

## CHAPTER II

# EPIDEMIOLOGY OF HIV/AIDS INFECTION AMONG MEN WHO HAVE SEX WITH MEN IN LATIN AMERICA AND THE CARIBBEAN: Current Situation and Recommendations for Epidemiological Surveillance

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## Introduction

As of December 2001, an estimated 1.82 million adults and children were living with HIV/AIDS in Latin America and the Caribbean, including 190,000 persons who had probably become infected during the previous 12 months (*UNAIDS, 2001*). By December 2001, 378,413 cases of AIDS and 156,228 deaths from AIDS had been reported in the region (*PAHO, 2001a*).

Sexual transmission of HIV accounts for approximately 78% of all reported cases of AIDS in Latin America and the Caribbean for which a probable transmission category has been provided (*PAHO, 2001a*). In the context of sexual transmission, male homosexual transmission has been and continues to be central in the region (*PAHO, 2001b*), since, although the number of cases reported as probably due to homosexual transmission is similar to the number of cases reported as caused by heterosexual transmission, the former is alarmingly high when one considers that men who have sex with men (MSM) comprise a minor fraction of the general adult

population. Similarly, studies on seroprevalence in MSM show levels significantly higher than those of sentinel heterosexual populations (*U.S. Bureau of the Census, 2001*). Early in the epidemic, it was said that Latin America displayed a combination of the old I and II patterns, in which there were a significant number of cases in MSM and injectable drug users (IDU), as well as a heterosexual component (*Cáceres and Hearst, 1996*). According to UNAIDS, in most Latin American countries the epidemic is concentrated in MSM populations and, in some cases, in IDUs. (*UNAIDS, 2000*). Latin America has the highest number of HIV/AIDS cases in MSM outside the United States (*McFarland and Cáceres, 2001*).



Figure 1: Latin America and the Caribbean divided into 7 sub-regions based on geographical proximity.

Far from being operationalized, the concept of «homosexuality» refers to a series of constructs and categories such as orientation of sexual desire, sexual behaviour, sexual identity and sexual socialization (*Stein, 1992; Herdt, 1997; Aggleton, 1996*), none of which is binary. For instance, while sex between men is fairly common in the region, male homosexual behaviour usually does not imply a homosexual or bisexual identity (*Parker, 1991; Cáceres and Rosasco, 1999; Carrier, 1995; Lancaster, 1995*). Without overlooking diversity or an interrelation as complex as that which exists between identity, desire, behaviour and gender roles, as well as the political implications of sexual identities in a region where homosexuality is still a source of stigma, discrimination and human rights abuse (*McKenna, 1996*), a behavioural category such as «MSM» is used arbitrarily in HIV epidemiology to the extent that it includes, in theory, all sexual interaction situations between two males. That assumption would have greater validity if one departed from the hypothesis that all MSM share similar levels of risk. However, that is refuted by research findings, since the only sexual practice clearly connected with HIV/AIDS transmission among men is unprotected anal insertive and receptive penetration (*Cáceres and van Griensven, 1994*)<sup>1</sup>, and, given that not all MSM engage in that practice, or do so

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selectively, the levels of risk are diverse. On the other hand, it is essential to recognize that preventive interventions and community organizing should consider culture, identity and politics (*Dowsett, 1996*), and, therefore, must distinguish between MSM with different identities, contexts and experiences.

In the first part of this chapter we will examine epidemiological information available on this public health problem in Latin America and the Caribbean. In the second part we will put forward a number of observations and recommendations

<sup>1</sup> Studies to date have not found systematic evidence of transmission via oral sex, or fellatio, even when semen is swallowed (*Page-Shafer et al., 2001*). Anal penetration with routine condom use is regarded as low risk (*Cáceres and van Griensven, 1994*).

for improving the quality and depth of information on HIV in this population in the region, in particular through organization or enhancement of epidemiological surveillance practices.

Latin America has the highest number of HIV/AIDS cases in MSM outside the United States (McFarland and Cáceres, 2001).

## Epidemiological Situation, according to information available

This section was prepared using the following information sources:

- Statistics on accumulated incidence of AIDS cases in the region reported to PAHO/WHO by each country and published periodically by PAHO/UNAIDS (*PAHO, 2001a*).
- Epidemiological studies on MSM populations recorded by three sources: a) *HIV/AIDS Surveillance Database* of the U.S Bureau of the Census (*U.S. Bureau of the Census, 2001*); b) publications and summaries of studies conducted in several countries in South America with participation of the US Naval Medical Research Center, Lima (*Russell et al., 2000a,b*); and c) information furnished by the National Bureau on STD/AIDS of the Ministry of Health of Brazil.

