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'Staying in the lane' of public health? Boundary-work in the roles of state health officials and experts in COVID-19 policymaking

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Abstract

The state-level COVID-19 response in the United States necessitated collaboration between governor' offices, health departments and numerous other departments and outside experts. To gain insight into how health officials and experts contributed to advising on COVID-19 policies, we conducted semi-structured interviews with 25 individuals with a health specialisation who were involved in COVID-19 policymaking, taking place between February and December 2022. We found two diverging understandings of the role of health officials and experts in COVID-19 policymaking: the role of 'staying in the lane' of public health in terms of the information that they collected, their advocacy for policies and their area of expertise and the role of engaging in the balancing of multiple considerations, such as public health, feasibility and competing objectives (such as the economy) in the crafting of pandemic policy. We draw on the concept of boundary-work to examine how these roles were constructed. We conclude by considering the appropriateness as well as the ethical implications of these two approaches to public health policymaking.

KEYWORDS
bioethics, boundary work, COVID-19 pandemic, public health ethics, public health policy, sociology of health

INTRODUCTION

The COVID-19 pandemic required governments to implement policies such as lockdowns, school closures and mask and vaccine mandates that had not been applied previously on such a wide scale. In the United States (US), many of these policies were developed and implemented at the state-level, necessitating collaboration between different elements of the state government including governor's offices, legislatures, and health departments. There was also significant collaboration across states, with health departments, experts, and other policy advisors exchanging ideas and best practices.

Collaboration in public health involves bringing together the perspectives of government officials and outside experts who have technical expertise in health with the perspectives of officials and experts who have technical expertise and practical experience in other policy areas, including economics, transportation and education (Axelsson & Axelsson, 2006). In the US, state-level decisions were often made in governor's offices, with government health officials and health experts from outside of government (as well as officials and experts from other domains) significantly involved in briefing and advising on policy decisions. While there are many benefits to collaboration, there are also challenges to involving more, and diverse, people in decision-making processes. As is often the case in more ordinary circumstances (D. Hunter & Perkins, 2012; Perkins et al., 2020; Taylor-Robinson et al., 2012), the multiplicity of goals and approaches that create differences between public health officials and experts and people from other sectors sometimes made reaching agreement about pandemic policies difficult.

To gain insight into how health officials and health experts from outside government contributed to COVID-19 policies made at the state level in the US, we conducted interviews with individuals involved in COVID-19 state policymaking.[1] In this article we explore two diverging ways that health officials and experts experienced their roles in this collaborative policymaking process, and the boundary-work (Gieryn, 1983; Lamont & Molnár, 2002) that went into constructing these roles. First, we examine an understanding of one's role as 'staying in the lane' of public health, specifically as it relates to mitigating the direct effects of COVID-19 on morbidity and mortality. For those undertaking this role, their primary responsibility was to prioritise public health needs in assessing and/or advocating for policies. This did not mean that they were ignoring or minimising the importance of other considerations, such as political or economic considerations; in many cases, they were aware of the importance of those considerations, but they were leaving it up to others to represent the needs of those sectors. Second, we discuss an understanding of one's role as moving beyond a prioritisation of public health to being responsible for balancing multiple considerations, including but not limited to the direct health effects of COVID-19, in policy assessment and formulation. This might entail assessing the political feasibility of a policy, or explicitly balancing economic or other societal objectives alongside public health objectives, as well as a consideration of the implications for other health outcomes beyond the direct effects of COVID-19 (such as mental health, social health or food security). The appropriateness of each of these approaches to the role of public health officials and experts depends on the position in which the official or expert finds themselves, the broader milieu of the policymaking apparatus and the social and political context where those decisions are being made.

When the sociological lens has been turned towards health officials or experts, much of the literature draws on conceptualisations of power and social constructionism to analyse how public health concerns—such as public health emergencies arising from West Nile virus or COVID-19 or the spread of chronic diseases throughout globe—are socially and medically constructed (for example, see Decoteau & Garrett, 2022; McCormick & Whitney, 2013; Phillips & Green, 2015; Schwartz et al., 2021). Building on this literature, we explore how boundaries are created by health officials and experts around their own roles in policymaking processes, in institutional contexts that enable or constrain taking on specific roles (see Cassola, Fafard, Nagi, & Hoffman, 2022). Appraising these different ways of doing public health—and their ethical implications—may help health officials and experts better navigate this challenging policymaking context and to build common ground across different parts of government and between competing policy considerations.

