## Researchers Agree with Pope Benedict: Condoms Can Worsen the AIDS Pandemic in Africa

Pope Benedict XVI has been criticized for saying in a March 17, 2009 press interview that distribution of condoms will not overcome the AIDS epidemic in Africa but can make it worse. Yet as Harvard researcher Edward C. Green (who spent 25 years promoting the use of condoms in Africa to combat AIDS) explains, condoms do not work and may be "exacerbating the problem" in Africa.<sup>1</sup>

### Risk Compensation: A brief lesson

Part of the explanation for this is the phenomenon of "risk compensation," a person's greater willingness to engage in potentially risky behavior when he believes his risk has been reduced through technology. Someone who puts on sunscreen is likely to stay in the sun longer than if he had not used sunscreen that day; hence studies have shown an actual increase in melanoma for users of sunscreen, from longer exposure to the sun.<sup>2</sup>

A surprising *increase* in traffic fatalities occurred after mandatory seat-belt laws were passed in the United Kingdom and continental Europe, due presumably to faster and more careless driving. "In the 23 months that followed the introduction of the UK seat-belt law, the number of deaths among pedestrians, cyclists, and unbelted rear seat passengers rose by 8%, 13%, and 25% respectively." 3

Similarly, experts in sexually-transmitted diseases (STDs) have found that risk compensation may occur with condom use.<sup>4</sup> One study notes three ways that programs promoting condom use may fail to reduce disease transmission:

"First, condom promotion appeals more strongly to risk-averse individuals who contribute little to epidemic transmission. Second, increased condom use will increase the number of transmissions that result from condom failure. Third, there is a risk-compensation mechanism: increased condom use could reflect decisions of individuals to switch from inherently safer strategies of partner selection or fewer partners to the riskier strategy of developing or maintaining higher rates of partner change plus reliance on condoms." Conclusion: "A vigorous condom-promotion policy could increase rather than decrease unprotected sexual exposure, if it has the unintended effect of encouraging greater sexual activity."

A 2006 study co-authored by the senior prevention advisor in the USAID Office of HIV/AIDS reported a finding by many HIV researchers that "the perception that using condoms can reduce the risk of HIV infection may have contributed to increases in inconsistent use, which has minimal protective effect, as well as to a possible neglect of the risks of having multiple sexual partners. Thus, the protective effect of promoting condoms may be attenuated at the population level and could even be offset by aggregate increases in risky sexual behavior" (emphasis added). The authors stress that behavior change (abstinence, monogamy, fewer partners), which has proven "a feasible and effective approach to preventing new HIV infections," must be promoted as an integral part of providing any new services in HIV/AIDS prevention.<sup>8</sup>

#### The problem with condom usage

In his 2003 book, *Rethinking AIDS Prevention: Learning from Successes in Developing Countries*, Harvard researcher Edward Green cites numerous studies finding "higher rates of STD or HIV infections

among inconstant condom users than among condom nonusers. ... And, of course, condom use is inconsistent far more often than it is consistent, virtually everywhere."

Green notes the "interesting paradox" that "condoms are widely accepted to be one of the least effective methods of contraception, yet they are considered by many experts to be the most effective method of AIDS prevention." He adds that in real-life "Third World situations, where use may not be correct, or condoms may be of poor or deteriorated quality, made of nonlatex, or the wrong size [leading to slippage if too large or tearing if too small], protection may be actually less than 80 percent, even when use is consistent, which is rare."

## Cumulative risk exposure with condoms is overlooked

Also ignored in many claims of condom effectiveness is the reality of "cumulative risk exposure." For example, with "repeated exposures to an infected partner," such as a man visiting a prostitute in Nairobi or Johannesburg once a month, "the man will likely be infected within five months, even with consistent condom use." Green cites a finding by Fitch et al. that "an intervention that is 99.8 percent effective for a single episode of intercourse can yield an 18 percent cumulative failure rate with 100 exposures."

As early as 1989, R. Gordon noted that condoms provide inadequate risk reduction for individuals, as it is statistically quite likely that a condom user who engages in casual sex or sex with people likely to be infected with HIV/AIDS will eventually become HIV infected as well.<sup>13</sup>

In 2004, researchers described how the early aggressive promotion of condoms doomed efforts to curb HIV/AIDS in Botswana, while resistance to condom promotion in Uganda fostered behavior changes that dramatically reversed the epidemic in that country.<sup>14</sup>

A 2004 study co-authored by a USAID senior medical scientist confirmed the "crucial role" of partner reduction in reducing HIV/AIDS transmission in Uganda and elsewhere. While it does not dismiss the role of condoms in specific circumstances, the study cautions that "even though prospective studies have shown that condoms reduce risk by about 80-90% when always used, in real life they are often used incorrectly and inconsistently. They should therefore not be advertised in a manner that leads to overconfidence or risky behavior."<sup>15</sup>

