

Uses of Population Health Rankings in Local Policy Contexts: A Multisite Case Study

Medical Care Research and Review

1–19

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DOI: 10.1177/1077558717726115

journals.sagepub.com/home/mcr



Jonathan Purtle¹, Rachel Peters¹, Jennifer Kolker¹,
and Ana V. Diez Roux¹

Abstract

Population health rankings are a common strategy to spur evidence-informed health policy making, but little is known about their uses or impacts. The study aims were to (1) understand how and why the County Health Rankings (CH-Rankings) are used in local policy contexts, (2) identify factors that influence CH-Rankings utilization, and (3) explore potentially negative impacts of the CH-Rankings. Forty-four interviews were conducted with health organization officials and public policy makers in 15 purposively selected counties. The CH-Rankings were used instrumentally to inform internal planning decisions, conceptually to educate the public and policy makers about determinants of population health, and politically to advance organizational agendas. Factors related to organizational capacity, county political ideology, and county rank influenced if, how, and why the CH-Rankings were used. The CH-Rankings sometimes had the negative impacts of promoting potentially ineffective interventions in politically conservative counties and prompting negative media coverage in some counties with poor rank.

Keywords

population health rankings, uses of research evidence, evidence-informed policy making, qualitative research

This article, submitted to *Medical Care Research and Review* on April 21, 2017, was revised and accepted for publication on July 24, 2017.

¹Drexel University Dornsife School of Public Health, Philadelphia, PA, USA

Corresponding Author:

Jonathan Purtle, Department of Health Management & Policy, Drexel University Dornsife School of Public Health, Nesbitt Hall, Room 351, 3215 Market Street, Philadelphia, PA 19104, USA.
Email: JPP46@Drexel.edu

Public policies produce patterns in population health (Galea, Tracy, Hoggatt, DiMaggio, & Karpati, 2011; Marmot, 2005), and public policies are made through political processes (Fox, 2006; Nutley, Walter, & Davies, 2007; T. R. Oliver, 2006; Weiss, 1977b, 1979). These realizations have prompted the development of strategies to disseminate research evidence in accessible and engaging formats with the aim of generating awareness about population health problems and cultivating community demand and political will for evidence-supported policies (Farrer, Marinetti, Cavaco, & Costongs, 2015; Woolf et al., 2015). Population health rankings—which rank geographic units (e.g., countries, states, counties) on health indicators—are a common type of this dissemination strategy.

Ranking initiatives exploit the comparative nature of rank-based measures to spur competition and, ideally, improve performance (Hazelkorn, 2015). By weighing multiple metrics to create a composite indicator, rank-based measures can simplify and concisely communicate complex data to public and policy maker audiences (Kindig, Asada, & Booske, 2008). Rankings initiatives have origins in the fields of education (e.g., U.S. News & World Report's College Rankings) and medical care (e.g., the Centers for Medicare and Medicaid Services' Hospital Compare program) and have been adopted for population health at national (the World Health Organization's World Health Report), state (e.g., the United Health Foundation's State Health Rankings; Erwin, Myers, Myers, & Daugherty, 2011; the Trust For America's Health's State Rankings), and, most recently, county levels.

The County Health Rankings

In 2002, the University of Wisconsin Population Health Institute (UWPHI) adapted the United Health Foundation's State Health Rankings model to create the Wisconsin County Health Rankings—an initiative that ranked all 72 Wisconsin counties on composite indices of health (Peppard, Kindig, Dranger, Jovaag, & Remington, 2008; Peppard, Kindig, Jovaag, Dranger, & Remington, 2004). The initiative stimulated local media coverage, was perceived as useful by local health officials, and thereafter conducted annually through 2007 (Remington, Catlin, & Gennuso, 2015; Rohan, Booske, & Remington, 2009).

In 2008, UWPHI received funding from the Robert Wood Johnson Foundation to create the U.S. County Health Rankings (CH-Rankings; Remington et al., 2015). Since 2010, UWPHI has used the CH-Rankings model to develop metrics of within-state rank that rank every U.S. county against all others in its state. Each county is ranked according to health outcomes and health determinants (Remington & Booske, 2011). Annually, UWPHI disseminates the CH-Rankings directly to local health departments and media outlets and makes all CH-Rankings data publicly available on the County Health Rankings and Roadmaps website (www.countyhealthrankings.org).

Although studies have been conducted to refine the CH-Rankings methodology (Courtemanche, Soneji, & Tchernis, 2015; Hood, Gennuso, Swain, & Catlin, 2016) and examine associations between CH-Ranking indicators and population health outcomes (McCullough & Leider, 2016; Peyer, Welk, Bailey-Davis, & Chen, 2016), relatively little research has explored how the CH-Rankings are used in real-world settings.

