

HIV/AIDS, Risky Behavior and Cost Resistance

Presented by
Ms. Vyjanti Beharry,
HEU, Centre for Health Economics

Overview of Paper/Presentation

- Summary of global and regional epidemic
- Relationship between Behavioural Theories and HIV/AIDS response programmes
- Concept of Cost Resistance and HIV/AIDS
- Policy Implications

INTRODUCTION

- HIV/AIDS is still a prominent feature of the regional and global landscape after almost 35 years
 - In 2014, there were 36.9 million people living with HIV.
 - There was 2 million new HIV infections worldwide in 2014, compared with 3.1 million in 2000, a decline of about 35%
 - 66% of new infections occurred in Sub-Saharan Africa
- HIV/AIDS prevalence rates in the Caribbean still hover around 1-2%
 - In 2014, there were approx. 280 000 with an estimated 13,000 new HIV infections in the region
 - New infection decreased by 50% between 2000 and 2015.

HIV and AIDS statistics and features by Regions | 2014

	Adults and children living with HIV	Adults and children newly infected with HIV	Adult prevalence (15–49) [%]	Adult & child deaths due to AIDS
Sub-Saharan Africa	25.8 million [24.0 million – 28.7 million]	1.4 million [1.2 million – 1.5 million]	4.8% [4.5% – 5.1%]	790 000 [670 000 – 990 000]
Middle East and North Africa	240 000 [150 000 – 320 000]	22 000 [13 000 – 33 000]	0.1% [<0.1% – 0.1%]	12 000 [5300 – 24 000]
Asia and the Pacific	5.0 million [4.5 million – 5.6 million]	340 000 [240 000 – 480 000]	0.2% [0.2% – 0.2%]	240 000 [140 000 – 570 000]
Latin America	1.7 million [1.4 million – 2.0 million]	87 000 [70 000 – 100 000]	0.4% [0.4% – 0.5%]	41 000 [30 000 – 82 000]
Caribbean	280 000 [210 000 – 340 000]	13 000 [9600 – 17 000]	1.1% [0.9% – 1.3%]	8800 [5700 – 13 000]
Eastern Europe and Central Asia	1.5 million [1.3 million – 1.8 million]	140 000 [110 000 – 160 000]	0.9% [0.7% – 1.0%]	62 000 [34 000 – 140 000]
Western and Central Europe and North America	2.4 million [1.5 million – 3.5 million]	85 000 [48 000 – 130 000]	0.3% [0.2% – 0.5%]	26 000 [11 000 – 86 000]
TOTAL	36.9 million [34.3 million – 41.4 million]	2.0 million [1.9 million – 2.2 million]	0.8% [0.7% - 0.9%]	1.2 million [980 000 – 1.6 million]

Source: UNADS

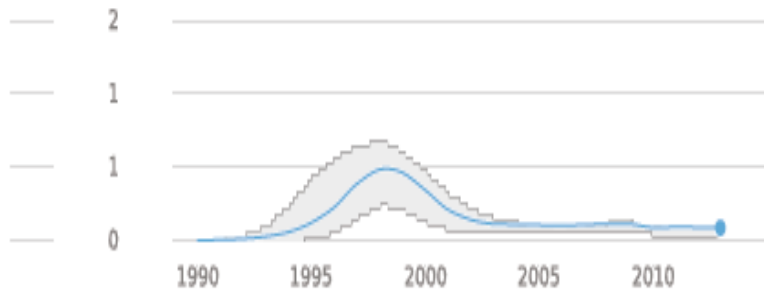
HIV/AIDS Prevalence Rate in Selected Caribbean Countries

COUNTRY	Population (000)	HIV/AIDS Adult (15-49years) Prevalence Rates (%)	
		2007	2013
Bahamas	312	3.0	3.2
Barbados	269	1.5	0.9
Belize	314	2.1	1.5
Guyana	751	2.4	1.4
Jamaica	2,621	1.3	1.8
Suriname	504	1.9	0.9
Trinidad & Tobago	1,306	2.1	1.6

