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Sources and Coverage of Medical News on Front Pages of US Newspapers

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Abstract

Background: Medical news that appears on newspaper front pages is intended to reach a wide audience, but how this type of medical news is prepared and distributed has not been systematically researched. We thus quantified the level of visibility achieved by front-page medical stories in the United States and analyzed their news sources.

Methodology: Using the online resource Newseum, we investigated front-page newspaper coverage of four prominent medical stories, and a high-profile non-medical news story as a control, reported in the US in 2007. Two characteristics were quantified by two raters: which newspaper titles carried each target front-page story (intrarater agreement, >96%; kappa, >0.92) and the news sources of each target story (intrarater agreement, >94%; kappa, >0.91). National rankings of the top 200 US newspapers by audited circulation were used to quantify the extent of coverage as the proportion of the total circulation of ranked newspapers in Newseum.

Findings: In total, 1630 front pages were searched. Each medical story appeared on the front pages of 85 to 117 (67.5%–78.7%) ranked newspaper titles that had a cumulative daily circulation of 23.1 to 33.4 million, or 61.8% to 88.4% of all newspapers. In contrast, the non-medical story achieved front-page coverage in 152 (99.3%) newspaper titles with a total circulation of 41.0 million, or 99.8% of all newspapers. Front-page medical stories varied in their sources, but the Washington Post, Los Angeles Times, New York Times and the Associated Press together supplied 61.7% of the total coverage of target front-page medical stories.

Conclusion: Front-page coverage of medical news from different sources is more accurately revealed by analysis of circulation counts rather than of newspaper titles. Journals wishing to widen knowledge of research news and organizations with important health announcements should target at least the four dominant media organizations identified in this study.

Introduction

Medical news coverage in newspapers plays an important role for both the public and medical professionals [1–9]. It is likely that the prominence editors give to different news stories is influenced by "newsworthiness" and news source, and is reflected by page allocation, which in turn affects readers' perceptions. For example, medical news that appears on newspapers' front pages is intended to reach a wide audience and gain maximum or immediate attention. Researchers have acknowledged the importance of front-page positioning of medical news [6,9–12], and the Project for Excellence in Journalism has also explained the value of researching front-page stories over inside-page stories [13].

The characteristics of front-page medical news have not yet been systematically researched, probably because of the large workload involved in exhaustively searching all newspaper front pages. A practical approach would be to limit the analysis to particular medical topics or stories during a selected period in one country. But even previous studies evaluating newspaper coverage of certain medical topics in the US used limited and variable samples of newspapers ranging from the five highest-circulation newspapers to 36 high-circulation national and regional US newspapers [14–18]. An objective sampling method does not seem to exist yet for newspaper analyses. In addition, analysis of newspaper titles alone does not reflect audience reach.

This study thus used an online US newspaper resource and a national newspaper audit to quantify the extent of coverage, in terms of newspaper titles and total newspaper circulation, of selected front-page medical stories and to assess if a story's visibility is associated with its news source. We also investigated whether findings differed between high-profile medical and non-medical stories, and between high- and low-profile medical stories.

Methods

Data Collection

The data source was the Newseum (www.newseum.org), an online daily repository containing electronic front pages of more
than 300 US newspapers. For 6 weeks in 2007 (October 12 to November 22), we collected front-page newspaper coverage of high-profile medical stories in the US. We first relied on *Newseum* editors’ daily analyses to identify each day’s 10 most interesting front pages and then confirmed that any medical stories had national or international relevance, and immediate or potential public health implications. The full selection of front pages is available daily at 08:30 hours (US Standard Eastern Time) and *Newseum* editors’ analysis appears soon after. Because *Newseum* displays newspaper front pages for only 24 hours and archives only front pages of historical significance, we checked the site daily at 23:00 hours Hong Kong time (11:00 hours US Standard Eastern Time) and collected data during the specific days of interest.

