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**HIV/AIDS in Rural Northeast Thailand:  
Narratives of the Impacts of HIV/AIDS  
on Individuals and Households**

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### **Abstract**

HIV/AIDS is one of the greatest public health and development challenges currently faced by the global community. Amongst reported statistics, such as the estimated 39.5 million people infected with HIV at the end of 2006, the human face of HIV/AIDS is often lost. This paper presents several narratives of the impacts of HIV/AIDS on individuals and households, drawn from a 2003 survey of 71 HIV/AIDS patients in Khon Kaen Province, Northeast Thailand. These narratives illustrate the broad range of impacts of HIV/AIDS, as well as the diverse coping strategies that are employed to deal with those impacts. The narratives also demonstrate how the HIV/AIDS epidemic impacts not just those who are HIV-infected and other members of their household, but also the wider community.

### **Keywords**

HIV/AIDS

poverty

Thailand

### **JEL Classification**

I19

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## 1. Introduction

HIV/AIDS is a global pandemic with critical demographic, economic, and social implications. It is already the fourth leading cause of death worldwide (Lampthey *et al.*, 2002). The pandemic is widespread in poor regions of the world, such as South and Southeast Asia where an estimated 7.6 million people are infected with HIV (UNAIDS, 2006). An estimated 58,000 Thais died from AIDS-related causes in 2001 (UNAIDS *et al.*, 2004).

Amongst reported statistics, such as the 39.5 million people infected with HIV at the end of 2006 (UNAIDS, 2006), the human face of HIV/AIDS is often lost. HIV/AIDS affects individuals, families, and communities, and its long-term effects could be catastrophic. At the simplest level, HIV/AIDS both decreases the income generation capacity of the infected individual and their household (due to increasing morbidity, and eventually death, of the infected individual), and imposes increased medical treatment costs. The human consequences are potentially severe and affect the community as a whole through mechanisms such as decreased social capital.<sup>1</sup> The wider impacts of HIV/AIDS on indirectly-affected individuals have to date received less treatment in the public health or social science literature.

The paper proceeds as follows. Section 2 presents a taxonomy of HIV/AIDS impacts on individuals and households. Section 3 describes the data collection, and Section 4 presents several narratives of the impacts of HIV/AIDS on individuals and households, demonstrating the range of impacts that may be faced. These narratives illustrate a broad range of impacts of HIV/AIDS, as well as the diverse coping strategies that are employed to deal with those impacts. The narratives also demonstrate how the HIV/AIDS epidemic impacts not just those who are HIV-infected and other members of their household, but also the wider community. Finally, Section 5 concludes the paper.

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<sup>1</sup> Putnam (1995, p.67) defines social capital as “features of social organization such as networks, norms and social trust that facilitate coordination and cooperation for mutual benefit”. Coordination and cooperation ensures that social capital is productive in the same way as other forms of capital.

## 2. Describing the impacts of HIV/AIDS on individuals and households

There exists a vast social science literature on the potential and actual impacts of HIV/AIDS, the most salient contributions of which are summarised in a series of three articles in the *Review of Development Studies* (see Barnett, 2002; Barnett and Clement, 2005; Barnett *et al.*, 2001), as well as an extensive recent review of over 150 studies in Gillespie and Kadiyala (2005). Despite this extensive and growing base of evidence on the impacts of HIV/AIDS there has been surprisingly little empirical research on the socio-economic impacts of HIV/AIDS in moderately affected communities in countries such as Thailand.

Further, virtually all studies have only considered the impacts on households or individuals who are directly affected by HIV, i.e. individuals who are HIV-infected and the households to which they belong. Freire (2003) recently expanded the definition of an affected household by considering what she termed the status and temporal dimensions of impacts on households. However, there remain some problems with the past categorisation of impacts.

One problem with past studies concerns the timing of impacts. Most studies consider the individual to be impacted either at the time they become infected with HIV, or at the time they begin to show symptoms of AIDS. However, neither of these are the best categorisation of the 'impact time', which should occur when the individual's behaviour or decision-making is affected by HIV/AIDS. In this paper, the definition of Freire (2003) is further expanded with consideration of the timing of impact. An adverse impact of HIV/AIDS will be defined as follows:

*If an individual was optimising their outcomes prior to the intervention of HIV/AIDS, and HIV/AIDS in some way causes the individual to modify their behaviour thereby reducing their welfare (a Pareto-inferior change), then that individual has been adversely impacted by HIV/AIDS.<sup>2</sup>*

Under this definition, impacts of HIV/AIDS include both gross impacts imposed exogenously as well as behavioural changes induced by the gross impact (coping mechanisms). A taxonomy of the impacts of HIV/AIDS can then be described. These impacts (Types I to V) are summarised in Table 1, and explained below.