Four studies have evaluated CH-Rankings utilization, but all have been atheoretical and limited to closed-ended surveys of health department officials in only three states (Peppard et al., 2008; Rohan et al., 2009; Winterbauer, Rafferty, Tucker, Jones, & Tucker-McLaughlin, 2015; Winterbauer, Sorensen, & Tidwell, 2012).

Knowledge Gaps

At least three important knowledge gaps related to the CH-Rankings exist. First, prior studies offer an incomplete understanding of *how and why the CH-Rankings are used*. Surveys have focused on how the CH-Rankings are used instrumentally to identify and solve problems but have not assessed how they might be used conceptually or symbolically. An understanding of how the CH-Rankings are used in all three ways warrants attention because studies suggest that conceptual and symbolic research utilization are often the primary ways that research evidence is used in policy contexts (Amara, Ouimet, & Landry, 2004; Haynes et al., 2011; Lavis, Robertson, Woodside, McLeod, & Abelson, 2003; Nutley et al., 2007; T. R. Oliver, 2010; Redman et al., 2015; Weiss, 1977a, 1977b, 1979). Furthermore, studies have not explored differences in the use of different aspects of the CH-Rankings—such as within-state ranks, raw CH-Rankings data, and measures of change in these metrics between years. As Thomas Oliver (2010) notes, “The longitudinal nature of the [CH-Rankings] enterprise raises the question of what will have the most impact: the initial county health rankings or subsequent changes in counties’ rankings over time” (p. 3).

Second, little is known about *factors that might influence CH-Ranking utilization*. Features of organizational environments and political climates are known to affect how academic research is used in policy contexts (Jewell & Bero, 2008; Liverani, Hawkins, & Parkhurst, 2013; Moat, Lavis, & Abelson, 2013; K. Oliver, Innvar, Lorenc, Woodman, & Thomas, 2014; K. Oliver, Lorenc, & Innvæ, 2014), but little is known about how such factors might influence how population health rankings are used. It is also possible that the nature of a county’s rank (i.e., poor or positive) or direction of change in rank between years (i.e., decline or improvement) might influence utilization. Rohan et al. (2009) speculated, that “Rankings can be controversial and politically sensitive because of the questions and concerns that come to light following a poor rank or a drop in rank” (p. 25), but studies have not investigated how these factors might influence use.

Third, studies have not explored any *potentially negative impacts of the CH-Rankings*. Criticisms of the CH-Rankings, and population health rankings in general, have stemmed from concerns that rank-based metrics are deceptively simplistic and that instrumental utilization could misguide policy and program decisions (Arndt, 2015; Arndt, Acion, Caspers, & Blood, 2013; Arndt, Acion, Caspers, & Diallo, 2011; Courtemanche et al., 2015; Gerzoff & Williamson, 2001; Krieger, 2017). The depth of empiric evidence about how the CH-Rankings are used, however, is insufficient to assess whether these concerns are legitimate. Relatedly, the volume of local media coverage about the CH-Rankings has been touted as a positive indicator of CH-Rankings

impact (Remington, 2015; Rohan et al., 2009), but little is known about how such media coverage is perceived by local stakeholders and the impacts that it might have.

Study Purpose

We used a qualitative, multisite case study approach to begin and address these knowledge gaps. The aims of the study were to (1) understand how and why the CH-Rankings are used in local contexts, (2) identify factors that influence CH-Rankings utilization, and (3) explore potentially negative impacts of the CH-Rankings. The study is of importance to researchers interested in how evidence is used by public health practitioners and policy makers because it provides indication of the pros and cons of population health rankings. The study is also of importance to policy makers and funders that support population health ranking initiatives because it sheds light on whether sustained investment these initiatives is warranted and how these initiatives might be improved.

Theoretical Framework

Carol Weiss's (1977a, 1977b, 1979, 1980, 1989) theories of research utilization in policy making were used to structure our data collection and analysis. Weiss (1977b) perceived research utilization in policy making as "an extraordinarily complicated phenomenon" (p.12) that had different meanings in different contexts. We used three of Weiss's modes of research utilization—one characterizing instrumental use, one conceptual use, and one symbolic use—to structure our data collection and analysis.

With the *problem-solving mode* of utilization, research evidence is instrumentally used to select the best solution to a problem. Weiss believed that this mode of research utilization rarely occurred in policy contexts, however, because of the limited relevance of most research findings to local policy decisions. This issue might be minimized for the CH-Rankings, however, because data are at the county level and thus potentially have local relevance.

With the *enlightenment mode* of utilization, research evidence is used conceptually to influence how policy makers and the public think about the causes of problems and solutions to address them. There is no assumption that policy makers actively seek or use research evidence when making decisions. Rather, the general concepts of research are believed to diffuse across sociopolitical environments and gradually influence policy processes. Thomas Oliver (2010) speculated that this would be the primary mode through which the CH-Rankings would have policy impacts.

