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Health Content in Local Television News: A Current Appraisal

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While local television news remains an important channel for the dissemination of health information, there has been little systematic examination of health content on those newscasts. This study, designed to update and expand upon earlier efforts, examined 1,382.5 hours of newscasts that aired on seven channels in four markets between December 2004 and June 2005. The four markets were a major-, a large-, a medium-, and a small-size market in the Midwestern United States. In total, 40,112 news stories were coded. About 8.1% of the news stories were devoted to health content. Health stories covered a large array of topics. Physical illnesses/diseases and healthy living issues received the most frequent coverage, while mental health and aging-related content were covered least frequently. Most health stories were neutral in tone and rather brief, with an average duration of less than 1 minute. One in eight (12.4%) health stories provided follow-up options. This is primarily due to an increase in the number of health news stories presented with a website URL compared to previous findings. Market differences emerged, although, interestingly, stations in the larger markets were not the leaders in health coverage.

Although information sources have increased notably with the advent and widespread use of the Internet, local television news remains an important channel for the dissemination of health information. More than half (56%) of American adults obtain “a lot” or “some” health information from local television news (Kaiser Family Foundation & Harvard School of Public Health, 2002). The American public perceives local television as a favorable, fact-oriented news sources (Pew Research Center for the People and the Press, 2005; Project for Excellence in Journalism, 2008). Beyond this, well-established mass communication theories such as agenda setting, cultivation, and social learning theories underscore the cognitive and behavior impact of health news coverage on the public (see Wang & Gantz, 2007, for a review).

In line with the official definition by the World Health Organization, this study defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (World Health Organization, 2003). Information on symptoms, causes, prevention, detection, and treatments of physical and mental illness or infirmity, as well as policy, law, technology, and fundraising activities related to well-being, is counted as health information. Such information in local television news can affect how individual patients as well as the general public understand and react to health-related issues—from sunscreen product selection to health policies during a presidential campaign. However, save for a study by the Kaiser Family Foundation and the Center for Media and Public Affairs (1998) and a more recent study by Wang and Gantz (2007), our understanding of health content in local television news remains scant.

The Kaiser study (1998) looked at 608 hours of local weekday evening news in 1996 and found health to be the

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fifth most common local news topic, accounting for 7% of the 17,074 news stories examined. In a typical 30-minute local newscast, health content constituted about 2 minutes. However, the study did not examine morning, midday, or late-evening newscasts or newscasts on weekends, which generally feature softer news, including health. Thus, Kaiser's study may underrepresent actual news coverage of health. In addition, the sample newscasts only covered late autumn and early winter, and thus might be biased by seasonality factors. For example, healthy lifestyle issues and outdoor community health events related to warmer months are likely to be underrepresented.

Wang and Gantz (2007) examined 67.5 hours of local newscasts, including 1,863 news stories, that aired on four English-language channels and one Spanish channel in seven large U.S. markets over the course of a composite week in 2000. Each station's early-morning, noon, early-evening, and late-evening newscasts were examined. Wang and Gantz found that about 10% of local news stories focused on health topics. The average health news story lasted 59.7 seconds; 70% were less than 1 minute. Illness and diseases received the heaviest coverage, followed by healthy living, health insurance and health policy, and parenting. More than half of the health news stories were neutral in tone. Most of the health news stories did not offer contrasting viewpoints. Few health news stories offered any follow-up information.

The Wang and Gantz (2007) study was limited in three important ways. First, as America and its television audience ages, current newscasts may devote more time to health. For instance, during the 2006–2007 season, half of the prime-time viewers of the five major networks were over the age of 48 years (Battaglio, 2007). Furthermore, research on television and aging has revealed that the elderly are more likely to watch television than other age groups, and watching the news is one of the major television viewing preferences among older adults (Scales, 1996; Hilt, 1997). To attract and keep these viewers, local news programs are likely to include more health content than they once did.