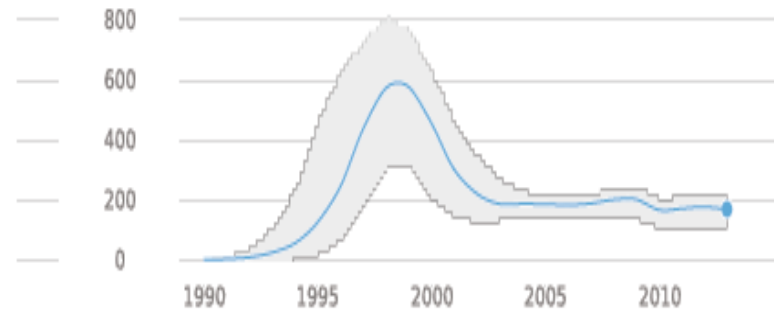
Incidence of HIV in Selected Caribbean Countries

- Belize

HIV incidence rate - Ages 15-49 (%)

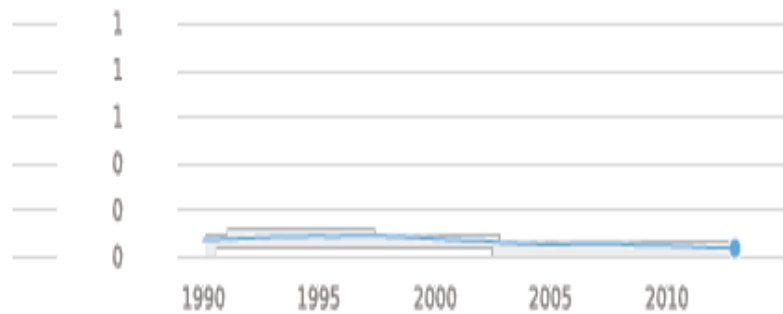


Number of new infections - all ages

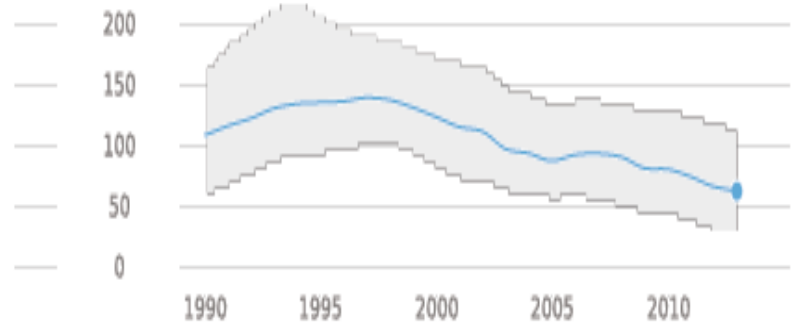


Barbados

HIV incidence rate - Ages 15-49 (%)

