# Coverage of Cancer in Local Television News 

WALTER GANTZ, PHD, ZHENG WANG, PHD


#### Abstract

Background. The news media provide significant health information to the American public. Although the public turns to and trusts local television news, news about cancer has not been systematically examined. Methods. In this content analysis, we examined 40,112 news stories aired in the 3rd, 25th, 87th, and 150th sized market in the country, all located in the Midwest. Results. In total, 386 stories focused on cancer. News stories about cancer were short and occurred less than once for every 30 minutes of news. The amount of news coverage of specific cancer sites was not consistent with cancer incidence rates. Similarly, the demography of cancer patients featured in the news differed from that in real life. Few stories provided follow-up information. The average story required a 10th-grade education to be understood. Differences across markets were not systematically related to market size. Conclusions. Cancer coverage was scattered and abbreviated. For both cancer practitioners as well as the general public, local television news cannot be counted on as a primary vehicle for cancer information.


The mass media play an important role in public health. This certainly is the case with cancer, as the media help increase awareness of cancer risks, ${ }^{1-3}$ encourage people to undertake routine examinations and obtain medical advice, ${ }^{1}$ and help people make better medical decisions. ${ }^{4}$ Several studies ${ }^{4,5}$ have suggested that adults tend to obtain most of their information about cancer from mass media channels. In this study, we examined the extent and nature of cancer information in American local television news from an information-seeking perspective, and we provide suggestions for more effective use of mass media in disseminating cancer information.

## BACKGROUND

According to information-seeking theories, ${ }^{6,7}$ cancer patients, their families, and close friends balance between information search and avoidance, whereas other members of the general public are open to information about cancer even if they do not actively seek such information.

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## Cancer Information and Cancer Patients

Mills and Sullivan ${ }^{8}$ identified 5 key information needs of cancer patients. However, cancer patients do not always seek information. Instead, under some conditions, some try to avoid cancer information, especially negative information that might remove hope. ${ }^{9,10}$ Misinformation about cancer also has been cited as a factor that impedes active information seeking. ${ }^{11}$ In addition, the mass media have been criticized for conveying negative and sensationalized cancer information, content that frightens, depresses, and discourages cancer patients from seeking information. ${ }^{1}$

The other side of the story is that research has suggested that media information may help cancer patients, even among those who try to avoid cancer information, ${ }^{12}$ because "potentially consequential information may be [and is] acquired nonstrategically" (p. 287). ${ }^{12}$ Even when cancer patients try to avoid cancer related information, they are still likely to be exposed to, attend to, and process some of that information when they watch television for other purposes.

## Cancer Information and the General Public

Compared to general news seeking, health information seeking is often triggered by significant, personally relevant discoveries. ${ }^{13}$ Without feeling a significant cancer threat to themselves or to others they care about, people are unlikely to seek or avoid cancer information actively. Nonetheless, they are generally open to cancer information available on the media.

Information openness has received relatively little attention from health communication researchers, although several studies have focused on audience receptivity to pro-tobacco content. ${ }^{14-16}$ An important byproduct of openness is incidental learning, the unintentional or unplanned learning that results from participation in other activities. Incidental learning can result in changed attitudes, self-confidence, and self-awareness. ${ }^{17-19}$ Recent studies ${ }^{20,21}$ have demonstrated that exposure to the media has the potential to induce incidental learning across an array of topic areas.

To maximize its value, cancer information on the media should do the following: cover a wide range of cancer sites and topics so that people with specific information needs can find what they need while the general public can incidentally learn about cancer and increase public awareness levels of cancer prevention and detection; not discourage information seeking by cancer patients and their families and friends; be easy for audiences to understand or follow during incidental learning; and provide follow-up options to encourage further information seeking. However, what cancer information actually is on mass media?