Second, as stations make more use of their websites (Chan-Olmsted & Ha, 2003), health news stories may offer more follow-up information. This is important as complicated health issues cannot be adequately covered by short stories that characterize health news coverage on television. Johnson and colleagues (1993, 1997) suggested that giving follow-up information in television messages may have great significance for viewers. They found information channel factors affect people's information-seeking behavior, and proposed that the media should be used not only to disseminate health information to the public, but also to educate and encourage audiences to select appropriate information channels (e.g., to seek direct contact with health professionals and organizations). Indeed, research examining adults' use of communication channels for health information found complementarity among traditional media and

the Internet (Tian & Robinson, 2008). A time-series analysis suggested that local television newscasts may affect the public health agenda not only by news aired but also by motivating postviewing information seeking, including online discussion (Roberts, Wanta, & Dzwo, 2002).

Providing follow-up information (i.e., listing a phone number or a website) does not take long, even in newscasts where every second counts. An earlier study by Friedman and Hoffman-Goetz (2003) assessed cancer stories in the print media and found about 40% contained follow-up information. Wang and Gantz (2007) found a much lower percentage (7.9%) with local television health news stories. It may be higher now, as just about every local television station offers news on its website (Project for Excellence in Journalism, 2008).

Finally, if newscast coverage of health issues varies on the basis of market size, Kaiser (1998) as well as Wang and Gantz (2007) may have overrepresented coverage of health. Stations in larger markets are likely to have larger news staffs and may be able to retain reporters whose sole beat is health news; they also may be more likely to have health news segments in their newscasts. Large market stations may have the personnel to maintain more active websites and, hence, may more often direct viewers to their websites for follow-up information. In short, stations in large markets may offer more health news—and more follow-up options for those news stories—than their smaller market counterparts.

With these considerations in mind, the current study is designed to update and expand upon earlier efforts of examinations of health content in local television news, using a larger sample from variously sized markets.

RESEARCH QUESTIONS

This study was guided by a set of questions similar to those assessed by Wang and Gantz (2007).

- RQ1:* How many stories and how much time are devoted to health news? How long generally does a health news story last?
- RQ2:* What time in the day are most health news stories aired? Where are health related stories located in television newscasts?
- RQ3:* What are the health topics that get coverage? And, what aspects of health topics do health news stories focus on?
- RQ4:* What is the verbal and visual tone for these stories? Are health stories likely to worry the typical viewer who might be affected by the story?
- RQ5:* To what extent are varying viewpoints presented?
- RQ6:* How often do these news stories provide follow-up opportunities for viewers? What options are offered?
- RQ7:* To what extent is market size related to the amount of health news provided, the inclusion of a formal

health segment in local newscasts, the presentation of contrasting viewpoints, and the inclusion of follow-up information?

METHOD

Quantitative content analytic procedures were employed to assess each of the research questions.

Sample

To examine the potential influence of market size on local health news, a major-, a large-, a medium-, and a small-size market were selected. To control the influence of factors other than market size, all four markets were selected from the same geographic area—the Midwestern United States. The markets selected were Chicago, Indianapolis, South Bend, and Terre Haute, which were ranked the 3rd, 25th, 87th, and 150th sized markets in the United States at the time of sampling and currently are 3rd, 26th, 89th, and 151st (Neilson Media Research, 2007).

Local morning, noon, and early- and late-evening newscasts on seven channels (the affiliates of ABC, CBS, Fox, NBC, UPN, WB, and Univision) in these four markets were recorded during four composite weeks from December 2004 to June 2005. The use of composite weeks was designed to minimize the potential impact of programming factors such as seasonal variability, sweeps period programming activities, special programs, and investigative reports. Each of the 28 days selected for each station was broken into the four newscast times sampled. Every station, then, featured a sampling grid with 112 slots. Working across slots, dates within the sampling time period were selected using random sampling procedures without replacement. Without-replacement sampling was employed to maximize days covered by each station and minimize repeat coverage within any station (as stations often report the same news item across newscasts during a day). The same procedure was carried out for each station to produce independent samples for each station. In total, 1,257 newscasts were sampled. They were 1,382.5 hours long and included 40,112 news stories.

