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Using advocacy to increase investment in enteric vaccine development

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ABSTRACT

Catalyzing and sustaining momentum for long-term research investments can be a challenge, especially for enteric pathogens like ETEC and *Shigella* that are most threatening to the health of children in low-resource areas, and whose vaccines would not be for global use. The 2018 Vaccines Against *Shigella* and ETEC (VASE) Conference included a workshop focused on building the capacity of scientists to communicate about their own research and advocate for additional attention and funding for enteric disease and vaccines research. Workshop presenters shared best practices and examples of advocacy, communications, and messaging tactics that have been used successfully during early stages of vaccine development research for other pathogens. The presentations were followed by an interactive, hands-on training for real-life communication opportunities for scientists that could result in increased research funding, including developing resonant messaging for relevant audiences and practicing interviews.

1. Introduction

Catalyzing and sustaining momentum for long-term research investments is often a challenge, but it can be even more difficult for vaccines against pathogens that are largely unheard of and are most threatening to the health of children in low-income countries. Enterotoxigenic *E. coli* (ETEC) and *Shigella* are two of the leading bacterial causes of moderate-to-severe diarrhea among children under 5 years of age [1,2]. ETEC and *Shigella* can be deadly, and they collectively take millions of healthy years of time from children through illness and long-term impacts on growth [3]. Vaccines against *Shigella* and ETEC are in development and have been prioritized by the World Health Organization (WHO) because of their potential to benefit public health [4], but investments in their research and development have stalled. In order to generate interest and investment from donors in enteric research and vaccine development, scientists need to play a role in raising awareness of the global burden of these pathogens and the investment case for vaccines against them. Raising interest becomes particularly challenging in early phases of clinical trials, when the potential benefit may be years down the line.

The workshop "Using advocacy to increase investment in enteric vaccine development" provided a forum at the 2018 Vaccines Against *Shigella* and ETEC (VASE) Conference to share, discuss, and practice tactics to raise awareness and investment (both public and private funding)—defined by the organizers as "advocacy"—during early stages of vaccine research. Presenters provided hands-on training for real-life communication opportunities for scientists that could result in increased funding, including developing resonant messaging for key donor audiences and reviewing media interview best practices.

2. Framing messages for specific audiences

The first presentation was from Hope Randall of PATH's Defeat Diarrheal Disease (DefeatDD) Initiative. Randall focused on the importance of knowing one's audience, their motivations, and their influencers when creating a communications or advocacy pitch. While all global health advocacy and communication should be evidence-based, she stressed, the emphasis and framing of a message can have a large impact on its reception and resonance. One particular metaphor resonated with the workshop attendees: a well-formed communications pitch should contain both "broccoli," which includes evidence, data, or figures, as well as "candy." The "candy" can help spark deeper reader engagement with the data and can take many forms, including compelling anecdotes, memorable angles, personal asides, or framings of a topic within broader trends and themes.

Because global health donors and decision-makers are dealing with multiple high-level issues and trends, Randall mentioned that it can be useful to frame specific topics such as ETEC and *Shigella* vaccines within broader trends emerging in the global health sector. Recent research has shown that messages about children reaching their full potential resonate best with global health

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donors [5]. This messaging can be adapted to stress the importance of going beyond mortality reduction and continuing to address ongoing morbidity and health needs. Randall argued that this can be an especially effective way to frame messages and data around the burden of ETEC and *Shigella* diarrhea, which have a lower mortality but a significant underlying burden of morbidity.

Randall mentioned that another important way to frame messages about enteric vaccines is as part of an integrated approach. Based on PATH's past experience with raising awareness about rotavirus vaccines when they had just achieved a global recommendation by WHO, policymakers often want to hear about addressing challenges of diarrhea in a holistic, comprehensive way, not with just one solution. This evidence-based approach [6] requires not only vaccines but also improvements in water, sanitation, and hygiene; proper nutrition and exclusive breastfeeding for infants under six months of age; and expanded coverage of first-line diarrhea treatment such as oral rehydration solution (ORS) and zinc.

Finally, Randall explained that the DefeatDD Initiative has found that presenting solutions alongside problems—such as the global burden of diarrhea—is necessary to catalyze engagement. Presenting a problem without a feasible solution can engender feelings of helplessness, while presenting a solution is a clear path forward for donors.

3. Getting in front of key audiences

The second presentation was from Laura Edison Kallen of PATH's DefeatDD Initiative. Picking up from the previous presentation, Kallen focused on specific tactics for getting one's tailored messages in front of key audiences. Because diarrhea gets less attention compared to other global health issues, she stressed the need for many voices and methods to raise awareness and urgency for solutions. While many participants agreed that scientists can sometimes be reluctant to call themselves advocates, Kallen emphasized that there can be significant overlap between presenting data and advocating; i.e., when evidence is presented in an engaging, relevant, and memorable way, it helps the message stick and consequently raises awareness of the issue among that audience. In this way, scientists may already be more engaged in advocacy than they realize.

