Medical News for the Public to Use?  
What’s on Local TV News

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**Background:** Local television news is the number 1 source of information for most Americans, and media health reporting has increased significantly during the past 10 years.

**Objective:** To evaluate the health topics and reporting characteristics of health stories on local television news across the United States.

**Study Design:** Content analysis of full-length broadcasts of local television news from a representative sample of the top 50 US media markets (122 stations).

**Methods:** Two trained coders evaluated all health stories for topics and reporting characteristics. Any discrepancies were resolved by a third independent coder.

**Results:** Among 2795 broadcasts reviewed, 1799 health stories were aired. Seventy-six percent of all stories were about medical conditions. The median story airtime was 33 seconds. Breast cancer and West Nile virus were the 2 most common topics reported on. Among 1371 stories about disease, few gave recommendations, cited specific data sources, or discussed prevalence. Egregious errors were identified that could harm viewers who relied on the information.

**Conclusions:** Local television news devotes significant airtime to health stories, yet few newscasts provide useful information, and some stories with factually incorrect information and potentially dangerous advice were aired. Regularly reaching 165 million people, local television news has the power to provide health information to most Americans. It is crucial that television reporting of health news be improved and that reporting errors be eliminated. (Am J Manag Care. 2006;12:170-176)

Improving the public’s health depends on effectively communicating health information. Health professionals have limited time in which to disseminate health information, and such personal patient communication does not reach persons who do not visit or who lack access to healthcare providers. As the number of uninsured people continues to increase and as the time physicians have to spend with patients continues to decrease, providers need to consider how health information is being disseminated to the public.

One important means of dissemination is the mass news media, which have been shown in several areas to reach almost every segment of the American public and to influence what Americans know and what they consider important. Health news coverage influences health knowledge and behaviors. Television news, in particular, has an important influence that may be underappreciated by the medical profession. For example, following Katie Couric’s 2000 discussion of colon cancer screening on NBC’s Today Show, colonoscopies increased by 27%. However, most Americans’ main source of information is not national network news but local television news. According to the Pew Research Center, 57% of Americans regularly watch local television news, outpacing all other media sources by a margin of almost 2 to 1. Americans rate television as their primary source of health information, and more than 76% report acting on health information obtained from the mass media.

Although studies have evaluated how health news is reported in the print media, little is known about what health topics reach most of the public through local television news. Understanding the health information disseminated to most of the public via local television news allows managed healthcare professionals to anticipate questions, concerns, and resource needs for their patients and communities. With local television news being Americans’ single most important news source, the objective of this study was to evaluate in a systematic way the health topics commonly reported on and the characteristics of this reporting on local television news for a specific period.
Medical News on Local TV

METHODS

Design
This study was a content analysis of local television news health information reported during October 2002. The data source was the top 50 media markets (122 stations) in the United States.

Sample
There are archives of many newspapers going back more than 100 years, and there is an archive of national network news broadcasts at Vanderbilt University, Nashville, Tenn. Although there have been scattered case studies of local news broadcasts in particular media markets for short periods, there has been no systematic national collection or archiving of local television news broadcasts, to our knowledge. In 2002, the NewsLab at the University of Wisconsin–Madison coordinated the archiving of more than 20,000 local television news broadcasts from a representative sample of 122 stations in the nation’s top 50 media markets (reaching 66% of the nation’s population) during September and October. To our knowledge, these data represent the largest, most systematic, and most representative sample of local television news coverage collected to date.

Originally intended to assess local television coverage of American politics, full broadcasts were archived 7 days per week for 7 weeks. NewsLab provided DVD recorders to volunteers in each of the 50 media markets. We used this representative national sample of broadcasts to understand better how health information is reported on local television news across America. For the month of October, we studied the late local news programs, usually at 10 PM or 11 PM. These were typically the top-rated news broadcasts for all 122 stations. When only a 30-minute broadcast was aired during this time, we archived the full broadcast. When the broadcast lasted 60 minutes, we recorded the highest-rated 30-minute segment (the first 30 minutes or the last 30 minutes of the broadcast). Of the 3205 late local television news broadcasts aired during October 2002, NewsLab archived 2795 (87%). The missing 13% were not collected because of malfunctions in DVD recorder timers, human errors, or technical issues. Among the missing broadcasts, there was no pattern in terms of media markets, times, or dates, and there was no indication of any sort of systematic bias introduced into the data set of health stories by their absence.

