

# HIV-Related Stigma and Knowledge in the United States: Prevalence and Trends, 1991-1999

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## **Abstract**

**Objectives.** *This study assessed the prevalence of AIDS stigma and misinformation about HIV transmission in 1997 and 1999 and examined trends in stigma in the United States during the 1990s. **Methods.** Telephone surveys with national probability samples of English-speaking adults were conducted in 1996-97 (N = 1309) and 1998-1999 (N = 669). Findings were compared to results from a similar 1991 survey. **Results.** Overt expressions of stigma declined throughout the 1990s, with support for its most extreme and coercive forms (e.g., quarantine) at very low levels by 1999. However, inaccurate beliefs about the risks posed by casual social contact increased, as did the belief that people with AIDS (PWAs) deserve their illness. In 1999, approximately one-third of respondents expressed discomfort and negative feelings toward PWAs. **Conclusions.** Although support for extremely punitive policies toward PWAs has declined, AIDS remains a stigmatized condition in the United States. The persistence of discomfort with PWAs, blame directed at PWAs for their condition, and misapprehensions about casual social contact are cause for continuing concern and should be addressed in HIV prevention and education programs.*

People with AIDS (PWAs) and the social groups to which they belong have been stigmatized worldwide since the epidemic began.<sup>1-4</sup> Stigma has interfered with effective

societal response to AIDS and has imposed hardships on people living with HIV as well as their loved ones, caregivers, and communities.<sup>5-</sup>

<sup>7</sup> PWAs have been shunned by strangers and family members, discriminated against in employment and health care, driven from their homes, and subjected to physical abuse.<sup>8-13</sup> Fear of stigma has deterred individuals from being tested for HIV and from disclosing their seropositive status to sexual partners, family, and friends.<sup>6,13-16</sup>

Among the US public, AIDS stigma has been manifested in the form of anger and other negative feelings toward PWAs; beliefs that they deserve their illness; avoidance and ostracism; and support for coercive public policies that threaten their human rights.<sup>4,17-19</sup> Stigmatizing attitudes are strongly correlated with misunderstanding the mechanisms of HIV transmission and overestimating the risks of casual contact<sup>20-24</sup> and with negative attitudes toward social groups disproportionately affected by the epidemic, especially gay men and injecting drug users.<sup>20,23-26</sup>

Early in the epidemic, concerns about stigma led to public health policies that reflected “a commitment to rely on prevention measures that were noncoercive – that respected the privacy and social rights of those who were at risk” (p. 1042).<sup>27</sup> In the 1990s, however, policy debates in the United States raised questions about whether and to what extent AIDS stigma remains a widespread problem. By the end of the century, many public health advocates had

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abandoned the philosophy sometimes characterized as “AIDS exceptionalism.” As Bayer summarized in 1999, “Practices uniquely informed by a commitment to privacy rights are increasingly vulnerable to challenge as despair and therapeutic impotence give way to a (perhaps premature) therapeutic triumphalism” (p. 1047).<sup>27</sup> Nevertheless, many AIDS researchers, physicians, and community-based advocates continue to oppose policies such as named reporting of HIV-infected individuals, arguing that ongoing fears of prejudice and discrimination are rational and realistic, and still play a significant role in personal decisions to seek HIV testing and treatment.<sup>28-31</sup>

Empirical data about the extent to which stigma actually persists would be highly useful for formulating health policy about this and other AIDS-related issues. Moreover, AIDS educators could use such data in designing programs that not only prevent HIV transmission, but also help to reduce persecution of PWAs. The present paper describes the prevalence and nature of AIDS-related stigma in the United States using data from surveys conducted with national probability samples of US adults in 1997 and 1999. In addition, trends in stigma throughout the 1990s are identified by examining data from the present study in conjunction with previously-reported findings from a comparable 1991 survey.<sup>4</sup>

## **Method**

### ***Sample and Procedure***

For the 1997 survey, the sampling frame was the population of all English-speaking adults (at least 18 years of age) residing in households with telephones within the 48 contiguous states. The sample was drawn using a list-assisted Random Digit Dialing (RDD) procedure.<sup>32</sup> This method yielded 2,009 eligible households that were contacted between September, 1996, and March, 1997. Of these, interviews were fully or substantially completed with 1,309, yielding a final response rate of 65.1%. The 1997 sample was 55.3% female and 79% non-Hispanic White, with a mean age of 44 years (range = 18 - 93), a median educational level of 1-2 years of college or post-secondary school, and a median

income of \$40-50,000.

