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DECLARATION BY CANDIDATE FOR THE DEGREE OF MASTER IN THE FACULTY OF HUMANITIES

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do hereby declare that I empower the University of Cape Town to produce for the purpose of research either the whole or any portion of the contents of my dissertation entitled

IGNORANCE IN THE TIME OF AIDS: WHAT WE DO, AND DO NOT, KNOW ABOUT THE ABC MESSAGE IN UGANDA

in any manner whatsoever.

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SUPERVISOR'S SIGNATURE DATE

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Ignorance in the time of AIDS: what we do, and do not, know about the ABC message in Uganda

CONTENTS

ABSTRACT

The reduction of the HIV prevalence rate in Uganda during the early 1990s is often attributed to the introduction of an ABC policy. The Ugandan government is thought to have maintained a consistent message that suggested behaviour change in response to the HIV epidemic – encouraging citizens to *Abstain, Be faithful, and/or use Condom*s. It is thought that such a policy provides individuals with behavioural 'options', allowing them to choose a manner of protecting themselves against HIV infection.

Although often used as an example of a successful social policy, many questions regarding the case are still unanswered. This dissertation establishes what is and is not known about the decline in prevalence in Uganda, as well as the role played by the ABC policy in that decline.

The dissertation takes the form of a literature survey using key terms relating to the case. The ABC concept and the issues relevant to its implementation are initially discussed on an abstract level. The dissertation then turns to the implementation of the ABC policy in Uganda and the alleged success thereof. Three key topics are discussed in relation to the case: 1) the available statistical evidence pertaining to HIV/AIDS rates, 2) the available statistical evidence of behaviour change in Uganda, and 3) the national policy employed by the Ugandan government during the past three decades. The ideological debate surrounding the current Ugandan policy is also discussed.

From the analysis of the available literature on the ABC policy and the Ugandan case, it becomes evident that certain things are known about the topic while others are not. The literature shows that a decline in prevalence did indeed take place, but that the extent and timing of this decline are unclear. The literature also shows that prevention messages in the country did suggest a change in behaviour in response to the threat of HIV, but that the content of these messages was not consistent on a national level.

Most importantly, the literature does not support a clear link between the implementation of an ABC policy and behaviour change in Uganda, nor does it clearly support a link between an ABC policy and a decline in HIV prevalence. Further research on the effectiveness – and potential negative impact – of the ABC concept is necessary before it is widely implemented in other countries.

CHAPTER 1 – INTRODUCTION

In 2007, the World Health Organisation (WHO) estimated that there were around 33 million people living with HIV/AIDS worldwide (WHO, 2007). The overwhelming majority of these people were from Sub-Saharan Africa. There are substantial variations in the levels of infection in the different countries within Sub-Saharan Africa. There is substantial variation in the national response to these levels of infection. Despite these variations in levels of infection and response to infection for all countries, AIDS is a deadly epidemic that kills large numbers of people and has the potential to cripple the working economy of the country in which it is pervasive. Additionally, the numbers are growing daily, and the need for a means of reversing national epidemics is more critical than ever.

One means has generated substantial attention in the past decade – the 'ABC' (Abstain, Be faithful, use Condoms) message, which promotes behaviour change. It appears to be a simple, cost effective and easily implemented approach, the greatest evidence of which is attributed to the Republic of Uganda – where infection rates subsided during the 1990s. This paper aims to investigate the Ugandan case: to understand what happened in Uganda to the greatest degree possible, and to acknowledge the areas in which the evidence is uncertain or debated. Ultimately, we need to know what the alleged success in Uganda means for HIV prevention in other regions.

I first became interested in this particular subset of HIV/AIDS research after working with the loveLife prevention campaign in South Africa. Once I began reading the literature on the topic it struck me that the ABC concept had not been analysed and evaluated. The assumptions underpinning the arguments I encountered seemed to stand in contradiction to what I understood about my own experiences of grassroots prevention. My initial work involved a research project for my BSocSc Honours degree – this analysed the characterisation and effectiveness of each element of the ABC.

I was then invited to undertake a research exchange with the University of British Columbia, Vancouver for four months on the basis of my Honours research project. I was fortunate to work with researchers from the Centre for AIDS Excellence at the University. This allowed me to access current research about the illness and about prevention methods that are being implemented around the world.

These experiences culminated in my choice to discuss the ABC and the case of Uganda as a Masters thesis. This thesis consists of the research I have completed throughout my Honours and Masters degrees.

1.1 Background

HIV prevention in Africa

This thesis is *not* concerned with explaining the faster expansion of HIV/AIDS epidemic in African countries when compared to the rest of the world. This topic is more usefully addressed by authors such as those concentrating on partner concurrency as an explanation (Epstein, 2008; Halperin and Epstein, 2004). Rather, this dissertation is concerned with the response that is adopted, in a context where there is an assumption of the presence of high infection rates. Thus, the starting point for prevention will be considered, rather than what caused high rates of infection to occur and the links of such rates, if any, to poverty and other alleged variables. Two features of African countries are highlighted.

Firstly, unlike Western and Asian countries, more African countries experience generalized epidemics, where HIV infection has spread to all levels of the population. In Thailand, for example, HIV infection was concentrated in high-risk populations such as commercial sex workers, with the rest of the general population experiencing far lower levels of risk. In contrast, South African citizens have a high risk of infection whether they are in a traditional high-risk group or not (Green, 2003: 9). The latter form of epidemic is harder to address because the number of people who must

change their behaviour to stop the spread is much higher in comparison to the first form of infection where smaller measures such as introducing condoms in brothel use (a successful strategy in Thailand) may succeed (Punpanich, Ungchusak et al., 2004).

Adding to this difficulty is the general trend of poverty in Africa. The ranking of South Africa as a middle-income country conceals the high levels of inequality within the society – South Africa is ranked as one of the most unequal societies within that income group (UNDP, 2008). In the case of South Africa the middle to high earners are covered by private medical coverage whilst the public sector has insufficient personnel and resources despite the public health sector receiving one of the highest allocations from the annual general budget (Benatar, 2004). Most African countries do not have the financial and human capacity to instantly address the broader development challenges, such as limited incomes, which in turn lead to high-risk behaviours (Parkhurst, 2005). Smaller amounts are available for HIV prevention education and related activities, but the willpower to divert major resources to such activities is often limited in the absence of a proven effective programme.

In sum, HIV prevention has posed a significant challenge to African countries. Few success stories are reported, and the search for a simple, effective means of preventing infection continues. It is into this climate, then, that reports of the successful reduction of HIV infection in Uganda were met with great interest when they appeared in the early 1990s (Iliffe, 2006: 126).

The Ugandan case

The Republic of Uganda has a population of roughly 31.9 million people (UN, 2008). It is a relatively poor country, with a per capita income of $340 (World Bank, 2007), a Human Development Index score that ranks it just above the lowest classification for 'Medium Human Development' (UNDP, 2008), and an economy largely based on agrarian production. Ugandans have also seen many years of conflict in the decades immediately prior to the initial data

suggesting a decline in HIV prevalence – the regimes of the 1970s and 1980s in particular were notorious for human rights abuses (BBC, 2009).

It is in this environment of oppression and civil conflict that HIV/AIDS spread in the late 1970s. The entry of the virus into Uganda is disputed. Whether the virus initially penetrated the border between Tanzania and Uganda during that time, or if the virus was present earlier, it is generally accepted that the virus spread from the rural border areas along main roadways and communication arteries to larger cities, and from there back to previously uninfected villages by migratory workers (Iliffe, 2006: 22; Barnett and Whiteside, 2006: 131).

Although strong evidence of a national epidemic was available by 1983, the country's response to the disease was hampered by violent conflict and the consequent disorganisation of government structures that such conflict brings. It was only when a new government took power in 1986 that a public response was instituted (Iliffe, 2006: 67).

In the early 1990s, evidence became available that suggested a decline in the number of people living with HIV/AIDS. After carefully checking its test procedures, the Ugandan AIDS Control Programme announced with much publicity a national decline in infection in 1995. The evidence was initially met with skepticism. However, the publication of independent academic studies (see Chapter 3 for details of these studies) reinforced the possibility that Uganda presented the first example of the reversal of a national epidemic (Iliffe, 2006: 127).

This decline was largely attributed to the fact that Ugandans adopted a relatively early response in comparison to other African countries once the new government took power in 1986. Openness about the disease and personal experiences of mortality were also highlighted. The greatest attention was given to the 'ABC' policy that invoked behavioural change. The potential for a 'social vaccine' for African countries caused much excitement in the HIV prevention community. It was hailed as a homegrown, culturally sensitive educational message that was proven to have an impact on national

rates (Green, Halperin et al., 2006). The ABC gained popularity amongst and was implemented by a number of governments and NGOs. In addition, the idea of a prevention message that went beyond promoting condom use caught the attention of the United States' government and one of its major funding programmes, USAID. In 2003, USAID adopted the ABC as its official prevention policy, allocating funding quotas to campaigns that promoted the A and B elements alongside condom use.

One would think that this situation would be cause for optimism. The prevention campaigns present in Uganda during the 1980s have collectively been identified as an ABC message. If the development of the ABC policy is more closely examined, certain glaring deficiencies in our understanding of the Ugandan case become obvious. Firstly, there is a misunderstanding of the exact nature of these campaigns; secondly, there is much debate over both the outcomes of these campaigns; and thirdly, the evidence of the statistical decline in infection is ambiguous (Iliffe, 2006: 128-129, 159). Both the exact nature of these campaigns and the outcomes that resulted are debatable. It appears that the strategies which form the basis for adopting the ABC in other contexts is not completely understood, and the use thereof may involve the perpetuation of a number of inaccuracies. This thesis highlights and analyses these inaccuracies in Chapters 3 to 6.

Even if the Ugandan case was not disputed, of greater concern is that many authors move from the assertion that ABC happened (and worked) in Uganda to stating that it should be implemented in other countries. In my view, such a conclusion does not constitute a real analysis of the ABC concept itself, and is simply an argument by example. If one assumes that not all national contexts are identical to that of 1980s Uganda – a reasonable assumption to make – then an example does not necessarily constitute proof of the validity of the concept for the general prevention of HIV.

1.2 Research question

What we don't really know

There are two main issues at hand that must be explored. On the one hand, a cohesive account of the conceptual concerns pertaining to the promotion of the ABC is essential. On the other, it is important that there is an accurate description of the Ugandan case.

This paper will address these two issues in turn. The ABC concept will be discussed in a literature review of the topic in the second chapter. The thesis will then go on to discuss the literature available on the Ugandan case study in order to establish an understanding of some central issues. Firstly, what statistical evidence is available pertaining to the alleged decline in HIV infection rates (Chapter 3)? Secondly, what statistical evidence of behaviour change amongst members of the population is available (Chapter 4)? Thirdly, how has the national prevention policy of Uganda during the period of alleged decline been described (Chapter 5)? And finally, what is the current situation in Uganda in terms of prevention statistics and national policy (Chapter 6)?

Through the interrogation of the case study material it will be possible in the concluding chapter to develop a concise list of what we do, and do not know about the Ugandan case.

1.3 Methodology

The paper responding to these questions is essentially a literature review in two parts – the first is a literature review of the ABC concept itself, while the second is a specific analysis of the Ugandan case study. As such, a literature review method applies to the entire thesis and will be outlined here prior to the introduction of the ABC conceptual literature.