Four different high-profile medical stories were reported during our search period. Story 1 appeared on Friday, October 12, 2007, and originated from a public health announcement made by a trade organization representing manufacturers of over-the-counter drugs that recommended the voluntary withdrawal of over-the-counter infant cold and cough medications [19]. Story 2, reported on Monday, October 15, 2007, originated from an annual national report on cancer in the US published in the journal *Cancer* [20]. Story 3, dated Wednesday, October 17, 2007, reported research findings showing an increase in the number of methicillin-resistant *Staphylococcus aureus* (MRSA) cases in the US and was based on an article published in the *Journal of the American Medical Association* [21]. Story 4, dated Wednesday, November 21, 2007, covered research reported in *Cell* [22] and *Science* [23] that described the generation of stem cells from skin cells.

A high-profile non-medical story was used as a positive control to determine the “maximum” level of front-page coverage. We chose the news story (Story 5) about gun shootings at the Virginia Polytechnic Institute and State University (Virginia Tech) in Blacksburg, Virginia, which was reported nationwide on Tuesday, April 17, 2007, because it was the highest-ranking solitary news event of 2007 according to *Time Magazine* [24] and newspaper front pages on that date had been archived by the *Newseum*. In that incident, a student killed 32 students and staff, and then himself, on the morning of April 16, 2007.

Newspaper titles on the chosen days were categorized by whether they covered the target medical or non-medical story on their front pages and by the source of the report. We first counted any mentions of the story topics, including banner headings and boxed or unboxed summaries, to measure total front-page coverage given by all newspaper titles. Next, author bylines were used to categorize the news sources as newspaper staff writers, news syndicates, or wire service. A news syndicate was defined as organizations that do not print or publish news but ensure comparable cell sizes.

Results

Media Characteristics Based on Newspaper Titles

In total, 1,630 US newspaper front pages from *Newseum* were searched: 326, 328, 340, and 330 for medical stories of October 12, 15, 17, and November 21, 2007, respectively, and 306 for the control story of April 17, 2007. The proportions of newspaper titles carrying any front-page mention (total front-page coverage by title) were 63.5%, 44.5%, 56.2%, 61.8%, and 99.0% for Stories 1 to 5, respectively (Table 1). Wire services were the most frequently used news source for all target front-page stories.

Among the 126 to 156 Top 200 newspapers that appeared in *Newseum* (capture rate, 61.1%–75.7%; n = 290), the front pages of 85 to 117 titles carried any mention of the target medical stories, corresponding to a total front-page coverage ranging from 67.5% to 78.7% of ranked newspaper titles. In contrast, 152, or 99.3%, of ranked newspaper titles in *Newseum* carried any mention of the control story (Table 2). Of the unauthorized briefs mentioning the four medical news topics, 81.9% (163/199) were boxed announcements or banner heads and the remainder were anonymous short summaries. Nearly all (98%; 195/199) unauthorized briefs referred the reader to a full story on an inside page.
Table 1. Coverage and Sources of Selected High-profile Front-page Stories in US Newspapers in Newseum, by Newspaper Title.

