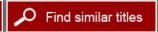


Communicating to Advance the Public's Health: Workshop Summary

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Communicating to Advance the Public's Health

Workshop Summary

Ellen Bayer and Darla Thompson, *Rapporteurs*Roundtable on Population Health Improvement

Board on Population Health and Public Health Practice

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

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The serpent has been a symbol of long life, healing, and knowledge among almost all cultures and religions since the beginning of recorded history. The serpent adopted as a logotype by the Institute of Medicine is a relief carving from ancient Greece, now held by the Staatliche Museen in Berlin.

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"Knowing is not enough; we must apply. Willing is not enough; we must do."

—Goethe



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This workshop summary has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the National Research Council's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published workshop summary as sound as possible and to ensure that the workshop summary meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the process. We wish to thank the following individuals for their review of this workshop summary:

Jay M. Bernhardt, Moody College of Communication Rob Waters, Prevention Institute Ann Whidden, Public Health Institute Ricardo Wray, Saint Louis University

Although the reviewers listed above have provided many constructive comments and suggestions, they did not see the final draft of the workshop summary before its release. The review of this workshop summary was overseen by **Hugh H. Tilson**, University of North Carolina Gillings School of Global Public Health. Appointed by the Institute of Medicine, he was responsible for making certain that an independent examination of this workshop summary was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this workshop summary rests entirely with the rapporteur, and the institution.



Contents

ABBR	REVIATIONS AND ACRONYMS	xiii
1	INTRODUCTION	1
2	THE SCIENCE OF HEALTH COMMUNICATION: GUIDING PRINCIPLES FOR POPULATION HEALTH CAMPAIGNS Behavior, 3 The Need for an Effective Exposure Strategy, 4 A Comprehensive, "All But the Kitchen Sink" Approach, 5 The Importance of Routine Media Exposure and Efforts to Shape Coverage, 5 Discussion, 6	3
3	THE NEWS MEDIA AS A CATALYST FOR ACTION Transforming the Practice of Health Reporting: The California Endowment Health Journalism Fellowship Program, 9 Influencing Public Policy on Obesity, 11 Promoting Community Engagement on Infant Mortality and Homicide in Detroit, 14 Discussion, 15	9
4	EFFECTIVE USE OF DIGITAL MEDIA TO ADVANCE POPULATION HEALTH GOALS Engaging a Lay Audience, 17 Communicating Effectively in the 21st-Century Media Environment, 19 Discussion, 22	17
5	EFFECTIVE MESSAGING STRATEGIES: A REVIEW OF THE EVIDENCE Factors to Consider When Communicating with Key Audiences About Social Determinants of Health, 25 Discussion, 30	25

6	THE POWER OF TELEVISION AND FILM	33
	Presenting Health Information Effectively on Television: The Hollywood Health &	
	Society Program, 33	
	Using Documentaries to Advance Health Equity and Social Justice:	
	California Newsreel, 36	
	Discussion, 41	
7	FINAL COMMENTS	43
	Community Partnerships, 43	
	Discussion Summary, 44	
APP	PENDIXES	
A	References	49
В	Workshop Agenda	51
C	Riographical Sketches of Workshop Speakers	55

Abbreviations and Acronyms

ACA Affordable Care Act

ACL Administration for Community Living

CDC Centers for Disease Control and Prevention

CHEF Communicating Health and Epidemiology Fellowship

HH&S Hollywood Health & Society

IOM Institute of Medicine

PSA public service announcement

RAINN Rape, Abuse, and Incest National Network

USC University of Southern California



1

Introduction¹

The Institute of Medicine's (IOM's) Roundtable on Population Health Improvement brings together individuals and organizations that represent different sectors in a dialogue about what is needed to improve population health.² The roundtable engages members, outside experts, practitioners, and stakeholders on three core issues: supporting fruitful interaction between primary care and public health, strengthening governmental public health, and exploring community action in transforming the conditions that influence the public's health.

The topic of communication has interested the roundtable from the start. At the roundtable's workshop on movement building, the idea of storytelling and the power of narrative to engage, mobilize, and inspire were recurring themes. As the roundtable's conversation about collaboration across sectors and disciplines has evolved, questions about how to communicate effectively and clearly (e.g., without jargon and with humility and inclusion) have appeared repeatedly. The recognition that policy is a potent tool for improving population health is paired with an acknowledgement that there are many challenges to informing the public debate about topics more or less overtly linked with health (ranging widely from soda taxes to universal preschool) and to conveying the best available evidence and information to decision makers. New and emerging media have been an added consideration in the roundtable's—and the field's—evolving dialogue about communication. For example, to what extent are social media platforms an essential conduit for sharing information and influencing relevant individuals and organizations? Is it just hype? As communication needs and modalities are rapidly evolving are those who seek to shape how Americans look at the many factors that make and keep us healthy plac-

¹ This workshop was organized by an independent planning committee whose role was limited to the identification of topics and speakers. This workshop summary was prepared by the rapporteurs as a factual summary of the presentations and discussions that took place at the workshop. Statements, recommendations, and opinions expressed are those of individual presenters and participants, and are not necessarily endorsed or verified by the forums or the National Academies, and they should not be construed as reflecting any group consensus.

² The working definition of *population health* used by the roundtable is "the health outcomes of a group of individuals, including the distribution of such outcomes within the group" (Kindig and Stoddart, 2003). The roundtable understands and takes it for granted that population health outcomes are the product of various determinants of health, including individuals' medical care, genetics, behaviors, and social factors as well as environmental factors and public health. For more discussion, please see the roundtable's website at http://www.iom.edu/pophealthrt.

ing more value on familiarizing themselves with both scientific knowledge and innovations in communication?

On September 22, 2014, the roundtable held a workshop to (1) discuss some of the science of health communication, audiences, and messaging, and to (2) explore what it will take to generate widespread awareness, acceptance, and action to improve health, including through the entertainment media, the news media, and social media (see Box 1-1). The workshop was organized by an independent planning committee in accordance with the procedures of the National Academy of Sciences. The committee, which was chaired by roundtable member Sanne Magnan, also included Ceci Connolly, Marthe Gold, Thomas LaVeist, Joe Marx, and Jeff Niederdeppe. The role of the workshop planning committee was limited to planning the workshop. Unlike the case with a consensus committee report, a workshop summary may not contain conclusions and recommendations except as expressed by and attributed to individual presenters and participants. Therefore, this summary has been prepared by the workshop rapporteur as a factual summary of what occurred at the workshop.

The workshop on communication was moderated by roundtable co-chairs David Kindig and George Isham and planning committee chair Sanne Magnan, and it featured presentations from invited speakers which were largely organized by topical panel. The individual chapters in this summary, which correspond to the workshop's agenda items, each include sections describing the presentations and a closing section summarizing group discussion among speakers, roundtable members, and members of the audience. Chapter 2 offers a synopsis of the morning's keynote presentation, which was an overview of the science, elements, and potential of health communication. Chapter 3 describes the first panel's presentations on the role of the news media in informing the public's view of what creates health as well as high points of the conversation that followed. Chapter 4 describes principles for and examples of the use of social media in engaging new and expanding audiences. Chapter 5 describes presentations and discussion about the science of identifying audiences and crafting messages, drawing on evidence from the social and behavioral sciences. Chapter 6 highlights presentations on the power of television and film in advancing ideas that have the power to influence the determinants of health. The concluding Chapter 7 describes the workshop's closing comments, which summarized and reflected on the meaning of the day's presentations, as well as a general discussion of the day's proceedings that took place among all workshop participants and attendees.

BOX 1-1 Statement of Task

An ad hoc committee will plan and hold a public workshop that will feature presentations on and discussion of communication, e.g., science and best practices in the field, to advance improvement in population health. Topics of interest include: lessons learned from recent and ongoing communication campaigns, the state of the evidence in communicating about health to diverse audiences, and approaches (e.g., storytelling, use of social media) to framing the issues and reaching audiences ranging from policymakers to communities and to journalists themselves. The committee will identify specific topics to be addressed, develop the agenda, select and invite speakers and other participants, and moderate the discussions. An individually authored summary of the presentations and discussions at the workshop will be prepared by a designated rapporteur in accordance with institutional guidelines.

2

The Science of Health Communication: Guiding Principles for Population Health Campaigns

In his keynote address, Robert Hornik discussed four guiding principles for health communication initiatives: (1) identify the targeted behavior; (2) develop an effective strategy for exposing people to the message; (3) take a comprehensive, "all but the kitchen sink" approach; and (4) seek routine media exposure.

BEHAVIOR

The first step in developing an effective health communication strategy, Hornik said, is to understand the targeted behavior. Health communication should focus not on population outcomes (such as increased life expectancy) or on categories of behaviors (such as limiting environmental toxins, reducing exposure to tobacco smoke, and safer sex), but rather on individual behaviors. Health communication can influence people to test for radon and thus help reduce environmental toxins. Health communication can convince policy makers to outlaw smoking in public places and thus help reduce the population's exposure to tobacco smoke. Health communication can persuade people to use condoms and thus advance the goal of safer sex.

Identifying Determinants of Behavior

Many factors influence individuals' behavior. For example, Hornik said, a member of Congress's decision to support funding for National Institutes of Health research on population health may be influenced by lobbying, campaign contributions, the member's personal beliefs, or a combination of factors. Once researchers identify the most important determinants of the member's beliefs, they can tailor communication strategies effectively.

In some cases—specifically, when behavior is driven by forces other than communication—the right intervention will require more than communication alone. For example, in some situations community factors, not individual beliefs, may be the primary influence on behavior. In such cases it may be necessary to tailor communication efforts toward outcomes that were not initially the goal.

The process of developing a population health initiative should begin with investigating the hypothesized determinants of the targeted behavior. This will influence whether the cam-

paign is directly focused on a particular population in order to influence change or whether it should be redirected toward different outcomes or people than initially planned. For example, if fresh produce is not readily available in a community, communicating with residents about the importance of eating fruits and vegetables may have little or no impact, and a more effective approach would be to take action to increase the accessibility and affordability of these foods in the community, possibly in conjunction with communication designed to increase demand. In other words, Hornik said, "If you are trying to influence a behavior in a particular population, then the focus needs to be on what influences them, not what influences you."

Identifying Effective Paths to Change

Even when communication is the most effective path to change, Hornik said, different behaviors will still require different paths to change, and research will be needed to identify the communication paths with the greatest potential to motivate behavior.

For example, in an anti-smoking campaign sponsored by the Centers for Disease Control and Prevention and the Philadelphia Department of Health, researchers tested 29 messages to determine which had the greatest potential to convince smokers already interested in quitting to seek help. The research found that three messages—"It would be easier to quit if I used help," "I would set a good example," and "I would have more energy"—were most likely to convince smokers to seek help with quitting. However, when researchers tested the messages' potential to persuade smokers to quit (rather than seek help with quitting), they found that two other messages were the most promising: "I would respect myself more" and "I am confident that I could manage intense cravings." Messages with the most potential to influence the first behavior—seeking help with quitting—were found to have little or no potential to influence the second behavior, actually quitting. The lesson, Hornik said, is that "depending on the behavior you are going after, even if you choose a communication path, what matters [to people] is going to vary sharply." What actually matters to people, he concluded, can only be learned by doing systemic, empirical work.

THE NEED FOR AN EFFECTIVE EXPOSURE STRATEGY

A Long-Term Process

Even when population health improvement communication campaigns have promising messages for the target audience, Hornik said, they often fail because they do not have an effective strategy for obtaining the needed exposure strategy. If addressing a particular behavior requires exposing people to the appropriate messages multiple times over an extended period, then a campaign needs to have a realistic strategy for assuring such exposure. For example, if behaviors are rooted in complex social norms, then people are unlikely to change their behaviors in response to a one-time exposure to a message. Changing social norms is likely to require a slow, incremental process of communication over time, with repetition from multiple sources.

Routine Exposure Through Paid Media

Without paid advertising, Hornik said, it is difficult for a population health campaign to provide media exposure that is broad and frequent enough to drive change, but large-scale communication initiatives are expensive. The National Youth Anti-Drug Media Campaign spent ap-

proximately \$100 million per year to buy its advertising time. The original American Legacy Truth Campaign, which focused its anti-tobacco efforts on youth, spent a similar amount, Hornik said. Most of the population health improvement campaigns that rely on free or low-cost public relations strategies to shape media messaging do not have access to that level of funding, which limits the exposure they might expect to achieve.

While a small number of campaigns appear to have found success by relying on the Internet to reach their audiences, a closer look at those campaigns may undermine any enthusiasm, Hornik said. It is quite rare for a specific message to diffuse broadly on the internet ("go viral"), he explained, and even those that do may have limited staying power. Although communication campaigns based on the Internet and social media can be implemented quickly and at minimal cost, even in those few instances where a message has tremendous viral diffusion, the message is unlikely to have a lasting presence in the public media environment or to have prolonged effects on behavior. "Virality comes and goes," Hornik said. "It is not equal to useful effects."

Hornik pointed out yet another concern about campaigns that depend on Internet diffusion. Often such campaigns encourage people to actively seek a message—by visiting a website or by becoming a Twitter follower or a Facebook friend—but in practice the portion of the target population which will actually visit a specific website will be very small, and thus campaigns that require an active seeking of information by audiences typically have minimal exposure and are not effective in changing population behavior. Often, Hornik said, campaigns must assume that most target audience members will not be active seekers, and then programs must choose exposure strategies that assume a more passive audience. Often that requires the use of paid media so that people are exposed to messages as part of their everyday routines, while they are using media in a passive way.¹

A COMPREHENSIVE, "ALL BUT THE KITCHEN SINK" APPROACH

The most significant changes in public health behaviors have been associated not with one-time communication efforts, Hornik said, but rather, with multi-faceted, "all but the kitchen sink" campaigns by multiple entities over long periods of time. The substantial reduction in the number of smokers in the United States since 1967 can be attributed to many activities, including but not limited to communication, by many organizations in the past 40 to 50 years. Other successful campaigns—including the National High Blood Pressure Education Program, implemented from 1972-1984 to reduce stroke mortality, as well as long-term efforts to reduce HIV transmission—likewise involved multiple stakeholders and used a variety of strategies.

THE IMPORTANCE OF ROUTINE MEDIA EXPOSURE AND EFFORTS TO SHAPE COVERAGE

Hornik estimated that public health communication campaigns account for less than 1 percent of the total volume of health information conveyed through the media. The vast majority of health information in the media comes from sources such as news programs, documentaries, doctor shows, drug advertisements, health magazines, radio talk shows, and Internet stories that people access in the context of their everyday routines. Because individuals get far more of their

¹ Hornik did not address whether social media could be effective components of the "all but the kitchen sink" campaigns discussed in the next section.

exposure to health-related messages through the media than through deliberate messaging campaigns, health communication efforts should consider strategies that seek to shape routine media coverage.

One way to shape media coverage is through media advocacy. Originally developed by Larry Wallack and Lori Dorfman, media advocacy links grassroots organizations and lobbying in order to influence mainstream media coverage and, ultimately, specific policy outcomes.² Other strategies to affect coverage include standard public relations practices (e.g., issuing press releases and communicating with reporters to shape the content and framing of stories), programs to educate health reporters about population health, and efforts to influence the content of entertainment media.

Media content can affect people's behavior directly—by modeling certain activities and condemning others (such as alcohol use)—and it can frame how people think about issues (e.g., by presenting health behavior as a matter of individual choice versus presenting it as the result of public policy).

Evaluation is a critical component of health communication, Hornik said. To test the effectiveness of a message, it is necessary not only to count the number of people exposed to it, but also to calculate the proportion of the total audience exposed, to measure audiences' understanding of the message, and the determine whether the message changed the audiences' attitudes and behavior, if indeed that was the purpose of the communication program.

Hornik concluded by reiterating the four tenets of health communication: identifying a targeted behavior, not just a population outcome or a category of behaviors; developing an effective exposure strategy; pursuing an "all but the kitchen sink" approach; and seeking routine exposure in the media.

DISCUSSION

In the discussion following his presentation, Hornik responded to a series of questions about effective communication strategies.

