

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Social Science & Medicine 63 (2006) 2010-2021



www.elsevier.com/locate/socscimed

# Syndemics, sex and the city: Understanding sexually transmitted diseases in social and cultural context

Merrill C. Singer<sup>a,\*</sup>, Pamela I. Erickson<sup>b</sup>, Louise Badiane<sup>b</sup>, Rosemary Diaz<sup>b</sup>, Dugeidy Ortiz<sup>b</sup>, Traci Abraham<sup>b</sup>, Anna Marie Nicolaysen<sup>b,c</sup>

<sup>a</sup>Hispanic Health Center, 175 Main Street, Hartford, CT 06106, USA

<sup>b</sup>University of Connecticut, CT, USA

<sup>c</sup>Hispanic Health Council, Hartford, CT, USA

Available online 16 June 2006

#### Abstract

This paper employs syndemics theory to explain high rates of sexually transmitted disease among inner city African American and Puerto Rican heterosexual young adults in Hartford, CT, USA. Syndemic theory helps to elucidate the tendency for multiple co-terminus and interacting epidemics to develop under conditions of health and social disparity. Based on enhanced focus group and in-depth interview data, the paper argues that respondents employed a cultural logic of risk assessment which put them at high risk for STD infection. This cultural logic was shaped by their experiences of growing up in the inner city which included: coming of age in an impoverished family, living in a broken home, experiencing domestic violence, limited expectations of the future, limited exposure to positive role models, lack of expectation of the dependency of others, and fear of intimacy.

© 2006 Elsevier Ltd. All rights reserved.

Keywords: Syndemics; Sexually transmitted diseases; Young adults; African American; Puerto Rican; Political economy

#### Introduction

This paper reports the findings of a multi-method qualitative study of sexual ideas, attitudes, and behaviors among African American and Puerto Rican young adults (18–25 years of age) in Harford, CT, USA. These findings are of note because of the ongoing intertwined epidemics in Hartford (and elsewhere) of two sexually transmitted diseases (STDs) in the study's target age and ethnic groups

*E-mail addresses:* anthro8566@aol.com (M.C. Singer), pamela.erickson@uconn.edu (P.I. Erickson).

as well as a third disease, AIDS, for which sexual contact is a primary route of transmission. Findings from this Centers for Disease Control (CDC) funded study, entitled Project PHRESH.comm (Philadelphia and Hartford Research Effort on Sexual Health and Communication), suggest key cultural and contextual factors underlying the spread of these STDs in the city. The analysis presented is framed by syndemic theory (Freudenberg, Fahs, Galea, & Greenberg, 2006; Singer, 1996; Singer & Clair, 2003), which seeks to elucidate the tendency for multiple, co-terminus and interacting epidemics to develop under conditions of health and social disparity. As Easton (2004, p. 211) notes, "The concept of syndemics is useful for

<sup>\*</sup>Corresponding author. Tel.: +18605270856; fax: +18607240437.

understanding how sociocultural, historical, and geographical, realities in urban areas interact with and compound the adverse consequences of disease."

## Syndemics theory

The traditional biomedical approach to disease is characterized by an effort to treat diseases as if they were distinct entities in nature, separate from other diseases, and independent of the social contexts in which they are found. This approach proved useful historically in focusing medical attention on the immediate causes and expressions of disease and contributed to the emergence of modern biomedical treatments, some of which have been enormously successful. However, as the compendium of knowledge has advanced, it has become increasingly clear that diseases do not necessarily exist in isolation from other diseases and conditions, that disease interactions are of considerable importance to disease course and consequence, and that the social conditions of disease sufferers are critical to understanding health impacts at the individual and population levels. Rather than existing as discrete conditions, multiple life-threatening diseases often are concentrated in particular populations.

Beyond disease clustering, there is growing evidence of important interactions among comorbid diseases (Wasserheit, 1992). One such interaction has been found, for example, between type 2 diabetes mellitus and various infections, such as hepatitis C viral infection in women (O'Connor, West, Lorntz, Vinicor, & Jorgensen, 2004). The worldwide prevalence of type 2 diabetes has been increasing and now impacts the lives of millions of women around the globe. Various factors are recognized as contributing to the onset of type 2 diabetes, including obesity and aging. The role of infection, however, is only beginning to be recognized. Already it is clear that risk for serious infections of various kinds increases significantly with poor diabetes control, but appreciation of more complex relationships between infection and type 2 diabetes is now emerging as well (Soule et al., 2005; Visnegarwala, Chen, Raghavan, & Tedaldi, 2005). The NHANES III study found that type 2 diabetes increases among people who have been infected with the hepatitis C virus. (O'Connor et al., 2004). Similarly, several health reports note that diabetes is present in as many as 37% of those who are critically ill with severe acute respiratory syndrome (SARS) (Booth et al., 2003; Fowler et al., 2003). These examples suggest the importance of dynamic diabetes-infection linkages. It is disease interactions of this sort that are a central element in syndemics. Syndemic theory seeks to draw attention to and provide a framework for the analysis of these interactions.

Various syndemics (although not always labeled as such) have been described in the literature already, including the SAVA syndemic (substance abuse, violence and AIDS) (Singer, 1996), the hookworm, malaria and HIV/AIDS syndemic (Hotez, 2003), the Chagas disease, rheumatic heart disease and congestive heart failure syndemic (Cubillos-Garzon, Casas, Morillo, & Bautista, 2004), the asthma and infectious disease syndemic (Johnson & Martin, 2005), the malnutrition and depression syndemic (Heflin, Siefert, & Williams, 2005), and the mental health and HIV/AIDS syndemic (Stall et al., 2003). Additionally, several syndemics have been identified that involve STDs (Chesson, Heffelfinger, Voigt, & Collins, 2005; Craib, Meddings, & Strathdee, 1995; Otten, Zaidi, Peterman, Rolfs, & Witte, 1994). Here too, researchers report interactions between comorbid STDs and other diseases (Nusbaum, Wallace, Slatt, & Kondrad, 2004).