## Cancer Information on Mass Media

Three decades ago, Greenberg et $\mathrm{al}^{22}$ examined newspaper coverage of cancer using the 50 largest daily newspapers published during 6 composite weeks in 1977. Cancers with the highest incidence rates were not covered extensively. The authors also suggested that news stories might reinforce rather than change negative public attitudes about cancer (eg, emphasizing dying rather than coping).

Breast cancer has received considerable airplay. LM Schwartz and Woloshin ${ }^{23}$ studied news media coverage of screening mammography for women and the use of tamoxifen as preventative strategies for breast cancer. Corbett and Mori ${ }^{24,25}$ examined the role of celebrities in news coverage of breast cancer and the role of gender in gender-specific cancer reports. Andsager and Powers ${ }^{26}$ shed insight on the ways in which breast cancer was framed in news and women's magazines.

Some researchers have examined mediated cancer information in a larger research context and have compared it with information about other diseases. ${ }^{27,28}$ For example, Clark ${ }^{27}$ compared the images of cancer, heart disease, and AIDS. Cancer and AIDS were described as evil predators, baffling enemies that brought hopelessness and despair. In comparison, heart attacks were viewed as mechanical rather than social failures that were very preventable.

Public service announcements (PSAs) about cancer have also been examined. Gantz and N Schwartz ${ }^{29}$ analyzed 1640 hours of television content and found 32 PSAs related to cancer. Most ( $63 \%$ ) of the cancer PSAs actually were paid for by agencies seeking the coverage.

A small number of studies have examined cancer information in national news programs or news type programs on broadcast and cable television. ${ }^{23-25,28,30}$ One limitation associated with many of the TV news analyses is their
reliance on database summaries of the news. However valuable, these databases provide abstracts and limit inquiries to preestablished topic codes. Quantitative assessments ${ }^{31}$ have documented the pitfalls associated with use of the Vanderbilt Television Archives.

## Cancer Information in Local Television News

Local television news is an important and valued source of cancer information for the American public. People get most of their news from local television news. ${ }^{32,33}$ The Health News Index Poll ${ }^{34}$ showed that more than half ( $56 \%$ ) thought they get "a lot" or "some" information about heath issues from local television news.

Despite the public's attention to-and dependence onlocal news, only 3 studies, to our knowledge, have included coverage of cancer on local newscasts. The Kaiser Family Foundation and the Center for Media and Public Affair ${ }^{34}$ looked at 608 hours of local weekday evening news in 1996 to measure the amount and nature of coverage devoted to health. Among health issues, cancer attracted the second most coverage, drawing $12 \%$ of the coverage. Unfortunately, that study did not assess the nature of the coverage given to cancer. Pribble et al. ${ }^{35}$ analyzed 1799 health news stories in 2795 local newscasts and found breast cancer was the most frequently reported topic. However, its sampling period included National Breast Cancer Awareness Month, making the popularity of a cancer topic no surprise. Pribble et al.'s ${ }^{35}$ sample was limited in 2 other ways: It only included late evening news and stopped recording at 30 minutes even when those newscasts ran beyond 30 minutes. Wang and Gantz ${ }^{36}$ examined 1863 news stories during a composite week in 2000 and found that illness and diseases received the heaviest coverage ( $39.5 \%$ of all news stories). Cancer was covered in more news stories ( $1.7 \%$ of all news stories) than any other single, specific topic. However, because that study was not specially designed to examine cancer content, it did not offer information beyond that proportion.

We designed this study to provide the first systematic assessment of the extent and nature of cancer information in local television news in America. We examined the following research questions ( RQs ):

RQ1: How many stories and how much time is devoted to cancer news? How long generally does a cancer news story last?
RQ2: What time of the day do cancer stories appear most frequently in local newscasts-in the morning, at noon, in the early or late evening?
RQ3: Where are cancer stories located in television newscasts? For example, are they among the lead stories, or embedded in regularly scheduled health segments?
RQ4: What cancer sites and topics get coverage? To what extent do policy and law, application of policy and law (ie, specific cases related to law or policy),
research advances, technology, and fundraising get covered?
RQ5: What are the demographics (ie, age, gender, and race) of the cancer patients featured? How often are these patients celebrities who happen to have cancer?
RQ6: What is the overall verbal and visual tone for these stories? Are health stories likely to worry the typical viewer who might be affected by the story?
RQ7: To what extent are varying viewpoints presented? (Do stories present contrasting prevention or treatment strategies?)
RQ8: How often do these news stories provide information that identifies where viewers can go for more information about cancer in general or about the specific cancer story covered?
RQ9: How accessible are cancer stories for the general viewing public?
RQ10: To what extent is market size related to the content associated with RQs 1 through 9?

