

Reporting Health: Rural Newspaper Coverage of Health in Kentucky

Al Cross and Sarah Vos

Institute for Rural Journalism and Community Issues
College of Communications and Information Studies
University of Kentucky

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Abstract

The prevalence of health reporting in larger newspapers is well established, but little research has been dedicated to rural newspapers. However, rural newspapers may be more influential than their urban counterparts and may be able to play a key role in improving health literacy among a demographic that often suffers from low health literacy levels. While the relationship between media coverage of health issues and health literacy has not been clearly defined, research suggests that media coverage does play some role in health literacy and may be a contributing factor in higher health literacy levels. In order to understand how reporting in rural Kentucky newspapers could play a role in improving health literacy, this study analyzed health news coverage in rural newspapers in Kentucky, a state with general low health status.

The study found a general lack of health reporting in Kentucky rural newspapers, based on the available evidence, and a relatively low quality in the coverage that did appear. Some major health problems received little coverage, and articles often did not contain information explaining the causes or possible causes of health problems and the larger context of the issue(s). We also found that it is rare for newspaper stories to even mention, let alone examine, disparities in health status between Kentucky counties and between Kentucky and other states. Not only are rural Kentucky newspapers devoting few resources to reporting on health, they devote little space for publication of reporting by others, though it is easily available. Their coverage is primarily reactive, not proactive. There is evidence from interviews with editors and publishers of rural weekly newspapers that some of them avoid reporting on community health issues because it reflects poorly on the community.

Al Cross, B.A., is associate extension professor of journalism in the University of Kentucky School of Journalism and Telecommunications and director of its Institute for Rural Journalism and Community Issues. Sarah Vos, M.A., is a doctoral student in Communication, Journalism and Telecommunications at the university, and was a master's-degree student during this research, which was supported in part by a grant from the Foundation for a Healthy Kentucky.

Reporting Health: Rural Newspaper Coverage of Health in Kentucky

The impact of news coverage on health status and health policy has long been established. Recent work has examined how media coverage may influence individual health decisions and preventive behaviors (Stryker, Moriarty, & Jensen, 2008; Jenson, 2011) and how coverage of health-related issues can lead to changes in public policy and public perception (Kline, 2011).

Scholars have theorized many models to explain the influence of the news media. Such models include traditional theories of media effects, like priming (Weaver, 2007) and agenda setting (McCombs & Shaw, 1972); health behavior theories like Social Learning Theory (Bandura, 1969) and stage-based theories (Weinstein, Sandman, & Blaclock, 2009); and news learning theories, like the cognitive mediation model (Jenson, 2011). These models all assume, however, that the news media regularly report on health.

While the prevalence of health reporting in larger newspapers is well established (Kline, 2011), little research has been dedicated to rural newspapers. This may be, in part, because relatively few rural newspapers are included in newspaper databases such as LexisNexis, and many are not online or do not post full or even partial news stories online. However, rural newspapers may be more influential than their metropolitan counterparts. According to Garfrerick (2010), rural and other community papers are often ignored by scholars because they are viewed as unprofessional and unimportant. What this assumption ignores, however, is the central role rural newspapers play in community life. According to Garfrerick, rural newspapers are viewed by readers as an “extended member of the family” (p. 152) and, thus, operate in a more intimate position in their readers’ lives than urban newspapers. Since many of these papers

are weeklies, each edition tends to remain in the living space longer than a daily, and is often re-read or passed along to another household. According to the National Newspaper Association (2011), each copy of a community newspaper is shared with an average of 2.33 persons.

Rural newspapers should be of interest to health communication scholars because of the way in which they are read. Although, nationally, newspaper readership has been declining, rural readership remains steady. According to the NNA, 60% of adults who live in the circulation areas of rural newspapers depend on their local paper as their primary source of local news. They spend, on average, 39 minutes reading their local newspaper, and 73% of them report reading the entire newspaper. The attention paid to rural newspapers suggests that these newspapers might be able to play a key role in improving health literacy among a demographic that often suffers from low health literacy levels.

Another factor to consider is that weekly newspapers often remain in the domicile until the next edition of the paper arrives, or even later, and are read on multiple days, unlike daily papers. (The newspaper industry defines daily papers as those that print four or more times per week, and weeklies as those that print one, two or three times a week.)

Health Literacy

Health literacy is commonly defined as “the degree to which individuals have the ability to obtain, process, and understand basic health information and services needed to make appropriate decisions” (USDHHS, 2003, “Definition of Terms,” para. 5). Low health literacy levels have been implicated in poor health status, poor management of chronic conditions, and lack of use of preventative services (USDHHS, 2010). Low health literacy is estimated to cost the nation \$106 billion to \$236 billion annually. In rural areas, in particular, more residents have low health literacy levels (Zahnd, Scaife, & Francis, 2009).

While the relationship between media coverage of health issues and health literacy has not been clearly defined, research suggests that media coverage does play some role in health literacy (Hinnat & Len-Rios, 2009) and may be a contributing factor in higher health literacy levels (Paek, Reber, & Lariscy, 2009).

Health Disparities

At a policy level, news coverage of health topics can influence public action (Wallington, Blake, Taylor-Clark, & Viswanath, 2010). But in order to do this, Wallington et al., argue, ~~that~~ newspapers stories must draw attention to health disparities -- inequalities in health outcomes and health-care access that affect certain populations based on race, socioeconomic status, and geographic regions (Ndiaye, Krieger, Warren, & Hecht, 2011).

National surveys have shown rural residents have more smoking-related illnesses, tooth loss, limited physical activity because of chronic health issues, and so on. They also have less access to quality health care than residents of metropolitan areas.

Bressers (2005) argues that the news media need to contextualize health problems, framing issues not just as one-time events but relating health issues to the broader well-being of society. Health coverage, it is argued, should provide a comprehensive picture of health problems, explaining not just why one person or group has health problem but the causes of the health issue. By covering the social determinants of health, media coverage could help set the public agenda by setting the terms of the debate (Gasher et al., 2007).

In order to understand how reporting in Kentucky newspapers could play a role in improving health literacy, this study analyzed health news coverage in rural newspapers in Kentucky, with these basic research questions:

RQ1: Do rural Kentucky newspapers regularly publish articles about health?

RQ2: What resources do rural Kentucky newspapers dedicate to health stories as measured by staff-written stories, article placement, photographs, and graphics?

RQ3: What ~~the~~ health topics are most frequently covered by rural Kentucky newspapers?

RQ4: Do stories about health in rural Kentucky newspapers provide information about the scope of the health issue or problem being reported?

RQ5: Do stories about health in rural Kentucky newspapers discuss health disparities?

Following this analysis, several editors of rural newspapers were interviewed in an attempt to determine their level of interest in covering health issues.

Methodology

Over a six-month period, a commercial clipping service, Newz-Group, identified health-related articles in 178 Kentucky newspapers for the Foundation for Healthy Kentucky. The news service works with the Kentucky Press Association to obtain copies of all Kentucky newspapers, directly from the publishers. The service clips from all regularly publishing newspapers in Kentucky. (For a complete list of the newspapers included in this study, see Appendix A.)

Search terms used by Newz-Group were: Foundation for a Healthy Kentucky, Medicaid, Susan Zepeda (president of the foundation), Janie Miller (secretary of the Kentucky Cabinet for Health and Family Services), KCHIP (Kentucky Children's Health Insurance Program), school health, mental health, public health, health policy, smoking ordinance, substance abuse, healthy communities, healthcare reform, cigarette tax, tobacco tax, Kentucky Voices for Health, health insurance, governmental/political issues, and health insurance and industry trends/statistics.

Between Jan. 21 and July 21, 2011, Newz-Group identified 1,919 articles that used the search terms. The articles were clipped, scanned into electronic packets and sent to the Foundation, which provided them for this analysis.

This study used a codebook with 31 questions to assess the types of articles, the content, and the quality of the information presented. Many of the coding categories were based on the previous work of Cohen et al. (2008), Mangello's (2010) review of health news content analysis, and an unpublished pilot study (Hoover and Cross, 2009) on rural health reporting in Kentucky. The full codebook is in Appendix B.

Inter-coder Reliability: Two coders, one of whom was the lead author of the study, were trained to perform content analysis by practicing coding together. Their practice led to several in the codebook. Once coders were comfortable with the categories, each separately coded 50 packets of articles, a total of 222, to establish inter-coder reliability. The coding was performed using Qualtrics, an on-line survey software, and the data were analyzed with the Statistical Program for the Social Sciences (SPSS). The Krippendorff's alpha, a gauge of reliability, for each measure is reported below. Items that did not reach the threshold of .667 recommended by Krippendorff (2004) are not reported. After obtaining reliability, the remaining article packets were coded and analyzed.