Beyond disease clustering and interaction, the term syndemic also points to the importance of social conditions in disease concentrations, interactions and consequences. In syndemics, the interaction of diseases or other health problems (e.g., malnutrition) commonly arises because of adverse social conditions (e.g., poverty, stigmatization, oppressive social relationships) that put socially devalued groups at heightened risk. As Farmer (1999) argues with reference to TB, it is impossible to understand its persistence in poor countries as well as its recent resurgence among the poor in industrialized countries without assessing how social forces, such as political violence and racism, come to be embodied and expressed as individual pathology.

An examination of STDs in Connecticut generally, and Hartford specifically, presented below, suggests the existence of an STD syndemic (STDS) involving several co-morbid diseases rooted in the social conditions of poverty and racial discrimination.

#### STDs in Connecticut

In Connecticut, physicians are required to report new cases of five STDs: syphilis, gonorrhea, chlamydia, chancroid, and neonatal herpes. In recent years, there have been no new cases of either chancroid or neonatal herpes reported, and few new cases of syphilis had been reported until recently (Farley, Hadler, & Gunn, 1990; Connecticut Department of Public Health, 2000, 2004). By contrast gonorrhea and chlamydia already have become significant epidemics in the state's population.

In 2003, there were approximately 3000 cases of gonorrhea reported in Connecticut; 61.5% of these cases were among women, 40.5% were among African Americans, and 55% were among youth and young adults 15–24 years of age. (Connecticut Department of Public Health, 2004). Of these cases statewide, 47% were in Hartford. In fact, it is believed that gonorrhea is much more common than these statistics would suggest. It is estimated that at least half of all cases go unreported. Risk factors for gonorrhea infection include having vaginal, oral or anal sex with multiple sex partners, having a sex partner with a past history of any STD, and having sex without the use of a condom.

Currently, chlamydia is the most commonly diagnosed STD in Connecticut. Each year since 1999 there have been 5000–7000 new cases reported in the state, primarily among women (Connecticut Department of Public Health, 2004). About 16% of chlamydia cases diagnosed in the state are from Hartford.

In addition to these two epidemics, AIDS continues to be a significant epidemic in Hartford. Disproportionately, AIDS cases have been concentrated in ethnic minority populations in the city. By 1999, African Americans and Latinos comprised 42% and 44% of AIDS cases, respectively in Hartford, while accounting for 36% and 41%, respectively of the city's total population. Of the three principal routes of HIV transmission-injection drug use, men having sex with men, and heterosexual sex-injection drug use has consistently been the most prevalent reported route of infection among Hartford's AIDS cases (Connecticut Department of Public Health, 2000). The distribution of AIDS cases, however, is not tightly predicted by injection drug use, suggesting the importance of other factors such as sexual transmission even among injection drug users (IDUs).

Notably, as the percentage of AIDS cases among IDUs in the city declined in the last few years of the 20th century, the percentage attributed to heterosexual transmission rose from fewer than 10% of cases during the late 1980s and early 1990s to 16%

of new cases through 1999. At the same time, the percentage of new cases among females increased from 18% to 30% between 1990 and 1999, and women were reported with AIDS at a younger age than men (e.g., 20.8% vs. 12.6% in the 13-29-yearold age group) (Hartford Community Health Partnership, 2003). These data indicate the growing importance of sexual transmission of HIV in Hartford, especially among ethnic minority populations. Co-infection with another STD-which increases the ability of HIV to be transmitted during sexual contact—and having multiple sexual partners have been suggested as key factors in accounting for higher rates of HIV among ethnic minorities in the city (Singer, Jia, Schensul, Weeks, & Page, 1992). This interpretation is supported by a review of findings from PHRESH.comm.

#### Methods

The data we use in this paper come from the Hartford, CT component of the larger study using the first two of seven research methods from a 5year qualitative and quantitative study of communication and negotiation about barrier contraceptive use for STD and pregnancy prevention among low income, inner city African American and Puerto Rican self-identified heterosexual young adults (age 18-25) in Hartford and Philadelphia. The major goal of this project is to understand strategies and patterns of communication and negotiation surrounding condom and other barrier contraceptive use in these sexually active at-risk populations. The study weaves together a variety of qualitative and quantitative methods, including focus group discussions, systematic cultural assessment techniques (Bernard, 2001), in-depth individual sexual and romantic life history interviews, sexual behavior diaries, scenario drama discussions, and structured interviews staged over 4 years of data collection (2004–2008). The aim of this design is to collect a variety of data that will be triangulated to yield a detailed and contextualized understanding of sexual and romantic relationships in light of social and cultural factors, and to use these data to inform the development of targeted risk-reduction strategies.

Participants for all methods are recruited through street outreach at two kinds of venues: general street settings and specialized activity sites. The first of these includes places with heavy pedestrian traffic in areas identified through prior research. The latter refers to the local community college, adult education centers, youth and young adult programs, and park and recreation sites. To recruit participants, project outreach workers approach individuals who appear to meet inclusion criteria and engage them in conversation about the goals of the project, screen for inclusion criteria, and invite participation.

In this paper, we use data from the first two methods: focus group discussions (FGDs) and indepth, individual sexual and romantic life histories (SRIs). These two methods elicited data on the socio-cultural context of relationships, the local terms used by participants in discussing sexual and romantic relationships and sexual behavior (FGDs), and the natural history of sexual and romantic relationships (SRIs). Participants in the FGDs were allowed to participate in the SRIs, as the former method collected group-level and the latter collected individual-level data. Eight percent of SRI participants were also FGD participants. While we will report some difference across gender, for the issues of concern to this analysis ethnicity did not appear to be a significant factor.