Clipping of Health Stories
Clipping was the process of identifying individual health stories within each 30-minute local television news broadcast. Media assistants received a 2-day training session with us (JMP, KMG, EFF) and viewed each broadcast to identify health stories.

We used a broad definition of a health story. We included any story contained within a franchised health segment (ie, a segregated news segment with a recurring health title) and any story that discussed a health topic or a health issue. We excluded stories that reported a death, homicide, suicide, injury, or bioterrorism event but did not discuss it from a medical or a public health perspective. For example, a story about a firearm homicide was not included unless it discussed issues such as the epidemiology of gun injury or prevention. We also excluded stories about medical malpractice.

Because of possible variations in resources throughout the sample, station demographics were gathered to assess health topic and reporting characteristics with respect to station location and media market size. Each health story was specified by station information, date aired, length of airtime, and network affiliate. Another media assistant independently clipped a 5% random sample of full-length local news broadcasts to assess clipping reliability and demonstrated 95% agreement.

Coding of Health Stories
Two media assistants independently coded each health story for all topics other than the identification of health topics and provided written descriptive summaries. Any discrepancies were resolved by a third independent coder, and final data were based on agreement of at least 2 coders.

Five independent health professionals with an MPH or MD degree also reviewed the original broadcasts and coded the health topics by classifying them into 1 of 17 categories (the complete data are available in an appendix from the author). Sixteen categories were based on the International Classification of Diseases, Ninth Revision, Clinical Modifications (ICD-9-CM) classification system, and 1 category was for health stories discussing health information unrelated to a medical condition. We combined 2 medical conditions (congenital and perinatal) into 1 category in Table 1. Before the study, all 5 independent health professionals coded 58 health stories to allow for interrater reliability testing. We tested the interrater agreement for multiple raters and for multiple rating categories according to the method by Fleiss.21 The χ value was 0.64 (P < .001), representing good interrater agreement. Within the full data set, each story was independently coded by the chief coder and by at least 1 other coder. We determined interrater agreement for each pair of health professional coders, calculating χ values for 2 raters and for more than 2 categories according to the method by Fleiss.21 The χ values for the 4 rater pairs were 0.76,
0.80, 0.68, and 0.77. This represents good-to-excellent agreement. We tested the hypothesis that the agreement was not better than chance and found P < .001 in each case. For all health topic discrepancies among pairs, a third health professional independently recoded all health topic codes that were discrepant after the initial coding, and the final data were based on agreement between at least 2 health professional coders.

After each story was coded into 1 of 17 categories, the descriptive summaries for each health story were used to subdivide these general medical conditions into specific health topics. For example, within the general category of cancer, the descriptive summary enabled us to note under specific health topics the type of cancer that was the main focus of the story. If a single story discussed multiple health topics, the health topic receiving the largest proportion of time was coded as the main focus.

Finally, because the same health story was at times reported on many local news broadcasts, we evaluated the entire sample for specific health stories that were repeated. This was accomplished by grouping all stories with similar descriptive titles under the same general medical condition category. Once this was done, each repeated story was viewed a second time to determine whether the story was in fact reporting on the same health issue. The story was defined as repeated if identical video was aired, if the story referenced the same source, or if identical statistics were reported. An independent health professional evaluated a 30% random sample of stories, with 95% agreement for identifying specific health topics and repeated health stories. Repeated stories that aired in more than 10 media markets were termed pervasive health stories.

**Data Analysis**

We described the characteristics of health reporting on local television news. These included health story length, stories reported within a franchised health segment, whether medical research was referenced in the story, and whether the story discussed prevalence, interviewed a health professional, or provided recommendations.

The health topics were ranked by general medical condition and by a more specific health topic categorization within each general category. In addition, stories that aired in at least 10 media markets were ranked to demonstrate the most pervasive health stories.

To determine whether exposure to certain health topics differed systematically by location, we compared the health topics and the characteristics of local television news health reporting by media market size (by quartile) within 4 geographic areas. These included the East, Midwest, South, and West; the data are available in an appendix from the author.