LITERATURE REVIEW

The 'cascading economic, financial, human and social crises' resulting from the COVID-19 pandemic necessitated collaboration between many sectors of government and society (Wolf-Fordham, 2020, p. 560). Engaging in collaborative work that brings together multiple perspectives is an important part of public health emergency preparedness (Lee et al., 2023) and public health more generally (Axelsson & Axelsson, 2006; D. J. Hunter et al., 2010; Kivits et al., 2019). This article focuses on one specific context of intersectoral partnerships: those in state-level decision-making during the COVID-19 pandemic, where numerous task forces, advisory groups and work groups were formed to advise governors on challenging policy decisions. We examine how these different group formations brought together a variety of perspectives to weigh competing values such as the promotion of public health with respect to infectious disease and other elements of health such as mental, social and spiritual health.

Support for these types of partnerships, and acknowledgement of the challenges to balancing multiple ethical objectives, has been a focus of a number of essays and ethical frameworks. For instance, numerous scholars called on policymakers in the COVID-19 pandemic to acknowledge the moral implications and ethical trade-offs of their decisions (Dupont & Galea, 2022; Gostin & Hodge, 2020; Gostin et al., 2020; Rieder et al., 2020; Tomori et al., 2021), and to bring diverse fields of expertise into the fold of decision-making (Fairman, 2022). Several public health ethics frameworks produced prior to the pandemic (see Childress et al., 2002; Kass, 2001; Marckmann et al., 2015; ten Have et al., 2013) and during the pandemic (for example, Bernstein et al., 2020; Mello & Wang, 2020; Phelan, 2020; Studdert & Hall, 2020) offer approaches to balance these competing considerations.

Collaboration is an important part of putting forward policies that strike an ethical balance between different objectives, although it does not always go smoothly. In a qualitative study of barriers to intersectoral public health collaboration in England, UK, Taylor-Robinson et al. (2012) found that cultural barriers between sectors—such as different types of 'language' used, and different values—made working together on big public health issues challenging. Similarly, D. Hunter and Perkins' (2012) study of the UK context found that successful partnerships between public health and other 'silos' were more likely to occur when there was clarity regarding the goals of those partnerships and everyone's roles in the partnership. Less fruitful partnerships were often characterised by a 'silo mentality' and a lack of willingness to share resources or information.

This literature points to the importance of understanding how the roles of different participants in a collaboratory effort are understood and articulated. Throughout this article we draw upon the concept of boundaries and boundary-work in our analysis of these diverging roles of health officials and experts in intersectoral collaboration. This concept has been useful in fields and sub-fields such as institutional ecologies (Blok et al., 2019), science and technology studies (Jasanoff, 1987), environmental policy (Guston, 2001) and the sociology of science (Klein, 2021). In this literature more generally, symbolic boundaries are 'conceptual distinctions made by social actors to categorize objects, people, practices, and even time and space' (Lamont & Molnár, 2002, p. 168). These boundaries are not uncontested: 'Groups compete in the production, diffusion, and institutionalization of alternative systems and principles of classifications' (p. 168). Boundary-work as a concept has been used to describe the ways that boundaries are erected, maintained, transgressed, contested and dissolved (Lamont & Molnár, 2002). With respect to boundary-work on disciplinary and professional boundaries, Allen (2000) described this work as the 'micropolitical strategies through which work identities and occupational margins are negotiated' (p. 348).

The demarcation of professional domains through boundary-work has been explored amongst journalists (Banjac & Hanusch, 2022), clinicians (Allen, 2000; Bowker & Star, 2000), medical examiners (Timmermans, 2002), in scientific disciplines (Gieryn, 1983) and in health promotion (Pedersen et al., 2017; Roussy et al., 2020). How professional domains are defined, and who or what is included or excluded, matters. As Roussy et al. (2020) note,

> Boundaries are drawn when decisions are made around how a situation or an intervention will be managed, who gets resources or not, and who will be involved or not. As such, boundary work can be defined as ongoing processes of inclusion and exclusion of spaces, people, activities and processes.
>
> (Roussy et al., 2020, p. 672)

Boundaries can be used to assert power and authority in ways that can bring about conflict (Banjac & Hanusch, 2022; Timmermans, 2002). However, they can also be transgressed over time to produce greater alignment, communication and respect for differences (Pedersen et al., 2017).

