Use and Perceived Impact of the County Health Rankings Report in Florida and North Carolina

Nancy L. Winterbauer, PhD; Ann P. Rafferty, PhD; Ashley Tucker, MPH; Katherine Jones, PhD; Mary Tucker-McLaughlin, PhD

Objective: Examine overall level of and variation in local health department (LHD) use and perceived impact of the County Health Rankings report (Rankings) in Florida (2010, 2011) and North Carolina (2010-2012, 2013). Design: Two cross-sectional surveys among LHDs. Participants: Local health directors and relevant staff. Main Outcome Measures: Use of the Rankings was measured by asking respondents if their LHD had used the Rankings in any of 10 ways and through assessment of community engagement. Perceived impact was measured by amount of attention the Rankings received from various stakeholders and whether they had already produced or would likely produce any of 7 possible results. Results: Overall, LHDs used the Rankings most often to educate staff in Florida (78%) and North Carolina (56%). Engagement with community groups around the Rankings was variable. Media engagement, through press releases (41%; 40%) or interviews (51%; 36%) in Florida and North Carolina, was moderate. Florida LHDs used the Rankings in more ways and significantly more frequently than North Carolina LHDs. There were few significant differences in perceived impact by state. At least a moderate amount of attention was received from media in Florida (52%) and North Carolina (46%). Twenty-percent of LHDs reported the Rankings received at least moderate attention from the general public in both states and 38% (Florida) and 33% (North Carolina) from policy makers. Tangible benefits to communities from the Rankings, such as having already influenced adoption of new policies, were modest in Florida (3%) and North Carolina (11%). Conclusions: Results suggest that tangible benefits to communities from use of the Rankings have yet to be fully realized but are encouraging. More effective media engagement could produce the community awareness necessary to maximize the Rankings’ potential to mobilize communities for health improvement. State variation in Rankings use suggests that more support to LHDs may be helpful.

KEY WORDS: communication media, County Health Rankings, local health departments, public health practice

The County Health Rankings report (Rankings) applies a modeling approach to assess county-level population health in the United States. Produced annually since 2010 through a collaboration between the University of Wisconsin Institute for Population Health and the Robert Wood Johnson Foundation, their development was based on the United Health Foundation’s annual state-level America’s Health Rankings. The goal of population health rankings, generally, is to stimulate public awareness of the multiple determinants of health and ultimately provoke multisectoral responsibility and collaboration to drive policy, resources, and action to improve community health outcomes. The Rankings rank nearly all counties in every state on health outcomes (morbidity and mortality) and health conditions.
factors (health behaviors, clinical care, social and economic factors, and the physical environment) and are conceived of as a “call to action” to mobilize the local public health system to address place-based inequities in health at both the programmatic and policy levels. Accordingly, they are an important tool with which local health departments (LHDs) can explicate complex health messages to prompt advocacy and policy change around the social determinants of health.

How communities have used the Rankings and to what effect has received little attention. In Wisconsin, the Rankings were evaluated annually up to 2008 since they were developed there in 2003. Results from the 2006 Wisconsin Rankings Survey indicated that local practitioners found the Rankings useful in public health work, particularly in educating and informing county board members and other policy makers; educating and engaging community partners; identifying program targets; performing needs assessments; and stimulating public discussions.

Winterbauer and colleagues reported on the use of the 2010 and 2011 Rankings by LHDs in Florida. Since that study was limited to 1 state, generalizability was limited. In this report, we expand that analysis and compare those results with a similar survey that evaluated use and impact of the Rankings by LHDs in North Carolina. Of particular interest, these states vary in the governance structure of local public health activities—Florida has a centralized governance structure (activities largely overseen at the state level), whereas North Carolina is decentralized, with independent control largely maintained at the local level.

Our evaluation approach was based on the Rankings logic model, which describes the impact of the release of the County Health Rankings report(s) as a function of 2 sets of activities: use by local health officers and media coverage. These activities are anticipated to result in broad community engagement, leading to the implementation of evidence-based health programs and policies and ultimately improved health outcomes.

Methods

Survey instrument

A cross-sectional online survey was conducted to measure use and perceived impact of the County Health Rankings among LHD directors in Florida (Florida County Health Rankings Survey [FL CHRS]). The questionnaire was based on existing instruments, including the NACCHO (National Association of County & City Health Officials) profile survey and the University of Wisconsin Population Health Institute’s internal evaluation tool. In addition, several questions were created specifically for this study. The questionnaire was vetted by an expert panel, and cognitive interviews were conducted to improve question comprehension. The FL CHRS was distributed electronically to all Florida County health officers over the time period December 2011 to February 2012. Directors representing all 67 Florida LHDs completed the survey for a 100% response rate. Three LHDs (4%) reported they were not familiar with the Rankings and were excluded from further analyses.

