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## Insights into How HIAs are Characterized in the Press: Findings from a Media Analysis of Widely Circulated United States Newspapers

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# CHIA

Chronicles of Health  
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Improving community health through health impact assessments

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## INSIGHTS INTO HOW HIAs ARE CHARACTERIZED IN THE PRESS: FINDINGS FROM A MEDIA ANALYSIS OF WIDELY CIRCULATED UNITED STATES NEWSPAPERS

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### *Abstract:*

**Background:** Health impact assessments (HIAs) are burgeoning tools in the policy arena, where media plays an important role by focusing attention on issues, informing the public, and influencing positions. Examining how media portrays HIAs is critical to understanding HIAs in the policy context.

**Methods:** This study considered how widely circulated, U.S. newspapers represent HIAs. After searching newspaper databases, we used a qualitative document analysis method consisting of open and axial coding to examine specific phrases of HIA depictions.

**Results:** In coding over 1,000 unique phrases from the 62 documents generated in our search, we found an uptick in HIA-related publications since 2010. Coding these documents identified 46 distinct codes across 10 different themes. The two most prominent HIA-centered themes focused on HIA engagement and the HIA setting. While themes of policy and science, health determinants, and explanations of HIAs were also frequently featured, specific mentions of projected impacts, HIA processes, HIA values, and health outcomes were less prevalent.

**Conclusion:** HIA media portrayals warrant further inquiry by researchers and practitioners. Focusing on how media portrays HIAs is consistent with several HIA steps. It is also important for a broader strategy to educate stakeholders about HIAs and to understand HIAs' utility. HIA practitioners should develop and implement guidelines for media interaction and tracking that encourage practitioners to seek additional media attention and to focus such attention on health impacts and outcomes, HIA recommendations, and HIA values. Building on our work, researchers should examine HIA media portrayals beyond the context of this study.



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## Introduction

The use of health impact assessments (HIAs) in the United States is on the rise. To date, over 400 HIAs have been completed across the country (Pew Charitable Trust, 2015). According to the National Research Council (NRC)(2011), an HIA is a “systematic process...to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects” (p. 46). HIAs rely on a six-step process -- consisting of screening, scoping, assessment, recommendations, reporting, and monitoring and evaluation -- and utilize assorted data, methods, and stakeholder inputs to draw meaningful conclusions (NRC, 2011).

HIAs are especially useful for bringing health concerns to decisions and issues that originate outside of the health sector, enhancing relationships across sectors, and empowering communities (Bourcier, Charbonneau, Cahill, & Dannenberg, 2015; Dannenberg, 2016). In particular, HIAs can be instruments to address the social determinants of health, defined by the World Health Organization (2017) as “conditions in which people are born, grow, live, work and age [which] are shaped by the distribution of money, power and resources at global, national and local levels [and] are mostly responsible for health inequities - the unfair and avoidable differences in health status.” Addressing these social determinants is critical to tackling health inequalities across groups (CDC, 2014). However, Gottlieb, Fielding, and Bravemen (2012) argue that, in isolation, HIAs do not constitute “healthy public policy.” They define “healthy public policy” as “a comprehensive approach to achieving more health-informed decision-making in other sectors, [that] generally requires multiple components,” including HIAs and also other strategies (p.158). In other words, HIAs can be an important component of a multifaceted Health in All Policies approach (Rudolph, Caplan, Ben-Moshe & Dillon, 2013; Gase, Pennotti, & Smith, 2013).

Challenging questions about the effectiveness of HIAs -- and how to measure this effectiveness -- remain critical for the field to resolve (Quigley & Taylor, 2004; Ali, O’Callaghan, Middleton, & Little, 2009). Studies demonstrate that HIAs can be useful in emphasizing the connections between health outcomes and some of their causes, both for policymakers and communities (Bourcier et al., 2015). Proponents frequently point to the ability of HIAs to raise awareness about health and public policy connections across sectors and communities (Winkler et. al, 2013; Gottlieb et al., 2012; Harris-Roxas & Harris, 2013). Since HIAs appear to impact how health-related issues are perceived, it is important to understand how they are portrayed and discussed in public discourse.

Media is a powerful outreach tool to enhance health-promoting behaviors (Randolf, & Viswanath, 2004). In addition -- and perhaps more salient to the social determinants of health and HIA work -- media plays an important role in public health policy. According to Dorfman & Krasnow (2014), media can blend “communications, science, politics, and advocacy to advance public health goals” (p. 293). Golden & Moreland-Russell (2016) explain that it does so by focusing public attention on issues as well as “raising awareness of a problem, stimulating coverage of issues, generating support for proposed policy solutions, and communicating information regarding the implementation of a policy” (p. 34). Shih, Wijaya, & Brossard (2008) have found that how issues are framed in the media impacts ways in which audiences perceive them and can “activate certain thoughts or feelings in readers’ minds that make them more likely to react in a somewhat predictable manner” (p. 142); media helps readers form heuristics to process complex issues (Shih, Wijaya, & Brossard, 2008).

Thus, determining how media portrays HIAs is critical to understanding the relationships between HIA and policy. We were unable to locate any studies in the literature that systematically examine HIAs’ portrayal in U.S. media sources. Aiming to reduce this gap, our

study focused on understanding how HIAs are portrayed in U.S. print media.

## Methods

Our study aimed to examine how HIAs have been portrayed in U.S. media sources. Specifically, our study asked: how have HIAs been covered and characterized in the most widely circulated U.S. newspapers? To answer this question, we used qualitative research methodology to analyze newspaper documents discussing HIAs. According to Bowen (2009), this type of “document analysis is a systematic procedure... [that] requires that data be examined and interpreted in order to elicit meaning, gain understanding, and develop empirical knowledge” (p. 27). Its methodology is especially useful to understand context, identify research questions, follow the development of issues, and enrich other research findings (Bowen, 2009). This type of analysis involves breaking down the content of selected documents and synthesizing and organizing data (i.e. document excerpts and quotations) into meaningful themes (Bowen, 2009). The process consists of skimming documents, followed by examining them thoroughly and then conducting content and thematic analyses to make meaning of the subject matter (Bowen, 2009). It is comprised of open coding, axial coding, and selective coding (Neuman, 2004).

In our analysis, we focused on newspapers to the exclusion of other news sources. Research suggests that consumers increasingly rely on television, online, and radio sources for news and that reliance on newspapers is declining (Pew Research Center, 2016). Nevertheless, many researchers continue to focus on newspaper texts to analyze how media portrays public health concerns (Rooke & Amos, 2014; Caulfield, Clark, McCormack, Rachul, & Field, 2014). As Rooke & Amos (2014) explain, newspapers perform an important gatekeeping function; they serve as “a useful proxy for reporting in other media as they often set the agenda for other formats and are easy to access and search” (p. 508). We also limited our analysis to

newspapers because, compared to other news sources, the quality of newspaper reporting is high. For example, an analysis of three large newspapers and five local TV news channels in the San Francisco Bay Area assigned overall “A” grades to all three newspapers while the local television channels earned grades ranging from “D+” to “C+.” These grades were based on measures of context, newsworthiness, explanation, civic contribution, local relevance, and enterprise (McManus, 2003).