<table>
<thead>
<tr>
<th>Date</th>
<th>Story 1&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Story 2&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Story 3&lt;sup&gt;*&lt;/sup&gt;</th>
<th>Story 4&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Story 5 (Control)&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. (%)*</td>
<td>Odds ratio (95% CI)</td>
<td>No. (%)*</td>
<td>Odds ratio (95% CI)</td>
<td>No. (%)*</td>
</tr>
<tr>
<td>All newspaper titles</td>
<td>326 (100)</td>
<td>-</td>
<td>328 (100)</td>
<td>-</td>
<td>340 (100)</td>
</tr>
<tr>
<td>Total coverage</td>
<td>207 (63.5)</td>
<td>-</td>
<td>146 (44.5)</td>
<td>-</td>
<td>191 (56.2)</td>
</tr>
<tr>
<td>News source (% of coverage):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff writers</td>
<td>29 (14.0)</td>
<td>-</td>
<td>4 (2.7)</td>
<td>-</td>
<td>17 (8.9)</td>
</tr>
<tr>
<td>News syndicates</td>
<td>30 (14.5)</td>
<td>-</td>
<td>22 (15.1)</td>
<td>-</td>
<td>56 (29.3)</td>
</tr>
<tr>
<td>Wire services</td>
<td>76 (36.7)</td>
<td>-</td>
<td>90 (61.6)</td>
<td>-</td>
<td>64 (33.5)</td>
</tr>
<tr>
<td>Unauthored briefs&lt;sup&gt;5&lt;/sup&gt;</td>
<td>72 (34.8)</td>
<td>-</td>
<td>30 (20.5)</td>
<td>-</td>
<td>54 (28.3)</td>
</tr>
<tr>
<td>Coverage, excluding unauthored briefs</td>
<td>135 (41.4)</td>
<td>0.466 (0.357 to 0.608)</td>
<td>116 (35.4)</td>
<td>0.398 (0.305 to 0.520)</td>
<td>137 (40.3)</td>
</tr>
<tr>
<td>News source (% of coverage):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff writers</td>
<td>29 (21.5)</td>
<td>1.579 (0.931 to 2.678)</td>
<td>4 (3.4)</td>
<td>0.253 (0.075 to 0.766)</td>
<td>17 (12.4)</td>
</tr>
<tr>
<td>News syndicates</td>
<td>30 (22.2)</td>
<td>0.851 (0.530 to 1.368)</td>
<td>22 (19.0)</td>
<td>0.727 (0.430 to 1.229)</td>
<td>56 (40.9)</td>
</tr>
<tr>
<td>Wire services</td>
<td>76 (56.3)</td>
<td>0.934 (0.664 to 1.314)</td>
<td>90 (77.6)</td>
<td>1.287 (0.919 to 1.802)</td>
<td>64 (46.7)</td>
</tr>
</tbody>
</table>

<sup>2</sup>Cough and cold medicines withdrawn from retail outlets.
<sup>1</sup>US cancer death rates drop.
<sup>3</sup>Increase in methicillin-resistant Staphylococcus aureus cases.
<sup>4</sup>Skins cells transformed into stem cells.
<sup>5</sup>Virginia Polytechnic Institute and State University (Virginia Tech) shootings.
<sup>6</sup>Because of rounding, not all percentages total 100.
<sup>7</sup>Small box briefs, banner headings and anonymous short summaries.

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### Table 2. Coverage and Sources of Selected High-profile Front-page Stories in US Newspapers in Newseum, by Ranked and Unranked Newspaper Title.

<table>
<thead>
<tr>
<th>Story 1&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Story 2&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Story 3&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Story 4&lt;sup&gt;d&lt;/sup&gt;</th>
<th>Story 5&lt;sup&gt;e&lt;/sup&gt; (control)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No. (%)</strong>&lt;sup&gt;f&lt;/sup&gt;</td>
<td>Odds ratio (95% CI)</td>
<td><strong>No. (%)</strong>&lt;sup&gt;f&lt;/sup&gt;</td>
<td>Odds ratio (95% CI)</td>
<td><strong>No. (%)</strong>&lt;sup&gt;f&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Number of Top 200 titles in Newseum</strong></td>
<td>138 (100)</td>
<td>-</td>
<td>126 (100)</td>
<td>-</td>
</tr>
<tr>
<td>Total coverage in ranked titles</td>
<td>108 (78.3)</td>
<td>0.774 (0.538 to 1.113)</td>
<td>85 (67.5)</td>
<td>0.679 (0.476 to 0.968)</td>
</tr>
<tr>
<td>Coverage, excluding unauthored briefs, in ranked titles</td>
<td>83 (60.1)</td>
<td><strong>0.644 (0.451 to 0.918)</strong></td>
<td>66 (52.4)</td>
<td><strong>0.560 (0.385 to 0.815)</strong></td>
</tr>
</tbody>
</table>

