortality is women

Prevalence of PA mortality, by sex and income, Zambia, 2001-2004



Finding 3: Certain factors affect the magnitude of impacts on households

- Strong evidence that impacts depend on:
  - Initial level of household vulnerability (assets, wealth)
  - Sex of the deceased
  - Position in household of deceased
  - Ability of household to attract new members
  - Characteristics of adults remaining in household (e.g, skills, education level)

Finding 4: For afflicted households, cash constraints often become the limiting factor in crop production

- Drawing non-resident members back to the farm can sever off-farm income sources
  - Kenya: death of head or spouse associated with $120 and $260 per year reduction in off-farm income

Finding 5: Effects Most Severe on the Poor

- Very few significant effects detected among households in top half of asset distribution
- Effects on ag production and non-farm income were larger and more highly significant among the poor

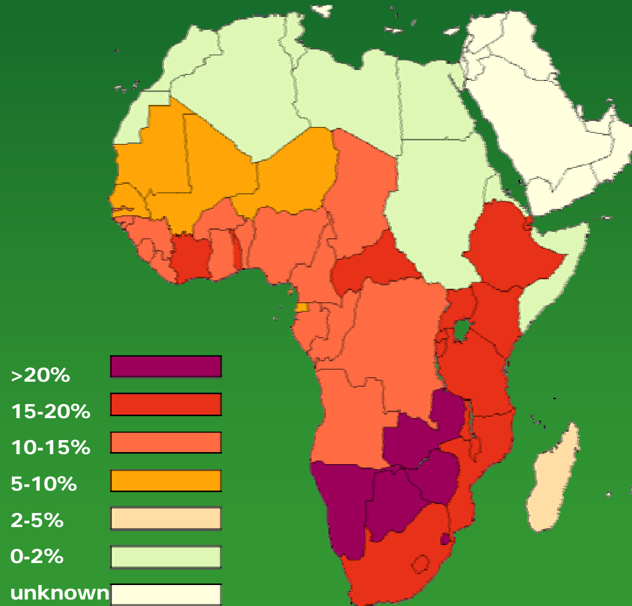
Finding 6: Spread of AIDS is co-factored with:

- Nutritional status
- Quality of basic health services
  - STDs and parasites increase susceptibility
- Extreme poverty leading to risky behavior
- Male violence, alcoholism

Finding 7: HIV Prevalence Rates generally lower than what we thought they were 10 years ago:

	2001 estimates	2004 estimates
Zimbabwe	33.9	24.6
Zambia	21.6	16.5
Kenya	15.1	6.7

HIV Prevalence Rates – 2001 estimates



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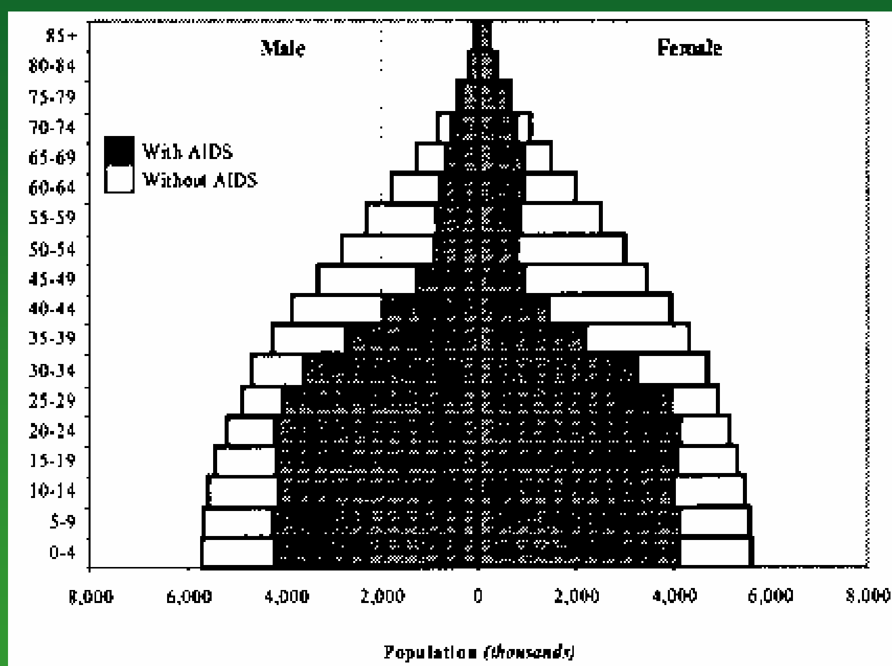
Projected Population in the 7 Most Highly Affected Countries, "With AIDS" vs. No-AIDS Scenario, by Sex and Age Group, 2025.



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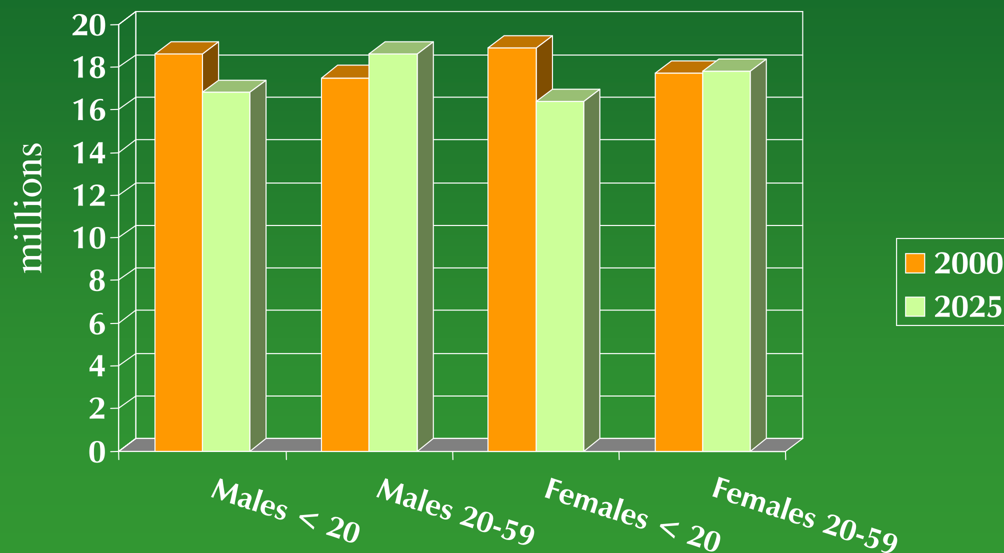
Population Size, 2000 vs. 2025 (projected)

Seven Most Highly Afflicted Countries



Implications - I

- Agricultural production and income growth in Southern Africa will be adversely affected
  - Much smaller effects in West Africa
- Increased vulnerability in the region
  - increased need for emergency response from international community
- Less purchasing power
  - Commercial food import demand likely to decline
- ARV treatment
  - likelihood of mutation
  - only 5% of HIV+ people in Southern Africa will have access even after PEPFAR is in full swing

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Need for appropriate balance between:

- Investing in long-term productivity growth (education, infrastructure, markets, agricultural productivity, health)

  vs

- Targeted assistance to affected HHs
- Poverty and HIV/AIDS are mutually reinforcing → hence pro-poor productivity growth is crucial
- Resources are scarce: which investments provide greatest benefits?

Concluding Thought:

- The international community is responding, but we must be prepared to adopt new responses as we learn more about how to effectively combat the disease and its effects