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<sup>2</sup> A similar interpretation is taken by Kremer (1996).

**Table 1: A taxonomy of the impacts of HIV/AIDS**

Impact Type	Who is affected	Examples of impacts
Type I impacts	HIV-infected individuals	<ul style="list-style-type: none"> <li>• reduction in labour supply</li> <li>• higher medical expenditure</li> <li>• lower human capital investment</li> </ul>
Type II impacts	Other members of the HIV-infected individual's household	<ul style="list-style-type: none"> <li>• responsibility for medical expenditures of HIV-infected member</li> <li>• lower social capital accumulation</li> <li>• movement of household members to other households</li> </ul>
Type III impacts	Members of households that care for former dependents of HIV-infected individuals' households	<ul style="list-style-type: none"> <li>• common resources shared between more household members</li> </ul>
Type IV impacts	Individuals whose preferences change as a result of HIV/AIDS	<ul style="list-style-type: none"> <li>• behavioural change</li> <li>• lower social capital accumulation</li> </ul>
Type V impacts	Individuals affected by macroeconomic changes brought about by HIV/AIDS	<ul style="list-style-type: none"> <li>• market failures in public goods markets</li> <li>• changes in relative prices</li> <li>• changes in relative wages</li> </ul>

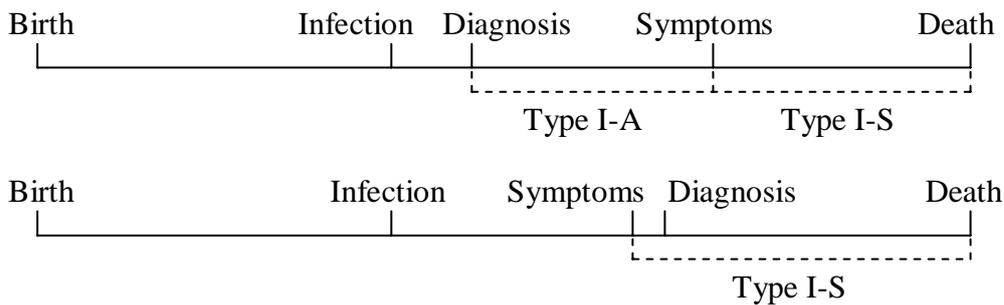
### 2.1 Type I Impacts of HIV/AIDS

A Type I impact affects the HIV-infected individual themselves. The impact on the individual's decision-making occurs from the moment they become informed of the infection, either through diagnosis of HIV infection or the beginning of AIDS symptoms, and may continue in various forms until death. The impact time will then be the earlier of: (i) when the individual is diagnosed with HIV; or (ii) when they begin to exhibit symptoms of AIDS. This can be illustrated with the aid of two simple life cycle timelines - not drawn to scale - for HIV-infected individuals, as shown in Figure 1. It is important to note that an individual will likely exhibit different behavioural responses to HIV/AIDS depending on their health status. This distinguishes Type I impacts into two subtypes: (i) Type I-A impacts on asymptomatic individuals; and (ii) Type I-S impacts on symptomatic individuals.

With Type I-S impacts, the individual will face a reduction in their labour supply due to increasing morbidity as they become ill from AIDS-related opportunistic infections. Along with the significantly higher medical expenditure that probably accompanies illness, these Type I-S impacts significantly reduce the wellbeing of the individual. Further, AIDS-related morbidity and mortality may also interrupt the accumulation of social capital by the HIV-

infected individual. As they suffer AIDS-related morbidity, they become less able to maintain existing social connections or to create new connections with friends, neighbours and relatives. This impact may be even worse in areas where significant stigma is attached to HIV infection. In such areas HIV-infected individuals might find themselves isolated or ostracised by their household or community due to perceived health risks or ‘social evils’ (Busza, 1999).

**Figure 1: Two typical life cycle timelines for an HIV-infected individual**



By contrast, individuals who are informed of their HIV status but are asymptomatic are probably able to continue to be a productive member of their household as normal. The impacts (Type I-A impacts) on this individual might include changes in sexual behaviour or increased medical costs to delay the onset of AIDS. This individual has time on their side – Type I-S impacts will occur in the future, when the infected individual eventually progresses to AIDS. However, the individual may still modify their behaviour due to their expected higher future medical expenses and lower future labour supply. As a coping mechanism, individuals may seek to protect and increase their existing resources in anticipation of a future decline. They might seek out medical treatment before symptoms occur in order to delay the progression to AIDS. This might include traditional medicine as well as public or private medical treatment, including antiretroviral treatment where available.

