Covering Cancer: Examining the Incidence and Impact of Prime Time Television Cancer Storylines

Erica Rosenthal, PhD
Sandra de Castro Buffington, MPH
Hollywood, Health & Society, USC Annenberg Norman Lear Center

Galen Cole, PhD, MPH, LPC
Division of Cancer Prevention and Control, Centers for Disease Control and Prevention

National Conference on Health Communication, Marketing & Media
August 20, 2013
Hollywood, Health & Society (HH&S)

- Outreach to entertainment industry
- Outreach to public
- Outreach to policymakers
- Strategic partnerships
- Research and evaluation
HH&S TV Monitoring Project: Health Storylines: 2009-2012*

- **Unintentional Injury**: 15.3%
- **Substance Abuse**: 11.3%
- **Mental Health**: 10.8%
- **Reproductive Health**: 10.3%
- **Cancer**: 9.6%
- **Infectious Disease**: 5.6%
- **Heart Disease**: 5.2%
- **Birth/Genetic Defects**: 2.8%
- **Other Health**: 29.2%

* General audience, 18-49; dialogue or higher; 679 total health storylines
HH&S TV Monitoring Project:
Cancer Storylines: 2009-2011*

Skin cancer 23%
Lung cancer 9%
Breast cancer 7%
Brain cancer 4%
Colorectal cancer 4%
Prostate cancer 2%
Unspecified cancer 7%
Other cancer 46%

* General audience, 18-49; dialogue or higher; 57 total cancer storylines
Impact Studies: Cancer
Breast Cancer Gene Mutations (BRCA1 & BRCA2)

• Increased lifetime risk of breast and/or ovarian cancer
• Genetic test available
• If harmful mutation is found, several options:
  – Surveillance
  – Risk avoidance
  – Prophylactic surgery

90210 Breast Cancer Storyline

- Storyline development process
- 8 episode arc
  
  (March 6 - May 15, 2012)
- Silver’s Story
**90210 Breast Cancer Storyline: Overview of Research**

<table>
<thead>
<tr>
<th>Study 1 (N = 236)</th>
<th>Study 2 (N = 496)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel sample (research firm)</td>
<td>Convenience sample <em>(90210 Facebook)</em></td>
</tr>
<tr>
<td>Median age: 48</td>
<td>Median age: 22</td>
</tr>
<tr>
<td>Median primetime TV: 13.5 hrs./week</td>
<td>Median primetime TV: 6 hrs./week</td>
</tr>
<tr>
<td>93% “never” watch <em>90210</em></td>
<td>92% watch “every episode” of <em>90210</em></td>
</tr>
<tr>
<td>Directed viewing of first episode (pre-test/post-test design)</td>
<td>Links posted after fourth and eighth episodes (range of exposure: 0-8)</td>
</tr>
</tbody>
</table>
90210 Breast Cancer Impact Study: Study 1 Results (Knowledge)

- Increase in familiarity with BRCA gene (also pre-test effect)
- Increase in selecting “family history/genetics” as risk factor for breast cancer

![Bar chart showing the increase in familiarity with BRCA gene and selecting family history/genetics as risk factors for breast cancer.](chart.png)

- Have you ever heard of the BRCA gene***
  - Pre-Test: 19.0%
  - Post-Test: 50.4%

- Family history/genetics***
  - Pre-Test: 84.3%
  - Post-Test: 96.7%

$\chi^2(1) = 36.026, p < .001$

Exact significance: $p < .001$
90210 Breast Cancer Impact Study: Study 1 Results (Knowledge)

- Increase in agreement: “Having a mastectomy is one possible option for preventing breast cancer”
- Decrease in agreement: “Having a mastectomy is only an option after breast cancer is detected”

<table>
<thead>
<tr>
<th></th>
<th>Mean Agreement</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastectomy is one possible option for preventing breast cancer***</td>
<td>3.31</td>
<td>3.70</td>
<td></td>
</tr>
<tr>
<td>Mastectomy is only an option after breast cancer is detected*</td>
<td>2.91</td>
<td>2.64</td>
<td></td>
</tr>
</tbody>
</table>

\[t(120) = 4.003, p < .001\]
\[t(120) = -2.340, p = .021\]
90210 Breast Cancer Impact Study: Study 1 Results (Behavior)

- Found out about family history: 20.8%
- Searched for info online: 16.5%
- Talked to a woman about BRCA gene test: 13.1%
- Watched next episode: 9.7%
90210 Breast Cancer Impact Study: Study 2 Results (Knowledge)

- Positive association between episodes viewed and yes to “Have you ever heard of the BRCA gene?”

χ^2(2) = 23.586, p < .001
Linear-by-linear: χ^2(1) = 23.199, p < .001
90210 Breast Cancer Impact Study: Study 2 Results (Knowledge)

- Negative association with “If someone tests positive for the breast cancer gene, it means they already have breast cancer”
- Positive association with “Having a mastectomy is one possible option for preventing breast cancer”

![Graph showing mean agreement with statements about breast cancer knowledge.](image)

- Already have breast cancer: 0 episodes (2.14), 1-3 episodes (2.16), 4 episodes (1.90)
- Mastectomy is one option: 0 episodes (3.20), 1-3 episodes (3.38), 4 episodes (3.62)

Statistical tests:
- $F(2,490) = 4.347$, $p = .013$
- Linear term: $F(1,490) = 6.919$, $p = .009$
90210 Breast Cancer Impact Study: Study 2 Results (Behavior)

- Positive association between # episodes viewed and yes to “Find out about my family history regarding breast cancer”
Conclusions

• Implications
  – Triangulation of outcomes
  – Dosage effects – knowledge and behavior
  – Strongest behavioral outcome – finding out about family history

• Future research
  – Non-viewers vs. ‘super-fans’
Thank You!

• Learn more:
  – Hollywood, Health & Society (HH&S)
    www.hollywoodhealthandsociety.org

• Contact:
  – Erica Rosenthal, HH&S Research Specialist
    erosenth@usc.edu
  – Sandra de Castro Buffington, HH&S Program Director
    sandra.buffington@usc.edu
  – Galen Cole, CDC Division of Cancer Prevention and Control
    gccole@cdc.gov