Primary search

The primary search was conducted using a number of electronic databases. The primary search strings were purposefully kept broad to encompass as many articles as possible. Initial reading on the topic suggested that literature

both on the ABC literature review and case study was limited. For the initial literature review, the search string of 'HIV AND ABC' was used. For the case study, 'HIV AND Uganda' was used to cover as much material pertaining to the Ugandan case (not only that discussing the ABC concept specifically). This collection of material was then supplemented by library searches for books and unpublished and non-journal papers.

Exclusion

The broad nature of the initial search led to a large number of articles (over 700) that were not substantively concerned with the ABC prevention policy as a concept or as part of the Ugandan case. This included articles on the antiretroviral treatment abacavir (abbreviated as ABC) – a drug used in the treatment of HIV/AIDS but of no relation to the ABC prevention policy.

After removing abbreviated terms that were not relevant, the remaining articles were examined for the depth of their content relating to the topic. It immediately became evident that many papers mention the ABC or Ugandan HIV/AIDS merely in passing as a single line without providing any argumentation on the topic – a symptom of the manner in which the case has become a popular catch-all example for African success in combating HIV (See Chapter 6). These articles were excluded from the search as they did not contribute to the substantive literature on the topic.

This exclusion left a total of 72 articles to be included in the thematic analysis.

Thematic analysis

The literature was initially approached thematically according to the main argument of each paper. However, the literature on the ABC and the Ugandan case is very disjointed and 'messy' – most papers made numerous, sometimes unrelated and sometimes contradictory points. As an example, Green (2003) asserts that donor nations to Uganda had negatively asserted a "risk-reduction" emphasis, while simultaneously declaring that the country is a

model of alternate strategies in HIV prevention, managing the input of donor nations effectively. The upshot of this is that it is difficult to find papers and articles addressing one specific theme at a time – most grouped two or more themes into an overall argument.

It is also difficult to clearly distinguish papers that focus on the ABC as a concept from those that focus on the Ugandan case. As such, I chose to organise subsections and arguments within the chapters and papers into themes. These themes were then divided into conceptual themes (Chapter 3) and the case study (Chapters 4 through 6). A further consequence of complex thematic arguments present within single papers is that for the most part, papers will be cited in their entirety, as single arguments span the entire paper as opposed to being concisely stated on single pages.

The following chapters present the literature in a clear, thematic manner. I begin with the background literature on the ABC policy and culminate with the current policy situation in Uganda.

CHAPTER 2 – THE ABC

In its simplest form, ABC refers to three preventative behaviours that individuals can adopt to avoid HIV infection: Abstain, Be faithful, and use Condoms (Cohen, 2002). Of course, each of these terms can be unpacked into a number of different epidemiological meanings.

2.1 The ABC as individual behaviours

Abstinence

'Abstinence' refers to the avoidance of sexual activity, usually sexual intercourse in particular. A young person might choose to delay their sexual debut to a later age (primary abstinence) or stop intercourse for a period after their initial sexual activity (secondary abstinence). Okware, Kinsman et al., (2005) explain that evidence from the Masaka cohort study in Uganda shows that for younger teenagers (in the 13-19 year old age group), delayed debut is associated with lower rates of seroconversion (being infected with HIV), suggesting that primary abstinence is a way to reduce overall risk of infection. However, in the 20-24 year old group, delayed debut from their teens is associated with fewer casual partners and greater condom use but not directly with lower rates of seroconversion. In their case, the current sexual behaviour of the individual is important, making secondary abstinence a useful option later in life. Delay of sexual debut is associated with fewer sexual partners over an individual's lifetime (Genuis and Genuis, 2005).

It is important to treat such evidence with scepticism. Scientific trials pertaining to abstinence, particularly those in the United States, often make use of poorly defined variables and thus cannot relate their findings successfully to HIV seroconversion. Moreover, for the relevance of abstinence to be understood relative to other behavioural factors at work, abstinence-only studies would need to be compared to studies including other behavioural variables. This comparison is seldom made (Underhill, Operario et al., 2007).

'Be faithful'/partner reduction

Concurrent partnerships, wherein an individual has one sexual partner in conjunction with one or more other partners, are often considered to be an explanation for the extent of the HIV/AIDS epidemic in Africa. The number of lifetime partners per individual in Africa is similar to that in Western or Asian countries. However, Africans have a higher degree of partner concurrency – usually a few partners that are consistently overlapping in terms of sexual activity – when compared to the serial monogamy and once-off encounters more common in other regions. Concurrency is an important factor because it links sexual networks together, allowing the disease to spread more widely and rapidly through a given population (Halperin and Epstein, 2004). Helen Epstein's work, *The Invisible Cure* (2008), provides a useful model for understanding how interlocking networks may account for the extent of the epidemic in Africa.

"Being faithful" in a most basic sense refers to monogamy in a long-term, often life-long, relationship between two partners who have tested negative for HIV. It is clear that if partners remain strictly faithful to such a union, they would be protected from infection via sexual means. Additionally, faithfulness to a polygamous marriage (as seen in Uganda) and serial monogamy (having one sexual partner per time period without overlapping sexual activity) has a lesser, but similar impact. However, overall partner reduction also has a protective effect – for example, individuals having the same number of unprotected sexual acts, but with fewer different partners, will lower their risk of infection (Okware, Kinsman et al., 2005). Partner reduction was a spin-off effect of the 100% condom use campaign in Thailand – fewer men frequented commercial sex workers (CSWs) and this reduced the overall risk in the population.

Condom use

There are numerous studies that show that condoms are very effective in preventing the transmission of HIV. Davis and Weller (1999) provide a

comprehensive overview of twenty-five published studies on condom effectiveness. They review the evidence presented by these studies and conclude that condoms are generally 87% effective in preventing the transmission of HIV. Pinkerton and Abramson (1997) report similar findings, although they stress the possibility of a range of effectiveness being more applicable. Various other factors, such as quality of the condom and how infective an individual is, will affect the successful prevention of transmission during each individual act of intercourse. Thus the effectiveness of condom use may be increased or decreased by these factors.

In a review of studies presented since 2004, Holmes, Levine et al., (2004) note that while condoms appear effective at preventing the transmission of HIV, the evidence regarding other sexually transmitted illnesses (STIs) is less convincing. The authors also point out the obvious limitation of such studies. It is impossible to set up a control group that would be advised not to use a form of protection – this would clearly violate medical ethics. Thus is it very difficult to say with any certainty that changes in HIV prevalence within a group under investigation is exclusively due to condom use.

There are also considerations of quality and distribution. Green (2003) points out that the statements from studies in the developed world are inapplicable in the African context. High-quality condoms are not always available – especially if they are provided at no or low cost to the user. Available infrastructure compounds this problem. Condoms must be stored and transported in controlled conditions. Unfortunately, due to the infrastructural inadequacies at best or at worst limited infrastructure in Africa, condoms are often left for long periods of time in hot warehouses or clinic storerooms. These conditions cause condoms to deteriorate, reducing effectiveness in preventing infection. Public statements to users of the effectiveness of condoms are therefore misleading (Green, 2003: 93).

In addition to this uncertainty, some studies suggest that the simplistic statement that condoms are 87% (or 60%, or 90%) effective overstate the effectiveness of condoms on average. Stewart (1994) and Okware, Kinsman

et al., (2005) stress the importance of consistent use of condoms. Using condoms inconsistently reduces their effectiveness in preventing transmission. Statements regarding the effectiveness of condoms must take this into account. Additionally, simple statements of effectiveness do not take cumulative risk into account. Mann, Stein et al., (2002) note that the number of exposures an individual has to the virus alters the effectiveness of condoms during these exposures.

Despite these concerns, condoms remain essential in combating infection during high-risk sexual encounters. For individuals who are unable or unwilling to take other preventative action, a barrier protection method is the best possible option available. It is this necessity that leads many officials to (often controversially) promote condom use to high-risk groups but not to the general population as a whole.

For the purposes of this paper, abstinence will be taken to refer to delay of sexual debut; being faithful will be defined as overall partner reduction; and condom use will refer to the "ever use" of condoms.

2.2 The ABC as a packaged message

The key point of a packaged ABC message is to provide individuals with a range of risk mitigating options. The ABC strategy operates on the assumption that individuals can choose the appropriate behavioural response according to their personal level of risk. The elements are generally presented in a rank order, presumably from the most successful in avoiding infection to the least. Many authors state this order explicitly as: 'First, abstain from sex. If you cannot abstain, stick to one partner. If you can't stick to one partner then you have to use a condom' (Green, 2003: 153-154). A is considered to be the most effective or 'safest' option – if one is not having sex then one cannot contract HIV. B is the next 'safest', as fewer partners decreases the chance of transmission. Finally, C is the least protective option, as it is not 100% safe (Genuis and Genuis, 2004).

2.3 The ABC as a strategy

A final conception of the ABC that arises in the literature – and the most dominant conception as it pertains to the Ugandan case – is of an overall ABC 'strategy'. In this case, the package of behavioural options need not be promoted together as a single message. Different groups participating in HIV prevention education as a whole are able to promote different elements of the ABC. One group may choose to focus on abstinence and being faithful, while another may choose to promote and provide condoms. In this way, a variety of messages from different sources work together as a whole to provide comprehensive information to the population (Okware, Kinsman et al., 2005). In the case of Uganda, it is suggested that allowing religious groups to focus on A and B interventions without including condom promotion allowed these groups to participate more successfully in national prevention policy (Allen and Heald, 2004). Groups that are forced to promote all three elements may feel alienated from the process.

Targeting

Okware, Kinsman et al., (2005) and Genuis and Genuis (2004) highlight an additional feature of the literature on an overall ABC strategy. Given the association between abstinence and delayed debut in young people, as well as between condom use and high-risk sex, much of the literature suggests that elements of the overall collection of messages should be targeted at specific groups. While a packaged ABC message promotes all the options to a given set of individuals, a targeted strategy emphasises specific elements to specific subsections of the population. Specifically, abstinence (delayed debut) should be the focus for young people, while being faithful (partner reduction) should be promoted for members of the general population who are sexually active. Condom promotion is considered as best reserved for high-risk populations such as CSWs, injecting drugs users (IDUs) and the like.

An interesting contradiction arises in the literature regarding targeting and comprehensive access to information. As an example, the group statement in

The Lancet suggests that a targeted strategy – A for the youth, B for sexual active individuals and C for high-risk groups – should be the primary focus of prevention education. Nevertheless, it also calls for comprehensive information to be provided to the population on all of the elements (Halperin, Steiner et al., 2004). One would presume that a focus on specific messages for specific groups would not provide such comprehensive education, as the emphasis of one element for a targeted group necessitates the downplaying of other messages. The literature on this subject appears to ignore or downplay this concern. The following section discusses the conceptual concerns associated with both targeted and untargeted applications of the ABC.

2.2 Conceptual concerns

Green (2003: 298) suggests that the ABC is a most effective and egalitarian policy as it provides a range of options that individuals may choose to protect themselves from HIV. However, the reality of individual experiences of HIV may prevent them from being able to access all of the options, while it is possible that the way in which the ABC policy is presented may bias the choices of individuals toward one or another option. This section will discuss the concerns regarding the normative expression and the practical implementation of the ABC policy. Specifically, these concerns are that the policy may be ineffective, that it is an inaccurate representation of protective options, that it is open to misunderstanding, that it excludes some risk groups and that it promotes stigma.

2.2.1 Gender and power

The nuanced issues of gender and power differentials in human relationships and preventative behaviour are difficult to capture within the scope of this paper. The points highlighted here are but a sample of the arguments associated with this field.