The FGDs included free listing and ranking of salient terms and a guided discussion surrounding six domains of interest: (1) types of sexual and romantic relationships; (2) types of sexual behavior and understandings/thoughts/ideas about monogamy and abstinence; (3) understanding of birth control methods, condoms, and safer sex; (4) factors considered when contemplating initiation of a new sexual relationship; (5) the physical and emotional risks of involvement in heterosexual relationships; and (6) the socio-cultural and economic factors that affect sexual and reproductive behavior. In Hartford, eight FGDs were convened with African American and Puerto Rican males and females (i.e., two groups within each ethnic/gender group of interest). A total of 61 people participated in the eight, 5-6 h FGDs. Unusually long FGDs were used as a means of gathering rich data that would assist in the development of subsequent methods such as the SRIs. Participants received \$60 for their time.<sup>1</sup>

The SRIs were open-ended interviews with 60 individuals at each site (i.e., 15 each African America and Puerto Rican males and females). Interviewers used a written guide to elicit a detailed history of each respondent's self-determined most important romantic and sexual relationships. The goal was not to obtain data about contraceptive use/risk reduction strategies in the past, but rather to understand the range of sexual and romantic relationships that are meaningful to inner city young adults and the patterning of entry into and exiting relationships over time as well as a general sense of risk prevention behaviors. The SRI interviews lasted about 2h and participants were paid \$30.

In many ways, the in-depth, personal SRI interviews provided a counterpoint to the FGDs in that they elicited information about relationships (from purely sexual to committed) and their personal, emotional meaning to the participant. While the FGDs provided a "universe" of relationship types and sexual behaviors in which participants engage, as well as what they think about and how they decide about potential relationships, the SRIs provided knowledge of what is important with respect to feelings and emotional attachment in relationships at the individual level. Together, these methods provide an emic or insider view of sexual and romantic relationships.

Each participant also completed a form that collected basic demographic information. Table 1 provides the sociodemographic characteristics of the study participants for the focus groups and sexual and romantic history interviews in Hartford.

The research protocol for all methods in the study was approved by the Institutional Review Boards (IRB) at the CDC, the University of Connecticut, the Hispanic Health Council in Hartford, and the Family Planning Council of Philadelphia. Written informed consent was obtained from each participant.

Participants in the two samples were quite similar across all of the characteristics reported in Table 1. The mean age of participants was just slightly over 20 years. While a majority of the individuals in both groups had graduated from high school, a sizeable percent in each group (40%) had dropped out of high school or earlier. While very few of the

<sup>&</sup>lt;sup>1</sup>Compensation for participant time was calculated roughly at \$15/h. Informed consent and preliminary instruction for FGDs required about an hour and actual data collection from 3 to 5 h. Participants had one break with refreshments during the FGDs. Facilitators reported that, while ultimately successful, the FGDs were very long and exhausting for both themselves and the participants. Some of the participants indicated to the facilitators that this was the first time they had ever talked to anyone or thought about their sexual experiences and behavior in this way

<sup>(</sup>footnote continued)

and that it had been an important learning experience for them. Despite the length of the sessions, many participants expressed interest in having subsequent sessions.

Table 1 Sociodemographic characteristics of participants

	Focus group discussions (FGD)	Sexual and romantic history interviews (SRI)
Number of participants	65	60
Mean age (years)	20.4	21.2
Less than High School	40	38
Education (%)		
Employed in last 6 months	63	59
(%)		
Employed currently (%)	34	38
Never married (%)	93	91
Have children (%)	41	48
Lives with parents (%)	47	40

participants in either group had ever been married, over 40% of both groups had children. Large percentages of both groups continued to live with parents. The majority of participants in both groups had been employed at least some of the time during the last 6 months; however, only a minority was employed at the time of their interview.

## Findings on STD risk in Hartford

Sexual and romantic relationships

From the total 16 FGDs at the Hartford and Philadelphia sites, we elicited 146 terms for different kinds of sexual and romantic relationships in the free list exercise. Findings indicate a wide range of relationship types from purely casual one-night stands to emotionally committed live-in arrangements, but with a particularly large number of relationships at the casual end of the spectrum.

From these free list data from the two sites, we selected the 30 relationships that were mentioned in three or more FGDs on the assumption that frequency of mention was an indication of saliency (see Table 2).<sup>2</sup> These terms were used for a free pile sort in which the 60 SRI participants sorted relationship types into meaningful groups of their

Table 2 Four main groups and subtypes of sexual and romantic

relationships		
Relationships that are not		
committed or expected to be		
monogamous		
Booty calls	Someone to call when you have sexual needs	
Chicken-head	Someone who gives oral sex without commitment	
Creep shots/Creepin'/	A purely sexual relationship one is	
Creeps	embarrassed to admit	
Friend/friendship	Someone you are checking out	
Head doctor/Head game/	Someone who prefers oral sex to	
Head nurse	intercourse,	
Hit & run/hittin' & skippin'	A purely sexual, brief relationship	
it/hit it & split it		
One night stand	A single event sexual relationship	
Shag/Shag Partner/Shaggin	Someone you have sex with periodically	
Shorty	A girlfriend, but may be less than serious	
Thang thang'Thing on the	A relationship on the side, not	
side/Little thing	main partner	
Sexual and monetary/commo	dity exchange	
Ho/Whore	A prostitute	
Jump/Jump off	Someone willing to have sex with	

Jump/Jump off Someone willing to have sex with

little wooing

Sugar daddy A man who gives presents or

money

Romantic but not committed

Boo/Boo-butt

Dating Someone you are seeing Boyfriend A guy you are romantically

> involved with A boyfriend

Girlfriend A girl you are romantically

involved with

Freaky/Freaky ones Someone who will do anything

sexual

Committed/expected to be monogamous

Committed A monogamous relationship Monogamous A monogamous relationship

Husband Legally married

Marriage A convention legal marriage Hubby Common-law, can imply the burdens of monogamy My man The man a woman is most

involved with

Parent of your child Someone who remains in your heart because you have a child

together

Baby mama/Baby's mother Mother of your child, can imply

> an intrusive, enduring, and interfering but still someone with whom you share something

important

Baby daddy/Baby's father Father of your child (same as

above)