Further, as the individual’s life expectancy falls as a result of HIV/AIDS, the marginal returns to human capital investment fall, regardless of whether the individual is symptomatic or not. It is possible they will modify their decision about investment in their own human capital in the face of reduced returns relative to current productive activities. This behavioural response to HIV infection is also a Type I impact.

## **2.2 Type II Impacts of HIV/AIDS**

A Type II impact affects other household members living in the same household as the HIV-infected individual. Type II impacts are likely to occur in combination with Type I-S impacts. For instance, as the infected household member becomes increasingly sick, the household might collectively cover the infected individual's medical costs, and eventually their funeral costs. These obligations represent a Type II impact on the uninfected members of the household. Members of these affected households might reduce current consumption in favour of savings in anticipation of their obligation for higher future expenditures. They may also respond by increasing labour intensity, reducing leisure activity, capital investment in labour saving devices, and decreasing investment in human and social capital.

As infected household members become increasingly sick, uninfected household members must increasingly transfer resources in terms of their labour supply to the care of the sick. This transfer of labour may indenture women to their traditional role of caregiver, reducing their mobility and access to resources not provided by men, and reinforcing gender inequality in labour supply and income. Further, individuals who do not directly care for the HIV-infected individual may respond to the reduction in labour supply available to the household as a whole by increasing the intensity of their own labour supply. This is especially the case where the adult members of the household are suffering from AIDS-related morbidity, and their labour supply or food production must be replaced by the other formerly unproductive members of the household. This may involve a reduction in leisure activity, or formerly retired or infirm household members returning to active employment, or children may temporarily or permanently abandon education in order to earn income or work in the family business or farm.

Human capital investment in uninfected members of the household might also be reduced. Not only is formal education affected by this reduction in investment, but the natural transfer of production technology and know-how from adults to their children may also be interrupted. This would result in decreases in production efficiency and potentially lower food or cash crop production or income-earning potential. Lower human capital accumulation will have a lasting effect on the remaining members of the household long after the death of the HIV-infected individual. The reduction in social capital experienced by the HIV-infected

household members themselves possibly also extends to the other members of their household. Also, increasing labour supply by HIV-negative members of the household reduces their leisure time and investment in social capital.

The behavioural responses (Type II impacts) described above assume that other household members are at least somewhat altruistic towards the infected individual. In reality, unfortunately, this is not always the case. In areas where HIV infection is highly stigmatised, it is possible that the uninfected household members might vilify or ostracise the infected household member, particularly if they are seen as some threat to the safety or security of the remainder of the household. In some cases, the flow of common household resources to the infected individual may be restricted, or the infected individual may even simply be ejected from the household (a Type I impact on the HIV-infected individual).

### **2.3 Type III Impacts of HIV/AIDS**

A Type III impact occurs where an individual accepts a responsibility to care for the former dependents of another household in which there are Type I or Type II impacts. The dependents moving into the destination household may be AIDS orphans or other children, the elderly, or the chronically sick or disabled. Often the origin household was forced to find other means of caring for them. However, sometimes children or other dependents might be sent to live with relatives even if the household had the means to support them. This might be true if the AIDS infected person was seen as a threat to their wellbeing (a form of stigma). Any changes to the behaviour of individuals in the destination household that result from this reallocation of care are Type III impacts.

By definition these additional dependents are unproductive or underproductive. This means that more output will need to be generated by the productive individuals in the destination household in order to maintain their level of wellbeing. Most impacts will be similar to Type II impacts, with the obvious exception that the household does not face the obligations to pay the costs of the HIV-infected individual. Type III impacts, affecting those in the destination household, might include decreasing investment in human and social capital, and reinforcement of gender inequality. Where the new dependent is a child, there may be a reduction in the human capital investment in other children in the destination household, as

shared resources are spread across more recipients. The accumulation of social capital will only be negatively affected (as per the Type II impact described earlier) if other households perceive the adopted household member to be a threat to the community. As women are generally the caregivers of dependents, regardless of whether they are HIV-infected or not, the reinforcement of gender inequality is the same as the Type II impact described earlier.

#### **2.4 Type IV Impacts of HIV/AIDS**

A Type IV impact occurs where an individual modifies their decision-making in response to the perceived risks of living in an area where the risk of infection with HIV is elevated. The most common changes in behaviour are likely to be modifications to their leisure behaviour, reductions in social capital investment, and changes in work decisions as a result of changes in the individual's risk perceptions. Unlike the types of impacts previously described, Type IV impacts are not necessarily welfare-reducing since they arise as a result of changes in preferences.