With the *political mode* of utilization, research evidence is used symbolically as "ammunition" to support predetermined policy positions. Although evidence is strategically used (and sometimes ignored) to advance the goals of organizations and advocates, the political utilization of research is not improper unless evidence is intentionally distorted. Research evidence, such as that produced by the CH-Rankings, is often aligned with health organizations' goals and can be legitimately used for political advocacy purposes (T. R. Oliver, 2010). These three modes of research utilization

informed the development of our interview guide and served as a priori coding categories in our analysis.

New Contributions

Prior studies have examined how traditional forms of academic research (e.g., individual studies, systematic reviews) are used in health policy making and practice contexts, but little is known about how population health rankings are used or impacts they might have. Population health rankings are meaningfully different from traditional forms of academic research because of their format (i.e., rank-based metrics), unit of analysis (i.e., counties, states, countries), target audience (i.e., the general public), and accessibility (i.e., publically available and widely disseminated). Prior studies of the CH-Rankings have been narrow in scope and limited to closed-ended surveys. The current study advances knowledge about the uses and implications of population health rankings through the use of a qualitative, multisite case study approach.

Method

Sampling

We purposively selected 16 U.S. counties to serve as case study sites and conducted multiple interviews in 15 of them (we were unable to recruit respondents from one county). We used the list of counties in the 2015 CH-Rankings data set to create a sample of counties that were diverse on four characteristics: geographic region, population size, within-state quartile rank, and direction of rank change in rank between years. We limited our sample to counties with a population of $\geq 50,000$ because CH-Rankings indicators are less precise for small counties (Arndt et al., 2013). We also limited our sample to counties that experienced a mean percentage change in rank between 2010 and 2015 or 2014 and 2015 that was 1 or more standard deviations from the mean percentage change in rank for all counties. We focused on counties that drastically changed in rank because extreme cases are well-suited to elucidate key features of a phenomenon (e.g., CH-Rankings utilization) in case study research (Stake, 2013; Yin, 2011). Table 1 shows the distribution of our case study counties across these four characteristics.

Data Collection

Key Informant Interviews. We selected local health department officials as our primary contacts in each case study county because UWPHI directly disseminates the CH-Rankings to this audience (Remington et al., 2015). We used the National Association of City and County Health Officials' Directory of Local Health Departments to identify these individuals in each county and recruited them, via e-mail, to participate in a telephone-based interview. At the end of each interview, a snowballing recruitment strategy was used in which we asked the health department official to recommend

Table 1. Characteristics of Case Study Counties and Interview Respondents.

Characteristic	N
Case study county characteristics (N = 15)	
Population size	
50,000-99,999	5
100,000-199,999	4
200,000-299,999	4
300,000-500,000	2
U.S. census region	
Midwest	4
Northeast	4
South	4
West	3
Quartile rank	
1 or 2	7
3 or 4	8
Type of County Health Rankings change	
2014-2015 rank improvement	3
2014-2015 rank decline	4
2010-2015 rank improvement	4
2010-2015 rank decline	4
Interview respondent characteristics (N = 48)	
Local health department official	19
Policy maker	12
Community organization official	6
Education department official	4
Local news reporter	4
Hospital/health care official	3

three individuals in their county that we should also interview about the CH-Rankings: a policy maker (e.g., mayor or county commissioner), a representative from an organization outside the health department that worked on health issues (e.g., another government agency, a community-based organization), and a local news reporter. We conducted multiple interviews in each county because it allowed us to explore different perspectives of CH-Rankings utilization within a shared county context (Stake, 2013).

A semistructured interview guide was developed based on scholarship about the CH-Rankings and research utilization in policy making. Interview questions spanned three core domains: knowledge and opinions about the CH-Rankings, experiences using the CH-Rankings, and challenges related to CH-Rankings. We also asked respondents to discuss their organization's resource capacity and their county's political climate (i.e., where it falls on a liberal-conservative continuum). Interviews were conducted between August 2015 and February 2016, approximately 30 minutes in

duration, audio recorded, and transcribed. We stopped data collection when thematic saturation was achieved (i.e., when the interviews consistently did not yield new information related to our primary research questions; Guest, Bunce, & Johnson, 2006). In total, 44 interviews were conducted with 48 individuals (4 of the interviews were joint interviews with multiple respondents). Table 1 shows the characteristics of interview respondents.

Local Newspaper Coverage About the CH-Rankings. Consistent with our case study approach, we identified textual documents relevant to our research questions and case study sites (Stake, 2013; Yin, 2011). We focused on local newspaper articles because media coverage is thought to be a key pathway through which the CH-Rankings mobilize stakeholders to engage in policy advocacy (Rohan et al., 2009). We used Lexis-Nexis Academic to identify local newspaper articles that mentioned “County Health Rankings” “AND” the name of case study counties. Articles were identified for 12 of the 15 counties. The content of these articles informed site-specific interview questions and contextualize interview responses.