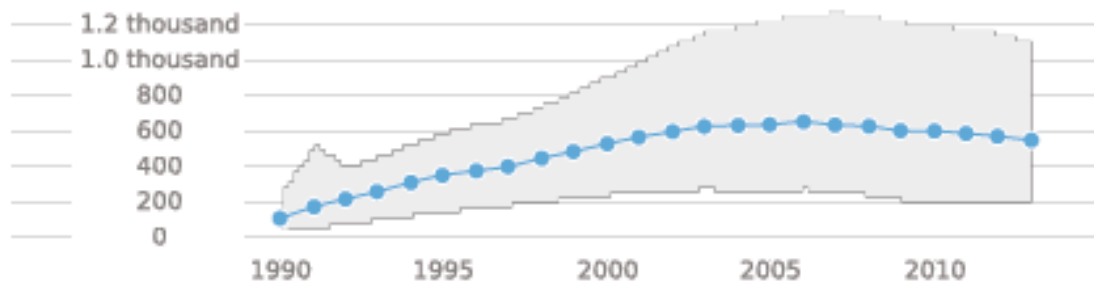


Number of new infections - all ages



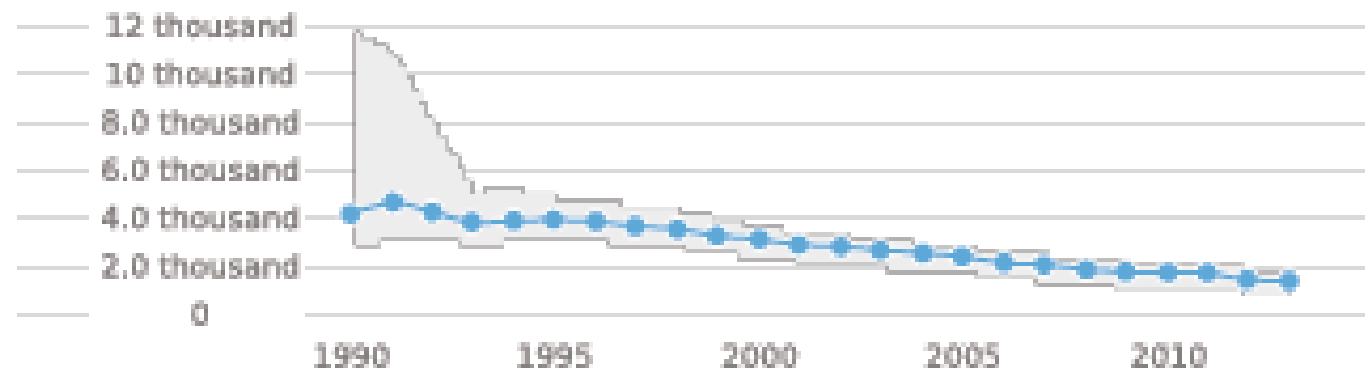
Guyana

Number of new infections - all ages



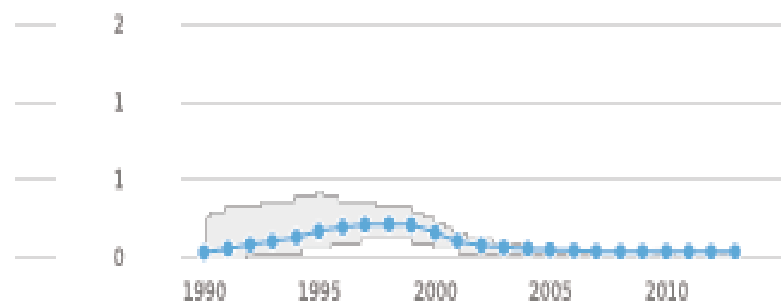
Jamaica

Number of new infections - all ages

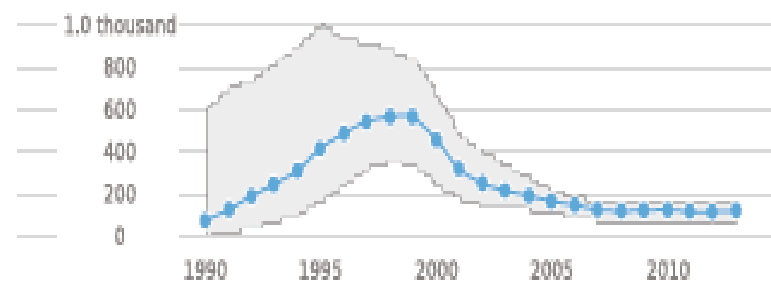


Suriname

HIV incidence rate - Ages 15-49 (%)

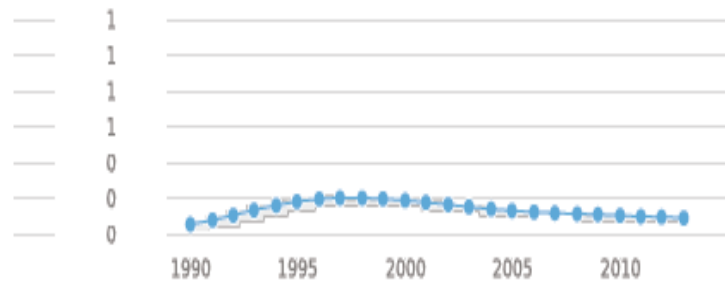


Number of new infections - all ages

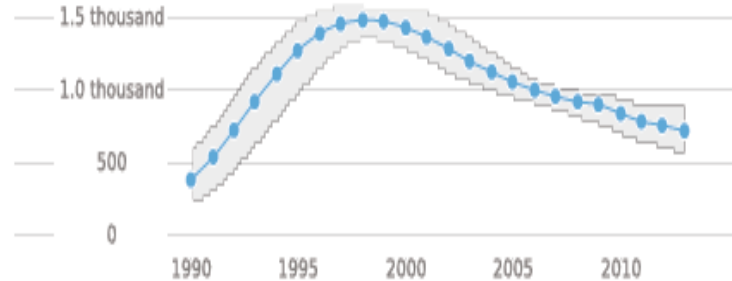


Trinidad and Tobago

HIV incidence rate - Ages 15-49 (%)