In response to a question about how to maintain focus on a goal in the context of a multifaceted campaign, Hornik cited the examples of two political movements aimed at improving population health. Mothers Against Drunk Driving organized people and maintained media attention over long periods of time to reduce drunk driving. Gay men got organized through advocacy groups to focus people's attention on HIV/AIDS. The World Health Organization's Global Program on AIDS shaped media coverage in an effort to frame the disease as a universal problem requiring public investment to protect future generations, since everyone was at risk.

Responding to a question about media manipulation of campaign messages, Hornik said that population health professionals cannot prevent the media from reframing messages. For example, a local news show may cover a campaign's television ad in way that presents the message as controversial or as particularly relevant in a local area. Such changes are virtually impossible to avoid.

Asked about measuring the relative impact of individual components of a multidimensional campaign, Hornik emphasized two points. First, he said, successful population

² Wallack and Dorfman are the founding director and current director, respectively, of the Berkeley Media Studies Group (BMSG). BMSG defines media advocacy as "the strategic use of mass media to support community organizers' efforts to advance social or public health policies." For more on media advocacy, see http://www.bmsg.org/resources/media-advocacy-101 (accessed January 27, 2015).

health movements such as the anti-smoking movement were effective because multiple entities focused on the theme. No single organization managed the campaign, and each entity focused on what it did best. Second, in a multi-faceted campaign, it is impossible to determine which component has the greatest impact because there is interaction among strategies. Each strategy may have different effects, with the various effects working together synergistically to achieve the desired outcome. For example, one part of the campaign may drive behavior change, while another may gain public attention and affect public policy.

When an audience member asked about developing messages to influence media coverage rather than individual behavior, Hornik said that such an approach could work if there were a clear path from media coverage to behavior change. For example, media coverage about climate change could reframe beliefs about electricity use, change social norms, and ultimately motivate people to replace standard light bulbs with energy-efficient alternatives. However, Hornik said he would be concerned about developing messages focused on media coverage without clear evidence that such a strategy would change beliefs and drive behavior change.



The News Media as a Catalyst for Action

The news media can play an important role in community-based efforts to improve population health. However, today's news organizations struggle to compete in a media environment characterized by a 24-hour news cycle, newsroom budget cuts, and a proliferation of social media. Most news organizations cannot afford the types of long-term, in-depth projects needed to engage communities on important population health topics. Therefore The California Endowment Health Journalism Fellowship program at the University of Southern California's Annenberg School for Communication and Journalism provides funding and support to journalists throughout the country for long-term communication initiatives to advance population health.

During the first panel discussion, three journalists described the fellowship program and many of its successful projects. Michelle Levander, fellowship director and editor of Reportingonhealth.org and the *Boyle Heights Beat*, described the program's approach and reviewed several fellowship initiatives. Kate Long, a fellowship recipient and former reporter for the *Charleston Gazette* who co-directs the Try This West Virginia project and the West Virginia Healthy Kids and Families Coalition, described her use of media to catalyze action on obesity and chronic disease in West Virginia. Karen Bouffard, a fellowship participant and reporter for the *Detroit News*, discussed her articles on children's health in Detroit as well as her ongoing efforts to engage community members on the issues of infant mortality and homicide.

TRANSFORMING THE PRACTICE OF HEALTH REPORTING: THE CALIFORNIA ENDOWMENT HEALTH JOURNALISM FELLOWSHIP PROGRAM

Addressing Challenges of the 21st-Century Media Environment

Because it can reach diverse audiences of business leaders, policy makers, and ordinary citizens, journalism provides one of the most effective ways to communicate with the public, Levander said. But newsroom budget and staffing cuts and competition from online media (see Figure 3-1) make it difficult for traditional news media to engage the public and stimulate action on important population health issues. The mission of The California Endowment Health Journalism Fellowship Program is to give journalists the tools they need to overcome these challenges and to foster local efforts to advance population health.



FIGURE 3-1 New ways to connect and communicate, adapted from Nielsen data. SOURCE: Michelle Levander's presentation, September 22, 2014.

Providing Support and a Forum for Sharing Best Practices

The training, mentoring, and ongoing support that the fellowship program provides is helping to change the practice of health reporting and increase its impact on local communities, Levander said. Journalists compete for admission to the program, and, once accepted, they spend a week at the Annenberg School for Communication and Journalism learning about important population health issues. Participants receive stipends ranging from \$2,000 to \$10,000 plus professional mentoring to help them develop their support research, data-gathering, and storytelling skills. The program provides funding for editors to participate in story conferences with the participants, and in some cases it pays for videographers and community engagement specialists to work with the program's journalists.

The Health Journalism Fellowship program encourages reporters to experiment with new communication techniques. Participants have found innovative ways to communicate with audiences before stories are published, using new online tools and traditional approaches such as notices posted in community meeting places. By gathering information from audiences prior to publication, journalists can write stories that reflect community input. Based on their experiences with these methods, participants provide their lessons learned for use in future projects. The program encourages reporters to coordinate with community organizations. For example, journalists writing about obesity may partner with local fitness councils that offer exercise classes, as a complement to their stories.

Since 2004 the Health Journalism Fellowship program has trained 600 journalists across the country. Participants join a larger community of health journalists who communicate online with each other and with policy leaders through an Internet community called Reporting on Health, which makes use of blogs, conferences, and trainings. After completing the program, journalists mentor other fellows.

Engaging Communities on Important Population Health Issues

In the second part of her presentation, Levander described fellowship projects that have engaged communities throughout the country and inspired policy changes aimed at advancing population health. For example, as part of a project in Boyle Heights, a Latino neighborhood in Los Angeles, Health Journalism fellows are partnering with a Spanish language newspaper to help local youth publish stories and hold community meetings focused on public health issues critical to their communities.

Another project brought together reporting teams from different media outlets to publish a series on valley fever, a little-known airborne fungal disease that was having a devastating impact on the Central Valley region of California. Levander said that when policy makers and local residents began responding to the stories, the project's community engagement coordinator organized meetings, conducted story booths, and sent e-newsletters to state legislative staff. As media coverage increased, the 2-month project turned into a year-long effort. The majority leader of the state senate, who lived in Central Valley, became concerned about valley fever and sent stories to the directors of the Centers for Disease Control and Prevention (CDC) and the National Institutes of Health. As a result, Levander said, the officials visited Central Valley and convened a meeting of prominent scientists to discuss the disease.

Levander added that CDC published information from the project, created a webpage on valley fever, and published an update on the disease in its publication *Morbidity and Mortality Weekly Report*. National media organizations, including the *New York Times* and National Public Radio, became interested in the story. The project team provided national reporters with information, sources, and stories about people affected by valley fever and gained widespread coverage. Ultimately, the federal government funded a \$100 million study on effective treatment protocols for the disease.

In another example, Levander said that after health journalism fellow Karen Bouffard published a story in the *Detroit News* about the dangers affecting the city's children, the mayor called for action, and the newspaper followed up with additional coverage.

In Montana, Levander said, a newspaper series about the state's high suicide rate contributed to a sense of urgency that prompted legislative action. Another successful project brought together six reporters from across the country to write articles on the effects of immigration on health status. One story described a family torn apart by immigration and explored its effects on mental health. In a project highlighting the effects of dropping out of school, a reporter created a curriculum for youth groups.

Another Health Journalism fellow reported on the high rates of asthma in a Colorado community located near a large Superfund site. The project's community engagement coordinator partnered with a local youth media organization to tell the story from the youth perspective. After the newspaper published the youths' story along with the reporter's findings, Levander said, local officials revived a long-neglected effort to clean up the site.

INFLUENCING PUBLIC POLICY ON OBESITY

The Shape We're In

The Shape We're In, another media project funded by the Health Journalism Fellowship program, took a multi-faceted approach to engaging communities across West Virginia on the

issue of obesity, helping to raise awareness at a time when legislative action was being considered. Health Journalism fellow Kate Long published 70 obesity-related stories in the *Charleston Gazette* over an 18-month period in 2012 and 2013. She partnered with community organizations to create websites and hold related events, and she developed a statewide network of professionals involved in obesity issues. Long said that the state enacted two laws: Feed to Achieve, which expanded the availability of school breakfasts in West Virginia public schools, and Move to Improve, which requires an extra half-hour of physical activity for all students. Additionally, the West Virginia Statewide Afterschool Network established a policy requiring that at least 50 percent of students' time in afterschool programs be devoted to physical activity.

Strategies for Success

In her presentation, Long described a number of strategies that contributed to the project's success.

Sparking public outrage First, Long said, by repeating messages about the implications of West Virginia's high rates of chronic disease and obesity, the series created a sense of sustained public outrage that transformed people's concern and shame into motivation for action. Stories described obesity as a medical risk, not merely as an issue of lifestyle or appearance. At the same time, by showing how people were overcoming obesity through diet and exercise, the articles conveyed a message of hope.

Sharing personal stories Humanizing the issue of obesity was critical to engaging the public, Long said. People are not interested in reading about diabetes, for example, but they do want to read about people who have overcome major life challenges to lose weight and avoid the disease. For example, the series included a story about Glenda, a West Virginia cook who overcame her struggle against type 2 diabetes. Another article featured women of the Mud River Volunteer Fire Department who came together to exercise and support each other in the process of losing weight. Other stories described a Native American girl with diabetes who was on a local swim team, a preacher, a man on kidney dialysis, and a day laborer who sought help from a diabetes coach. By showcasing people's success in their struggles against obesity and diabetes, the stories gave readers a sense of pride that increased their engagement.

Stories about children also increased public engagement, Long said. Whereas people tend to attribute obesity in adults to a lack of personal responsibility or self-control, audiences are sympathetic to children and are touched by children's stories. The Shape We're In included an article about high school students using movement and dance to teach kindergartners about vowels and consonants as well a story about retraining school chefs to cook meals from scratch.

Using statistics effectively Providing important statistics in plain language increases the impact of media messages, Long said. For example, at the beginning of the project, one in four 11-year-olds in West Virginia had high blood pressure and high cholesterol levels, and 18 percent of kindergartners were obese. Without actions to reverse these trends, CDC said, the incidence and cost of obesity would double. Publicizing these statistics along with CDC's prediction helped create a sense of urgency throughout the state.

¹ For more information see https://wvde.state.wv.us/child-nutrition/feed-to-achieve (accessed January 5, 2015).

Highlighting innovative practices Besides providing real-life examples of efforts to overcome obesity, the stories captured readers' attention by highlighting innovative treatment practices, Long said. These practices included preventive care services and also group medical visits that provided a means for social support.

Partnering with community organizations To increase the series' impact, Long partnered with representatives of religious, medical, social services, nutrition, and education organizations throughout the state. She worked with West Virginia University's Extension Service to create a joint website for articles. The Prevention Research Center established a website for educators to share Long's stories with students. The West Virginia Association of Counties held a Healthy Counties Conference and invited Long to speak. For the first time, the association created a health committee to address obesity.

Long created a statewide network of professionals doing obesity-related work throughout the state. People forwarded her articles to their contacts, and, based on information shared through the network, she compiled a list of diabetes counselors who participated in the State Medicaid program.

Timing Long said that the timing of publications and media reports can be an important factor in policy debates. HBO aired a four-part documentary on obesity, *Weight of the Nation*, while the West Virginia Legislature was considering Feed to Achieve, a bill to expand the state's school breakfast program. Long said that the series caught the attention of legislators, and the bill passed. Likewise, the Institute of Medicine's report on obesity and physical activity for children, *Educating the Student Body*, was published while the legislature was debating Move to Improve, a proposal to increase school physical education requirements. The State School Board discussed the issue and subsequently raised physical education standards for all students.

Linking health issues with economic development Stories linking healthy lifestyles with economic development provided a catalyst for community action in Williamson, West Virginia, Long said. Local leaders—including the mayor, school superintendent, nutrition director, garden club leader, and farmer's market organizer—are now working together on initiatives aimed at creating a healthier community.

Lessons Learned

Based on her experiences, Long offered two suggestions for journalists and population health professionals seeking to influence public policy.

Use compelling photos and headlines: People often do not read articles in their entirety, Long said, but they pay attention to photos and headlines. Headlines, photos, and the captions under the photos should tell the story in a compelling way so that people become engaged even without reading the article.

Share sources and promote regular dialogue By connecting journalists with people experiencing health-related challenges, informing the journalists about events and photo opportunities, and sharing research findings in plain language, population health professionals can shape the news coverage of important health issues. To promote continued coverage, Long said, the population health community should build ongoing relationships with journalists through one-on-one meetings, mini-conferences, and regular dialogue.

The "Try This" Project

Before concluding, Long briefly described Try This, her follow-up project to promote healthy lifestyles in West Virginia. Supported by a coalition of public health, nutrition, community development, and farmers' market representatives as well as two foundations and a health insurer, the project created an interactive website, trythiswv.com. The website displays photos representing community-based programs aimed at advancing population health. Among the initiatives featured are community gardens, farmer's markets, school-based health centers, local fitness challenges, farm-to-school programs, youth and adult sports leagues, healthy cooking classes, and running, walking, and biking clubs. By clicking on the photo of a community garden, for example, users can access information on how to establish and operate a community garden and learn about successful initiatives in other localities. The site also includes videos and links to state and national websites with more information.

The Try This initiative has provided \$82,000 in grants to 42 West Virginia communities for projects to promote healthy lifestyles. More than 400 people attended the project's first annual conference, where nearly 100 people gave presentations on community-based programs intended to improve population health.

PROMOTING COMMUNITY ENGAGEMENT ON INFANT MORTALITY AND HOMICIDE IN DETROIT

Bouffard reported that her series in the *Detroit News* was part of a community conversation about infant mortality and homicide that influenced the mayor and other local leaders to engage in efforts to address these issues. Her stories described the experiences of Detroit families affected by the city's economic decline and highlighted local initiatives to improve population health. Working with state health departments across the country, Bouffard collected data on total deaths and deaths by homicide for children 18 and younger in 23 U.S. cities. Her original research found that Detroit had the highest death rate in America for children from birth through age 18 among cities of its size and larger (Bouffard, 2014). Articles presented compelling statistics—such as the fact that Detroit has the highest infant mortality rate in the nation—and told the stories of people and community issues behind the statistics. One story featured Darnella, a pregnant woman whose children were removed from her household because she was involved in a violent relationship. The story showed that infant mortality in Detroit is attributable not only to inadequate prenatal care but also to factors such as domestic violence and the lack of transportation, social support, and healthy foods in the community.

To show the impact of homicide on Detroit's children, Bouffard wrote about a family in which the father was shot and killed while working as a security guard. The children said they were afraid to play in the park across the street from their house, and the older daughter was afraid to drive her car in the neighborhood.

The training and mentoring that Bouffard received from the Health Journalism Fellowship program helped her frame the story effectively and find sources for important data and background information. The articles presented research findings in plain language and conveyed hope by describing the many local initiatives aimed at improving public safety and health. For example, the Skillman Foundation is funding efforts to strengthen neighborhood watch groups, the Kellogg Foundation is supporting local child nutrition programs, and the Children's Health

Fund is sending mobile health clinics to Detroit public schools to provide treatment to children with asthma.

Detroit Mayor Michael Dugan read Bouffard's stories and contacted her to follow up. To promote continued community engagement, the *Detroit News* and the Kellogg Foundation held an event featuring a lunch and a panel discussion by professionals working to address infant mortality. Invited guests included the mayor, the police chief, foundation leaders, neighborhood watch groups, and local residents. Bouffard's series is continuing, with additional stories focused on the high rate of abortion, the high maternal death rate, and high rates of asthma in Detroit.

DISCUSSION

During the discussion following their presentations, the panelists addressed several questions about effective ways for population health professionals to build positive relationships with journalists. They also discussed strategies to create movements for social change and recommended approaches to presenting important population health concepts in the media.

In response to a question from Paula Lantz of the George Washington University School of Public Health and Health Services about how academic researchers can work effectively with the media, Bouffard said experts should educate reporters about the meaning of their research. Reporters should not rely solely on information from university press releases but rather should read studies in their entirety. When journalists understand the context for newsworthy events and trends, they can report accurately and avoid distortion.