Units of Analysis and Measures

The primary unit of analysis was the news story, a discrete report presented by a news anchor or reporter that covers an event (in or out of the studio). Health stories were defined as those that featured diseases and illness (both physical and psychological), parenting and children's growth, aging and caregiving, drugs and other medical treatments, diet and nutrition, exercise and fitness, environmental risks (e.g., toxic chemicals in the workplace), product recalls, gun and safety issues (e.g., use of seat belts), laws and policies

related to health, health science and technology, and health infrastructure and programs. The following did not count as health stories: (1) stories in which the behavior of a health care professional in the news story was not related to his/her occupation; (2) stories of health facilities, such as hospitals, if not covered as places for physical or psychological health exams, illness prevention, or treatment; And (3) stories on the death of people, accidents, crime, and natural disasters if the news story did not extend the significance to the general audience's well-being. (In comparison, stories about safety, such as wearing seat belts when driving, toxic chemicals in the workplace, gun control, and disease prevention after natural disasters would be coded.)

Each health story was coded in terms of duration, location in the newscast, air time, topics covered, visual and verbal tone, viewpoints presented, and follow-up options provided.

Coder Training and Intercoder Reliability

The study employed 22 coders. All were paid for their time and received as much as 40 hours of training over 8 weeks.

This study employed a modification of Scott's π proposed by Potter and Levine-Donnerstein (1999) to assess the intercoder reliability. This measure is particularly useful when multiple coders are involved and when coding decisions use nominal category systems. Five rounds of assessments were conducted in the last three weeks of training. During the last two rounds, coders achieved high reliability—modified π greater than .90 on all coding items.

RESULTS

Distribution and Duration of Health Stories

In total, 50.3 hours of news stories were devoted to health, accounting for 3.6% of all the newscast time. Of all the stories aired, 3,249 (8.1%) were health stories (see Table 1).

On average, there were 1.26 health stories per 30 minutes ($SE = 1.27$). The average duration of a health story was 57.46 seconds ($SE = 1.14$). Almost half (45.8%) of the stories were less than half a minute; three out of four (74.5%) lasted less than 1 minute. The shortest story was 7 seconds and the longest 21 minutes 21 seconds. Stories about new research findings, new products, and policies or laws tended to be brief. Stories that told personal life experiences or featured interviews in coverage of local community events were likely to be long.

Market differences. Market differences emerged in terms of the number of health stories provided per 30 minutes ($F(3, 1,253) = 19.90, p < .001$). Bonferroni pairwise comparisons found that affiliates in Indianapolis has significantly fewer health stories per 30 minutes ($M = .96, SE = 1.11$) than those in other three markets. Market differences also were