Using document analysis methodology, our team developed and implemented a research protocol starting in January 2017. First, we selected the specific newspapers to include in our study. We chose the 50 U.S. newspapers with the widest circulation. These newspapers were identified using *The World Almanac and Book of Facts 2016*, which relied on data from the Alliance for Audited Media (Janssen, 2016). The most recent circulation data available to generate this list dated to March 2014. We relied on these 50 newspapers because of the readership reach. We also selected the time-period of 1990 to January 31, 2017 for our analysis. We did this primarily because HIAs are a fairly new tool in the U.S. (Schuchter, Bhatia, Corburn, & Seto, 2014). Therefore, related newspaper documents would be unlikely to predate 1990.

Two members of our team searched for newspaper documents published in each of the 50 most circulated newspapers by using three different databases: ProQuest Newspapers, LexisNexis Academic, and Access World News. For the selected newspapers and dates, we searched each database using the key term: “health impact assessment.” Two members of the team then downloaded and saved all of the documents found, eliminating any duplicate results uncovered through multiple databases or documents printed only online. Online-only articles were excluded because of the differences in online presence and archiving across newspapers and also because the circulation and readership for online-only documents was difficult to ascertain.

We then proceeded to code the documents and identify themes. During open coding, two members of the research team read through all of the resulting documents, twice, to familiarize themselves with their content and the ideas discussed. Then, the two team-members re-read each document individually. For each main idea related to our research question, each of the two team-members selected one to three representative words, or codes, keeping detailed notes on the meaning of each code.

After the initial codes were created, three members of the team met to resolve differences and compile an agreed-upon, final list of codes and code definitions. Using this final list, two members of the research team together re-coded each document over several sessions. Sessions consisted of each researcher reading and coding alone and then the two researchers immediately and thoroughly discussing the document codes to resolve any discrepancies in order to agree on all final codes. The team then calculated the number of times each code emerged in the documents.

After each document was coded in the open coding phase, the research team completed axial coding by arranging the codes into meaningful themes. In this phase, the team organized the codes generated during open coding into larger, categorical themes that discussed related ideas. Once the list of themes was finalized, we tallied the number of times each theme appeared. Finally, the team engaged in selective coding to pick out representative quotations that could illustrate the character of each code and theme. We deemed a quotation representative when it exemplified the meaning of that particular code.

## Results

The initial search generated 70 documents, eight of which were excluded because they were duplicative or online only. The database searches ultimately produced 62 documents that met inclusion criteria. The 62 documents came from 27 newspapers (see Table 1).

Of these 27 newspapers, six newspapers contained 28 total documents -- or 45.2% of all documents found in our search; specifically, two newspapers published six documents each while four newspapers published four documents each. These six newspapers were: The Oregonian (n=6), Orange County Register (n=6), Los Angeles Daily News (n=4), Star Tribune (n=4), St. Paul Pioneer Press (n=4), and Buffalo News (n=4). Four additional newspapers contained three documents each (a total of 12 documents, or 19.4% of all identified documents); five contained two documents each (a total of 10 documents or 16.1% of all identified documents); and 12 newspapers printed one document each (a total of 12 documents or 19.4% of all documents). In some of these newspapers, one author produced most or all of the HIA-related content.

We found no relevant documents in the remaining 23 newspapers. Of these 23 newspapers, we were unable to search for complete results for five. Three of the five (Long Island Newsday, Phoenix Republic, and The Detroit Free Press) were not indexed in the databases available to us and two of the five were only partially indexed for our period of interest (Pittsburgh Tribune-Review indexed from 2001-2015 and Woodland Park Herald News indexed from 1998 to 2016). Table 1 lists the newspapers that contained documents relevant to our search. Newspaper document citations are provided in the Appendix.

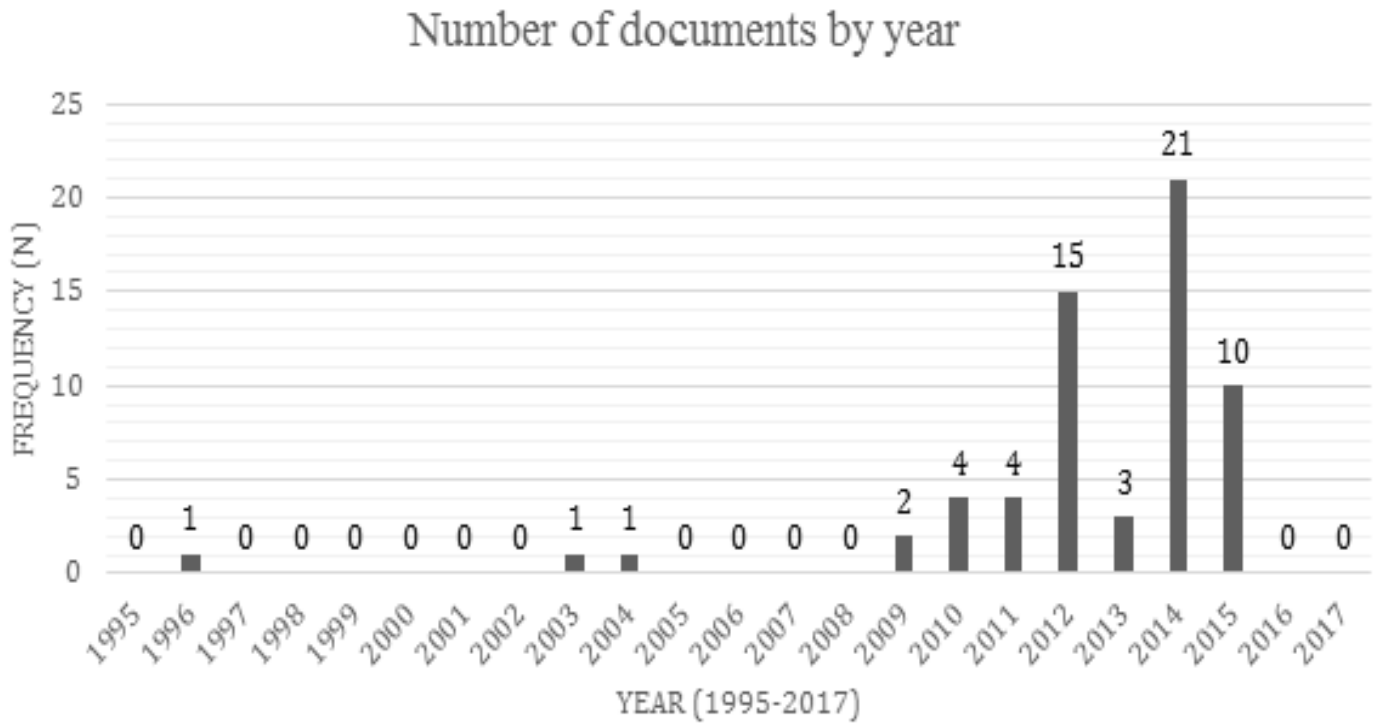


**Table 1. Number of documents mentioning “health impact assessment” in the top 50 most circulated newspapers of 2014 published between 1990 and January 31, 2017**