Changes in the perception of risk in the environment are critical to changes in behaviour. If some behaviour is seen as more risky than previously this may induce a change. People may reduce their leisure behaviour or individuals may seek to avoid those that they believe are at high risk of HIV infection, and encourage other members of their community to do the same. Either of these may lead to a consequent reduction in social capital. Individuals might even migrate to other regions where they may perceive themselves to be at lower risk, thereby forfeiting much of their accumulated social capital and incurring significant relocation costs.

#### **2.5 Type V Impacts of HIV/AIDS**

Type V impacts occur through the aggregate effects of changes in the decisions made by others in the economy. There may be market failures caused by changes in the aggregate behaviour of individuals or of government. For example the adverse selection problems in the life and health insurance markets are exacerbated when those in high-risk situations seek to spread some of the risk of their behaviour to insurance companies. The firms' initial response may be to exclude HIV/AIDS from policy coverage. HIV/AIDS policy exclusions raise incentives for life insurance policyholders to manipulate the cause of death, and this behaviour has been observed in many countries, including Thailand (Im-em, 1999). Insurance

firms may then resort to raising life (and health) insurance premiums to cover their added costs, thereby pricing many individuals out of the market.

There may also be failures in financial markets, including the provision of savings and loan services, whether through formal banks, savings groups or microfinance projects, as fewer customers increase the marginal transactions costs of these institutions. If the AIDS epidemic is widespread and the government is unable to maintain capacity, there may even be failures in the provision of important public goods such as healthcare, education, and national security. Further, changes in relative wages may occur if HIV/AIDS morbidity and mortality disproportionately affects certain occupations, and labour demand, labour supply, and labour productivity are likely to be affected. There may also be changes in relative prices if there are extensive Type I and Type II impacts.

### **3. Data**

To illustrate the first three impact types detailed above, data were collected in a survey of 71 HIV/AIDS inpatients and outpatients in October 2003. Respondents were selected randomly from HIV-infected patients attending one of three hospitals in southern Khon Kaen Province in Northeast Thailand, approximately 500 kilometres northeast of Bangkok. Data were collected by graduate students from the Faculty of Public Health at Khon Kaen University, who were experienced in qualitative and quantitative data collection and used interview techniques that placed respondents at ease. This ensured that respondents felt free to answer without being subjected to community norms or expectations. Informed consent was obtained verbally from all respondents prior to the interview, and confirmed with written consent after the interview. Respondents were paid B150 (approximately NZ\$6) to cover transportation and opportunity costs associated with their participation in the study. The research received ethical approval from Waikato Management School and Khon Kaen University.

The questionnaire collected demographic and health data, data on the household that the respondent lives in now (or lived in immediately prior to hospital admission in the case of inpatients), data on the household that the respondent lived in at 'impact time', healthcare costs and coping mechanisms, migration history, risk history and discrimination. These data were supplemented by significant open-ended questions, qualitative data and observations of

the interviewers. Quantitative data collected from the HIV/AIDS patients are summarised in Table 2 below, with comparative data for adults from a representative household survey of 660 households in southern Khon Kaen province (provided in brackets). The average age of the HIV/AIDS patients was 33.3 years (compared with 46.4 for adults from the representative survey), with 49 months since impact time, and on average they had 6.1 years of formal education (compared with 5.5 years for adults from the representative survey). Compared to adults from the representative household, the HIV/AIDS patients were more likely to be women and to be divorced, separated or widowed, and less likely to be currently married.

Because the respondents' household could not be visited for fear of disclosing their status to their community, estimating the wealth of their households was difficult. Several models of household wealth were developed using data from a representative household survey of 660 households, covering all sub-districts in Ban Phai and Phon districts of southern Khon Kaen Province. The simple descriptive household characteristics of the respondents' households could then be used to estimate their household wealth and the probability that their household was in poverty, both at the time of the interview and at 'impact time'.<sup>3</sup>

**Table 2: HIV/AIDS patient survey summary statistics**

	Number	Proportion
<b>Gender</b>		
Male	25	35.2% (44.9%)
Female	46	64.8% (55.1%)
<b>Patient type</b>		
Outpatient	69	97.2%
Inpatient	2	2.8%
<b>Current marital status</b>		
Never married	12	16.9% (11.0%)
Married	18	25.4% (75.1%)
Divorced	5	7.0% (1.7%)
Separated	5	7.0% (1.6%)
Widowed	31	43.7% (10.6%)
<b>Health status</b>		
Symptomatic	29	40.8%
Asymptomatic	42	59.2%

<sup>3</sup> Details of the representative household survey and the wealth estimation method are omitted here for the sake of brevity, but may be obtained from the author.