TABLE 1
General Information on Newscasts and Health News Stories

	<i>Chicago</i>		<i>Indianapolis</i>		<i>South Bend</i>		<i>Terre Haute</i>		<i>Total</i>	
Number of newscasts & stories	<i>n</i>	% [†]	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
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	7,357	18.3	3,449	8.6	40,112	100.0
Health stories	1320	40.6	902	27.8	569	17.5	458	14.1	3,249	100.0
Percent of news stories about health		7.8		7.2		7.7		13.3		8.1
Time	<i>n</i>	% [†]	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Newscasts (hours)	536.4	38.8	440.4	31.9	268.9	19.5	136.8	9.9	1,382.5	100.0
Health stories (hours)	17.5	34.8	16.1	32.0	9.3	18.5	7.4	14.7	50.3	100.0
Percent of news time devoted to health		3.3		3.7		3.5		5.4		3.6
Average duration	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>
Health stories (seconds) *	47.78	1.64 ^{abc}	64.35	1.99 ^a	59.22	2.50 ^b	58.48	2.79 ^c	57.46	1.14
Number of health stories per 30 minutes	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>
In all the 1,257 newscasts*	1.32	1.37 ^{ab}	.96	1.11 ^{acd}	1.23	1.08 ^{ce}	1.86	1.41 ^{bde}	1.26	1.27
In 978 newscasts with health stories*	1.60	1.35 ^{ab}	1.39	1.09 ^{ac}	1.56	.99 ^d	2.20	1.27 ^{bcd}	1.62	1.22
Location in a newscast	<i>n</i>	% ^{††}	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Newscasts having a health segment *	217	46.6	94	24.4	78	31.3	50	31.9	439	34.9
Health stories in a health segment*	767	58.1	370	41.0	308	54.1	211	46.1	1,656	50.1
Air time (number of health stories)	<i>n</i>	% ^{††}	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Morning	527	39.9	473	52.4	230	40.4	158	34.5	1,388	42.7
Noon	251	19.0	109	12.1	72	12.7	73	15.9	505	15.5
Early evening	333	25.2	202	22.4	157	27.6	104	22.7	796	24.5
Late evening	209	15.8	118	13.1	110	19.3	123	26.9	560	17.2
Air time (number of health stories per 30 minutes)*	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>
Morning	1.00	.11	1.16	.12	.86	.14	1.49	.19	1.13	.07 ^a
Noon	1.94	.12	1.35	.16	2.17	.20	3.94	.26	2.35	.10 ^{abc}
Early evening	1.51	.12	.86	.13	1.34	.14	1.10	.18	1.20	.07 ^b
Late evening	1.05	.10	.74	.10	1.06	.13	1.97	.16	1.20	.06 ^c
Follow-up options*	<i>n</i>	% ^{††}	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Health stories with any follow-up (<i>n</i> , % ^{††})	136	10.3	133	14.7	66	11.6	68	14.8	403	12.4
Website URLs ^{††††}	73	5.5	83	9.2	31	5.4	29	6.3	216	6.6
Phone numbers (not toll-free)	10	.8	30	3.3	24	4.2	24	5.2	88	2.7
Phone numbers (toll-free)	4	.3	20	2.2	3	.5	9	2.0	36	1.1
Corresponding media programs	4	.3	15	1.7	3	.5	10	2.2	32	1.0
Mail address	1	.1	7	.8	4	.7	8	1.7	20	.6
Health professionals	5	.4	6	.7	2	.4	4	.9	17	.5
Other	50	3.8	6	.7	6	1.1	8	1.7	70	2.2

Note. Common lowercase letters following market M and SE of the item indicate significant Bonferroni comparison between markets. Other symbols represent: [†] The portion of the number of newscasts (or health stories) or time of newscasts (or health stories) of total newscasts (or health stories). ^{††} The portion of the newscasts (or health stories) in that particular market (or in all markets, for the last column). * Significant ($p < .05$) chi-square test (or F test) on item cross markets. ^{††††} The number of stories presented this specific follow-up option. Some stories provided more than one follow-up options, so the sum of the specific options is larger than the total number of health stories with any follow-up.

found for story duration ($F(3, 3,245) = 15.08, p < .001$). Chicago aired significantly shorter stories ($M = 47.78, SE = 1.64$) than the rest.

Air Time and Location of Health News Stories

As shown in Table 1, the largest portion (42.7%) of health news stories was broadcast in the morning and the smallest

proportion (15.5%) was aired at noon. However, a different pattern emerged when newscast duration was taken into consideration. There was a significant difference in terms of the number of health stories per 30 minutes aired across times of day ($F(3, 1,253) = 47.14, p < .001$). Bonferroni tests revealed that newscasts at noon had significantly more health stories per 30 minutes ($M = 2.01, SE = .09$) than the other three newscast times, which were not significantly different from each other ($M_{morning} = 1.08, SE_{morning} = .07; M_{early eve} = 1.22, SE_{early eve} = .07; M_{late eve} = 1.07, SE_{late eve} = .06$).

Slightly more than one-third of newscasts (34.9%) had a health segment in the program. Health segments contained half (50.1%) of the health stories coded.