## METHODS

Each RQ was assessed using content analysis procedures.

## Sample

Coders examined every news story on 1257 newscasts aired on 7 stations (the affiliates of ABC, CBS, Fox, NBC, UPN, WB, and Univision) in 4 Midwest US markets-Chicago, Illinois; Indianapolis, South Bend, and Terre Haute, Indiana-during 4 composite weeks from December 2004 to June 2005. We selected these markets to reflect a major-, large-, medium-, and smallsize market in the United States. When we selected them, the 4 markets were the $3 \mathrm{rd}, 25 \mathrm{th}, 87$ th, and 150 th sized markets in the United States. ${ }^{37}$ We selected them from the same geographic area so as to control the influence of factors other than market size. We analyzed each channel's morning, noon, early evening, and late evening local newscasts.

## Units of Analysis

The primary unit of analysis was the news story. We defined cancer stories as those that have at least some to half of the news content focusing on cancer (or oncology) in general or a specific cancer. Stories that only mentioned cancer (eg, 1 or 2 sentences in a lengthy news story) were not counted as cancer stories.

## Measures

Each cancer story was coded in terms of duration (in seconds); location in the newscast; specific cancer sites, stages, and topics covered; overall visual and verbal tone; viewpoints presented; follow-up options provided; and
language accessibility. SMOG was used to assess language accessibility. ${ }^{36,38,39}$

## Intercoder Reliability

A total of 22 coders received approximately 40 hours of training over a 1 -month period. Coders achieved satisfactory intercoder reliability at the end of trainingmodified Scott's pi ${ }^{40}$ was greater than .90 on all coding items.

## RESULTS

## Distribution and Duration of Cancer Stories in Local News (RQ1)

The 1257 newscasts coded were 1382.5 hours long and included 40,112 news stories. A total of 347.2 minutes was devoted to cancer news-that is, 386 cancer stories. On average, there was less than 1 cancer story per 30 minutes (see Table 1). The average duration of a cancer story was 56.67 seconds $(\mathrm{SE}=2.93)$. More than half ( $50.3 \%$ ) of the stories were less than 30 seconds; 3 out of 4 ( $74.1 \%$ ) lasted less than 1 minute. The shortest story was 7 seconds and the longest 7 minutes 3 seconds.

## Air Time and Location of Cancer Stories (RQs 2 and 3)

As shown in Table 1, the largest proportion (40.9\%) of the cancer stories was broadcast during morning newscasts and the least (15.0\%) at noon. A different pattern emerged when newscast duration was considered. There was a significant difference in terms of the number of cancer stories per 30 minutes of news across the day $\left(\mathrm{F}_{3,270}=\right.$ $30.41, P<.001$ ). Bonferroni tests revealed that newscasts in the morning had significantly ( $P<.05$ ) fewer cancer stories per 30 minutes than those at noon and in the early/ late evening; newscasts at noon had significantly more compared to those in the morning and in the early/late evening; and there was no difference between those in the early versus late evening.

A total of 1 in 3 newscasts ( $34.9 \%$ ) had a health segment in the program. The health segment contained more than half ( $57.0 \%$ ) of the cancer stories coded. Of all the cancer stories coded, $7.0 \%$ appeared in the first 10 minutes of the newscasts.