The limitations affecting the information available for carrying out this task are numerous:

- Epidemiological surveillance in the region is not of a uniform quality, and in many countries a significant proportion of AIDS cases cannot be diagnosed; furthermore, reporting may be delayed or not occur at all for a variety of reasons.
- Similarly, there are problems with transmission categories, particularly those linked to stigmatised behaviour; for instance, the label «homosexual transmission» (like that of IDU) is not applied consistently. In many situations, health providers may, to avoid embarrassment to themselves and the party concerned, prefer not to draw up a sexual history, and may simply assume that the cause is heterosexual transmission. For many the discrepancy between an allegedly predominant pattern of heterosexual infection in Central America and a *male:female ratio* of nearly two to one in that region (*PAHO, 2001a*) suggests that a high proportion of homosexual transmission is reported as heterosexual.
- Certain dilemmas have to do specifically with situations where there are multiple risk factors present, since many surveillance systems do not allow a margin for recording multiple risk conditions and use hierarchical classifications, which gives rise to arbitrary decisions on the most likely form of infection in each case; as a result, misclassification leads to error. The Brazilian AIDS/STD Control Program examined the impact of classification policies on case reports to determine the potential variability of figures according to criteria used to determine order of priority, in statistics, of transmission mechanisms present in each case (see Table 1), when there is more than one mechanism present (*Ministry of Health of Brazil, 1999*).
- Furthermore, very few seroprevalence studies have been conducted on representative samples of individuals. (The situation is much more serious in terms of seroincidence studies.) The above is probably the result of restrictions in funding and institutional (academic and governmental) support for epidemiological studies on MSM, as well as the marked complexity of appropriate research approaches with this vulnerable population (*McFarland and Cáceres, 2001*).

**Table 1:**

Comparison of AIDS case reporting figures according to two different classifications of modes of transmission (i.e. hierarchical vs. concurrent) for AIDS cases recorded by the National Bureau on STD/AIDS of Brazil for 1980 to 1999.

HIERARCHICAL CLASSIFICATION		CLASSIFICATION BY CONCURRENT CATEGORIES	
CATEGORY	NUMBER OF CASES	CATEGORY	NUMBER OF CASES
Homosexual	31,669	Homosexual	28,410
		Homosexual/IDU	2,805
		Homosexual/haemophiliac	37
		Homosexual/transfusion	335
		Homosexual/IDU/haemophiliac	19
		Homosexual/IDU/transfusion	61
Bisexual	17,221	Bisexual	13,751
		Bisexual/IDU	3,054
		Bisexual/haemophiliac	37
		Bisexual/transfusion	327
		Bisexual/IDU/haemophiliac	10
		Bisexual/IDU/transfusion	42
Heterosexual	40,115	Heterosexual	40,115
		Heterosexual/IDU	16,224
		Heterosexual/haemophiliac	121
		Heterosexual/transfusion	923
		Heterosexual/IDU/haemophiliac	40
		Heterosexual/IDU/transfusion	224
Injection Drug User (IDU)	32,819	IDU	16,067
		IDU/haemophiliac	46
		IDU/transfusion	218
Haemophilia	1,109	Haemophilia	988
Transfusion	3,070	Transfusion	2,147
Perinatal	4,630	Perinatal	4,630
Unknown	39,442	Unknown	39,442

Source: Ministry of Health of Brazil. Epidemiological Bulletin, National Coordinator on STD/AIDS, August 1999.

## HIV/AIDS Case Reporting to PAHO/WHO/UNAIDS<sup>2</sup>

**Cumulative Relative Incidence.** Table 2 shows the proportion of the cumulative number of cases reported in each geographic stratum that were classified as the result of homosexual transmission. The central column includes cases classified as of probable mode of transmission not reported<sup>3</sup>, while the right-hand column excludes them<sup>4</sup>. As we can see, the Andean Region and Mexico remain the areas with the highest proportion of cases attributed to male-male sexual transmission with around 50% of cases, with one assigned transmission category. After them come Brazil and the Southern Cone, with approximately one-third of the total, followed by Central America and the Caribbean which list only 13% of cases in this category.

**Table 2:**

Proportion of cases reported as pertaining to MSM in Latin America and the Caribbean (total number of cases reported to date). Source: PAHO, 2001a.