In answering a question from Sanne Magnan of the Institute for Clinical Systems Improvement, Levander said that population health professionals should take a personal approach to communicating with journalists. Population health experts should become familiar with the interests of individual reporters, meet them for lunch, and build relationships over time. In some cases, researchers can help journalists by conducting complex data analyses to enhance the journalists' stories. When news develops, journalists are more likely to call experts whom they know and trust. Reporters do not want to speak with people who repeat messages from prepared scripts and avoid all controversy.

In response to a two-part question, Long said that population health professionals can facilitate local and national media coverage of issues by telling different aspects of their stories to different media outlets. Population health experts using this approach can provide each media organization with information and sources on an exclusive basis. She added that reporters welcome national media interest in stories they have published on the local level and are willing to work with the national media to gain additional coverage.

In answer to a question from Judy Monroe of CDC, Levander said that arranging group meetings between reporters and population health professionals is an effective way to build positive relationships. She suggested arranging casual lunches to provide reporters with background information on issues before they become urgent. Long noted that group meetings also provide a venue for population health professionals to engage in networking and learn about each other's work.

When a participant asked how media messages can effectively create movements to address social issues such as poverty and hunger, panelists suggested focusing on community-based strategies and personal stories. Bouffard's project is bringing together foundation leaders, neighborhood watch groups, mothers, and city officials to address important health issues affecting children in Detroit. In West Virginia, organizations involved in child obesity issues hold re-

gional stakeholder meetings to develop priorities. Telling stories about people who have overcome obstacles to improve their health conveys a sense of hope that can provide a catalyst for action, Levander said.

José Montero of the New Hampshire division of Public Health Services asked how public officials—who are obligated to treat all journalists equally—can most effectively promote coverage of stories of interest to different segments of the community. Moderator Ceci Connolly agreed that public health officials addressing straightforward news issues should disseminate information broadly, to all media outlets in the state. However, she said, when public officials identify a special project or an issue of interest to a particular media organization, it is appropriate to share information with that organization specifically.

In response to a participant's question, Bouffard said journalism alone is not a sufficient tool to advance population health. Support from the Annenberg and Kellogg Foundations has enabled the *Detroit News* and other media organizations with limited funding and staff to provide the sustained and in-depth coverage needed to engage community leaders.

Another participant asked how organizations that do not have media relations departments can create content of interest to the media. Long suggested providing journalists with sources and ideas for stories to show how issues are affecting people's lives.

In response to a question about effective ways to present population health concepts, Levander and Bouffard agreed that articles should avoid population health jargon. Reporters should bring issues to life by telling stories about people who are affected by the issues in question, Levander said. Long said that she sometimes provides definitions of key terms to help readers understand the issues. Learning about population health concepts helps reporters frame stories appropriately, Bouffard said.

In conclusion, Connolly highlighted several key themes from the presentations: Population health professionals should build long-term, ongoing relationships with reporters and treat them with respect. To activate community leadership on population health issues, stories should reiterate important messages, use plain language, and include data to support key points. In some cases, focusing on local issues is the most effective way to engage community stakeholders; at other times, a national focus is best. Furthermore, Connolly added, reporters should consider involving employers and health care companies in community conversations about health. Many companies conduct employee wellness and incentive programs that can play an important role in promoting community engagement. Support for population health initiatives is not universal, Connolly said. Journalists should be aware of all organizations affected by population health issues and should carefully consider their approaches to individual stakeholders.

4

Effective Use of Digital Media to Advance Population Health Goals

As digital media transform the landscape for health communication, public health professionals are seeking new and more effective ways to engage audiences. During the second panel, two digital media experts described a variety of health communication projects in digital space and identified a number of strategies for success. Dana March, editor-in-chief of 2x2, a digital media project at Columbia University's Mailman School of Public Health, described the school's fellowship program and discussed some of the stories featured on the project's website. Based on her experience with 2x2, March provided suggestions for effective health communication using digital media. Carlos Roig, executive vice president for media content strategy for Home Front DC, discussed the predominance of digital communication in the 21st-century media environment, and he reviewed factors to consider when planning digital communication initiatives. After describing several successful projects, he offered advice on using digital and social media effectively to advance population health goals.

ENGAGING A LAY AUDIENCE

The 2x2 Project

Established in 2012 by the Department of Epidemiology at Columbia University's Mailman School of Public Health, the 2x2 project presents findings from emerging public health research in engaging, easy-to-read online stories designed for lay audiences. Its goal is to spark conversation among thought leaders and policy makers about important public health issues and to help translate scientific research findings into practice. The project focuses not only on topics typically associated with public health, such as obesity, but also on social issues such as poverty, education, and gun violence that have a major impact on health. The project uses a variety of storytelling methods, including visual strategies, in addition to traditional journalism.

The Fellowship Program

The 2x2 project is staffed by journalists participating in the Communicating Health and Epidemiology Fellowship (CHEF) at the Mailman School of Public Health. The CHEF program, which supports four or five fellows each year, provides training on topics such as communicating

with lay audiences about public health issues, using social media effectively, generating conversations across digital platforms, and writing commentary aimed at stimulating action.

March collaborates with CHEF participants to develop stories through a brainstorming process called "idea lab." The project uses three social media platforms—Facebook, Twitter, and Instagram—and it soon will add an audio platform called Clammr.

Timely Content Linked to Popular Culture

The 2x2 project recently published a week-long series on the public health implications of Internet addiction, gambling, and gaming. The series included a lengthy, in-depth story called "Gambling with America's Health." *Pacific Standard* magazine re-posted the story on its website.

Another week-long series focused on gun violence. Stories explored the role of advertising in promoting gun violence and described advocacy group campaigns to make gun ownership and shooting attractive to children.

The 2x2 project also publishes commentary to provide context for conflicting media reports about the risks and benefits of popular treatments such as hormone replacement therapy. When the latest research findings conflict with previous reports, 2x2 journalists provide insights on the evolving landscape for evidence-based care.

Journalists participating in 2x2 review health-related documentaries produced by the PBS program Frontline. The project's stories about League of Denial—a documentary about traumatic brain injuries in the National Football League—discussed the potential for the sports-related injuries to become a global epidemic. Additionally, 2x2 produces a feature called PHresh, which reviews the week's public health news, discusses the media's portrayal of population health issues, and spotlights various important topics, some of which have been covered by the media and some of which have not.

Strategies for Success

As March was describing other 2x2 stories, she highlighted several effective digital communication strategies.

Produce timely, engaging visual content Because Facebook, Twitter, and Instagram are visually driven, the 2x2 project produces provocative content to support visual information sharing. For example, it posted an open letter to LeBron James featuring an altered image of the athlete to show how much weight he would gain if he consumed the amount of sugar contained in the Coca-Cola and McDonald's products he advertises. Citing data showing that celebrity endorsements of unhealthy foods have a negative impact on public health, the letter urged James to drop the endorsements.

The format of digital content should reflect that fact that people get most of their online news through mobile devices, March said. By creating websites that are optimized for such mobile devices, population health professionals can maximize their opportunities to generate conversations in digital space.

Content based on current news stories can also help generate interest in public health issues, she said. By adding to discussions that are already underway in the news media, the 2x2 project seeks to capture public attention and foster continued dialogue.

Incorporate relevant data Stories are strengthened by data, March said, and data are more powerful in the context of stories. Online communications about public health topics should reflect this synergy between stories and data.

Speak with a unified voice across digital platforms Covering events live on Twitter can help foster engagement, March said. Live tweeting creates easy-to-read content for people at the event, she added, and it helps build networks of people who are interested but unable to attend in person. To stimulate conversation across the digital landscape, health journalists should speak with a consistent voice across online platforms.

Build relationships The most successful social media strategies are those that build relationships and foster continued dialogue about public health. Therefore, March suggested, communications projects should seek not only to distribute content but also to generate conversation and promote ongoing engagement. Because people throughout the world use social media, population health professionals should seek engagement on a global scale.

COMMUNICATING EFFECTIVELY IN THE 21ST-CENTURY MEDIA ENVIRONMENT

The Predominance of Digital Media

Roig began his presentation by noting that digital media are no longer new, emerging technologies. Rather, they now are standard tools for mass communication. Therefore, health communications professionals should rethink their process of designing and distributing content to engage audiences.

Because most people now access breaking news through digital media, traditional news organizations such as the *Washington Post* are struggling. As a result, Roig said, the market value of traditional media companies has fallen dramatically. Whereas Amazon recently purchased the *Washington Post* for \$250 million, the purchase price for Instagram—a social platform for photo sharing—was \$1 billion. Facebook acquired WhatsApp, a text messaging platform, for \$19 billion. To engage people on public health topics in a communications environment dominated by digital media, Roig said, population health professionals need to understand and use social media platforms effectively.

Each social media platform has a specific audience and function in the digital space. Instagram and Tumblr, a multimedia blogging platform, tend to have younger audiences than other platforms. Reddit is a platform for community-generated news and commentary. It includes a feature called the Ask Me Anything event, which President Obama and other prominent individuals have used. Pinterest enables visual bookmarking for do-it-yourself projects, recipes, and fashion. Facebook provides opportunities for interpersonal connection and engagement. Twitter allows users to create short messages, or tweets. Twitter's value, Roig said, is derived not solely from the tweets themselves but rather from their ability to direct people to related content. LinkedIn is a professional networking site where people post resumes online.

Use of Digital and Social Media for Health Communication

Factors to Consider

Communicating through social media should not be one's only strategy in efforts to advance population health goals, Roig said. Instead, social media should be viewed as an important component of a broad set of communication strategies. When planning health communication initiatives, he said, it is important to set clear goals and assess whether social media can help achieve those goals. Population health professionals should conduct preliminary research to understand the environment and identify the target audience. Coordination with communications, marketing, and, public relations staff should occur early in the planning process.

Roig advised workshop participants to select digital and social media platforms for particular projects based on their potential to reach and engage the intended audience. Content should be tailored to the platform, and engagement plans should be based on both the content and platform. As they develop content and execute engagement strategies, communications professionals should assess the quality, volume, and impact of those channels on a regular basis. High-quality content—which may include photography, advertising, video, and infographics—should be distributed steadily and consistently to achieve maximum impact (see Figure 3-1).

Successful Initiatives

To show how digital and social media can be used effectively, Roig reviewed several successful projects.



FIGURE 4-1 Quality, volume, impact.

SOURCE: Carlos Roig's presentation, September 22, 2014.

¹ For a more cautious assessment of the potential reach and impact of social media, see the summary of Robert Hornik's presentation in Chapter 2.

NewPublicHealth.org In order to reach their target audiences with a steady stream of public health news and information, the Robert Wood Johnson Foundation created a site called NewPublicHealth.org. Former journalists and professional communicators produce content for the site, which features public health news roundups, recommended reading, question-and-answer sessions with public health leaders, and highlights from many public health conferences, including the American Public Health Association's annual conference. Users can comment on, share, and e-mail each article. In 3 years, more than 1 million pages were viewed on the website, and the Twitter account associated with the site grew by more than 200,000 followers.

Outbreak Week To highlight gaps in the public health system that could hinder its response to infectious disease outbreaks, Trust for America's Health and the Robert Wood Johnson Foundation created a week-long series called Outbreak Week. The series featured engaging infographics, online articles posted on NewPublicHealth.org, animated gifs, a 15-second video, and a Twitter hashtag.² The associated Twitter account has grown by more than 3,400 followers..

Google Hangouts Home Front collaborated with TEDMED to plan and execute more than 40 moderated events called Google Hangouts, which were broadcast live on social media platforms. The events, designed to shape public conversation on important health topics, featured representatives from the Department of Health and Human Services, Kaiser Permanente, Seimens, and Cigna, among others. More than 10,000 people participated live in the events, and more than 50,000 people viewed post-event videos.

Public safety A project with Toyota and the Cincinnati Children's Hospital included Web-based and social media tools to promote the safe installation and use of children's car seats. Within 6 months, the number of Facebook fans for the project grew by more than 3,000 percent.

Digital branding An online project with the Carnegie Endowment for International Peace focused on social media to create personal brands—that is, strong, recognizable identities—for foreign policy experts in the digital space. Carnegie emerged from virtually no presence on social media to getting recognized by the University of Pennsylvania in their 2013 index of think tanks for best use of social networks.

Key Strategies

Based on his experiences with these and other projects, Roig identified a number of strategies for success in digital space.

Segment audiences To maximize the impact of communication efforts, public health professionals should identify target audiences by category and develop engagement strategies for each audience. One strategy for engaging with a variety of audiences is to organize events in social media and to participate in online events conducted by other organizations.

Curate from multiple sources and add unique content Because so many individuals and organizations outside of the media industry have become digital publishers, health communication projects no longer need to rely exclusively on the news media to distribute content. Effective

² The campaign generated more than 47 million impressions on Twitter. Impressions are the number of times a user receives a Tweet. A hashtag (metadata tag) is a word or phrase that is preceded by a pound sign (#) and allows users to search for and identify messages on a specific topic.

projects curate content from a variety of sources and add value with original material. Audiences often are attracted to online platforms that distill important information from across the Internet and provide links to other websites for more information.

Create individual brands Organizations seeking to increase their effectiveness in the digital space should create strong digital identities, or brands, for key members of their leadership teams. Professionals with strong digital brands can become online thought leaders and play a significant role in shaping conversations about important issues.

Coordinate online and offline efforts to build a foundation for future engagement Population health professionals should develop strategies to engage with target audiences, online and in person, before and after implementing digital media projects. By cultivating relationships with organizations and thought leaders who can act as informal ambassadors, health communication professionals can create active online networks, increase public engagement on important issues, and build a foundation for future efforts. The early stages of planning and implementing digital and social media campaigns can be difficult, Roig said, but once an organization establishes a strong foundation and audience base, it can more easily experiment with new ideas. It is important to track both quantitative and qualitative metrics for online communication initiatives, although there is no single best measure of success.

In conclusion, Roig challenged workshop participants to think about how to make digital media a central component of their work.

DISCUSSION

During the discussion following the presentations, panelists answered questions about how to design and implement effective health communication projects.

In response to a question from moderator Michelle Larkin of the Robert Wood Johnson Foundation about how to create messages with a lasting impact in the digital world, March and Roig suggested a systematic approach. First, they said, it is important to identify the target audience. When planning communication initiatives, public health professionals should determine the people they want to reach, the information they seek to convey, and the actions they wish to promote, Roig said. Digital communication strategies for an 18- to 24-year-old audience differ from those targeting *New York Times* readers, March added. Repetition is important, but audiences stop paying attention if the same messages are repeated too often, she said. To keep people engaged, health communicators should find new and innovative ways to present information across the digital landscape. For example, said, March, it may be useful to continue conversations on Facebook rather than on an organization's home page. Communication initiatives should include mechanisms to regularly seek and incorporate audience feedback.

When Sanne Magnan of the Institute for Clinical Systems Improvement asked how to find the right balance between in-person and social media strategies for relationship building, Roig and March agreed that reciprocity is critical. Public health professionals should not focus solely on publishing their own digital content. Instead, March said, they should curate content from multiple sites. The same principles that apply to building relationships in person apply across the digital landscape, Roig added. Just as professionals giving presentations at conferences should avoid excessive self-promotion, public health professionals communicating in the digital space should move beyond disseminating their messages and think about how to provide

value to the target audience. When deciding whether to pursue partnerships in person or in the digital space, Roig said, public health professionals should first determine whether the individual or organization of interest has a strong digital presence. If not, cultivating a relationship in person would be preferable. March encouraged workshop participants to reach out, both in person and online, to discuss their work with journalists and thought leaders with a shared interest in public health. Larkin noted that face-to-face meetings can enhance online relationships. For example, people attending conferences sometimes use their Twitter accounts to connect in person with other attendees.

When asked about public response to the 2x2 project, March said she has received excellent feedback. The project is on the cutting edge of journalism, publishing scientifically grounded, sometimes provocative pieces to stimulate conversation about important public health topics. March said she welcomes all input, including the negative feedback she received from gun activists in response to stories that presented gun violence as a public health issue. The project's leadership is considering new ways to expand its audience across a broader political spectrum by, for example, publishing point/counterpoint pieces to represent different perspectives. Furthermore, 2x2 is seeking additional funding to expand and sustain its activities.