Article Identification: The first two questions in the codebook assessed whether articles belonged in the study. The first question identified the newspaper that published the article. Articles printed in newspapers published in a major city one of three major metropolitan regions in Kentucky (Lexington, Louisville, and Northern Kentucky-Cincinnati) were removed from the study (N=354, Krippendorff's alpha = .935) because the cities are not rural and the regions contain relatively little rural area.

In Kentucky, most newspapers' primary circulation areas are defined by the boundaries of the county in which they publish. The great majority are based in county seats, and most of the 120 counties have only one local newspaper.

The second question assessed whether the article was primarily about health. In order to be included in the study, the coders had to assess whether the focus of the article was on a health illness, a health topic, a health-related policy (including funding), or another health-related issue. An additional 355 articles were removed from the study because the articles were not primarily about health, such as stories, editorials and columns relating to the legislature. That left 1,208 articles for analysis (Krippendorff's alpha = .727). Tables of all of the results are in Appendix C.

Statistical Results

Coverage

RQ1 asked: *Do rural Kentucky newspapers regularly publish articles about health?* Of the 164 papers included in the analysis, 131 published one or more health-related articles during the study period. These papers published, on average, 9 articles during the six-month period. The median number was 4, and the mode was 1. Most of those articles (61%) were identified as news stories, followed by opinion pieces (25%). News accounted for 8% of the sample. Letters to the editor and feature articles were 4.1% and 1.4%, respectively.

Locale: The geographic emphasis of the stories was usually the state of Kentucky or the geographic region where the newspaper is published. More than half the stories (51%) had a statewide focus while 41% had a local emphasis, meaning most events described in the article took place within the geographic region where the newspaper primarily circulates, usually the county where it is based. The remaining articles (8%) had a national or international emphasis.

Resources Dedicated to Health Reporting

RQ2 asked: *What resources do rural Kentucky newspapers dedicate to health stories as measured by staff-written stories, article placement, photographs, and graphics?* The results indicate that rural newspapers dedicate few resources to reporting health stories.

More than a fifth of the health articles (22.6%) did not have a clearly marked author or source. Newspapers typically identify staff-written articles longer than a few paragraphs as staff-written.

Of the articles with a clearly marked author or source, the most common was a staff member or local columnist: 44.2%. Another 0.4% of the articles were wire-service stories to which a staff member contributed. Wire services provided 16.5% of health articles, and reprints from other newspapers (which may have been obtained through a wire service) provided 8.3%. Kentucky Health News, a free service of the Institute for Rural Journalism and Community Issues at the University of Kentucky, accounted for 5.6% of the health articles.

Elected officials, largely legislators writing about health issues during their legislative session, wrote 10.6% of the articles. Community members and readers contributed 6.4%. The remaining articles came from government press releases (3.2%), syndicated columns (1.8%), nonprofit press releases or reports (1.7%), business press releases (0.1%), and other sources (1.2%).

Kentucky Health News: This news service primarily aggregates and customizes health coverage for Kentucky news media, but also conducts original reporting and sends the stories to newspapers. Among the 52 Kentucky Health News articles identified in the clips, 47, or about 90 percent, were original articles.

It should be noted that this category did not capture articles that were written by newspaper staff members but were based on or inspired by Kentucky Health News reporting or ideas. The service regularly encourages newspapers to do their own stories and provides sources for them to do so.

Wire Services: Among the 154 wire-service stories, The Associated Press provided 92, or 59.7 percent. Few weekly newspapers in Kentucky are AP members. Community Newspaper Holdings Inc. provided 38.3% of the articles classified as wire service. CNHI publishes five daily and six weekly newspapers in Kentucky, some in metropolitan areas but serving a

significant rural audience. It has a correspondent in Frankfort who covers issues including health, and distributes articles to its papers, which make independent editorial judgments about which articles to publish, according to the company.

Reprints: Almost half the articles (48.7%) reprinted from another news source originally appeared in another Kentucky newspaper in this study. These articles most frequently came from *The Independent* of Ashland (part of a metro area with Huntington, W.Va.), which has the largest circulation among CNHI's Kentucky papers. The remainder of the reprints came from the two largest papers in Kentucky, *The Courier -Journal* of Louisville (16.7%) and the *Lexington Herald-Leader* (33.3%), which were excluded from this study because of their urban locations.

Photographs and graphics: Because research has shown that photographs and graphics draw readers' attention and convey information in a way that may be more effective than story text, the clips were examined for those features.

The vast majority of the articles (82.7%) had no photographs. Among those with pictures, most (13.4% of the total) had one photo; 2.2% had two and 1.7% had three or more. Headshots of the author of a column or a story were not counted as a photograph.

Graphics (defined as maps, charts, lists, and illustrations) were even less common, occurring in only 5.2% of the cases.

Article Placement: Another factor that can determine whether an article gets a reader's attention is its placement in the newspaper. Most health stories (71.4%) were placed on an inside page; most of the rest were on Page 1, with a majority of those (14.6% of the total) placed on the top half of the page. A small number (3.1%) were on a section front; most rural Kentucky newspapers typically have only one section.

Sources of Information in Articles: This factor can illustrate the extent of research and reporting that goes into an article.

Valid inter-coder reliability could not be reached for the number of sources of information within an article (Krippendorff's alpha = .619), but when ranges of numbers were used, inter-coder reliability was reached (alpha = .819).

Just over one-third of the health articles (33.6%) had four or more sources of information besides the author. Most articles (43.2%) contained two or three sources. Almost one-fifth (23.2%) had one or fewer sources.

Health Topics

RQ3 asked: *What health topics are most frequently covered by rural Kentucky newspapers?* The analysis showed that rural newspapers ran stories that addressed a wide -range of topics, but the clips were dominated (35.6%) by 430 stories about health care funding and policy issues, including Medicaid. The initial figures for other topics were:

146	12.1%	Drug and alcohol use
115	9.5%	Tobacco and smoking
104	8.6%	Diet, obesity and/or exercise
50	4.1%	Health warnings and advisories
27	2.2%	Abuse
22	1.8%	Individual-level health-care costs
19	1.6%	Cancer
13	1.1%	Mental health
7	0.6%	Oral health
3	0.2%	AIDS, HIV, and other sexually transmitted diseases
2	0.2%	Diabetes
2	0.2%	Heart and circulatory problems
2	0.2%	Reproductive and sexual health
1	0.1%	Birth defects and prematurity
1	0.1%	Stroke
264	21.9%	Other categories

Since more than a fifth of the articles were identified as “other,” a secondary analysis was conducted to re-categorize topics identified in that category. That showed the same pattern as above, except that public-health issues and general health status were identified as significant topics.

In this secondary analysis, the largest category was again stories about funding and policy issues (457, or 37.8%). Other large categories included drug and alcohol use (147, or 12.2%), tobacco and smoking (115, or 9.5%), exercise and diet (104, 8.6%), public health issues (89, or 7.4%), general health status (83, or 6.9%), the business of health care (45, or 3.7%), individual health care costs (29, or 2.4%), abuse (27, or 2.2%) and children’s health issues (26, or 2.2%). These categories accounted for 92.9% of the articles originally categorized as “other.” The remainder fell into categories that each accounted for less than 2% of the total: cancer, mental health, oral health, electronic health records, health literacy, diabetes, sexually transmitted diseases, heart and circulatory problems, reproductive health, stroke, and other.

Relevance: The figures show that Kentucky’s rural newspapers are giving significant coverage to drug and alcohol use, tobacco and smoking, and issues related to obesity, diet and exercise. All three are significant health problems in Kentucky. However, the state also ranks high in heart and circulatory problems, including stroke, and many types of cancer, and has by some measures the worst oral health in the nation. Yet, these subjects received miniscule coverage in the news clips provided for this study.

Legislative session: Almost one-third of the articles were related in some way to coverage of health policy questions before the Kentucky’s General Assembly. The legislature meets in odd-numbered years from January until late March, and its business typically drives a large portion of news coverage in the state during that time. Almost one-third of the articles

(28.7%) were related to the legislative session, either containing a reference to the General Assembly or a bill or issue being considered by the legislature.

Context

RQ4 asked: *Do stories about health in rural Kentucky newspapers provide information about the scope of the health issue or problem being reported?* This research question was addressed by assessing the amount of context in an article about a health topic. Context was defined as the information the story provided about the causes of a problem, its seriousness, and any national or regional discussion about the issue. Initially, valid inter-coder reliability could not be reached on the *degree* of context within an article (Krippendorff's alpha = .324). However, when the data were recoded to reflect the *presence or absence* of context, inter-coder reliability was reached (Krippendorff's alpha = .787).