**News source (% of coverage):**

- **Staff writers**
  - Story 1: 25 (30.1) 1.723 (0.930 to 3.193)
  - Story 2: 4 (6.1) 0.347 (0.116 to 1.036)
  - Story 3: 14 (15.7) 0.900 (0.444 to 1.822)
  - Story 4: 19 (19.6) 1.120 (0.585 to 2.146)
  - Story 5: 25 (17.5)

- **News syndicates**
  - Story 1: 23 (27.7) 0.777 (0.443 to 1.363)
  - Story 2: 17 (25.8) 0.722 (0.388 to 1.345)
  - Story 3: 42 (47.2) 1.323 (0.813 to 2.153)
  - Story 4: 41 (42.3) 1.185 (0.730 to 1.926)
  - Story 5: 51 (35.7)

- **Wire services**
  - Story 1: 35 (42.2) 0.900 (0.551 to 1.469)
  - Story 2: 45 (68.2) 1.455 (0.903 to 2.345)
  - Story 3: 33 (37.1) 0.791 (0.483 to 1.297)
  - Story 4: 37 (38.1) 0.814 (0.505 to 1.312)
  - Story 5: 67 (46.9)

| **Number of unranked titles in Newseum** | 188 (100) | 202 (100) | 184 (100) | 194 (100) | 153 (100) |
| Coverage, excluding unauthored briefs, in unranked titles | 52 (27.7) | **0.328 (0.223 to 0.483)** | 50 (24.8) | **0.294 (0.199 to 0.433)** | 48 (26.1) | **0.309 (0.209 to 0.459)** | 65 (33.5) | **0.397 (0.276 to 0.573)** | 129 (84.3) | - |

**News source (% of coverage):**

- **Staff writers**
  - Story 1: 4 (7.7) 0.827 (0.255 to 2.682)
  - Story 2: 0 (0) 0
  - Story 3: 3 (6.3) 0.672 (0.182 to 2.485)
  - Story 4: 3 (4.6) 0.496 (0.135 to 1.820)
  - Story 5: 12 (9.3)

- **News syndicates**
  - Story 1: 7 (13.5) 0.868 (0.346 to 2.177)
  - Story 2: 5 (10.0) 0.645 (0.030 to 1.912)
  - Story 3: 14 (29.2) 1.881 (0.881 to 4.019)
  - Story 4: 23 (35.4) **2.282 (1.169 to 4.467)**
  - Story 5: 20 (15.5)

- **Wire services**
  - Story 1: 41 (78.8) 1.049 (0.645 to 1.706)
  - Story 2: 45 (90.0) 1.197 (0.740 to 1.937)
  - Story 3: 31 (64.6) 0.859 (0.509 to 1.449)
  - Story 4: 39 (60.0) 0.798 (0.496 to 1.285)
  - Story 5: 97 (75.2)

<sup>a</sup>Cough and cold medicines withdrawn from retail outlets.

<sup>b</sup>US cancer death rates drop.

<sup>c</sup>Increase in methicillin-resistant Staphylococcus aureus cases.

<sup>d</sup>Skins cells transformed into stem cells.

<sup>e</sup>Virginia Polytechnic Institute and State University (Virginia Tech) shootings.

<sup>f</sup>Because of rounding, not all percentages total 100.

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Chi-square analyses confirmed that Stories 1, 2, 3, and 4 were not significantly different from Story 5 in profiles of news sources (P = 0.0841, P = 0.0067, P = 0.2095, and P = 0.4032, respectively). Story 2 was significantly different from Story 1 (P = 0.0002) but Stories 3 and 4 were not (P = 0.0134 and P = 0.0855, respectively). Furthermore, Stories 3 and 4 were not significantly different from one another (P = 0.720) but were each significantly different from Story 2 (P = 0.0005 and P = 0.0004, respectively).