<sup>&</sup>lt;sup>2</sup>There were only four terms that were absent or rare in the Hartford FGDs. Only one term in the list was not mentioned at all in Hartford ("hit and run") and three others that were mentioned in only one Hartford group. Most of the terms (26) were mentioned in two or more groups at both sites (see Table 2). What is more notable about the terms in use is the dominance of African American youth culture, language, and modes of speaking among all the participants.

own construction. Cluster analysis (using Anthropac 4.98, Borgatti, 1996) documented two distinct groupings—relationships that were primarily sexual and those that were primarily romantic and emotionally meaningful, which we hereafter call sexual and serious relationships following terminology used by the participants (see Table 2). Forcing more categories in the cluster analyses (using Anthropac's hierarchical tabu search forcing 15 clusters) revealed three clusters (two with definite sub-clusters) that suggested a more nuanced understanding of kinds of relationships in which participants engage, their potential for developing into something more lasting, and the stages in relationship development.

This interpretation was further supported by multi-dimensional scaling (Anthropac's MDS) of the pile sort data that suggested three groups of relationships. We identified the domains underlying these groupings from the labels participants assigned to their sorted piles. The first group, sexual relationships, included the two subgroups casual sexual relationships just for sex (e.g., "purely sexual", "these are just fucking and you leave", "sex friends") or as exchange for resources ("person that helps you out, gives you things financially," "friends who provide money and stuff"). Half (15) of the relationship types were purely sexual (e.g., "booty call," "thang thang") and three implied an exchange of sex for access to resources (i.e., "jump," "ho," "sugar daddy"). These purely sexual relationships can be short-term, never proceeding to a romantic stage by definition (e.g., "ho," "one night stand"). Alternately, they can be longer term but still purely sexual relationships (e.g., "friends with benefits", "shorty") in which the partners can be quite attached to each other as friends; these usually do not develop into romantic relationships. Purely sexual relationships may involve types of sexual behavior (e.g., oral sex, kinky sex) that are different from those in more romantic or committed relationships.

Although serious relationships might involve some of these more specialized sexual behaviors, they are not likely to be defined by them or limited to them. Indeed, seeking a certain type of sexual gratification may play a significant role in the persistence of secondary sexual relationships during a serious relationship.

In the kinds of relationships in which sex is exchanged for resources like money or material items such as clothes, shoes, cell phones, or car tires, this is not considered commercial sex work by participants, but rather as a more general form of economic support or exchange of services.

Participant 1: A jump takes care of you.

Facilitator: You mean just sexually?

Participant 2: Monetary! Financial wise.

Participant 1: I need my tires fixed; can I get some tires? And if he say no, he got to go!

Participant 3: You got to make it clear. You's not my man, you just my side partner.

(African American Females, FGD)

Separate from the sexual relationships are those serious relationships in which people can "catch feelings" for each other, the participants' way of talking about becoming emotionally and romantically involved with another. The second grouping in the MDS analysis involved this stage ("girlfriends and boyfriends that are dating," "getting to know person/talk about feelings"). Six of the relationships fell into this group and were considered romantic but not yet completely committed (e.g., dating, boyfriend/girlfriend). Getting to know a person in whom one is interested sexually and romantically is called "talking." "Feeling the person" (understand/ empathize with/care about) means that the couple is transitioning to a socially recognized couple or boyfriend/girlfriend stage.

The final stage is a serious, usually long-term relationship in which catching feelings (i.e., romantic love, attachment, and commitment) and longevity are the main themes. This is the third MDS grouping comprised of serious relationships with a current partner ("you're going to be together for a long time," "you are with this person and no one else," "love") or with your baby's father/mother ("they are people you have to deal with all your life because you have a child together"). Seven of the relationship types were serious relationships that were ideally monogamous (e.g., "hubby/wifey") and two indicated the parent of your child (i.e., "baby mama/baby daddy")-forty-one percent of FGD and 47% of SRI participants already had children although most (over 90%) had never been married. The often-used phrase "baby mama/daddy drama" suggests the intrusive nature and kind of influence that baby mamas/daddies can have on subsequent serious relationships to the point that how many baby mamas/daddies a person has becomes a factor in deliberations about whether to become involved in a relationship with them.

In the FGDs, participants talked freely about the normalcy of multiple relationships among people in their age group, even among those in supposedly serious relationships. Several of the sexual relationship terms refer explicitly to a partner on the side of a more serious relationship (e.g., "creep shots," "thing on the side") although any of them can be side partners. These participants summarize the ubiquity of the norm of multiple relationships:

Participant 1: That's the point. You never know. What, you never sit around and then think: "He's cheating on me?" In all, he really is. 'Cause you really don't care, because you got to *not* care 'cause he'll do it anyway. You can't be like that's my man and I'm the only one, not in 2004 you're not. Trust! Everybody got somebody extra.

Participant 2: Even if you say that you the wifey, like how we say we got a hubby, we still got our man on the side. Just like you the wifey, he still got the other girl on the side. You ain't goin' to never know.

Participant 3: Somebody always got some better coochie than the next person, so it's going to happen. That's life. I'm telling you. I don't believe in that faithful committed junk. That junk don't live here.

(African American Females, FGD)

Since multiple partners are the rule, it is not very surprising that participants indicated a fundamental lack of trust between current partners and those entering new relationships. In fact, catching feelings is considered dangerous and there is a sense that emotional involvement is risky.