## Cancer Sites Covered in Local News (RQ4)

In terms of frequency of coverage, the top 5 cancer sites were breast cancer ( $25.1 \%$ ), colon/rectum (12.7\%), prostate ( $7.5 \%$ ), brain ( $6.7 \%$ ), and lung/bronchus (4.4\%). This is somewhat at odds with the frequency that new cases of these cancers are reported in the population. According to the American Cancer Society, ${ }^{41}$ the new case incidence rate was highest for prostate cancer, followed by breast, lung/bronchus, colon/rectum, and skin. Brain cancer

TABLE 1. General Information on Newscasts and News Stories

| General Information | Location |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Chicago |  | Indianapolis |  | South Bend |  | Terre Haute |  | Total |  |
|  | N | \%* | N | \% | N | \% | N | \% | N | \% |
| No of newscasts and stories |  |  |  |  |  |  |  |  |  |  |
| Newscasts | 466 | 37.1 | 385 | 30.6 | 249 | 19.8 | 157 | 12.5 | 1,257 | 100.0 |
| News stories | 16,826 | 42.0 | 12,480 | 31.1 | 7357 | 18.3 | 3449 | 8.6 | 40,112 | 100.0 |
| Health stories | 1320 | 40.6 | 902 | 27.8 | 569 | 17.5 | 458 | 14.1 | 3,249 | 100.0 |
| Cancer stories | 159 | 41.2 | 101 | 26.2 | 75 | 19.4 | 51 | 13.2 | 386 | 100.0 |
| News stories devoted to cancer |  | 0.9 |  | 0.8 |  | 1.0 |  | 1.5 |  | 1.0 |
| Health stories devoted to cancer |  | 12.0 |  | 11.2 |  | 13.2 |  | 11.1 |  | 11.9 |
| Time |  |  |  |  |  |  |  |  |  |  |
| Newscasts (in hours) | 536.4 | 38.8 | 440.4 | 31.9 | 268.9 | 19.5 | 136.8 | 9.9 | 1382.5 | 100.0 |
| Health stories (in hours) | 17.5 | 34.8 | 16.1 | 32.0 | 9.3 | 18.5 | 7.4 | 14.7 | 50.3 | 100.0 |
| Cancer stories (in min) | 118.9 | 34.2 | 101.2 | 29.2 | 73.9 | 21.3 | 53.2 | 15.3 | 347.2 | 100.0 |
| News time devoted to cancer |  | 0.4 |  | 0.4 |  | 0.5 |  | 0.7 |  | 0.4 |
| Health time devoted to cancer |  | 11.3 |  | 10.5 |  | 13.2 |  | 12.0 |  | 11.5 |
|  | Mean | SE | Mean | SE | Mean | SE | Mean | SE | Mean | SE |
| Average duration |  |  |  |  |  |  |  |  |  |  |
| Health stories (in sec) | 47.8 | 1.6 | 64.4 | 2.0 | 59.2 | 2.5 | 58.5 | 2.8 | 57.5 | 1.1 |
| Cancer stories (in sec) | 44.9 | 4.2 | 60.1 | 5.3 | 59.1 | 6.1 | 62.6 | 7.4 | 56.7 | 2.9 |
| No. of cancer stories per 30 minutes |  |  |  |  |  |  |  |  |  |  |
| In all the 1257 newscasts | 0.28 | 0.02 | 0.15 | 0.02 | 0.21 | 0.03 | 0.27 | 0.03 | 0.22 | 0.01 |
| In 274 newscasts with cancer stories | 0.80 | 0.05 | 0.59 | 0.06 | 0.76 | 0.07 | 0.86 | 0.07 | 0.75 | 0.03 |
|  | N | \% ${ }^{\dagger}$ | N | \% | N | \% | N | \% | N | \% |
| Location in a newscast |  |  |  |  |  |  |  |  |  |  |
| Newscasts having a health segment | 217 | 46.6 | 94 | 24.4 | 78 | 31.3 | 50 | 31.8 | 439 | 34.9 |
| Cancer stories in a health segment | 100 | 62.9 | 54 | 53.5 | 37 | 49.3 | 29 | 56.9 | 220 | 57.0 |
| Cancer stories as a lead story $\ddagger$ | 8 | 5.0 | 5 | 5.0 | 9 | 12.0 | 5 | 9.8 | 27 | 7.0 |
| Air time of cancer stories |  |  |  |  |  |  |  |  |  |  |
| Morning | 57 | 35.8 | 50 | 49.5 | 35 | 46.7 | 16 | 31.4 | 158 | 40.9 |
| Noon | 30 | 18.9 | 10 | 9.9 | 8 | 10.7 | 10 | 19.6 | 58 | 15.0 |
| Early evening | 39 | 24.5 | 32 | 31.7 | 19 | 25.3 | 11 | 21.6 | 101 | 26.2 |
| Late evening | 33 | 20.8 | 9 | 8.9 | 13 | 17.3 | 14 | 27.5 | 69 | 17.9 |
|  | Mean | SE | Mean | SE | Mean | SE | Mean | SE | Mean | SE |
| Accessibility and follow-up options |  |  |  |  |  |  |  |  |  |  |
| SMOG of cancer stories | 10.7 | 1.7 | 10.5 | 1.6 | 10.5 | 1.4 | 11.2 | 1.5 | 10.7 | 1.6 |
|  | N | \% | N | \% | N | \% | N | \% | N | \% |
| Lowest-highest SMOG | 7-16 |  | 7-15 |  | 8-14 |  | 9-14 |  | 7-16 |  |
| Cancer stories with follow-ups | 16 | 10.1 | 14 | 13.9 | 3 | 4.0 | 13 | 25.5 | 46 | 11.9 |