Almost three-fifths of the articles (59.5%) contained some context, while 40.5% offered no context about the importance or the causes of the health topic being discussed in the article.

Health Disparities

RQ5 asked: *Do stories about health in rural Kentucky newspapers discuss health disparities?*

Initially, valid inter-coder reliability could not be reached on the use of health disparities within an article (Krippendorff's alpha = .57). However, when the data were recoded to reflect one category for statistical health disparities instead of two (general and specific), intercoder reliability was reached (Krippendorff's alpha = .83).

The analysis showed that most articles (80.3%) did not contain a reference to health disparities. Approximately one-fifth (19%) used statistical information to convey health disparities. Only one article used narrative information or a combination of narrative and statistical information to convey health disparities.

Additional online research: During the first three months of 2012, the Institute for Rural Journalism and Community Issues surveyed independent, online-only local news outlets in rural Kentucky to determine their prevalence and content. It identified 18 such outlets, mainly in Western Kentucky due to a group operation, but with some in all major areas of the state.

The survey found that with a single exception, health was not a major factor in the content of the reviewed sites. *Fulton Kentucky News* featured a link from its health menu to *Medical News Today*, a database specializing in adapting medical press releases. By aggregating this data, the site was able to connect with readers seeking health care stories. In this study, Fulton provided nearly three-quarters of the total health coverage delivered by all sites reviewed during the period.

Analysis

These results show that there is a shortage of health reporting in rural Kentucky newspapers, and a lack of quality among much of the coverage that is provided.

While it was beyond the scope of this study to measure the amount of health reporting compared to other reporting, the results suggest that few articles dealing with health appear in rural Kentucky newspapers on a regular basis.

In a six-month period, the 19 daily newspapers in this study issued approximately 2,964 editions (average of 6 per week x 26 weeks x 19). The 145 weekly newspapers, some of which

publish twice or thrice weekly, issued approximately 4,160 editions (est. 160 per week times 26 weeks). Thus, the study period covered a time during which approximately 7,100 separate newspaper editions were published, with 1,208 articles primarily about health – about one every six editions, though the state’s premature-death rate, a common measure of relative health status, is 20 percent higher than the U.S. rate, according to KentuckyHealthFacts.org, operated by the Foundation for a Healthy Kentucky.

Given the state’s poor health status and the need to improve it, we believe this study fairly concludes that Kentucky newspapers are not devoting enough resources to reporting on health or devoting space for publication of reporting by others. It shows that many major health issues are rarely covered by rural newspapers, and even when such issues are covered the articles often do not contain information that explains the causes of health problems and the larger context of a health issue. In addition, it is rare for newspaper stories to mention – let alone examine – health disparities.

Additional Examples and Interviews with Weekly Editors and Publishers

Following this analysis, nine editors and/or publishers of weekly newspapers in rural Kentucky were interviewed to in an attempt to determine their level of interest in covering health issues. The interviews generally followed a template that began with a general question and then narrowed the focus to health coverage.

When asked to name the primary community issues their newspaper covers, none of the editors mentioned health (although one in Eastern Kentucky said the biggest issue in his county is prescription drug abuse, and another mentioned methamphetamine, an illegal drug).

However, when asked if their newspaper perceives that it has a role in covering rural health issues in a similar manner as economic development or education, they all said “yes.” That is not borne out by the clips analyzed above.

The lack of coverage in the clips was also reflected in a later set in April 2012, with the release of the latest set of County Health Rankings by the University of Wisconsin Population Health Institute in collaboration with the Robert Wood Johnson Foundation. While the clips from that month do not appear to be complete, there was a clear pattern: Good news was reported and bad news was mostly not.

The clips had six stories about the rankings, most of them from counties that scored relatively well: 20th, 27th, 35th and 38th. The Mount Sterling Advocate did a story about Montgomery County’s ranking of 86th and quoted the county health department’s education director on possible reasons for the ranking and what the department plans to do to improve it. The story gave the rankings for the adjoining counties.

The other story in the clips came from the McCreary County Record, where the headline called the very poor county’s rank of 117th “dismal.” It cited health factors such as high rates of smoking and uninsured residents, and a very high rate of children in poverty. It also gave the rankings of the adjoining Kentucky counties, another example of reporting of health disparities.

In the interviews, some editors and publishers seemed to define local health issues not in terms of the prevalence of diseases or disorders, but as stories about local institutions. Three of the nine mentioned their local hospitals as prime examples of local health coverage, and their comments also illustrated how most health coverage is reactive, not proactive.

“The hospital and the health department come to us when they want something promoted but that’s about it,” said the publisher of an independently owned weekly in Appalachian Southern Kentucky.

“We cover things at the hospital as they pop up,” said the editor of a CNHI-owned weekly in a nearby Appalachian county of 21,000 people. She said the hospital calls “if they have something they think is newsworthy.”

The paper is among those that do an annual health section, a product that appears to have become more common in recent years. Such sections are typically supported by advertising from health-care providers, who often provide articles for the sections. A weekly in a smaller, adjoining county recently used Kentucky Health News articles to fill its special health section.

Asked what obstacles might prevent them from covering community health issues, most editors cited a lack of staff. Because Kentucky has many small counties (a total of 120 counties for 4.3 million people), and is a relatively poor and under-educated state, many of its rural newspapers have relatively weak circulation and advertising bases that make it difficult to employ full-fledged news staffs.

Some editors said they are not sure how to access information needed to adequately cover some health topics. “I guess we don’t always know where to get some of the information that would be useful to us,” said one editor whose paper has been relatively active in health coverage.

The last question to the editors was, “Is there a reluctance, at your paper or other papers, to report on your community’s poor health status because it reflects poorly on the community?”

Only one of them said it was, but another said “I can see that happening at other papers,” and a Western Kentucky editor-publisher said editors or publishers of two other papers had told

him they did not publish their county's health rankings "because they were so low." He said another paper downplayed the story.

The editor-publisher who acknowledged a reluctance to make a special effort to report on community health problems was Dennis Brown, who has been owner of the Lewis County Herald in Vanceburg, in Kentucky's northeastern corner, for 25 years. "I don't like to write stories that reflect poorly on the community," he said. "I'm part of it. I like to make it look as good as we can. I think we bring to light what we need to."

Brown said he is willing to run "well written" material about the county from outside sources, and has editorialized in favor of a local ordinance against indoor smoking, a stand he said was not popular in the very rural county where tobacco is still grown and many cigarettes are smoked in local restaurants. He said he grew tobacco for 40 years, and has a smoking area in his place of business for employees who smoke.

The Western Kentucky editor-publisher said it is common for rural weeklies that may be one or two major advertisers away from losing money and fear upstart competition to follow generally timid editorial policies. "It's opening a bag of worms they don't want to open," he said. "They don't want to offend."

This journalist took the county health rankings story to a level seen by no other paper in Kentucky, questioning how his county had risen significantly in rank from one year to the next, and publishing a story that explained the change was largely the result of a statistical anomaly and a relatively small sample. He also built a special health section around localized information sent to him by the Institute for Rural Journalism and Community Issues, and filled the section with locally reported and written stories.

The Institute for Rural Journalism and Community Issues holds up such work as examples for others to follow. The director (co-author of this report) tells rural editors and publishers that a newspaper should stand for something, and “If a newspaper can’t take a stand for better health care and better health, then what in the world *can* it stand for?”

Limitations: There are several limitations to this study. The news stories analyzed were gathered by a commercial news clipping service, and, for cost reasons, the number of search terms used by the company was limited. In addition, the study period included a legislative session where there was a long debate on how to deal with a Medicaid shortfall. The inclusion of those articles probably skewed the data.

Conclusion: Given the role the news media can play in improving health literacy, and the intimate position of rural newspapers in their readers’ lives, this analysis suggests that the lack of health coverage in rural newspapers represents an opportunity to improve health literacy in rural populations by increasing the number and quality of health stories in rural newspapers. The results suggest that more work needs to be done to encourage rural newspapers to improve the quality and the quantity of reporting on health issues, or their willingness to devote space to reporting done by others.

Finally, more work needs to be done to understand how rural newspaper editors regard health issues, whether they understand health disparities, what resources they need to improve their health reporting, and how they can overcome their natural reluctance to “turn over rocks” that may reveal a less than favorable picture of their communities but also help community members recognize the problems, do something about them and make their communities more attractive and healthy places to live and work.