Rank	Newspapers	Results (n)	Rank	Newspaper	Results (n)
1	<i>USA Today</i>	3	26	<i>The Oregonian</i>	6
2	<i>Wall Street Journal</i>	1	27	<i>San Diego Union Tribune</i>	-
3	<i>New York Times</i>	1	28	<i>Cleveland Plain Dealer</i>	3
4	<i>Los Angeles Times</i>	2	29	<i>San Francisco Chronicle</i>	-
5	<i>New York Post</i>	1	30	<i>Kansas City Star</i>	-
6	<i>San Jose Mercury News</i>	2	31	<i>Pittsburgh Tribune-Review</i> <sup>^</sup>	1
7	<i>New York Daily News</i>	-	32	<i>St. Paul Pioneer Press</i>	4
8	<i>Chicago Tribune</i>	1	33	<i>Detroit Free Press</i> *	-
9	<i>Long Island Newsday</i> *	-	34	<i>Milwaukee Journal Sentinel</i>	1
10	<i>Washington Post</i>	1	35	<i>Sacramento Bee</i>	3
11	<i>Chicago Sun Times</i>	-	36	<i>Miami Herald</i>	-
12	<i>Dallas Morning News</i>	1	37	<i>Tampa Tribune</i>	-
13	<i>Los Angeles Daily News</i>	4	38	<i>Atlanta Journal-Constitution</i>	2
14	<i>Denver Post</i>	3	39	<i>Fort Worth Star Telegram</i>	-
15	<i>Houston Chronicle</i>	-	40	<i>St. Louis Post-Dispatch</i>	-
16	<i>Orange County Register</i>	6	41	<i>Salt Lake City Tribune</i>	-
17	<i>Philadelphia Inquirer</i>	-	42	<i>Baltimore Sun</i>	2
18	<i>Star Tribune</i>	4	43	<i>Pittsburgh Post-Gazette</i>	2
19	<i>St. Petersburg Times [AKA Tampa Bay Times]</i>	-	44	<i>Ft. Lauderdale Sun-Sentinel</i>	-
20	<i>Newark Star-Ledger</i>	1	45	<i>Indianapolis Star</i>	-
21	<i>Honolulu Star-Advertiser</i>	-	46	<i>Little Rock Democrat Gazette [AKA Arkansas Gazette]</i>	-
22	<i>Boston Globe</i>	1	47	<i>Woodland Park Herald News</i> <sup>^</sup>	-
23	<i>Phoenix Republic</i> *	-	48	<i>Buffalo News</i>	4
24	<i>Seattle Times</i>	1	49	<i>Fresno Bee</i>	-
25	<i>Las Vegas Review-Journal</i>	1	50	<i>Orlando Sentinel</i>	-

**Notes:** \* = Not indexed in the databases used; ^ = Partially indexed in the databases used

While our search dated back to 1990, the first document we found was published in 1996 and the last document we found was published in 2015 (see Figure 1). Between the calendar years of 1997 to 2002, we found no documents that met our search criteria. Most of the documents (n=57 or 91.9%) appeared in 2010 or after, with 21 documents (or 34.0%) appearing in 2014 alone. Of the 62 documents that met inclusion criteria, 37 were news articles (59.7%), 11 were editorials or commentaries (17.7%), 9 were other opinion pieces such as letters to the editor (14.5%), four were news briefs (6.5%), and one was a crossword puzzle (1.6%).



**Figure 1. Frequency of documents mentioning “health impact assessment” within the top 50 mostly widely circulated U.S. newspapers of 2014 with publication dates between 1990 and January 31, 2017**

By coding over 1,000 individual phrases from the 62 documents using a final list of 46 codes, grouping the codes into 10 different themes to capture related codes, and selecting quotations to illustrate the essence of each code, we identified several important patterns of how newspaper documents characterized HIAs.

These patterns -- in order of theme frequency -- are discussed below. Code definitions and frequencies as well as illustrative quotations are presented in Table 2. In addition, Figure 2 illustrates the relative frequency with which each code was observed.

Table 2. Definitions and illustrative quotations for each code, categorized by theme			
Theme	Code (n)	Definition	Quotation
General reference to HIA or other HIA-related work	HIA steps (4)	mentions 6 HIA steps	<p>“It’s not clear how extensive the DEC’s health-specific review has been or will be, or whether it will follow the guidelines and methodology laid out for health impact assessments laid out by leading medical organizations” (Campbell, 2012, September 21, p. ARC).</p> <p>“Getting information out to the public ahead of the official scoping process, perhaps beginning in June, inspired creation of www.coaltrainfacts.org” (Dickie, p. A15).</p>

	HIA-related assessment (40)	mention of mental health impact assessment; environmental impact assessment; other assessment related and similar to HIA but defined differently	<p>“The study coincides with a 20-month, \$3 million draft environmental impact study, which is a required part of the government funding process” (Mohr, p. A3).</p> <p>“The DEC has already released a draft set of regulations and two non-final versions of its environmental impact statement, which has grown to 4,000 pages” (Campbell, 2012, September 20, p. ARC).</p>
	HIA background (9)	mentions or discusses when, why, and by whom HIAs are used or performed – not specific to the HIA that is the main topic of the newspaper piece	<p>“Ross said that the “health impact assessment” is about improving quality of life, such as finding best practices for sound-proofing homes near an airport” (Tobin, p. A11).</p> <p>“A health impact assessment is a relatively new tool in urban planning. It uses existing epidemiological data to project the likely health outcomes of a change to a community’s built environment” (McCurdy, sec. Clark Community).</p>
	Previous HIAs (14)	mentions or discusses other HIAs in the US or abroad – mention should be of a specific HIA other than the one that is the main topic of the article	<p>“Doctors elsewhere are starting to call for a health assessment along the entire corridor. The concept is not new. A study was done in 2008 on the Highway 520 replacement” (Dickie, p. A15).</p> <p>“A similar health impact assessment was completed last year for the Bottineau Transitway, which is slated to be a 13-mile extension of the Blue Line light-rail ...” (Mohr, p. A3).</p>
	General HIA definition (6)	defines in general (that is, not specific to the HIA that is the topic of the newspaper piece) what HIAs are	<p>“What if proposed policies had to include a health impact assessment in addition to the oft-required fiscal impact analysis? Including information about a policy’s health impacts could shift the view” (Gara, sec. My town).</p> <p>“To measure how planning decisions affect health in city neighborhoods, Collier said his department would use a new digital tool called Health Impact Assessment, which employs data to measure the potential effect of policy on public health” (Litt, p. 6).</p>
Miscellaneous	Other (64)	information not related to the HIA	<p>“Cities were sickly places 150 years ago. Dysentery, typhoid, measles, influenza and other diseases thrived in overcrowded and unsanitary conditions. It took heroic and creative leadership by city planners, architects and health advocates to create healthier cities” (Kaufman, p. M6).</p> <p>“Freed, a former board member for Environmental Advocates of New York, ceased working for the state in March of this year. Both he and the Department of Health declined comment on why he no longer works there” (Campbell, 2012, September 21, p. ARC).</p>
	Author opinion (67)	opinion or conjecture of the author of the editorial or letter – not fact	<p>“The mayor has been a stubborn disappointment since taking office, but he hit a high note with his June 5 speech commemorating World Environment Day” (Duin, sec. Local News).</p> <p>“When is a proposed moratorium on oil and gas drilling really not a moratorium at all but an excuse to ban such operations for a couple of years?” (Loveland is the latest, 2014, p. 15A)</p>
HIA Values	Social justice (3)	discusses or mentions social justice	<p>“Ben Duncan, chairman of the environmental justice task force, said the trains tend to pass through lower-income neighborhoods, whether in eastern Oregon, Portland or Eugene. That’s “an environmental justice issue that cannot be ignored,” he said” (Learn, 2012, July 20, sec. Local News).</p> <p>“The worst part of this story is that this compressor and pipeline, which are slated to be built in Pendleton and Wheatfield, will get the toxic gases and threat of malfunctions, while Canada gets “clean gas” (Stanley, p. 5).</p>