The quantitative and qualitative data collected were then used to develop the following six narratives, each of which is a case study of one of the interviewed HIV/AIDS patients. These narratives illustrate the range of impacts faced by HIV-infected individuals and others in the community, and the coping mechanisms that they employ. In each narrative the name of the individual has been changed to protect the respondent's identity.

## 4. Narratives

### 4.1 Noi

Noi discovered she was HIV-positive as a result of a routine HIV test at an antenatal clinic seven years before the interview. Her husband, a construction worker, had been an occasional drug user, and had apparently been infected when sharing a needle with some workmates. When she was diagnosed with HIV, she immediately told her mother though she kept this information from other members of the community for as long as she could. Her parents convinced her to separate from her husband, and he and his sister's family moved out of their home.

#### Noi: Key Statistics

Age:	24
Gender:	Female
Marital status:	Separated
Education:	6 years
Time since impact:	7 years
Symptomatic:	2 months
Household size:	↓
Wealth:	↓
Poverty probability:	↑

Noi now lives alone but in the same village as her parents, who care for her and offer support and advice. She has no land, few household assets, and her income is limited to what she can earn by raising and selling chickens and occasionally working for an agricultural wage. She finds agricultural work difficult to come by as her HIV-positive status is known to the other villagers. They found out following a home care visit by a health worker which, in combination with her illness, implicitly revealed to them that Noi was infected with HIV.

Even when work is available, Noi finds it difficult to take advantage of it due to her illness. She spent three nights of the last month in hospital as a result of a secondary infection. Fortunately, her medical expenses have been covered by the 30 Baht Healthcare programme and she has also received money from her family to cover the costs of her treatment and care.

Noi is often too sick to adequately care for herself – she mainly relies on food prepared by her grandmother. Noi’s only child, now seven years old, was fortunately born uninfected with HIV. However, he now lives with his grandparents as Noi finds it too difficult to care for him. It is unlikely that he will ever return to live with her, though she does get to see him often. Noi has experienced some stigma as a result of her HIV infection – although most villagers offer sympathy, some avoid speaking to or interacting with her and seem afraid of her. When she eats with her family, they isolate her dishes for fear that HIV might spread to them.

Noi is significantly worse off as a result of her HIV infection. Before ‘impact time’ Noi was pregnant with her first child, and living in a shared home with her sister-in-law’s family. Since ‘impact time’ she has experienced a significant change in family situation and now lives alone with no land, very few assets, and low income prospects. Her wealth has decreased substantially, and the estimated probability that she is poor is much higher. She is also increasingly sick, and unable to adequately care for herself or her son. Noi’s case illustrates significant Type I impacts (on Noi), Type II impacts (on Noi’s son, and on her family who have the burden of care for her), and Type III impacts (on her parents, who must now care for and raise Noi’s son).

## 4.2 Ping

In 1996, Ping’s husband spent six months working in Bangkok. Four years before the interview (in 1999), he was admitted to hospital with a serious illness, and was diagnosed with HIV. He then admitted to Ping that he had injected drugs during his time in Bangkok, sharing needles with a friend. Ping was tested for HIV and found to also be positive. She immediately told her parents because it really was no secret about her husband’s condition, and she hoped for their help and support. They were supportive, and continue to support her (although her mother has since died).

### Ping: Key Statistics

Age:	42
Gender:	Female
Marital status:	Widowed
Education:	4 years
Time since impact:	4 years
Symptomatic:	No
Household size:	↓
Wealth:	↑ slightly
Poverty probability:	↑

Ping's husband died in 2001, leaving Ping to care for herself and their two children. She remains in the family home, which includes a plot of land five rai in size, large enough to provide rice for the family with some surplus available for sale. Ping's health is good enough that she can tend to the plot of land with little help from others. In addition to income from surplus rice, Ping takes on some agricultural wage work, and weaves silk for sale to traders. She has even managed to save enough money to buy a bicycle for her children.

Ping has been fortunate in that her HIV infection has remained relatively dormant, and she has not yet had to take any medication to treat HIV or any opportunistic infections. Her medical expenses are minimal and not significantly different to what they were before she was infected with HIV. Her HIV-positive status has been known to other people in her village ever since she was diagnosed, and yet she has not experienced any recent stigma or discrimination. She comments that nothing has really changed in the way she interacts with other villagers – they still get along with her and eat food together as usual.