A critique of ineffectiveness arises largely from the more feminist elements of HIV prevention literature. The basic thesis is that while the ABC policy does provide a range of suitable options from which individuals may choose. This choice becomes moot in the cases of individuals who do not have control over their sexual behaviour.,This is particularly true for women and the context in which they make choices, as they are often not capable of negotiating options such as condom use or able to refuse sex (Murphy, Greene et al., 2006)

In some cases, this is simply a function of abuse and the fear of reprisal. Martin and Curtis (2004) and Schleifer (2003) explain that options such as abstinence lose their practical possibilities for implementation in situations where women are subjected to forced sex – a widespread occurrence in both the developed and developing world. Moreover, legal systems are often prejudiced away from prosecuting such crimes, leaving women without a legal avenue to reinforce their rights to bodily integrity. Ultimately, however, instances of forced sex are considered to be symptomatic of a much larger issue of unequal power relations within sexual relationships. The gendered power disparities within relationships speak to every element of those relationships – including sexual relations – and limit the capacity of women to enforce their protective choices.

Moreover, the socio-economic situation in which many developing-world women find themselves further limits their practical opportunity to protect themselves. While commercial sex workers are often considered as being at risk, a larger context of sex in exchange for gifts, food, money or other rewards occurs beyond the official scope of commercial work. Singh, Darroch et al., (2004), Schoepf (2004) and Dworkin and Ehrhardt (2007) note that women may rely on sexual relationships to furnish them with material support in situations of poverty and limit their capacity to refuse risky sexual practice for fear of losing sources of material income.

Ultimately, the sense here is that the ABC concept may be acceptable in theory, but practically not applicable in many partnerships. The ABC behaviours should perhaps be viewed as outcomes, and not as a strategy, for

improving the sexual health of women. These deeper issues are not a direct critique of the ABC concept, but rather of the lack of attention paid to existing social norms and contexts limiting individual behaviour (Murphy, Greene et al., 2006).

2.2.2 Rank order and inaccuracy

Another critique goes further than the ineffectiveness concerns by questioning the assumption that the ABC concept itself is an acceptable depiction of a set of preventative options. A common query about the ordering of the ABC options is whether the hierarchy is an accurate one. As noted earlier, whether the message is being applied in a comprehensive or targeted fashion, a specific rank-order is implied by many authors. A is considered to be the most effective or 'safest' option – if one is not having sex then one can not contract HIV. B is the next 'safest', as fewer partners decreases the chance of transmission. Finally, C is the least protective option, as it is not 100% safe (Genuis and Genuis, 2004).

Abstinence is usually promoted as a '100% effective' option. Dailard (2003) raises some questions about the effectiveness of abstinence as a preventative option. It is a 100% effective option when used perfectly and consistently – its 'ideal use' effectiveness – in the same way that condoms have an effectiveness rate associated with correct and consistent usage. Yet an evaluation of condom effectiveness also includes a 'typical use' component, where condoms are used incorrectly or inconsistently. Should a 'typical use' use component also be included in evaluations of the effectiveness of abstinence as an option? An individual may abstain for a long period of time but 'slip-up' every now and then. He/she is still adopting abstinence as a preventative action, but the average effectiveness of the option is decreased (Cohen, 2003; Murphy, Greene et al., 2006). The difficulty here is that once someone 'slips up' they are generally considered to no longer be abstaining. Given the lack of clarity on this issue, it is incorrect to present the ABC elements in a clear order of effectiveness.

2.2.3 Social meaning of 'faithfulness'

Another critique attacking the desirablity of the ABC concept itself is the contention that it is open to widespread misunderstanding. The basic argument is that the elements of the ABC may well be accurately represented on a normative level, but in practice, the meaning of the individual elements may be perceived in an inaccurate manner. The following authors consider two ways in which this may occur.

Definitions of faithfulness

In the first instance, the meaning of the individual elements may simply be misinterpreted. This is a common concern when it comes to moving HIV interventions from one context and applying them in another. As Mash (2006) reports, a study presented to the Toronto AIDS conference highlighted misunderstandings of the term 'faithfulness'. Respondents reported that they thought of 'faithfulness' as a desirable character trait, that is, describing a person who is loyal or has a lot of faith in their partner. This is plainly different from the intended meaning, and local understandings must be considered when implementing the ABC concept.

HIV in marriage

In the second instance, confusion may arise when the ABC elements are targeted as individual choices, while in reality the sexual health of individuals is also dependent on their partners' behaviour. Sinding (2005), Schoepf (2004) and Murphy, Greene et al., (2006) argue that promotion of faithfulness ignores the risk posed to individuals by their partners. While choosing the B option is indeed a protective action, individuals must be made aware that it will only be effective when couples are mutually monogamous. Since social norms often permit men to have more partners than women, it is often women who are at greatest risk in this situation (Csete, 2004). Unfortunately, the risks faced by steady partners are largely ignored by many prevention campaigns, particularly those developed by faith-based organisations (Schoepf, 2003).

Indeed, 50% of new infections that occur worldwide occur between regular partners or spouses (Dworkin and Ehrhardt, 2007), suggesting that the promotion of faithfulness *per se* is a false assurance when not combined with a message of mutual faithfulness. A simplistic ABC message does not readily capture this situation of partner-based risk.

2.2.4 Targeting and risk groups

The specific understanding of the ABC as a package strategy in which certain elements can be promoted to certain subsets of the population is subject to extensive criticism in the literature. This critique has gained much momentum following the decision by PEPFAR to limit condom distribution to high risk groups and promote the A and B options to the general population (Murphy, Greene et al., 2006). The overall argument is twofold: firstly, it is not likely to be possible to identify specific risk groups in generalised epidemics; secondly, even if there are risk groups that stand out in populations, there are nonetheless groups of people that fall into the general population but still need the options that are targeted to risk groups.

The defining of 'risk groups' is difficult in the context of generalised epidemics in the developing world (and particularly in some African contries). Countries with a high background prevalence (such as South Africa) merge the supposed risk and general population (Schoepf, 2003). This is largely a function of the socio-economic context in which people live, which affects both the underlying sources of risk – such as poverty increasing the instances of transactional sex – and an individual's perceptions of their level of risk (Barnett and Parkhurst, 2005). Thus, choosing which groups are at a higher risk than others, and thus which elements to promote to them, becomes practically impossible.

Moreover, even if it were possible to group most of the population into broad risk groups, targeting always runs the risk of ignoring the protection needs of some individuals. As Wilson (2004) notes, a protective element that has the greatest impact nationally will not necessarily be the best option on an

individual level. If a campaign seeks to protect members of a population, it presumably can not simply ignore parts of that population, no matter how small they might be. Various authors, including Cohen (2003), Okware, Kinsman et al., (2005), and Cohen and Tate (2006) highlight a variety of individuals who would be left out, including serodiscordant couples who are faithful to one another, once-off casual partners, members of the general population who wish to limit the spread of other STIs, and the like.

Furthermore, risk groups are dynamic. The life circumstances of individuals change as time progresses. Cohen (2003) adds that people need different messages as they go through life, because they are moving from one risk group to another. She asks whether a young woman who has abstained thus far must wait until she is actually sexually active before being able to obtain information about condoms – a risky situation in itself. Thus, individuals in transition between different groups of risk, and also those who are in overlapping risk groups, are left out of a targeted ABC strategy.

2.2.5 Stigma

A final critique is raised in objection to both a rank-ordered comprehensive ABC message and a targeted ABC strategy. The potential for generated or reinforced stigma in both cases is worrying. A targeted strategy that highlights condom use for high risk groups (especially with reference to commercial sex work) and not to the general population may generate or worsen existing stigma toward the use of condoms and make people hesitant to use them (Martin and Curtis, 2004).

Additionally, in the case of a non-targeted message, a further concern arises in respect of the order in which individuals are encouraged to adopt the behaviours even if the rank order *is* accurate. As with targeting, a strategy which advocates condom use as a 'last resort' is likely to reinforce existing stigmas about condom use. The ordering of the ABC elements is often presented as implying a moral or ideological priority. Condom use is implicitly limited to people who are unable to control themselves or have poor sexual

morals (unable or unwilling to choose A or B). Condom use is not given a place in regular partnerships, which are supposed to be 'faithful' relationships (Ferguson, Pere et al., 2004; Pulerwitz, Lillie et al., 2006; Sinding, 2005; Schoepf, 2003).

Reinforcing stigma in either of these ways may discourage individuals from choosing this option, even if this is the best option considering their unique situation (Sinding, 2005). Many studies report that individuals are afraid to ask their partners to use condoms, as it implies that they don't trust their partners. This is especially disturbing when one considers that women who are faithful to their marital relationships are at a great risk of HIV infection (Schleifer, 2003; Sinding, 2005). These women can not ask their husbands to use condoms for fear of being labelled prostitutes or untrustworthy individuals or implying that their husbands/partners are unfaithful. Promoting the ABC options in a rank-order may thus be both inaccurate and detrimental to prevention efforts.

A review of the literature suggests that the ABC policy is not as sound as it is often purported to be. The concept may simply be inapplicable in real world settings, or it may be harmful in and of itself. Concerns of stigmatisation and misunderstanding must be taken seriously if an effective prevention message is to be developed. Perhaps this is what leads Merson (2006) to suggest that prevention efforts move away from the ABC slogan and adopt a less judgmental approach.

Yet, despite the arguments outlined in the literature on the ABC, numerous governments and organizations continue to argue for its adoption. The impetus toward implementing a targeted ABC strategy is closely linked to the Ugandan case. However, before one can analyse the relationship between the ABC strategy and the Ugandan success, the actual extent of that success, and the cited causes thereof, must be discussed.

CHAPTER 3 – THE CASE OF UGANDA: A DECLINE IN PREVALENCE?

Statistical data in the Ugandan case makes use of two specific epidemiological terms referring to the spread of the virus. HIV *prevalence* refers to the proportion of the population currently infected with HIV in a population – this is the proportion of people living with HIV and AIDS (PLWHAs). It is expressed as a percentage of the total population. HIV *incidence* refers to the rate at which new individuals are being infected with the virus in a given time period (Barnett and Whiteside, 2006: 53).

It is difficult to draw specific conclusions about incidence trends from prevalence data. Studies by Nunn, Mulder et al., (1996) and Wawer, Serwadda et al., (1997) demonstrate that prevalence might decline without a concurrent decline in incidence. Prevalence in the general population is not only a result of incidence rates, but also of other factors such as mortality (which decreases prevalence). Incidence will decline if saturation (a reduction in the available pool of new individuals to be infected as prevalence rises) is evident.

However, incidence trends are often extrapolated from antenatal prevalence data in younger cohorts. Prevalence in 17 to 24 year olds is often taken as a proxy indicator for incidence because factors such as mortality and saturation are unlikely to have a substantial impact on this group. Mortality is not as influential because young people have generally contracted the disease recently enough not to progress to being AIDS-sick by the age of 24. Additionally, the pool of new individuals in this cohort available for infection is constantly replenished as additional young people become sexually active, while infected older individuals in the cohort move up to another age bracket. Saturation is therefore similarly less of a concern (Parkhurst, 2002). It is thus assumed that changing prevalence rates amongst young people can suggest changes in HIV incidence.

The two long-term cohort studies in south-western Uganda collected information on both prevalence and incidence – the first concrete

measurements of declining incidence were published in 2002 (Mbulaiteye, Mahe et al., 2002; Parkhurst, 2002).