The FL CHRS questionnaire was modified slightly and administered to all 85 LHD directors in North Carolina, with data collection between July and September 2013. LHD directors at both the county and multicounty jurisdiction levels were included. At the LHD director’s discretion, his or her designee could complete the questionnaire. Of the 85 invitations to North Carolina LHD directors, we received 55 responses (51 from single-county health directors and 4 from multicounty directors) for a response rate of approximately 65%. Both studies received approval from their respective institutional review entities, the Florida Department of Health and the East Carolina University institutional review board.

Measures and statistical analyses

Use of the Rankings was measured by asking respondents to indicate (check all that apply) if their LHD had used the Rankings in any 1 of 10 possible ways including issue a press release, give presentations to community groups, give interviews to local media, use the Rankings in grant applications, educate staff around interpretation of the Rankings, search for and/or access other data/databases to get more information on specific indicators, convene existing stakeholders to discuss results, create or reinvigorate a task force to discuss results, develop partnerships across multiple sectors to respond to the report, and collaborate with other community health groups to use the Rankings. In addition, the questionnaires included a multicomponent question about whether their LHD had attempted to engage the following sectors in understanding and using the Rankings: employers and businesses, health care professionals, community opinion leaders, government officials, community groups, local schools, local universities, and faith-based communities. Respondents checked all that applied. The Florida questionnaire asked about use of the 2010 and 2011 Rankings, and in North Carolina, respondents were asked about use of the 2010-2012 Rankings (combined) and of the 2013 Rankings.

Perceived impact of the Rankings was measured by asking whether respondents thought that the Rankings...
had already produced specific results in their county, and if not, how likely they thought it would be that the Rankings would produce these results in the future. Possible results included increase public awareness of the multiple factors that influence health, increase public awareness of the broad scope of the public health system, promote local programs and policies, influence the development of community programs, influence the adoption of new policies, influence the allocation of funding resources, and leverage additional funding for their agency. In addition, respondents were queried about the amount of attention the Rankings (2010 for Florida, 2013 for North Carolina) had received in their county from the health care community, the media, policy makers, other community groups, and the general public. Response options for this question were “quite a bit,” “a moderate amount,” “not very much,” “almost none,” and “none.”

Data were analyzed using SPSS at the jurisdiction level. Two-tailed Pearson $\chi^2$ tests were used to examine differences between Florida and North Carolina.

## Results

### Use and engagement

The most frequently reported use of the Rankings in both states was to educate staff around the interpretation of the Rankings; 78% of Florida respondents reported educating staff about both the 2010 and 2011 Rankings, and 53% and 56% of North Carolina respondents reported this use for the 2010-2012 and the 2013 Rankings, respectively (Table 1). In general, the order of the proportions engaging in each use was similar across the 2 states, with create or reinvigorate a task force to discuss the Rankings and develop partnerships across multiple sectors to respond to the report, in general being the 2 least frequently reported activities.

However, the proportions of LHDs using the Rankings in specific ways were notably and consistently lower in North Carolina than in Florida. The proportions engaging in 5 of these activities were significantly lower for the 2013 North Carolina Rankings than for the 2011 Florida Rankings ($P < .05$), that is, educate staff (78%; 56%) ($P = .01$), search and access other data sources (71%; 53%) ($P = .04$), include results in grant applications (46%; 26%) ($P = .02$), give presentations to community groups (65%; 46%) ($P = .03$), and create or reinvigorate a task force to discuss Rankings (43%; 15%) ($P = .001$) in Florida and North Carolina, respectively. About half of Florida LHDs gave interviews to local media in 2011 whereas 36% of North Carolina LHDs did so in 2013, but this difference was not significant ($P = .12$). About 40% of LHDs in both states reported issuing press releases in 2011 in Florida and 2013 in North Carolina.

In general, LHDs in both states reported engaging most often with government officials, health care professionals, and community stakeholders and less often with employers and businesses, schools, and the faith-based community. As for other aspects of use, the proportions of LHDs that reported attempting to engage specific sectors of their community were consistently higher in Florida than in North Carolina, the 2011 Florida proportions for 5 of the 8 sectors being significantly higher than the respective 2013 North Carolina proportions (Table 2). For example, 80% of Florida LHDs attempted to engage government officials around the 2011 Florida Rankings whereas only 52% of North Carolina LHDs reported doing so ($P = .001$).