	Vulnerable population (21)	discusses or mentions a vulnerable population	<p>“Delaying disconnection can cause other problems for vulnerable populations, allowing them to accrue more debt” (Wernau, p. 2.1).</p> <p>“Metro-area faith leaders say a \$1.8 billion plan to widen a portion of Interstate 70 in northeast Denver should be scuttled because it is a public health threat and will break up low-income families...” (Whaley, p. 17A).</p>
	Equity (9)	discussion of a population that is at risk of inequity or harm	<p>“Today, if Collier’s views hold sway, equity would mean a greater emphasis on improving public health through parks, bike trails and healthier food options for residents in economically challenged neighborhoods” (Litt, p. 6).</p> <p>“And communities have become willing to overcome earlier hesitation over connecting racially and economically diverse areas with bike lanes and other recreational pathways” (Litt, p. 1).</p>
HIA Setting	Geographic setting (24)	mentions or discusses the geographic setting for the decision related to the HIA	<p>“Metro-area faith leaders say a \$1.8 billion plan to widen a portion of Interstate 70 in northeast Denver should be scuttled because it is a public health threat and will break up low-income families...” (Whaley, p. 17A).</p> <p>“A \$100,000 grant will fund a yearlong study of potential health effects resulting from the development of the Gateway Corridor, the transit link being developed along Interstate 94 from the eastern end of Woodbury to downtown St. Paul” (Anderson, p. 2N).</p>
	HIA decision (65)	mentions or discusses the proposal, policy, law, program etc. that is the subject of the HIA	<p>“The Eastside Greenway [project] ... would bring nature and recreation closer, among other benefits” (Litt, p. 1)</p> <p>“Placer County has proposed developing the power-generation facility on county-owned land off Highway 89 between Truckee and Squaw Valley” (Litt, p. 1).</p>
	Problem background (86)	mentions or discusses the situation that led to the proposal being examined in the HIA	<p>“Today’s cities are plagued with traffic, violence and overcrowding” (Kaufman, pg. M2).</p> <p>“When Matt Pakucko and Hibino bought their four-bedroom home in Porter Ranch eight years ago, they say it was never disclosed it sat on an oil and gas field. The closest well pumps crude 1,200 feet from their house” (Bartholomew, p. 3)</p>
	Timeline (25)	timeline for the decision related to the HIA	<p>“The council unanimously agreed last month that owner Sam Chew must cease new shipments and clear the lot by Feb. 1, 1997” (Central Los Angeles, 1996, p. 5).</p> <p>“City Manager Tom Bakaly said ... the analysis should be finalized by the end of June” (Cooley, p. H).</p>
	Legal mandates (11)	mentions or discusses government requirements related to the HIA	<p>“Tuesday is the last day to comment on new proposed fracking regulations in California as mandated by SB 4” (Russell, p. 11A).</p> <p>“Such measures have historically been a tough sell in Wisconsin, where the Legislature passed the truth-in-sentencing law in 1999 and last year rescinded a program that released prisoners early for good behavior or health reasons” (Russell, p. 11A).</p>
	Decision-makers (42)	mention or discussion of those who are making a decision related to the topic of the HIA	<p>“Coal export critics ramped up pressure on Gov. John Kitzhaber on Thursday to delay any Oregon projects until a comprehensive “health impact assessment” is completed” (Learn, 2012, July 20, sec. Local News).</p> <p>“Several environmental and medical groups had on Martens and Gov. Andrew Cuomo to tap an independent, non-governmental group to assess hydrofracking’s physical effects on humans” (Campbell, 2012, September 20, p. ARC).</p>

	Baseline conditions (33)	discusses or mentions baseline or existing conditions about the community affected by the HIA decision related to health or other factors	<p>“Despite almost 60 years of nationwide experience proving the safety and tooth-saving benefits of maintaining a consistent level of this naturally occurring element in the water, fewer than 14 percent of New Jerseyans receive fluoridated drinking water” (Harris, p. 4).</p> <p>“Among other issues, Mariposa’s assessment found that more than 55 percent of the neighborhood’s predominantly Latino residents were overweight, about 75 percent had high blood pressure or were borderline, and nearly 40 percent had a condition that prevented them from working” (Gose, p. B8).</p>
Process for this particular HIA	HIA authors (20)	mentions or discusses authors of HIA	<p>“The Health Impact Assessment that the city commissioned McDaniel Lambert Inc. to complete...” (Cooley, 2014, June 12, p. 1).</p> <p>“Research team member Courtney Coughenour, an assistant professor in public health courses at UNLV...” (Ortega, p. B1).</p>
	HIA funding (12)	mentions or discusses grant or other funds used to conduct the HIA that is discussed in the newspaper piece	<p>“Georgia Tech’s work is being funded in part by more than \$300,000 in grants from sources including the Ford Motor Co., The Pew Charitable Trusts and The Robert Wood Johnson Foundation” (Tobin, p. A11).</p> <p>“A \$100,000 grant will fund a yearlong study of potential health effects resulting from the development of the Gateway Corridor...” (Anderson, p. 2N).</p>
	Availability (11)	mention or discussion of where completed HIA or its related documents are available	<p>“Residents can read the report online at <a href="http://www.hennepin.us/bottineauhia">www.hennepin.us/bottineauhia</a>. Copies are available at Hennepin County libraries at Brookdale, Brooklyn Park, Golden Valley, Rockford Road and Sumner” (Bottineau transitway, p. 2AA).</p> <p>“The report documenting the expected health impact of the proposed Bottineau light-rail line is now available online and at local libraries” (Bottineau transitway, p. 2AA).</p>
	Community event (14)	mention of public forum or event related to the HIA where community members are present	<p>“The prospect of Whatcom County hosting the annual export of 54 million tons of Power River Basin coal helped turn out more than 800 people for a community meeting on what the environmental review of the project should cover” (Bottineau transitway, p. 2AA).</p> <p>“The gathering attracted St. Paul citizens representing a cross-section of ethnic and religious groups advocating for protection for low income people, small businesses and history in the heart of St. Paul” (Simons, p. 1B).</p>
	Steering committee (4)	discusses or mentions a steering committee created to work on the HIA	<p>“Coyne is helping to lead a steering committee that includes planners and elected officials from Shaker Heights, Cleveland Heights, University Heights, Euclid, South Euclid, Beachwood, Lyndhurst, Pepper Pike, Mayfield, Mayfield Heights, Highland Heights, Orange, Warrensville Heights and Bratenal” (Litt, p. 3).</p> <p>“The committee also included former mayor Miesha Headen of Richmond Heights.... Christel Best, director of economic development, represented the city at the last steering committee meeting” (Litt, p. 3).</p>
Projected impact of decision, program, or policy	HIA impact of decision (19)	discusses or mentions the decision’s expected impact on health or its determinants (e.g. projections)	<p>“If vaccine mandates are weakened, we will see pockets of unvaccinated kids putting at risk infants, pregnant women and people whose immunity has waned or never took when first inoculated” (Harris, p. 4).</p> <p>“The report found several possible negative health impacts, including a likely increase in mortality locally due to exposure to air pollution, increased traffic injury risks and both mental and physical problems associated with the project’s odors” (Cooley, p. K).</p>