Approximately two years later (between September, 1998, and May, 1999), another survey was conducted with a new sample, referred to hereafter as the 1999 survey. It used the same sampling frame and RDD procedure as the 1997 survey. A total of 1,153 eligible households were contacted, and interviews were fully or substantially completed with 669, yielding a final response rate of 58%. The 1999 sample was 55% female and 82% non-Hispanic White, with a mean age of 45 years (range = 18 - 89), a median educational level of some college, and a median income of \$40-50,000.

All interviews for both surveys were conducted by the Survey Research Center at the University of California at Berkeley, using their computer-assisted telephone interviewing (CATI) system. No limit was set on the number of recontact attempts for each number. Upon reaching an adult, the interviewer enumerated the first names of all household members 18 years or older. The target respondent was selected at random from that list. The median duration of the interview was 44 minutes in both years.

To examine trends, we compare data from the 1997 and 1999 surveys to findings from a previously reported 1990-91 national telephone survey (hereafter referred to as the 1991 survey). The 1991 survey results presented below use unweighted data and are based on that study's primary sample ( $N = 538$ ), which was selected using RDD procedures and interview methods comparable to those in the 1997 and 1999 surveys. Methodological details for the 1991 survey have been reported elsewhere.<sup>4,20,21,33</sup>

### ***Measures***

As much as possible, the items for assessing AIDS stigma were the same as those used in the 1991 survey<sup>4</sup> and were administered in the same sequence. The survey protocols were not identical, however, because some new items were added and other items were dropped in 1997 and 1999. The present article reports response patterns for items that were administered in at least two surveys (either the 1991 and 1997 surveys, or the 1997 and 1999 surveys). For most items, the exact wording is

reproduced in Tables 1-3 (a list of the items is also available online at the following URL: <http://psychology.ucdavis.edu/rainbow/html/aids.html>).

### ***AIDS Stigma***

Previous research has shown that AIDS stigma is expressed in a variety of ways.<sup>4,5,19-24</sup> Accordingly, the survey protocol assessed multiple facets of it. Questions were included about *support for stigmatizing AIDS policies* (quarantine, publicly identifying PWAs), *support for mandatory testing* (of pregnant women, immigrants, and people perceived to be at high risk), attributions of *responsibility and blame* to PWAs (the belief that PWAs are responsible for their disease, that they deserve it), *beliefs about PWAs* (that they do not care about infecting others), *affective responses* to PWAs (anger, fear, disgust), and *discomfort* with and *avoidance* of PWAs in hypothetical situations (having one's child attend school with a PWA, working in an office with a PWA, patronizing a neighborhood grocer who has AIDS).

### ***Beliefs About HIV Transmission***

*Casual contact and blood donation.* Because one of the most consistent correlates of AIDS stigma has been overestimation of the risk of HIV transmission through various routes,<sup>20-24</sup> we assessed beliefs about the likelihood "that a person could get AIDS or AIDS virus infection" through a kiss on the cheek; sharing a drinking glass; using public toilets; being coughed or sneezed on; and donating blood.

*Symbolic contact and magical contagion.* We assessed exaggerated and seemingly irrational fears about HIV contagion through mere contact with an object that had once been touched by a person with AIDS (e.g. a sweater, a drinking glass). This phenomenon has been described elsewhere as belief in the magical law of contagion.<sup>34,35</sup> We first asked respondents about their willingness to wear "a very nice sweater that had been worn once by another person who you didn't know" and had been "cleaned and sealed in a new plastic package so that it looked like it was brand new." Then we asked about the likelihood that they would wear the same sweater if "you found out that the person who had worn it the one time before had

AIDS." We also asked how comfortable the respondent would feel about drinking out of a washed and sterilized glass in a restaurant if someone with AIDS had drunk out of the same glass a few days earlier.