Responding to a participant's question about how to develop individual and organizational brands that appeal to specific audiences, Roig stressed the importance of knowing the audience. Some people are interested in reading lengthy, in-depth research reports about population health issues, while others prefer shorter pieces. To reach the broadest possible audience, health communication initiatives should use a combination of digital platforms, including some that tell the full story about an issue and others that summarize key points. Moreover, public health professionals should build websites based not on the preferences of their colleagues and peers, but rather based on the characteristics of their target audience. Communication with the target audience should differ from communication with peers.

To achieve measurable results, population health professionals should identify the specific demographic groups they wish to reach and the behaviors they seek to promote, Roig said. Based on those decisions, professionals can choose the digital and social media platforms that are best suited to their target audience. Just as fashion industry professionals engage with fashion trendsetters to influence people's style preferences, public health professionals should seek dialogue with opinion leaders to disseminate public health messages in a strategic way, March said.

Answering a participant's question about the use of social network analysis and other analytic tools to define online audiences, Roig said that the tools for social media analysis continue to evolve, and there is no single best source. He therefore uses a mix of paid and free platforms for analysis. Analyzing and responding effectively to audience feedback on social media is a challenging process. In some cases, traditional research methods, such as focus groups, can provide valuable insights. Though costly, these methods are warranted for large campaigns and social marketing efforts, he said.

Larkin summarized the session's key points. First, he said, it is important to plan health communications efforts systematically. Population health professionals should first set goals for behavior or policy change, decide what they want audiences to focus on, and use social media strategically to promote engagement. Research is necessary to understand which strategies and messages are most likely to influence audience behavior. Health communications projects should engage audiences in ongoing dialogue, address audience feedback, and stimulate lively debate about effective solutions to complex problems.

24

COMMUNICATING TO ADVANCE THE PUBLIC'S HEALTH

Larkin concluded by challenging the workshop participants to expand their networks beyond the colleagues and peers they work with regularly. To advance the goals of population health, she said, public health professionals should build broad networks, seek input from people with different perspectives, and keep an open mind about new and innovative approaches to important issues

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5

Effective Messaging Strategies: A Review of the Evidence

When developing messages for health communication initiatives, public health professionals and communications experts rely on the lessons learned from their experiences as well as on their professional judgment about the strategies that are most likely to succeed, said Marthe Gold of the New York Academy of Medicine and the City College of New York, the moderator of the third panel. These professionals often make decisions without empirical evidence of effectiveness, she said, because the availability of relevant research is limited. The lack of a strong evidence base can be attributed in part to the limited funding available for research on population-based health interventions and also to the difficulty of determining causality in multi-faceted health and communication campaigns. During the third panel session, Sarah Gollust, an assistant professor at the University of Minnesota's School of Public Health, and Jeff Niederdeppe, an associate professor at Cornell University's Department of Communication, shared findings from the latest research, funded primarily by the Robert Wood Johnson Foundation and the National Institutes of Health, on the impact of different messages about health inequalities and the social determinants of health.

FACTORS TO CONSIDER WHEN COMMUNICATING WITH KEY AUDIENCES ABOUT SOCIAL DETERMINANTS OF HEALTH

The Current Focus on Individual Behaviors and Personal Responsibility

Health communication research and practice traditionally have focused on changing individual behaviors such as smoking and eating habits, Niederdeppe said, yet research shows that individuals' health behaviors and outcomes are influenced largely by the social, political, and economic environments in which they occur. Communication strategies that are effective in influencing individual behaviors may not be effective in advancing policies to improve the environment. In fact, he said, sometimes the strategies conflict.

Public opinion and discourse about many of the leading causes of death in the 21st century—including heart disease, cancer, chronic obstructive pulmonary disease, and accidental injury—are driven largely by a sense of personal responsibility for health. When asked in a national public opinion survey about factors that strongly influence health, the vast majority of re-

spondents cited personal health practices such as smoking, diet, exercise, and alcohol use. Fewer people mentioned factors such as affordable health care and health insurance. Respondents were least likely to attribute health to social determinants such as income, education, neighborhood, and race/ethnicity (Robert and Booske, 2011). People who viewed individual behavior as the sole determinant of health outcomes were much less likely than other respondents to support public policy options addressing the social determinants of health.

Developing communication to explain how the social, physical, and policy environments affect individual health behavior is challenging, Niederdeppe said, because the relationships are complex. It is not always obvious how macro-level factors link to individual actions. Researchers in the United Kingdom created a diagram illustrating 105 systems-level variables contributing to obesity. The complexity of the diagram underscores the challenge of communicating effectively about the problem, for which there is no single solution.

Goals and Target Audiences

The goals of communication campaigns and other messaging about the social determinants of health can be divided into five categories, Niederdeppe said. Some aim to increase the public awareness of health disparities and to show that they are determined in part by social factors. Others seek to increase concern about disparities and to build support for action to address them. Some public health messages promote the belief that societal forces contribute to poor health and health disparities, some seek to build support for policies addressing social factors, and some seek to mobilize people to advocate for social change.

Communication about the social determinants of health will need to address at least three audiences, Gollust said: the general public, the medical and public health workforce, and decision makers in the public and private sectors. There are at least two types of publics for campaign messages: those inclined to agree with messages about social determinants of health and those inclined to disagree. Communication about the impact of social determinants should seek to mobilize the former group and persuade the latter.

The medical and public health workforce is an important audience because of its credibility on population health issues, Gollust said. Health care workers may be able to focus public attention on population health, to educate patients and others, and to mobilize people to act. Communication with decision makers, including policy makers and private-sector leaders within and outside of the health care industry, should promote specific actions that can be taken to address the social determinants of health

Challenges from Industry

Communication initiatives to advance public health face challenges from well-funded industries that promote products—such as cigarettes, alcohol, and junk food—that are detrimental to health, Niederdeppe said. These industries tend to oppose regulations affecting their profits, and, he estimated, they are able to outspend public health advocates by at least 100 to 1 when their marketing budgets promoting their products are taken into account.

¹ An interactive obesity systems map can be viewed at http://www.shiftn.com/obesity/Full-Map.html (accessed February 18, 2015). For more information see http://www.noo.org.uk/NOO_about_obesity/causes (accessed February 18, 2015).

Important Lessons Learned

Based on the current body of communication research, Gollust cited three important lessons about the effectiveness of various strategies to communicate about population health. First, communication initiatives designed simply to increase the awareness of social determinants may not be sufficient to effect change. Second, to influence public opinion and policy, communication will need to reflect important societal values that resonate with large audiences. And finally, when formulating communication strategy, it is important to recognize and address challenges from groups opposed to the population health messages and policy being supported by the communication strategy.

Recognizing the Limitations of Informational Strategies

Raising public awareness about disparities is not sufficient to induce action, Gollust said, and it may even have unintended consequences. Rigby et al. (2009) found that messages about health disparities primed people to focus on group differences. Messages linking health disparities to race generated the least support for public policy intervention, while messages relating disparities to income generated the most support for government action. That study as well as additional research by Lynch and Gollust (2010) found that people may have different beliefs about the reasons for group differences. Some may attribute racial and gender variations in longevity to individual behaviors. Others may believe these differences are related to societal factors. Some people may believe that discrimination affects longevity, whereas others may think that genetics is the primary determining factor (although evidence unequivocally finds that genetics is not an important factor). Attitudes about responsibility and fairness also may shape people's views about the reasons for group differences in longevity.

People may process messages differently depending on their knowledge or beliefs about the social determinants of health. Therefore, Gollust said, an educational message may not have the same influence on all people, and educational strategies may not be sufficient to stimulate action on health disparities. A study by Gollust and colleagues (2009) found that individuals' responses to a news article about the social determinants of diabetes varied by party affiliation. People in the control group, who received no information about social determinants, showed little recognition that social factors affect health. When people in the experimental group received information about social determinants, the recognition of social factors' role increased substantially among Democrats and Independents, but not among Republicans. Moreover, support for public policies to help prevent diabetes increased among Democrats who read the information, while it declined among Republicans.

When Lundell et al. (2013) studied focus groups, they found similar variations in information processing based on people's values, beliefs, and prior knowledge of issues. The major lesson learned was that in the absence of information explaining how social determinants create disparities, people form opinions based on their biases. They may be suspicious of data on the topic or attempt to refute the statistics. One focus group participant rebutted data on the association between educational attainment and life expectancy by saying, "Maybe somebody didn't go on to school or even didn't finish high school, but they might have gotten a good education at home in terms of how to be a healthy person." Population research has shown, however, that the link between education and longevity is attributable not only to education about health specifically but also to the skills, abilities, and resources that people gain through higher education.

A study by Gollust et al. (2014) showed that even when policy makers have access to the best information about health disparities and social determinants, they may not consider the data

in their decision-making process. For example, despite the abundance of evidence on disparities in obesity, the researchers found that none of the of oral testimony, written reports, fact sheets, bills, or news articles discussed by the Minnesota legislature over 5 years of discussion on this issue actually cited this evidence to support government action on disparities in obesity.

Linking Population Health Messages to Important Societal Values

Population health messages that reflect important societal values may be more persuasive than messages that do not, Gollust said. For example, messages acknowledging personal responsibility for health—a strong value in the United States—probably are more effective than messages that do not (Gollust and Cappella, 2014). Gollust offered several important caveats, however. In a nationally representative study on the impact of three messages about the social determinants of health, the message that mentioned personal responsibility generated less anger among both Republicans and Democrats than the message emphasizing social determinants or the message highlighting the relationship between socioeconomic status and health (Gollust and Cappella, 2014). But a message suggesting that personal responsibility was the major or exclusive determinant of health generated much more anger, particularly among Democrats. Moreover, the message emphasizing personal responsibility sparked many counterarguments from both Democrats and Republicans. These findings indicate that audiences are likely to reject messages attributing health outcomes mainly or exclusively to personal responsibility.

A study by Niederdeppe et al. (2014a) found that personal stories about the social and economic determinants of obesity were more persuasive when the protagonist acknowledged some level of personal responsibility for his or her health. However, placing a strong emphasis on personal responsibility undermined the social determinants message, particularly among people with conservative political views. Additional research has suggested that using personal narratives to convey information about the determinants of health can lead people to focus more on the role of personal responsibility. A study by Barry et al. (2013) found that people who read obesity information in the form of a story about a child blamed children more for the condition than those who read a story without the individual narrative. In another study, Niederdeppe et al. (2015) found that policy makers tended to develop counterarguments against information conveyed through personal narratives, unless it was linked to statistics or a story about community issues.

Because messages focused on personal responsibility sometimes reduce support for population health objectives, researchers are seeking new ways to show how population health issues relate to important American values. For example, to build support for improving school meal programs, a recent report highlighted the devastating impact of childhood obesity on military readiness (Christenson et al., 2012). In a study by Gollust et al. (2013), messages emphasizing the effects of child obesity on military readiness led conservatives to view obesity as a government responsibility and increased their support for obesity prevention policies.

Additional research is needed to identify effective messaging strategies for linking population health objectives with important American values. Messages that relate population health goals to the values of fairness, equal opportunity, and economic security may generate support for public policy interventions, Gollust said. For example, a study by Lynch and Gollust (2010) found that people defined fairness in a variety of ways, and a plurality (38.4 percent) believed that it meant "Everyone has an equal chance to begin with." This suggests that messages emphasizing equal opportunity may resonate with a wide segment of the American public.

Anticipating and Responding to the Opposition

Health communication professionals often face challenges from opposing organizations that can outspend them by 100 to 1, or even more, Niederdeppe said. Efforts to anticipate and respond to opponents' messages may have limited success. In one study by Niederdeppe and colleagues (2014b), researchers divided people into four groups to test the effect of alternative messages about a proposed tax on sugar-sweetened beverages: one group read a strong, researchbased argument supporting the tax; the second group read both the pro-tax argument and an opposing argument from the beverage industry; the third read a "refutational" message refuting industry arguments against the tax and explaining why the tax was justified; and the fourth group received no message. The refutational message increased support for the tax relative to the control group, but approval remained far below 50 percent. Moreover, people's responses to the message varied by political affiliation. The refutational approach was effective among Democrats and Independents, but it seemed to backfire among Republicans. To replicate the real-world environment for health communication, where industry opposition outspends health policy advocates by a considerable margin, researchers conducted a follow-up study in which participants read an anti-tax message 2 weeks later. After reading the follow-up message, a majority of people in all four of the original groups—including those who had read the refutational message continued to oppose the tax.

Calling attention to public health issues may in some cases activate the opposition, Niederdeppe said. A study by Harwood et al. (2005) found that when an alcohol prevention campaign received extensive media coverage, prevention legislation was defeated. When the campaign received little or no coverage, several prevention bills were enacted. Based on this analysis, researchers suggested that media advocacy had the unintended effect of mobilizing the alcohol industry. In some cases, Gollust noted, industry representatives disseminate arguments against public health initiatives indirectly through third parties such as interest groups and advocacy coalitions. Therefore, she encouraged population health professionals to identify and track the source of counterarguments.

Finding Effective New Messengers

The traditional news media is an important source of information about population health, but the news tends to focus on individual determinants of health—such as behavior, biology, and genetics—rather than on social, economic, or neighborhood determinants (Gollust and Lantz, 2009). Although the news media is beginning to describe issues from a population health perspective, Gollust said, this approach remains relatively uncommon. In a study by Wallington et al. (2010), journalists cited the lack of specialized training, capacity, and time as barriers to covering health disparities. Moreover, they had difficulty making the issue relevant and interesting to target audiences. One journalist said, "I think that [with] any issue that involves race, such as health disparities, there will be opportunities for people or our audiences to turn a deaf ear or say, 'Oh! Here we go going on about this [race] again."

Because the news media has a limited capacity to deliver population health messages, further research is needed to identify effective messengers outside traditional media outlets, Gollust said. Messages are most likely to be persuasive when the audience perceives the source to be credible; therefore, she suggested, public health professionals should conduct research to identify which potential sources are perceived as most credible. Messages from unexpected sources can be particularly effective. For example, a study by Bergan (2012) found that a Republican's endorsement of a policy allowing same-sex marriage generated greater support for the policy than a

Democrat's endorsement. A health communication campaign in San Francisco, The Bigger Picture, features youths speaking to youths about the social determinants of type 2 diabetes. Military leaders affiliated with the Mission Readiness campaign are advocating for healthier school meals to reduce child obesity.

In conclusion, Niederdeppe called for additional research, both on the interaction between message and messenger and on the connection between public opinion and actions conducive to policy change. Public opinion—along with factors such as politics and coalition building—plays a major role in the policy-making process. Gradual shifts in public opinion have set the context for significant policy change on issues such as same-sex marriage and tobacco control. Additional research is needed, Niederdeppe said, to identify the communication strategies with the greatest potential to influence public opinion on population health issues. Just as professionals would not make public health decisions without comprehensive epidemiological evidence, they should not make decisions about health communication strategies without sufficient research and evaluation. Communicating effectively about population health is just as important as understanding its fundamental causes, he said.

DISCUSSION

Following the presentation, panelists responded to questions about effective messages and strategies for advancing population health.

Michael Mangianello, founding partner of HCM Strategists, asked whether a single event could prompt policy change to improve population health to the same extent that National Coming Out Day changed the policy environment for the gay rights movement. Niederdeppe suggested that a multi-faceted, "everything but the kitchen sink" approach would have greater potential to influence policy than any single event. Strategies that go beyond messaging to include coalition building and efforts to stimulate interpersonal conversation and mobilize people are effective ways to engage the public. Gollust agreed and noted the importance of generating conversation in small groups and social networks. Gold said that bringing together diverse groups of people to share ideas and build mutual understanding can be an effective way to approach public policy challenges.