References

- Bandura, A. (1969). Social-learning theory of identificatory processes. In D. A. Goslin (Ed.), *Handbook of socialization theory and research* (pp. 213-262). Chicago: Rand McNally.
- Bressers, B. (2005). Staff, time, space constraints limit coverage of children's health issues. *Newspaper Research Journal*, 26(2/3), 124-132.
- Cohen, E.L., Caburnay, C.A., Luke, D.A., Rodgers, S., Cameron, G.T., & Kreuter, M.W. (2008). Cancer coverage in general-audience and black newspapers. *Health Communication*, 23, 427-435. doi: 10.1080/10410230802342176
- Foundation for a Healthy Kentucky, www.KentuckyHealthFacts.org, retrieved July 15, 2012.
- Garfrerick, B. H. (2010). The Community Weekly Newspaper: Telling America's Stories. *American Journalism*, 27(3), 151-157.
- Gasher, M., Hayes, M., Hackett, R., Gutstein, D., Ross, I., & Dunn, J. (2007). Spreading the news: Social determinants of health peportage in Canadian daily newspapers. *Canadian Journal of Communication*, 32(3/4), 557-574.
- Hinnant, A., & Len-Ríos, M. E. (2009). Tacit understandings of health literacy: Interview and survey research with health journalists. *Science Communication*, 31(1), 84-115.
- Hoover, A.G., & Cross, A. (2009). Health coverage in Kentucky's community newspapers: The key word is local. Institute for Rural Journalism, University of Kentucky. (Presented at Priester National Extension Health Conference, 2009.)
- Jensen, J. D. (2011). Knowledge acquisition following exposure to cancer news articles: A test of the cognitive mediation model. *Journal of Communication*, 61(3), 514-534.
doi:10.1111/j.1460-2466.2011.01549.x

- Kline, K.N. (2011). Popular media and health: Images and effects. In T.L. Thompson, R. Parrott, & J.F. Nussbaum, *The Routledge handbook of health communication*, 2nd Ed. (pp. 252-348). New York: Routledge.
- Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*. Thousand Oakes, Calif.: Sage Publications.
- Manganello, J., & Blake, N. (2010). A study of quantitative content analysis of health messages in U.S. media from 1985 to 2005. *Health Communication*, 25(5), 387-396.
doi:10.1080/10410236.2010.483333
- McCombs, M. E., & Shaw, D. L. (1972). The agenda setting function of the mass media. *Public Opinion Quarterly*, 36, 176-87.
- National Newspaper Association (2011). *Facts and figures*. Retrieved from:
<http://www.nnaweb.org/?/nnaweb/community02/87/>.
- Ndiaye, K., Krieger, J.L., Warren, J.R., & Hecht, M.L. (2011). Communication and health disparities. In T.L. Thompson, R. Parrott, & J.F. Nussbaum, *The Routledge handbook of health communication*, 2nd Ed. (pp. 469-481). New York: Routledge.
- Paek, H., Reber, B., & Lariscy, R. (2009). Roles of interpersonal and media socialization agents in adolescent health literacy: Proposing and applying a health socialization model. *Conference Papers -- International Communication Association*, 1-37.
- Stryker, J., Moriarty, C. M., & Jensen, J. D. (2008). Effects of newspaper coverage on public knowledge about modifiable cancer risks. *Health Communication*, 23(4), 380-390.
doi:10.1080/10410230802229894

- U.S. Department of Health and Human Services. (2003). Objective 11-2. Improvement of health literacy. *Healthy People 2010*. Retrieved from Office of Disease Control and Promotion Web site <http://odphp.osophs.dhhs.gov/projects/healthcomm/objective2.htm>
- U.S. Department of Health and Human Services. (2010). *National action plan to improve health literacy*. Retrieved from <http://www.health.gov/communication/hlactionplan/>
- Wallington, S., Blake, K., Taylor-Clark, K., & Viswanath, K. K. (2010). Antecedents to agenda setting and framing in health news: An examination of priority, angle, source, and resource usage from a national survey of U.S. health reporters and editors. *Journal of Health Communication*, 15(1), 76-94. doi:10.1080/10810730903460559
- Weaver, D. H. (2007). Thoughts on agenda setting, framing and priming. *Journal of Communication*, 57(1), 142-147.
- Weinstein, N.D., Sandman, P.M., Blalock, S.J. (2009). The precaution adoption process model (pp. 123- 147). In K. Glanz, B. Rimer, & K. Viswanath (Eds.), *Health behavior and health education*. NewYork: Joseey Bass/AHA Press Series.
- Zahnd, W., Scaife, S., & Francis, M. (2009). Health literacy skills in rural and urban populations. *American Journal Of Health Behavior*, 33(5), 550-557.

Appendix A**Newspapers included in the Content Analysis** (*“The” in newspaper names is omitted*)

Adair County Community Voice	Columbia	KY
Adair Progress	Columbia	KY
Advance Yeoman	Lacenter	KY
Advocate--Messenger	Danville	KY
Alexandria Recorder	Alexandria	KY
Anderson News	Lawrenceburg	KY
Appalachian News-Express	Pikeville	KY
Ballard Weekly	La Center	KY
Barbourville Mountain Advocate	Barbourville	KY
Barren County Progress	Cave City	KY
Bath County News Outlook	Owingsville	KY
Beattyville Enterprise	Beattyville	KY
Berea Citizen	Berea	KY
Big Sandy News	Louisa	KY
Boone Community Recorder	Florence	KY
Boone County Recorder	Florence	KY
Booneville Sentinel	Booneville	KY
Bourbon County Citizen	Paris	KY
Bracken County News	Brooksville	KY
Breathitt Advocate	Jackson	KY
Breckinridge Co. Herald--News	Hardinsburg	KY
Butler County Banner - Green River Republican	Morgantown	KY
Cadiz Record	Cadiz	KY
Campbell Community Recorder	Florence	KY
Campbell County Recorder	Ft. Thomas	KY
Carlisle County News	Bardwell	KY
Carlisle Weekly	Bardwell	KY
Casey County News	Liberty	KY
Central Kentucky News Journal	Campbellsville	KY
Citizen--Times	Scottsville	KY
Citizen Voice & Times	Irvine	KY
Clay City Times	Clay City	KY
Clinch Valley Times	Saint Paul	VA
Clinton County News	Albany	KY
Commonwealth Journal	Somerset	KY
Crittenden Press	Marion	KY

Cumberland County News	Burkesville	KY
Cynthiana Democrat	Cynthiana	KY
Daily Independent	Ashland	KY
Daily News	Bowling Green	KY
Dawson Springs Progress	Dawson Spring	KY
Edmonson News	Brownsville	KY
Elliott County News	Sandy Hook	KY
Erlanger Recorder	Erlanger	KY
Estill County Tribune	Irvine	KY
Falmouth Outlook	Falmouth	KY
Farmer's Pride	Columbia	KY
Fleming County News	Flemingsburg	KY
Flemingsburg Gazette	Flemingsburg	KY
Florence Recorder	Florence	KY
Floyd County Times	Prestonsburg	KY
Fort Campbell Courier	Hopkinsville	KY
Fort Thomas Recorder	Fort Thomas	KY
Franklin Favorite	Franklin	KY
Fulton Leader	Fulton	KY
Gallatin County News	Warsaw	KY
Garrard Central Record	Lancaster	KY
Georgetown News–Graphic	Georgetown	KY
Glasgow Daily Times	Glasgow	KY
Gleaner	Henderson	KY
Grant County News	Williamstown	KY
Grayson County News–Gazette Record	Leitchfield	KY
Grayson Journal– Enquirer	Leitchfield	KY
Greensburg Record– Herald	Grayson	KY
Hancock Clarion	Greensburg	KY
Hardin County Independent	Hawesville	KY
Harlan Daily Enterprise	Elizabethtown	KY
Harrodsburg Herald	Harlan	KY
Hart County News– Herald	Harrodsburg	KY
Hazard Herald	Munfordville	KY
Henry County Local	Hazard	KY
Herald–News	New Castle	KY
Herald -Ledger	Edmonton	KY
Hickman County Gazette	Eddyville	KY
Hickman Courier	Clinton	KY
Interior Journal	Hickman	KY
Jackson County Sun	Stanford	KY
	McKee	KY