Number of new infections - all ages



Response to HIV/AIDS in the Region

- In 2001, a Declaration of Commitment to the Pan-Caribbean Partnership against HIV/AIDS issued
- National HIV/AIDS strategic plans were crafted using the outline of the Pan Caribbean Partnership against AIDS (PANCAP) Regional Strategic Framework for HIV/AIDS
- Most Countries began this process in 2002

- Second round of multi-sectoral strategic plans
 - Includes strategies for Education, Health, Tourism, Labour, Military/Police, Social Welfare etc
- Targeted initiatives for certain groups
 - Women, youth, MSMs, Sex Workers, orphans and other vulnerable groups

KEY POINTS TO NOTE

- Early response programmes were designed to change risky behavior with a heavy focus on Prevention activities
 - based on the premise that increased information, knowledge of and education about HIV/AIDS, would lead to a decrease in high-risk sexual behaviors and an increase in safe sexual practices. (MacNeil and Jones 1997)
- Other factors were found to be relevant
 - socioeconomic, genetic, psychological and environmental factors (DiClemente and Peterson 1994).

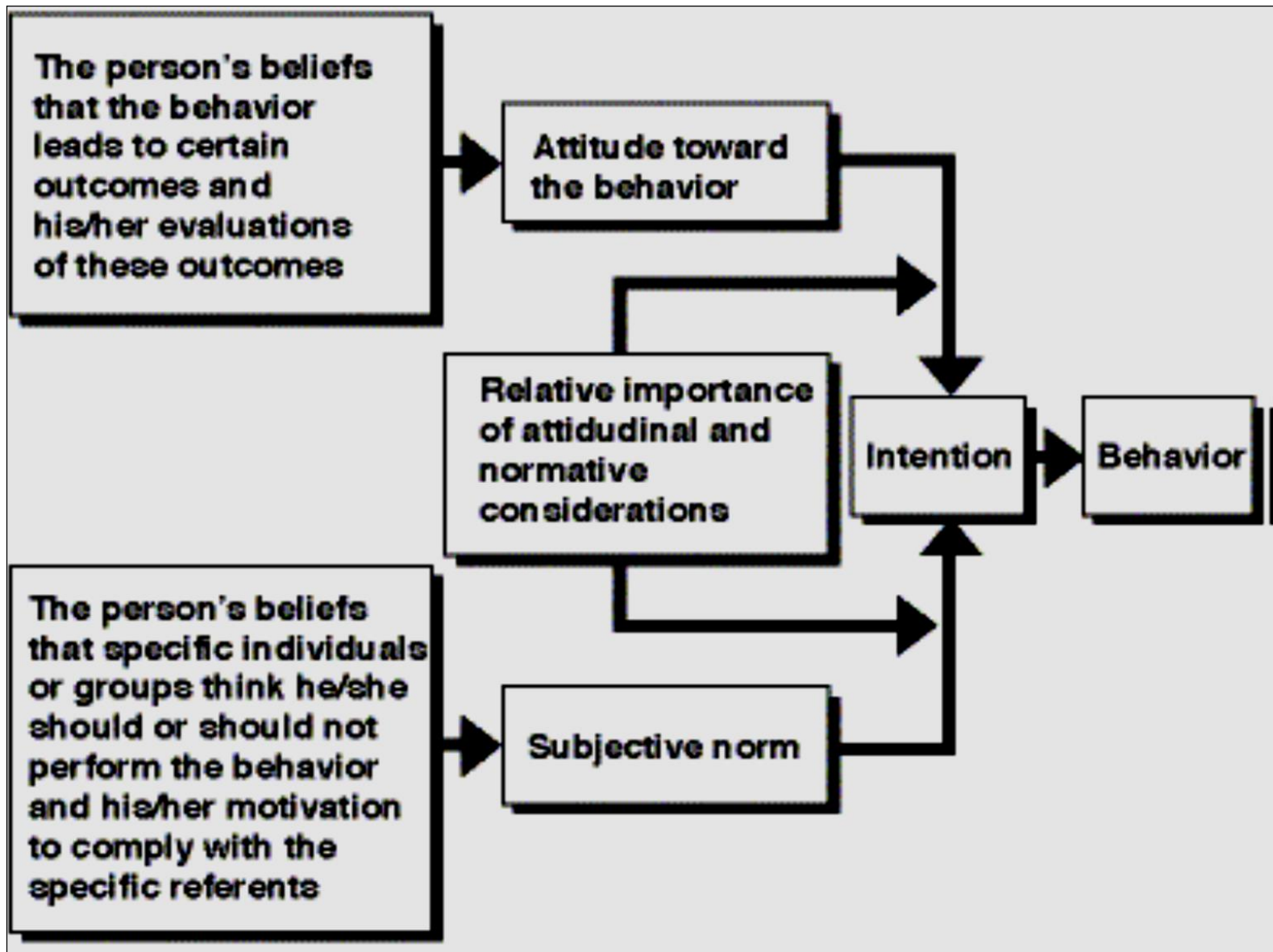
Main Behavior Models

– Theory of Reasoned Action

- a causal link between the model's four main elements—a person's beliefs, attitudes, intentions and behaviours
- Intentions are viewed as the most important determinant of behaviour
 - intentions and behaviours are determined more by attitudes and individuals own evaluations of the outcome of the behaviour
 - Interventions cannot be generic but must be targeted, depending on which determining factor is more significant

TRA cont.