**RESULTS**

Among 2795 local news broadcasts analyzed, 1799 health stories were aired. Forty percent of broadcasts reported at least 1 health story, and those stories comprised 11% of airtime on local television news that was nonsports related and nonweather related. Twenty-six percent of health stories on local television news gave specific recommendations, and 12% of all health stories reported prevalences of disease. The median health story airtime for local television news was 33 seconds; 40% of stories were part of franchised health segments. Only 27% of all stories interviewed a health professional.

Among the health stories collected, 1371 (76%) were about medical conditions and were coded into 1 of the 16 categories based on the ICD-9-CM. The top 2 categories for general medical conditions were infectious disease and cancer. This finding was consistent for the entire sample, for each quartile of media market size, and for each of the 4 geographic locations. The median story airtime was similar for all stations. However, local television stations in the East and those in larger media markets were more likely to interview health professionals. Stations in the South reported twice as many West Nile virus stories as other geographic areas in the United States.

The 2 most common specific health topics reported on local television news were breast cancer (10% [172 stories]) and West Nile virus (9% [166 stories]). Ischemic heart disease was the subject of 3% (58 stories), influenza immunization was the subject of 3% (53 stories), and obesity or weight loss was the subject of 3% (51 stories).

Table 1 summarizes the breakdown of the stories among the 16 general medical conditions, with each category including only a few specific health topics. The specific health topics listed represent 70% of the 1371 health stories that reported on medical conditions. The 428 health stories not classified into a general medical condition category discussed a range of health topics, the most common of which were smoking cessation (7% [31 stories]) and prescription drug coverage (5% [23 stories]).

**Table 2** lists the top 5 pervasive health stories aired on local television news.22-26 The most pervasive health story discussed the effectiveness of breast self-examinations.22 This story was reported 40 times, covering 26 different media markets, exposing 45 million households to this message. The sources of information for all of the top 5 pervasive health stories were medical journals or the Food and Drug Administration.

Among the 1799 health story broadcasts, 38% of stories referenced a medical or scientific study generically by using phrases such as “researchers have found” or
Table 1. Most Common Specific Health Topics Within Each General Medication Condition Category

<table>
<thead>
<tr>
<th>General Medical Conditions</th>
<th>Most Common Specific Health Topics</th>
<th>% of Stories Under Each General Medical Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infectious disease (316 stories)</td>
<td>West Nile virus</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>Food contamination</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Smallpox</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Warts</td>
<td>7</td>
</tr>
<tr>
<td>Cancer (259 stories)</td>
<td>Breast cancer</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Prostate cancer</td>
<td>7</td>
</tr>
<tr>
<td>Injury or poisoning (157 stories)</td>
<td>Motor vehicle safety</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Violence prevention</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Domestic violence</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Fire safety</td>
<td>8</td>
</tr>
<tr>
<td>Circulatory (135 stories)</td>
<td>Ischemic heart disease</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>Hypertension</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Stroke</td>
<td>10</td>
</tr>
<tr>
<td>Central nervous system (107 stories)</td>
<td>Eye disorders</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Parkinson's disease</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Alzheimer's disease</td>
<td>10</td>
</tr>
<tr>
<td>Mental (82 stories)</td>
<td>Depression</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Autism</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Attention-deficit/hyperactivity disorder</td>
<td>11</td>
</tr>
<tr>
<td>Respiratory (69 stories)</td>
<td>Influenza immunation</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>Asthma</td>
<td>20</td>
</tr>
<tr>
<td>Endocrine (65 stories)</td>
<td>Obesity or weight loss</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Diabetes mellitus</td>
<td>16</td>
</tr>
<tr>
<td>Genitourinary (54 stories)</td>
<td>Menopause</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Infertility</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Impotence</td>
<td>22</td>
</tr>
<tr>
<td>Musculoskeletal (49 stories)</td>
<td>Osteoporosis</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Arthritis</td>
<td>26</td>
</tr>
<tr>
<td>Childbirth or pregnancy (33 stories)</td>
<td>Alcohol use or smoking and pregnancy</td>
<td>47</td>
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<tr>
<td>Digestive (18 stories)</td>
<td>Dental caries</td>
<td>58</td>
</tr>
<tr>
<td>Skin (10 stories)</td>
<td>Wrinkles</td>
<td>50</td>
</tr>
<tr>
<td>Blood (9 stories)</td>
<td>Immune disorders</td>
<td>44</td>
</tr>
<tr>
<td>Congenital or perinatal (8 stories)</td>
<td>Conjoined twins</td>
<td>50</td>
</tr>
<tr>
<td>Not classified as a medical condition (428 stories)</td>
<td>Smoking cessation</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Prescription drug coverage</td>
<td>5</td>
</tr>
</tbody>
</table>

“a new study shows,” with only 6% of all stories citing a specific source. Three journals (*Journal of the National Cancer Institute, The Journal of the American Medical Association, and The New England Journal of Medicine*) accounted for 54% of all journals cited.