Ping has been extraordinarily lucky (at least relative to other HIV-infected people) in her experience with HIV. She has neither faced increasing medical costs nor decreasing labour supply since 'impact time' because her symptoms have not materialised. However, the death of her husband certainly created some Type I and Type II impacts on Ping's family. Ping has managed to cope by taking on additional work and has kept her family well above the poverty line. Their wealth has even increased slightly since 'impact time'. However, while it appears that this household is no worse off now than before 'impact time', it is likely to be significantly worse off than it was before Ping's husband died. There is now one less productive household member providing for the household, and the children are now being raised without a father.

### 4.3 Mai

Mai and her husband are both HIV-infected, and were only diagnosed one year before the interview. Mai's husband had applied for a new work visa for a Middle Eastern country, and part of the visa process was an HIV test. Mai was also tested at the same time. It is likely that Mai's husband was infected with HIV while working in Singapore a few years earlier. He has since admitted to Mai that he paid for commercial sex services using some of his higher disposable income in Singapore. He then passed the virus to Mai because she trusted him and never thought a condom or other

<b>Mai: Key Statistics</b>	
Age:	38
Gender:	Female
Marital status:	Married
Education:	6 years
Time since impact:	1 year
Symptomatic:	No
Household size:	Same
Wealth:	↑ ↓
Poverty probability:	↑

protection was necessary. Mai's village know of their HIV-positive status. It would have been difficult to keep from them the reason that her husband's planned overseas job had fallen through.

Mai and her husband live with their adult daughter and her husband, and their youngest son (14 years old), none of whom is infected with HIV. Their daughter, who works in a local factory, gives them money whenever she can and their oldest son (now 16 years old) moved to Bangkok for work and to support them. However, he has never sent any remittances and they have rarely been contacted by him since then. Their youngest son is also preparing to leave school and work in Bangkok.

In addition to the small amount of money given to them by their daughter, their village fund recently provided them with a loan of B10 000 to cover medical expenses. However neither Mai nor her husband is experiencing any symptoms of AIDS. It has not directly affected their ability to work or to earn an income. Mai's husband is now unemployed, having been previously employed as a mechanic. They believe that his job loss was unrelated to his HIV infection status. They own ten rai of land, enough land to produce rice for income as well as for the household.

Mai's case again demonstrates a household that has yet to experience the full impact of HIV/AIDS. They appear to not be significantly worse off than they were before 'impact time' – some measures of wealth have increased slightly while others have decreased. The adverse impacts on the household – the loan of B10 000, and the out-migration of the eldest son and impending out-migration of the youngest son – may well have occurred even in the absence of the HIV infection of Mai and her husband. However, there are likely to be future Type I and Type II impacts, particularly affecting Mai's daughter and her husband who will probably face the burden of care for their parents.

#### 4.4 Lek

Lek is just 20 years old, and was diagnosed with HIV two years before the interview during a routine antenatal blood test. She has thalassemia, a genetic defect that results in abnormal blood cells. People with thalassemia require regular blood transfusions, and it is almost certain that Lek contracted HIV through either infected blood products or unsafe needle practices associated with one of the many blood transfusions she has received throughout her life. She has never engaged in any other behaviour that could be considered a serious risk for HIV infection.

<b>Lek: Key Statistics</b>	
Age:	20
Gender:	Female
Marital status:	Married
Education:	6 years
Time since impact:	2 years
Symptomatic:	No
Household size:	↑
Wealth:	↑ ↓
Poverty probability:	↑

Lek's child is fortunately not infected with HIV. Lek and her husband (also uninfected) continue to live with Lek's parents and adult brother. The family has six rai of land and engages in work for the agricultural wage to supplement their income from rice production. The only person who knows of Lek's infection is her husband – they have not informed any other members of the family or their community and as such, the household remains relatively unaffected by Lek's HIV infection (the other household members have had no incentive to change their behaviour). Lek is asymptomatic, and has not experienced any significant medical expenses as a result of her infection.

Lek and her husband have also not changed their behaviour – even to the extent of continuing to engage in unprotected sex, which puts the husband at an extreme risk of HIV infection. They cited a lack of convenience (condoms are not available in their village and must be purchased from the market in town), and the cost (around B15 per unit) as the main reasons they did not use protection.

Lek’s case illustrates the information and risk-evaluation problems that many villagers may face in their decisions surrounding HIV/AIDS risk and behaviour. Despite knowing that Lek was infected with HIV, the couple continued to evaluate the benefits of unprotected sex as outweighing the costs of protection. It is possible that the couple have either seriously underestimated the eventual health and mortality costs of AIDS or have an extremely high preference for the present (that is, heavily discounting the future costs of the morbidity and mortality due to AIDS for the husband). In the future they will begin to face significant Type I impacts, beginning with a change in behaviour to place the husband at lower risk.