So all that just boils down to the whole big word, fear. That's what it is, fear of being in a relationship. (African American Male, FGD)

In sum, in the FGDs, we found a generalized fear of commitment and a sense of certainty about sexual infidelity even in committed relationships that may be fueled to some extent by the fact that some sexual relationships, especially secondary relationships, are driven by the need for access to resources. Although the terms differ, there are parallels to findings of Lichtenstein and Schwebke (in press) from a study of STDS and sexuality among African American men.

Data from the SRIs support the key findings from the FGDs. Both male and female participants indicated that catching feelings and entering into a serious relationship were risky. The SRI data

document the natural history of young people's serious relationships, which numbered between one and six, and their non-serious, but nevertheless memorable, relationships which numbered between one and 15. Life history data document the ubiquity of multiple relationships even during serious relationships, which are supposed to be sexually exclusive. In fact, less than 5% of participants had ever been in a serious relationship in which neither they nor their partner had side partners. The majority (72%), both males (69%) and females (76%), had a secondary partner during one or more of their serious relationships, or had a serious partner who they thought had cheated on them (males 79%, females 86%). In addition, many said that they were already talking to someone else before ending a serious relationship, serving as a catalyst for ending a current relationship when the partner finds out or as a motivating factor to move on once the current relationship grows stale or becomes otherwise unappealing (e.g., controlling behavior by the partner, violence, interference from the baby mama/daddy)—in either case, hedging bets against being alone.

Participant: Um, when I was with Carlos, me and Carlos broke up when we were up here, so we broke up for like a couple of weeks or whatever, because, you know he just keeps, he kept playing me [seeing other women] ... we always would break up and get back together and stuff like that and while we were broken up I was messing with Jamal. (Puerto Rican Female, SRI)

#### Condom use in relationships

The participants in FGDs and SRIs indicated a high awareness of the need for STI/HIV prevention through condom use with casual sexual partners.

You know what Russian roulette is? That's having unprotected sex with somebody. You are having sex with every hundreds of thousands of people that they have been with, if you are unprotected. (African American Female, FGD)

Agreement was virtually unanimous that it was the norm to use condoms with a casual sexual partner for both men and women.

Participant 1: If you don't want no STDs you go and use a condom.

Participant 2: Or else you go to a clinic and get checked up at the same time, you and your

broad. Like, if you wanna have kids. (African American Male, FGD)

Actual use, however, was subject to the immediate context of the event, the longevity of the relationship, and the level of feeling and commitment attached to it. In casual relationships where condoms are most socially acceptable and likely to be used, situational factors like the lack of availability of a condom in the heat of the moment or impairment by drugs or alcohol can lead to an unprotected sexual encounter.

Participant 1: Sometimes, you get in a sexual act, and sometimes you protect yourself and sometimes you don't. Some people just get caught up in the moment. Like, Raul is conscientious about the way he goes about doing things, but some people get caught up in the heat of the moment. (Puerto Rican Male, FGD)

Participants made it clear that condom use was likely to be only a temporary strategy because men prefer to "hit it raw" (i.e., have skin-to-skin contact while having sex):

When you do it like raw, you feeling the best way. That the best shit in the world. But when you got condoms it's like nothing, it's nothing... raw is better. It's natural. (Puerto Rican Male, FGD)

When feelings are involved and relationships become more serious, condoms are quickly abandoned both because people like raw sex and because condoms signify a lack of trust.

Participant 1: Yeah, like when at first I'm going with her, I use a condom. But now after that, I just turn that shit off like, man, fuck it.

Facilitator: So then, why do you take off the condom?

Participant 1: Because that's the female I'm gonna be fucking for a while.

Participant 2: Cause you feel safe with her...feel comfortable with her.

(African American Males, FGD)

Women indicate that sometimes fear of losing a partner makes them reluctant to ask for condom use.

Participant 1: 'Cause you so wrapped up into what this guy is telling you, you not actually thinking about yourself. Damn, he love me, he want to be with me. Damn, what if I tell him to

put a condom on? Will he leave me? You got some people that think like that and they don't realize the consequences 'til it's done.

(Puerto Rican Females, FGD)

The last participant is telling the group that her relationship has become more serious, and she no longer expects to use condoms precisely because they indicate a lack of trust. It is also important to note that relationships develop quickly and condom abandonment often takes place within quite a short period of time, usually one or two months.

The cultural logic of sexual decision-making, risk assessment, and condom use

Analysis of FGD data suggests that participants employ a cultural logic system borne of their life experiences. Elements of this logic system were elicited using a free list exercise in which the participants told us all the things young people consider before having sex with someone new. Their responses are summarized below and include the following considerations:

- (1) Your knowledge about the Other, especially: (a) are they a "psycho"; (b) do they have sex with many others; (c) have you had sex with them before; (d) do they fit the folk category of "clean" (hygienic and disease-free);
- (2) Your knowledge of the Other's family (do they come from good people, respectable people);
- (3) Information provided to you by friends or family about the Other;
- (4) The Other's "street rep" (based on continuum from "clean" to "scallywag/ho");
- (5) The current status of your relationship with the Other (brand new or a month old or more);
- (6) The kind of relationship you have or want to have with the Other (e.g., "a jump" vs. a "wifey");
- (7) Situational factors at the moment of potential sexual interaction (e.g., availability of a condom);
- (8) Visible or olfactory indications of health vs. disease/dirty;
- (9) How attractive you find the Other person physically and sexually; and
- (10) The Other's assets (e.g., car, own apartment, job, etc.) and liabilities (e.g., how many baby mamas/daddies, criminal background, abusive, use/sell drugs).

