CDC’s Office of Public Health Genomics (OPHG) is working to integrate advances in genomics effectively and responsibly into public health programs to improve population health.

A Tiered Approach to Integrating Genomic Tests and Family Health History into Practice

In 2012, OPHG developed a three-tiered framework for classifying genomic testing and family health history applications based on the availability of scientific evidence and evidence-based recommendations supporting their use.

Table. Evidence-based Classification of Genomic Tests and Family Health History

<table>
<thead>
<tr>
<th>Tier</th>
<th>Definition</th>
<th>Example(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Implementation in practice is supported by a base of synthesized evidence.</td>
<td>BRCA-associated hereditary breast and ovarian cancer (U.S. Preventive Services Task Force B recommendation); Lynch syndrome (EGAPP)</td>
</tr>
<tr>
<td>2</td>
<td>May provide information for informed decision making based on existing evidence; however, synthesized evidence is insufficient to support routine implementation in practice.</td>
<td>Family health history in primary care, with few exceptions</td>
</tr>
<tr>
<td>3</td>
<td>Not ready for routine implementation in practice based on synthesized evidence culminating in recommendations against use, OR no relevant synthesized evidence identified.</td>
<td>Direct-to-consumer personal genomic tests</td>
</tr>
</tbody>
</table>

The Evaluation of Genomic Applications in Practice and Prevention (EGAPP) Working Group

The EGAPP Working Group (EWG) is an independent, non-federal, multidisciplinary panel, supported by OPHG since 2005. The EWG has published systematic methods to assess the validity and utility of genomic testing and family health history applications; and ten recommendation statements on genomic applications for breast cancer, colorectal cancer, prostate cancer, heart disease, diabetes, and depression.

EGAPP: Informing Policy at the National, State, and Institutional Level

- Healthy People 2020: The 2009 EGAPP recommendation on genetic testing for Lynch syndrome served as the foundation for a new developmental objective in the genomics topic area.
- Payer coverage: Major health plans, including Blue Cross Blue Shield licensees in several states, are basing policies on the 2009 EGAPP recommendation on genetic testing for Lynch syndrome.
- Institutional screening protocols: More than 90 institutions have used the 2009 EGAPP Lynch syndrome recommendation to justify Lynch syndrome screening protocols.

Next Steps

- In 2015, the EWG is preparing two new recommendations statements on genomic tests for prostate cancer risk assessment and antiplatelet therapy; and new methods for evidence synthesis and modeling, including stratified screening.
- Through ongoing horizon scanning, OPHG continues to build a database of genomic applications in transition from research to clinical and public health practice, numbering over 500 since 2009. (http://www.hugenavigator.net/GAPPKB/home.do)
- OPHG continues to conduct horizon scanning for evidence-based reviews and recommendations on genomic tests and family health history from other sources, upon which to base public health programs and policy.
- In 2015, OPHG and partners will transition toward a new Public Health Genomics Action Collaborative to explore public health approaches for accelerating the translation of evidence-based genomic tests and family history into population health benefits.

More Information

Office of Public Health Genomics
Centers for Disease Control and Prevention
1600 Clifton Road NE  800-CDC-INFO (800-232-4636)  www.cdc.gov/genomics/
Mailstop E-61       TTY: (888) 232-6348  cdcinfo@cdc.gov
Atlanta, GA 30333   

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