When David Kindig, emeritus professor of the University of Wisconsin School of Medicine and Public Health, asked about the state of the art in targeting specific audiences, Niederdeppe said that the research on effective strategies is limited. His study of the impact of various messages on legislators and the general public (Niederdeppe et al., 2015) found a similar association in both groups between perceptions of personal responsibility for health and support for public policy intervention. To advance the objectives of population health, public health professionals should make personal connections and build long-term relationships with policy makers, he said. Additional research is needed to identify effective relationship-building strategies.

Sanne Magnan of the Institute for Clinical Systems Improvement asked for suggestions for how to anticipate unintended consequences without conducting formal research and how to engage audiences in discussions about health care costs. Gollust said that results from past experience may help health communications professionals recognize the potential for unintended consequences, but empirical research is probably the best source of guidance. Niederdeppe said that it is not always possible to design evaluations to analyze unintended effects, but social science theory may be instructive in some cases. For example, if the target audience has stereotypes that could interfere with effective communication, researchers should avoid messages with the

potential for priming these stereotypical convictions, such as the existence of certain types of group differences. Even if they do not test messages in advance, researchers should consider strategies to offset stereotypes. Research on message processing and motivated reasoning processes has identified metrics that signal potential boomerang effects, that is, effects that produce results that are opposite from those intended, Gollust said. By measuring intermediate emotional and attitudinal reactions to communication—such as anger, negative thoughts, and counterarguing—researchers can assess whether messages are having the intended effect on public opinion or if they have the potential to produce backlash.

Engaging audiences on the issue of health care costs is challenging, Gollust said, because people associate low-cost care with low-quality or substandard care. Negative reactions to cost discussions are strongly associated with moral concerns about rationing. Additional research is needed to explore the implications of these views.

In light of findings reported by Rigby et al. (2009), Pamela Russo of the Robert Wood Johnson Foundation asked whether population health professionals should focus discussions of health disparities on income rather than on racial and ethnic differences. Discussions of race are challenging for many reasons, Gollust said, but because racial minority status is so strongly associated with other types of social disadvantage, it is impossible to discuss one issue without the referencing the other. The study by Rigby et al. (2009) found that people had different attitudes about the reasons for racial and income disparities in health. Many people believe that racial and gender differences in life expectancy are mainly biological, but they do not believe the same thing about income differences. Therefore they may have different responses to messages about disparities, depending on the group being discussed. Additional education may be necessary to change how people understand the underlying factors leading to group differences.

Focusing discussions of disparities exclusively on income inequality would omit many other factors, such as discrimination, that contribute to racial disparities, Niederdeppe said. Although avoiding discussion of race may be easier in the short term, he added, in the long term it would have negative implications for social justice, and the costs would outweigh the benefits. Gollust commented that structural factors and discrimination are important and distinct determinants.

Paula Lantz of The George Washington University School of Public Health and Health Services commented that policy change tends to occur when policy makers and the public view affected populations as deserving. For example, policy makers typically view women as a deserving population in the context of policies related to breast cancer prevention. As a result, legislatures in 19 states have passed bills requiring the issuance of mammogram reports to notify women when the results show dense breast tissue. The greatest challenge facing public health professionals, she said, is to effectively address issues affecting populations who are marginalized and viewed as less deserving and who lack a voice in the policy-making process. Messages should not use the term social justice, she said, because discussions of social justice tend to polarize people based on their political and ideological views.

Gold concluded the session by reviewing major points from the presentation. First, he said, it will be difficult to shift public opinion away from the view that individual behavior determines health, but this shift is necessary to make progress in addressing social determinants. The social and environmental factors affecting health are complex, and efforts to explain them succinctly are challenging. Public health organizations also face challenges from well-funded opponents.

Population health messages should focus on three target audiences: the public, health professionals, and decision makers. In some cases, communication should aim to mobilize audiences; in other instances, it should be designed to persuade. The persuasion process is difficult, and increased awareness is not always a sufficient impetus for action. Public health messages linked with important American values are more likely to be persuasive.

Changing the way that messages are conveyed can alter people's responses. Narratives suggesting that health outcomes are determined by a moderate amount of personal responsibility combined with other factors may be the most effective way to convey information about social determinants. However, individuals' interpretations of messages vary depending on their political beliefs and values.

Counterarguments and opposing messengers can create major challenges for population health initiatives. In some cases, focusing public attention on an issue activates the opposition and leads to defeat. In New York State, when policy makers were considering a tax on sugar-sweetened beverages, the beverage industry worked with the NAACP to defeat the proposal.

The traditional news media have been slow to engage in discussions about social determinants of health. Reporters may be reluctant to use population health terminology because they expect a negative response among readers, but research findings suggest that a change in journalists' perspectives may be coming. It is important to use the language of population health and to discuss social determinants, Gold said, in order to help change public perceptions and increase support for investment in population health initiatives.

In a concluding comment, Gollust reiterated Lanz's call for focusing communication initiatives on the needs of populations often viewed as less deserving, in spite of the challenges this poses because of the undercurrent of negative societal attitudes toward some marginalized groups.

6

The Power of Television and Film

Television and film are powerful tools to disseminate health information, promote health, and construct health-related narratives, said Dana March, moderator of the fourth panel. Since the 1940s, TELEVISION and film have played an important role in shaping Americans' perceptions of health and disease. During the fourth panel session, two presenters described creative ways that the power of television and film could be leveraged to increase the public understanding of population health. Kate Folb, director of the Hollywood Health & Society (HH&S) program at the Annenberg School for Communication and Journalism at the University of Southern California, described how the program helps writers and producers convey health information effectively on television. And Rachel Poulain, an associate producer at California Newsreel, discussed two projects combining documentary film with public engagement campaigns to shift the public conversation about population health issues.

PRESENTING HEALTH INFORMATION EFFECTIVELY ON TELEVISION: THE HOLLYWOOD HEALTH & SOCIETY PROGRAM

Consultation to Ensure Accuracy

Storytelling is an effective way to provide important health information, Folb said, in part because people often retain information better when its presented in a narrative way. Hollywood Health & Society is a free resource offered to the entertainment industry with the goal of supporting accurate health-related storylines. Established in 2001, HH&S is funded primarily by the Centers for Disease Control and Prevention (CDC), The California Endowment, and The Bill & Melinda Gates Foundation. Writers, producers, and creative content makers often contact HH&S for information about health issues they plan to address in their shows. For example, writers may ask about specific diseases and treatments, the appearance of treatment rooms, and medical terminology.

HH&S has a website and provides easy-to-read tip sheets that are based on information from CDC. HH&S staff are available for quick phone and e-mail consultations and also can provide expert briefings to and in-person consultations with a show's creative team. HH&S also holds panel discussions, screenings, and field trips—dubbed Storybus Tours—to inform and inspire the entertainment industry on a wide range of public health topics. As part of a 2013 project

funded by The California Endowment, HH&S staff conducted a tour through select neighborhoods to educate writers about the social determinants of health. To demonstrate the challenge of creating healthy, nutritious meals on a limited budget in neighborhoods with little access to grocery stores, one tour took writers to South Central Los Angeles to learn about food deserts and about the various projects working to combat hunger and obesity. Participants visited a liquor/convenience store where they were asked to figure out how to feed a family of four with \$10. When TELEVISION writers personally experience these challenges, they can more effectively convey information about social determinants of health in storylines.

HH&S works with the entertainment industry on a pro bono basis, requiring no fee or credit for its services. Since 2009, program staff have helped develop more than 700 aired health-related story lines for dozens of top rated shows, including *Doc McStuffins, The Good Wife, Homeland, Grey's Anatomy, NCIS, Body of Proof, Boardwalk Empire,* and *Switched at Birth.* The organization works with all major broadcast networks, including the Big Three (NBC, CBS, ABC), Fox, and CW, as well as cable channels such as HBO, Showtime, Lifetime, and Spanish language television.²

Public Service Announcements Linked with Health-Related Content

Public service announcements (PSAs) aired immediately following television shows can increase the impact of health messages, Folb said. HH&S staff have worked with television writers and producers on several projects that combine story lines with PSAs to engage audiences on important health issues. HH&S staff helped develop the story line for an episode of the medical show *Private Practice* in which one of the characters became addicted to Oxycontin and others intervened to help. HH&S helped write language for a PSA directing people to an addiction hotline which aired after the show. During her presentation, Folb showed a video clip from the episode as well as the PSA.

HH&S consulted with producers of the show *Extreme Weight Loss*, who wanted to list resources for victims of sexual assault in a PSA following an episode about incest. The PSA provided the link to the website for the Rape, Abuse, and Incest National Network (RAINN) and the phone number for the National Sexual Assault Hotline. After the network aired the episode and the PSA, the number of calls to the sexual assault hotline increased by 200 percent, call volume for the online hotline rose by 97 percent, and visits to the website were up by 80 percent. The number of Facebook impressions³ for RAINN doubled, and the number of Twitter mentions increased by more than 100 percent. Folb showed the PSA during her presentation.

In the early days of the AIDS epidemic, many shows created story lines and PSAs about HIV/AIDS. In 2001, HH&S worked with the daytime soap opera *The Bold and the Beautiful* on a story about a character who learned that he was HIV positive. When the network aired the episode in which he was diagnosed, followed by a PSA listing the phone number for an HIV/AIDS hotline, calls to the hotline increased significantly. After the character disclosed his HIV positive status to his fiancée in another episode followed by the PSA, the number of calls rose to a record-high level (Kennedy et al., 2004).

¹ For more on HH&S Storybus tours see https://hollywoodhealthandsociety.org/events/?event_type=2 (accessed January 22, 2015).

² Other shows they have helped develop story lines for include *Breaking Bad* and online shows such as *Orange Is the New Black*.

³ Facebook impressions are the number of times a message is displayed, for example, on a user's wall, in their newsfeed, or when it is shared.

HH&S worked with a television detective show called *Numbers* on an episode about organ donation. At the end of the show, one of the characters, who originally did not want to become an organ donor, changed his mind and informed his family of the decision. Folb showed a clip from the episode. HH&S's analysis found that people who had viewed the scene perceived organ donation as more important than those who had not. Furthermore, viewers of the scene were more likely to register as organ donors and to encourage others to donate (Morgan et al., 2009 and Movius et al., 2007).

Public Outreach Initiatives

Public outreach efforts linked with story content likewise can increase the impact of health messages on television. The Disney Junior show *Doc McStuffins* has engaged audiences throughout the country with health-related story lines and innovative outreach, Folb said. The show—which explores a variety of health issues from the perspective of an African-American girl whose mother is a doctor—became extremely popular among African-American female doctors whose children were watching it. These women began blogging about it, and eventually the show became a national sensation. In 2013, HH&S worked with the network to design an Airstream trailer called the Doc Mobile, which visited more than 37,000 children and families in cities across the country in August and September 2013 as a back-to-school activity. The goals were to help children feel comfortable about going to the doctor and to remind parents to bring their children to the doctor for back-to-school checkups. The Doc Mobile was a great success and will likely return in the future.

In an outreach project funded by The California Endowment, HH&S is working with television producers to incorporate accurate information about the Affordable Care Act in story lines. As part of the project, HH&S staff consulted with producers of *En Otra Piel*, a show on Telemundo, to tell the story of an uninsured man who could not afford his surgery.

Evaluations to Assess Impact

HH&S frequently conducts evaluations to analyze the impact of health-related messages. Several years ago, program staff worked with the show 90210 on an eight-episode story line about the BRCA gene. One of the characters who had a family history of breast cancer tested positive for the gene and faced a series of difficult treatment decisions. After the series aired, HH&S studied its impact on two groups, one composed primarily of American women who were frequent television watchers but who had never previously watched 90210, and the other composed of women from around the world who were enthusiastic 90210 fans and who had watched every episode. HH&S polled study participants to assess their knowledge of the BRCA gene before and after the shows aired. Folb reported that after viewing the first episode, 11.9 percent of women who had never previously watched 90210 said they subsequently scheduled a doctor's appointment to discuss their breast cancer risk. Additionally, 13.1 percent said they talked about the BRCA gene with a woman they knew, 16.5 percent said they searched for more information about breast cancer online, and nearly 10 percent said they watched the next episode. 4

⁴ E. L. Rosenthal, S. C. Buffington, and G. Cole. Evaluation of a multiple episode television storyline on genetic risk factors for breast cancer. Manuscript is currently being prepared for publication. For a list of HH&S studies see https://hollywoodhealthandsociety.org/sites/default/files/for-public-health-professionals/research-and-evaluation/Publications.pdf (accessed January 28, 2015).

In the second study, Folb said, researchers polled viewers before they had seen any of the episodes about the BRCA gene, after they had seen the first four episodes of the series, and after they had seen five to eight episodes. According to Folb, knowledge gains correlated with the number of episodes viewed. Similarly, the percentage of women who said they were likely to research their family histories of breast cancer increased with the number of episodes watched.

HH&S is now conducting an audience impact evaluation for the popular online show *East Los High*, which targets Latino youth. The study is analyzing the show's impact on audience knowledge about sexual health, reproductive health, domestic violence, advocacy, and the Affordable Care Act. HH&S staff are also working with the program's producers on a story about an uninsured character with diabetes who is thinking about traveling to Mexico for treatment.

USING DOCUMENTARIES TO ADVANCE HEALTH EQUITY AND SOCIAL JUSTICE: CALIFORNIA NEWSREEL

California Newsreel, an independent nonprofit organization, produces and distributes documentary films to promote health equity and social justice. Founded in 1968, Newsreel is the oldest nonprofit, social issue documentary film center in the country, the first to merge media production and contemporary social movements.⁵ In her presentation, Poulain described two California Newsreel documentaries that address population health issues: *Unnatural Causes: Is Inequality Making Us Sick?* and *The Raising of America: Early Childhood and the Future of Our Nation*. Both series were created in the context of national public engagement campaigns. California Newsreel measures the success of its films by how effectively they can be used to advance the efforts of other organizations that have long worked to advance health equity and social justice.

Unnatural Causes: Is Inequality Making Us Sick?

Broadening Public Perceptions of Health

Released in 2008 on video and for national PBS broadcast, *Unnatural Causes* is a seven-part documentary exploring racial and socioeconomic inequalities in health. The film was created as a tool to help reframe the debate about health equity, and it is now being used by various organizations as part of a broad public engagement campaign around the country. California Newsreel created a companion website, discussion guides, action tool kits, and other resources to help organizations use the film to shift public dialogue on the issue.⁶

Traditionally, Poulain said, health is discussed in the context of access to health care, genes, and health-related behaviors such as healthy eating and exercise. The film's introduction sets the stage for stories intended to broaden public perceptions of health. Poulain showed a video clip of the opening. The narrator begins by acknowledging that people carry their health histories in their bodies and states that that human biology is shaped by constant interactions with the world. As the story line unfolds, the film repeatedly returns to the question of what constitutes health.

⁵ For more information see http://www.newsreel.org (accessed January 26, 2015).

⁶ For more information see http://www.unnaturalcauses.org (accessed February 8, 2015).

Using Stories to Convey Population Health Messages

Each episode of the film is designed to convey a message, Poulain said. The opening episode, called *In Sickness and Wealth*, blends storytelling with facts to illuminate the social determinants of health. The episode focuses on three neighborhoods associated with different socioeconomic and health statuses, different educational attainment levels, and different longevity rates. As the story continues, it becomes clear that life expectancy is longest in the most affluent neighborhood and lowest in high-poverty neighborhoods. To help audiences relate to the episode's message on a personal level, writers tell the story from the perspective of people who work in a hospital. The goal, said Poulain, is to prompt viewers to think about their places within broader social structures and to recognize that people's opportunities vary depending on the neighborhoods in which they live.

