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

Melissa Hessock DNP, APRN, FNP-C; Tracy Brewer DNP, RNC-OB, CLC; Sadie Hutson PhD, RN, WHNP-BC, FAANP; Jeff Anderson, MD

CLINICAL PROBLEM

• Up to 10-15% of breast and ovarian cancers are due to HBOC.
• Early detection of HBOC reduces morbidity and mortality.
• HBOC risk assessment and genetic counseling referral are vastly undertreated in the United States.
• 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.
• Literature appraisal demonstrated good and consistent evidence supporting use of HBOC risk assessment tools.
• 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.

Table 1: Comparison of HBOC Risk Assessment and Genetic Referral Before and After Implementation

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Pre-Implementation (N = 920)</th>
<th>Post-Implementation (N = 192)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years, M ± SD</td>
<td>38.4 ± 12.5</td>
<td>38.5 ± 12.4</td>
<td>.663</td>
</tr>
<tr>
<td>Race, n (%)</td>
<td>38.4 ± 12.5</td>
<td>38.5 ± 12.4</td>
<td>.234</td>
</tr>
<tr>
<td>Caucasian</td>
<td>728 (78.28)</td>
<td>697 (74.42)</td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>170 (18.78)</td>
<td>146 (16.20)</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>14 (1.72)</td>
<td>24 (2.63)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>12 (1.37)</td>
<td>14 (1.54)</td>
<td></td>
</tr>
<tr>
<td>Not reported</td>
<td>5 (0.53)</td>
<td>11 (1.21)</td>
<td></td>
</tr>
<tr>
<td>Women at high risk as assessed by the RST tool, n (%)</td>
<td>100 (100)</td>
<td>100 (100)</td>
<td>.705</td>
</tr>
<tr>
<td>Women who met criteria for HBOC referral, n (%)</td>
<td>325 (34.93)</td>
<td>349 (36.27)</td>
<td>.305</td>
</tr>
<tr>
<td>All women at risk of HBOC, n (%)</td>
<td>920 (100)</td>
<td>920 (100)</td>
<td>.705</td>
</tr>
</tbody>
</table>

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

Scan for full presentation and reference list.