*Trust of Experts.* Whereas inaccurate beliefs about how HIV is transmitted often reflect lack of information, they can also result from mistrust of health experts.<sup>21</sup> We measured such mistrust with two questions. Respondents reported their level of agreement with the statement "Scientists and doctors can be trusted to tell us the truth about AIDS." They also indicated the extent to which they believed scientists' and doctors' assertions that AIDS is not spread by casual contact.

### ***Analysis of Trends***

Because the same items were used in multiple surveys, the data permit examination of trends in AIDS stigma throughout the 1990s. To test for significant changes in the point estimates over time, we conducted a series of logistic regression analyses. For the dependent variables, responses to each item were coded as 0 or 1, with the percentages reported in Tables 1-3 corresponding to responses coded as 1. To account for the unequal time gaps between surveys (i.e., 6 years between the 1991 and 1997 surveys, 2 years between the 1997 and 1999 surveys), an independent variable for year of the study was entered on the first step of the equation (coded 0 = 1991, 6 = 1997, 8 = 1999). When the item appeared in all three surveys, the quadratic form of the independent variable was entered on a second step to test for nonlinear trends. These analyses yielded odds ratios (ORs) that characterize changes in the odds of endorsing the item with each passing year (with 1991 as the index year).

For purposes of the present discussion, we assume that changes in opinion were linear and consistent across the years in which data were not collected. The validity of this assumption cannot be tested with the current data. Our primary focus, however, is on trends during the 1990s, and we believe that describing these trends in terms of average amount of change per year is an appropriate way to gauge their magnitude. Statistically significant ORs ( $p < .05$ ) are reported in Tables 1-3.

## Results

### *Support for Punitive Policies*

At the beginning of the decade, approximately one third of survey respondents supported quarantine, and nearly as many (29%) endorsed public disclosure. In 1997, by contrast, about one respondent in six endorsed policies of quarantine, and fewer than one in five supported public disclosure of the names of PWAs. By 1999, the proportions were lower still (Table 1; in all tables, percentages are based on totals that include “Don’t Know” responses and refusals). As indicated by the significant ORs, the odds of a respondent supporting quarantine declined by approximately 15% annually between 1991 and 1999. The odds of supporting public identification of PWAs declined by an average of 9% annually.

In 1997, substantial majorities supported mandatory testing for pregnant women (83%), people considered to be at high risk for AIDS (74%), and immigrants (78%). By 1999, support for mandatory testing of high risk individuals had dropped significantly to 64%, and support for testing immigrants declined to 74%. Support for testing pregnant women remained substantially unchanged.

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Insert Table 1 about here

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### *Negative Feelings Toward PWAs*

As indicated by the significant ORs, the odds of expressing negative feelings toward PWAs declined by an average of 8-10% annually between 1991 and 1999. At the beginning of the decade, more than one respondent in three expressed some fear of PWAs, and more than one in four felt anger or disgust. By 1999, approximately one-fifth of respondents expressed fear, and roughly one sixth felt anger or disgust (Table 1, Section 2).

### *Responsibility and Blame*

The proportion of respondents believing that “people who got AIDS through sex or drug use have gotten what they deserve” peaked in 1997 at 28% (Table 1, Section 3). This represented a significant increase from 1991. By 1999, agreement had declined but approximately one

fourth of respondents still endorsed the statement. Somewhat smaller proportions perceived PWAs as not caring whether they infect other people. Framing the issue in less punitive terms, more than half of the 1997 respondents believed that PWAs are responsible for their illness. That proportion declined somewhat in 1999 to 48%.

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Insert Table 2 about here

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### *Beliefs about HIV Transmission*

Virtually all survey respondents understood that HIV can be contracted through sharing needles for drug use and through unprotected sex with an infected partner. But many did not understand how HIV is *not* transmitted. Moreover, the proportion responding incorrectly to some of the questions about casual contact increased over the decade.