Jackson-Breathitt County Times-Voice	Jackson	KY
Jessamine Journal	Nicholasville	KY
Journal-Enterprise	Providence	KY
Kenton Community Recorder	Erlanger	KY
Kentucky Monthly	Frankfort	KY
Kentucky Mountain News	Jackson	KY
Kentucky New Era	Hopkinsville	KY
Kentucky Standard	Bardstown	KY
Lake News	Calvert City	KY
LaRue County Herald News	Hodgenville	KY
Leader-News	Greenville	KY
Lebanon Enterprise	Lebanon	KY
Ledger Independent	Maysville	KY
Leitchfield Record	Leitchfield	KY
Leslie County News	Hyden	KY
Letcher County Community News-Press	Cromona	KY
Lewis County Herald	Vanceburg	KY
Licking Valley Courier	West Liberty	KY
Livingston Ledger	Smithland	KY
Manchester Enterprise	Manchester	KY
Marshall County Tribune-Courier	Benton	KY
Mayfield Messenger	Mayfield	KY
McCreary County Record	Whitley City	KY
McCreary County Voice	Whitley City	KY
McLean County News	Calhoun	KY
Meade County Messenger	Brandenburg	KY
Medical Leader	Pikeville	KY
Menifee County News	Frenchburg	KY
Messenger	Madisonville	KY
Messenger-Inquirer	Owensboro	KY
Metcalfe County Light	Edmonton	KY
Middlesboro Daily News	Middlesboro	KY
Monroe County Citizen	Tompkinsville	KY
Morehead News	Morehead	KY
Mount Vernon Signal	Mount Vernon	KY
Mountain Citizen	Inez	KY
Mountain Eagle	Whitesburg	KY
Mt. Sterling Advocate	Mt. Sterling	KY
Murray Ledger & Times	Murray	KY
News- Democrat & Leader	Russellville	KY
News-Democrat	Carrollton	KY
News Journal	Williamsburg	KY

News Standard, The	Brandenburg	KY
News-Enterprise	Elizabethtown	KY
Ohio County Times-News	Hartford	KY
Oldham Era	Lagrange	KY
Olive Hill Times	Olive Hill	KY
Owen News-Herald	Owenton	KY
Paducah Sun	Paducah	KY
Paintsville Herald	Paintsville	KY
Pineville Sun	Pineville	KY
Pioneer News	Shepherdsville	KY
Richmond Register	Richmond	KY
Robertson County News	Carlisle	KY
Russell County News-Register	Russell Springs	KY
Salyersville Independent	Salyersville	KY
Sebree Banner	Sebree	KY
Sentinel	Radcliff	KY
Sentinel-News	Shelbyville	KY
Sentinel-Echo	London	KY
South Central Business Journal	Cave City	KY
Spencer Magnet	Taylorsville	KY
Springfield Sun	Springfield	KY
State Journal	Frankfort	KY
State Journal's AdVantage	Frankfort	KY
Sturgis News	Sturgis	KY
The Carlisle Mercury	Carlisle	KY
The Community Recorder	Florence	KY
The Goods	Frankfort	KY
The Kentucky Gazette	Frankfort	KY
Thousandsticks News	Hyden	KY
Three Forks Tradition	Beattyville	KY
Times Leader	Princeton	KY
Times Tribune	Corbin	KY
Times-Argus	Central City	KY
Todd County Standard	Elkton	KY
Tompkinsville News	Tompkinsville	KY
Tri-City News	Cumberland	KY
Trimble Banner	Bedford	KY
Troublesome Creek Times	Hindman	KY
Turret	Fort Knox	KY
Union County Advocate	Morganfield	KY
Wayne County Outlook	Monticello	KY
West Kentucky News	Paducah	KY

Winchester Sun	Winchester	KY
Wolfe County News	Campton	KY
Woodford Sun	Versailles	KY

Appendix B

Coding Categories for Community Newspaper Content Analysis – June 2011

1. **Newspaper Name:** The name of the newspaper; this should be listed to the left of the clip; select the name from the pull-down menu.
2. **Primarily about health** means that the focus of the story is a health illness (e.g. cancer), a health topic (e.g. violence prevention or exercise); funding (for Medicare, Medicaid, insurance, local health departments, etc.); health policy; or other health-related issue. Coders should read no more than the first five paragraphs of the story to determine whether the story is about health.
3. The **headline** is defined as the main headline for the story; do not include subheads.
4. **Month:** Select the month in which the article was published from the pull-down menu
5. **Day:** Select the day on which the article was published from the pull-down menu.
6. **Year:** Select the year in which the article was published from the pull-down menu.
7. **Story type as presented:** There are five options for story type. A **news story** is defined as a story that is about something that happened or will happen recently; this includes press releases/advertorials that are presented as news stories. An **opinion piece** is usually placed on the opinions/comment pages, contains opinions and/or makes an argument. Legislator columns are opinion pieces as are regularly appearing local life/event columns. A **feature article** is defined as a special story or article that is often prominently displayed. A **feature article** is often not time-sensitive, although it can be, and typically has a more informal style than a news article. **Briefs** are defined as any type of article (excluding letters to the editor) that are 5 paragraphs or less. **Letters to the editor** are defined as pieces written by readers appearing in the letters to the editor section. Code as **other** any articles that do not fit into the previous categories. In the text section, explain what the article is.
8. Number of **photos:** Count the number of photos that accompany each story. Include those on the jump page. Do not include charts, cartoons, or other graphics. Columnist or writer headshots do not count as pictures.
9. Number of **graphics:** Count the number of graphics (charts, maps, lists, illustrations, etc.), including those on the jump page, appearing with the story. Do not include photographs. A standing head does not count as a graphic.

10. The **article source** is defined as the author of the story. The source is **marked** if it clearly appears at the beginning or end of the story or within the layout of the story, as it does for some columnists. The source is **unmarked** if it is not listed at the beginning or end of the story or within the layout. Note: Unsigned editorials are clearly marked, as the layout of the editorial implies that it is written by the editorial staff.
11. There are 13 article source choices for marked stories:

Staff Report/local columnist: Is an article written by a member of the newspaper staff or a regular columnist for the paper. Local is broadly defined to the area where the paper is published.

Staff and wire report: Is an article that was written by a wire service but contains original content by a staff member. Articles that contain a staff byline but acknowledge the contribution of a wire service at the end of the article should be coded as a **Staff Report/columnist**.

Community member/Reader: Is an article written by a reader, either as a letter to the editor or in another form.

Nonprofit Report/ press release: Is an article written by a nonprofit. This does not include the Institute for Rural Journalism blog (a reprint) or the Kentucky Health News Service (separate category)

Advertorial is an article that is not written by a staff member that promotes a product, service, or company.

Business Press Release is a press release from a business, commercial enterprise, or trade association (e.g., Kentucky Optometrist Association).

A **Reprint** is an article that has been reprinted from another newspaper.

Wire service is an article that is written by a wire service like AP or CHNI or an article that has been rewritten by a wire service. Articles that contain the byline/give credit to the original publication should be categorized as reprints, even if they are distributed by a wire service. Press releases distributed by the Kentucky News Content Service should be categorized as press releases.

Kentucky Health News Service is an original article or blog item from the Kentucky Health News Service.

Syndicated columns include opinion and advice columns that appear in multiple papers. Columns printed on the editorial and feature pages are often syndicated.

A government press release is a report or press release generated by a government agency.

Elected official is a current or formerly elected official who is writing the column.

Articles that do not fall into one of the above categories should be coded as **other**. Enter the source of the article into the text box.

12. Choose the type of KHNS article. An original article is written by a member of the KHNS. A blog item is a reprint from the KHNS blog.
13. There are 14 article source choices for unmarked articles. Read the article looking for clues as to whom it was written by; for example, a statement that makes clear the article is a reprint of a press release. Then choose the category that best represents the author of the article. If the source is unclear, mark unclear.

Staff Report/local columnist: Is an article written by a member of the newspaper staff or a regular columnist for the paper. Local is broadly defined to the area where the paper is published.

Staff and wire report: Is an article that was written by a wire service but contains original content by a staff members. Articles that contain a staff byline but acknowledge the contribution of a wire service at the end of the article should be coded as a **Staff Report/columnist**.

Community member/Reader: Is an article written by a reader, either as a letter to the editor or in another form.

Nonprofit Report/press release: Is an article written by a nonprofit. This does not include the Institute for Rural Journalism blog (a reprint) or the Kentucky Health News Service (separate category).

Advertorial is an article not written by a staff member that contains promotions for a product, service, or company.

Business Press Release is a press release from a business, commercial enterprise, or trade association (e.g., Kentucky Optometrist Association).

A **Reprint** is an article that has been reprinted from another newspaper.

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Kentucky Health News Service is an original article or blog item from the Kentucky Health News Service.