**DISCUSSION**

This systematic study of health information reported on local television news throughout the United States provides a more generalizable estimate of the health messages aired on local television news than previous studies.\textsuperscript{27,28} We analyzed 1799 health stories, which comprised 11% of the nonweather-related, nonsports-related airtime for local television news broadcasts that contained health information during the study period.

What information was conveyed in these stories? The most common general medical condition categories found in this study were infectious disease, cancer, injury or poisoning, and circulatory disease. These categories appear to coincide with common causes of death and disability in the United States.\textsuperscript{29} However, the public health relevance diminishes when one considers...
specific health topics discussed. For example, 79% of 316 stories about infectious disease were related to the 4 topics of West Nile virus, food contamination, smallpox, and treatment of warts using duct tape. Only 6 stories were about human immunodeficiency virus (HIV) and 4 of these discussed how lemon juice might be useful in preventing HIV transmission during sexual intercourse.

Although the most common specific health topic, breast cancer, is a significant cause of morbidity and mortality, West Nile virus is not. Less than 1% of the population who contract West Nile virus will develop severe disease. Nonetheless, West Nile virus was the second most prevalent specific health topic reported on, comprising 9% of all health stories aired and 52% of stories about infectious disease during the study period.

The reasons for this finding are hardly obscure. West Nile virus was a new topic in October 2002, and news media commonly report on uncommon events. The way in which it was reported is worthy of attention. By the media’s failure to place health stories in context, the public’s perceived risk may inappropriately increase. Most stories about West Nile virus reported the numbers of infected people and deaths within a certain community but did not put this illness into perspective. Perhaps by comparing these numbers with other causes of illness or death or by comparing the risk of West Nile virus with other more common causes of viral illness, such as influenza, would have enhanced the public’s perception of this public health problem. In addition, these stories did not discuss known prevention techniques. In fact, only 18% of West Nile virus stories provided recommendations about how to prevent mosquito bites or about what to do if bitten by a mosquito. Managed care health professionals need to realize the deficiencies of television news health reporting and be cognizant of this reporting because it may directly influence patient care. Preventive messages omitted by the news media should be addressed by healthcare professionals when possible. This type of response to the news media’s reporting about West Nile virus could have reduced the fears of the public, limited the number of people who sought medical attention after being bitten by a mosquito, and decreased the fatalities caused by West Nile virus. There is no mistaking that West Nile virus was news and should have been reported to the public. However, in the reporting about West Nile virus, opportunities were missed to provide the public with the most useful information.

Almost 76% of the stories about cancer were about sex-specific cancers such as breast cancer, cervical cancer, testicular cancer, and prostate cancer. Only 5 of 259 cancer stories discussed lung cancer, the leading cause of cancer death in the United States. Skin cancer, the most common form of cancer, was reported on 5 times, and only 1 story discussed colon cancer. More alarming, 2 health stories reported that exercise may cause cancer.

Because October is National Breast Cancer Awareness Month, it is not surprising that breast cancer stories were the most commonly reported cancer topic. The most pervasive cancer story discussed a study evaluating the effectiveness of teaching breast self-examinations. This story was reported 40 times and aired in more than half the media markets in our sample. Common opening monologues contained statements such as “breast self-examinations may be a waste of time.” This type of oversimplified headline is common in the mass media and may be misleading. Despite these headlines, 65% of these stories gave recommendations, and almost 90% of the recommendations encouraged women to continue performing breast self-examinations. Moreover, there were differences of opinion among health professionals interviewed. For example, a health professional on one local television channel on the East Coast stated that

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**Table 2.** Top 5 Pervasive Health Stories Aired on Local Television News