Of great concern is the manner in which data regarding incidence and prevalence in Uganda is cited as widely variable simplistic percentages. The authors of scientific studies are careful to cite the sources of their data. However there are serious limitations to this data and to the statistical significance associated with particular results. Many other authors cite percentages that appear to have no bearing on the reality of the Ugandan case. Okware, Kinsman et al., (2005) assert that national prevalence in Uganda fell from 30% to 10% in the early 1990s, while Barrett (2007) suggests a similar fall to 14%. Allen (2006) notes that the United States global AIDS coordinator cites figures of a 30% to 6% decline. Yet, there is little to suggest that national prevalence in Uganda *ever* reached 30%. In fact, the decline from 30.2% to 10.5% only occurred at one antenatal site in Mbarara (Parkhurst, 2002). It is for this reason that this thesis undertakes a comprehensive review of the available data from Uganda in order to understand the scope and timing of the change in the country. A number of different sources contribute to the overall data – the following sections will discuss each of these sources and subsequently discuss the criticism associated with their use.

3.1 Antenatal data (prevalence)

System

Most of the early data from Uganda documents trends in prevalence arising from antenatal surveillance sites – pregnant women attending clinics for antenatal care are tested for HIV through anonymous, unlinked samples. Pregnancy implies that an individual is sexually active; pregnant women thus reflect prevalence in a group within the sexually active population. In Uganda, the data is collected in a manner such that it is as regionally representative as possible (Okware, Opio et al., 2001).

Analysis

The data from antenatal clinics is summarised in Table 1 (Parkhurst, 2002).

	Date (year)									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Site										
Nsambya	24·5	25	27·8	29·5	26·6	21·8	16·8	15·4	14·6	13·4
Rubaga	..	..	27·4	29·4	24·4	16·5	20·2	15·1	14·8	14·2
Mbarara	21·8	23·8	24·3	30·2	18·1	17·3	16·6	15	14·5	10·9
Jinja	24·9	15·8	22	19·8	16·7	16·3	13·2	14·8	11	10·5
Tororo	..	4·1	12·8	13·2	11·3	10·2	12·5	8·2	9·5	10·5
Mbale	3·8	11	12·1	14·8	8·7	10·2	7·8	8·4	6·9	6·3
Kilembe	..	..	..	..	7	16·7	11·1	10·4	8·5	..
Pallisa	..	..	..	7·6	5	1·2	..	..	3·2	2·6
Soroti	..	..	..	..	9·1	..	8·7	7·7	5·3	7·7
Matany	..	..	..	..	2·8	7·6	..	2	1·6	1·3
Hoima	..	..	..	..	..	..	..	12·7	9	5·4
Kagadi	..	..	..	..	..	..	..	..	10·3	11·5
Mutolere	..	4·1	5·8	..	4·2	..	3·6	2·6	..	2·5
Moyo	..	..	..	..	..	..	..	..	..	3·2

Reproduced from reference 4 by permission of Ugandan Ministry of Health.

Prevalence (%) of HIV-1 among individuals who attend antenatal clinics[4]

Green, Halperin et al., (2006), Hogle, Green et al., (2002), Asiimwe-Okiror, Opio et al., (1997), Kirungi, Musinguzi et al., (2006), Stoneburner and Low-Beer (2004) and Okware, Opio et al., (2001) note that antenatal prevalence peaked in 1991-1992. By 1995, a significant decline in prevalence had occurred, which continued its downward trend to 2002. The decline was particularly pronounced between 1993 and 1997 (Gray, Serwadda et al., 2006; Kilian, Gregson et al., 1999). While there are some differences in exact figures from different sites – urban sites in particular exhibited higher prevalence than rural sites – the general trend in the data was one of a peak in the early 1990s and a significant decline thereafter.

What do these authors say about incidence? Stoneburner and Low-Beer, (2004) posit that by 1995 there was a significant decline in the HIV prevalence in younger antenatal cohorts.. As suggested earlier, this may reflect a prior decline in incidence.

General problems related to antenatal data

There are some issues to be considered when using antenatal data to estimate national HIV prevalence. Firstly, HIV+ women are less fertile than

HIV- women, and thus less likely to need antenatal care. Antenatal data may *understate* the national prevalence rate as a result of this bias (Moore and Hogg, 2004; Allen, 2006). However, it is generally accepted that antenatal data *overstates* national prevalence, particularly as a result of the usually urban and peri-urban location of sentinel sites (Parkhurst, 2002; Allen, 2006).

Furthermore, antenatal sentinel sites in Uganda are largely concentrated in the south of the country, with early data coming almost entirely from Kampala and the rural south-west (Figure 2). Six sites clustered in the north-west were opened in 1993, and only one opened in the north-east (Allen, 2006). Generalising the data from these limited sites to a national prevalence figure must take account of the regional bias evident in their location.

Strickler, Hoover et al., (1995) highlight a further issue regarding geographical generalisability – antenatal clinics may pick up on specific local trends that distort the overall data. An example is the migration of specific risk populations into and out of urban centres for antenatal treatment – they highlight a case where CSWs from a town choose to move to another area while receiving antenatal treatment, returning at the end of their pregnancy. The data in the antenatal clinic thus tracks the treatment of a high-risk group, and is not representative of the general population. This is a very specific case, but nonetheless highlights a possible concern specifically related to antenatal surveillance data.

Gray, Serwadda et al., (2006) also draw specific attention to the recorded declines in the Kampala sites. The decline in prevalence between 1993 and 1994 is so pronounced that even if incidence in the youngest cohort was near zero, it could not explain the decline. In a young cohort, the additional effect is unlikely to be due to a spike in mortality. They suggest that the change is likely to have been caused by a change in surveillance methods in these sites and that the importance of the data must not be overstated. Ultimately, there are problems with all manner of data sources – nevertheless, antenatal surveillance data is recognised as one of the best (and in some cases only)

sources of data available, especially once it has been adjusted for mortality rates in the area.

3.2 Cohort studies (prevalence and incidence)

The results from two long-running cohort studies in south-western Uganda are available in addition to the antenatal surveillance data. The findings from these cohort studies turned the Ugandan case into a success story overnight (Allen, 2006). The sites are located in roughly the areas where the penetration of the virus into the country was first detected and were studied with the help of the United Kingdom Medical Research Council (MRC). One of the studies is located in the Masaka district, adjacent to the shores of Lake Victoria. The study initially included 15 villages in the district, with another ten added in 2000 (Mbulaiteye, et al., 20002b).

Three studies on the data from this cohort were reviewed. Each made use of the system of taking a census of demographic data and a serosurvey (HIV testing of the members of the cohort) each year. Over seven years (1989-1996), Kamali, Quigley et al., (2003) found that prevalence had declined from 8.2% to 6.9%. The study by Mbulaiteye, Mahe et al., (2002) supports this finding, noting after a spike in prevalence in 1993, a reduction in prevalence occurred particularly in the youngest age group. Again, falling prevalence in the youngest cohort, which is less affected by mortality and saturation, suggests that incidence in the cohort is also falling (Mbulaiteye, Mahe et al., 2002).

In the case of the cohort study, however, such a decline in incidence may be confirmed by using the annual data to estimate annual seroconversion. Although the study by Kamali, Quigley et al., (2003) finds a non-significant decline in incidence between 1990 and 1996, a 10-year data published by Mbulaiteye, Mahe et al., (2002) showed a clear downward trend in incidence over the period between 1989 and 1999. Okware, Opio et al., (2001) analysed nine years of data between 1990 and 1998 and documented a decline in

incidence from 7.6/1000 pa to 3.2/1000 pa. They noted that the decline appeared to be more pronounced amongst men and in younger age groups.

Rakai MRC cohort

The second study is situated in the Rakai district on the border shared with Tanzania. Initial results reported by Wawer, Serwadda et al., (1997) indicated a decline in HIV prevalence between 1990 and 1992 without a concurrent decline in incidence – incidence for the overall group remained stable. A further set of results, released at the World AIDS Conference in 2005, suggested that the continued prevalence decline after 1994 remained unlinked to a decline in incidence (Wawer, Gray et al., 2005). However, Green, Halperin et al., (2006) and Genuis and Genuis (2005) suggest that these results are not yet peer-reviewed or confirmed.

A further point on the studies is that the peaks in prevalence that occur between 1991 and 1993 suggest that, if an incidence decline is responsible for the downward trend in prevalence, such a decline in incidence must have occurred sometime *before* that date. Low-Beer (2002) notes that the Mbulaiteye, Mahe et al., (2002) study showed a high prevalence to incidence ratio at baseline – that is, in the first set of data collected from the cohort in 1989, prevalence was substantially higher than incidence in the population. A dramatic decline in incidence to account for the decline in prevalence from 1992 onwards probably occurred in the late 1980s. However, neither the original nor the new data from the Rakai cohort refers to a period after the major decline in incidence – the lack of concurrent incidence decline post-1994 does not challenge the late-1980s incidence decline hypothesis (Wawer, Serwadda et al., 1997; Green, Halperin et al., 2006).

General problems related to cohort data

Cohort studies escape some of the bias evident in antenatal surveillance data by specifically measuring incidence and not extrapolating it from prevalence

data. However, the weakness of the studies is that they are not readily generalisable to the national population. Two key issues are highlighted in the literature. Cohort studies are relatively small – seroconversions in the measured population may only amount to a small number of individuals. Yet these few seroconversions have a dramatic effect on the rate of incidence and the prevalence of HIV in the cohort. The data is not sensitive to the more subtle timing of an overall national epidemic. As a result, seroconversions in these cohorts can not be reliably used as a test of discrete interventions – changes in the infection dynamics specific to that cohort are more likely to explain changes in prevalence and incidence data than changes in national policy or large-scale interventions (Low-Beer, 2002). Mbulaiteye, Mahe et al., (2002) correctly note this point and warn against broadly generalising their results to the national population.

Additionally, there are concerns regarding the possibility of the Hawthorne Effect impacting the results. The Hawthorne Effect refers to the "effect on study participants that results from their knowing that they are being studied" (Gail, 2000: 427). In other words, it is possible that by participating in a study, respondents will exhibit different behaviours than they would have if they had not taken part. This is of particular concern in the two cohort studies, in which the population has been involved in the study and under surveillance for an extended period of time. Declines in prevalence and incidence may be influenced by the tendency of these individuals to adopt protective behaviour simply by virtue of being in contact with researchers. This may distort the evaluation of a specific prevention intervention or campaign. How might one evaluate such a concern? Mbulaiteye, Mahe et al., (2002) used the data from the addition of new villages to the cohort in 2000 to determine the impact of the Hawthorne Effect on the study. Despite the fact that the original villages had been exposed to researchers for a full decade and the new villages for only one round of measurement, the HIV prevalence in both the old and new villages was similar. The results do not support a Hawthorne Effect in the study as the similarity in prevalence suggests a similarity in safe sexual behaviour. The link between behaviour and prevalence and incidence data will be explored in Chapter 4.

3.3 Other studies: blood donors, military conscripts (prevalence)

Further data on the Ugandan case is available from specific small-scale measurements. For example, Kilian, Gregson et al., (1999) undertook a seven-year study between 1991 and 1997 in the town of Fort Portal, south-eastern Uganda. While the serosurvey was small in scale, a significant decline in prevalence was evident between 1994 and 1997. This was comparable to the trend in antenatal data and cohort studies. While the generalisability of such surveys is limited, the study did provide a useful indication of the impact of an HIV intervention being undertaken in the town from 1991 onwards.

