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Willingness to Pay for Hereditary Breast Cancer Testing: Variation by Exposure to Direct-to-Consumer Advertising and Perceived Breast Cancer Risk.

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Background: From September 2002 through January 2003, Myriad Genetics, Inc. initiated a direct-to-consumer advertising (DTC-ad) campaign in Denver and Atlanta associated with its genetic test for the BRCA 1/2 genes. This selected marketing provided a natural experiment between populations exposed and not exposed to the campaign. While genetic testing is currently a covered benefit in many health plans, uncertainty exists about the value to members of testing services. In addition, little is known about the influence of exposure to DTC-ads, perceived risk of breast cancer, and socio-economic factors on member valuations.

Objective: To use "willingness-to-pay" (WTP) methodology to assess the relative value of genetic testing services for breast cancer risk assessment among female MCO members, and compare such values across markets exposed and not exposed to a DTC-ad campaign supporting such services. A primary hypothesis is that women with perceived higher levels of breast cancer risk will be willing to pay relatively more for a genetic test than women at lower levels of risk.

Methods: Written surveys were mailed to a random sample of women aged 25-54 at Kaiser Permanente Colorado (KPCO) in Denver, where the marketing campaign took place, and Henry Ford Health System (HFHS) in Detroit, Michigan, where there were no such ads. The survey included WTP questions that were varied both with respect to underlying 15-year breast cancer risk (60% vs 10%) as well as bidding algorithms (to test for starting point bias). Recipients were asked for their WTP directly for a genetic test for breast cancer risk, as well as for their willingness to increase their monthly insurance premium to cover the test. In addition to questions associated with knowledge, attitudes, and behavior towards genetic testing, several questions were included to measure the variation of socioeconomic status and ethnicity/race.

R**esults:** Overall response rate was 62%. Seventy-two percent of respondents in Denver (the exposure site) reported having seen or heard of the DTC-ad versus 27% in metro Detroit, the non-exposure site. Respondents were relatively evenly split (52% vs 48%) regarding the breast cancer risk scenario that was described in their version of the survey. Irrespective of the risk scenario (60% vs 10%), 70% of respondents reported that they would be willing to pay a positive amount for the test, vs 56% of unexposed. Sixty percent of DTC-exposed respondents would be willing to increase their monthly premium to make the test available, vs 55% of DTC-unexposed respondents. Underlying breast cancer risk does not appear to affect reported WTP values.

Conclusion: Preliminary analyses suggest that direct-to-consumer advertising may have less of a positive influence on a woman's willingness to pay for genetic testing services than hypothesized. Further, this effect is observed, irrespective of perceived underlying risk of breast cancer.