Market differences. Markets differed in terms of having an identified health news segment of their newscasts ($\chi^2(df = 3, N = 1,257) = 85.42, p < .001$): Stations in Chicago were the most likely to have one (46.6%), followed by Terre Haute, South Bend, and then Indianapolis (31.9%, 31.3%, and 24.4%, respectively).

Health News Topics and Foci

Topics. Of the seven overarching categories of health topics, physical illness and disorders received the heaviest coverage, accounting nearly half of all the health stories (46.0%). The 10 most frequently covered specific physical illnesses, diseases and disorders were cancer (12.2%), heart disease (5.5%), flu (3.4%), obesity (2.0%), diabetes (1.6%), eye disorders (1.2%), joint and tissue disorders—including arthritis (1.2%), lung diseases/asthma/emphysema (1.0%), pain and aches other than headache, toothache, and stomachache (1.0%), and Alzheimer's disease (0.9%). Healthy living was the second most common general topic (24.8%), followed by health insurance, health-related law and policy (12.0%), parents and children (6.8%), environmental factors (3.8%), mental health (3.0%), and aging (.7%).

When it comes to specific topics, cancer was covered in more news stories ($n = 394, 12.2\%$) than any other topic. This was followed by nutrition ($n = 200, 6.2\%$), heart disease ($n = 177, 5.5\%$), smoking ($n = 119, 3.7\%$), flu ($n = 111, 3.4\%$), product recalls ($n = 83, 2.6\%$), health technology/infrastructure such as medical technology, programs for patients, and drug companies ($n = 79, 2.5\%$), exercise and fitness ($n = 64, 2.0\%$), obesity ($n = 63, 2.0\%$), and children's safety ($n = 60, 1.9\%$).

Foci. Prevention (20.3%) and treatment (20.4%) were focused on most frequently. The cause of illnesses was the focal point for 13.6% of health stories; detection was emphasized least often (6.2%). In addition, 15.4% of health stories focused on advances made in the research or professional field. Health-related policy and law, including specific policies or laws proposed, drafted, enforced, changed, or ceased, were covered in about 1 of every 10 (9.5%) health stories. Application of health related policies and laws, such

as specific cases about health products or medical accidents that violated or were judged according to certain policies or laws, was covered in 5.6% of health stories. A similar portion (5.0%) of health stories focused on technology, while fundraising for improving health appeared in 3.6% of the health stories.

Tone, and Viewpoints Presented by Health News

Nearly three-quarters of the coded health stories (71.2%) were verbally neutral in tone; about one-fifth (18.4%) were generally positive and one-twelfth (8.8%) were generally negative; the remaining 1.6% were mixed.¹ Visually, almost all health stories were neutral in tone (95.1%), and 3.4%, 1.3%, and .2% of stories were positive, negative, and mixed, respectively. One of every five stories (20.0%) was judged to be worrisome to the average viewer who might be directly affected by the story. For example, a story about the dramatic increase in the incidence of melanoma, a dangerous skin cancer, would be coded as worrisome because it would be likely to trigger some concern among those who stay in the sun a great deal.

An overwhelming majority of health news stories (94.4%) did not offer contrasting viewpoints. Among those that presented contrasting viewpoints, about two-thirds (61.3% in stories with contrasting viewpoints, and 3.4% in all news stories) did not come up with a conclusion. Instead, they simply presented contrasting viewpoints.

Market differences. Markets differed in the inclusion of contrasting viewpoints ($\chi^2(df = 6, N = 3,249) = 19.49, p < .005$), although the differences here were not dramatic. The Indianapolis market led the way here (6.8%), followed by Chicago and Terre Haute (5.2% each), and finally South Bend (4.7%).