Long-term data on a particular subset of the population – those seeking treatment for sexually transmitted infections (STIs) – have been collected from a site at the Old Mulago hospital in urban Kampala. Prevalence rates in this group also declined, from 44% in 1989, to 20.5% in 2000 (Low-Beer, 2002). Data from other subsets is also available. Prevalence in military conscripts aged between 19 and 22 years declined from 18.6% in 1991 to 8% in 1996, to below 4% in 2002, while replacement blood donors exhibited a decline from 24% in 1989 to 7% in 1997 (Low-Beer and Stoneburner, 2003).

It is evident that there are both many sources of data from Uganda and many concerns relating to the validity of those results. The scope of the decline in prevalence may not be readily generalisable to the entire population, nor is the exact timing of the incidence decline that is hypothesised to have preceded the 1991-1992 peak in prevalence obvious. This much we *do* know about the data: there is a clear downward trend in prevalence rates between roughly 1991-1992 and 2000, and this trend is evident in all of the sources of data discussed above. In light of this conclusion, the next logical question to be addressed, and ultimately the question upon which the relevance of the Ugandan case hinges, is: “what caused this decline in prevalence?”

CHAPTER 4 – CAUSES OF THE DECLINE

Three major explanations for the decline in prevalence are examined in the literature. They include evidence of behaviour change within the population, the reduction of civil conflict and the social stabilisation of the country, and finally the natural evolution of the epidemic with links to mortality rates. The various sources of data and argument for each of these explanations will be examined in this chapter.

4.1 Behaviour change

Arguments in favour of social behaviour change are generally based on statistical sexual behaviour data. This explanation is distinct from arguments of particular social features of Uganda or political culture, as the latter are considered causes of behaviour change, rather than part of the behaviour change itself. Those causes will be dealt with in the following chapter. This section concerns itself with the evidence that the actions of the population changed. A change in behaviour would correspond to a change in the rate of incidence and this would lead to a decline in prevalence. This would be accurate in the absence of other explanatory factors such as saturation and mortality. The Ugandan data is generally measured with indicators representing each of the ABC elements: delayed debut, partner reduction and ever-use of condoms. Of particular interest is the behaviour of the youngest cohorts, which are assumed to be less prone to the impacts of mortality and saturation.

Behaviour change studies can be divided into two main camps. Some authors (Green, Halperin et al., 2006; Low-Beer and Stoneburner, 2003; Hogle, Green et al., 2002) suggest that the major contributor to overall behaviour change is the adoption of the practice of partner reduction. The other group places greater emphasis on increased condom use and delayed debut (Gray, Serwadda et al., 2006; Asiimwe-Okiror, Opio et al., 1997). Initially, when data from Uganda first became available in the mid-1990s, emphasis was placed on ‘biomedical’ explanations, and especially the use of condoms. The

involvement of USAID towards the end of the 1990s recommended the prevailing 'biomedical interventions (STI treatment, condom provision) as preventative options. However, a new wave of literature – possibly linked to a change in political leadership in the United States – placed greater emphasis on what was referred to as “primary behaviour change” (Green, 2003: 9): the A and B options of the ABC. A number of USAID consultants, such as Edward Green and Daniel Halperin, published reviews of the available data which suggested that Uganda “went against the tide” of international policy and adopted a ‘home-grown approach’ of primary behaviour change. This was used as a justification for the change in USAID policy and the newly established PEPFAR policy of directing funding to more conservative means of prevention HIV.

This section will review the available sources of behavioural data in Uganda and the interpretations of this data that have been put forward. It is particularly interesting to see how the same data is used to support differing emphases on the various elements of the ABC.

DHS surveys (Measure Project)

The first source of data analysed in the literature is the Demographic and Health Survey (DHS) run by the Measure Project. The surveys are undertaken in a number of countries, making for a useful comparison among differing populations. The first DHS in Uganda only interviewed women, with men being added in the 1995 and 2000 surveys. Comparisons are therefore possible over all three surveys spanning more than a decade in the case of women. Comparisons of male behaviour are limited to between the 1995 and 2000 surveys. Gray, Serwadda et al., (2006), Blum, (2004) and Kirungi, Musinguzi et al., (2006) suggest that partner reduction was minimal from survey year to survey year and was not significant. On the other hand, the age of debut increased and the use of condoms also increased, suggesting that these elements played the largest role. Gray, et al. (2006) go further and perform intra-survey analyses between different female age groups. They hold the survey coverage constant and compare the behaviour of older

women to that of younger women in order to assess differing behaviours over time as women age. Again, the results show little difference in non-marital partners and in this case, no change in age of debut. Condom use, on the other hand, was higher for younger women.

Low-Beer and Stoneburner (2003) and Hogle, Green et al., (2002) use the surveys in a different manner. Instead of comparing survey years, they used the behavioural data from other countries and compared their behaviours to Uganda. While condom use in Uganda was actually somewhat lower than that in other countries, the number of respondents reporting non-regular partners (taken to show partner reduction) was 60% lower in Uganda in 1995 than it was in Kenya (1998), Zambia (1996) and Malawi (1996). The authors thus suggest that partner reduction played the greatest role in behaviour change.

Gersowitz (2007) criticises findings of increased debut between 1995 and 2000, showing that there is evidence of statistical bias in the results. Furthermore, while the DHS may be somewhat nationally representative, it obviously does not included areas where ongoing conflict is present. This criticism is, however, applicable to all behavioural studies.

WHO/GPA surveys

The second major set of behavioural surveys are those taken by the World Health Organisation (WHO)/GPA surveys of 1988/9, 1995 and 2000. These surveys are less nationally representative than the DHS, but are more useful in comparing male behaviour as they include data on both sexes for all the survey years (Green, Halperin et al., 2006). The results from these surveys are less widely analysed than the DHS data and are mostly used to support the argument that partner reduction accounts for the greatest proportion of behaviour change. Green, Halperin et al., (2006) and Hogle, Green et al., (2002) compare the first two surveys, finding that casual sex decreased from 60% of respondents in 1989 to 23% of respondents in 1995. Men reporting two or more partners also decline, while condom use increased only a little amongst women. Respondents reporting three or more partners declined from

15% to 3%, suggesting that overall partner reduction makes up the greatest proportion of the change in behaviour. Stoneburner and Low-Beer (2004) note that the official report on the GPA surveys emphasised the role of delayed debut and increased condom use, but argue that the most dramatic (and often overlooked) element of protective behaviour change was in fact partner reduction.

Interestingly, in their conflation of DHS and GPA data up to 2000, Singh, Darroch et al., (2004) find that age of debut and monogamy increased, but it appears that the definition of the variables used in the survey varies from author to author. Nonetheless, Singh, Darroch et al., (2004) agree that increased condom use did not contribute substantially to overall behaviour change.

KABP surveys

The Ugandan Ministry of Health (MoH) also performed a number of surveys in the late 1990s. The Knowledge, Attitudes, Beliefs and Practices (KABP) surveys did not include information on serology, but used similar behavioural indicators to the other types of surveys. Low-Beer and Stoneburner, (2003) state that the most significant change in behaviour was partner reduction – the number of respondents reporting non-regular partners declined by 65% between 1989 and 1995. Yet Okware, Opio et al., (2001) do not appear to have analysed the data on partner reduction, reporting that age of debut increase, as did condom use with non-regular partners.

Cohort surveys

The cohort studies discussed in the previous chapters also collected behavioural data in their surveys. Allen (2006) discusses a presentation by Wawer and colleagues on the Rakai cohort in terms of behavioural data. It appears that the age of debut declined and the number of respondents reporting sexual activity, non-marital partners and multiple partners increased. Thus, the use of the A and B elements of the ABC declined, while the use of

condoms increased dramatically. The authors nonetheless acknowledge that this does not dispute the possibility of behaviour change in an earlier period; rather, the results should be contrasted with those from a similar period as a critique of the focus on the A and B elements.

Two papers outline the results of behaviour change measurement in the Masaka cohort. Kamali, Carpenter et al., (2000) and Kamali, Quigley et al., (2003) find a similar increase in condom use in the Masaka cohort. However, the first results (published in 2000) suggested an upward trend in age of debut for men (but no change for women) and an increase in two or more partners reported by men (but again, no change in women). The latter results (published in 2003) suggest that while the level of respondents reporting two or more partners remained constant, the number of respondents reporting casual partners declined.

Smaller surveys

A number of smaller-scale individual surveys have also been undertaken. Asiimwe-Okiror, Opio et al., (1997) conducted two surveys using the GPA structure in 1989 and 1995. The surveys only included respondents from Kampala and Jinja, but nonetheless showed a significant increase in debut age and condom use, but non-significant changes in non-regular partners. The increase in debut age and condom use was confirmed by Kilian, Kipp et al., (2007) in their annually repeated surveys of high school children in south-western Uganda between 1995 and 2001. In a more ambiguous result, partner reduction (in this case referred to as 'being faithful') increased between 1995 and 1998, but declined from 1998 to 2001 among boys/men. 'Being faithful' increased among girls/women overall. However, the authors note that one might not be able to link these changes directly to a decline in prevalence, as the surveys did not capture other forms of behaviour change. Singh, Darroch et al., (2004) also note that school children, by virtue of school-based education campaigns, may be more receptive and more widely exposed to preventative education messages, making these results less representative of the general population.

It appears that behaviour change in high-risk populations is not as evident as it is in the general population studies. Ntozi, Mulindwa et al., (2003) suggest that high-risk groups are motivated by different forces (particularly financial ones) and noted that there has been little change in their behaviour at the time of the survey in Kabale, Kampala and Lira in 1999. However, as this was a once-off survey, changes over time have not been captured.

Behaviour data caution

Two key responses to the behavioural data are highlighted by the literature. The first critique is simply to argue that behaviour change is hard to measure (Slutkin, Okware et al., 2006). The age-old issue of whether qualitative behaviour might be measured using quantitative methods in the social sciences is raised here. In fact, anthropologists working on the Ugandan case have felt somewhat pushed aside on the behavioural issue – despite the need for understandings of how behaviour change and specifically altered social norms are related, anthropological qualitative research is often reduced to 'anecdotal evidence' (Allen, 2006: 8). This debate is unlikely to be resolved in the near future. However, this tension does highlight the need for more comprehensive understandings of behaviour change in order to design effective policy. Kirungi, Musinguzi et al., (2006) and Singh, Darroch et al., (2004) note that behaviour is not readily reduced to statistical figures. Behavioural factors are often interrelated – higher debut age may increase stable partnerships and consistent condom use. A decline in the number of partners could result in a decline in the number of respondents able to talk about the use of condoms. These concerns are often context-specific and the qualitative situation surrounding behaviour change must be understood.

The second key response to is to argue that even if it is possible to separate out the measures of behaviour change, the practice of relying on respondent answers to behavioural questions is possibly flawed in itself. Gersowitz (2007) and Kamali, Quigley et al., (2003) highlight a possible 'right answer' bias in behaviour change campaigns (and in the ABC campaigns in particular).

These campaigns suggest ‘correct’ and ‘good’ behaviour. This alerts the population to assume that certain responses make one appear more ‘moral’, upstanding and/ noble. Behaviour change campaigns could cause individuals to report certain behaviours, particularly delayed debut, because they want to appear to be better individuals.

Inferred change

A final note should be added to the behavioural case data. Inferred change models use existing prevalence data and model the results according to a number of assumptions. Two examples of this format are Kilian, Gregson et al., (1999) and Hallett, Aberle-Grasse et al., (2006). The authors show that the model can not replicate the observed declines in prevalence unless the assumption of behaviour change is introduced. From this result, the authors conclude that behaviour change is likely to have played a strong role in the decline.