### TABLE 1

<table>
<thead>
<tr>
<th>Activities</th>
<th>Florida (N = 63)</th>
<th>North Carolina (N = 55)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educate staff around interpretation of the Rankings</td>
<td>78 (49)</td>
<td>53 (29)</td>
</tr>
<tr>
<td>Search for and/or access other data/databases</td>
<td>68 (43)</td>
<td>51 (28)</td>
</tr>
<tr>
<td>Give interviews to local media</td>
<td>59 (37)</td>
<td>51 (28)</td>
</tr>
<tr>
<td>Give presentation(s) to community groups</td>
<td>57 (36)</td>
<td>55 (30)</td>
</tr>
<tr>
<td>Issue a press release</td>
<td>54 (34)</td>
<td>51 (28)</td>
</tr>
<tr>
<td>Collaborate with other community health groups to use the Rankings</td>
<td>44 (28)</td>
<td>47 (26)</td>
</tr>
<tr>
<td>Convene existing stakeholders to discuss Rankings results</td>
<td>43 (27)</td>
<td>42 (23)</td>
</tr>
<tr>
<td>Use the Rankings in grant application(s)</td>
<td>41 (26)</td>
<td>35 (19)</td>
</tr>
<tr>
<td>Create or reinvigorate a task force to discuss Rankings</td>
<td>25 (16)</td>
<td>13 (7)</td>
</tr>
<tr>
<td>Develop partnerships across multiple sectors to respond to the report</td>
<td>22 (14)</td>
<td>18 (10)</td>
</tr>
</tbody>
</table>

$a$Significantly different from Florida 2011 by 2-sided Pearson $\chi^2$, $P < .05$.  
$b$N = 62 for this question regarding 2011.
TABLE 2  ●  Proportion of Local Health Departments That Attempted to Engage the Following Sectors in Understanding and Using the Rankings

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Florida (N = 61)</th>
<th>North Carolina (N = 54)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010, % (n)</td>
<td>2011, % (n)</td>
</tr>
<tr>
<td>Government officials</td>
<td>80 (49)</td>
<td>80 (49)</td>
</tr>
<tr>
<td>Health care professionals</td>
<td>67 (41)</td>
<td>66 (40)</td>
</tr>
<tr>
<td>Community opinion leaders</td>
<td>57 (35)</td>
<td>59 (36)</td>
</tr>
<tr>
<td>Community groups</td>
<td>57 (35)</td>
<td>59 (36)</td>
</tr>
<tr>
<td>Local schools</td>
<td>43 (26)</td>
<td>46 (28)</td>
</tr>
<tr>
<td>Employers and businesses</td>
<td>33 (20)</td>
<td>50 (28)</td>
</tr>
<tr>
<td>The faith-based community</td>
<td>28 (17)</td>
<td>33 (20)</td>
</tr>
<tr>
<td>Local universities</td>
<td>23 (14)</td>
<td>34 (21)</td>
</tr>
</tbody>
</table>

*aSignificantly different from Florida 2011 by Pearson $\chi^2$, $P < .05$.

Perceived attention and impact

Similar proportions of LHDs in Florida and North Carolina reported that the Rankings had received at least a moderate amount of attention (quite a bit or a moderate amount) (Table 3). The media and the health care community were the sectors most frequently reported by both states to have given the Rankings at least a moderate amount of attention, with nearly half of LHDs reporting this. Only 20% of LHDs from both states reported that the general public had given the Rankings at least a moderate amount of attention.

In general, the most frequently reported impacts to have already been produced by the Rankings in both states concerned awareness of the public health system. Increased public awareness of the multiple factors that influence health was the most frequently reported impact in both states (18% in Florida and 33% in North Carolina). The difference in these proportions was not significant ($P > .05$). Respondents in both states also frequently reported that the Rankings had already produced an impact by increasing public awareness of the broad scope of the public health system in Florida (8%) and North Carolina (26%); these differences were significant ($P = .005$). Respondents from LHDs in North Carolina were also significantly more likely to report that the Rankings had already produced an impact by influencing the development of community programs (19%) than were their Florida counterparts (5%) ($P = .023$). Fewer other tangible benefits of the Rankings, such as influencing the allocation of resources (5%; 7%), influencing the adoption of new policies (3%; 11%), or leveraging additional funding (3%; 9%), were reported as having already been produced since their first release by LHDs in Florida and North Carolina, respectively (data not shown).