Qualitative Analysis

Interview transcripts were imported into NVivo 10, a qualitative data management program, for analysis. A “directed” qualitative content analysis approach (Hsieh & Shannon, 2005, p. 1,281) was used in which a preestablished theoretical framework (i.e., Weiss’s modes of research utilization) guided coding and analysis. Two coders first read all of the transcripts, wrote memos about themes in the data, and inductively developed new coding categories (e.g., negative impacts of the CH-Rankings). These new categories were combined with the a priori coding categories of Weiss’s modes of research utilization (i.e., problem-solving, enlightenment, political) and characteristics of the interview respondents and their county.

The two coders then reread and coded the transcripts. Coding matrixes and quote tables were used to organize findings, explore differences in themes between respondent and county characteristics, and generate concepts (Creswell, 2013; Richards, 2014). Kappa statistics of interrater reliability were calculated and concepts with “substantial” or “almost perfect” agreement ($\text{kappa} \geq .70$; Landis & Koch, 1977) were retained. Diagrams were created to depict relationships between different types of respondents, organizational and county characteristics, and CH-Ranking uses.

Results

How and Why Are the CH-Rankings Used in Local Contexts?

Figure 1 shows how the CH-Rankings were used by different stakeholders. Arrows indicate the direction of the flow of CH-Rankings evidence between stakeholders and the types of research utilization that characterize each use. Table 2 and the text below provide additional detail about these uses of the CH-Rankings and motivations for their use.

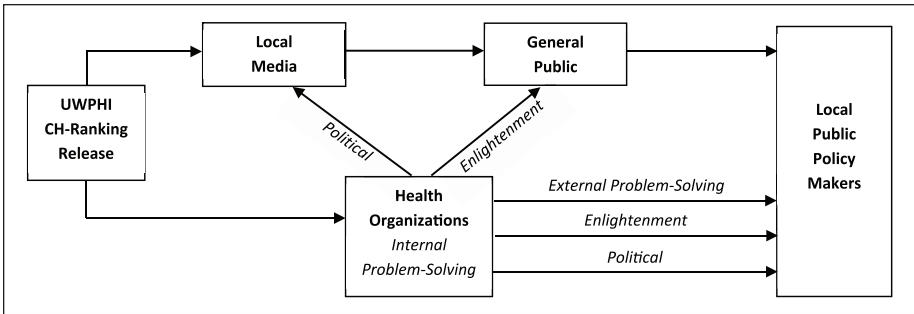


Figure 1. Empirically-derived conceptual framework of how the County Health Rankings are used in local contexts.

Note. UWPHI = University of Wisconsin Population Health Institute; CH-Rankings = County Health Rankings.

Problem-Solving Utilization: “I Don’t Know How We Can Make Decisions Without the Data.” The problem-solving mode of research utilization characterized how the CH-Rankings were used by health organizations for internal planning purposes. Raw CH-Rankings data, as opposed to the within-state ranks, were used in combination with other data sources to elucidate the magnitude of population health problems in counties and set organization agendas. Respondents also expressed that they used CH-Rankings data to inform decisions about how to allocate resources.

Most respondents reported that they did not use raw CH-Rankings data or within-state ranks to monitor changes in their county’s health between years. Two reasons were provided for not doing so. First, many respondents acknowledged that it would be invalid to compare data or within-state ranks between years because the CH-Rankings indicators change annually. Second, some respondents expressed that they were simply too busy to keep track of changes in their population’s health.

The problem-solving mode of research utilization primarily characterized how CH-Rankings data were used for *internal* planning purposes, but instances were identified when CH-Rankings data were sometimes used instrumentally to inform *external* policy and program decisions. For example, the poor population health status depicted by CH-Rankings data “shocked” policy makers in one county and led to the creation of a local health department. In another county, the CH-Rankings’ measure of adult obesity prevalence was the impetus for a multisector, county-wide intervention.

Enlightenment Utilization: “We Use It As a Conversation Starter.” The enlightenment mode of research utilization characterized many of the ways that CH-Rankings data and within-state ranks were used by health organizations when communicating with the public and policy makers. Respondents generally expressed that the CH-Rankings had more utility as an enlightenment (i.e., conceptual) than as a problem-solving (i.e., instrumental) tool. For example, the CH-Rankings were frequently described as a way to “build a narrative around the challenges that counties face” and “create a conversation” about the

Table 2. Primary Uses of the CH-Rankings.