	Recommendations (9)	Mention or discussion of the HIA’s recommendations	<p>“Because research shows that giving children information about nutrition early in life can have a positive effect on their attitudes later, the team suggested schools provide professional workshops to kindergarten teachers to improve their nutrition education strategies. It also recommended free universal meals for all kindergartners to ensure they receive proper nutrition” (Ortega, p. B1).</p> <p>“The health impact assessment recommends that the ICC disallow remote disconnection” (Wernau, p. 2.1).</p>
	Cost (30)	Discusses or mentions projected impact of the decision that is the subject of the HIA on monetary cost (in dollars) to the government or private parties	<p>“The Gateway Corridor project is expected to cost about \$400 million” (Mohr, p. A3).</p> <p>“City staff estimate that the first phase of construction for the project... will cost \$563,000” (Cooley, p. H).</p>
	Economics (15)	Mentions or discusses projected impact of the decision that is the subject of the HIA on the economy and/or economic well-being of the community or groups or individuals in the community	<p>“Supporters say the project can be done without long-term harm to the environment, providing an economic boost to the regional economy” (Myers, p. A8).</p> <p>“The City Council on Tuesday night asked for additional changes to a cost benefit analysis taking place on the proposed E&amp;B Natural Resources oil drilling project” (Cooley, p. H).</p>
Engagement	Stakeholders (100)	Mentions or discusses involvement and input into the HIA or related decision by stakeholders (i.e. persons or organizations invested or interested in the decision being discussed by the HIA)	<p>“Healthy Corridor for All, a coalition of St. Paul community groups, unions and churches, organized the event to push this message: Decisions surrounding the Central Corridor project should be made in a way that improves life for the low-income and minority residents that populate the neighborhoods along University Avenue” (Simons, p. 1B).</p> <p>“In February, a group of 19 Duluth-area physicians, nurses and medical school faculty sent letters to state and federal regulatory agencies saying the effects of copper mining on human health haven’t been adequately addressed” (Myers, p. A8).</p>
	Collaboration (21)	Mentions or discusses relationship between different sectors (e.g. public health and other sector)	<p>“The Pennsylvania Department of Health is charged with ensuring and protecting the health of all state residents. It fulfills this obligation by partnering with communities to monitor existing and emerging health problems and to establish programs that prevent disease and injury” (McDermott-Levy &amp; Katkins, p. B1).</p> <p>“Ross said the studies are being done by several Georgia Tech departments, including mechanical engineering, and city and regional planning” (Tobin, p. A11).</p>
	Health department (24)	Mentions or discusses local, state, or federal health department (e.g. CDC, state health department)	<p>“The groups want the Minnesota Department of Health to conduct the review, saying none of the human health issues has been vetted in the ongoing environmental impact statement that has focused on how Minnesota’s first copper mine might affect air and water quality, wildlife and other natural resources” (Myers, p. A8).</p> <p>“Officials at the Centers for Disease Control say raw milk consumption is 150 times more likely to cause similar infections than pasteurized milk” (Harris, p. 4).</p>
	Expert (10)	Mentions or discusses opinion of an expert in the field related to the HIA, other than the HIA authors	<p>“Ann Stahlheber, a county public health dietician who helped collect the data, said that well-used trails and parks could improve safety and public health” (Litt, p. 1).</p> <p>“Three outside experts assisting New York with a health review of hydraulic fracturing say their work was completed more than a month ago, which the state Health Department didn’t reveal during lengthy testimony before lawmakers last week or in a public statement” (Campbell, 2013, February 8, p. ARC).</p>

	Feedback (154)	Mentions or discusses testimony or feedback about the HIA or related issue from someone in community or a stakeholder	<p>“Ophthalmologist Andy Harris, an advisory board member for Oregon PSR, said coal export out of Oregon and Washington ports poses ‘a significant risk to public health’” (Learn, 2012, July 20, sec. Local News).</p> <p>“Michael Schommer, a health department spokesman, said that “Commissioner Ehlinger looks forward to discussing the issue with the governor later this week, and to addressing any of his questions about the requests for a health impact assessment” (Marcotty, p. B1).</p>
Policy and Science	Community advocacy (21)	Discusses how community members affect policy or policymaking process	<p>“The records obtained by Gannett’s Albany Bureau show that several organizations have been privately pushing the Department of Environmental Conservation and Gov. Andrew Cuomo’s office to take a broader look at the potential health impacts of hydrofracking” (Campbell, 2012, September 21, p. ARC).</p> <p>“More than 250 doctors asked Gov. Cuomo yesterday to order a thorough review of potential health hazards before allowing hydraulic fracturing in upstate’s Marcellus Shale” (Kriss, p.14).</p>
	Science advocacy (2)	Discusses how scientists affect policy or the policy-making process	<p>“Unfortunately, health professionals contribute to this confusion by their silence. Some who dare to speak out are attacked professionally and personally. Some have trouble communicating complex issues in understandable language. Many work for public institutions, such as universities and health agencies, with strict rules about ‘lobbying’ and can’t speak directly to legislators without their employer’s consent” (Harris, p. 4).</p> <p>“Legislators should invite academic researchers to present objective testimony without concerns over lobbying. The state’s significant data resources and newly developed health information networks should inform their deliberations” (Harris, p. 4).</p>
	Misinformation (4)	Mentions or discusses information that is not scientifically accurate or groups espousing such information	<p>“Opponents of fluoridation, citing concerns about cost, toxins and lack of consent, ignore the fact that 72 percent of the nation’s water is already fluoridated without adverse health effects. Every dollar spent on fluoridation saves \$38 in dental care” (Harris, p. 4).</p> <p>“Vaccine deniers painted a somber portrait of children damaged by vaccines, while public health professionals cited detailed research studies showing that vaccinations prevent, rather than cause, serious disease” (Harris, p. 4).</p>
	Lack of evidence (7)	Mentions or discusses lack of consensus on an issue related to the HIA topic	<p>“Los Angeles City Councilman Mitch Englander and L.A. County Supervisor Michael Antonovich only repeat what SoCal Gas says: The leak is ‘non-toxic,’ ‘no health concern.’ Neither repeats what dozens of residents said about being sick from the gas” (Frazer, p. 4).</p> <p>“Instead, self-proclaimed experts citing personal anecdotes or cherry-picked factoids fresh off the internet are heard in the same forum and often given the same credence as scientific experts with decades of training and experience dedicated to advancing public health” (Harris, p. 4).</p>
	Scientific evidence (27)	Mentions or discusses credible, scientific evidence related to an issue related to the HIA	<p>“A separate analysis that used ComEd’s data from its pilot study said education will be especially important to the area’s most vulnerable populations: the sick, the poor and the elderly, who otherwise won’t receive the benefits they’re paying for” (Wernau, p.2.1).</p> <p>“Research shows that fewer patients die when their caregivers are vaccinated against the flu, but last year, only 64 percent got the shot” (Harris, p. 4).</p>