In sum, the kinds of things that young adults in our sample consider tend to center around their assessment of how attractive their prospective partner is and how sexually pleasing the relationship will be, how stable he/she is emotionally and financially, whether or not he/she already has children, and finally, how "safe" the potential partner is with respect to STDs/HIV. The kinds of information used to assess this last factor include the person's street reputation—whether a man is a "player," or a "scallywag" (i.e., has had a lot of sexual partners without attention to prevention) and whether a woman is a "ho" or a "chicken head" (i.e., has sex for material gain or just because she likes to give head [oral sex]). Stated a female participant:

Smooth talker. Umm...he was my sweet. He was like a ladies' man, like basically...I think the reason that I went out with him is because like I hear these girls talking about him so I'm like... you know, curious [laughs]. So I'm like: "There must be something that's going on." (African American Female, SRI)

Also of importance is his/her appearance and hygiene—if they smell bad, have dirty clothes, are missing teeth, look "dusty" (poorly dressed and unhygienic), or if the woman has a foul vaginal odor (determined by what is referred to as "the finger test"):

Participant 1: I used to do something, like I'm not trying to be perverted or nothing. I used to, like, when I would finger her....

Participant 2: ...and then you go [sniffs finger], well, if you smell [it], then you know. If you smell it from here, good-bye.

(Puerto Rican Males, FGD)

In deciding about a new partner, men tended to emphasize the importance of physical appearance and the potential for sexual satisfaction more than women, who also mentioned these factors but tended to put more emphasis on assets and liabilities and the potential for a longer term relationship. Further, males were found to be less likely to think about risk in relationships than were females, and often had to be prompted by FGD facilitators to give examples of the kinds of risks that are encountered in relationships. Females, by contrast, were much more likely to have a ready list of risk factors that they associated with romantic and sexual relationships. Both males and females,

however, mentioned the same basic domains of risk: reproductive issues, violence, interaction with ex-partners (especially baby mama/daddy), drama (i.e., intense interpersonal interchanges—anger, shouting, mind games, etc.), fear of falling in love and losing control, and emotional vulnerability, pain, and heartbreak. Men, however, particularly emphasized vulnerability, losing control, getting hurt (e.g., falling in love, betrayal, heartbreak, loneliness, anger), having to deal with partners who were "psycho" or intrusive (including ex-partners and/or baby daddies of a new partner), and physical risk of STDs, violence, and incarceration.

For women, risks included physical and emotional abuse, rape, pregnancy, STDs, dealing with ex-girlfriends and baby mamas, and a litany of emotional risks—heartbreak, betrayal, dependence, depression, anger, jealousy, loneliness, fear, stress, and loss of control. In general, women began their lists with physical vulnerability and men with emotional vulnerability. Men thought less about risk in relationships, but women were keenly attuned to risk, perhaps because of their greater perceived physical vulnerability to pregnancy, physical and sexual abuse, and the greater importance attached to their good reputations than for men. Those labeled "Hos," they know, are not girlfriend material.

Even with this greater vulnerability, women tended to value having a relationship more than they valued being risk-free; hence even if they wanted a man to use a condom, they might not risk upsetting him by asking him to use one. Moreover, even if condoms were used at the beginning of a relationship, their use was often curtailed before very long because increasing familiarity tends to breed trust in the Other and confidence in his/her safety. Within a month or two, condom use was often abandoned because the Other was now familiar and appeared to be clean. The fact that one had not already gotten sick (i.e., exhibited symptoms) was taken as proof that the Other was safe.

An important aspect of this cultural model of risk assessment is that both women and men tend to think in terms of "who is safe" rather than "which behaviors are risky." In other words, riskiness is an attribute of particular people, not of particular actions in which anyone might engage. Participants tend not to be aware of asymptomatic disease; hence, if they feel fine, they believe they are fine or if someone looks "clean" they are clean. Similarly,

someone from a good family is likely to be "safe." If someone were deemed on the basis of appearance or family background to be safe then there was no need to use a condom to avoid disease as no disease would be present. Even if someone were not deemed to be completely safe, condom availability still strongly influenced whether or not condoms were used in all kinds of relationships. Thus, lack of condom availability tends not to be a strong barrier to having sex.

One consequence of the cultural logic model employed by the participants in our study is that it puts them at high risk for STD infection. Notably, 22% SRI participants and 11% of FGD participants reported that they had ever been told by a doctor or nurse that they had an STD. Females were much more likely to report having had an STD (35% of SRI and 15% of FGD female participants) than male participants (5% of SRI and 13% of FGD male participants). These high rates of infection are noteworthy. Rates of STD infection in equivalent age general samples reported by the CDC (1999) include 5% diagnosed with chlamydia among 20-24-year-old female family planning clinic patients in Connecticut and 3% and 8% diagnosed with gonorrhea and chlamydia respectively among 16–24-year-old women entering the U.S. Job Corp in Massachusetts.

#### Socio-political context of inner city families

The patterns of sexual behavior and condom use within relationships among inner city youth in Hartford, and the cultural logic that informs these behaviors, did not emerge in a vacuum; rather they have been shaped by their experiences growing up in the inner city (or relocating there after growing up in another, but often socio-economically similar, locale). In the focus groups and one-on-one interviews, participants cited a number of key features of their psychosocial life experiences that have shaped their views, attitudes, understandings, and behaviors. These include the following:

- Coming of age in an impoverished family,
- Living in a broken home,
- Experiencing domestic violence,
- Having limited expectations about one's future, lack of hope about significant improvements,
- Having limited exposure to positive relationship role models,

- Having a lack of expectation about living a long life (feeling old early, especially men),
- Having a low level of expectation about the dependability of others (i.e., limited ability to trust), and
- Fear of intimacy as dangerous because it makes one vulnerable.

It is within this psychosocial milieu of threat and uncertainty that the sentiments, beliefs, decision-making and sexual behaviors of participants regarding multiple concurrent relationships, lack of relationship trust, patterns of condom use and disuse, and fear of attachment become understandable. Collectively, the factors cited above appear to mitigate against strict and prolonged adherence to risk reduction strategies, which are predicated on being able to realistically engage in long-term planning for a healthy life.