Type of CH-Ranking use	Main findings	Illustrative quotes
Problem-solving utilization	CH-Rankings data, not within-state ranks, are used for internal planning purpose to identify population health problems and inform organizational agenda setting	<p>“When you see the [CH-Ranking data] right in front of you, it kinda jumps out that we need to do something.”</p> <p>“I looked at the [CH-Rankings] and went, ‘Oh my God, we’ve got so much work to do!’ So I use them as I prioritize what to work on and how I should spend internal funding.”</p> <p>“Having the [CH-Rankings] data is just so important . . . It’s just vital. I don’t know how we can make decisions without the data.”</p>
	Between-year changes in CH-Rankings data or within-state rank are generally not monitored or used for problem-solving purposes	<p>“So we don’t do year-to-year too much and look at how it’s changed over time because the metrics have changed.”</p> <p>“You know, I’ll be quite honest; I’ve got so many other things on my plate it’s probably falling out of my brain at this point. Did we go down this last year? I don’t remember.”</p>
Enlightenment utilization	CH-Rankings data and within-state ranks are used conceptually to communicate with the public and policy makers about population health status and its determinants	<p>“I use ‘em to, number one, enlighten and educate my administrative official.”</p> <p>“We use [the CH-Rankings] as a tool. It’s not necessarily meant to be the be-all, end-all. Basically, it’s set up as a tool. We use it as a tool to provide and offer a conversation . . . And we use it as a conversation starter, not necessarily a be-all, end-all.”</p> <p>“Ultimately my goal [with the CH-Rankings] is to draw people’s attention to the connection between the health of our residents and the policies that contribute to that.”</p>
	Some health organizations use local media attention about the CH-Rankings to reinforce and amplify messages about population health	<p>“The rank is extremely important to everybody. Every year when the rankings come out there is an article, the media looks at it and how we stand . . . And it absolutely allows the public to see that, ‘No, it’s just not the County Department of Health telling you that there’s a problem—there is a problem!’”</p> <p>“When we have issued press releases in the past related to the rankings or any type of health data, it’s always generated a call back from our local media, whether it’s our radio stations or it’s our local newspaper. It’s kind of always generated discussion. That’s been helpful to us, because we’ve had the opportunity to promote programs that we have in place to address the concerns.”</p>
Political utilization	CH-Rankings data and within-state ranks are used symbolically to promote organizational agendas and can be easily “spun” (i.e., manipulated) to be used in this capacity	<p>“I use [the CH-Rankings] when it’s opportune to use it, and I ignore it when it’s opportune . . . It’s all in how you spin it.”</p> <p>“So there’s always a lot of spin in whatever you do [with the CH-Rankings]; and I think that’s where you get into the ethical and moral side of public health in how you deliver those messages.”</p> <p>“We promote the fact that our access to health care and specialists and the resources we have here are rich . . . Because we have two really state of the art hospitals and then we have a medical school too, so that really skews that portion of our ranking, and we promote that positively.”</p> <p>“We mostly go with the rank itself. Although we might cherry pick out a particular data point.”</p> <p>“So sometimes you can push on a negative and get funding, and sometimes you can be out in the front and get funding. And of course you have a third option—they don’t even use them.”</p> <p>We also have used them to sell the importance of upgrading public health programs to the elected officials.</p>

Note. CH-Rankings = County Health Rankings.

determinants of population health and the potential for public policies to improve them. Public attention generated by local newspaper stories about the CH-Rankings occasionally served to reinforce, and sometimes amplify, health organizations' messages about population health. Some health department officials described strategic partnerships with local newspapers and leveraged the annual release of the CH-Rankings as a "springboard" to promote programmatic initiatives.

Respondents also described using CH-Rankings data and within-state ranks when giving presentations to policy makers and felt that the CH-Rankings had been "eye-opening" and a "wake-up call" for those who did not have expertise on health issues. In these instances, the fact that the CH-Rankings were at the county level was of particular importance. As one respondent noted, "Our political leaders want local, local, local." Some organizations had developed structured processes to use the CH-Rankings in enlightenment capacities. In these instances, standardized presentations were developed, updated with new CH-Rankings data each year, and delivered to community stakeholders through in-person presentations.

Political Utilization: "There's Always a Lot of Spin in Whatever You Do." Health organizations used the CH-Rankings data and within-state ranks to promote organizational agendas when communicating with local newspapers, funders, and policy makers. Respondents described how they would strategically and symbolically use CH-Rankings metrics to "sell" and "make a better case" for public health programs and would "spin" CH-Rankings data and within-state ranks into a story that was aligned with their organization's goals. Some respondents acknowledged the challenge of not wrongfully distorting CH-Rankings evidence when communicating with external stakeholders.

Respondents used both CH-Rankings data and within-state ranks for political purposes. Indicators of poor health were used to demonstrate resource need, and indicators of positive health were used to demonstrate strong organizational performance. All health organization respondents stated that they used the CH-Rankings in grant applications.

The political utilization of the CH-Rankings was starkly evident when respondents did not perceive CH-Rankings metrics of within-state rank as valid but still used them to promote organizational agendas. For example, one health department official described CH-Rankings measures of within-state rank as "stupid" because of the relative nature of the ranking but still disseminated information about her county's positive within-state rank to the board of health because it reflected positively and "makes them feel good, like 'Oh look, we're getting better.'" Similarly, respondents explained how they emphasized indicators of positive county performance when communicating with newspapers about the CH-Rankings, regardless of whether they felt that these data points were actually drivers of their population's health.