Among *Newseum* newspapers not appearing in the Top 200 rankings, the four medical stories were again significantly less likely than the non-medical one to appear on front pages (odds ratios, 0.294 to 0.397; Table 2). All five stories most commonly came from small box briefs, banner headings and anonymous short summaries. Chi-square analyses confirmed that Stories 1, 2, 3, and 4 were not significantly different from Story 5 in profiles of news sources (P = 0.0841, P = 0.0067, P = 0.2095, and P = 0.4032, respectively). Story 2 was significantly different from Story 1 (P = 0.0002) but Stories 3 and 4 were not (P = 0.0134 and P = 0.0855, respectively). Furthermore, Stories 3 and 4 were not significantly different from one another (P = 0.720) but were each significantly different from Story 2 (P = 0.0005 and P = 0.0004, respectively).

**Characteristics Among All Newspaper Titles.** After unauthored briefs had been excluded, front-page coverage was significantly less likely for the medical stories than the non-medical one (odds ratios, 0.398 to 0.549; Table 1). Wire services remained the most common source for all stories. Story 1’s profile of news sources was similar to that of Story 5. Story 2 was significantly less likely than Story 5 to be written by staff writers, and both Stories 3 and 4 were significantly more likely to be supplied by news syndicates.

Chi-square analyses showed that Stories 1, 3, and 4 were not significantly different from Story 5 in profiles of news sources (P = 0.1282, P = 0.0094, and P = 0.0136, respectively), whereas Story 2 was (P = 0.0005). Stories 2, 3, and 4 were significantly different from Story 1 (P < 0.0001, P = 0.0023, and P = 0.0049, respectively). Furthermore, Stories 3 and 4 were not significantly different from one another (P = 0.9279) but were each significantly different from Story 2 (P < 0.0001 for both).

**Characteristics Among Ranked Newspaper Titles.** Among *Newseum* newspapers included in the Top 200 rankings, Stories 1, 2, and 3 were significantly less likely than Story 5 to appear on front pages (odds ratios, 0.560 to 0.644; Table 2); after unauthored briefs had been excluded. Stories 1, 2, and 3 most frequently used wire services as news sources, whereas Stories 3 and 4 most frequently used news syndicates; however, no significant differences in sources between the medical and non-medical stories were detected.
respectively), but least common for Stories 4 and 5 (7.2% and 8.0%, respectively); staff written reports were the most common source for Stories 4 and 5.

After unauthored briefs had been excluded, Stories 1, 2, and 3 were significantly less likely than Story 5 to receive front-page coverage (odds ratios, 0.426 to 0.586; Table 3). The most common medical news source differed by story. Stories 1, 4, and 5 most frequently originated from staff writers, Story 2 from wire services, and Story 3 from news syndicates. Odds ratios revealed that Story 1 had a similar news source profile to that of Story 5, whereas Stories 2 and 3 were significantly less likely than Story 5 to be prepared by staff writers. Story 2 was also more likely to be provided by wire services, and Story 3 was more likely to be provided by news syndicates. Story 4 was significantly less likely than Story 5 to come from wire services.

Chi-square analyses confirmed that Story 1 was not significantly different from Story 5 in profiles of news sources (P = 0.0315) but Stories 2, 3, and 4 were (P = 0.0003, P < 0.0001, and P = 0.0009, respectively). Stories 2 and 3 were significantly different from Story 1 (P < 0.0001 for both) but Story 4 was not (P = 0.0301). Furthermore, Stories 3 and 4 were significantly different from one another (P < 0.0001), and from Story 2 (P = 0.0002 and P < 0.0001, respectively).

### Comparison of Newspaper Titles and Weighted Circulation for Ranked Newspapers

For *Newseum* newspapers included in the Top 200 rankings, the chi-square test showed that the profile of known news sources as proportions of newspaper titles (60.1%, 52.4%, 57.1%, 71.3%, 93.5% for stories 1 to 5; Table 2) was significantly different from the profile as proportions of circulation counts (53.8%, 39.0%, 48.5%, 82.0%, 91.7%; Table 3) for Stories 1, 2, 4, and 5 (P = 0.0037, P = 0.0029, P < 0.0001, and P < 0.0001, respectively). Only Story 3 showed no significant difference (P = 0.0942).