*Proportions across markets.
${ }^{\dagger}$ Proportions within individual markets.
${ }^{*}$ A lead story is defined as a story that appears in the first 10 minutes of a newscast.
received more coverage in local news than a number of other cancers with higher incidence rates. On the other hand, skin cancer, which the American Cancer Society estimated to be No. 5 , only received coverage in $2.6 \%$ of the cancer stories and ranked No. 7 in coverage frequency. Other undercovered cancer sites included urinary/bladder (No. 6 in new case estimation vs No. 15 in coverage), nonHodgkin lymphoma (No. 7 vs 10), uterine (No. 8 vs 16), and kidney (No. 9 vs 18 ). When the time devoted to each
cancer site was considered, the divergence between new case estimation and news coverage again also was quite clear (see Table 2).

## Topics and Foci of Cancer Stories (RQ4)

Half of the cancer stories were about prevention ( $25.9 \%$ ) or treatment $(24.4 \%)$. A total of 1 of 4 cancer stories (25.6\%) focused on advances made in research.

Table 2. News Stories Across Different Cancer Sites

|  | Cancer Stories <br> $\mathrm{N} \mathrm{( } \mathrm{\%)}^{*}$ | Estimated New <br> Cancer Cases in $2006^{\dagger}$ | Story Duration (s) <br> Mean (SE) | Total <br> Time(in min) |
| :--- | :---: | :---: | :---: | ---: |
| Breast | $97(25.1)$ | 214,640 | $48(48)$ | 77.6 |
| Colon/Rectum | $49(12.7)$ | 148,610 | $53(59)$ | 43.3 |
| Prostate | $29(7.5)$ | 234,460 | $38(39)$ | 18.4 |
| Brain | $26(6.7)$ | 18,820 | $65(51)$ | 28.2 |
| Lung/Bronchus | $17(4.4)$ | 174,470 | $86(99)$ | 24.4 |
| Leukemia | $14(3.6)$ | 35,070 | $38(37)$ | 8.9 |
| Skin | $10(2.6)$ | 68,780 | $61(44)$ | 10.2 |
| Liver | $9(2.3)$ | 18,510 | $20(4)$ | 3.0 |
| Ovary | $7(1.8)$ | 20,180 | $48(43)$ | 5.6 |
| Non-Hodgkin Lymphoma | $7(1.8)$ | 58,870 | $45(26)$ | 5.3 |
| Oral Cavity | $6(1.6)$ | 30,990 | $55(46)$ | $69(69)$ |
| Pancreas | $6(1.6)$ | 33,730 | $40(19)$ | 6.9 |
| Esophagus | $3(0.8)$ | 14,550 | $24(7)$ | 2.0 |
| Thyroid | $2(0.5)$ | 20,180 | 0.8 |  |
| Urinary/Bladder | $2(0.5)$ | 61,420 | $27(9)$ | 0.9 |
| Uterine | $2(0.5)$ | 50,910 | $60(-)$ | 0.9 |
| Bone | 2,760 | $201(-)$ | 1.0 |  |
| Kidney | 38,890 | $64(46)$ | 3.4 |  |
| Other specific cancer | $1(0.3)$ |  | $61(54)$ | 18.1 |
| Cancer in general | $17(4.4)$ | $57(3)$ | 96.6 |  |
| Total | $95(24.6)$ |  | 347.2 |  |