#### Discussion

Findings from Project PHRESH reveal the social and cultural contexts of sexual behaviors among our participants while suggesting key conceptual, attitudinal, and behavioral factors that may help explain high rates of STDs in the communities and age groups of concern. Study participants have learned to be cautious about commitment in romantic relationships and tend to hedge their bets by having multiple partners and various kinds of relationships. Moreover, four contextual factors appear to be critical in limiting condom use: (1) condoms are not always available when passions run high; lack of a condom is often not a barrier to having sex; (2) the decision to use a condom flows from a culturally informed assessment of a partner's presumed level of risk rather than from a public health understanding of risky behaviors; (3) emotional involvement in relationships runs counter to continued condom use; the decision to curtail condom use is made quickly; and (4) relationships in which condoms are not used are multiple, overlapping and sequential. The result is a high level of risk for STD. This risk is not random or meaningless; it is conditioned by socioeconomic factors that press participants to focus on shortterm pleasure and emotional and material gains rather than on long-term planning and monogamous partnerships. It is, in short, a rational response to social disparity. The results of our investigation, however, lead us towards pessimistic conclusions regarding STD prevention and risk reduction behaviors with current methods. While existing prevention efforts have succeeded in teaching participants about condoms, the context of their utilization creates multiple opportunities for sexual disease transmission.

#### Conclusion

Disease discriminates. Some groups in society get more of it than others. Consistently research has shown that especially concentrated and chronic social disadvantage across multiple spheres of life, enduring discrimination in access to quality health care, and relative poverty, are significantly detrimental to the health not just of individuals but of whole social groups (Budrys, 2003; Hayward, Crimmins, Miles, & Yang, 2000). What have been found to be of greatest importance in the relationship between social inequality and poorer health are structurally imposed "ecosocial" and "psychosocial factors" (Bosman, Schrijvers, & Mackenback, 1999; Kawachi, Kennedy, & Wilkinson, 1999). Kreiger (2001) introduced the term ecosocial to label a configuration of local social environmental conditions (e.g., the social deprivation of living in an impoverished neighborhood) that are the products of class and ethnic inequality. Psychosocial factors of note include a set of interrelated experiences linked to health, such as internalized racism, stigmatization or other social discrimination, living in fear and uncertainty (because of a prevalence of crime and violence in the local social environment), having a low locus of control borne of repeated exposure to discrimination, and feelings of hopelessness about the future.

It is the set of social, psychological, and economic factors experienced by our participants that appear to underlie the set of sexual ideas, attitudes and behaviors, and sexual behavior decisions described in this paper. These beliefs and actions are responses to the uncertainties, threats, and emotional injuries concentrated in the local social environment as a result of significant and increasing socioeconomic inequality. These conditions, and the beliefs and behaviors they give rise to in turn, help drive the spread of multiple and potentially interacting STDs, a phenomenon that is termed here the STDS. The STDS in Hartford is reflected in the comparatively high rates of HIV and other STD infections in the low-income, inner city ethnic minority neighborhoods from which study participants were recruited

and the comparatively high rates of STD diagnoses reported by study participants. As this discussion suggests, the analysis of syndemic spread must take into account cultural and behavioral patterns in the social context. While syndemics reflect social conditions and unequal social relationships, their diffusion is mediated by the beliefs and behaviors of involved communities, and these, in turn, reflect human responses to the life experiences of injustice and social suffering.

Finally, the findings and conclusions of this study have intervention and policy implications. Certainly they should reduce trust in approaches that see individual irresponsibility, damaged family values, or lack of morality as the key causes of STDSs. Community attitudes and behaviors are complex and attentive to social conditions, including, especially, the ecosocial and psychosocial factors that shape day-to-day experiences. Social policies and interventions should be no less attentive to such factors if they are to make a difference in overcoming health inequalities. At the same time, knowing through research what people actually believe and do, and hearing their voices about such matters, presents a firmer foundation on which to construct prevention messages and effective prevention (Singer et al., 2005).

# Acknowledgements

Funding for this study was provided for by the Centers for Disease Control and Prevention, grant #U58/CCU123064, Pamela Erickson and Linda Hock-Long, PIs. Our sister site in this cooperative agreement, the Family Planning Council of Philadelphia is implementing the same research protocol with a similar population of 18-25 year-old young adults in Philadelphia. All names are pseudonyms.

### References

Bernard, R. (2001). Research methods in anthropology: Qualitative and quantitative approaches (3rd ed). Walnut Creek, CA: Altamira.

Booth, C., Matukas, L., Tomlinson, G., Rachlis, A., Rose, D., & Dwosh, H. (2003). Clinical features and short-term outcomes of 144 patients with SARS in the greater Toronto area. *Journal of the American Medical Association*, 289, 2801–2809.

Borgatti, S. (1996). *Anthropac 4.98*. Chestnut Hill, MA: Analytic Technologies.

Bosman, H., Schrijvers, C., & Mackenback, J. (1999). Socioeconomic inequalities in mortality and importance of