#### 4.5 Sanga

Sanga was probably infected with HIV during the several years he spent working as a construction worker in Bangkok and Phuket. He left his wife and two children behind in the village seven years before the interview and migrated first to Bangkok, then to Phuket. In Bangkok he found a regular girlfriend, and also purchased commercial sex services when going out with friends in both Bangkok and Phuket, and had several casual non-commercial sexual partners in both Bangkok and Phuket. It is probable that his extramarital sexual activity resulted in his infection with HIV.

#### Sanga: Key Statistics

Age:	34
Gender:	Male
Marital status:	Separated
Education:	6 years
Time since impact:	3 years
Symptomatic:	3 years
Household size:	↓
Wealth:	↓
Poverty probability:	↓

Three years before the interview Sanga became symptomatic (while working in Phuket) and was tested and confirmed HIV-positive. He returned to his family in Khon Kaen, afraid that his wife and children might also be infected. After they were tested and found uninfected,

Sanga separated from his wife and became a monk at the local temple – his reasoning was partly that he did not want to infect his wife and children, and partly to ‘make merit’ to compensate for the ills of his life. His wife continues to work their small farm (of six rai) and also raises cows. His family visits him often at the temple, bringing gifts of food and clothing.

Sanga is occasionally sick from AIDS-related opportunistic infections, and spent one day in the previous month in hospital. He pays his medical expenses himself, but also receives some support from the temple and from a local government project. Unsurprisingly, measures of wealth are now substantially lower for Sanga. His local community knows of his HIV infection and they provide money and gifts to his wife and children, including helping to pay for their education. Some of the villagers could not believe that he is infected with HIV because he ‘does not look like an HIV/AIDS patient’ and ‘these things could not happen to monks’. Sanga is hoping that he can use his experience and illness to teach young men from his village valuable lessons about HIV/AIDS.

This case study illustrates all of Type I, Type II and Type III impacts, as well as suggesting Type IV impacts. Sanga himself is facing higher medical expenses and has changed occupation and left his family home as a result of AIDS. His family faces Type II impacts, as they no longer receive his income (whether direct income from when he was working at home, or remittances from when he was working in Bangkok or Phuket). Other households in the village have taken on some responsibility to care for Sanga’s children and pay for the education expenses, constituting a Type III impact on those households. Further, Sanga is providing counselling and information for young men in his village which he hopes will change their behaviour to become less risky – a Type IV impact.

#### 4.6 Kannika

Kannika discovered that she was infected with HIV thirteen years before the interview, when she became sick while working in Yala province on the southern border with Malaysia. Over the three years prior to becoming symptomatic of AIDS, Kannika had worked as a commercial sex worker, firstly in Bangkok and Chon Buri province, then in one of the border towns in Yala province. Kannika did not use protection with either her commercial clients or her casual sexual partner because she did not realise that she was at risk of contracting HIV. She also was an infrequent user of methamphetamine, mostly to keep her awake during the long nights.

#### Kannika: Key Statistics

Age:	34
Gender:	Female
Marital status:	Never married
Education:	6 years
Time since impact:	13 years
Symptomatic:	13 years
Household size:	↓
Wealth:	↑ ↓
Poverty probability:	↑

After being diagnosed with AIDS, Kannika returned to her home in Khon Kaen province. Then after three years living with her parents, Kannika again migrated back to Bangkok to work as a waitress. During her two years in Bangkok Kannika had another casual sexual partner and she did not tell him of her HIV infection status. However she did try unsuccessfully to use protection with him, though when he was drunk he would not consent to using a condom, placing him unknowingly at risk of HIV infection. Eventually another illness forced Kannika to return home to Khon Kaen.

Five years after she was initially diagnosed and shortly before she returned home from Bangkok, Kannika finally revealed her HIV-positive status to her family, by sending them a letter. She was afraid to tell them in person because of the perception that would give them of her – her family did not know she had been working as a commercial sex worker. The local community also discovered her HIV infection status on her return to Khon Kaen because her symptoms became easily distinguishable, and over the last five years she has faced significant stigma and discrimination within her village. Though the villagers did not know she had been a commercial sex worker during her time away, she was labelled as such and endures the additional stigma associated with commercial sex work. Many villagers try to avoid contact

with her, and the other members of her family have also experienced similar stigma because the other villagers are afraid of them.

Kannika has never married, owns no land and few household assets, but was able to set up a small village store on her return to the village, using the money she had saved from commercial sex work and her later job as a waitress. However, due to stigma her shop has been quite unsuccessful, with most villagers avoiding both her and the shop.