SUB-REGION	MSM CASES AS A % OF TOTAL	% OF TOTAL CASES KNOWN TO BE OF MSM TRANSMISSION*
Central America	12.3	13.6
Andean Region	42.6	48.3
Brazil	26.7	35.0
Non Latin Caribbean	10.3	12.4
Latin Caribbean	9.0	13.8
Southern Cone	31.5	32.9
Mexico	(n.a.)	54.5
TOTAL		35.2

<sup>2</sup> The statistics for Latin America are provided by PAHO/WHO in six and sometimes seven geographical strata or areas: the Andean Region (including Bolivia, Colombia, Ecuador, Peru and Venezuela); Brazil; the Southern Cone (including Argentina, Chile, Paraguay and Uruguay); Central America (Belize, Guatemala, Nicaragua, Honduras, El Salvador, Costa Rica and Panama); the Latin Caribbean (including Cuba, Dominican Republic and Haiti); the English- and Dutch-speaking Caribbean (which includes 19 islands); and Mexico (See Figure 1).

<sup>3</sup> Except for Mexico, because the source does not have the information available, which prevents estimation of a regional total.

<sup>4</sup> It also excludes cases resulting from risks considered 'infrequent'; in other words, other than homo/bisexual, heterosexual, injectable drug use, hemoderivatives, transfusion, and perinatal.

Upon closer examination of the details for each geographical stratum, three patterns emerge. In the first pattern, the Andean Region has an epidemic in which 48.3% of reported cases are classified as pertaining to MSM (Figure 2a), with heterosexual transmission accounting for 47.5% of cases (a similar figure). Injection drug use is almost nonexistent, and cases resulting from perinatal transmission and other modes of blood transmission are rare. Similarly, in Mexico (Figure 2b) 54.5% of cases are classified as MSM, compared to 38.9% in the heterosexual category. Here, it should be noted that the Notification Report of December 2001 does not provide -for Mexico- the proportion of cases without information on probable mode of transmission; however, in the Report of May 2000 this figure was around one-third of total cases (PAHO, 2000). For the Andean Region and Mexico, the male:female ratio highlights the high frequency of MSM cases.

**Figures 2a-h:** AIDS cases distributed by mode of transmission among 7 sub-regions of Latin America and the Caribbean (2a-g); and in the region overall (2h). Excludes cases attributed to transmission via «other risk factors» and cases without probable cause attributed. Source: PAHO, 2001a.

Figure 2a

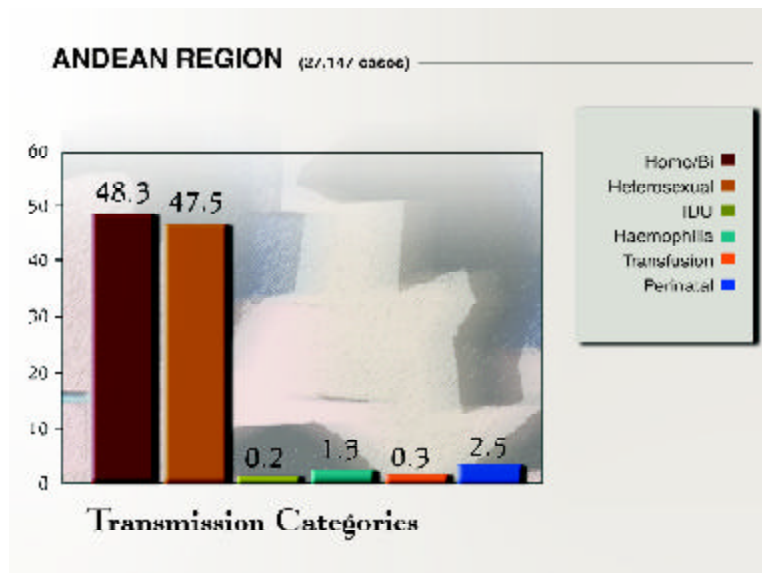
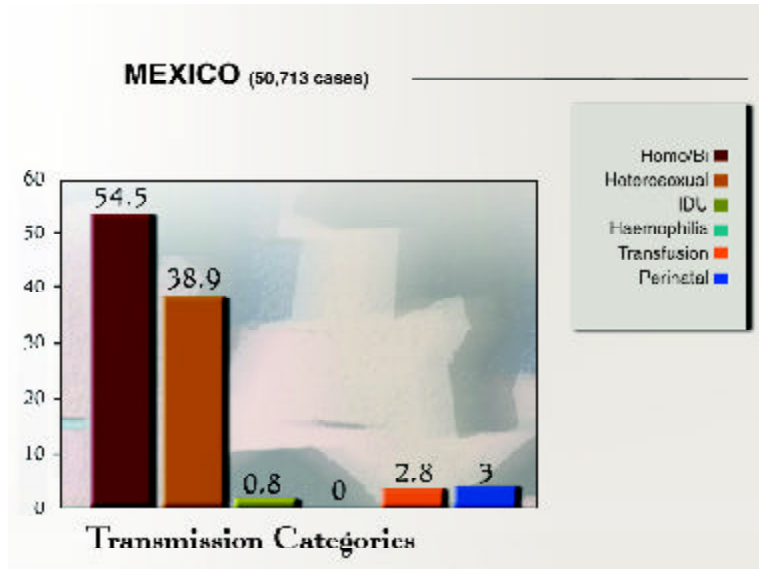
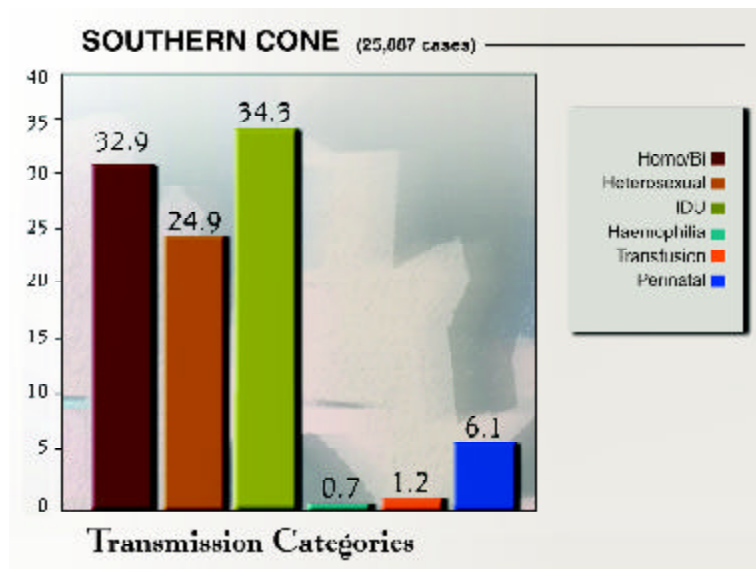


