Implementation of Standardized Hereditary Breast and Ovarian Cancer (HBOC) Risk Assessment and Genetic Referral

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Women at risk of HBOC were significantly more likely to be identified and referred for genetic counseling after the implementation of a standardized HBOC risk assessment tool.

Clinical Problem

- Up to 10-15% of breast and ovarian cancers are due to HBOC.15
- Early detection of HBOC reduces morbidity and mortality.21-24
- HBOC risk assessment and genetic counseling referral are vastly underutilized in the United States.7,9,11,29,34
- In our practice prior to implementation, 35.1% of women at risk of HBOC were identified; 18.2% at risk were further referred.

Purpose/Aims

- To implement evidence-based HBOC risk assessment/referral.
- To increase identification of women at risk of HBOC by 25%.
- To increase genetic referral for women at risk by 25%.

Implementation

- Framework: Evidence-based Practice Improvement Model.18
- Literature appraisal demonstrated good and consistent evidence supporting use of HBOC risk assessment tools.13
- Risk assessment tool selection and clinical decision-making algorithm development were made via Plan-Do-Study-Act Cycles.
- All women presenting for well-woman visits were screened for HBOC risk using the RST tool.10,35

Implementation of Standardized Hereditary Breast and Ovarian Cancer (HBOC) Risk Assessment and Genetic Referral

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Outcomes

- Women at risk of HBOC were 25 times more likely to be identified as at-risk and 31 times more likely to be referred for genetic counseling after implementation (OR = 25.88, 95% CI [10.78-62.14]; OR = 31.50, 95% CI [13.37-74.22])
- HBOC risk identification increased by 58.2%
- Genetic referrals for women at risk increased by 69.3%
- The relationship between use of the RST familial risk assessment tool and HBOC risk identification and referral for women at risk was statistically significant X2 (1, N = 199) = 74.76, p = < .001; X2 (1, N = 165) = 79.78, p = < .001

Tables and Figures

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Pre-Implementation (N = 920)</th>
<th>Post-Implementation (N = 912)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years, M ± SD</td>
<td>39.41 ± 13.05</td>
<td>38.15 ± 12.68</td>
<td>.663</td>
</tr>
<tr>
<td>Race, n (%)</td>
<td></td>
<td></td>
<td>.234</td>
</tr>
<tr>
<td>Caucasian</td>
<td>672 (74.28)</td>
<td>697 (76.42)</td>
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</tr>
<tr>
<td>African-American</td>
<td>170 (18.28)</td>
<td>146 (16.20)</td>
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<tr>
<td>Asian</td>
<td>14 (1.72)</td>
<td>24 (2.63)</td>
<td></td>
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<tr>
<td>Other</td>
<td>12 (1.37)</td>
<td>14 (1.54)</td>
<td></td>
</tr>
<tr>
<td>Not reported</td>
<td>2 (0.22)</td>
<td>1 (0.11)</td>
<td></td>
</tr>
</tbody>
</table>

Table of screen positive results: Women at risk of HBOC were significantly more likely to be identified as at-risk and referred for genetic counseling after implementation (OR = 25.88, 95% CI [10.78-62.14]; OR = 31.50, 95% CI [13.37-74.22]).

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