Follow-up Information in Health News

As Table 1 shows, one in eight health stories (12.4%) offered follow-up information. The follow-up option most frequently presented was a website URL, featured in 6.6% of the health news stories. Regular or toll-free phone

¹Verbal and visual tones were coded separately. Verbal tone was coded as (1) positive if it clearly pointed to success, reduced incidence and mortality rates, reduced health care costs, or positive psychological states (e.g., courage); (2) negative, if it focused on difficulty associated with handling medications or surviving diseases, increased incidence and mortality rates, the costliness of health care, or negative psychological states (e.g., hopeless); (3) mixed, if it was evenly or almost evenly split with positive and negative tones; or (4) neutral, if it only introduced facts and figures, incidence rates, and expressed no negative or positive comments about them. Visual tone was coded in much the same way: (1) generally positive, if it presented a clearly positive situation, mood, or subject; (2) generally negative, if it presented a clearly negative situation, mood, or subject; (3) mixed; or (4) neutral, if it did not present any clearly negative or positive feelings, or if it showed peaceful and tranquil scenes.

numbers were provided in 3.8% of the health stories. A corresponding media program related to the health news was mentioned in 1.0% of the stories.

Market differences. Markets were significantly different in providing follow-up options ($\chi^2(df = 3, N = 3,249) = 12.77, p < .01$). Health stories aired in Terre Haute and Indianapolis markets provided at least one follow-up option in 14.8% and 14.7% of the stories respectively, and those in South Bend and Chicago only provided an option in 11.6% and 10.3%, respectively.

DISCUSSION

Our content analysis revealed that for the seven channels in four markets coded, one in 12 local news stories focused on health content. This is consistent with findings disclosed by Kaiser (1998) as well as Wang and Gantz (2007), where health content accounted for 7% and 10% of the news stories examined, respectively. It appears that the ratio of health news to all news stories in local newscasts is relatively stable. Our content analysis found that 74.5% of coded health news stories lasted less than 1 minute. This, too, is consistent with previous research on general local news (Project for Excellence in Journalism, 2008) and local health news (Schwitzer, 2004; Wang & Gantz, 2007). As is the case with other news, health news stories are short.

The overarching topics of physical illness, diseases, and healthy living received the most frequent coverage. Mental health and aging received the least frequent coverage. Again, this pattern is similar to that found by Wang and Gantz (2007). Cancer, nutrition, and heart disease were the specific topics that appeared most often. Other topics, such as smoking, flu, product recall, health technology and infrastructure, exercise and fitness, obesity, and children's safety, also were common. The focus on cancer coverage is similar to what was found in the Kaiser (1998) content analysis as well as the Wang and Gantz (2007) study.

Research has found that local television news coverage of specific cancer sites diverges from cancer incidence rates in real life (Gantz & Wang, 2009), but at least cancer has consistently received extensive coverage in recent years. Two factors are likely to contribute to this: Cancer can be life-threatening, and it is less stigmatized than some diseases (e.g., mental illness, sexually transmitted diseases). As a result of the latter, it may be easier to feature stories about celebrities with cancer or local community events related to cancer (e.g., walk or run for cancer).

In comparison, relevant issues such as mental health and aging receive scant coverage even though both are prevalent in today's society. According to the National Institute of Mental Health (2008), about one in four American adults (age 18 years and over) has a diagnosable mental disorder, and one in 17 suffers from a serious mental illness.

Similarly, the aging of the U.S. population pleads for more public awareness: The group of 65 years old and over is increasing at a faster rate than the total population (National Center for Health Statistics, 2007). These facts highlight the public's need for relevant information, something local television news coverage does not currently provide. This gap may represent an opportunity for local television news programs as they try to work against a tide of declining viewership. If stations provide more coverage of these topics—and do so on a regular basis—they may attract additional viewers and, as a consequence, additional advertising revenues for their bottom line.

This study also found that a majority of health news stories were verbally and visually neutral in tone. Health news has been criticized as being frightening, depressing, and discouraging viewers from information seeking (e.g., Rees & Bath, 2000). Supporting the Wang and Gantz (2007) results, data from this study suggest again that such a critique is unfounded. That is, most health news stories were neutral and unlikely to depress and discourage viewers from information seeking. It is worth mention that, to further scrutinize the tone of the news stories, this study separately examined the emotional tone of verbal and visual content of health stories, rather than making a single judgment on a whole story. Thus, the normally neutral tone for both the verbal and visual information found in this study provides stronger evidence for story tone differences between health news and other news typically found on local newscasts.