A recent opportunistic infection has made Kannika sick for over a month, costing around B700 in medical expenses. To pay for this she sold the last of her jewellery (a common form of non-monetary savings for poor villagers) and borrowed B500 from her neighbour, who works as a teacher in the village. With no remaining savings and continuing and worsening morbidity, Kannika must now rely on gifts from her family and neighbour in order to pay any future medical costs. However, measures of wealth show an inconsistent pattern with some showing an increase between 'impact time' and the time of the interview and others showing a decrease.

Kannika has experienced significant Type I impacts, forcing her to move back to her home village earlier than she had planned. Her medical expenses are high and she is experiencing significantly reduced ability to earn income. She also faces significant stigma from her community. Her family, if they begin to provide additional care for her or pay her medical expenses, will then incur Type II impacts.

## **5. Conclusions**

This paper presented a taxonomy of the impacts of HIV/AIDS based on an expanded definition of impact. It then used six narratives drawn from a 2003 survey of 71 HIV/AIDS patients in Khon Kaen Province, Northeast Thailand, to illustrate the range of impacts, as well as the diverse coping strategies that are employed to deal with those impacts.

Type I impacts on the HIV-infected individuals themselves were readily apparent from the narratives, although the nature and extent of these impacts varied widely between individuals. Some had experienced very little impact, while others had faced significant decreases in

wealth due to lower labour supply and increased medical expenditure. Others had changed their behaviour to cope with the impacts. Many uninfected household members experienced Type II impacts due to their obligations for the expenses relating to the illness, and to facing the burden of care for the HIV-infected individual. Type III impacts were less common, although the children of one patient were being cared for by their grandparents, and the family of another were significantly supported by other members of their community. Type IV and Type V impacts were not illustrated in the narratives, although in one case some Type IV impacts were suggested. Through the narratives it is clear how social capital may be eroded by the stigma and discrimination associated with HIV/AIDS. This represents a significant impact on the wider community – even those not affected by Type I, Type II, or Type III impacts.

In the literature on the impacts of HIV/AIDS, there has been little attention to these wider impacts of HIV/AIDS, or to the impacts faced and coping mechanisms employed in moderately affected regions. Further, in amongst the reported statistics on HIV/AIDS, its human face is often lost. HIV/AIDS affects individuals, families, and communities, and this paper has contributed to an understanding of the impacts faced and coping mechanisms employed by affected rural households in Northeast Thailand.

## References

- Barnett, T. (2002). HIV/AIDS Impact Studies II: Some Progress Evident. *Progress in Development Studies*, 2(3), 219-225.
- Barnett, T., and Clement, C. (2005). HIV/AIDS impact: so where have we got to and where next? *Progress in Development Studies*, 5(3), 237-247.
- Barnett, T., Whiteside, A., and Desmond, C. (2001). The social and economic impact of HIV/AIDS in poor countries: a review of studies and lessons. *Progress in Development Studies*, 1(2), 151-170.
- Busza, J. R. (1999). *Literature review: challenging HIV-related stigma and discrimination in Southeast Asia: past successes and future priorities*. New York: The Population Council.
- Freire, S. (2003). HIV/AIDS affected households: status and temporal impacts. In J. Moatti, B. Coriat, Y. Souteyrand, T. Barnett, J. Dumoulin and Y. Flori (Eds.), *Economics of AIDS and access to HIV/AIDS care in developing countries - issues and challenges* (pp. 365-381). Paris: Agence nationale de recherches sur le sida.

- Gillespie, S., and Kadiyala, S. (2005). *HIV/AIDS and food and nutrition security - from evidence to action*. Washington, D.C.: International Food Policy Research Institute.
- Im-em, W. (1999). Mortality trends and levels to verify the AIDS epidemic in Thailand: analysis from death registration statistics, 1984-1997, *Institute for Population and Social Research Publication 239*. Nakhom Pathom, Thailand: Institute for Population and Social Research, Mahidol University.
- Kremer, M. (1996). Integrating behavioral choice into epidemiological models of AIDS. *Quarterly Journal of Economics*, 111(2), 549-573.
- Lamprey, P., Wigley, M., Carr, D., and Collymore, Y. (2002). Facing the HIV/AIDS pandemic. *Population Bulletin*, 57(3).
- Putnam, R. (1995). Bowling alone: America's declining social capital. *Journal of Democracy*, 6(1), 65-73.
- UNAIDS. (2006). *2006 report on the global AIDS epidemic*. Geneva: UNAIDS.
- UNAIDS, UNICEF, and World Health Organisation. (2004). *Epidemiological fact sheets on HIV/AIDS and sexually transmitted infections - Thailand*. Geneva: UNAIDS.