	Failure to conduct HIA (12)	Refusal to conduct HIA, despite stakeholder or community interest in an HIA	<p>“New York’s top environmental regulator on Thursday dismissed calls for a lengthy outside analysis of natural-gas drilling’s health effects, instead calling on the Department of Health to tap experts to assist in the state’s review” (Campbell, 2012, September 20, p. ARC).</p> <p>“Since the department has failed to provide a public registry of fracking-related complaints, there is no way to determine whether it is adequately monitoring and investigating fracking’s health effects” (McDermott-Levy &amp; Katkins, p. B1).</p>
	HIA pushback (4)	Resistance by stakeholders or decision-makers to the <u>findings</u> of a <u>completed</u> HIA	<p>“Following the preliminary report’s release in February, E&amp;B’s attorneys sent the city a letter demanding it “retract and disavow” the report, claiming it failed to address existing laws that regulate air, water and soil quality” (Cooley, p. E).</p> <p>“E&amp;B asked the city to retract and disavow the report, claiming that the HIA failed to address existing laws that regulate air, water and soil quality. The oil company also claimed that statements in the report were either not backed up by science or used untested methods for verification” (Cooley, p. K).</p>
	HIA resistance (23)	Resistance to <u>conducting</u> an HIA by stakeholders or decision-makers	<p>“The city of Hermosa Beach has withdrawn the Health Impact Assessment for the proposed oil drilling project at the request of the consulting group that compiled the report” (Cooley, p. K).</p> <p>“In February 2011, a Cuomo administration official sent a letter to a doctor who had pressured the Department of Health on hydrofracking, outlining his position that an extensive health assessment would be redundant” (Campbell, 2012, September 21, p. ARC).</p>
Health determinants	Healthy community (21)	Mentions or discusses attributes of a community that are termed or described as healthy or desirable for health purposes	<p>“By redesigning the area where people live, they hope to change how they live, making it so simple to move and eat good foods that people start leading a healthier life” (Dworkin, sec. Living).</p> <p>““We seek a solution that demonstrably improves the health and wellness of residents beyond conditions that exist today -- that is, a solution that results in measurably better health conditions for residents, schoolchildren, workers and visitors to these neighborhoods,” the letter says” (Whaley, 17A).</p>
	Access to health-care (3)	Mentions or discusses a person’s or community’s access to the healthcare system and/or clinical services (e.g. paying for health insurance, getting to a doctor)	<p>“Large Hospital groups typically make these transactions to keep smaller, financially distressed nonprofit hospitals open so they can continue to serve their communities” (Maiman, p. 11A).</p> <p>“Do we want to hold a community’s access to critical health care while the litigation process resolves itself?” (Maiman, p. 11A).</p>
	Community development (31)	Mentions or discusses building projects in the community (e.g. related to housing, transportation, and/or planning)	<p>“So activists are working with Portland’s Bureau of Planning and Sustainability to map out new sidewalks and other changes that could turn the area around Southeast 122nd into a ‘20-minute neighborhood’” (Dworkin, sec. Living).</p> <p>““We are the test bed for the re-creation of urban spaces, neighborhoods and communities,” said Catherine Ross, director of the school’s Center for Quality Growth and Regional Development. ‘My hope is that we develop this reputation -- with Atlantic Station, the Beltline and the aerotropolis -- as cutting edge examples of recreating communities’” (Tobin, p. A11).</p>

	Environment (24)	Mentions or discusses the <u>natural</u> environment or attempts to address impacts on the natural environment by government or others	<p>“The preliminary finding said air pollution, noise and increased traffic from the project would subject neighboring residents to numerous physical and mental problems” (Cooley, p. E).</p> <p>“It is also clear fracking will cause environmental damage, especially to water. It has happened everywhere fracking is allowed and it can’t be stopped” (Guy, p. 17A).</p>
	Health behavior (6)	Mentions or discusses individual behaviors that can have positive or negative impacts on health outcomes (e.g. smoking, substance abuse, sexual practices, healthy eating, exercise) or associated risks	<p>“In addition to encouraging convenience stores to offer healthier food, Mortell and other officials have been working to encourage county residents to walk and bike” (McCurdy, p. Clark Community).</p> <p>““For example, developments that include sidewalks and nearby places to walk to such as coffee shops and grocery stores can encourage people to exercise -- even casually -- and can help in the war against obesity,” he said” (Frankston, p. F1).</p>
Health outcomes	Injury (3)	Mentions or discusses injury-related morbidity or mortality (e.g. car crash, fall, gun violence, etc.) or associated risks	<p>“The data show that from 2008 to 2012, there were 330 accidents involving bikes on east side roads and streets, and 596 pedestrian accidents” (Litt, p. 1).</p> <p>“With more time spent in the car, the probability of a crash becomes greater. A lack of sidewalks also can lead to more pedestrian fatalities” (Frankston, p. F1).</p>
	Chronic disease (26)	Discusses or mentions morbidity or mortality data related to chronic disease	<p>“Sprawling cities that force people to drive long distances to work, school or shopping reduced the amount of exercise people got by replacing walking with increased driving. Problems linked to sprawl include heart stroke, road rage, obesity, asthma and diabetes” (Frankston, p. F1).</p> <p>““For example, developments that include sidewalks and nearby places to walk to such as coffee shops and grocery stores can encourage people to exercise -- even casually -- and can help in the war against obesity,” he said” (Frankston, p. F1).</p>