Figure 2b



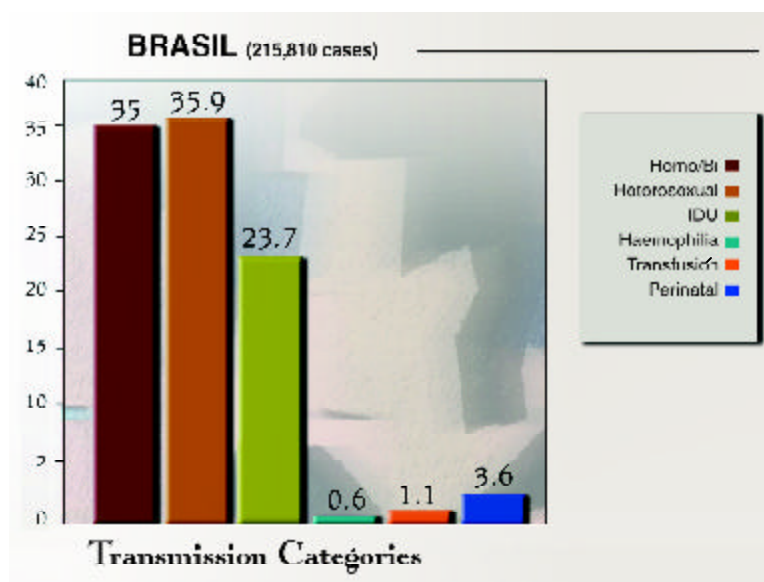
A second pattern is visible in the Southern Cone and Brazil. In the Southern Cone (Figure 2c), approximately 58% of reported cases are due to sexual transmission, of which almost three in five are classified as MSM cases. However, the new element here is injection drug use, which accounts for one-third of reported cases. Perinatal cases represent 6% of total cases.

Figure 2c



Equally, in Brazil (Figure 2d), around 70% of AIDS cases with information about probable mode of transmission are placed in the sexual transmission category, and 50% of those are listed as occurring among MSM. Another 24% are classified as corresponding to injection drug users. It should be noted that in Brazil, a quarter of cases are listed in an unknown risk category (a fact not shown in Figure 2d).

Figure 2d



A third pattern becomes clear in Central America and the Caribbean. In Central America (see Figure 2e), the proportions as regards probable mode of sexual transmission reported are inverted, and heterosexual transmission, which accounts for 79% of total cases, is six times more frequent than homosexual transmission. Perinatal cases are also more common. Similarly, in the English- and Dutch-speaking Caribbean (see Figure 2f) heterosexual cases are 6.5 times more frequent than homosexual cases and account for 79.5% of cases with information about probable infection category. Here, however, the proportion of cases whose transmission category is given as unknown comes to 17%. In the same way, in the Latin Caribbean (Figure 2g) reported heterosexual transmission is also 5.5 times higher than homosexual transmission, and accounts for 76% of cases with information about mode of transmission. In this region, again, the proportion of cases listed as of mode of transmission unknown is very high (35%). In all of the last three areas the proportion of cases attributed to injection drug use is very low.