*The proportion of cancer stories $(\mathrm{N}=386)$ focusing on a particular cancer site. Note that because there were 14 stories focusing on 2 cancer sites, the total number of cases reported here $(\mathrm{N}=400)$ is larger than the total number of cancer stories $(\mathrm{N}=386)$.
${ }^{\dagger}$ American Cancer Society (2006). Cancer Facts \& Figures 2006. Available at: http://www.cancer.org/downloads/STT/ CAFF2006PWSecured.pdf. Accessed August 12, 2006.
${ }^{*}$ The mean and SE of story durations and the total time devoted to a certain cancer site are based on all the stories focusing on that cancer site. Up to 2 cancer sites could be coded for each story.

Fundraising for cancer also was frequently covered (13.5\%; see Table 3).

## Cancer Patients in Cancer Stories (RQ5)

In total, 103 cancer patients were coded in 101 cancer stories that featured patients. (For each story, up to 2 cancer patients were coded.) The stories featured more male patients ( $63.1 \%$ ) than female patients ( $36.9 \%$ ). About 8 out of 10 were White ( $78.6 \%$ ), and the remaining patients whose ethnicity could be identified were African American (17.5\%) or Hispanic (1.9\%). The most presented age groups were adults 44 to 65 years old $(44.7 \%)$ and those older than $65(30.1 \%)$. Of the cancer patients presented, about half ( $49.5 \%$ ) were celebrities.

## Tone and Viewpoints Presented by Cancer Stories (RQs 6 and 7)

More than half of the cancer stories (54.7\%) were verbally neutral; and most cancer stories ( $93.0 \%$ ) were visually neutral. Only a small proportion of stories (17.6\%) were judged by coders as likely to worry those who might be affected by the disease. Almost all of the cancer stories ( $97.7 \%$ ) offered a single viewpoint (see Table 3).

## Follow-up Information Provided by Cancer Stories (RQ8)

A total of 1 out of 8 cancer stories (11.9\%) offered follow-up information. The follow-up option most often provided was a Web site URL, featured in $5.7 \%$ of the cancer stories. Phone numbers (toll free or non toll free) were the second most popular ( $2.3 \%$ ), followed by mail address ( $1.0 \%$ ), a corresponding television program (1.0\%), and health professionals (.5\%).

## Accessibility of Health News (RQ9)

SMOG scores for cancer news stories ranged from 7 to 16. (SMOG scores were not calculated for stories on Univision, all of which were presented in Spanish.) On average, cancer stories required at least a 10 th-grade education ( mean $=10.7, \mathrm{SD}=1.6$ ) for the audience to understand the covered information. (See Table 4 for news story examples illustrating the minimum, mean, and maximum SMOG scores.)