<table>
<thead>
<tr>
<th>Story Description</th>
<th>No. of Media Markets</th>
<th>Times Aired</th>
<th>Households, million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast self-examinations may not be useful[^22]</td>
<td>26</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>One third of Americans are obese[^23]</td>
<td>23</td>
<td>30</td>
<td>36</td>
</tr>
<tr>
<td>Lumpectomy as effective as mastectomy for treating breast cancer[^24]</td>
<td>21</td>
<td>24</td>
<td>31</td>
</tr>
<tr>
<td>Duct tape is effective for wart removal[^25]</td>
<td>19</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td>Warning against wearing decorative contact lenses[^26,*]</td>
<td>18</td>
<td>22</td>
<td>36</td>
</tr>
</tbody>
</table>

\[^*\]The source of the story was the Food and Drug Administration. All other story sources were medical journals.
“this is the best done study on this subject,” while another health professional at a station in a western state commented that “this is a really terrible study.” Viewers in different media markets received different recommendations based on the same health story. Health professionals and health organizations need to take the lead in understanding how to convey potentially controversial information so that the best science reaches the public in a comprehensible manner.

Thirty-eight percent of all health stories and almost all of the pervasive health stories in our sample referenced scientific studies. Which studies get aired? Wading through the vast amount of published medical research is difficult enough for health professionals, let alone journalists. Health professionals should assist local television news producers in determining what health information to cover. The public desires health information that is pertinent to them. Healthy People 2010 can provide a framework to help decide which studies should be distributed through the news media. This framework could help medical journal editors scrutinize their press releases so that the health topics provided to the media advance the current public health priorities. In addition, local television news editors could use Healthy People 2010 as a guide in choosing wire service stories that may most benefit the public.

Time is precious. Health stories reported on local television newscasts last approximately 30 seconds, hardly enough time to deal with any complicated topic. Health organizations commonly produce health stories and make them available to local television stations via B-roll press releases. These segments are often longer than the time allotted for health reporting on local television news, and stations may import any part of the video into the health story. Only small portions of these segments ever make it onto the air, and few give source attribution because of the limited airtime. It is unclear whether this fragmented reporting affects the message delivered, the story credibility, or the public's comprehension of health information reported on local television news.

Only 6 stories in our study discussed HIV, a significant health problem in the United States. Four of these stories discussed an in vitro study about the effect of lemon juice on sperm and speculated about (or presented as fact) the use of lemon juice as a form of contraception and its potential effect on preventing HIV transmission. All 4 stories cited a general reference to the research, only 1 story explained how to use the lemon juice, and 1 story simply stated to “apply it before sex.” Only 1 story mentioned that this finding represented the results of a laboratory study and had not been tested in humans. Moreover, one of the stations misinterpreted the study altogether and stated that lemon juice may be a substitute for “costly HIV” medications. Egregious mistakes like this may harm a credulous public; further systematic evaluation of the accuracy of health messages reported on local television news is needed. Many local television news organizations strive to achieve certain standards: most weather reporters are certified meteorologists, yet there is no requirement for credentialing health reporters. Establishing a “best practices” model for health reporting like that proposed by the Association of Health Care Journalists may enhance the ability of local television newsgroups to convey accurate and useful information.

The main limitation of this study is its temporal specificity. Newsworthy health articles will always be picked up by the media at specific times and will (and should) skew news coverage. Events such as National Breast Cancer Awareness Month and outbreaks of West Nile virus obviously affected the findings of our study. News is always being made, and any study performed during any period will be affected by events of that particular time. However, this limitation should not affect how the reported health information was evaluated in our study. Another limitation is that the study involved only late local news; broadcasts aired during other parts of the day may differ. However, the late local news broadcasts are typically the highest rated newscasts, reaching the greatest number of viewers.

Despite the influence that mass media, particularly local news, could have on health literacy and the state of public health, little is known about how health information is comprehended by viewers. Future research efforts are needed to better understand how the public comprehends and uses health information obtained from the mass media. Regularly reaching 165 million people, local television health news has the power to convey health information and to influence health literacy among all segments of our society. Measures need to be implemented to encourage better health reporting on local television broadcasts and to eliminate egregious errors in reporting health news to the public.

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REFERENCES
TRENDS FROM THE FIELD