Korenromp, Bakker et al., (2002) approach behaviour measurement in a different way, by comparing the Ugandan Rakai cohort case with that of the Mwanza cohort in Tanzania. Both countries are experiencing an advanced, generalised epidemic. In the early years of an epidemic, treatment for STDs has a large impact on HIV transmission, but as HIV shifts to the general population (which has a lower level of STD infection) as the epidemic progresses, the impact of STD treatment decreases. This is due to the fact that there are fewer cases of STD infection to treat, resulting in a lesser impact on HIV infection in the population. Despite the similarity in the progression of the epidemic in both cases, the treatment of STDs had a much lower impact in the Rakai cohort than anticipated. The authors suggest that preceding behaviour change – which would lower the cases of STD infection that could be treated – would have had to have occurred in the Rakai cohort to account for the low impact of STD treatment on HIV infection. In other words, by changing their behaviour at an earlier point, individuals in the Rakai cohort had lower levels of STD infection. The treatment of STD infections would have a smaller impact. The authors thus conclude that some form of

behaviour change must have occurred before the data on the cohort was collected.

Although inferred change models avoid the issues of respondent bias and difficulties in developing behavioural indicators, the obvious concern is that they are no longer measuring behaviour at all. Again, it seems unlikely that a qualitative mathematical model could act in place of behavioural predictors which are ultimately qualitative in nature.

4.2 Conflict stabilisation

In response to the behavioural literature, a second explanation for prevalence decline has been put forward. It is argued that because Uganda has been subject to an extended period of civil conflict, which reduced somewhat in the mid-1980s (although conflict continues in northern regions of the country today) and brought with it greater social stability. Some authors suggest that the social stabilisation that comes after the end of a protracted civil conflict reduces the risk factors that contribute to HIV infection. This argument formed part of the early understandings of prevalence decline (Smallman-Raynor and Cliff, 1991) but has recently been revisited in the wake of the international excitement over Uganda's 'success' (Gray, Serwadda et al., 2006).

Smallman-Raynor and Cliff (1991) suggested that geographical patterns of recruitment into the Ugandan National Liberation Army (UNLA) is reflected in patterns of prevalence distribution in 1990. Soldiers recruited predominantly in the North were deployed in the South where HIV was quietly spreading in the early 1980s. When these soldiers were demobilised and returned home, infection rates rose in the north. It then follows that as the UNLA demobilised towards the end of the 1980s, risk factors associated with conflict (economic deprivation, military presence and the like) would decrease, slowing transmission. This may account for the prevalence declines that were seen a number of years later, as well as the fact that some regions of Uganda continued to experienced low infection rates. What the authors were essentially arguing is that historical factors were as important in determining

HIV prevalence as current behaviour. They acknowledged that their data was extremely limited and despite this their study took on a surprising importance. Allen (2006) points out that there simply is not enough information about the composition of the UNLA and data from regions affected by conflict at the time to give the study too much weight. Gray, Serwadda et al., (2006) recently returned to this hypothesis, noting that post-conflict stabilisation in the mid-1980s could account for incidence declines in later years. While the paper does not rely on ethnic patterning or geographical spacing of conflict, the possibility remains that the cessation of widespread conflict could be chronologically linked to a decline in incidence (and thus a later decline in prevalence).

However, it is not clear how the existence of a conflict situation affects HIV rates. Cianta (2004) argues that there is an ambiguity in the link between conflict and spread of HIV in historically conflict-ridden areas in northern Uganda. Prevalence data from these areas follows similar trends to national data. Evidence from Sierra Leone, Bosnia & Angola also fails to reveal a robust link between the variables. In other words, conflict is probably conducive to the kinds of behaviours that raise the risk of HIV infection, but this increase in risk is not necessarily translated into higher prevalence. Why might this be? Allen (2006) suggests that the relationship between conflict and HIV rates can operate in different ways. For example, while the migration that is usually a feature of civil conflict is a risk factor for the spread of HIV, the existence of camps for internally displaced persons (IDP) may act as a protective factor against HIV. Camps restrict movement and offer curfews and security, possibly retarding riskier behaviour. The existence of a camp thus becomes another intervening variable, confounding the relationship between conflict and HIV prevalence. Allen and Heald (2004) further develop this point by suggesting that if social stabilisation is capable of reducing rates, and conflict spreads HIV, why do countries free from civil war not have much lower prevalence rates? Stabilisation alone does not necessarily have a profound impact on the socio-economic and cultural variables that shape the HIV/AIDS epidemic.

Ultimately, the social stabilisation hypothesis does not exclude the assumption of behaviour change. It is a more indirect explanation of behaviour change – social stabilisation reduces risky behaviours and thus incidence. However, it does account for something that the behavioural literature itself does not emphasise, namely, the element of social change that is exogenous to the individual. In other words, while behaviour change in the previous section is used as a justification for proactive policy, the social stabilisation literature highlights a factor that is beyond national policy – namely, the dynamics of conflict. It is thus not a direct critique, but merely an addition of another variable that may play a role in the prevalence decline.

4.3 Mortality

A further reaction to behavioural literature is the mortality hypothesis. Unlike the social stabilisation argument, authors that highlight the impact of mortality exclude an assumption of behavioural change. This literature mainly comes into play from 2000 onwards, with the most recent contribution being a presentation by Wawer, Gray et al., (2005) at the world AIDS conference in 2005. Although the data from this presentation has not yet appeared in publication, the results presented by the authors caused a stir in international circles.

How does mortality affect HIV prevalence? If mortality rates exceed the rate of incidence, deaths may cancel out new infections when counting the number of people currently living with HIV/AIDS. It will also limit the pool of available people who may become infected – even when infected more than once, a person is captured under prevalence as either infected or not infected. The greater the number of people already infected, the fewer will be captured in prevalence data as changing from an uninfected to an infected state (Kirungi, Musinguzi et al., 2006). Wawer, Gray et al., (2005), Gray, Serwadda et al., (2006) and Stoneburner, Low-Beer et al., (1996) suggest that available data from cohort and national studies suggest that mortality may contribute to prevalence decline to a greater extent than behaviour change or other factors. Even when there are reductions in incidence, it should be noted that mortality

might cancel out their effect due to the lasting impact of increased mortality. It is thus possible that reductions in prevalence are related to the maturity of the epidemic and associated mortality.

Unsurprisingly, this new wave of mortality literature generated controversy. Some authors have argued that while the mortality explanation holds for declines in older cohorts, declines in prevalence in younger cohorts are not accounted for by this explanation. As noted in Chapter 3, mortality and saturation effects will not be as great in younger cohorts – mortality explanations need to account more fully for declines amongst young people (Moore and Hogg, 2004). Moreover, comparisons with other countries' epidemic progressions suggest that the decline in Uganda is unique in that younger cohorts were experiencing decreasing infection rates (Stoneburner and Low-Beer, 2004). Additionally, authors and health officials, particularly those affiliated to USAID and the more conservative groups in Uganda, have pointed out that the data presented by Wawer, Gray et al., (2005) did not cover the time period in which the Ugandan 'miracle' of behaviour change was alleged to have taken place – the late 1980s (Green, Halperin et al., 2006).

4.4 Timing critique

Given the peak in prevalence from the data in the previous chapters, it would appear that any explanation of change must correspond to the rapid increase in prevalence up to 1991-1992 and the dramatic decline thereafter. The mortality hypothesis would have to match mortality rates at the time of the decline to the prevalence decline itself.

For declines to have occurred in post-1992, a spike in mortality must have occurred at this time. And for that spike to have occurred at that time, incidence must have been particularly high between 5 and 10 years beforehand. Is this plausible? Certainly it is. High levels of prevalence at the beginning of the 1990s would suggest that a large number of people had been infected in the middle 1980s. At that time, Uganda had no prevention, monitoring or screening systems in place to reduce infection, suggesting that

early diagnoses of the country being the worst hit in the world could be accurate. However, mortality data is limited, and without information about incidence in the early 1980s, it is difficult to conclusively show that excess mortality explains the scale of the prevalence declines seen in the early 1990s.

When considering the incidence-based explanations (behaviour change and conflict stabilisation), one must consider the timing of a decline in incidence that would account for the decline in prevalence post-1992. One way to estimate the timing of an incidence decline is to compare the dates of the peak with the time taken for a change in incidence to convert to a decline in prevalence. Parkhurst (2002) states that the conversion time is seven years – implying that a rapid decline in incidence must have taken place in around 1985-1986. Stoneburner, Low-Beer et al., (1996) argue for a slightly later date (1987-1988) on the basis of a comparison between mortality rates and the time taken to progress from HIV infection to death from AIDS. In this manner, the prior decline in incidence is estimated to have occurred between 1987 and 1988. Overall, a decline in incidence would have to have happened some time between 1986 and 1988.

What does this mean for the behavioural hypothesis? The behavioural data discussed above may be less relevant to policy design because it is too difficult to accurately measure behaviour, or because such measurement is very likely to produce inaccurate responses. To my mind, these are excellent critiques of behavioural data – including ones that are not only applicable to the Ugandan case but have a far wider applicability. Yet, in the case of behavioural data from Uganda, there is a far more paralysing critique of the use of such behavioural data to effect policy change. If the mortality hypothesis suffers from deficiencies in timing, is a similar problem applicable to the behavioural hypothesis?

The goal of the behavioural hypothesis is to compare causation with serological results. For their argument to hold, the behaviour change timeline would have to match the prevalence/incidence change timeline. Unfortunately,

none of the behavioural studies successfully achieve this. The KABP surveys can be left out of the analysis, as they were undertaken a decade too late. The DHS surveys are not useful, as there is no pre-1989 comparison point. There is similarly no pre-1989 comparison point for the WHO/GPA surveys. Cohort studies that started in 1989 are not pertinent; neither are the smaller scale studies occurring after that date. There is evidence that behaviour changed during the first half of the 1990s, but this can not account for the scale of the decline in prevalence from 1992 onwards. Behavioural data before 1989 is unavailable, so any arguments surrounding behaviour change causing a decline in incidence in the preceding time period are purely conjectural.

Even if we were to dismiss the concerns based on behavioural measurement and biased responses, the data currently being used to justify certain policy responses is in and of itself not applicable to the case of the Ugandan 'miracle' of the late 1980s. In fact, the only available data pertaining to the period prior to 1989 is antenatal surveillance from a few sites from 1985 onwards. This may be used to loosely estimate locally-specific incidence (see Chapter 3). Beyond this, we have no real evidence of behaviour change from the time when the Ugandan 'miracle' was taking place.

Timing concerns threaten both the behaviour change and mortality explanations. What does the timing of an incidence decline mean for the post-conflict stabilisation hypothesis? As explained above, a decline in incidence as an explanation for the prevalence decline of the early 1990s would have to have happened in the mid-1980s. At this time, Uganda was only just coming out of a civil war, without a national AIDS programme in place (Parkhurst, 2002). Post-conflict stabilisation is thus the most plausible explanation when considering the *timing* of the decline. However, the concerns expressed about the link between conflict and HIV incidence should be taken into account when relying on this argument. Moreover, a lack of evidence of behaviour change applies equally to the social stabilisation (and thus reduced risky behaviour) hypothesis.

In sum, I would agree with Gray, Serwadda et al., (2006) and Merson (2006) in their assertion that we may simply not be able to disaggregate the factors contributing to the decline in prevalence in Uganda. What is the importance of this statement? The various explanations are generally used to substantiate and justify associated policy approaches. It is hoped that by finding the factor that contributed most prominently to the decline one might replicate an associated prevention approach in order to effect the same change in other countries.