## Variation Across Markets (RQ10)

Significant differences across markets frequently emerged, but there was no clear pattern based on market

Table 3. Central Topics, Focuses, Tones, and Viewpoints of Cancer Stories

|  | Cancer Stories |  |
| :--- | ---: | ---: |
|  | N | $\%^{\dagger}$ |
| Central Topics* | 100 | 25.9 |
| Prevention | 56 | 14.5 |
| Early detection | 14 | 3.6 |
| Diagnosis | 94 | 24.4 |
| Treatment | 28 | 7.3 |
| Life with cancer | 26 | 6.7 |
| End of life | 23 | 6.0 |
| Incidence statistics | 76 | 19.7 |
| Not Specific |  |  |
| Foci | 8 | 2.1 |
| Policy/law | 3 | 0.8 |
| Application of policy/law | 52 | 13.5 |
| Fundraising | 21 | 5.4 |
| Technology | 99 | 25.6 |
| Advances |  |  |
| Verbal tone | 135 | 35.0 |
| Positive | 31 | 8.0 |
| Negative | 9 | 2.3 |
| Mixed | 211 | 54.7 |
| Neutral | 22 | 5.7 |
| Visual tone | 2 | 0.5 |
| Positive | 3 | 0.8 |
| Negative | 359 | 93.0 |
| Mixed | 68 | 17.6 |
| Neutral | 377 | 97.7 |
| The story is worrisome | 2 | 0.5 |
| Viewpoints presented | 7 | 1.8 |
| No contrast |  |  |
| Contrast with conclusion |  |  |
| No conclusion |  |  |
| Up |  |  |

*Up to 2 central topics could be coded for each story. In total, 417 topics were identified for the 386 cancer stories.
${ }^{\dagger}$ The percentage reported here is based on the total number of cancer stories ( $\mathrm{N}=386$ ).
*A story was judged "Yes" or "No" on each of the possible story foci.
size. Markets varied significantly $(P<.05)$ in terms of (1) number of cancer stories per 30 minutes, (2) time of the day when cancer stories were aired, (3) average duration of cancer stories, (4) newscasts having a health segment (but not the number of cancer stories presented in a health segment), (5) cancer stories presented in the first 10 minutes of a newscast, (6) cancer sites covered, (7) story foci on fundraising and research advances, (8) verbal and visual tone, (9) number of authorities presented in each cancer story, (10) accessibility of stories indicated by SMOG scores, and (11) follow-up information offered.

## DISCUSSION

This content analysis revealed that for the 7 channels in 4 markets coded, about $1 \%$ of all local news stories were about cancer. Cancer news stories were unevenly dispersed through the day's local newscasts. It is reasonable to speculate that those at home at midday were most likely to be exposed to cancer news.

Like other news stories, cancer news stories were short; 3 out of 4 cancer news stories in our sample lasted less than 1 minute. This is consistent with previous research on local news ${ }^{42}$ and local health news. ${ }^{36,43}$ At the same time, it suggests that local television news coverage of cancer will, by itself, not provide detailed coverage of the cancer issues it covers.

About 1 out of 7 cancer news stories focused on fundraising. Although fundraising is a critical function, stories about fundraising say little about cancer and may decrease air time for stories on available treatment regimes, the side-effects of existing and new therapies, as well as prognoses and the likelihood of cure, all of which have been identified as key information needs of cancer patients and those close to them. ${ }^{8}$ The popularity of fundraising news is consistent with an earlier assessment that cancers news tended to focus on public awareness of cancer rather than on cancer itself. ${ }^{44}$

At least 3 media organizational factors were likely to play a role in the coverage of fundraising activities. First,

