HPV protection in older groups may be in the eye of the beholder

Ever since Gardasil, made by Merck, landed on the market in 2006 for protecting women under 27 from the human papillomavirus (HPV), the drug giant has aimed to expand the vaccine's label to older women. But conflicting regulatory decisions are highlighting a debate about whether the vaccine is worth approving for use in an older cohort.

Merck's vaccine (and its competitor, GlaxoSmithKline's Cervarix), immunizes against a handful of HPV strains, dramatically reducing the occurance of the genital warts and cellular abnormalities that can precede cervical cancer for four years or more after immunization. Gardasil has been approved for years for use in dozens of countries around the world: the US Food and Drug Administration (FDA) approved the jab for girls and women aged 9–26 in 2006. But even though many nations have approved the use of Gardasil in older women up to age 45—including countries overseen by the European Medicines Agency and, just a month ago, Canada—the FDA ruled against this expansion in April.

There is no question that the vaccine is safe and can work in older women. But there is also no question that it will have less impact in that group, because the vaccine only works well for those who have not been exposed to the HPV strains previously. "Once you start having sex, you're going to have an HPV infection," says epidemiologist Abby Lippman of McGill University in Montreal.

Merck argued that the best test subjects on whom to judge the jab were the women in their study who tested negative for the relevant HPV strains before vaccination. In this group, Gardasil proved almost 90% effective. But the FDA looked at all the women in the study, for whom efficacy dropped to below 50%. In addition, the FDA noted that, in terms of preventing advanced conditions of abnormal cervical cells that might lead to cancer, the vaccine's efficacy was just 22%. By the time they considered disease caused by all HPV strains—not just the ones covered by the shot—the FDA deemed that the benefit of the vaccine is "likely to be insubstantial."

Other countries put more weight on the results from the HPV-naive study participants and on the vaccine's role in preventing multiple issues, rather than just precancerous cells. "We communicate with those other agencies, and we share viewpoints sometimes. We didn't on this particular issue. I can't speak to how they came to their conclusions," says Jeffrey Roberts, a medical officer for the FDA's vaccine division in Rockville, Maryland.

Lippman questions whether Canada should spend $350 or more per person on the vaccine given the small number of deaths from cervical cancer in the developed world. "Why are we expanding its use when cervical cancer is not rampant?" she asks of Canada's regulatory decision. In the developing world, she adds, the disease is a "horrible scourge"; women there would benefit more from mass vaccination.

There are hints that Cervarix might fare better in getting FDA approval for older women. Cervarix has a unique adjuvant carefully engineered to target HPV receptors that gives it a bigger kick even in women with previous HPV exposure, says Diane Harper of the University of Missouri–Kansas City. These data haven't made it to the FDA for evaluation as of yet, she says.

Nicola Jones

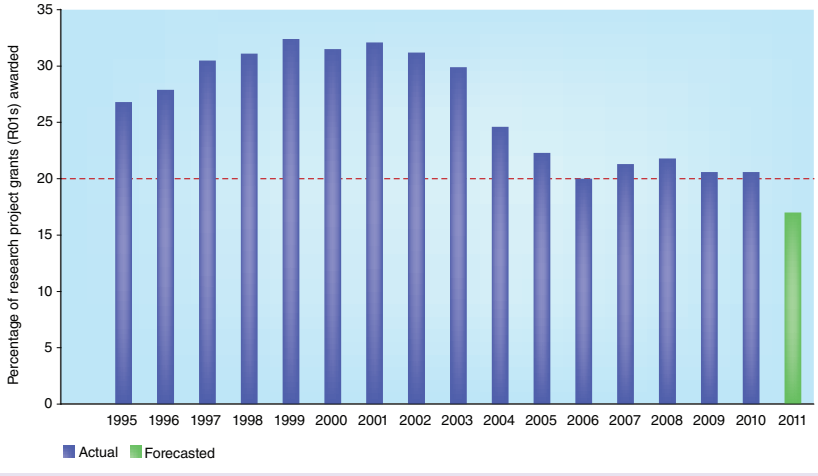
NIH funding rates drop to record lows

Although the US National Institutes of Health (NIH) was largely spared the budgetary ax in the agreement reached last month by Congress, researchers will nevertheless soon feel the sting. Speaking before a Senate appropriations subcommittee last month, NIH director Francis Collins said that agency will probably fund only one in six grants in 2011—the first time that the award rate has dipped below 20%.

"It's devastating," says Howard Garrison, deputy executive director for policy at the Federation of American Societies for Experimental Biology (FASEB), an organization headquartered in Bethesda, Maryland that represents 23 scientific societies.

With the stimulus funding drying up and the NIH budget shrinking slightly, former FASEB president Mark Lively warns that increased competition for a smaller slice of the NIH pie could force principle investigators to lay off lab staff or drive junior scientists out of biomedical research altogether. "Discoveries will go unmade, scientific progress will be interrupted and budding careers are going to be cut short," says Lively, a biochemist at Wake Forest University in Winston-Salem, North Carolina. "There are times when paylines have gotten difficult, but never anything like this."

To get funding rates back up, Mary Woolley, president of the Alexandria, Virginia–based advocacy group Research!America, urges researchers to trade in their lab coats for dark blue suits and advocate for increased basic research funding. "Scientists need to step up," she says. "The case for robust investment in research needs to be made strongly, often and now."



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