CHAPTER 5 – NATIONAL POLICY

At this point, the questions surrounding both prevalence data and the behavioural, mortality and conflict stabilisation explanations relating to the Ugandan case have been explored. This chapter focuses specifically on the issue of behaviour change as caused by some form of national policy. What sets the behaviour change explanation apart from the others is that evidence of behaviour change prior to 1989, as well as evidence of an active prevention policy by health officials, are crucial to the use of the Ugandan case. After all, the crux of the case is: can one copy what the Ugandans did in order to save lives in other countries? Officials would like to know 'what happened in Uganda' in relation to 'what Ugandans did to cause the miraculous decline'. Just what the Ugandans did is the subject of the following chapter. If there is no evidence that what the Ugandan officials did was in any way linked to a change in prevalence, the use of the country as a success story for a prevention paradigm becomes both inaccurate and irresponsible.

The evidence of behaviour change is highly problematic. What of the evidence of a coherent national prevention policy? Numerous authors refer to some form of 'ABC' policy in Uganda. Yet, as Barnett and Whiteside (2006: 345) point out, Uganda did not actually have one single ABC *policy*. Yes, there is evidence of a concerted effort to establish national bodies and manage a national response, but this is not necessarily linked to a specific national message or official policy. This chapter will explore the various elements of the national policy to assess the validity of claims regarding the ABC. There are three key features of national policy that arise in the literature: leadership, context and message.

5.1 Leadership

The specific structure of the government's institutional response, such as the development of the National AIDS Control Programme (NACP), is discussed extensively by numerous authors (Parkhurst, 2005; Hogle, Green et al., 2002; Okware, Kinsman et al., 2005; Slutkin, Okware et al., 2006). This chapter is

less concerned with these specific details and will instead focus on the forms of government involvement.

There are two elements of government leadership in Uganda. Firstly, the government began responding to the HIV/AIDS threat earlier than other countries did. Green, Halperin et al., (2006) suggest that the first government responses took place in 1986, although Allen (2006) notes that some hesitation was still present during this period. For example, a foreign journalist highlighting the problem of AIDS was expelled from the country in 1987. Nevertheless, there is evidence that the Ugandan government, contrary to other countries such as South Africa, did not avoid the problem in national debate, and started developing plans as soon as initial data from cohort studies became available.

Countries with poor health infrastructure – such as Uganda – are usually considered likely to have a poor response to AIDS (Gow, 2002). However, Parkhurst and Lush (2004) explain that the low levels of infrastructural development in the country actually improved the Ugandan response to AIDS. Given the lack of state capacity, the government was forced to outsource the national response to NGOs and placed itself as a facilitator rather than a provider of services – it channelled funding to providers and created fora in which interested parties could coordinate their activities. It also welcomed foreign aid and advice, but maintained independence by including, rather than alienating, external parties (Parkhurst, 2005). Indeed, this replicated the relationship the government had previously established with external debt agencies such as the World Bank and International Monetary Fund (IMF).

Essentially, the government relinquished its 'ownership' of AIDS through such facilitation (Barnett and Whiteside, 2006: 362) and included all groups in a multi-sectoral approach that moved beyond 'prevention' or 'treatment' and supported a broadly social understanding of the disease. By including a wide range of actors, possible challenges to government authority by groups that felt alienated from the process did not occur. Contrast this situation with that of South Africa, where civil rights groups exist in an antagonistic relationship

to the state; or Botswana, where entire alternative discourses around AIDS have arisen (Parkhurst and Lush, 2004; Allen and Heald, 2004). Both of these countries had a more developed health infrastructure prior to the response to AIDS, and the decentralised nature of the infrastructure posed a barrier to the ready inclusion of other groups and thus mitigating conflict.

The key point to understand here is that Uganda's broad national response – which included all sectors of society as well as external donors – arose when the government positioned itself as a manager of the national response rather than prescribing national policy. What does this conceptualisation suggest for other countries? Firstly, it seems unlikely that the national response, given it's varied and non-prescriptive nature, could simply be replicated elsewhere as a blueprint for action (Parkhurst and Lush, 2004). Secondly, the importance of the strategic positioning of the government in developing a multi-sectoral response suggests that the success of the national policy can not lie in the use of a simplistic national message. The nature of government leadership in this case is not reliant on the ABC policy. It is the elements of leadership that can offer lessons to other countries without assuming the replication of the message that is so often linked to the case.

5.2 Context and awareness

The second feature to arise in the literature is the context in which the national response occurred. Although the context into which a policy is introduced is often introduced as an exogenous variable, there are important lessons that must be taken from the Ugandan case and the manner in which the government factored in the situation faced by its citizens. By taking note of the context, the government could implement policy that reinforced positive and counteracted negative norms.

One such social feature was the high rate of AIDS mortality experienced by the population. The country experienced the spread of the disease relatively early and was experiencing high mortality rates. Ugandans were thus very likely to know someone who was sick with AIDS. To use this situation to enact

effective policy, the government harnessed channels of personal communication to add knowledge about AIDS to peoples' personal experiences of AIDS mortality. When presented with information about HIV/AIDS – particularly due to the willingness of prominent politicians and celebrities to talk about the disease – the population could immediately link it to the evidence of AIDS-related death around them (Allen and Heald, 2004). While other countries are now also experiencing high levels of mortality, death was more explicitly linked with AIDS (as opposed to opportunistic infections such as tuberculosis) in Uganda, reinforcing messages about the urgency of HIV prevention. Together, these factors had a powerful impact on the public understanding of the nature and causes of AIDS (Stoneburner and Low-Beer, 2004). Furthermore, personal experience of mortality was also used to buttress a level of openness about the disease, working against discrimination and stigmatisation, and improving support and care for those with AIDS (Green, Halperin et al., 2006; Okware, Kinsman et al., 2005).

Murphy, Greene et al., (2006) explain that political leaders also attempted to change norms to better suit their national policy. For example, Museveni urged mutual respect for all citizens, reducing the negative impact that gender constraints could have on prevention policy. Moreover, the placement of women and young people in prominent political positions may have had a spin-off effect in terms of effective personal control of HIV risk (Green, Halperin et al., 2006). This does not in itself account for a decline in infection, and by no means eliminated gender power differentials in the country, but it was consistent with any messages of individual behavioural choice when they were introduced.

These points highlight something important: far from adopting a specific "prevention policy", many of the key successes in the Ugandan case are related to the incorporation of varied social groups, the reinforcement of personal communication and an open discussion of the health issues facing the country's citizens. These successes are not dependent on an ABC policy and can be praised independently of such a message.

5.3 Messages

Nonetheless, there were national prevention messages distributed through government and NGO channels. What resemblance did they bear to an ABC message? The greatest focus of authors promoting the ABC concept is the use of the 'be faithful' element. The dominant message in early national campaigns was to 'love faithfully' and 'stick to one partner' (Green, Halperin et al., 2006). Moreover, the element was uniquely tailored to the Ugandan context by invoking the image of a tethered animal that could graze only in a limited circle – the so-called 'zero-grazing' message. In a largely agrarian society, this message conveyed exactly the concept of partner reduction while taking into account the polygamous nature of some Ugandan marriages (Green, 2003: 153; Stoneburner and Low-Beer, 2004; Allen and Heald, 2004; Slutkin, Okware et al., 2006).

What about abstinence and condom use? Murphy, Greene et al., (2006) point out that abstinence was not a focus of 1980s prevention messaging in Uganda. Although the *British Medical Journal* referred to the country's pre-1994 programme as an 'abstinence programme', this is incorrect (Roehr, 2005; Green, Halperin et al., 2006).

Moreover, the government largely resisted promoting condoms until very late in their response to AIDS. Early campaigns had little reference to condoms, partly due to hesitance on the part of Museveni (Allen and Heald, 2004; Slutkin, Okware et al., 2006). Social marketing of condoms was introduced in the early 1990s, but was not met with significant engagement by the population. Condom use levels only reached a significant level in the late 1990s – long after the supposed miracle decline in the country (Green, Halperin et al., 2006). Incidentally, this lack of emphasis on condom use may have made national HIV prevention messages as a whole more acceptable to local and religious groups and utilised their unique placement to spread information through their networks and influence (Allen, 2006; Otolok-Tanga, Atuyambe et al., 2007).

However, although national messages were largely restricted to the zero-grazing element, more localised groups emphasised a far broader range of preventative options. Given the management role adopted by the government, many players were admitted to the prevention system, bringing with them the capacity to generate a diversity of messages to be presented to the population. In many cases, different groups promoted various combinations of preventative elements – religious groups concentrated on the 'be faithful' element and added some work on abstinence, while civic groups included more options such as condom promotion (Singh, Darroch et al., 2004; Okware, Kinsman et al., 2005; Green, Halperin et al., 2006). It is perhaps because of this diversity and adaptation that an alternative discourse resisting "Western" medical information did not arise as it has in Botswana – the government was not seen as imposing messages, but was instead accommodating many different messages (Allen and Heald, 2004).

If such a variety of options were being presented to the population, and the government was reinforcing the zero-grazing concept, where does the idea that the government adopted an ABC policy originate? On the one hand, authors such as Green and Witte (2006) and Barrett (2007) state that the ABC became USAID policy in 2003 because it has been successful enough in Uganda to warrant emulation. Yet, Slutkin, Okware et al., (2006), Allen (2006) and Cohen and Tate (2006) state that the ABC concept seems to have come from USAID itself. They suggest that AIDS workers in the country had simply never heard of the ABC message until the United States branded Uganda's policy as such. Furthermore, the stronger evidence of the origin of the ABC message was its use on a billboard in Botswana – where it failed dismally to reign in the epidemic (Allen, 2006; Heald, 2006).

Who is to be believed? Given the literature discussed above, it would seem that the Ugandan government never followed a concrete policy of ABC. Yes, the A, B and C elements may have occurred independently and in combination – in various ways and with other methods – so that the ABC slogan captures many elements of the local and national messages (Allen, 2006; Cohen and Tate, 2006). But they were never promoted as a rank-order

or even package of options by the government during the 'miracle' years of the Ugandan epidemic.

Messages and behaviour change

What is the implication of this mischaracterisation? If we have no evidence of an ABC policy in Uganda, how can we say that such a policy is what caused behaviour change in the country? It could be that behaviour change arose spontaneously in the population in response to high mortality (Allen, 2006). Or it could be the case that behaviour change simply does not correspond directly to what campaigns promote (Slutkin, Okware et al., 2006). Either way, to say that an increase in a specific combination of preventative behaviour is due to the promotion of that specific combination of behavioural messages is tenuous at best. Thus, changes in the ABC elements must be seen as *outcomes* of varied messaging and social intervention in Uganda, at a particular time and in a particular social context (Barnett and Parkhurst, 2005). The most successful features of the response – empowerment, personal communication, local adaptation of prevention options and openness about the disease – are *not* linked to a specific method or message of intervention. Why, then, has the Ugandan example been so widely touted as proving the effectiveness of the 'ABC' policy or message? While this chapter has discussed historical national policy, the following chapter will discuss current national policy in Uganda and suggest a possible reason for the current reliance on the Ugandan case as proof of the ABC concept.

CHAPTER 6 – CURRENT POLICY DEBATE

Unfortunately, it now appears that the Ugandan 'miracle' is losing some of its earlier impact. A recent indication of this was the announcement of new initial data at the National HIV/AIDS conference in Kampala in 2008. Wakabi (2008) reports that the data shows an increase in new HIV infections and other STIs. According to this data, the national prevalance has increased from 5% three years ago to a present level of 6.4% – notably, infections within married couples account for 60% of the total.