The demarcation of expertise is one way that boundaries are drawn around professional domains. For Eyal (2013), expertise is the 'networks that link together objects, actors, techniques, devices, and institutional and spatial arrangements' (p. 864). In other words, expertise is not just something that is possessed by an expert, such as a public health expert; it is the medical or public health degrees, the statistical software, the journal articles and textbooks and the roles within institutions assigned experts that form something that can be held together and understood as expertise. In this article we examine expertise as a form of boundary-work that is undertaken by health officials and experts to make claims about who can or should participate in COVID-19-related policy discussions.

The boundaries of public health are not merely a question of professional demarcation, they raise significant ethical questions as well. From a public health ethics perspective, it matters how people in public health understand and enact their roles because it affects what objectives are valued and how they are balanced, the types of information that are accessed and used to make decisions and the epistemic (in)justices that are brought about regarding claims to expertise or for whom one can speak. Better elucidating these differing perspectives can help with orientation

and training for public health to work better with other sectors to make challenging decisions, and to invite a greater consideration for what role(s) public health practitioners should play in different contexts.

METHODS

Data and sampling

Participant recruitment occurred from February to December 2022. Recruitment and semi-structured interviews occurred in two phases:

1) *Interviews with government health officials and advisors and external experts involved in the pandemic policymaking process across six states that were selected for their political and geographic diversity.* Potential participants were identified through outreach to governor's offices, snowball sampling and Internet searches.[2] Through this process, 12 interviews were conducted with 13 individuals in 5 states.[3]
2) *Interviews with state epidemiologists, who could come from any state.* Through this process 11 interviews were conducted with 12 individuals[4] (11 state epidemiologists and one additional state health official). Contact information for state epidemiologists was identified using Internet searches of both official government websites and secondary sources, and they were then emailed a recruitment email.

Interviews with 25 participants form the basis of this article (see Table 1).

Recruiting participants was challenging; most of the prospective participants that were contacted did not respond to our invitation. This is likely because public health officials and experts have been incredibly busy throughout the pandemic and did not have time to participate in the study. Additionally, following the interviews, some of the participants also did not want us to use some specific statements that they had made due to concerns that the information contained in the quote might reveal their identity to their colleagues or to others. These concerns are very understandable; significant numbers of public health officials have faced pandemic-related harassment, and some were removed from their positions due to public outcry about restrictions during the pandemic (Ward et al., 2022).

Ensuring that we could do our best to maintain confidentiality was important in the participant recruitment process. It was also ethically important, given the possibility of harassment from the public, or retaliation by their employers, should content from an interview come to be associated with a participant. To this end, to maintain confidentiality, we will not identify the state in which each participant was working, and throughout the manuscript we will be using the non-gendered pronoun 'they' to describe participants and the governors of the states in which they worked. For the first set of interviews, at the end of each interview participants were asked how they would like for us to refer to their professional role in project outputs, given that for many of them they could be identifiable if their job title was given. For these interviews we use the descriptor agreed to by these participants; in many instances, a general description is used such as 'state health official', 'advisor to governor,' 'task force member,' or 'health advisor to a governor'. Other interviewees who were less concerned about being identified gave specific job titles. When permitted by the participants, we indicate whether a participant was a government official or external to government, which we view as relevant to the findings. For the second set

TABLE 1 List of participants and the role that they played in their state's pandemic response.

Interviewee number	Interviewee role
100-1	State public health leadership
100-2	State public health leadership
101	State public health official
102	Expert outside the state government who was a member of a COVID-19 working group
103	COVID-19 task force member who worked at a large health-care institution
104	State public health official
105	State health official
106	Expert outside of the state government involved in the COVID-19 response
107	Local health official and health company CEO with knowledge of their state's COVID-19 response
108	External public health advisor to a governor
109	External health advisor to a governor
110	State health official
111	State health official
200	State epidemiologist
201	State epidemiologist
202-1	State health official
202-2	State epidemiologist
203	State epidemiologist
204	State epidemiologist
205	State epidemiologist
206	State epidemiologist
207	State epidemiologist
208	State epidemiologist
209	State epidemiologist
201	State epidemiologist

of interviews, those who were state epidemiologists (all but one) are referred to as state epidemiologists. The additional health official in this set of interviews is referred to as a state health official.

