

# Study finds online hookup sites increase HIV rates in sometimes-surprising ways

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The introduction of Craigslist led to an increase in HIV-infection cases of 13.5 percent in Florida over a four-year period, according to a new study conducted at the University of Maryland's Robert H. Smith of Business. The estimated medical costs for those patients will amount to \$710 million over the course of their lives.

Online hookup sites have made it easier for people to have casual sex—and also easier to transmit [sexually transmitted diseases](#). The new study measured the magnitude of the effect of one platform on HIV-infection rates in one state, and offered a detailed look at the varying effects on subpopulations by race, gender and [socio-economic status](#). Looking at the period 2002 to 2006, it found that Craigslist led to an additional 1,149 Floridians contracting HIV.

The study "underscores the need for broader communication and dissemination of the risks posed by the type of online matching platforms studied here," noted Ritu Agarwal, a professor at the University of Maryland's Robert H. Smith School of Business and founding director of the Center for Health Information and Decision Systems (CHIDS), and Brad N. Greenwood, a 2013 Smith Ph.D. and assistant professor at Temple University's Fox School of Business.

The study also found that the new HIV cases came disproportionately from one racial-ethnic group, African Americans, who accounted for some 63 percent of the new cases. "That is a bit of paradox," says Agarwal, "because research suggests that the African American community is one which uses the Internet the least, even though the gap is narrowing."

Greenwood described African Americans as suffering the effects of a "double digital divide." He said, "Not only have studies shown there is lower utilization of the Internet for welfare-enhancing activities, but now there's evidence of utilization for negative activities as well."

Craigslist's arrival in different cities and different counties at different times made it possible to isolate the effects of the matching platforms; the phased rollout amounted to a "natural experiment." (Other matching sites, like Grindr or Tinder, have tended to become available across broad areas all at once, although neither of those platforms existed when this study was done, and Craigslist remains the largest). Agarwal and Greenwood focused on whether there was a change in HIV cases in the first full calendar quarter after Craigslist's arrival in a county or city. For patient data, the researchers drew on a census that included data on some 12 million patients; omitting institutions that had no HIV cases or which were open for only part of the period studied, there were 223 hospitals in the sample.

There was also an increase in new HIV cases among Latinos and Caucasians—although only intermittently statistically significant and not statistically different from each other. The lack of difference between Latinos and Caucasians was notable, as Latinos have a higher baseline rate of HIV infection. One explanation could be that fewer Latinos may have sought treatment. Or Florida's Latino community, which is especially large and well-off, may not be reflective of national trends.

Another counterintuitive result was that more cases came from non-Medicaid patients, the wealthier patients, than from the population covered by the government program. That was the case even though the base rate of HIV infection is higher among lower-income citizens. "It could be the case that higher-income people face a higher social penalty for engaging in casual, quasi-anonymous sex, and that the freedom of internet anonymity changes their behavior more than it does for the less wealthy," Agarwal suggested. "Or it could be a byproduct of substantially better internet access." (Together with the finding for African Americans, that would suggest that degree of internet access affects different sub-populations in different ways).

HIV-prevention efforts tend to focus on the highest-risk populations, such as the economically disadvantaged, but public-health officials should be aware that online platforms may be "changing the game," says Agarwal.

Perhaps most surprising of all, given the relatively high rates of infection among bi- and homosexual men, there was not a statistically significant difference in HIV-infection-rate increases across men and women.

It could be the case that homosexual men with HIV who used Craigslist were more likely to practice safe sex than infected heterosexuals, the authors speculated. Or matching platforms may lead to more homosexual activity by men who do not identify publically as homosexuals, who then

spread the virus to their female partners. The question demands more research, the authors said.

Agarwal and Greenwood were careful to note that they weren't making a statement about the overall value of Craigslist. Nevertheless, the study offers a reminder of the downside of connectivity. "While there is a general belief that connectivity is good on average, unfortunately 'on average' means that some people are going to benefit more and others are going to lose more," Agarwal says. "We need to better understand both the beneficial as well as the punitive effects of the Internet on individual and public health."

"Matching Platforms and HIV Incidence: An Empirical Investigation of Race, Gender, and Socio-Economic Status," by Brad N. Greenwood and Ritu Agarwal, is forthcoming in *Management Science*.

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Provided by University of Maryland

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