The failure of condoms to reduce HIV transmission in a generalized epidemic has been noted by other researchers. Norman Hearst, MD, MPH testified to Congress: "No generalized HIV epidemic has ever been rolled back by a prevention strategy based primarily on condoms. Instead, the few successes ... were achieved not through condoms but by getting people to change their sexual behavior." <sup>16</sup>

# 150 AIDS experts agree: Condoms are ineffective compared to partner reduction and abstinence in generalized epidemics.

A final example: In 2004, 150 experts signed a Comment in the medical journal *The Lancet* calling for an evidence-based approach to preventing the sexual transmission of HIV/AIDS, with primary emphasis on changing behavior rather than promoting condoms to stem generalized epidemics.<sup>17</sup>

Later experience has borne out the wisdom of their statement, and of the remarks made by Pope Benedict in 2009.

<sup>&</sup>lt;sup>1</sup> Catholic News Agency. Harvard researcher agrees with Pope on condoms in Africa, March 21, 2009, at www.catholicnewsagency.com/new.php?n=15445. See also, Edward C. Green, The Pope may be right, Washington Post, March 29, 2009, A15, at www.washingtonpost.com/wp-dyn/content/article/2009/03/27/AR2009032702825\_pf.html.

<sup>&</sup>lt;sup>2</sup>M Cassell et al., Risk compensation: the Achilles' heel of innovation in HIV prevention? British Medical Journal 2006; 332: 605-607, at 605.

<sup>&</sup>lt;sup>3</sup> J Richens et al., Condoms and seat belts: the parallels and the lessons. Lancet 2000; 355: 400-403, citing AC Harvey and J Durbin, The effects of seat belt legislation on British road casualties: a case study in structural time series modeling. J R Stat Soc 1986; 149: 187-227.

<sup>&</sup>lt;sup>4</sup> J Richens et al., supra.

<sup>&</sup>lt;sup>5</sup> Ibid.

<sup>&</sup>lt;sup>6</sup> Ibid. A Canadian study found that "televised AIDS messages from the Ontario Ministry of Health made respondents more likely to use condoms and less inclined to avoid casual sexual partners." W-J Ng. The impact of public service announcements on AIDS risk perception and preventive health behaviours. Ph.D. thesis, Department of Psychology, Queen's University, Kingston, Ontario (October, 1992), cited in GJS Wilde, *Target Risk* (1<sup>st</sup> ed). Toronto, Ont.: PDE Publications, 1994, available at http://psyc.queensu.ca/target/.

<sup>&</sup>lt;sup>7</sup> Cassell, supra note 2, at 605. Five studies are cited for this proposition.

<sup>&</sup>lt;sup>8</sup> Ibid., at 606.

<sup>&</sup>lt;sup>9</sup> EC Green, Rethinking AIDS Prevention: Learning from Successes in Developing Countries. Westport, CT: Praeger Publishers, 2003, at 106.

<sup>&</sup>lt;sup>10</sup> Ibid., at 108.

<sup>&</sup>lt;sup>11</sup> Ibid., at 108.

<sup>&</sup>lt;sup>12</sup> Ibid., at 110, citing JT Fitch et al., Condom effectiveness: Factors that influence risk reduction. Sexually Transmitted Diseases 2002; 29(12): 811-817.

<sup>&</sup>lt;sup>13</sup> Ibid., at 117, quoting R Gordon, A critical review of the physics and statistics of condoms and their role in individual versus societal survival of the AIDS epidemic. Journal of Sex & Marital Therapy 1989; 15(1): 5-30.

<sup>&</sup>lt;sup>14</sup> T Allen and S Heald, HIV/AIDS Policy in Africa: What has worked in Uganda and what has failed in Botswana? Journal of International Development 2004; 16: 1141-1154.

<sup>&</sup>lt;sup>15</sup> J Shelton et al., Partner reduction is crucial for balanced "ABC" approach to HIV prevention. BMJ 2004; 328: 891-893.

<sup>&</sup>lt;sup>16</sup> N Hearst, AIDS Prevention in Generalized Epidemics: What Works?, Testimony before House Committee on Foreign Affairs, Sept. 25, 2007; see also, N Hearst and S Chen, Condoms for AIDS prevention in the developing world: Is it working? Studies in Family Planning 2004; 35: 39-47.

<sup>&</sup>lt;sup>17</sup> D Halperin et al., The time has come for common ground on preventing sexual transmission of HIV. The Lancet 2004; 364: 1913-1915.