This article focuses on those who were advising on the COVID-19 response in a public health capacity. However, not all of the participants have specific public health expertise; many had health or medical expertise or expertise in hospital systems. Throughout the article we use the broad terms 'health officials and experts' to illustrate the variety of professional backgrounds and areas of expertise that are represented in the study sample.

An interview guide was used covering a range of topics, including policy decision-making processes and participants, how policymakers managed multiple policy objectives and trade-offs between them and whether ethics guidance was used in the policy response. Since the participants frequently had different insights into different policy decisions (due to being in their role at different times throughout the pandemic, or being in different states with varying policies), some

questions were altered to ask about particular policy decisions to which they would have had access. The interview guide was developed with feedback from experts on both semi-structured interviews and the state government/pandemic policy. Interviews were conducted over Zoom or a similar platform, and were recorded and transcribed verbatim using transcription software or a transcription company with the exception of one interview where only notes were taken at the interviewee's request. Interviews ranged in length from 36 min to 1 h and 34 min and were conducted by multiple members of the research team. To ensure that interview procedures were consistent across interviewers, the first author trained the other interviewers on the research team's approach to conducting themselves and asking follow-up questions during interviews and invited other members of the research team to sit in on early interviews to model the approach to be taken in subsequent interviews. All procedures were approved by the Johns Hopkins University Bloomberg School of Public Health Institutional Review Board.

Data analysis

Throughout and following the interviewing process, data analysis proceeded following the approach of Miles et al. (2014). First, an initial code book of 126 codes was developed for first cycle coding. These codes were selected based on the research questions, the interview guide and a read-through of the transcripts. The code book was validated using intra-rater reliability, whereby a research team member coded five interview transcripts and then later recoded these 5 transcripts after at least a week of time had passed. The overall unweighted Cohen's kappa based on character was 0.82 which was in the target range. This process was followed by second cycle coding, focusing on 16 codes related to: internal debates regarding policy; policy objectives related to controlling COVID-19, managing the economy, respecting freedom and promoting equity and balancing multiple policy objectives. The final representation of the two conceptions of roles for health officials and experts is reflective of an iterative process of coding, writing, theorising and returning to the transcripts to follow up on theories and emerging themes.

RESULTS

In what follows, we describe how the participants constructed boundaries around their roles as health officials and experts. This involved boundary-work related to areas of expertise, institutional arrangements and hinges, and assertions about what is right or what is best. We characterise two diverging ways along a spectrum in which research participants articulated the boundaries of their role as state health officials and health experts while serving in an advisory capacity on COVID-19 policymaking teams. We start at one end of the spectrum by examining the role of 'staying in the lane' of public health (specifically, public health related to containing morbidity and mortality from COVID-19) by prioritising public health needs when assessing and/or advocating for policies. Next, we outline the other end of the spectrum: the role of balancing multiple considerations in a pandemic policymaking context. This is an understanding of one's role that moves beyond a prioritisation of public health to considering multiple objectives (including but not limited to public health) to reach decisions about policies. Health experts operating within this understanding of their role might have been engaging in compromise with other sectors, assessing the political feasibility of a policy or explicitly balancing other objectives alongside public health objectives when making recommendations about the best policy approach.

Before presenting these two approaches, some caveats are needed. First, we present these two roles as being on a spectrum because they are not mutually exclusive. For instance, the boundaries of the role of a health official or expert may change depending on context; a health official or expert might have advocated primarily for public health in the beginning of the pandemic, but shifted their perspective as the pandemic continued and pharmaceutical interventions became available. There is also space between these two approaches. For example, one might see themselves as primarily assessing and advocating for policies that advance public health given that this is their area of expertise, while also working to take other perspectives and areas of expertise into account in their own thinking. Also, several participants never indicated if they subscribed to either perspective in the context of pandemic policymaking.