6.1 Explanations of change

Two opposing explanations are being offered for this change. These explanations are particularly interesting in that they present contending views of just what exactly the current official HIV prevention policy in Uganda is.

Increased condom promotion leads to greater levels of risk behaviour and thus higher infection rates

The first explanation has been offered by organisations such as USAID who advocate a supposedly more 'home-grown' approach (that is, A and B without C). Their contention is that condom promotion introduced in the mid-1990s has a disinhibiting effect on sexual behaviour. Thus, individuals are shifting from the more preventative A and B methods to less effective condom use, as the promotion of condom use makes casual sex more acceptable (Blum, 2004). Green, Halperin et al., (2006), Genuis and Genuis (2005) and Hearst and Chen (2004) suggest that increased condom use has decreased the adoption of abstinence and faithfulness, causing HIV incidence to once again rise in Uganda.

Increased limitation to A and B options leads to greater risk of infection

An alternate explanation – one presented in opposition to the USAID adoption of ABC as its official policy – has been especially supported by members of

Human Rights Watch. They argue that the new increase in incidence is explained by the movement toward AB as a strict policy, rather than the discarding thereof. Uganda's success in tackling the epidemic is viewed as being based on the diversity of responses, where all preventative methods had a place. Now, the government (possibly under pressure from US funders) has adopted an anti-condom approach, withholding one of the previously successful and essential preventative options from the public (Cohen and Tate, 2006). New government teaching materials omit information on condom use and in some cases make inaccurate and negative comments about condom use. Schoepf (2003) also highlights falsehoods about condom use that are being spread by Ugandan churches, particularly by the predominant Anglican Church of Uganda and the Roman Catholic Church. Islamic clerics have also spoken against condom use.

Essentially, authors such as Cohen and Tate (2006), Schoepf (2003, 2004), Mullan (2008) and Cohen (2003) believe that the pressure from the US religious right has influenced the policies implemented in countries where US funding plays a strong role in providing prevention education. Specifically, the official adoption of the ABC policy by USAID is suggested to be a cover for more conservative policies that are in opposition to condom promotion. Indeed, the new official prevention policy guide released in Uganda in 2004 was entitled the "Asbtinence and Being Faithful" policy, which suggests that the promotion of condom use within an ABC policy is "confusing to the youth" (Cohen and Tate, 2006). Tuncalp (2005) also reports that recent Ugandan regulations forbid NGOs from distributing condoms in high schools. Ultimately, it is argued that the removal of a legitimate prevention option from official policies prevents condoms from being recognised as a viable and acceptable method for preventing infection. Thus, those individuals for whom the use of condoms is the best option – and sometimes the only option – for protection are now becoming infected, accounting for the increase in new infections.

The difficulties of disaggregation

How does one evaluate these competing claims? It is evident that both adopt a strong rhetoric about the relative importance of the ABC elements, but does this provide a useful point of departure for establishing future policy? As discussed in previous chapters, it is difficult to clearly disaggregate the effects of individual options on infection rates – both historical and current. Again, statistical evidence on a national level, of the kind that Wilson (2004) uses to suggest that partner reduction is "good epidemiology", can not simply be translated into a national policy. The reality is that the Ugandan response to the epidemic has been varied and complex. Neither of the explanations above takes this into account fully, and parties generally argue past one another on ideological grounds.

If there is not sufficient evidence to suggest a split in explanations along these lines, why is the literature on the subject so very strongly polarised? Green, Halperin et al., (2006) suggest that this debate is merely the product of a US culture war – a contest between conservative and liberal academics and policy-makers. Yet Green himself (2003: 9) appears to construct a 'risk reduction' (condom use and other biological methods) vs. 'primary behaviour change' (abstinence and faithfulness) as competing, and possibly mutual exclusive, policy options. Schoepf (2003) argues that this is merely a politically expedient construction – by establishing a 'risk reduction' paradigm as having 'failed' in numerous countries, it lends weight to a conservative agenda that limits sexual freedom. Labelling the ABC as a 'traditional' 'non-technical' 'non-Western' prevention policy is not an exercise in cultural sensitivity, but a deliberate political tactic.

Schoepf (2003), Murphy, Greene et al., (2006) and Sinding (2005) believe that the entire construction of the debate is not a useful exercise. Instead of debating the merits of AB versus C, policymakers should accept that each of the options requires behavioural change, and that no one is easier or more effective than any other on an individual level. Indeed, a look at the history of prevention policy in Uganda makes it clear that no single policy was adopted,

and that the options promoted where not necessarily similar to those that occupy the cultural debate in the US – for example, the construction of abstinence education (Blum, 2004).

Unfortunately, much of the discussion is clouded by accusations flying between the "condom-pushers" and "right-wing stooges" (Allen, 2006). Das (2005) reports that while HRW claims that Ugandan official policy excludes condom use, Green (as an advisor to USAID in 2005) claimed that this is untrue, and argues that instead that the official policies of other countries and NGOs are flawed due to their reliance on risk reduction strategies such as STD treatment and condom promotion alone.

This is why the polarised debate exists: the evidence from Uganda is not sufficient to prove that condom use and STD treatment alone can arrest an epidemic. However, the evidence is also not enough to show that condom use should *not* be promoted at this time in the country. The only way in which conservative authors can get around this conundrum is to construct a mutually exclusive debate between a focus on condom use and a focus on abstinence and faithfulness. In this way, they can argue that the promotion of condom use will have some form of detrimental effect on the other options. And since it is (allegedly) less effective than the other options, it should be done away with. Unsurprisingly, other parties respond to this argument about condom promotion with vigour, mounting their best arguments in favour of condom promotion and highlighting the pitfalls of the A and B elements.

Obviously, this is not an accurate characterisation of the ABC policy, either in concept (as discussed in Chapter 2) or in practical Ugandan policymaking (Chapter 5). Thus, the use of evidence from Uganda to promote one element at the expense of others is simply inappropriate. Moreover, it is unclear as to what exactly constitutes current Ugandan policy on the matter. Official documents spell out one set of guidelines, while reports on the ground suggest that other steps are being taken. On the one hand, official government policy initially included teaching about all elements of the ABC. However, Human Rights Watch (Cohen & Tate, 2005) reports that interviews

with teachers and pupils in the schooling system suggest that teachers are forbidden from mentioning or strongly pressured by education officials not to mention, the ‘C’ element in the school curriculum. Thus it is not clearly evident that a single coherent policy is being followed in Uganda – which means that the reduction in Ugandan infection rates can not be attributed to any one national policy. The policy debate is thus based on ideology and not evidence.

CHAPTER 7 – CONCLUSION

This paper has investigated a number of questions relating to the ABC and the Ugandan case. Firstly, it has considered the theoretical literature regarding the ABC concept – literature which is not very well developed and which raises many questions while answering few. Secondly, it has analysed the literature pertaining to the ABC concept as associated with the decline (and recent increase) in HIV infection in Uganda. By considering the literature on statistical evidence of the decline in the 1990s, the evidence of behavioural change, the nature of Ugandan prevention policy and the new debates arising from a recent increase in infection, we come to a position where we can say what we do and do not know about the ABC in Uganda.

7.1 What we do and do not know

What we do know is that some form of decline in HIV prevalence occurred during the 1990s. We do not know the extent of that decline. It appears to be less significant than it was first thought to be. We also have reason to believe that this trend is now being reversed, although we do not know the extent of this reversal.

We also know that many prevention messages in Uganda suggested behaviour change in response to a threat of infection. However, a change in behaviour is suggested in most campaigns – be it adopting condom use, opting to avoid commercial sex workers, using clean needles from needle exchange programmes and the like. Although authors such as Green (2003: 9) classify some of these options as 'biomedical' (opposed to 'primary behaviour change'), they nonetheless all require a change in personal behaviour, habits and actions. Thus, any decline in HIV infection must be attributed to some form of behaviour change. We thus know that some form of behaviour change occurred in Uganda – we do not know exactly which behaviours changed, whether they operated as individual changes or changes in behaviour of particular social groups, or if one change worked independently from any other behavioural changes.

We still do *not* know that an ABC policy caused such a behavioural change. We do not have evidence of a systematic adoption of an ABC concept. Rather, we know that many different organisations addressed the issue in Uganda with individualised messages and programmes during the period in which a prevalence decline occurred.

Finally, and most importantly, we do not know that an ABC concept, implemented on a wide scale and in another context, will have a positive impact on the level of HIV infection within countries with high infection rates. Although 'positive stories' are often referred to in the literature, it is essentially an untested concept, no matter how frequently authors invoke the Ugandan case study as proof.

In what way is the above a problem? It could be argued that if the concept makes some sense on a theoretical level, we should implement a prevention programme in this desperate situation. Such an argument is cause for concern. We do know that there are many questionable effects of the concept, as highlighted in Chapter 2. We also know that these effects have not been suitably evaluated and do not give us an understanding of the risk that the ABC poses. Thus, we would be implementing a prevention concept that has not been proven to be effective, and which has potentially serious unintended consequences.

7.2 Further research

What does this list of what we do and do not know mean for the ABC message? These persistent questions suggest that much more research is needed on the topic.

Firstly, experts in the field need to take a careful look at the arguments and theories that are being exchanged on the issue. They need to consider where the debate is, and is not, relevant to policy formation, and to attempt to put at least some of their ideological – I suggest unscientific – biases aside. The

entire topic requires a deeper level of analysis, where argument by example is not relied upon as a logical analysis. The schools of thought in play, the scientific content of reports on various cases, and the political and financial interests of experts weighing into the debate must be acknowledged and taken into account.

Secondly, the myths surrounding the Ugandan case must be dispelled. The achievements of those working in the country are indeed noteworthy and they should be congratulated, but they must not be turned into something that they are not. For too long the specific details of Ugandan AIDS policy have been glossed over as experts squeeze them into neat policy recommendations. Perhaps the answer is simply that a less constrictive policy environment, rather than a single prescriptive concept, accounts for the success of Ugandan efforts. Perhaps not: we cannot be sure of the explanation until it has been more thoroughly analysed.

Finally, the ABC concept itself must be analysed. It is not enough to suggest that 'something' be done, that a 'new', 'homegrown' concept is at hand. It must be subjected to the same rigorous theoretical analysis that other prevention campaigns have undergone. There are very real concerns that must be addressed before the concept can be considered a viable means of prevention. Then, if appropriate, a systematic evaluation of the effectiveness of a specifically formulated ABC campaign must be enacted within a population.

Unfortunately, this systematic evaluation of the effectiveness of a specifically formulated ABC campaign has been largely sidestepped. This is a dangerous precedent to set for policies in respect of epidemics generally and in particular those epidemics where sexual contact is one of the key modes of transmitting the disease. While the current situation is serious, even critical, the need for effective policy should not obscure the need for scientific process. Can we say that the ABC will or will not work? We simply *do not know*. Policy should be based on evidence rather than conjecture. If governments believe the conjecture to be true, they should be advised to pause for thought before

implementing a prevention message that may at best be a wasteful application of limited resources, and at worst, hinder the fight against HIV/AIDS. In other words, the burden of proof does not rest upon critics, requiring them to show that the ABC is harmful. The burden of proof is on promoters of the concept – who must show that the ABC is not harmful and is actually effective in reducing infection rates – in order to avoid a gross misallocation of resources.

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