The episode called *Place Matters* explores why zip codes matter to our health. It examines the history of Richmond, California, from the end of World War II to the present by focusing on two neighborhoods. When shipyards closed after the war, many people lost their jobs, said Poulain. Because the federal government provided housing loans on a racially restricted basis, white soldiers returning from World War II had the opportunity to become home owners, and black soldiers did not. [As the community was left behind during a period of social and economic progress, health conditions worsened.] The once-vibrant community declined, and it is now characterized by high rates of poverty and unemployment. In contrast, said Poulain, Seattle was transformed over the years from a low-income community into a thriving city where people have opportunities to improve their lives. The episode shows deteriorating neighborhoods being rebuilt and tells the story of a Seattle family that moved to a home with better air quality to help a child with asthma. The message behind these stories is that community change is not a random act of God but rather the result of specific policy decisions, thus demonstrating the links between housing and health policies.⁷

An episode called *When the Bough Breaks* is based on research suggesting that racism is associated with socioeconomic disparities in preterm birth and infant mortality rates. Poulain commented that studies have shown that among whites, the rates of preterm birth and infant mortality correlate with socioeconomic status but that African Americans at all socioeconomic levels have higher rates of preterm birth and infant mortality than their white counterparts. The episode describes a study that found that preterm birth and infant mortality rates among African women that immigrated to the United States are similar to those of whites with the same socioeconomic status. But researchers found evidence of disparities in the next generation: Rates of preterm birth and infant mortality among children of the African immigrants are similar to those of their African-American peers. These findings, said Poulain, suggest that racism has long-term effects on health outcomes.

The episode called *Bad Sugar* explores the impact of federal government policy on the health of Pima Indians. For many years, scientific research has focused on genetic factors associated with the tribe's high rates of obesity and diabetes. However, the research has ignored important public policy factors. As the federal government implemented policies to divert water from Native American communities to white landowners, tribes that had relied on the water for crops became dependent on the federal government for food subsidies which did not include

⁷ For a more detailed description of this episode see

http://www.unnaturalcauses.org/episode_descriptions.php?page=5 (accessed February 18, 2015).

⁸ The study was conducted by neonatalists James Collins and Richard David. For more information see http://www.unnaturalcauses.org/episode_descriptions.php?page=2 (accessed January 26, 2015).

fresh fruits and vegetables until the early 1990s. The story's message is that policies of the past have enduring effects, but policies can be changed.

The next episode, *Becoming American*, tells the story of a Mexican-American immigrant family and shows how although they arrived in the United States poor, they also had better health than the average American. However, after 7, 10, 12 years in the United States, their health declined, raising questions about the long-term impact of relentless, chronic stress as people work to feed their families and pay their bills. Another episode, *Collateral Damage*, explores the global forces associated with health inequities on the Marshall Islands. The film portrays living conditions on two islands 3 miles apart. On one island, American families enjoy a middle-class lifestyle on a military base. On another island, Marshallese citizens live in overcrowded conditions, and rates of tuberculosis are high. The film shows that when Marshallese people come to the United States to work, their health status improves somewhat, but disparities remain.

The film's final episode, *Not Just a Paycheck*, tells the story of two towns—one in the United States and the other in Sweden—affected by the closure of a refrigerator factory. After the plant closed in the American town, middle-aged people who previously had middle-class lifestyles did not have access to vocational training and could not find jobs. Their stress levels rose, and rates of depression and heart attack increased. The town was unable to recover. In Sweden, the refrigerator company was required to pay the community \$3 million to foster economic development, and people who lost their jobs received 80 percent of their salaries. They were able to afford additional education and start new careers, and the town continued to thrive.

Not Just a Paycheck helps audiences understand the link between social structures and personal aspirations for health and well-being. The stark differences in the towns' experiences raise questions about the future of the American way, Poulain said. Some Americans prefer European approaches to promoting economic opportunity, and others do not. Poulain noted that the resources available in her neighborhood—including supermarkets, recreational facilities, public transportation, and a variety of restaurants—enable her to make healthy choices. Her health is affected not only by her actions, but also by her environment. By using herself as an example during discussions of the episode, Poulain has helped audiences understand social and economic determinants of health.

Changing the Language of Population Health

Changes in terminology have helped reframe the public conversation about population health, Poulain said. The term "health disparities," while accurate, only describes differences among population health outcomes. Using the term "health inequity" implies that the differences in health outcomes are a result of injustice and unfairness in our structures and systems. By moving to a language of "health equity," which has become prevalent more recently, we begin to foster a sense of hope and an aspirational goal to move toward health equity.

Finding New Ways to Engage Audiences

As public engagement efforts have evolved, Poulain said, public health organizations are focusing less on the dissemination of written materials and more on engagement with community members. Organizations were invited to use the series. As public engagement evolved, those groups were able to give audiences opportunities to participate in the campaign.

⁹ Both sites were closed by Electrolux Corporation. See http://www.unnaturalcauses.org/episode_descriptions.php?page=7 (accessed January 26, 2015).

More than 400 organizations partnered with California Newsreel on the campaign. ¹⁰ The number of participating organizations grew as the production timeline was extended. Many organizations included the film in their training programs. Screenings ranged from community events to conferences, training sessions, policy briefings, classroom screenings, and more. For example, local health departments across the country arranged screenings for staff and community members. The film was featured in policy forums on Capitol Hill and in state capitals. Poulain has heard that policy makers in Rhode Island created a health equity commission partially in response to the film.

An important lesson learned from the project, Poulain said, is that planning and organization are critical to success in the engagement process. When the film was released, community members were energized and ready to join the campaign. Health departments organized community screenings and people were asking what they could do to help.

The Raising of America

Changing the Conversation About Child Health and Development

The Raising of America, which will be completed in 2015, explores the issue of health inequity from a child's perspective. Whereas previous research and communication projects related to child development have taken a siloed approach, the film focuses on the big picture. It seeks to shift the public conversation about child development to emphasize the need for action to provide all children with a solid foundation for growth and development. The documentary's primary message is that providing children with a strong foundation can help build a healthier, more prosperous, and more equitable nation. In other words, "It is easier to build strong children than repair broken men," Poulain said, quoting Frederick Douglass. California Newsreel is conducting a public engagement campaign in conjunction with the film's release and has provided a companion website with discussion guides, action toolkits, and other resources to support organizations using the film.

The Raising of America counters many of the messages that have dominated previous discussions of child development. Conventional wisdom suggest a link between babies' development during the first 2 years of their life and the quality of parenting, without considering other factors. Thus, children's success depends on the quality of parenting they receive and on parental choices. If parents work hard enough they can provide everything their children need.

The documentary seeks to provide a broader perspective. While we may not remember our earliest years, research has shown that the period from age 0 to 3 is a critical time for brain development, which builds a foundation for future development. During this time, the environment shapes the way that the brain is wired. The film describes how environmental factors can increase or reduce stress. Because parental stress affects children's brain development, growing social inequities ultimately affect parents' ability to create safe, secure, and nurturing environments. All public policies should be considered as child development policies, Poulain said, because public policies affect people's health throughout their lives. 12

The Raising of America emphasizes the importance of opportunity. If people have the opportunities and resources they need and still make unhealthy choices, their health truly is deter-

¹⁰ More than 25,000 screenings were organized during the first 18 months after release.

¹¹ See http://www.raisingofamerica.org/?q=documentary (accessed January 26, 2015).

¹² Poulain later said that the best parenting programs have nothing to do with parenting. Living wage jobs, affordable housing, safe neighborhoods, and good schools all influence parents' ability to provide for their children.

mined by personal behavior. But if people lack sufficient opportunities, children's health and well-being cannot be attributed entirely to parental decisions or behaviors.

The film is designed to spark a rethinking of American values about balancing work and family. The goal is to help people move beyond feelings of economic insecurity and self-blame and to promote system-wide solutions that provide families with greater opportunity and choice. Middle-class people may not see themselves in messages advocating improvements in social and economic conditions for low-income, yet all families are getting squeezed for time, money and resources. Policies to make child care more affordable and to expand public transportation, thus improving the quality of life for all working families, would benefit all children.

The film's opening episode, called *DNA Is Not Destiny*, begins by explaining the science of early childhood development.¹³ It shows how financial and time pressures create stress for parents, and it describes public policies that can change the social and economic environment for all families. Americans work more hours and have less vacation time than their counterparts in other developed nations, Poulain noted. Mothers are expected to work extra hours, commute, provide support for their spouses, be patient with their children, and volunteer in their schools. Americans have internalized societal expectations for mothers, but, in fact, parents' abilities are affected by their social and economic environments.

The episode called *Wounded Places* shows that children raised in low-income neighborhoods develop symptoms similar to posttraumatic stress disorder. Racism, Poulain said, clearly has an impact on the featured neighborhoods, but the episode does not address racism directly. Most people, said Poulain, who viewed unfinished footage of the episode at pre-screenings said that they could relate to the story because they had grown up in similar neighborhoods.¹⁴

Another episode called *Once Upon a Time* describes the political ideology associated with President Nixon's veto of legislation to provide universal child care. Nixon speechwriter Patrick Buchanan, who is featured in the episode, describes the veto as an opportunity to limit the role of government in family and community life. The action led to a major shift in the direction of public policy for working families. Audiences who have watched the story have expressed concern about its potential to upset people, said Poulain. ¹⁵

The episode called *Are we Crazy About Our Kids* makes the argument that investing in high-quality child care and early childhood education pays a 7:1 return on investment later in life. Invest now and society will benefit later.¹⁶

Activating Receptive Audiences

The Raising of America is meant to be a tool that engages the "choir"—meaning those audiences receptive to the message—to take a closer look at how people can work together across sectors to make societal changes that will encourage the consideration of child health and development as essential components in providing all infants in America the chance to live strong, healthy lives. Americans work more hours than people in most developed nations. How does that affect the ability to have time with family, be an advocate, and civilly engaged? People may identify as part of the choir, but that doesn't mean they are not affected or that they do not feel the squeeze themselves. The question is how people in positions of influence and power can

¹³ This film's opening episode is now called *The Raising of America*. *DNA is Destiny* is still under development and will be the fifth in the series. http://www.raisingofamerica.org/documentary (accessed January 26, 2015).

¹⁴ Fore more on this episode, http://www.raisingofamerica.org/wounded-places (accessed January 26, 2015).

¹⁵ For more on this episode, http://www.raisingofamerica.org/once-upon-time (accessed January 26, 2015).

¹⁶ For more on this episode, http://www.raisingofamerica.org/crazy-about-our-kids (accessed January 26, 2015).

create change while recognizing their own needs to balance work, child-rearing, and other parts of their lives. Poulain said that California Newsreel hopes the film will also be used to engage dormant allies who may be working in other fields. For example, in much of the work to increase the minimum wage, there has not been much emphasis on how an increase will benefit children. By explaining how the wage increase would help improve children's health—and thus ultimately reduce violence and create safer communities—minimum wage advocates could activate a broader coalition.

Addressing Fundamental American Values

The production of *The Raising of America* has become a much larger research project than originally anticipated, Poulain said. Even before its release, the film has reached many more people than expected. In the process of creating the film, producers are addressing fundamental American values about wealth and happiness. While money is necessary to live, Poulain noted, it does not produce happiness. Instead, people will be happy when they feel safe in their neighborhoods, when their commuting times are reduced, and when they can spend more time with their children. Happiness comes from having choices, feeling a sense of empowerment at work, and being able to balance work and family obligations, she said. *The Raising of America* is intended to help audiences imagine a better place for themselves, for friends in their communities, and for future generations of Americans at all income levels.

DISCUSSION

During the brief discussion period, Folb reviewed effective strategies for working with the entertainment industry to disseminate public health information.

In response to a participant's question, Folb stressed the importance of providing television and film producers with objective information to ensure the accuracy and credibility of their stories. HH&S is not an advocacy group; it advocates only for truthful presentation of scientific research and data. Staff members do not promote specific story lines. Instead, they answer questions from television and film producers, connect producers with researchers conducting studies relevant to their projects, and help television storytellers interpret scientific information. HH&S has partnerships with the Writer's Guild, the Television Academy, and similar organizations.

The organization's goal is to inform television and screen writers about important health topics and inspire them to address those topics on their shows, Folb said. Because television writers like to read about real people, HH&S provides them with case studies about people facing a variety of health-related challenges. The organization sends *Real to Reel*, a quarterly newsletter highlighting news stories about people's health experiences and challenges, to more than 900 entertainment industry professionals. In some cases, the organization provides information about high-priority health topics identified by CDC. By serving as a resource for accurate information, HH&S has built a solid reputation and gained the industry's trust. Producers frequently contact HH&S for information and advice.

Gold asked how to encourage the entertainment industry to tell stories that explore the social determinants of health in a way that resonates with the public and transforms public opinion. Reiterating the effectiveness of an informational approach, Folb said that avoiding advocacy is a key factor in HH&S's success. At the time when the program was being created, nearly 200 disease-specific advocacy organizations had formed in Hollywood to pitch their messages to the television industry. Writers stopped taking their calls. HH&S was established to provide writers

with a one-stop shop to gather the information they needed without feeling pressure from advocacy groups. The organization shares information with writers about new developments and studies without criticizing or blaming them for inaccuracies in stories. Although sometimes the health information on television shows is not entirely accurate, Folb said, public health professionals may in some cases need to accept minor errors as the price to pay for disseminating important information that was not previously available to the general public. Folb encouraged public health professionals to share their most updated information with HH&S, and she offered to make it available to the television industry. She also urged organizations conducting their own industry outreach to take a supportive approach, provide useful information, and avoid blame.

In conclusion, March emphasized several summary points: First, a multi-faceted communication strategy—with public service announcements, websites, and education campaigns that complement story lines on television and film—can maximize the impact of population health messages. Health-related stories on television and film can have powerful effects on audiences; therefore, it is crucial to do as much as possible to ensure the accuracy of the content. The goal of communication initiatives should be to prompt not only reaction, but also action to advance population health. When evaluating communication initiatives, researchers should track multiple outcomes. Evaluations limited to measuring a single outcome overlook important effects. Personal narratives can increase the impact of stories about social determinants. Television, film, and complementary communication strategies can help create a new common language for population health messages. Connecting with audiences is critical. Innovative approaches to production can actively engage key audiences in population health issues. Media projects to advance population health should be well-organized, and public health professionals should take a strategic approach to coordinating engagement efforts. Success may depend on the selective use of advocacy strategies.

7

Final Comments

During the workshop's closing session, participants reflected on key points from the presentations and raised issues for further consideration. Prior to the open discussion, Michael Manganiello, founding partner of HCM Strategists, shared his perspectives, described successful community partnerships for promoting population health, and outlined potential next steps.

COMMUNITY PARTNERSHIPS

The roundtable is at a pivotal moment, Manganiello said, as it faces the challenge of developing and implementing an overarching strategy to improve population health. Partnerships will be critical to the roundtable's success. He noted that many organizations are pursuing successful initiatives to advance population health, and he encouraged roundtable members to invite representatives of those organizations to meetings, to work with them to identify best practices, and to consider partnering with them. The entertainment industry is a potential partner.

An important lesson learned from patient experiences during the HIV/AIDS epidemic, Manganiello said, is that people with chronic conditions need more than medical care to improve their health. If people do not have transportation, food, or housing, they cannot realize the benefits of treatment. Under Part D of the Ryan White Act, the federal government partnered with the private sector to create social support networks for people with HIV/AIDS. The program was successful, Manganiello said, but it was eliminated after new drugs were developed that helped people live longer with the disease.

The Administration for Community Living (ACL) within the Department of Health and Human Services and the Manhattan Plaza Apartment complex have each successfully conducted community-based initiatives to improve the health of elderly populations. The ACL connects senior citizens with long-term care support services in every state. When that agency implemented an evidence-based program to help people with care transitions following hospital discharge, the rates of hospital readmission declined. When it added community-based support services—such as transportation, home-delivered meals, homemaker/chore services, medication management, and caregiver support—readmission rates declined even further. The program now is helping to reduce preventable hospital admissions as well as readmissions.

The Manhattan Plaza High Rise apartment complex, which provides federally subsidized housing for people in the performing arts, has partnered with community organizations—

including the Actor's Fund of America, the Manhattan Community Board Number Four, the Manhattan Plaza Rodney Kirk Center, and the Senior's Community Survey Project—to provide support services such as transportation, caregiving, and nutrition assistance to elderly residents. These services have enabled residents, 46 percent of whom are over 60, to age in place and to avoid preventable hospitalizations and nursing home admissions. The number of residents who have entered nursing homes is extremely low—a total of 70 since 1977— and 97 percent of them die at home. Manganiello said that the complex does not appear to have many of the problems associated with other subsidized housing projects.