- The issue is not changing behaviors through information and education alone but rather in identifying the appropriate type of information that is required.
 - an exact behavior defined in terms of action, target, context and time
- *...if the goal of an intervention is to increase homosexual's use of condoms for oral sex with their long term partners, the intervention should be designed to increase homosexual men's intentions to 'always use condoms for oral sex with my long term partner' and not to increase their intentions to 'avoid AIDS', 'to practice safe sex' or even their general intentions to 'always use condoms when I have sex.'*
(Fishbein, Middlestadt Hitchcock, 1994)



- **Health Belief Model**

- individual's behaviour is based on his or her subjective value of an outcome and the expectation that a particular action or behaviour will achieve that outcome.
- The initial purpose of this theory was to explain the poor response of the population to participation in disease detection and prevention programmes
 - an individual's decision to access health services was based, to a large extent, on his or her perceived susceptibility to the disease and the perceived benefits of action.
 - A study conducted in Uganda by Kibombo et al (2007) shows a negative relationship between perception of risk of HIV and risky sexual behaviour among females, but not males.
 - Brooks et al. (2009) note that among Latino male gang members, men who reported low risks of HIV were more likely to engage in a number of risky sexual behaviours.

BACKGROUND

Socio demographic factors
(age, education, sex, race,
ethnicity)

PERCEPTIONS

Expectations

- Perceived benefits of action (minus)
- Perceived barriers to action
- Perceived self efficacy to perform action