Syndicated columns include opinion and advice columns that appear multiple papers. Columns on the editorial and feature pages are often syndicated.

A **government press release** is a report or press release generated by a government agency.

Elected official is a current or formerly elected official who is writing the column.

Articles whose source is still unclear should be coded as **unclear**.

Articles that do not fall into one of the above categories should be coded as **other**. Enter the source of the article into the text box.

14. Choose the type of KHNS article. An original article is written by a member of the KHNS. A blog item is a reprint from the KHNS blog.
15. Choose the publication from which the article is reprinted. If the publication is not listed, choose other and write in the name of the publication.
16. Choose the publication from which the article appears to be reprinted. If the publication is not listed, choose other and write in the name of the publication.
17. Choose the wire service that distributed the article. If the wire service is not listed, choose other and write in the name of the wire service.
18. Choose the wire service that appears to have distributed the article. If the wire service is not listed, choose other and write in the name of the publication.
19. Article placement/prominence: Examine the thumbnail of the of the newspaper page from which the article is taken. **Page 1, above the fold** means that entire headline appears on top half of the first page. **Page 1, below the fold** means that the entire headline or part of the headline appears on the bottom half of the first page. **Section Front** means that the article appears on the front of a section other than the first page. The section front is not necessarily a physically separate section; it may noted by the layout. However, opinions pages are not considered section fronts unless they are on the front of a physically-separate section. **Inside** means that the article does not appear on the first page of the paper or on the first page of a section front but on one of the inside pages. Note: If the newspaper does not have a “fold” and the article appears on page 1, choose Page 1 above the fold. If the article jumps, choose the first page on which the article appears.

20. **Count** the number of different sources other than the writer in the article and choose the number that appear within the article : 0, 1, 2, 3, or 4 or more.
21. After reading the article, identify the types of **sources**. Choose as many as apply. Expert sources are sources that provide information based on their area of knowledge or practice: For example, a health department official speaking about the importance of flu shots or legislators discussing healthcare reform. **Government sources** include elected officials, government agencies, departments, and their employees. **Nonprofit sources/interest groups** include nonprofit agencies and their employees and lobbying groups, like the Kentucky Chamber of Commerce or the Family Foundation . **Physician/provider** sources include any health professionals who provides healthcare like doctors, nurses, dentists, nurse practitioners, etc. **Citizen sources** is a regular person who is familiar with the problem or has the problem themselves.
22. **Sources of information** within the article are the people or institutions cited by the author of the article as experts or providers of information. **Clearly identified** sources are sources that are identified in full, with their name, positions and agency (if any) listed or, if the source is an agency/nonprofit, the source is identified by its name, its role (if the name does not explain), and its geographic location. **Partially identified sources** are identified by their name, position or agency but not all three. **Unidentified sources** are sources that are either unstated or unacknowledged. Choose the category that best describes the sources of information within the article as a whole.
23. **Locale** is the geographic emphasis of the story takes place. There are five choices: **Local** is any event or issue that occurs within the region where the newspaper is published. For example, a column about the Medicaid donut hole, written by a staff member/columnist about their experience with the Medicaid donut hole, is a local. **Kentucky** is defined as any event or issue that occurs within Kentucky. **Neighboring State** is defined as event or issue that takes place within one of Kentucky's neighboring states (IL, IN, OH, WV, VA, TN, and MO.) **National** is defined as any issue or event that occurs outside of Kentucky or the neighboring states. **International** is defined as any issues occurring outside of the United States.

To determine the locale, first examine the **dateline**. If there is no dateline, examine the first four paragraphs/20 lines of the story and look for clues as to where the event/issue occurred. If necessary, consider the location of sources. Localized leads on a statewide issue story should be categorized as local.

24. There are 18 categories of general health topics. Read the first four paragraphs/20 lines to determine the general topic. Reading further will result in lower reliability as most stories have many subtopics. In cases where the newspaper delineates the topic (in a headline or in the layout), coders should select that topic. The general topics are defined as:

Abuse includes the physical, emotional or sexual mistreatment of children, spouses and other persons that affect one's general health.

Birth defects/prematurity – terms include spinobifida, preterm births, neonatal intensive care unit (NICU), cerebral palsy

Cancer use of the word “cancer” or related key words such as tumor, lump, malignant, carcinogen, oncology, neoplasm, or other derivatives of these words.

Diabetes can include type 1 diabetes, type 2 diabetes, gestational diabetes, and insulin.

Drug/Alcohol Use and Abuse include use of prescription and illegal mind-altering substances that cause changes in behavior and often addiction.

Exercise, Food, or Diet/Obesity include stories related to food, food consumption, exercise, and excess body weight.

Heart and Circulatory Problems: related terms include angina pectoris, arrhythmia, congestive heart failure, coronary heart disease, high blood pressure, heart attack

HIV/AIDS/other STDs related terms include immunodeficiency and subjects such as genital warts, herpes, syphilis, and gonorrhea.

Mental Health involves the study, research or philosophy surrounding mental illness and behavioral disorders as well as research on the mind, brain, and behavior. Examples include anxiety disorders, Attention Deficit Hyperactivity Disorder (ADHD, ADD); Autism and other developmental disorders; bipolar disorders (manic-depressive); borderline personality disorder, depression, eating disorders (anorexia, bulimia); obsessive-compulsive disorder, panic disorder, post-traumatic stress disorder (PTSD), schizophrenia, social anxiety disorder/social phobia; suicide.

Reproductive/Sexual Health – Includes pregnancy, birth control, and sexual health. Related terms may include Cesarean section, episiotomy, labor, condom, birth control pill, contraception, diaphragms, and spermicides.

Tobacco/Smoking – terms include smoking cessation, smoking prevention, cigarettes, cigars, nicotine, smoking bans.

Oral Health – includes any issues related to dental care including cavities, caries, gum disease, gingivitis, preventative care, relationship to overall health.

Stroke – There are four main types of stroke. Two are caused by blood clots in a blood vessel – these usually form in arteries damaged by atherosclerosis or other particles (ischemic strokes) and include Cerebral thrombosis and

cerebral embolism. Two are caused by bleeding (hemorrhagic stroke). Ruptured blood vessels cause cerebral and subarachnoid hemorrhages. Bleeding strokes have a higher fatality rate than strokes caused by clots.

Healthcare funding and policy include articles about funding of healthcare programs and organizations, budget stories, Medicare and Medicaid budget stories, health care reform, and other stories about the plans of the government and other organizations to improve/deal with health issues.

Healthcare cost- individual level includes articles about paying for the cost of healthcare from the perspective of the individual. This includes articles about the cost of Medicaid/Medicare to the individual, the cost of prescriptions drugs, the cost of insurance, co-payments, etc.

Health warnings and advisories includes articles that instruct readers about how to deal with a health problem or an incident that could become a health problem. This includes precautions a resident should take during flooding and strategies to prevent food from spoiling.

Other: Articles that do not fit into the above categories should be coded as other. Type in the subject of the story.

25. Identify the specific type of cancer discussed by the story. Read the first three paragraphs and no further to identify the specific type of cancer discussed by the story. If a specific type of cancer is listed in the headline, select that type of cancer. If the specific cancer site is not listed, select other and type the site in the box.
26. **Context** is defined as the amount of information the story provides about the causes of the problem/issue, the seriousness of the problem/issue in the region, and what is going on related to the problem locally and nationally. Essentially context helps readers understand the scope of the issue/problem the story is about. **Good context** shows the reader the larger context of the issue being discussed. The article gives sufficient information for the reader to understand the importance of the issue and make a decision as to how they should act. **Some context** may mention part of the context but not fully describe it. **Little or no context** means that the context is not addressed within the story or is mentioned in passing (approximately one sentence or less). **Not applicable** means that context does not apply to the type of article (for example, a letter to the editor or a brief).
27. **Referral:** The article contains a referral if the article directs the reader to local resources or contains a call to action. It answers the question, "What can I do?" Detailed contact information may include phone number, email, Web address, information about an event, etc. Choose all of the different types of resources directs individuals to: local, state, or nation. If there is no referral, mark no referral.

28. **Communication of health disparities:** Health disparities are differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States. Select the type of evidence used in communicating the health disparities mentioned:

Narrative – an individual’s or group’s personal experience or story is given as evidence of a health disparity.

Statistical: General – defined as health disparities discussed in general quantitative terms (e.g. Eastern Kentuckians have a higher rate of preterm birth).

Statistical: Specific – defined as health disparities discussed in specific statistical terms (e.g., Eastern Kentucky women are twice as likely as women in other parts of the country to have a preterm birth). If the article contains both specific and general, mark specific.