In 1991 and 1997, relatively few respondents (17% and 13%, respectively) believed that AIDS could be transmitted by a kiss on the cheek (Table 2, Section 1). Misconceptions about other forms of casual social contact were widespread, however. Throughout the decade, roughly half of the respondents believed that AIDS could be contracted from sharing a drinking glass. About one third of 1991 respondents believed that AIDS could be contracted from a public toilet, and the proportion increased significantly to nearly 41% by the end of the decade. Somewhat fewer than half of the 1991 respondents believed that AIDS could be spread through a cough or sneeze; the proportion expressing this belief peaked at 54% in 1997, and then declined to 50% in 1999. In addition to incorrect beliefs about casual contact, much of the public continues to harbor misapprehensions about donating blood. Roughly one third of the 1991 respondents believed that HIV can be contracted through donating blood. The proportion dipped to 29% in 1997, but rose again to 33% in 1999.

These incorrect beliefs cannot be explained simply as the result of public mistrust of scientists’ pronouncements about HIV transmission.<sup>21</sup> Indeed, such mistrust is relatively uncommon. In the 1997 and 1999

surveys, more than two thirds of respondents agreed that “scientists and doctors can be trusted to tell us the truth about AIDS.” More than four fifths reported that they believe scientists’ assertions that AIDS is not spread through casual contact (and the odds of believing scientists increased throughout the 1990s). As might be expected, respondents expressing disbelief of scientists tended to believe that various types of casual contact could transmit AIDS. In 1997, for example, 57% of those reporting that they did not believe scientists also said that AIDS could be transmitted by sharing a drinking glass. However, the belief that AIDS could be transmitted by a drinking glass was also expressed by 52% of the respondents who said that they *believed* scientists.

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Insert Table 3 about here

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### ***Discomfort and Avoidance***

How did the feelings and beliefs described heretofore translate into intentions to avoid PWAs? The logistic regression analyses indicated that the odds of avoiding or stigmatizing a PWA in various hypothetical situations declined by 8-10% each year. In 1991, 19% said they would avoid a coworker with AIDS, and 15% would have had their own children avoid a schoolmate with AIDS (Table 3, Section 1). Those proportions declined significantly to less than 10% by 1999. In 1991, 45% said that they would avoid shopping at the grocery store whose owner had AIDS. This proportion dropped significantly by the end of the decade. Nevertheless, even in 1999, roughly three in ten respondents said that they would shop elsewhere.

Although relatively few respondents said they would actually take steps to avoid a coworker with AIDS or to prevent their children from interacting with a child with AIDS, considerably more felt uncomfortable about contact with PWAs. As shown in Section 2 of Table 3, between 22% and 30% of respondents reported that they would feel somewhat or very uncomfortable having their son or daughter go to school with a child with AIDS, working in an office with a PWA, or

shopping at a neighborhood grocery store whose owner has AIDS.

Section 3 of Table 3 shows the extent to which respondents would avoid symbolic contact with PWAs. Even though the hypothetical situations described to respondents could not possibly transmit HIV, about one-fourth said they would be less likely to wear a sweater that had been worn once by a PWA, or would feel uncomfortable drinking out of a clean glass in a restaurant that had been used a few days earlier by a PWA.

### ***Summary Index of Stigma***

As a summary measure, a 9-item stigma index was computed by counting the number of stigmatizing responses each person gave to the items concerning negative feelings, avoidant behavioral intentions, quarantine, public revelation of the names of PWAs, and the belief that PWAs have gotten what they deserve. This subset of items was selected to correspond to a similar index\* constructed for the 1991 survey.<sup>4</sup> Internal consistency for the items was acceptably high in all years ( $\alpha = .77$  in 1991,  $.79$  in 1997, and  $.77$  in 1999). Trends were assessed with ordinary least squares regression, using the stigma index score as the dependent variable with hierarchical entry of the same two independent variables as in the logistic regression analyses reported earlier (i.e., the linear and quadratic forms of year of survey).

Stigma index scores declined significantly across the three surveys. In 1991, the mean number of stigmatizing responses was 2.6 (Standard Error [SE] = 0.11); in 1997, it was 1.7 (SE = 0.06); and in 1999, it was 1.5 (SE = 0.08). The linear term explained a significant proportion of variance in index scores ( $R^2 = .031$ ;  $b = -0.132$ ,  $p < .001$ ). The quadratic term was not significant ( $p > .20$ ).