Table 4. Transcripts of News Story Examples to Illustrate Both Ends of the Range and the Mean of SMOG Scores

| SMOG | News Title | Transcript |
| :--- | :---: | :---: |
| 7 | Prostate Cancer | Anchor: And doctors believe a drug normally used to fight breast cancer may actually help fight <br> prostate cancer too. Doctors say men who took low doses of a hormonal drug for one year cut their <br> chances of developing prostate cancer in half. But researchers say these findings need to be tested in <br> longer studies. |
| 10 | Colon Cancer | Health Beat Reporter: People who take statin drugs to lower their cholesterol may be getting an extra <br> benefit: protection from colon cancer. A new study found patients taking the drug dropped their <br> risk of the disease by forty-seven percent. This latest finding updates a similar study last year that <br> also found statins can protect from colon cancer. |
| Anchor: More sexually active teens might be at higher risk for cervical cancer than previously |  |  |
| thought. An Indiana University study reveals that eighty-two percent of sexually active girls are |  |  |
| infected with at least one type of HPV.* According to the research published in the Journal of and Cancer |  |  |
| Infectious Diseases, thirty-nine percent tested positive for a particular string of the virus, which is |  |  |
| associated with an increased cancer risk. |  |  |

*HPV indicates human papillomavirus.
compared with most other cancer topics, fundraising requires little investigative work since organizations readily provide information and personnel needed for news coverage of fundraising events so as to promote their events and strengthen their public images. Second, fundraising events tend to take place in a local community, an important news selection criterion for local news programs. Third, fundraising activities (eg, fun runs or walks) are very visual, providing newscasters with something to show their audiences.

Local television newscast coverage of cancer diverges somewhat from the real-life picture of cancer incidence rates and cancer patients. Such divergence is not new: Almost 3 decades ago, Greenberg et $\mathrm{al}^{22}$ noted that cancers with the highest incidence rates were not covered extensively in newspaper. Local television news coverage of cancer patients also does not reflect the real-life demography of those with cancer. The divergence between the realities of cancer and TV coverage of it may affect public perceptions of cancer incidence rates and the viewer's own likelihood of developing cancer in their lifetime.

About half of the cancer patients in local news are celebrities. This is consistent with what has been found in earlier studies ${ }^{22,24}$-and understandable from a news organizational perspective: Celebrities attract viewers. On one hand, this suggests that the underlying purpose of covering cancer news is not to educate the audience but instead to attract and keep the viewing audience and increase program ratings (and thus to increase advertising revenue generated by the program). On the other hand, use of celebrities may be helpful in another way as well, much as coverage of Betty Ford's breast cancer when her husband was President of the United States reduced the stigma associated with breast cancer. When viewers see that celebrities are not immune to cancer, viewers may be more attentive to information related to cancer prevention and detection. ${ }^{45}$

A large majority of cancer news stories were verbally and visually neutral or positive in tone. This finding is consistent with recent studies on local health news in general ${ }^{36}$ and refutes the concern that health news is depressing and as such, discourages viewers from information seeking. ${ }^{1}$ This is important for cancer patients, as interest in seeking information beyond that offered by their physicians is affected by patient attitudes about avoiding negative information. ${ }^{9,10}$

Cancer stories on local television newscasts require at least a 10 th-grade education to comprehend. Because news stories on television are short and fleeting, they often are more difficult for audiences to grasp than those in the print media and on Web sites. As a result, it is important that viewers be offered follow-up options that encourage information seeking. However, again, cancer news stories rarely provide follow-up information. As television stations increasingly encourage viewers to visit their Web sites, this situation may change.

Cancer research, care, and outreach professionals can take some comfort in knowing that cancer is a frequently reported topic in local television health news, and the presented information is likely to help viewers learn about-instead
of inappropriately fearing-cancer. Yet, because cancer stories tend to be short, challenging for the average viewer to follow, and often focus on "soft" topics such as fundraising, cancer practitioners can not count on local television news as a primary vehicle for cancer information dissemination. In addition, the variability of cancer coverage across markets makes it unwise for practitioners to assume uniform coverage of any cancer topic across markets.

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    Address correspondence and reprint requests to: Walter Gantz, Department of Telecommunications, Institute for Communication Research, Indiana University, 1229 East 7th Street, Bloomington, IN 47405-5501; phone: (812) 855-1621; fax: (812) 855-7955; e-mail: [gantz@indiana.edu](mailto:gantz@indiana.edu).