Respondents from Florida LHDs were significantly more likely to report that the Rankings were very likely to increase public awareness of the multiple factors that influence health (18%; 6%) ($P = .038$) and increase awareness of the broad scope of the public health system (30%; 4%) ($P = .001$) in the future than were respondents from North Carolina LHDs, respectively. There were no other significant differences in perceptions that the Rankings would be very likely to promote local programs and policies (20%; 17%) ($P = .829$), influence the development of community programs (20%; 15%) ($P = .631$), influence the allocation of funding resources (7%; 15%) ($P = .267$), influence the adoption of new policies (18%; 15%) ($P = .836$), or leverage additional funding for their agency (12%; 9%) ($P = .937$) in Florida and North Carolina LHDs, respectively (data not shown).

TABLE 3  ●  Proportion of Local Health Departments That Reported at Least a Moderate Amount of Attention Was Received by the Rankings From the Following Sectors

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Florida 2010 (N = 61), % (n)</th>
<th>North Carolina 2013 (N = 54), % (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media</td>
<td>52 (32)</td>
<td>46 (25)</td>
</tr>
<tr>
<td>Health care community</td>
<td>49 (30)</td>
<td>48 (26)</td>
</tr>
<tr>
<td>Policy makers</td>
<td>38 (23)</td>
<td>33 (18)</td>
</tr>
<tr>
<td>Other community groups</td>
<td>38 (23)</td>
<td>43 (23)a</td>
</tr>
<tr>
<td>General public</td>
<td>20 (12)a</td>
<td>20 (11)</td>
</tr>
</tbody>
</table>

aN = 60 for these questions.

aN = 53 for this question.

Discussion

Study results indicate that overall, LHDs in both states used the Rankings most often for internal purposes—to educate staff and as a starting point for finding and accessing other related data and data sources. LHD engagement with community groups and existing stakeholders in use of the Rankings was limited and they
were least likely to report using the Rankings to develop multisectoral partnerships. Approximately 40% of LHDs in Florida and North Carolina issued press releases, whereas 51% of Florida LHDs and 36% of North Carolina LHDs gave interviews to local media (these differences were not significant).

The most frequent impact to have already been produced by the Rankings reported by LHD respondents in both states was increased public awareness of the multiple determinants of health. Increased awareness of the broad scope of the public health system was also commonly reported. Tangible benefits to communities from use of the Rankings in either state, such as increased resources or policy change, have yet to be fully realized. Nonetheless, in North Carolina, close to 20% of responding LHDs reported that the Rankings had influenced the development of new community programs, 11% reported they had influenced the adoption of new policies, and close to 10% indicated they had used them to leverage additional funding for their agency. Although modest, the results reported here are encouraging, since the Rankings represent value-added to other community health improvement efforts.

Despite the perceived impact of the Rankings on public awareness, the amount of at least moderate attention received from the general public was reportedly low in both states (20%) and the amount of at least moderate attention received from policy makers was modest at 38% and 33% in Florida and North Carolina, respectively. These measures did not vary significantly between the states.

These results are consistent with the Rankings logic model, which relies on both local health officers’ use of the Rankings and media attention to provoke broad community engagement and support for evidence-based programs and policies to ultimately improve community health. Population health metrics have inherent limitations and as a first step in using the Rankings, LHD staff must first understand the data that underlie them and how these data may relate to other local data.

Beyond using the Rankings to educate staff and search for other data, community engagement, resources, and policy change can all be facilitated through effective media engagement. Recently, Dodson and colleagues reported that constituents’ opinions were the most highly rated factor influencing state legislators’ public health priorities and emphasized the onus that this finding places on public health practitioners (and researchers) to disseminate results from public health research to inform and educate their communities. Traditional media play an important role in translating scientific information and advancing policy goals. Yet, LHDs in both states reported only modest engagement with the media regarding the Rankings.

Insufficient media engagement may explain the limited amount of attention the Rankings reportedly received from the general public and policy makers and, consequently, the reported indifferent effect of the Rankings to influence tangible benefits, including the allocation of funding and other resources or the adoption of new policies, in either Florida or North Carolina.

The Rankings capture complex ideas regarding health disparities, personal responsibility, and the social determinants of health. Effective management of media messaging becomes especially important in this context. Yet, complex messages may be especially challenging for LHD staff to communicate to constituencies that can be variably receptive to hearing and acting on them. Content analysis of 120 news stories covering the release of the North Carolina Rankings report from January 1, 2012, to May 2013 revealed 3 dominant discursive frames: an emphasis on health accountability (personal, rather than social determinants), horse race reporting (competition by rank, which obscures more relevant messages), and engagement (limited LHD involvement in crafting the message). These results suggest that more effective use of the media at the LHD level could help further health promotion goals, both with respect to the Rankings and more generally. However, it has been noted elsewhere that public health does not make effective use of the media as advocates and LHDs may not have the capacity necessary to accomplish this task. Future research might examine LHD-media relationships and engagement, specifically, as well as health communication and media advocacy training needs of the local public health workforce in media advocacy.