The proportion of respondents that gave no stigmatizing responses (i.e., index score = 0) nearly doubled between 1991 and 1999, from 21% to 39%. Nevertheless, 20% of respondents

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\* A 10-item index was used in the paper that originally reported the 1991 data. Because one item from the 1991 index was not administered in the later surveys, we recalculated the 1991 index using 9 items rather than 10 to compare scores on the summary measures.

gave stigmatizing responses to three or more of the items in 1999, compared to 25% in 1997 and 38% in 1991.

### Discussion

The survey trends yield both hopeful and disturbing findings about AIDS stigma among the US adult public. On the hopeful side, overt expressions of stigma appear to have declined over the 1990s. The most punitive aspects of AIDS stigma – support for quarantine and public identification of PWAs – diminished considerably, with fewer than 1 in 5 adults still supporting such measures by 1999. A similar pattern was evident for negative feelings toward PWAs. And, by the decade's end, relatively few respondents said that they would avoid a male coworker or a schoolchild with AIDS.

Nevertheless, it is disturbing that in 1999 – nearly two decades after the beginning of the AIDS epidemic in the United States – one fifth of those surveyed still feared PWAs and one sixth expressed disgust or supported public naming of PWAs. In addition, the surveys revealed that more covert forms of stigma persist. Even in 1999, roughly one fourth of respondents felt uncomfortable having direct or symbolic contact with a PWA. It is important to recognize that attitudes such as these do not necessarily predict specific behaviors in any particular situation. However, social psychological research suggests that such attitudes often find expression in an individual's ongoing pattern of behavior.<sup>36</sup> Thus, feelings of discomfort might well translate into avoidance or discrimination in some real-world interactions. Indeed, nearly one third of respondents said they would avoid shopping at a neighborhood grocery store whose owner had AIDS.

The surveys also revealed troubling signs that the sorts of beliefs and opinions that provide a foundation for AIDS stigma continue to be widespread. The proportion of adults believing that a person infected with HIV through sex or drug use deserves to have AIDS increased over the decade, peaking in 1997. When the question was framed in less harsh terms, approximately one-half of respondents perceived PWAs to be responsible for their illness. This pattern is worrisome because

individuals with an undesirable condition are generally subjected to greater stigma when they are perceived to be personally responsible for their situation.<sup>37</sup> In the case of AIDS, such perceptions may be an unintended consequence of public education campaigns that stress the importance of personal decision making in HIV prevention. If so, health educators face the challenge of communicating the importance of protecting oneself from AIDS without promoting increased blame for individuals who become infected.

Of further concern is the fact that although respondents understood how HIV is transmitted, they were much less clear about how it is *not* transmitted. Indeed, the proportions overestimating the risks posed by some forms of casual social contact were higher in 1997 and 1999 than in 1991. Those who believe that HIV can be spread through casual social contact are probably more likely to fear such contact with PWAs and may be more willing in the future to support punitive policies that violate PWAs' human rights under the guise of protecting public health. Such fears may partly account for the widespread support for mandatory testing of various groups. Although such support declined to some extent between 1997 and 1999, mandatory testing continued to be favored by most respondents.

The survey results have at least two important implications for public health. First, they suggest that AIDS educational efforts have effectively communicated how HIV is transmitted but have been less successful in convincing the public that AIDS is not spread through casual social contact. Some respondents who doubted the safety of casual contact were skeptical of scientists, but most reported that they believe scientists who say that AIDS is not transmitted through casual contact. Thus, AIDS educators and public health workers may be able to counter misperceptions about HIV transmission simply by ensuring that AIDS education messages include clear information about how HIV is *not* transmitted, a practice that was common in the 1980s.

Second, public health policy should recognize that AIDS stigma persists in the United States. One fifth of respondents gave three or more stigmatizing responses on the 9-

item index in 1999. Still more indicated some degree of discomfort in social interactions with PWAs. These respondents represent a sufficiently large number of adults that many PWAs justifiably fear the consequences of stigma when their diagnosis becomes known to others. Such fears are likely to have detrimental effects on PWAs and persons at risk for HIV. They will also affect the success of programs and policies intended to prevent HIV transmission. Thus, eradicating AIDS stigma remains an important public health goal for effectively combating HIV.