Threat

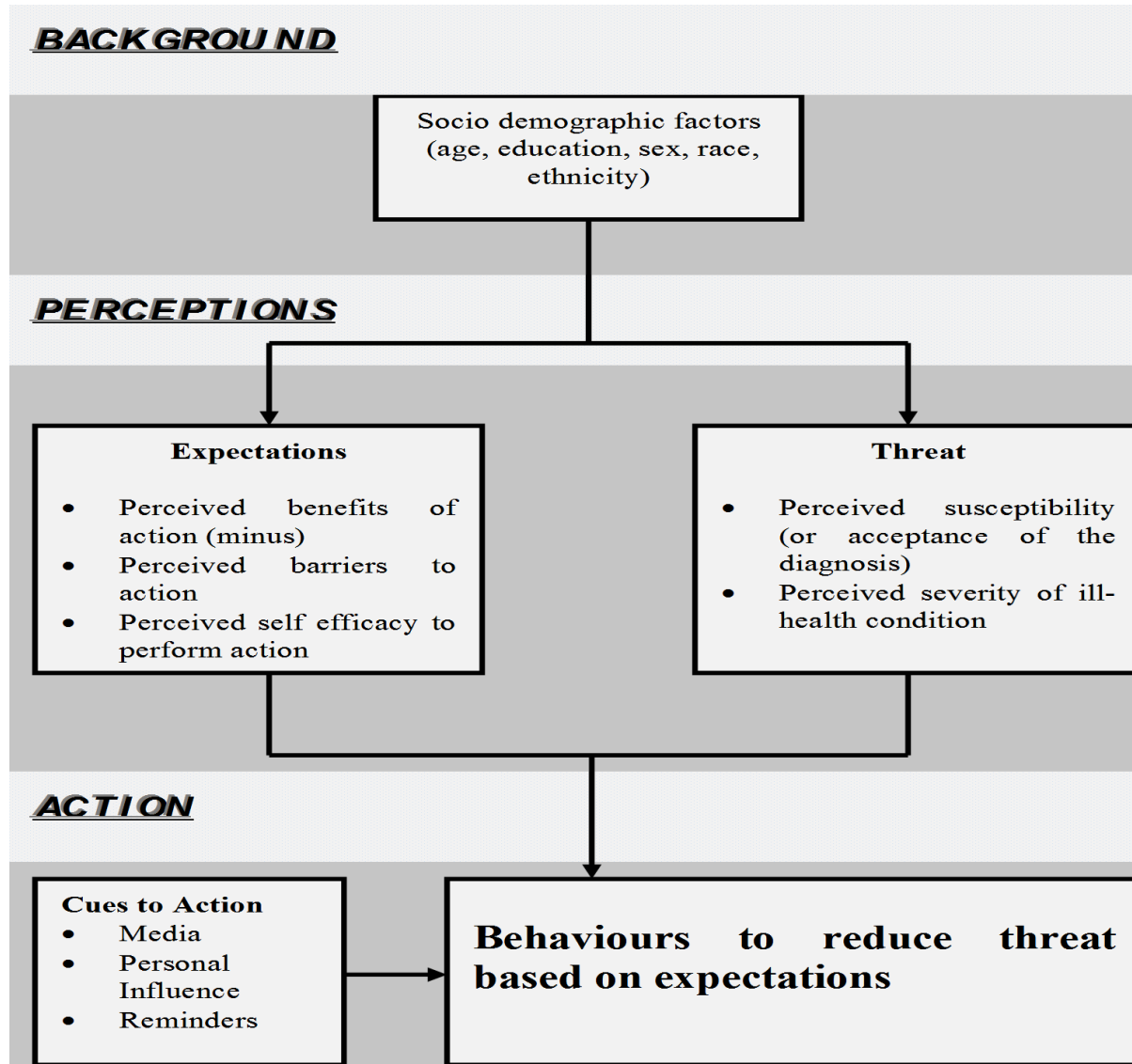
- Perceived susceptibility (or acceptance of the diagnosis)
- Perceived severity of ill-health condition

ACTION

Cues to Action

- Media
- Personal Influence
- Reminders

**Behaviours to reduce threat
based on expectations**



- **Transtheoretical Model of Behaviour Change**
 - Introduces the concepts of Pre-contemplation, Contemplation,, Preparation, Action and Maintenance
 - In the contemplation stage, the cost benefit analysis of action or non-action determines whether behaviour changes or not
 - The mathematical relationship between these two variables, estimated from an analysis of 12 studies, concluded that the “pros of changing must increase twice as much as the cons must decrease,” which implies that individuals place a very high beneficial value on their current behaviours. (Prochaska, Redding and Evers, 2002)