What Factors Influence CH-Rankings Utilization?

Factors at the organizational and county levels appeared to influence if, how, and why the CH-Rankings were used (Table 3). Specifically, the resource and staff capacity of

Table 3. Factors Influencing CH-Rankings Utilization.

Factors influencing CH-Rankings use	Main findings	Illustrative quotes
Organizational capacity	CH-Rankings data serve an important problem-solving function for organizations with limited resources, while they have less problem-solving utility for more well-resourced organizations	<p>“If you want to be scientific, if you want to look at [the CH-Rankings] purely from a scientific basis, it’s going to drive people crazy that look at it that way. But I think it can serve a purpose, especially in an environment of limited resources.”</p> <p>“You don’t have to sift through piles and piles of data and try to interpret it on your own, which makes it very easy for people with lots of projects they’re working on at once.”</p> <p>“Well, I’ll be honest with you, [the CH-Rankings] are not something we have used heavily at all . . . We have a pretty well-developed assessment unit here . . . We really haven’t used them very extensively at all.”</p> <p>“There are about 450,000 people in our jurisdiction, but there really are a lot of small counties in the state. And given the smallness of them, fluctuations in the rankings can change pretty quickly. And your relative ranking can change based on the rankings of some of the smallest counties in the state . . . From my perspective, [the CH-Rankings] don’t add that much to what we’re already doing.”</p>
	Local newspapers have very limited, and decreasing, organizational capacity and this constrains their uses of the CH-rankings	<p>“A couple weeks ago [the] most recent CH-Rankings came across and our editors sent me a copy of it—and I just deleted it . . . If I had been a health reporter, obviously I would have looked at it to see if there was anything that might be useful.”</p> <p>“Over the last seven or eight years we probably lost more than a third and close to a half of the reporting staff.”</p>
County political ideology	CH-Rankings data and within-state ranks are generally used to promote individually focused behavior change interventions in conservative counties, while they are used to advocate for policy change in liberal counties	<p>“We’re behind the progressive cities. And trust me, I’m an ultra-conservative Republican. And I don’t like the word progressive, but when it comes to health and wellness, I do . . . It’s a blue-collar town, and with that lower socioeconomic element, (a) they don’t want to be healthy, and (b) don’t know how to be healthy.”</p> <p>“To be quite honest, I don’t think the public makes any tie-in that [the public sector] is in any way responsible for, or should be responsible for [health]. This is an area that’s very anti-government . . . I think it’s always been in the perspective of more in the healthcare industry’s responsibility—that’s the way people look at it.”</p> <p>“If we’re going to really solve this government encroachment into society, larger government, if we really want smaller government, we gotta look at where we’re spending government.”</p>
County rank and media coverage	Media coverage about population health, spurred by the annual release of the CH-Rankings, is often perceived as problematic in counties with poor within-state rank, while it is perceived as an opportunity in counties with positive within-state rank	<p>“We got hit from our political leaders the first year [when the CH-Rankings came out] . . . They immediately were blaming the department and wanting to cut the department—like that’s going to help.”</p> <p>“The press looks at the big [rank] number and then throws it out there. Being a county that’s ranked very, very low in our state, it just, it permeates until it’s pervasive in people’s minds that we are unhealthy . . .”</p> <p>“[News reporters] see a number, they see a comparison among other counties in our state, and they just see us down at the bottom of the barrel. So of course their question is, ‘Why?’ That’s not an easy question . . . And they want a simplistic answer.”</p>

Note. CH-Rankings = County Health Rankings.

organizations, the prevailing political ideology of the county, and whether a county was ranked poorly or positively were related to CH-Rankings utilization.

Organizational Capacity: "It's Very Easy to Use. It's Very Quick Too." CH-Rankings data were especially useful for problem-solving purposes at organizations with limited resources, such as health departments in small counties. Among respondents from organizations with limited resources, the utility of the CH-Rankings as a user-friendly, publicly available, current, and local data source sometimes offset concerns about the within-state rank methodology and facilitated use.

In contrast, respondents from larger health departments with greater staff capacity expressed more hesitations about using the CH-Rankings for internal problem-solving capacities because of concerns about the methodology. Other respondents did not have methodological issues with the CH-Rankings but did not use them for problem-solving purposes because they already had sufficient analytic capacity and access to other data sources. While the CH-Rankings were generally not used for internal problem-solving purposes in well-resourced health departments, they were still used for enlightenment purposes when communicating with external audiences and for political purposes when requesting resources.

Newspaper reporters resoundingly expressed that organizational capacity influenced if and how they used the CH-Rankings. Despite the user-friendly design of the CH-Rankings, the capacity of local newspapers was often too limited to support the writing of in-depth stories about the CH-Rankings and population health. All of the news reporters interviewed expressed sentiment that it was difficult to depict the complex interplay of factors that influence population health because they did not typically "have the luxury of being able spend a lot of time focusing on an enterprise story." News reporters described how they did not have the ability to write in-depth health stories because of drastic staff cuts. The local health reporter in most case study counties had been laid off.