### Main News Source Providers

The data based on newspaper titles (Table 1) showed that, after exclusion of unauthored briefs, news syndicates and wire services were together the main sources of the target front-page stories: 78.5%, 96.6%, 87.6%, 86.3%, and 86.4% for Stories 1 to 5. A similar trend (P = 0.8390) was observed when the sample was limited to ranked newspapers in *Newseum* (69.9%, 94.0%, 84.3%, 80.4%, and 82.6%; Table 2). In contrast, on the basis of newspaper circulation counts (Table 3), the major sources of news coverage varied by story and were less clear-cut.

The majority of target front-page medical stories in ranked newspapers that were reported by news syndicates came from three newspapers: the *Washington Post*, *Los Angeles Times*, and *New York Times* (Table 4). These three syndicates together supplied 79.6% (23,448,389/29,473,055) of all circulated newspapers displaying syndicated medical news stories in our sample, compared with 58.2% (6,300,357/10,825,900) for Story 5. These three newspapers actually use staff writers and usually publish syndicated stories on their own front pages; hence, they also accounted for 24.7% (7,936,113/32,187,394) of the target medical stories written by staff writers and 25.4% (3,730,079/14,664,290) of staff-written reports covering Story 5. The *Associated Press* contributed 90.0% (21,283,196/23,658,409) of all wire reports of the target front-page medical news stories, and 87.2% (10,680,996/12,255,742) for Story 5. Thus, three major newspapers and the *Associated Press* supplied 61.7% (52,669,898/83,318,858) of the total coverage of target medical stories with known news sources.

### Other Medical News Reported on Front Pages

On the same day as each of the target medical stories, 4.6% to 11.0% of newspapers carried a total of 5 to 17 additional or alternative front-page medical stories (Table 5). These lower-profile medical stories were mostly written by staff writers (50.0%–60.0%). On the basis of Top 200 newspaper circulation counts, the mean circulation of the stories appearing on the same day as Stories 1, 2, 3, and 4 was 150,000, 390,000, 230,000, and 300,000, respectively. The highest visibility achieved by a single low-profile medical story was coverage in 7 newspaper titles with a cumulative circulation of 0.9 million. This story, reported on the same day as Story 2, was based on a predictive test for Alzheimer disease that had been published in *Nature Medicine* [26]. Statistical comparisons between Stories 1 to 4 and these lower-profile medical stories were not performed because of small cell sizes.

### Discussion

In this study, we identified four high-profile front-page medical stories in US newspapers and quantified their media characteristics in terms of news source and coverage by title and total circulation. Each high-profile medical story received some front-page coverage in 78.7% to 87.2% of ranked newspaper titles in the *Newseum* repository and had a cumulative circulation ranging from 61.8% to 83.4% of ranked newspapers. In comparison, the “maximum” total front-page exposure, as measured using the high-profile Virginia Tech story, was 99.5% of ranked newspaper titles, with a cumulative print circulation of 99.8% of ranked newspapers. The latter figures indicate that the denominators of titles and counts of all ranked newspapers approximate to maximum coverage, and that US newspaper editors share common values when planning general high-profile front-page news.

This study also presents a new resource for quantifying coverage and identifying important media characteristics of front-page news—namely, *Newseum* in combination with the Top 200 rankings. Furthermore, using Top 200 rankings together with weighted circulation figures is more accurate for calculating news visibility than simply analyzing all newspaper titles, for two reasons. Firstly, unranked newspapers introduced bias—for example, unranked newspapers did not use staff writers in Story 2 and used news syndicates more commonly in Story 4 than in the control story (Table 2); inclusion of these titles thus affected the profiles of news sources (Table 1). Secondly, the data on newspaper titles alone misleadingly suggested that wire services and news syndicates are the most used sources of medical news.