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**Table 1**

*Support for Coercive AIDS-Related Policies, Negative Feelings Toward People With AIDS (PWAs), and Attributions of Responsibility and Blame for PWAs*

	1991	1997	1999	OR Year	OR Year*2
<b>1. SUPPORT FOR COERCIVE POLICIES<sup>a</sup></b>					
People with AIDS should be legally separated from others to protect the public health.	34.4 (30.4, 38.4)	16.6 (14.6, 18.6)	12.0 (9.5, 14.5)	0.848	n.s.
The names of people with AIDS should be made public so that others can avoid them.	28.8 (25.0, 32.6)	18.6 (16.5, 20.7)	16.3 (13.5, 19.1)	0.911	n.s.
Women who are pregnant should be required to be tested for the AIDS virus in order to protect the health of their unborn baby.	N.A.	83.0 (81.0, 85.0)	81.9 (79.0, 84.8)	n.s.	---
People at risk for getting AIDS should be required to be tested regularly for the AIDS virus.	N.A.	73.8 (71.4, 76.2)	63.5 (59.8, 67.2)	0.774	---
People from other countries who want to live in the United States should first be required to have an AIDS test to prove they are not infected with the AIDS virus.	N.A.	77.5 (75.2, 79.8)	74.1 (70.8, 77.4)	0.885	---
<b>2. NEGATIVE FEELINGS TOWARD PWAS<sup>b</sup></b>					
Angry	27.7 (23.9, 31.5)	20.4 (18.2, 22.6)	14.8 (12.1, 17.5)	0.919	n.s.
Afraid	34.6 (30.6, 38.6)	20.0 (17.8, 22.2)	20.2 (17.1, 23.3)	0.902	n.s.
Disgusted	26.6 (22.8, 30.4)	18.3 (16.2, 20.4)	16.0 (13.2, 18.8)	0.924	n.s.

*(Table continues)*

**Table 1 (continued)**

	1991 <sup>a</sup>	1997	1999	OR Year	OR Year*2
<b>3. RESPONSIBILITY &amp; BLAME<sup>a</sup></b>					
People who got AIDS through sex or drug use have gotten what they deserve.	20.3 (16.9, 23.7)	28.1 (25.7, 30.5)	24.8 (21.5, 28.1)	1.212	0.980
Most people with AIDS don't care if they infect other people with the AIDS virus.	N.A.	25.5 (23.1, 27.9)	21.8 (18.6, 25.0)	n.s.	---
Most people with AIDS are responsible for having their illness.	N.A.	53.5 (50.9, 56.1)	48.3 (44.5, 52.1)	0.907	---

Table reports point estimates with 95% confidence interval in parentheses.

N.A. = Item not asked in that year.

n.s. = not significant.

<sup>a</sup> Percentage responding “agree somewhat” or “strongly agree.”

<sup>b</sup> Respondents were asked to what extent they felt anger, fear, and disgust toward people with AIDS (e.g., very angry, somewhat, a little, or not at all angry). Estimates are reported for the percentage feeling “somewhat” or “very” angry, disgusted, and afraid.

*Note.* Figures in the “OR Year” column are odds ratios, indicating the annual change in likelihood of endorsing the item. Figures in the “OR Year\*2” column are odds ratios for the quadratic term, indicating a significant nonlinear trend.