County Political Ideology: "Hey, Government, Stay Out of My Business!" How the CH-Rankings were used varied according to the prevailing political ideology of the county. CH-Rankings data and within-state ranks were generally used to promote individually focused behavior change interventions in politically conservative counties while they were used to promote policy changes in politically liberal counties. In conservative counties, the CH-Rankings not only were used to mobilize stakeholders to action but also appeared to inadvertently promote ideologies of individual responsibility by spurring the development of individually focused behavioral change interventions and communication campaigns that were aimed at "waking people up to the idea that [health's] an individual choice and individual action that has to be taken."

Some respondents from politically conservative counties stated that they did not use the CH-Rankings for policy advocacy purposes because antigovernment sentiment was strong in the county and because paternalistic policy interventions were "met with two barrels" (i.e., strong resistance). Respondents from conservative counties also expressed, however, that the CH-Rankings could be used to cultivate support for

policy interventions in conservative counties if they included cost–benefit metrics and “put it in terms of dollars and cents” to show that “taxpayers wind up footing the bill” for poor health outcomes.

In contrast to how the CH-Rankings were used in conservative counties, the CH-Rankings were often used to advocate for policy change in liberal counties. For example, in a small northeastern city, CH-Rankings data contributed to the identification of teen smoking as a local public health problem and subsequent policy proposal to raise the city’s tobacco purchasing age to 21. The health department director in this city described how he used CH-Rankings data when advocating to the local board of health to approve the policy. The CH-Rankings diagram also spurred policy development activities in liberal counties.

County Rank and Media Coverage: “We Try to Move Away From the Outcomes and Factors Ranks, Even Though That’s What the Media Latches Onto.” We did not find that uses of the CH-Rankings varied according how a county’s rank had changed between years, presumably because most respondents did not track changes in the CH-Rankings (described above). We did find, however, that local media coverage of the CH-Rankings was perceived differently by health organization officials in counties with poor within-state ranks (i.e., were in the third or fourth rank quartile). While respondents in counties with positive ranks often used local newspaper coverage about the CH-Rankings as an opportunity to promote organizational agendas and raise awareness about the determinants of population health, respondents in counties with poor rank saw annual newspapers coverage about the CH-Rankings as a perennial source of anxiety that prompted an “Oh no, here they come again feeling.”

Three reasons were identified as to why newspaper coverage about the CH-Rankings was perceived as problematic in counties with poor ranking. First, health department officials occasionally received backlash from policy makers who learned about the rankings through local newspapers. Second, some respondents were concerned that local news coverage about their county’s rank had negative impacts on residents’ conceptions of self and reinforced beliefs that their community was unhealthy. Third, some respondents felt that local newspaper coverage about the CH-Rankings painted an incomplete picture of the factors that influenced their county’s poor rank.

Discussion

By using a qualitative multisite case study approach, our study builds on prior survey research and scholarship about the CH-Rankings and offers a more holistic and nuanced understanding of how and why CH-Rankings data and within-state ranks are used and the factors that influence utilization. We found that the CH-Rankings were used instrumentally for problem-solving purposes to inform internal planning decisions, conceptually for enlightenment purposes to educate the public and policy makers about determinants of population health, and symbolically for political purposes to advance organizational agendas. Factors related to organizational capacity, county political ideology, and within-state rank influenced if, how, and why the CH-Rankings were used.

The varied uses of population health rankings identified in our study share some similarities with how traditional forms of academic research are used in policy contexts (Amara et al., 2004; Haynes et al., 2011; Lavis et al., 2003; Nutley et al., 2007; T. R. Oliver, 2010; Redman et al., 2015; Weiss, 1977a, 1977b, 1979). However, two well-established challenges to the use of research evidence appear to be minimized with the CH-Rankings. One persistent challenge to evidence-informed policy making stems from deficiencies in the content of research evidence (Jewell & Bero, 2008; K. Oliver, Innvar, et al., 2014; K. Oliver, Lorenc, & Innv er, 2014). Timeliness and local relevance are of paramount importance to policy makers, particularly those at the local level, but research evidence often lacks these qualities (Lawless, Lane, Lewis, Baum, & Harris, 2017; Liu, Lindquist, Vedlitz, & Vincent, 2010; McGill et al., 2015). The facts that the CH-Rankings were current and available at the county level may have ameliorated these barriers and enabled health organizations to craft messages about population health that were relevant to contemporary and local contexts, and thus resonate with policy stakeholders.