Combination - News stories that contain both narratives and statistical communication of health disparities.

No health disparities communicated – The article does not communicate any information about health disparities.

29. The article is related to **legislative session** if it contains a reference to the legislative session or a bill/law/budget issue being considered by Kentucky’s General Assembly. Key words include General Assembly, bill, Senate, State House of Representatives, etc.
30. The article is related to a political race if it mentions an upcoming election. Choose all that apply. Mere mention of Beshear, Obama, or other politicians does not mean the article is related to a political race. It must refer the election itself. Key words include: voting, reelection, incumbent, etc.
31. Choose the political race mentioned/referred to by the article.

Appendix C

Table 1: Newspapers publishing articles about health

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily Independent (Ashland, daily)	59	4.9	4.9	4.9
	Daily News (Bowling Green, daily)	48	4.0	4.0	8.8
	Kentucky New Era (Hopkinsville, daily)	42	3.5	3.5	12.3
	Winchester Sun (Winchester, daily)	38	3.1	3.1	15.5
	Paducah Sun (Paducah, daily)	33	2.7	2.7	18.2
	Richmond Register (Richmond, daily)	30	2.5	2.5	20.7
	Messenger Inquirer (Owensboro, daily)	29	2.4	2.4	23.1
	Advocate Messenger (Danville, daily)	28	2.3	2.3	25.4
	Floyd County Times (Prestonsburg)	26	2.1	2.1	27.5
	Messenger (Madisonville, daily)	26	2.1	2.1	29.7
	Paintsville Herald (Paintsville)	26	2.1	2.1	31.8
	Times Tribune (Corbin, daily)	26	2.1	2.1	34.0
	Murray Ledger & Times (Murray, daily)	25	2.1	2.1	36.0
	News-Enterprise (Elizabethtown, daily)	25	2.1	2.1	38.1
	Commonwealth Journal (Somerset, daily)	24	2.0	2.0	40.1
	Morehead News (Morehead)	24	2.0	2.0	42.1
	Times Leader (Princeton)	21	1.7	1.7	43.8
	Central Kentucky News Journal (Campbellsville)	20	1.7	1.7	45.5
	Sentinel Echo (London)	20	1.7	1.7	47.1
	Glasgow Daily Times (Glasgow, daily)	19	1.6	1.6	48.7
	Kentucky Standard (Bardstown)	19	1.6	1.6	50.2
	Mayfield Messenger (Mayfield, daily)	19	1.6	1.6	51.8
	Mountain Citizen (Inez)	19	1.6	1.6	53.4
	Dawson Springs Progress (Dawson Springs)	17	1.4	1.4	54.8
	Ledger Independent (Maysville, daily)	17	1.4	1.4	56.2
	Harrodsburg Herald (Harrodsburg)	16	1.3	1.3	57.5
	State Journal (Frankfort, daily)	16	1.3	1.3	58.8
	Grayson Journal – Enquirer (Grayson)	14	1.2	1.2	60.0

Sentinel – News (Shelbyville)	13	1.1	1.1	61.1
Georgetown News – Graphic (Georgetown)	12	1.0	1.0	62.1
Greensburg Record – Herald (Greensburg)	11	.9	.9	63.0
Lewis County Herald (Vanceburg)	11	.9	.9	63.9
Campbell County Recorder (Ft. Thomas)	10	.8	.8	64.7
Harlan Daily Enterprise (Harlan, daily)	10	.8	.8	65.5
McCreary County Record (Whitley City)	10	.8	.8	66.4
Pioneer News (Shepherdsville)	10	.8	.8	67.2
Todd County Standard (Elkton)	10	.8	.8	68.0
Union County Advocate (Morganfield)	10	.8	.8	68.8
Wayne County Outlook (Monticello)	10	.8	.8	69.7
Spencer Magnet (Taylorsville)	9	.7	.7	70.4
Times-Argus (Central City)	9	.7	.7	71.2
Trimble Banner (Bedford)	9	.7	.7	71.9
Barbourville Mountain Advocate (Barbourville)	8	.7	.7	72.6
Beattyville Enterprise (Beattyville)	8	.7	.7	73.2
Florence Recorder (Florence)	8	.7	.7	73.9
Fort Thomas Recorder (Fort Thomas)	8	.7	.7	74.5
Gallatin County News (Warsaw)	8	.7	.7	75.2
Bourbon County Citizen (Paris)	7	.6	.6	75.8
Campbell Community Recorder (Florence)	7	.6	.6	76.4
Cumberland County News (Burkesville)	7	.6	.6	76.9
Herald –News (Edmonton)	7	.6	.6	77.5
Jackson County Sun (McKee)	7	.6	.6	78.1
Kenton Community Recorder (Erlanger)	7	.6	.6	78.7
Lake News (Calvert City)	7	.6	.6	79.3
Middlesboro Daily News (Middlesboro, daily)	7	.6	.6	79.8
Springfield Sun (Springfield)	7	.6	.6	80.4
Three Forks Tradition (Beattyville)	7	.6	.6	81.0
Butler County Banner - Green River Republican	6	.5	.5	81.5
Carlisle County News (Bardwell)	6	.5	.5	82.0
Jessamine Journal (Nicholasville)	6	.5	.5	82.5
Licking Valley Courier (West Liberty)	6	.5	.5	83.0
News Journal (Williamsburg)	6	.5	.5	83.5
Sturgis News (Sturgis)	6	.5	.5	84.0

Adair Progress (Columbia)	5	.4	.4	84.4
Clay City Times (Clay City)	5	.4	.4	84.8
Flemingsburg Gazette (Flemingsburg)	5	.4	.4	85.2
Leader - News (Greenville)	5	.4	.4	85.6

Mountain Eagle (Whitesburg)	5	.4	.4	86.4
Mt. Sterling Advocate (Mt. Sterling)	5	.4	.4	86.9
News Democrat (Carrollton)	5	.4	.4	87.3
Sebree Banner (Sebree)	5	.4	.4	87.7
The Carlisle Mercury (Carlisle)	5	.4	.4	88.1
Berea Citizen (Berea)	4	.3	.3	88.4
Bracken County News (Brooksville)	4	.3	.3	88.8
Cadiz Record (Cadiz)	4	.3	.3	89.1
Casey County News (Liberty)	4	.3	.3	89.4
Citizen Voice & Times (Irvine)	4	.3	.3	89.8
Clinton County News (Albany)	4	.3	.3	90.1
Grant County News (Williamstown)	4	.3	.3	90.4
Hancock Clarion (Hawesville)	4	.3	.3	90.7
Herald Ledger (Eddyville)	4	.3	.3	91.1
Jackson-Breathitt County Times-Voice (Jackson)	4	.3	.3	91.4
Lebanon Enterprise (Lebanon)	4	.3	.3	91.7
Meade County Messenger (Brandenburg)	4	.3	.3	92.1
Sentinel (Radcliff)	4	.3	.3	92.4
Advance Yeoman (LaCenter)	3	.2	.2	92.6
Anderson News (Lawrenceburg)	3	.2	.2	92.9
Barren County Progress (Cave City)	3	.2	.2	93.1
Big Sandy News (Louisa)	3	.2	.2	93.4
Citizen – Times (Scottsville)	3	.2	.2	93.6
Edmonson News (Brownsville)	3	.2	.2	93.9
Henry County Local (New Castle)	3	.2	.2	94.1
Journal – Enterprise (Providence)	3	.2	.2	94.4
LaRue County Herald News (Hodgenville)	3	.2	.2	94.6
Leslie County News (Hyden)	3	.2	.2	94.9
Manchester Enterprise (Manchester)	3	.2	.2	95.1
McCreary County Voice (Whitley City)	3	.2	.2	95.4
Russell County News Register (Russell Springs)	3	.2	.2	95.6
Troublesome Creek Times (Hindman)	3	.2	.2	95.9
Wolfe County News (Campton)	3	.2	.2	96.1
Bath County News Outlook (Owingsville)	2	.2	.2	96.3
Crittenden Press (Marion)	2	.2	.2	96.4