- perceived control: Cohort Study. *British Medical Journal*, 319, 1469–1470.
- Budrys, G. (2003). *Unequal health: How inequality contributes to health or illness*. Roman & Lanham, MD: Littlefield Publishers
- Centers for Disease Control (CDC). (1999). Sexually transmitted disease surveillance report: STDS in adolescents and young adults. Atlanta, Ga: CDC.
- Chesson, H., Heffelfinger, J., Voigt, R., & Collins, D. (2005). Estimates of primary and secondary syphilis rates in persons with HIV in the United States, 2002. Sexually Transmitted Disease, 32(5), 265–269.
- Connecticut Department of Public Health. (2000). HIV/AIDS Surveillance Report, Year-end Edition. HIV/AIDS Surveillance Program. Hartford, CT.
- Connecticut Department of Public Health. (2004). Sexually transmitted diseases. Connecticut STD Control Program at site: http://www.dph.state.ct.us/BCH/infectiousdise/STD\_2003/std gc table10.htm accessed 5/12/05.
- Craib, K., Meddings, D., & Strathdee, S. (1995). Rectal Gonorrhoea as an independent risk factor for HIV infection in a cohort of homosexual men. *Genitourinary Medicine*, 71, 150–154.
- Cubillos-Garzon, L., Casas, J., Morillo, C., & Bautista, L. (2004).
  Congestive heart failure in Latin America: The next epidemic.
  American Heart Journal, 47(3), 386–389.
- Easton, D. (2004). The urban poor: Health issues. Encyclopedia of medical anthropology, Vol. 1 (pp. 207–213).
- Farley, T., Hadler, J., & Gunn, R. (1990). The syphilis epidemic in Connecticut: Relationship to drug use and prostitution. Sexually Transmitted Diseases, 17(4), 163–168.
- Farmer, P. (1999). Infections and inequality: The modern plagues. Berkeley, CA: University of California Press.
- Fowler, R., Lapinsky, S., Hallett, D., Detsky, A., Sibbald, W., & Slutsky, A. (2003). Critically ill patients with severe acute respiratory syndrome. *Journal of the American Medical Association*, 290, 367–373.
- Freudenberg, N., Fahs, M., Galea, S., & Greenberg, A. (2006).
  The impact of New York City's 1975 fiscal crisis on the tuberculosis, HIV, and homicide syndemic. *American Journal of Public Health*, 96(3), 424–434.
- Hartford Community Health Partnership. (2003). HIV/AIDS Surveillance report. Hartford: City of Hartford Health Department.
- Hayward, M., Crimmins, E., Miles, T., & Yang, Y. (2000). The significance of socioeconomic status in explaining the racial gap in chronic health conditions. *American Sociological Review*, 65, 910–930.
- Heflin, C., Siefert, K., & Williams, D. (2005). Food insufficiency and women's mental health: Findings from a 3-year panel of welfare recipients. Social Science & Medicine, 61(9), 1971–1982.
- Hotez, P. (2003). *The hookworm vaccine initiative*. Washington, D.C.: Sabin Vaccine Institute, Georgetown University.
- Johnson, S., & Martin, R. (2005). Chlamydophila pneumoniae and Mycoplasma pneumoniae: A role in asthma pathogenesis.

- American Journal of Respiratory and Critical Care Medicine, 172(9), 1078–1089.
- Kawachi, I., Kennedy, B., & Wilkinson, R. (1999). *The social and population health reader*, Vol. 1. New York: The New Press.
- Kreiger, N. (2001). Theories for social epidemiology in the 21st century: An ecosocial perspective. *International Journal of Epidemiology*, 30, 668–677.
- Lichtenstein, B., & Schwebke, J. (in press). Partner notification methods for African American men being treated for trichomoniasis: A consideration of main men, second hitters and third players. *Medical Anthropology Quarterly*, 19(4), 383–401.
- Nusbaum, M., Wallace, R., Slatt, L., & Kondrad, E. (2004). Sexually transmitted infections and increased risk of coinfection with human immunodeficiency virus. *Journal of the American Osteopathic Association*, 104(12), 527–535.
- O'Connor, S., West, S., Lorntz, B., Vinicor, F., & Jorgensen, C. (2004). Women and infectious disease—Chronic disease interactions [conference summary]. *Emerging Infectious Diseases* [serial on the Internet]. At: http://www.cdc.gov/ncidod/EID/vol10no11/04-0623 14.htm. Accessed May 18, 2005.
- Otten, M., Zaidi, A., Peterman, T., Rolfs, R., & Witte, J. (1994). High rate of HIV Seroconversion among patients attending urban sexually transmitted disease clinics. *AIDS*, 8, 549–553.
- Singer, M. (1996). A dose of drugs, a touch of violence, a case of AIDS: Conceptualizing the SAVA Syndemic. Free Inquiry in Creative Sociology, 24(2), 99–110.
- Singer, M., & Clair, S. (2003). Syndemics and public health: Reconceptualizing disease in bio-social context. *Medical Anthropology Quarterly*, 17(4), 423–441.
- Singer, M., Jia, Z., Schensul, J., Weeks, & Page, J. (1992). AIDS and the IV drug user: The local context in prevention efforts. *Medical Anthropology*, 14, 285–306.
- Singer, M., Stopka, T., Shaw, S., Santilices, C., Buchanan, D., Teng, W., et al. (2005). Lessons from the field: From research to application in the fight against AIDS among injection drug users in three New England Cities. *Human Organization*, 64(2), 179–191.
- Soule, J., Olyaei, A., Boslaugh, T., Busch, A., Schwartz, J., Morehouse, S., et al. (2005). Hepatitis C infection increases the risk of new-onset diabetes after transplantation in liver allograft recipients. *American Journal of Surgery*, 189(5), 552–557.
- Stall, R., Mills, T. C., Williamson, J., Hart, T., Greenwood, G., Paul, J., et al. (2003). Association of co-occurring psychosocial health problems and increased vulnerability to HIV/ AIDS among urban men who have sex with men. American Journal of Public Health, 93(6), 949–954.
- Visnegarwala, F., Chen, L., Raghavan, S., & Tedaldi, E. (2005). Prevalence of diabetes mellitus and dyslipidemia among antiretroviral naive patients co-infected with hepatitis C virus (HCV) and HIV-1 compared to patients without co-infection. *Journal of Infection*, 50(4), 331–337.
- Wasserheit, J. (1992). Epidemiological synergy. Interrelationships between human immunodeficiency virus infection and other sexually transmitted diseases. *Sexually Transmitted Diseases*, 19, 61–77.