Another common challenge to evidence-informed policy making stems from an insufficient number of stakeholders who have access to research evidence and are willing to deliver it to policy makers. Researchers, who typically have the most access to research evidence, are generally not incentivized to engage in policy advocacy and are often hesitant to do so (Bogenschneider & Corbett, 2011; Brownson, Royer, Ewing, & McBride, 2006; Otten, 2015). The fact that the CH-Rankings centralizes dozens of population health metrics on a user-friendly, publicly available website might have allowed a wider range of stakeholders (e.g., health department officials, community-based organization leaders, policy makers) to access research evidence and disseminate it across local policy contexts.

Our findings by and large suggest that the CH-Rankings, and potentially population health rankings more broadly, have positive impacts and the ability promote evidence-informed policy making. However, two potentially negative impacts of the CH-Rankings were identified. First, we found that the CH-Rankings were often used to promote individually focused behavior change interventions in politically conservative counties. While well-intentioned, the preponderance of evidence suggests that the benefits of such interventions are likely to be limited and that policy interventions are needed to produce significant improvements in population health (Frieden, 2010; Golden & Earp, 2012). Many respondents from politically conservative counties expressed, however, that such individual-level interventions reflect the constraints of what is feasible in these counties because of residents' antigovernment ideology. Second, local newspaper stories about the CH-Rankings were occasionally perceived as having negative impacts in counties with poor rank. Studies should assess the content of local news media about the CH-Rankings and explore strategies that health organizations have used to respond to such media coverage.

Our results have implications for debates about the potential harms of population health rankings (Arndt, 2015; Arndt et al., 2011; Arndt et al., 2013; Gerzoff & Williamson, 2001; Krieger, 2017). In a methodological critique of the CH-Rankings' metrics of within-state rank, Arndt (2015) posed the question of "Just How Useful are

Health Rankings?” Our results indicate that the answer depends on the ends to which the CH-Ranking are used. If within-state ranks are being used in problem-solving capacities to make policy and program decisions, then such utilization could be counterproductive, as studies have shown that variations in within-state rank might not accurately reflect variations in population health or health determinants (Arndt, 2015; Arndt et al., 2011; Arndt et al., 2013; Gerzoff & Williamson, 2001; Krieger, 2017). However, we did not identify instances of the CH-Rankings being used in this capacity, and when the CH-Rankings were used for problem-solving purposes to inform policy and program decisions, CH-Rankings data, not within state-ranks, were used.

Alternatively, if within-state ranks are being used in enlightenment and political capacities to expand discourse about the determinants of population health—which is the explicit goal of the CH-Rankings (Remington, 2015)—then their utilization could promote evidence-informed policy making by increasing public and policy maker awareness about the impact of social, economic, and environmental factors on population health. This would represent a positive development as dominant discourses about the drivers of population health have been narrowly focused on individual behavior and medical care (i.e., discourses not aligned with evidence; Niederdeppe, Bu, Borah, Kindig, & Robert, 2008).

Our finding that the declining capacity of local newspapers has inhibited in-depth coverage of the CH-Rankings is consistent with national data and has implications for the dissemination of population health rankings. In the United States between 2004 and 2014, 21,200 newspaper jobs were eliminated (a 39% reduction) and the number of daily newspapers in operation decreased by 126 (a 9% reduction; Pew Research Center, 2016). Concurrent with these declines, however, social media utilization increased dramatically. As of 2014, 74% of U.S. adults used social networking websites (Pew Research Center, 2014), 62% obtained news from these sources (Pew Research Center, 2014), and 31% used social media to encourage others to take action on political and social issues (Pew Research Center, 2012). Given that local newspaper coverage is central to the theory of how the CH-Rankings influence change (Rohan et al., 2009), UWPHI and other entities that disseminate population health rankings might consider evaluating how social media can be most effectively used to disseminate ranking information directly to the public.

Limitations

Case study sites were limited to counties that experienced a dramatic change in within-state county rank and had a population $\geq 50,000$. The dynamics of CH-Ranking utilization might be different in counties that do not dramatically change in rank or have a population $< 50,000$. However, it is unlikely that change in within-state rank would substantially influence CH-Rankings utilization because we found that most respondents were not aware that their county’s rank had changed. To capture diverse perspectives about CH-Rankings utilization, we interviewed four different types of interview respondents and selected case study counties that varied across four different domains. As a result, however, it is unlikely that we achieved thematic saturation across all

possible interview respondent type * county characteristic combinations. We only conducted interviews with four news reporters, and findings about this stakeholder group's perceptions and uses of the CH-Rankings might be incomplete.

Conclusion

We found that the CH-Rankings are used in a variety of ways for various purposes and that factors at the organizational- and county-level influence if, how, and why the CH-Rankings are used. While not without potential challenges, the CH-Rankings appear to be a positive development in the quest to expand discourse about the determinants of population health and have potential to promote evidence-informed policy making.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study was funded by the Robert Wood Johnson Foundation (71865) and the National Institutes of Health (R21MH111806; R25MH080916).

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