Indicators of Rankings use were generally and significantly higher in Florida than in North Carolina. In addition, Florida LHDs attempted to engage significantly more community sectors in understanding and using the Rankings than North Carolina LHDs. The reason for these differences may be complex. Both states ranked similarly according to America’s Health Rankings, 1990-2014, with Florida ranked at 32 and North Carolina ranked at 37. The states are also comparable in key demographic characteristics, such as population density, age, education level, household income, and physicians per 100,000 population, although they do differ in racial distribution, with Florida having a considerable larger Hispanic population (22.5%) than North Carolina (8.4%). Thus, health and population characteristics do not appear to be related to Rankings use.

Another explanation for these differences, not examined in this study, is that the states may differ with regard to their capacity to invest in use of the Rankings. For example, they may differ with regard to the availability of health education specialists, or public
information officers, or other staff who might be expected to respond to and use the report. An alternative account is suggested by the governance structure of the 2 states.27 Local public health activities in Florida are coordinated at the state level by the Florida Department of Health. The release of the Rankings there is facilitated by the state through a contracted agency that conducts statewide trainings, briefs public officials, and engages media interest in the Rankings.28 In contrast in North Carolina, where public health activities are largely administered by local authorities, there are few support services or resources available to LHDs at the state level for assistance in using the Rankings. Although, the Rankings Web site provides substantial support for action based on the Rankings,1 LHDs generally do not utilize these resources (data not shown). Consequently, an important recommendation is to direct practitioners to the Rankings companion “Roadmaps to Health Action Center” that provides communities with tools and resources, such as webinars and community health coaches, useful to building a healthier community.29

Several limitations are noted. First, response options to some questions were not objectively defined (eg, “moderate attention”) and this may have introduced bias. However, it does not seem likely that interpretation of these options would have varied in any systematic way. In addition, data were self-reported and we cannot discount the possibility that participants responded in ways they perceived to be socially desirable. If this were the case, it is likely that respondents would have overstated their use and the perceived impact of the Rankings in their communities and this is not likely to vary by state. Our survey measured the proportions of LHDs using the Rankings in various ways but did not report on the magnitude of use. There is no way to know, for example, the frequency with which LHDs issued press releases or convened community groups regarding the Rankings in either state.

Of greater concern, response rates differed between the 2 states. While a 100% response rate was obtained in Florida, only 65% of North Carolina’s local health jurisdictions participated in the survey. It is reasonable to suppose that North Carolina nonrespondents would have had lower levels of awareness and less engagement with the Rankings, Compared with respondents, meaning that the differences between the 2 states might have been even larger than described here. The rank of respondents and nonrespondents was not examined in this study. This may have biased our results to the extent that rank is related to outcomes. Moreover, because of the small sample sizes, our analyses may have lacked sufficient power to detect additional statistically significant differences.

Finally, the Florida and North Carolina surveys, both cross-sectional, were administered during, and asked respondents to report on, different points in time (2010, 2011—Florida; 2010-2012, 2013—North Carolina). This may explain why the impacts already produced in Florida should be consistently lower than those reported for North Carolina. It is possible that the impact of the Rankings in North Carolina simply had a longer period of time in which to accrue than was the case in Florida. While survey data in North Carolina captured perceptions from the years surveyed in Florida, the reverse is not true. We cannot know what events may have transpired after the survey was completed in Florida. Use and perceptions of impact of the Rankings there may have increased, decreased, or remained the same in the years following the survey period. The available data do not allow us to make these comparisons.

Conclusions

Our study highlights opportunities to increase the potential of the Rankings to mobilize the local public health system to address place-based inequities in health. The amount of at least moderate attention received from media regarding the Rankings in both states is encouraging. However, the amount of attention received from the general public and policy makers suggests that more effective use of the media by LHDs may be necessary to elicit the community engagement and attention from policy makers envisioned to lead to community health improvement. Effective media advocacy may be beyond the capacity of many LHDs,24 which could benefit from targeted training in health communication.3 Future research might examine LHD media relationships and engagement, specifically, as well as the health communication and media advocacy training needs of the local public health workforce. Finally, state variation in use of the Rankings suggests that more coordinated support to LHDs could be helpful. LHDs should be encouraged to use resources available through the Roadmaps to Health Action Center,29 for partnership building, community health needs assessment, and choosing evidence-based policies and programs, particularly in states where support is otherwise limited or unavailable.

REFERENCES