Elliott County News (Sandy Hook)	2	.2	.2	96.6
Estill County Tribune (Irvine)	2	.2	.2	96.8
Hardin County Independent (Elizabethtown)	2	.2	.2	96.9
Hart County News-Herald (Munfordville)	2	.2	.2	97.1
Hickman County Gazette (Clinton)	2	.2	.2	97.3
Hickman Courier (Hickman)	2	.2	.2	97.4
Livingston Ledger (Smithland)	2	.2	.2	97.6
Marshall County Tribune--Courier (Benton)	2	.2	.2	97.8
Monroe County Citizen (Tompkinsville)	2	.2	.2	97.9
Ohio County Times-News (Hartford)	2	.2	.2	98.1
Olive Hill Times (Olive Hill)	2	.2	.2	98.3
The Kentucky Gazette (Frankfort)	2	.2	.2	98.4
Tompkinsville News (Tompkinsville)	2	.2	.2	98.6
Turret (Fort Knox)	2	.2	.2	98.8
Ballard Weekly (La Center)	1	.1	.1	98.8
Breckinridge Co. Herald--News (Hardinsburg)	1	.1	.1	98.9
Cynthiana Democrat (Cynthiana)	1	.1	.1	99.0
Falmouth Outlook (Falmouth)	1	.1	.1	99.1
Fort Campbell Courier (Hopkinsville)	1	.1	.1	99.2
Gleaner (Henderson, daily)	1	.1	.1	99.3
Grayson County News-Gazette (Leitchfield)	1	.1	.1	99.3

Kentucky Monthly (Frankfort, magazine)	1	.1	.1	99.5
Letcher County Community News-Press (Cromona)	1	.1	.1	99.6
Mount Vernon Signal (Mount Vernon)	1	.1	.1	99.7
Salyersville Independent (Salyersville)	1	.1	.1	99.8
The Community Recorder (Florence)	1	.1	.1	99.8
Tri-City News (Cumberland)	1	.1	.1	99.9
Woodford Sun (Versailles)	1	.1	.1	100.0
Total	1210	100.0	100.0	

Table 2: Article type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	News story	736	60.8	60.9	60.9
	Opinion piece	306	25.3	25.3	86.3
	Brief	93	7.7	7.7	94.0
	Letter to the Editor	49	4.0	4.1	98.0
	Feature article (does not include news features)	17	1.4	1.4	99.4
	Other	7	.6	.6	100.0
	Total	1208	99.8	100.0	
Missing	System	2	.2		
Total		1210	100.0		

Table 3: Locale

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Kentucky	617	51.0	51.1	51.1
	local	496	41.0	41.1	92.1
	national	94	7.8	7.8	99.9
	international	1	.1	.1	100.0
	Total	1208	99.8	100.0	
Missing	System	2	.2		
Total		1210	100.0		

Table 4: Marked and Unmarked Sources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Marked	935	77.3	77.4	77.4
	Unmarked/unclear	273	22.6	22.6	100.0
	Total	1208	99.8	100.0	
Missing	System	2	.2		
Total		1210	100.0		

Table 5: Article Sources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Staff Report/local columnist	413	34.1	44.2	44.2
	Wire Service	154	12.7	16.5	60.6
	Elected Official	99	8.2	10.6	71.2
	Reprint	78	6.4	8.3	79.6
	Community member/reader	60	5.0	6.4	86.0
	Kentucky Health News Service	52	4.3	5.6	91.6
	Government Press Release	30	2.5	3.2	94.8
	Syndicated column	17	1.4	1.8	96.6
	Nonprofit Report/ Press Release	16	1.3	1.7	98.3
	Other	11	.9	1.2	99.5
	Staff and wire report	4	.3	.4	99.9
	Business Press Release	1	.1	.1	100.0
	Total	935	77.3	100.0	
	Missing	System	275	22.7	
Total		1210	100.0		

Table 6: Articles by the Kentucky Health News Service

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	an original article	47	3.9	90.4	90.4
	a blog item	5	.4	9.6	100.0
	Total	52	4.3	100.0	
Missing	System	1158	95.7		
Total		1210	100.0		

Table 7: Wire Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Associated Press	92	7.6	59.7	59.7
	CNHI	59	4.9	38.3	98.1
	Other	3	.2	1.9	100.0
	Total	154	12.7	100.0	
Missing	System	1056	87.3		
Total		1210	100.0		

Table 8: Reprints

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other	38	3.1	48.7	48.7
	The Lexington Herald-Leader	26	2.1	33.3	82.1
	The Courier-Journal	13	1.1	16.7	98.7
	Institute for Rural Journalism Blog	1	.1	1.3	100.0
	Total	78	6.4	100.0	
Missing	System	1132	93.6		
Total		1210	100.0		

Table 9: Photographs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Zero	999	82.6	82.7	82.7
	One	162	13.4	13.4	96.1
	Two	27	2.2	2.2	98.3
	Three or more	20	1.7	1.7	100.0
	Total	1208	99.8	100.0	
Missing	System	2	.2		
Total		1210	100.0		

Table 10: Graphics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Zero	1137	94.0	94.1	94.1
	One	63	5.2	5.2	99.3
	Two	5	.4	.4	99.8
	Three or more	3	.2	.2	100.0
	Total	1208	99.8	100.0	
Missing	System	2	.2		
Total		1210	100.0		

Table 11: Article Placement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Inside	862	71.2	71.4	71.4
	Page 1, above the fold	176	14.5	14.6	85.9
	Page 1, below the fold	133	11.0	11.0	96.9
	Section front	37	3.1	3.1	100.0
	Total	1208	99.8	100.0	
Missing	System	2	.2		
Total		1210	100.0		

Table 12: Sources of Information (Redcoded)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 or less	275	23.1	23.2	23.2
	2 to 3	511	43.0	43.2	66.4
	4 or more	398	33.5	33.6	100.0
	Total	1184	99.7	100.0	
Missing	System	4	.3		
Total		1188	100.0		

Table 13: Health topic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Healthcare funding and policy	430	35.5	35.6	35.6
	Other	264	21.8	21.9	57.5
	Drug/Alcohol Use and Abuse	146	12.1	12.1	69.5
	Tobacco/smoking	115	9.5	9.5	79.1
	Exercise, Food or Diet/Obesity	104	8.6	8.6	87.7
	Health warnings and advisories	50	4.1	4.1	91.8
	Abuse	27	2.2	2.2	94.0
	Healthcare cost - individual level	22	1.8	1.8	95.9
	Cancer	19	1.6	1.6	97.4
	Mental Health	13	1.1	1.1	98.5
	Oral Health	7	.6	.6	99.1
	HIV/AIDS/other STDs	3	.2	.2	99.3
	Diabetes	2	.2	.2	99.5
	Heart and Circulatory Problems	2	.2	.2	99.7
	Reproductive/Sexual Health	2	.2	.2	99.8
	Birth defects/prematurity	1	.1	.1	99.9
	Stroke	1	.1	.1	100.0
Total	1208	99.8	100.0		
Missing	System	2	.2		
Total		1210	100.0		

Table 14: Health topic (secondary analysis)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Healthcare funding and policy	457	37.8	37.8	37.8
	Drug/alcohol use and abuse	147	12.1	12.2	50.0
	Tobacco/smoking	115	9.5	9.5	59.5
	Exercise, food or diet/obesity	104	8.6	8.6	68.1
	Public health issues	89	7.4	7.4	75.5
	General health	83	6.9	6.9	82.4
	Business of healthcare	45	3.7	3.7	86.1
	Healthcare cost - individual	29	2.4	2.4	88.5
	Abuse	27	2.2	2.2	90.7
	Children's health issues	26	2.1	2.2	92.9
	Cancer	20	1.7	1.7	94.5
	Other	17	1.4	1.4	95.9
	Mental health	15	1.2	1.2	97.2
	Oral health	7	.6	.6	97.8
	Electronic health records	7	.6	.6	98.3
	Health literacy	6	.5	.5	98.8
	Diabetes	4	.3	.3	99.2
	Reproductive/sexual health	4	.3	.3	99.5
	HIV/AIDS/other STDs	3	.2	.2	99.8
	Heart and circulatory problems	2	.2	.2	99.9
Stroke	1	.1	.1	100.0	
	Total	1208	99.8	100.0	
Missing	System	2	.2		
Total		1210	100.0		

Table 15: Legislative Session

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	861	71.2	71.3	71.3
	Yes	347	28.7	28.7	100.0
	Total	1208	99.8	100.0	
Missing	System	2	.2		
Total		1210	100.0		

Table 16: Context (recoded)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Context	705	59.3	59.5	59.5
	No Context	479	40.3	40.5	100.0
	Total	1184	99.7	100.0	
Missing	System	4	.3		
Total		1188	100.0		

Table 17: Health Disparities (recoded)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Narrative	1	.1	.1	.1
	Statistical	225	18.9	19.0	19.1
	Combination	7	.6	.6	19.7
	None	951	80.1	80.3	100.0
	Total	1184	99.7	100.0	
Missing	System	4	.3		
Total		1188	100.0		