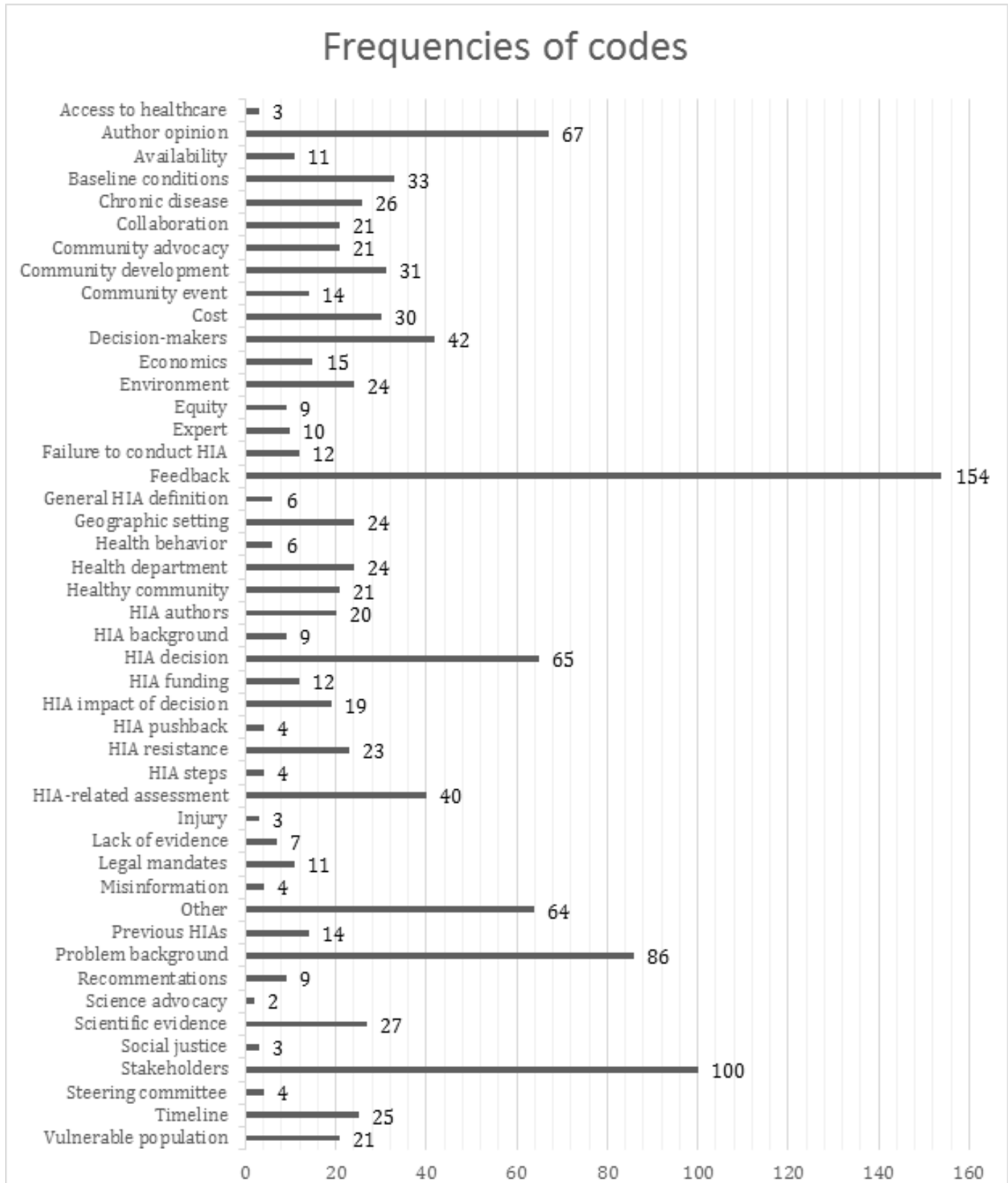


Figure 2. Number of times each code appeared in examined documents

### *Theme 1: Engagement*

The most common theme that appeared in the documents focused on HIA-related engagement. This theme includes codes that captured documents' discussions of collaboration and feedback across sectors, with stakeholders, and with experts. Within the engagement theme, which appeared 309 times in the documents, "feedback" was the most frequently used code (n=154). The "feedback" code was used when a phrase focused on a reaction to the HIA or related issues from a stakeholder or community member. The second most commonly used code under this theme was "stakeholder" (n=100). The "stakeholder" code was used when an article mentioned involvement in the HIA or a related decision by a stakeholder. Phrases discussing collaborations between public health and other sectors (e.g. city planning, academia, or engineering) also appeared within this theme.

### *Theme 2: HIA Setting*

The second most frequently appearing theme (n=286) consisted of codes depicting the environment in which the HIA was occurring. The most frequently used code in this theme captured language discussing the "problem background" (n=86), or the situation that led to a proposal examined by the HIA. This theme also included discussions of the "HIA decision" (n=65) -- that is, the proposal, policy, law, or program that was the subject of the HIA -- and "decision-makers" (n=42), the individuals, groups, and organizations involved in making decisions on a proposal examined by the HIA. This theme also included codes that captured the scope of the HIA, such as existing conditions (n=33), HIA or decision timelines (n=25), HIA geographic settings (n=24), and any related mandates (n=11).

### *Theme 3: Miscellaneous*

Many of the documents contained authors' opinions (n=67) and other statements (n=64) that were not directly related to the HIAs or the issues they were examining. We grouped these two codes into a theme that we called "miscellaneous" (n=131). While not

focused on the HIA, phrases coded under this theme were still prominent. The "author opinion" code in particular was often used in opinion pieces.

### *Theme 4: Policy and Science*

The fourth most frequently detectable theme represented discussions of various aspects of the policy process and its interaction with scientific evidence (n=100). Within this theme, the most frequently used code, "scientific evidence" (n=27) captured phrases that connected scientific evidence to an issue examined by the HIA. Many documents mentioned ways in which community members affect policy or the policymaking process (n=21). They also contained language that discussed resistance to conducting an HIA by stakeholders or decision-makers (n=23), refusals to conduct an HIA despite stakeholder or community interest (n=12), or resistance to the findings of a completed HIA (n=4). Mentions of how scientists affect policy were infrequent (n=2). Some documents discussed a lack of scientific consensus on an issue related to an HIA topic (n=7) or discussed information that was not scientifically accurate (n=4).

### *Theme 5: Health Determinants*

The "health determinants" theme appeared in the documents 85 separate times. The most frequently used code under this theme was "community development" (n=31), which captured discussions of built environment projects related to housing, transportation, or planning. Codes capturing mentions of the natural environment (n=24) and attributes of healthy communities (n=21) also appeared in the newspaper documents with moderate frequency. In contrast, individual health behaviors (n=6) and access to healthcare (n=3) were mentioned infrequently.

### *Theme 6: General Reference to HIA or Other HIA-Related Work*

Many documents made general references to HIAs or the HIA process or discussed other HIAs previously completed (n=73). Within this theme, mentions of HIA-related assessment, such as environmental im-

pact assessments or mental health impact assessments, were frequent (n=40). The documents also contained phrases intended to explain HIAs to readers. This included language that defined HIAs (n=6); explained when, why, and by whom HIAs are typically performed (n=9); specifically mentioned the 6 HIA steps (n=4); and discussed previously completed HIAs (n=14).

#### *Theme 7: Projected Impacts*

Discussions of the projected impacts of the decision, program, policy, or issue at the center of the HIA were appeared in the documents 73 times. This included projections of monetary costs (n=30) and broader economic impacts (n=15). It also included projected health impacts (n=19). We coded nine times when specific recommendations were mentioned in the documents.

#### *Theme 8: Process for a Particular HIA*

Codes centered on the process of a particular HIA appeared in the documents with some frequency (n=61). This theme included mentions of an HIA's authors (n=20) and funding sources (n=12). It also included mentions of events or fora held as part of the HIA process at which community members were present and input was solicited (n=14), and any steering committees or similar groups created to work on or guide the HIA (n=4). Mentions of the publication of the HIA report or related documents were coded as "availability" and appeared 11 times.

#### *Theme 9: HIA Values*

Discussions of HIA-related values were relatively infrequent (n=33). This theme manifested primarily through mentions of vulnerable populations (n=21) and equity (n=9). In a few cases, social justice was also specifically referenced or discussed (n=3).

#### *Theme 10: Health Outcomes*

While mentions of health outcomes did appear in the documents, the use of mortality and morbidity data was relatively infrequent (n=29). The majority of these

references focused on chronic diseases (n=26), such as asthma and diabetes, and their risk factors. A few phrases referenced injuries (n=3).

## **Discussion**

This study examined how HIAs are portrayed in widely circulated U.S. newspapers. While previous research has considered HIAs in the broader policy-making context, we were unable to locate studies that systematically analyzed discussions of HIAs in U.S. media sources. This is an important line of inquiry because of media's prominent role in policymaking, particularly in focusing attention. We concentrated our research on representations of HIAs in major newspapers, searching newspaper databases for documents published in the most widely circulated newspapers in the U.S. between 1990 and January 31, 2017. We found 62 unique documents from 27 newspapers in our search. Approximately two-thirds of these documents were news pieces and the remaining one-third were opinion pieces. Almost 92% of these documents were published in 2010 or thereafter and 45.2% were published in just six sources. For the pieces found through our search, we used a qualitative document analysis method consisting of open and axial coding to examine more than 1,000 individual phrases. We ultimately identified 46 unique codes across 10 different themes. The two most prominent themes focused on engagement around an HIA and the HIA setting. While policy and science, health determinants, and explanations of HIAs were also frequently featured themes, specific mentions of projected impacts, HIA processes, HIA values, and health outcomes were less prevalent.

Attention to HIAs in major U.S. print media sources is on the rise. This is not surprising because the use of HIAs is steadily increasing nationwide (The Pew Charitable Trusts, 2015). More surprisingly, however, is that while over 400 HIAs have been completed in the U.S. (The Pew Charitable Trusts, 2015), their coverage in print versions of major U.S. newspapers has been limited. This may be in part because many HIAs,

including the ones that were the subjects of the newspaper documents in our analysis, considered local-level decisions about the built or natural environment and most of the newspapers we searched focused primarily on limited geographic areas where HIAs may not have been taking place. Another potential explanation for this limited coverage may be a lack of knowledge of or interest in HIAs and the issues they analyze by newspapers. A reader relying primarily on printed versions of USA Today, The Wall Street Journal, The New York Times, The Los Angeles Times, The Chicago Tribune, The Washington Post, or other major U.S. newspapers as a main source of news, therefore, will have only very limited exposure to HIAs from news media. In fact, even in the last seven years, when the vast majority of HIA-related documents were printed in the newspapers we searched, readers might be exposed to only one to three stories. In many large newspaper markets, exposure to HIA-related newspaper documents may be non-existent. In large market newspaper media sources, it seems, HIA discussions are still very much a novelty.