DISCUSSION SUMMARY

Identifying Next Steps

The next steps for the roundtable include formulating and implementing a population health strategy, developing tactics and messaging, and identifying the entities to effect change. Because the problems are considerable and because major changes are needed, the federal government should play a role in the transformation, Manganiello said. Voters should be engaged in the process. Public education will be challenging, he said, but roundtable members have the experience needed for the task. There are many potential partners.

When formulating a communication strategy, Manganiello suggested that roundtable members address several important questions: Who will be the face of population health? What is the story to be told? How can traditional media be combined with social media effectively?

Answering Questions About Scope, Messaging, and Engagement

During the open discussion, workshop participants continued to explore important strategic questions, and Manganiello offered additional suggestions. Raymond Baxter of Kaiser Permanente said that the key takeaway for him was the enormousness of the challenge within public health and population health. He stated that the wide range of issues discussed during the day, all of which in some ways fall under the umbrella of population health, still seemed to illustrate a disconnect between what the roundtable means by population health and what others think it is. Although the speakers shared important insights on how to shape messages and find the right venues for communicating to audiences, the roundtable still faces the big challenge of articulating its core message. And in order to do that, he said, the roundtable needs to state more clearly "just what population health is and what it isn't."

Finding the Right Messages and Messengers

Manganiello said he believes that children should not be the public face of population health. Because racism remains prevalent across the country, he said, communication initiatives should use messengers such as a middle-class, white Milwaukee fireman who drinks beer and watches football. If the story of population health is told from the fireman's perspective, he predicted, social determinants will become a priority for everyone.

The key takeaway from the workshop, said José Montero of the New Hampshire Division of Public Health Services, was that roundtable members need to make important decisions about the population health message, desired behavior changes, and the target audience. Roundtable members know how to communicate effectively with national and state policy makers and

FINAL COMMENTS 45

should find ways to stimulate discussions of population health without actually mentioning the term. Perhaps the roundtable should focus less on developing a detailed population health strategy, he said, and focus more on finding real-life examples to convey the message. By enabling others to tell the story, roundtable members can maximize the impact of population health messages. Stories told through television and film speak for themselves.

Brian Sakurada of Novo Nordisk likewise encouraged colleagues to think about effective ways to tell the story of population health to key decision makers.

Judith Monroe of the Centers for Disease Control and Prevention highlighted several issues for further consideration. First, she asked colleagues to think about strategies to communicate the message that addressing social determinants of health ultimately will benefit everyone. Second, she noted that public service announcements (PSAs) linked with story lines on television and film have been effective communication tools. Because PSAs are expensive, she said, roundtable members should consider partnering with local television news stations on lower-cost messaging strategies. For example, a public health official could discuss important health information during a brief television interview following a news story. Monroe used this model successfully while serving as a state health official during the H1N1 epidemic. And, finally, she encouraged participants to think about how to use social media platforms effectively.

Pursuing Micro- Rather than Macro-Level Strategies

Manganiello felt that the workshop had focused too much on high-level strategy and not enough on grassroots efforts. He noted that during the debate over embryonic stem cell research, advocates targeted communications in small media markets first. They held town hall meetings that were covered in local newspapers. Then national newspapers began covering the issue, and eventually national television shows and the President were discussing it. The campaign had macro-level goals and strategies, but it was conducted on a micro level. Ultimately it was successful. In the first executive order of his presidency, President Obama authorized federal funding for embryonic stem cell research.

James Knickman of the New York State Health Foundation likewise noted that many of the workshop discussions had focused on macro-level strategies to advance population health when, in fact, micro-level approaches may be more appropriate. Communications and outreach initiatives to promote place-based approaches to population health should perhaps focus on targeted communities rather than on a general television or social media audience. Finding the right blend of micro- and macro-level approaches will be critical to success, he said.

Broadening the Coalition to Advance Population Health

Sanne Magnan of the Institute for Clinical Systems Improvement encouraged colleagues to identify potential partners for comprehensive initiatives to advance population health. The community partnerships developed by the Administration for Community Living and the Manhattan Plaza Apartments exemplify the comprehensive, all but the kitchen-sink approaches that Hornik recommended. The success of these programs demonstrates that people in different political parties can work together toward common goals. She asked roundtable members to think about how the population health community can likewise work with people in both parties to achieve shared goals.

Workshop participant Floyd Morris reported that The California Endowment has partnered successfully with young people on a project to increase understanding of population

health. Once youth group members understood the concept that neighborhoods, workplaces, and schools affect health, they took ownership of the idea. Young people have been adept at using social media to explain neighborhood barriers to health and propose solutions, he noted. Moreover, they have taken a proactive approach to communicating with decision makers. The endowment also has worked with young people on an initiative to address school discipline policies. The project, which began with a dialogue among young people about the need for change, has had a major impact on school discipline policies in several California communities and in Washington, DC.

Morris said that the endowment's Health Happens Here campaign is leveraging opportunities created by the Affordable Care Act (ACA) to advance population health. The campaign includes outreach to facilitate health insurance enrollment along with public education about important non-medical aspects of health. Campaign messages focus on strategies to navigate the health care system effectively, to maximize health benefits, and to maintain good health. Additionally, the campaign encourages patients—including the newly insured as well as those ineligible for coverage under the ACA—to confront barriers to healthy living and seize opportunities to promote health in their communities. These actions ultimately will lower the cost of health coverage, reduce preventable emergency room visits, and improve health outcomes, Morris said.

As the roundtable considers next steps, Manganiello suggested that members meet with the Young Invincibles, an advocacy organization for 18- to 34-year-olds. The group has tremendous influence with Democratic and Republican policy makers in Washington, he said, because both parties are seeking to build support among young adults. Manganiello has worked with the organization on policies related to student loan reform and college graduation rates.

Creating an Environment Conducive to Making Healthy Choices

Two additional questions for the roundtable to consider, said workshop participant Ballard, are how to create an environment in which the healthy choice is the easy choice and how to help people overcome barriers to making healthy choices. If people do not have transportation, child care, or access to healthy food, they may be unable to follow treatment plans for chronic conditions. He suggested that the National Diabetes Prevention program—a public—private partnership that has implemented local, evidence-based lifestyle change programs for people at high risk for type 2 diabetes—may be a useful model for future population health initiatives.

Finding the Right Language to Generate Bipartisan Support

Finding the right language to convey population health messages is difficult, said Marthe Gold of the New York Academy of Medicine and the City College of New York, because communication about social determinants is associated with a specific political agenda. Messages about the redistribution of resources do not resonate with political conservatives, and terms such as population health and social determinants generate negative reactions. Therefore, she said, roundtable members need to develop different messages about creating a healthier society at a reasonable cost.

People's views are influenced by their gut-level reactions, Manganiello said. He reiterated his suggestion to tell the story of population health from the perspective of a Milwaukee fireman. Republicans will be receptive to messages that explain the impact of education and wages on the health of the fireman and his children, he said. To persuade policy makers, communication about population health should include data and evidence. Noting that the Stem Cell Re-

FINAL COMMENTS 47

search Enhancement Act passed with significant support among Republicans, Manganiello said that with the right messaging, population health can be viewed as a bipartisan issue.

David Kindig, professor emeritus of the University of Wisconsin School of Medicine and Public Health, said that communication about population health should focus not only on social determinants, but also on multiple determinants, and it should clarify the appropriate role of medical care. Identifying messages that resonate with both political parties may be a communications challenge, he said, but population health does not need to be a partisan issue. Before moving forward in developing communication strategy, he said, the roundtable should decide which behaviors and populations to target.

George Isham of HealthPartners reiterated the need to identify a clear message and asked whether a consensus study could spark the conversations necessary to reach a decision about messaging. Communication that links population health with a wide range of American values could motivate policy makers in both political parties and help build a bipartisan movement to advance population health. Roundtable members should focus on combining the successful communication strategies discussed during the workshop to tell the story of population health to policy makers, communities, and the general public. Workshop presenters could be important allies in the next step of the process, Isham said.



Appendix A

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Appendix B

Workshop Agenda

Roundtable on Population Health Improvement

Workshop: Communication to Improve Population Health

September 22, 2014

Auditorium, Beckman Center of the National Academies, Irvine, California

WORKSHOP OBJECTIVES:

- 1. Explore what we know to improve health in the United States and in all communities
 - a. the science of health communication
 - b. how to think about audiences and messages
- 2. Explore what it will take to generate widespread awareness/acceptance /action to improve health, including through
 - a. entertainment media
 - b. news media
 - c. social media

8:15 a.m. Welcome, introductions, and context

David Kindig, professor emeritus of population health sciences, emeritus vice chancellor for health sciences, University of Wisconsin School of Medicine and Public Health; co-chair, IOM Roundtable on Population Health Improvement; co-chair, workshop planning committee

Sanne Magnan, president and chief executive officer, Institute of Clinical Systems Improvement; chair, workshop planning committee

8:45 a.m. Keynote: The Science of Health Communication

Robert Hornik, Wilbur Schramm Professor of Communication, Annenberg School for Communication, University of Pennsylvania

9:15 a.m. **Discussion** – moderated by Sanne Magnan

9:45 a.m. Panel I: How the News Media Informs How We View What Makes Us Healthy

Moderator: Ceci Connolly, managing director, PricewaterhouseCoopers Health Research Institute

Michelle Levander, director, University of Southern California Annenberg School for Communication and Journalism California Endowment Health Journalism Fellowships; editor, ReportingonHealth.org; co-editor, Boyle Heights Beat

Karen Bouffard, reporter, Detroit News

Kate Long, former reporter, Charleston Gazette; co-director, Try This West Virginia project, West Virginia Healthy Kids and Families Coalition

10:45 a.m.	Break
11:00 a.m.	Discussion with Panel I – moderated by Ceci Connolly
11:30 a.m.	Panel II: The Power of Social Media for Reaching New Audiences: Evolving Practices, Emerging Evidence
	Moderator: Michelle Larkin, assistant vice president, Program Portfolios, Robert Wood Johnson Foundation
	Dana March, editor-in-chief, 2x2 Project, Columbia University School of Public Health
	Carlos Roig, executive vice president, Media and Content Strategy, Home Front DC
12:15 p.m.	Lunch
1:15 p.m.	Discussion with Panel II – moderated by Michelle Larkin
1:45 p.m.	Panel III: Identifying Audiences and Crafting Messages (e.g., behavioral and social science)
	Moderator: Marthe Gold, Logan Professor, Department of Community Health and Social Medicine, Sophie Davis School of Biomedical Education, City University of New York
	Sarah Gollust (via skype), assistant professor, McKnight Land-Grant Professor, School of Public Health, Division of Health Policy & Management, University of Minnesota
	Jeff Niederdeppe (via Skype), associate professor, Department of Communication, College of Ag riculture and Life Sciences, Cornell University
2:15 p.m.	Discussion with Panel III – moderated by Marthe Gold
2:45 p.m.	Panel IV: The Power of Television and Film in Advancing Ideas to Improve Health and Alter the Factors That Shape it
	Moderator: Dana March, editor-in-chief, 2x2 Project, Columbia University School of Public Health
	Kate Folb, director, Hollywood, Health & Society, University of Southern California Annenberg School for Communication and Journalism
	Rachel Poulain, associate producer, California Newsreel
3:45 p.m.	Discussion with Panel IV – moderated by Dana March
4:15 p.m.	Reactions to the Day and Significance for Future Action in Communicating to Achieve Healthier Communities and a Healthier Nation
	Introduction by: George Isham, senior advisor, HealthPartners, senior fellow, HealthPartners Institute for Education and Research; co-chair, Roundtable on Population Health Improvement
	Michael Manganiello, founding partner, HCM Strategists
5:15 p.m.	Adjourn

APPENDIX B 53

For more information about the roundtable, visit www.iom.edu/pophealthrt_or email pophealthrt@nas.edu.

On Twitter: @theIOM and use #healthcomm



Appendix C

Biographical Sketches of Workshop Speakers¹

Karen Bouffard has been a reporter at the *Detroit News* since 2002, where she has covered a variety of topics, from education and human services to state politics and her current beat, health. She previously worked as a stringer for *Time* magazine and as a freelance writer for various publications, including *Michigan Medicine* magazine. She has won awards for stories about grand-parents raising grandchildren and reported on the murder of Ricky Holland, a Michigan foster child. She was also part of a team that won an Associated Press first-place award for breaking news coverage of labor protests over Michigan's right-to-work law. As a 2013 National Health Journalism Fellow at the University of Southern California Annenberg School of Journalism, she produced a multimedia project, Surviving Through Age 18 in Detroit, which documented the city's high infant mortality and youth homicide rates, spurring action by city officials. She is a graduate of Michigan State University.

Ceci Connolly is the managing director of the Health Research Institute at Pricewaterhouse-Coopers, LLC, a research organization dedicated to objective analysis on the issues, policies, and trends important to health organizations and policy makers. Ms. Connolly is a veteran journalist, author, and commentator who spent 25 years in the news business, reporting on national politics, health care, Latin America, and natural disasters such as Hurricane Katrina. As the national health correspondent for *The Washington Post*, she chronicled the enactment of the Affordable Care Act and was co-author of Landmark: The Inside Story of America's New Health Care Law and What It Means for Us All. During her years in journalism, she reported on six U.S. presidential campaigns and was a major contributor to the book Deadlock: The Inside Story of America's Closest Election. Ms. Connolly spent more than 2 years based in Mexico City, traveling extensively throughout Latin America. She produced a daily blog on Mexico's 2006 presidential race as well as a multimedia project on HIV/AIDS along the U.S.-Mexico border. Ms. Connolly is a board member for the nonprofit Whitman Walker Health and is the first non-physician to receive the Mayo Clinic's prestigious Plummer Society Award for promoting a deeper understanding of science and medicine. She also serves on the national advisory board of the Center for Sustainable Health Spending and was the recipient of a fellowship at Harvard's Kennedy School of Government. She has appeared on PBS's Washington Week, CBS's The Early Show, NPR's Diane Rehm Show, and several news programs on MSNBC and the Fox News Channel. Ms. Connolly has spoken at the prestigious National Press Club, the Chautauqua Institution, the Cleveland

¹ Names appear in alphabetical order. † = member of the workshop planning committee; * = member of the Roundtable on Population Health Improvement.

Clinic, numerous universities, and health care conferences. Prior to joining PwC, she was a senior adviser at the McKinsey Center for Health Reform. In her role at the Health Research Institute, Ms. Connolly oversees a team of independent analysts and writers who track major developments across the healthcare spectrum.

Kate Langrall Folb, M.Ed., is a program director for Hollywood, Health & Society (HH&S), a program of the University of Southern California Annenberg Norman Lear Center, and a veteran for more than 20 years in the entertainment education field. After an early career in television and music production and management at Don Kirshner's Rock Concert, Shep Gordon's Alive Enterprises, and Borman Entertainment, Ms. Folb joined the Scott Newman Foundation as director of special projects. There, she worked with top television shows and films on portrayals of alcohol and other substance abuse, developed a media literacy program for middle and high school students, and produced the foundation's annual public service announcements. Later, she spent nearly 10 years as director of The Media Project, a partnership of Advocates for Youth and the Kaiser Family Foundation, which addressed portrayals of adolescent reproductive health in the media, working with dozens of prime-time and daytime television shows on storylines featuring HIV/AIDS and other sexually transmitted diseases, teen pregnancy prevention, condom use, and sex education, among other topics. She also produced the annual SHINE Awards for sexual health in entertainment and developed a cutting-edge media campaign for Viacom to normalize condom use and encourage healthy relationships. From 2001 to 2012 Ms. Folb led Nightingale Entertainment, an independent consulting firm working with the Robert Wood Johnson Foundation on the multi-year Cover the Uninsured Week and Covering Kids and Families campaigns. and with Planned Parenthood Federation of America on Birth Control Matters and I Stand with Planned Parenthood, garnering celebrity involvement, producing public service announcements, and coordinating national media events. She joined HH&S in July 2012 as senior program manager and became director in fall 2013. Ms. Folb speaks fluent Spanish and holds a bachelor's degree from the University of Denver and a master's degree in education from the University of California. Los Angeles.