Process	Description
<i>Experiential processes</i> (cognitive and emotional activities)	
Consciousness raising	Finding facts and information that support the change in behavior; these include information on how to change and awareness of the adverse consequences of the behavior. Information comes from the therapist, the media or from reading
Dramatic relief	Experiencing the negative emotions that accompany the behavior, and recognizing the relief that accompanies changing the behavior. People may be moved emotionally by personal testimonies of people who have changed, or through psychodrama.
Self-evaluation	Coming to recognize the change as a significant part of one's identity by contrasting the image before and after the change (e.g., switching from couch potato to active person)
Environmental evaluation	The person's recognition of how their behavior affects those around them. This has a cognitive and an affective component and can include an understanding that they can become a role model for others.
Self-liberation	Believing that one can change and making a firm commitment to change. Making New Year's resolutions and public commitments can represent this process.
<i>Behavioral processes</i>	
Helping relationships	Seeking social support for making the change; benefitting from the trust and acceptance of others. This may occur through a therapeutic alliance, buddy systems, or support from a partner.
Counterconditioning	Substituting healthier alternatives or safer substitutes for the problem behavior. An example would be nicotine replacement therapy
Contingency management	This implies creating consequences that will encourage the person to initiate change in a particular direction. This mainly involves reinforcing positive behavior, group recognition and reducing rewards for the negative behavior.
Stimulus control	Removing cues to the unhealthy behavior and adding cues and reminders for the desired behavior. Avoiding social situations that encourage a person to over-eat would be an example.
Social liberation	Policies and social activism is required to create environments in which the healthy alternative appear as the social norm. This is especially relevant in poor neighborhoods and with disenfranchised groups. Salad bars, smoke-free zones are examples.

Progression across the stages of change

Precontemplation → Contemplation → Preparation → Action → Maintenance

Consciousness raising;
Dramatic relief;
Environmental re-
evaluation

Self-
reevaluation

Self-liberation

Counter-
conditioning;
Supportive
relationships;
Reinforcement;
Stimulus control

- **AIDS Risk Reduction Model**

- Based on the hypothesis that behaviour change is a result of a three stage process—first, recognizing and labeling behaviour as high risk; second, making a commitment to reduce high-risk behaviours and third, taking action which eliminates or reduces these risky behaviours
- In stage one, for example, recognizing and labeling behaviour depends on the individual's belief that his or her behaviour increases their risk of HIV infection.
- In stage two, the perceived costs and benefits of changing a particular behaviour impacts on an individual's commitment to change that behaviour.
- The final stage of the ARRM, assumes that individuals recognize that their sexual behaviours are risky, they are committed to changing these high risk behaviours

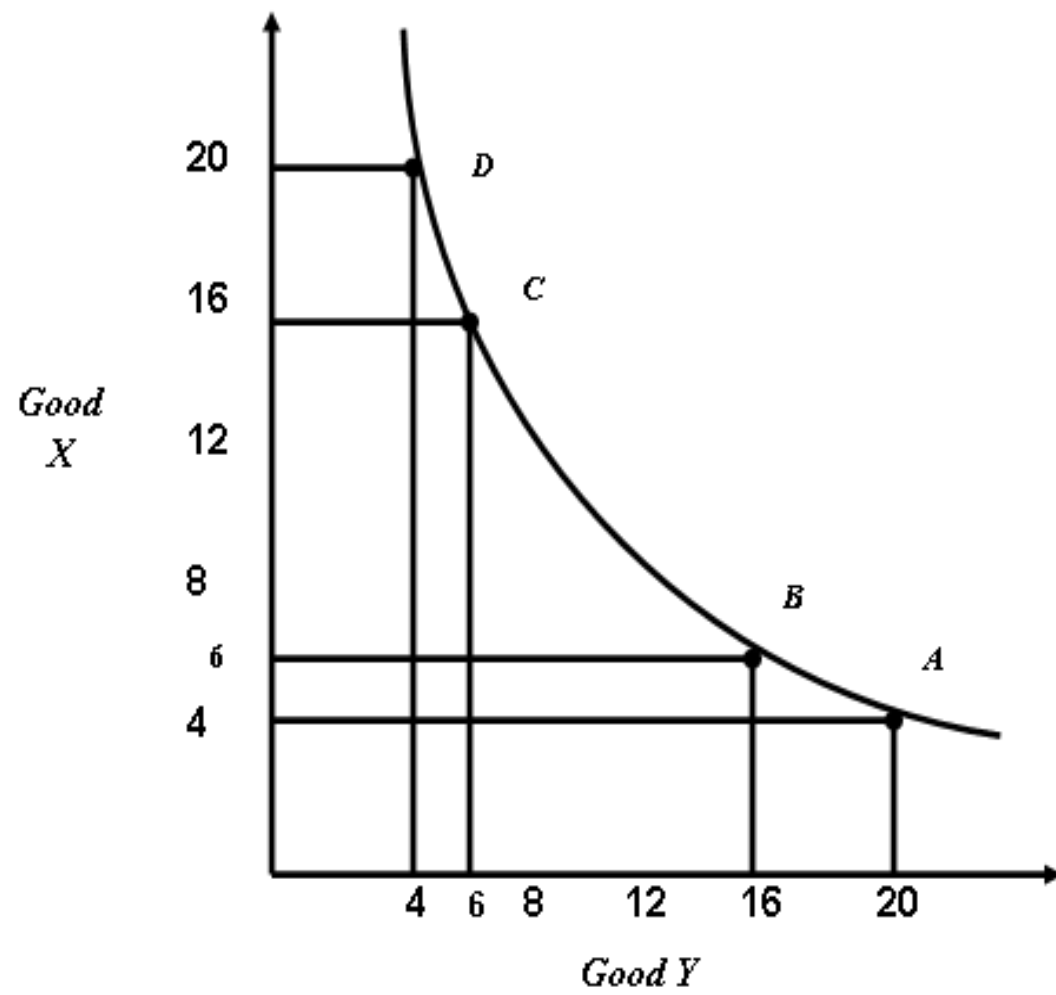
- Bown (2006) found that environmental influences as well as peer perceptions and acceptance negated the effect of HIV-related knowledge on behaviour in a study done at the Mona Campus of the UWI
- Brown further states that: *Although general knowledge of HIV/AIDS and Sexually transmitted infections (STIs) was high, environmental influences such as fetes, dances and parties coupled with uncontrolled levels of alcohol consumption were thought to be key facilitators for unsafe sexual behaviours on the campus.* (p 5).
- A study done in Texas USA, involving ethnic minority adolescent women with a history of sexual and physical abuse and sexually transmitted infection—who are generally prone to the risk of HIV—shows that specially designed interventions aimed at increasing the knowledge of this population worked to prevent infection (Champion and Collins 2012).

