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## The BMJ Press Release

### Sharp rise in breast cancer gene testing after Angelina Jolie's New York Times editorial

*But no change in overall mastectomy rates*

There was a sharp increase in breast cancer gene testing among US women immediately after Angelina Jolie's New York Times editorial, but no change in overall mastectomy rates, finds a study in the Christmas issue of **The BMJ**.

The results suggest that celebrity announcements can influence use of healthcare services, but they may not effectively target the groups at greatest risk for the underlying condition, say the researchers.

Celebrity endorsements for health related matters such as preventive screening, fad diets, and supplements are ubiquitous. But evidence on whether celebrity endorsements actually affect health related behaviours remains limited.

In 2013, actress Angelina Jolie announced in the New York Times that she had undergone a double mastectomy (where both breasts are surgically removed) followed by breast reconstruction surgery after genetic testing revealed she had a greatly increased chance of developing breast cancer in later life.

She urged women to consider BRCA gene testing (BRCA1 and BRCA2 are two genes that raise a woman's risk of breast and ovarian cancer if they become altered).

The editorial is one of the most viewed health related articles in the social media age, yet analyses of the editorial's effects on rates of BRCA testing and mastectomy have been limited.

So, using data from over 9 million commercially insured US women aged 18-64 years, Sunita Desai, the Marshall J. Seidman Fellow, at Harvard Medical School, and Anupam Jena, Associate Professor, analysed rates of BRCA testing and mastectomy before and after Jolie's editorial.

Daily BRCA test rates increased immediately and sharply after publication of the editorial. Rates rose from 0.71 tests per 100,000 women in the 15 business days before to 1.13 tests in the 15 business days after 14 May 2013.

In comparison, daily BRCA test rates were relatively similar in the same period in 2012 (0.58 per 100,000 women in the 15 business days before 14 May versus 0.55 tests per 100,000 in the 15 business days after). This corresponds to an absolute daily increase of 0.45 tests per 100,000 women or a 64% relative increase.

However, the researchers saw no overall increase in mastectomy rates, with an average of seven mastectomies a month per 100,000 women during January to April as well as during May to December 2013.

Moreover, among women who had BRCA tests, 60 day monthly mastectomy rates decreased from on average 10% during January to April 2013 to 7% during May to December 2013, further suggesting that additional BRCA testing as a result of the editorial did not identify new BRCA mutations requiring preventive mastectomy.

This also suggests that celebrity announcements can reach a broad audience but may not effectively target the population that would benefit most from the test, in this case women with a family history of breast, ovarian, fallopian tube, or peritoneal cancer, they write.

They point out that this is an observational study, so no firm conclusions can be drawn about cause and effect. However, they say their findings illustrate that well delivered announcements by high profile figures “can raise awareness and use of preventive care by a large and broad audience, although their ability to target subpopulations of interest may be limited.”

[Ends]

**Notes to Editors:**

Do celebrity endorsements matter? Observational study of BRCA gene testing and mastectomy rates after Angelina Jolie’s New York Times editorial

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