When Top 200 newspapers and weighted circulation figures were considered, the patterns of known sources suggested the existence of different types of medical stories (Table 3). Story 1 seems most similar to Story 5 in coverage and news sources, preferring staff writers to syndicates or wires, while chi-square test results show that Stories 1 and 4 are not significantly different in profiles of sources. The topics of Stories 1, 4, and 5 (i.e. recall of medicine, stem cells, and college shootings) appear to be of both general and recent interest, as well as easily understood in terms of national importance or implications (e.g. regarding safety, ethics, and politics); such topics seem to be commonly assigned to staff writers. In comparison, Stories 2 and 3 (i.e. national cancer and MRSA rates, respectively) may be newsworthy for the reason of “routinely” updating the public on epidemiological data and trends, with such reports relying more on syndicates or wire services.

It is worrying that unauthored briefs were the most used form of front-page communication in three of the four medical stories in this study. Although most of them directed the reader to the full story on an inside page, the news source was undisclosed and the brevity (typically around 25 words) suggests insufficient or
misleading front-page reporting for complex medical or health topics. The quality of such front-page elements warrants further research, especially as not all readers would refer to the full version. Incomplete or inaccurate reporting of medical news has previously been implicated in misinforming the public and even causing harm [17,27], so front-page briefs regarding medical and health news should be carefully prepared.

Our findings show that three major newspapers (i.e. Washington Post, Los Angeles Times, and New York Times, which rank 6, 4, and 3, respectively, among the top 200 newspapers by circulation [23]) and the Associated Press wire service have an influential role in the reporting of front-page medical news in US newspapers. Together, these four sources accounted for more than 61% of the total coverage of the target medical stories. We speculate that media factors—including consideration of perceived high-quality content from reputable organizations and limited editorial budgets—may contribute to this situation. For example, the four sources employ dedicated medical writers (as indicated on their websites and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines). Additional factors—like the “technicality” of the news, reputation of a science journal or institution, and occasionally on bylines).
Table 5. Coverage and Sources of Low-profile Front-page Medical Stories in US Newspapers in Newseum, by Newspaper Title and Total Circulation.

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>All newspaper titles</td>
<td>326 (100)</td>
<td>328 (100)</td>
<td>340 (100)</td>
<td>330 (100)</td>
</tr>
<tr>
<td>Total coverage</td>
<td>15 (4.6)</td>
<td>16 (5.0)</td>
<td>11 (3.2)</td>
<td>5 (1.5)</td>
</tr>
<tr>
<td>News source (% of coverage):</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Staff writers</td>
<td>9 (60.0)</td>
<td>18 (50.0)</td>
<td>6 (54.5)</td>
<td>3 (60.0)</td>
</tr>
<tr>
<td>News syndicates</td>
<td>1 (6.7)</td>
<td>4 (11.1)</td>
<td>3 (27.3)</td>
<td>2 (40.0)</td>
</tr>
<tr>
<td>Wire services</td>
<td>2 (13.3)</td>
<td>10 (27.8)</td>
<td>1 (9.1)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Unauthored briefs</td>
<td>3 (20.0)</td>
<td>4 (11.1)</td>
<td>1 (9.1)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>(Circulation per 100,000)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cumulative circulation in Top 200 titles</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>14.8</td>
<td>66.8</td>
<td>18.2</td>
<td>14.8</td>
<td></td>
</tr>
<tr>
<td>Number of different stories</td>
<td>16</td>
<td>17</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Mean cumulative daily circulation</td>
<td>[1.5]</td>
<td>[3.9]</td>
<td>[2.3]</td>
<td>[3.0]</td>
</tr>
</tbody>
</table>

*Because of rounding, not all percentages total 100.

Table 5 shows the coverage and sources of low-profile front-page medical stories in US newspapers in the Newseum repository. The table presents data for specific dates and shows the number of stories, coverage, and sources for each date. The table also includes cumulative circulation in Top 200 titles, number of different stories, and mean cumulative daily circulation.

The table highlights the importance of staff writers and wire services in covering medical news, with significant coverage in the Newseum repository. The data reveals that the coverage of medical stories varies across different newspapers, with some publications dedicating a larger portion of their front pages to these topics.

In conclusion, the study underscores the significance of medical news coverage and its impact on public health awareness. Further investigation is needed to understand the factors influencing the selection and presentation of medical stories in the news media.

**References**


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