**Table 2**  
**Beliefs About HIV Transmission**

	1991	1997	1999	OR Year	OR Year*2
<b>1. CASUAL CONTACT<sup>a</sup></b>					
Kissing someone on the cheek who has the AIDS virus	17.1 (13.9, 20.3)	13.3 (11.5, 15.1)	N.A.	0.951	---
Sharing a drink out of the same glass with someone who has the AIDS virus	47.6 (43.4, 51.8)	53.2 (50.5, 55.9)	50.1 (46.3, 53.9)	n.s.	n.s.
Using public toilets	34.0 (30.0, 38.0)	40.9 (38.2, 43.6)	40.8 (37.1, 44.5)	1.042	n.s.
Being coughed on or sneezed on by someone who has the AIDS virus	45.7 (41.5, 49.9)	53.6 (50.9, 56.3)	50.4 (46.6, 54.2)	1.148	0.986
<b>2. BLOOD DONATION<sup>a</sup></b>					
Donating or giving blood	32.2 (28.2, 36.2)	28.9 (26.4, 31.4)	32.9 (29.3, 36.5)	0.890	1.015
<b>3. TRUST IN EXPERT INFORMATION</b>					
Scientists and doctors can be trusted to tell us the truth about AIDS. (% agree)	N.A.	67.0 (64.4, 69.6)	69.8 (66.3, 73.3)	n.s.	---
Many scientists and doctors say AIDS is not spread by casual social contact. (% believing what they say is “definitely true” or “probably true”)	81.6 (78.3, 84.9)	85.9 (84.0, 87.8)	86.7 (84.1, 89.3)	1.049	n.s.

(Table continues)

**Table 2 (continued)**

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Table reports point estimates with 95% confidence interval in parentheses.

N.A. = Item not asked in that year.

n.s. = not significant.

<sup>a</sup> Percentage of respondents incorrectly believing that each type of activity is “very likely,” “somewhat likely,” or only “somewhat unlikely” to transmit AIDS (the responses “very unlikely” and “impossible” were counted as correct responses to these items).

*Note.* Figures in the “OR Year” column are odds ratios, indicating the annual change in likelihood of endorsing the item. Figures in the “OR Year\*2” column are odds ratios for the quadratic term, indicating a significant nonlinear trend.

**Table 3**  
***Intentions to Avoid Contact with People with AIDS (PWAs), Feelings of Discomfort About Contact With Them, and Discomfort About Symbolic Contact With PWAs***

	1991	1997	1999	OR Year	OR Year*2
<b>1. AVOIDANT INTENTIONS <sup>a</sup></b>					
Suppose you had a young child who was attending school where one of the students was known to have AIDS	14.9 (11.8, 18.0)	9.9 (8.3, 11.5)	8.5 (6.4, 10.6)	0.921	n.s.
Suppose you worked in an office where one of the men working with you developed AIDS	18.6 (15.3, 21.9)	11.7 (9.9, 13.5)	9.1 (6.9, 11.3)	0.905	n.s.
Suppose you found out that the owner of a small neighborhood grocery store where you liked to shop had AIDS	45.2 (41.0, 49.4)	32.2 (29.7, 34.7)	29.3 (25.8, 32.8)	0.913	n.s.
<b>2. DISCOMFORT <sup>b</sup></b>					
Child attending school	N.A.	26.6 (24.2, 29.0)	30.3 (26.8, 33.8)	n.s.	---
Office coworker	N.A.	24.7 (22.3, 27.1)	22.4 (19.2, 25.6)	n.s.	---
Neighborhood grocer	N.A.	28.6 (26.1, 31.1)	27.2 (23.8, 30.6)	n.s.	---
<b>3. SYMBOLIC CONTACT</b>					
Less likely to wear sweater once worn by PWA <sup>c</sup>	N.A.	26.8 (24.4, 29.2)	25.7 (22.2, 29.2)	n.s.	
Uncomfortable using restaurant drinking glass once used by PWA <sup>d</sup>	N.A.	26.9 (24.5, 29.3)	25.7 (22.4, 29.0)	n.s.	

(Table continues)

**Table 3 (continued)**

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Table reports point estimates with 95% confidence interval in parentheses.

N.A. = Item not asked in that year.

n.s. = not significant.

<sup>a</sup> Percentage who would avoid person with AIDS in this situation.

<sup>b</sup> Percentage who would feel “somewhat” or “very” uncomfortable in this situation.

<sup>c</sup> Percentage whose self-rated likelihood of wearing sweater worn by PWA was lower than previously rated likelihood of wearing another sweater.

<sup>d</sup> Percentage who would feel “not very comfortable” or “not at all comfortable” about drinking out of a washed, sterilized glass used a few days earlier by a PWA.

*Note.* Figures in the “OR Year” column are odds ratios, indicating the annual change in likelihood of endorsing the item. Figures in the “OR Year\*2” column are odds ratios for the quadratic term, indicating a significant nonlinear trend.