Our analysis indicates that HIA depictions in newspapers center on two major themes: (1) HIA-related engagement and (2) setting the scene for the HIA. Within the engagement theme, which appeared over 300 times in the 62 documents, the two most prevalent types of depictions focused on stakeholder feedback (n=154) and involvement in the HIA (n=100). This suggests that newspaper documents are primarily used to demonstrate how stakeholders and community members interact with HIA processes and their underlying questions. Additional research is needed to better understand why media portrayals focus on engagement and setting the HIA scene. One possible explanation that merits study is whether focusing on HIA engagement and setting the scene for an HIA provides what news outlets would consider newsworthy content when compared to other important facets of an HIA, such as its processes, recommendations, and values. Newspaper documents are also consistently used to draw attention to the setting and scope of

the HIA, emphasizing questions leading to the assessment (n=86) and the specific decisions being assessed (n=65). This includes emphasizing decision-makers, timelines, settings, and conditions giving rise to the issues central to the HIA as well as presenting HIAs as tools to understand problems and address uncertainty. Relatedly, newspaper and other media sources appear to underscore the connections between policy and science, explain HIAs, and discuss health determinants. The prominence of these themes across newspaper documents is consistent with previous research that stresses the ability of HIAs to heighten awareness across communities and sectors (Winkler et al., 2013; Gottlieb et al., 2012; Harris-Roxas & Harris, 2013). Our analysis supports the possibility that media depictions are a mechanism through which HIAs raise awareness beyond the HIA team and its partners and may also present an important way to measure attempts to heighten awareness.

A more surprising finding of this study is that the documents examined focused less on projected impacts (including impacts on health, costs, and the broader economy) and HIA recommendations; HIA processes; health data; and HIA values. Information on the HIA process – including its authors, steering committees, funding, community events, and availability – for example, arose only 61 times across all documents. Readers of these newspaper documents therefore may end the pieces without a sense of the HIA process or what happens next. Perhaps even more surprising, while scholars have found that HIAs can be useful in emphasizing the connections between health outcomes and some of their causes (Bourcier et al., 2015), these connections appeared infrequently in the documents we analyzed. Although there were references to costs (n=30) and economic impacts (n=15), we found only 19 phrases specifically mentioning health impacts related to an HIA and 29 references to health outcomes data. Specific recommendations made in the HIA appeared only 9 times across all 62 documents. HIA values (i.e. social justice, vulnerable populations, and equity) were mentioned in the documents in aggregate

only 33 times. These findings are surprising because, in contrast to the portrayal we observed in the newspaper documents, HIAs are organized around projecting health impacts and recommending health-promoting actions around core values. An implication of this finding is that in contributing to newspaper documents, both HIA practitioners and authors of newspaper documents should frame HIAs in terms of their scope and values and emphasize the health-related projections and recommendations that are central HIA outputs.

A concerted focus on media depictions during an HIA and after its completion is critical for HIA practitioners (Lin, Houchen, Hartsig, & Smith, 2017). It is especially useful as part of reporting, stakeholder engagement, and monitoring and evaluation. This is because of media's prominence in the public policy process (Golden & Moreland-Russell, 2016). HIA coverage in major newspaper sources is limited, leaving an important mechanism of dissemination and potential impact underutilized, especially in the reporting phase. Our finding that only about 14.5% of the documents analyzed were letters to the editor also suggests untapped opportunities to use HIA findings in media-based advocacy. A practitioner-led effort to use media more frequently and in ways that emphasize health impacts, recommendations, and HIA values – especially in larger markets – may be important for a shared strategy of informing community members about HIAs and the social determinants and building momentum in the field. Employing such a strategy may require that practitioners work with trained communications experts or receive additional training on both how to work with media effectively and how to portray and frame their work around HIA processes, projected impacts, recommendations, and values. Such a strategy would be consistent with the major strengths of HIAs: inserting health concerns into non-health sector decisions and empowering communities (Bourcier et al., 2015; Dannenberg, 2016).

HIA practitioners should also build on existing practices to track HIA media portrayals as part of moni-

toring and evaluation (Lin et al., 2017). In addition to aiding with monitoring issues and tracking impacts of specific HIAs, media analysis can also assist in understanding the aggregate impact of the HIA field, which remains a challenge (Quigley & Taylor, 2004; Ali et al., 2009). Uniform practitioner standards to track HIA-related media reporting are imperative for the success and utility of individual tracking efforts.

While our study presents important findings, it has several limitations. Our study focused on large market (i.e. top 50), print newspapers. However, we were unable to comprehensively search five of the 50 newspapers in the databases available to us. The study also excluded all other newspapers. In the process, it excluded any discussions of HIAs occurring in other markets or in smaller newspapers in the same markets. Furthermore, the study excluded other frequently consumed media sources, such as television, radio, and the internet. These exclusions may affect the generalizability of this study beyond the sources we considered. Nevertheless, analyzing newspaper documents is important, particularly because of their gatekeeping function and because of the relative quality of their content. In addition, while we analyzed newspaper documents, our study did not take into account whether readers actually read these documents or how they interpreted them. Finally, while we used an established method of document analysis, the phrases that triggered certain codes and themes for our team may have triggered other codes or themes for other researchers or led other researchers to select alternative themes and taxonomies.

This study and its limitations raise vital questions for future research. Media can be important to the policy process and advancing public health (Dorfman & Krasnow, 2014). Future research in this area should aim to understand HIA portrayals in the media beyond large markets and beyond print newspapers. One strategy could involve a media analysis for each completed HIA. Our recommendation to create and use uniform practitioner standards for tracking would greatly assist



in conducting this type of research. Studies should also examine the actual impact of media portrayals of HIAs on stakeholders and community members. Such research can help HIA practitioners understand the most effective ways to employ this important tool and contribute to new standards in the field.

## **Conclusion**

A central purpose of HIAs is to contribute best-available evidence to questions of policy. As such, HIAs function in a larger policy landscape. A powerful feature of this landscape is the media, which has the ability to inform and shape ideas and actions of communities, stakeholders, and decision-makers both about specific policy questions and the connections between the social determinants and health outcomes. Thus, it is critical to understand how HIAs are represented in media sources. By aiming to examine how widely circulated, U.S. newspapers depict HIAs, our study begins to build systematic evidence to answer this question.

Our findings indicate that there is substantial room in both how much HIAs are discussed in major media sources and how they are discussed. While discussions of HIAs in newspaper documents are on the rise, many readers are never confronted with HIAs in major newspaper sources. Those who are exposed, more frequently encounter depictions focused less on HIA projections, recommendations, and values and more on engagement and the HIA setting. This presents tremendous opportunities for HIA practitioners to increase efforts to both study these portrayals in greater depth and enhance these portrayals through media interaction. In addition, HIA practitioners should establish and utilize uniform media engagement and tracking guidelines to understand and meaningfully compare this aspect of HIAs. This is significant because the media is a powerful tool for reporting, monitoring and evaluation, and stakeholder engagement. It is also important because of media's potential to educate stakeholders about the connections between health outcomes and social factors and to help build an HIA movement.



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