Marthe Gold, M.D., M.P.H., †* is a visiting scholar at the New York Academy of Medicine and the Logan Professor in the Department of Community Health and Social Medicine at the Sophie Davis School of Biomedical Education at City College, New York. A graduate of the Tufts University School of Medicine and the Columbia School of Public Health, she received her clinical training in family medicine. Dr. Gold has been a primary care provider in urban and rural underserved settings. She served as a senior policy adviser in the Office of the Assistant Secretary for Health in the Department of Health and Human Services from 1990 to 1996, where her focus was on the financing of clinical preventive services, the economics and outcomes of public health programs, and health care reform. Dr. Gold directed the work of the Panel on Cost-Effectiveness in Health and Medicine, an expert panel whose report remains an influential guide to cost-effectiveness methodology for academic and policy uses. Her current academic work focuses on patient, public, and decision maker views on using economic and comparative effectiveness information to inform health policy. A member of the Institute of Medicine, Dr. Gold served as chair of its Committee on Public Health Strategies to Improve Health, which was convened in 2009 and whose three reports on measurement, law and policy, and funding were released between 2010 and 2012.

APPENDIX C 57

Sarah Gollust, Ph.D., is an assistant professor in the Division of Health Policy and Management at the University of Minnesota School of Public Health. Her broad research interests lie at the intersection of communication and health policy, and she is particularly interested in understanding the media's role in influencing the public's opinions and perceptions of public health issues. Her recent published research has examined the media framing of and public opinion toward health inequalities, type 2 diabetes, childhood obesity, and the human papillomavirus vaccine. She has published more than 50 peer-reviewed articles on these topics, and her work has been funded by the Robert Wood Johnson Foundation, the American Cancer Society, and the National Institutes of Health. From 2008 to 2010 she was a Robert Wood Johnson Foundation Health & Society Scholar at the University of Pennsylvania. Dr. Gollust received her Ph.D. in health services organization and policy from the University of Michigan.

Robert C. Hornik, Ph.D., is the Wilbur Schramm Professor of Communication and Health Policy at the Annenberg School for Communication at the University of Pennsylvania. He co-directs Penn's Tobacco Center for Regulatory Science, which is funded by the Federal Drug Administration and the National Cancer Institute. From 2003 to 2014, he directed Penn's National Cancer Institute—funded center of excellence in cancer communication research. Previously he led the evaluation of more than 20 public health communication campaigns, including those focused on child survival, HIV prevention, and tobacco use throughout the world as well as the evaluation of the U.S. National Youth Antidrug Media Campaign. He is the author of *Development Communication*, he edited *Public Health Communication: Evidence for Behavior Change* and co-edited *Prediction and Change of Health Behavior*, and he is the author of more than 125 refereed articles and papers. He has served on four Institute of Medicine committees, is a fellow of the International Communication Association, and received the Derryberry Award from the American Public Health Association and the Lindback award for distinguished teaching at Penn.

David Kindig, M.D., Ph.D., is Emeritus Professor of Population Health Sciences and Emeritus Vice-Chancellor for Health Sciences at the University of Wisconsin School of Medicine. He currently is co-chair of the Institute of Medicine Roundtable on Population Health Improvement, and he co-directs the Wisconsin site of the Robert Wood Johnson Health & Society Scholars Program. He was an initial co-principal investigator on the Robert Wood Johnson MATCH grant under which the County Health Rankings were developed, and he was the founder of the Robert Wood Johnson Foundation Roadmaps to HealthPrize. From 2011 to 2103 he was editor of the Improving Population Health blog. He received a B.A. from Carleton College in 1962 and M.D. and Ph.D. degrees from the University of Chicago School of Medicine in 1968. He completed residency training in social pediatrics at Montefiore Hospital in 1971. Dr. Kindig served as a professor of preventive medicine/population health sciences at the University of Wisconsin from 1980 to 2003. He was vice chancellor for health sciences at the University of Wisconsin— Madison from 1980 to 1985, director of Montefiore Hospital and Medical Center from 1976 to 1980, deputy director of the Bureau of Health Manpower at the U.S. Department of Health, Education and Welfare from 1974 to 1976, and the first medical director of the National Health Services Corps from 1971 to 1973. He was the national president of the Student American Medical Association in 1967–1968. He served as chair of the federal Council of Graduate Medical Education (1995–1997), president of the Association for Health Services Research (1997–1998), a ProPAC commissioner (1991–1994), and as senior advisor to Donna Shalala, Secretary of Health and Human Services (1993–1995). In 1996 he was elected to the Institute of Medicine (IOM).

He received the Distinguished Service Award from the University of Chicago School of Medicine in 2003. He chaired the IOM's Committee on Health Literacy in 2002–2004, chaired Wisconsin Governor Doyle's Healthy Wisconsin Taskforce in 2006, and received the 2007 Wisconsin Public Health Association's Distinguished Service to Public Health Award.

Michelle Larkin, J.D., M.S., R.N., †* is an assistant vice president and deputy director for the Robert Wood Johnson Foundation's health group, when she helps to shape the foundation's strategies and policies. She views her role as one of "contributing to the foundation's intellectual and organizational development and managing program operations to ensure that we meet RWJF's goals of reversing the childhood obesity epidemic, driving fundamental improvements in the nation's public health system, and addressing the needs of the country's most vulnerable populations." Ms. Larkin also co-leads the foundation's major initiative on public health law. In this capacity, she strives to establish effective public health laws, regulations, and policies; to enhance the public health law infrastructure to support practitioners, advocates, and their legal counsels in improving health; and to promote the use of law in fields that affect health. In supporting the foundation's commitment to tackling some of the nation's toughest health and health care problems through evidence and policy. Ms. Larkin seeks to fulfill the promise she made to herself early in her career: "to create a positive impact on the lives of many and make it easier for people to live healthier lives." Previously, Ms. Larkin directed the foundation's public health team in its work to improve federal, state, and local public health systems; to build the necessary evidence for effective public health practice and policy; and to advocate for the use of law and policy to improve health. From 2003 through 2006, she co-led the foundation's tobacco team, promoting increased tobacco excise taxes, state and local smoke-free air laws, and funding for tobacco prevention and treatment. She has also worked on the foundation's key areas of nursing, leadership development, and end-of-life care. Before joining the foundation, Larkin worked as a health policy analyst at the Office on Smoking and Health at the Centers for Disease Control and Prevention (CDC) in Washington, DC, developing and analyzing policy proposals related to state, national and international tobacco prevention and control and contributing to the development of *Healthy People 2010*. She served as a Presidential Management Fellow, working as a policy analyst at CDC and as a legislative fellow for the U.S. Senate Labor and Human Resources Committee. Previously, she was an oncology nurse at the University of Maryland Medical System in Baltimore, Maryland.

Thomas LaVeist, Ph.D., ** earned a bachelors degree at the University of Maryland Eastern Shore and an M.A. and a Ph.D. in sociology at the University of Michigan. He completed a post-doctoral fellowship in health policy at the University of Michigan School of Public Health. Dr. LaVeist is a former fellow at the Institute of Gerontology and School of Public Health at the University of Michigan, where he participated in several studies, including a study of the differences in adjustment to aging in four societies (the United States, Japan, mainland China, and Taiwan) and the National Survey of Black Americans. Dr. LaVeist is also a former associate with the Program for Research on Black Americans at the Institute for Social Research of the University of Michigan. As a Brookdale National Fellow, Dr. LaVeist has focused his research on further understanding the social and behavioral factors which affect the length of human life. He has also conducted studies of the social determinants of health and research on the determinants of disparities in health care access, utilization, and quality.

APPENDIX C 59

Michelle Levander, M.A., joined the University of Southern California (USC) in 2004 as founding director of the USC Annenberg School of Journalism's California Endowment Health Journalism Fellowships. The fellowships program has educated more than 600 journalists nationwide. It helps journalists produce game-changing reporting that has influenced policy and improved health in communities across America. Other initiatives launched under her leadership include ReportingonHealth.org, an online community of journalists, bloggers, and policy thinkers; and the Reporting on Health Collaborative, which brings together health journalists on collaborative projects. She joined with Pedro Rojas, former executive editor of La Opinión, to launch Boyle Heights Beat, a bilingual newspaper reported by youth for their immigrant neighborhood in Los Angeles. The Center's Dennis A. Hunt Fund for Health Journalism provides grants that support groundbreaking journalism on community health. A veteran editor and writer, Ms. Levander reported in Asia, Latin America, and the United States for *Time Magazine Asia*, the Asian Wall Street Journal, and the San Jose Mercury News. She has received journalism awards from the Overseas Press Club of America (Best Reporting in Latin America), the Inter American Press Association, and the Society of Professional Journalists. A former Inter American Press Association fellow, she spent a year in Mexico attending the prestigious El Colegio de Mexico and researching migrant culture in rural Mexico. She graduated Phi Beta Kappa and magna cum laude from the University of California, Berkeley, and has a master's degree from Columbia University's Graduate School of Journalism.

Kate Long is a former national award-winning reporter who now co-directs a statewide healthy lifestyle coalition in West Virginia. Her 2012–2013 *Charleston Gazette* series, "The Shape We're In," spotlighted West Virginia's chronic disease epidemic and featured communities and people who are fighting it. After finishing the series, the West Virginia native accepted an invitation to create a West Virginia—based "how-to" website for West Virginians who want to create healthier communities. The website, based with the West Virginia Healthy Kids and Families Coalition, grew into the year-old Try This program, which now includes the website (www.trythiswv.com), an annual conference, and an extensive minigrant program. It is overseen by a coalition of 20 statewide groups and organizations. Ms. Long's newspaper stories, public radio reporting, fiction, and songwriting have won national awards.

Sanne Magnan, M.D, Ph.D., is the president and chief executive officer of the Institute for Clinical Systems Improvement (ICSI) in Minnesota. Dr. Magnan was reappointed to this position in January 2011 after serving for 3 years as the Minnesota commissioner of health. She had previously served as the President of ICSI in 2006 and 2007. As commissioner of health, she was responsible for the implementation of significant components of Minnesota's 2008 health reform legislation. Under her leadership, Minnesota developed the Statewide Health Improvement Program to address tobacco and obesity, a standardized quality reporting system and quality incentive system, the "baskets of care" payment system, the certification of primary care clinics as health care homes, and a system for provider peer grouping (ranking providers with a composite measure of total quality and total cost). She also supported more consumer engagement in health care and furthered e-health usage. During her earlier tenure at ICSI, she helped expand ICSI's focus beyond guideline development and quality improvement activities to include strategic initiatives designed to enhance patient-centered and value-driven health care. Two unique programs in the country—ICSI's DIAMOND program for depression and the statewide initiative to ensure the appropriate use of high-technology diagnostic imaging scans—are outcomes of that focus.

Dr. Magnan has also served as a staff physician at the Tuberculosis Clinic at St. Paul—Ramsey County Department of Public Health and a clinical assistant professor of medicine at the University of Minnesota. She previously served as vice president and medical director of consumer health at Blue Cross Blue Shield of Minnesota, lead physician at Lino Lakes Correctional Facility, and a staff physician at various other clinics. She has served on several boards, including Minnesota Community Measurement. Commissioner Magnan was named 1 of the 100 Influential Health Care Leaders by *Minnesota Physician* in 2004. Dr. Magnan holds an M.D. and a Ph.D. in medicinal chemistry from the University of Minnesota. She earned her bachelor's degree in pharmacy from the University of North Carolina.

Michael Manganiello, M.P.A., is a born advocate and a believer in the power of patient groups to affect major shifts in health policy. He founded HCM with Kristin Conklin and Terrell Halaska as a firm that not only can access major stakeholders in the health care community but can bring them together and find common ground to advance positive change. Mr. Manganiello is driven by this philosophy in his management of the firm's health policy practice, where he leads the firm's work for the Christopher and Dana Reeve Foundation, Novo Nordisk, Faster Cures, and the New York Stem Cell Foundation. Mr. Manganiello brings to HCM an impressive track record of building effective coalitions within the health care community. He chaired the Paralysis Task Force, which collaborated with the Centers for Disease Control and Prevention and the Hope Network to connect more than 50,000 advocates across the country. He is also a founding member, president emeritus, and board member of the Coalition for the Advancement of Medical Research (CAMR), which unites more than 100 diverse organizations in support of groundbreaking medical research. He and CAMR were instrumental in Congress's passage of the Stem Cell Research Enhancement Act and the Obama administration's decision to allow federal funding for embryonic stem cell research. Michael has served on several boards and advisory panels, including the National Institutes of Health Director's Council of Public Representatives, the National Association for Biomedical Research, the Prevent Cancer Foundation, and the National Symposium on Health Care Reform. He is passionate about his role as a board member of Whitman Walker Health, the largest provider of HIV/AIDS health services in Washington, DC, and he has a strong focus on lesbian, gay, bisexual, transgender health issues. Whitman Walker, a federally qualified health center, is the new and better entry point for many Americans to receive their health care. It is at the center of the innovative changes that the Affordable Care Act exemplifies.

Dana March, Ph.D., is a psychiatric epidemiologist with graduate training in 20th-century American history. She weaves together her training in history and epidemiology to address her two primary research interests: the conceptualization and measurement of social context as it pertains to psychosis, cognition, and related neurodevelopmental outcomes across the life course; and the historical study of epidemiologic methods and understanding of disease. A unifying theme in Dr. March's work is social inequalities. She is currently developing a body of epidemiologic work regarding social context that examines how a particular place at a given moment in history can be a reservoir of risk or resilience with respect to cognition and psychosis, depending on the social group and the timing of exposure during the life course. In her historical work, Dr. March is currently examining the social, political, and economic forces that have shaped quantitative methods for characterizing infectious disease transmission dynamics, specifically, how the valuation—or devaluation—of indigenous populations in the British colonies ultimately shaped

APPENDIX C 61

the development of the mathematics that would enable the characterization of the transmission dynamics of malaria.

Jeff Niederdeppe, Ph.D., is an associate professor in the Department of Communication at Cornell University. His research examines the mechanisms and effects of mass media campaigns, strategic health messages, and news coverage in shaping health behavior, health disparities, and social policy. He has published more than 80 peer-reviewed articles in communication, public health, health policy, and medicine journals, and his work has been funded in recent years by the National Institutes of Health, the U.S. Department of Agriculture, and the Robert Wood Johnson Foundation. He serves on the editorial boards for five communication journals.

Rachel Poulain, M.P.H., is an associate producer and public engagement director for *The Raising of America: Linking Early Childhood to the Future of Our Nation*, a forthcoming documentary and public engagement campaign, produced by California Newsreel, that explores how early childhood health and development is linked to a more prosperous and equitable society. She was an associate producer and director of outreach for the award-winning documentary series *Unnatural Causes: Is Inequality Making Us Sick?* also produced by California Newsreel. Ms. Poulain teaches documentary for health and social justice, an innovative transdisciplinary course offered by the Health Equity Institute and the cinema department at San Francisco State University. Health education students partner with cinema students to work with a community organizations to create short films for social change. Prior to this, Ms. Poulani was a communications associate at the California School Health Centers Association, where she worked to engage and foster advocates for school-based health centers. She began her career in the health communications field as a research associate and communications production manager at PolicyLink, a national research and action institute advancing economic and social equity. Ms. Poulan holds a master of public health degree from San Francisco State University.

Carlos Roig is executive vice president at Home Front, where he leads the Media and Content Strategy Division with a strong emphasis on creative storytelling, strategic distribution, and engagement on multiple platforms. He built and established the agency's first digital media strategy team before merging the digital, broadcast, and print units into a single, integrated division. In addition to his work with Home Front, Mr. Roig is a recipient of the Teaching Excellence and Service Award for his instruction in Georgetown University's graduate journalism program. His courses have spanned digital media strategy, entrepreneurial journalism, and project management for news organizations. Prior to joining Home Front, Mr. Roig led the site-wide development of niche-targeted online communities at USAToday.com and directed *USA Today*'s full digital coverage of the 2008 election cycle.