Outlets for advocacy discussed in this part of the workshop included social media, traditional media, blogs and other non-traditional media, institutional and academic networks, in-person advocacy events, and scientific meetings and conferences. Kallen presented social media as an opportunity for both highlighting newsworthy findings as well as maintaining a steady drumbeat of awareness-raising messaging. Kallen also encouraged scientists who may not feel comfortable using social media themselves to connect with their institutional social media managers when they have results or messages to share. Traditional media is an ideal tool for high-visibility moments, like study publications. Even if a particular study seems too technical for a lay audience, Kallen urged participants to work with their institutional communications departments—as well as those of interested partners—to see if there could be a hook for a media story or press release.

Finally, Kallen presented best practices for how to disseminate evidence to key audiences. These included: (1) connecting first with institutional media and communications departments to learn about their media contacts, opportunities, and processes; (2) reading and following relevant news, blogs, and social media channels to understand their coverage, angles, and areas of influence; (3) being clear, concise, and accurate about research; (4) stressing findings that are most surprising and/or unique; and (5) leveraging partners, connections, and networks for advocacy opportunities.

4. Case studies from Bangladesh and Zambia

The final two presenters—Dr. Rubhana Raqib from the International Center for Diarrheal Disease Research, Bangladesh (icddr, b), and Dr. Roma Chilengi from the Centre for Infectious Disease Research, Zambia (CIDRZ)—shared case studies of advocacy tactics that they have successfully used in the past to increase investment or interest in vaccine research in low-income country settings.

Raqib shared icddr,b's institutional capabilities and communications and advocacy approaches for their various projects and issues, using cholera and polio as case studies. Tactics included disseminating research via media in several languages, producing multimedia content, tagging research collaborators on digital media when disseminating results, and sharing information directly with policymakers. By engaging in communications and advocacy activities to raise awareness of the burden of cholera and polio and the success of their vaccine trials, scientists at icddr,b were able to accelerate the introduction of these vaccines in Bangladesh. Raqib noted that icddr,b's robust technical capabilities and long history of experience and scientific contributions, as well as their partnership and collaboration with the government, were assets that bolstered icddr,b's position as a thought leader in the community and have been beneficial in generating funds for icddr,b and other health research organizations in the Global South. She also shared a video that icddr,b developed with DefeatDD in 2017 to raise awareness about their work in ETEC and *Shigella* vaccine development.

Chilengi shared his experiences advocating for rotavirus vaccine development and introduction in Zambia, emphasizing the importance of advocating "from wherever you are" and the idea that scientists are a key part of that collective responsibility. If scientists studying diarrhea do not talk about it, he asked, who will? He argued that precedence from other neglected diseases teaches us that the research community is a critical stakeholder in advocacy. He stressed that continued advocacy for vaccines is crucial because donors in high-income countries do not face the daily realities of children dying from preventable illnesses because they lack access to basic vaccines. In the case of enteric pathogens such as ETEC and *Shigella*, he mentioned, there is even more pushback because many donors and decision-makers believe that they have already been addressed with improvements in water, sanitation, and hygiene, even though children are still getting sick. Chilengi presented Zambia's introduction of rotavirus vaccines as an example of how advocacy and awareness-raising from scientists who had been involved in rotavirus vaccine trials played a key role in policy decision-making and in generation of funding. Scientists like Chilengi became involved by speaking directly to decision-makers, raising awareness of the burden of rotavirus and the availability and potential impact of rotavirus vaccines, working to update and improve Zambia's existing health and cold chain system to accommodate new vaccines, and networking with the global community to gain more information and resources.

Chilengi urged scientists to become involved in local, small-scale studies whenever possible, because local data is a powerful advocacy tool when talking to local decision-makers. This comment generated a discussion among the participants around the role of data. For example, while participants acknowledged that more data is generally useful, they wondered how much more evidence on disease burden and potential impact of the vaccines is needed to generate interest and investment, when so much already exists. While some participants expressed the need for further routine diagnostics and surveillance of ETEC and *Shigella* disease in order to measure the potential effect of an intervention like a vaccine, others expressed that the issue lies in a lack of communication and dissemination of the data that already exist.

5. Conclusion

To generate interest and long-term research investment from donors in the development of vaccines against ETEC, *Shigella*, and other enteric pathogens, scientists need to play a role in raising awareness of these issues and communicating and disseminating their research. All participants in the workshop agreed that the enteric vaccine field needs to do a better job of sharing results externally—not just to other scientists but also to policymakers, donors, the media, and the advocacy community. While a variety of diverse tactics can help disseminate messaging to appropriate audiences, scientists should consider how to craft messaging that is evidence-based as well as resonant, memorable, and impactful. As presenters emphasized, if those working on enteric vaccines do not talk about the importance of these investments, no one else will.

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