A large majority of health news stories in this study did not present contrasting viewpoints. This may be because the topics covered were not particularly controversial—or because stations did not want to expend reporter or air time pursuing alternative views. Further research would be needed to determine that.

One in eight (12.4%) health stories provided follow-up options. This figure is higher than the 7.9% figure found in the Wang and Gantz (2007) study and is primarily due to an increase in the number of health news stories presented with a website URL—from 2.6% of health stories in the 2000 study to 6.6% in this analysis. The increased use of station websites for follow-up information improves the health information services provided by stations. At the same time, again, these data suggest that stations can do much more here, even if they simply offer follow-up options for a larger proportion of their health news stories.

Overall, health news stories coded in this study included features that are likely to help viewers learn about health information from local newscasts. Stories covered a large array of topics, were neutral in tone, and increasingly provided follow-up information. They also have weaknesses that may prevent viewers from effectively obtaining health information: Stories were quite brief, with few providing follow-up options. They also did not provide a great deal of coverage on health issues that affect, directly or indirectly, a significant portion of society.

Interestingly, stations in the larger markets might not be the leaders in health coverage. Several findings highlight this phenomenon: First, stations in the smallest market offered more health stories per 30 minutes of local news. Second, stations in the largest market offered the shortest health stories—on average, at least 10 seconds shorter than elsewhere. Lastly, stations in the largest market were the least likely to provide follow-up information, particularly phone numbers.

It is clear from this follow-up study that health news remains a staple on local television news. In one respect, this is comforting as a majority of American adults report that local television news is their primary source for health information. Yet, because of the nature of the coverage, health practitioners cannot count on television news as a primary vehicle for information about their particular health concern or as a means of setting the public's health agenda. In addition, the variability of health coverage makes it unwise for practitioners to assume uniform coverage of any health topic within or across markets—or reasonably uniform awareness of health issues. Instead, all they can reasonably expect is regular, albeit generally abbreviated, coverage of a variety of health topics. For more concentrated coverage, health practitioners will have to utilize outlets they have used in the past including paid ads that, while short, can set an agenda and steer viewers to interactive information outlets and to health practitioners themselves. However, two suggested changes may enhance the effectiveness of local television news as a public health campaign channel. First, local news journalists and producers need to more actively study health trends in America as well as in their local communities, and better understand important health issues that affect large segments of their potential audience. With that in hand, they will be able to keep up with the changing needs of the public. In turn, that will not only help fulfill each station's public interest responsibilities, but also may be lucrative, as more than 40% of station revenues come from news programs (Project for Excellence in Journalism, 2008). Useful health news content has the potential to attract audiences who, as reviewed, are interested in getting health information from local television news. Second, as proposed by other researchers (e.g., Johnson & Meischke, 1993), local television news should not only disseminate health information but also educate and encourage follow-up information-seeking activities. These two suggestions seem appropriate for health professionals and health organizations as well: These organizations proactively reach and educate the news-gathering community, particularly by updating people on health trends, providing them with authoritative content for station websites, or just simply asking reporters to encourage their audiences to visit relevant organizations' websites.

Finally, two limitations associated with this study are worth noting. First, only Midwestern U.S. markets were

sampled. This was deliberately done to control for geographic variability so we could examine the effect of market size. However, given differences across markets, it is quite possible that local television news in other geographic areas may focus on health issues central to their areas but less germane to those in the Midwest. For example, stations on the West Coast or in the South and Southwest may devote more stories and air time to outdoor activities, protection from the sun, and skin cancer. Second, while this study focused on the extent and nature of the amount of health information available to the public, it did not assess how easy or difficult the information is for the public to follow or comprehend. The accessibility of the news story language and the redundancy of the verbal and visual information have been found to influence information processing. Future studies should try to address these limitations.

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