Summary Notes

- Critique of models is the focus on the behaviour, beliefs and attitudes of individuals. Role of social norms and interpersonal relationship also need to be considered
- Key concepts that cut across all; namely the subjective assessments and evaluations made by the individual, especially in terms of risk
 - Can explain irrational risky behaviour by individuals based on their assessments

Rational Theory Applied

- Utility maximation
 - persons will make choices that maximizes their utility or satisfaction
 - Main factor affecting choice is price or cost of desired choice (Other factors are tastes, preference)
 - Rationality is relative based on an individual's calculations and perceptions of costs and benefits



Cost Resistance

- **cost resistance**—the refusal to discard the utility function to which one has become accustomed.
- We propose that the cost of risky behaviour is HIV infection.
 - Cost resistance is the inability to view this as a cost.
 - The cost may be perceived to be very low compared to the benefit derived
 - The cost may be seen in terms of the benefit forgone by NOT engaging in the activity
- Behavior change will occur when costs is perceived to be high

Policy Implications:

Localizing the Prevalence Rate

- An individual may reduce his or her number of risky sexual activities when the prevalence rate for HIV increases
 - decentralizing or localizing the rate to specific demographic, socioeconomic or even ethnic groups will bring the reality of HIV to the decision space of each individual who are members of these smaller groups.

Libertarian Paternalism

- ***Libertarian Paternalism***, defined as a policy approach which impinges on the options which individuals may have but which leaves enough room for the enjoyment of personal choice.
 - Change the characteristic of the choice set available to individuals
 - For example, new legislation which bans the drinking of alcohol in public places after 10 p.m. may lead to a reduction in activities related to alcohol use, such as commercial and casual sex

Socio-Economic Policy

- Magnify present value of the future benefits especially as it relates to the youth
 - Inheritance, grants or scholarships
 - This recommendation amounts to bribing the young (15-24) population to keep free of HIV infection by inducing them to choose safety over risk (Pettifor et al 2012, Heise et al 2013).

Concluding Statement

There is a sense in the region that things are getting better and maybe the epidemic is now under control so we don't have to put as much resources in it. That is a mistake. The epidemic is undermining something that is crucial to us—our human resource. If we don't keep up the investments we are going to pay a very heavy price

(Professor Karl Theodore, UNAIDS/PEPFAR Caribbean Meeting on Strategic HIV Investment and Sustainable Financing held in Kingston, Jamaica from May 29th - 30th 2013)