Role one: 'Staying in the lane' of public health

Particularly in the early months of the pandemic, public health concerns were at the forefront of the public's mind and on policymakers' agendas. Significant numbers of health officials and experts were dedicated to specifically assess how to best prevent the spread of COVID-19, how to protect those most vulnerable and how to protect hospital systems from being (too) overburdened. Some participants articulated a role for health officials and experts that involved sticking to their area of expertise. In some instances, this approach entailed providing the necessary public health or epidemiological information to inform decisions:

> I think from my perspective and my seat at the table and my role, my primary focus was on the infectious disease epidemiology and trying to present the best information about what was happening to the coordinating group and our leadership who are making large policy decisions.
>
> (p. 204)

For others—perhaps because of the role that they were assigned in COVID-19 policymaking ecosystem—this approach involved moving beyond an informational role to a role where they were assessing specifically what would be best for public health by reducing the direct health impacts of the coronavirus on morbidity and mortality. This view was also articulated by a local health official and health company CEO:

> I'm looking at it through the lens of public health and what it means to a human being and to a family to either have COVID or to have it in the family. Or what it means to [people with] certain medical conditions, and people at risk. I'm looking at it from a heavy medical public health lens, myself.
>
> (p. 107)

Some participants took on a policy-recommending role. The following quote from a state health official is emblematic of this perspective:

> We needed to come with our public health recommendations and let others point out the economic impact of what we were saying. So, even though we understood [that there are other considerations], we felt like our job was to try to say what

> we thought was the most protective to public health. ... They knew that given our druthers, we would force everyone to stay home for three years, and [the economic advisors] wanted to make sure there was a balance to our voices of extreme caution, right? Balancing those economic interests.
>
> (p. 101)

A health task force member explained how this occurred in practice during meetings:

> And the question [about a policy] would get posed [by the governor], and then we would weigh in medically. And again, this was not a shy group. We would weigh in and then the business folks would weigh in as well and say, "Well, we could do that, but there'll be a negative impact. We won't be able to hire".
>
> (p. 103)

Many of these quotes illustrate an acknowledgement on the part of those who 'stay in the lane' of public health that there were other concerns that needed to be considered beyond those of public health, but that it was the job of others to bring those concerns to the table and to advocate for them. The boundary of their role ended with public health, and others were expected to offer advice from within the boundaries of their respective areas of expertise. As such, this may be a role that was more likely to be taken on by external experts who were sometimes siloed along with other health experts on medical or health advisory bodies, rather than those in the state government who may have had more interactions with those with different areas of expertise.

In acknowledging that multiple considerations were at play in policy deliberations, several participants stated that it was appropriate for the governor to make the final decisions regarding policies as they had a broader and better view of the multiple objectives at stake than the health department and health experts alone. For example, a state health official noted that the governor's office is engaged with different agencies and different groups, and therefore 'they're obviously trying to balance across a whole wider range of perspectives that we may be aware of, but we're not getting blown up by those groups regularly' (p. 203). Another state health official noted that the governor's office should make decisions that involve balancing different objectives, 'because they have to weigh all the pieces of the state's wellbeing,' and thus those policymakers who are hearing multiple perspectives are better tasked with making decisions than the health department alone (p. 200). Within the pandemic policymaking ecology, the governor and the governor's office served as a hinge (Abbott, 2005) between the different segments of pandemic policymaking.

We contend that a potential strength of this approach is that it allows public health experts, as well as experts in other domains, to stick to their area of expertise and to make recommendations based on extensive knowledge to the party who will make the final decision. This approach can work particularly well when trust and familiarity have been established between officials and experts from different backgrounds (Pedersen et al., 2017). However, this approach can break down when distinct forms of expertise are not appropriately appreciated by others. For example, one external health advisor to a governor described a policymaking process where the information provided by health advisors was 'highly discounted by some parties' (p. 108). They explained that a facet of this dynamic was that health experts deferred to those with economic expertise, but the reverse was not observed.

> Some people assumed that they were experts on everything. And that just becomes a difficult environment in which to say, "How do we negotiate a pathway forward that puts equal weight on economic impact and medical impact?" You can't do it if people advocating for economic impact also think that they are the masters of medical information.
>
> (p. 108)

Ultimately, this dynamic led to what this health advisor described as an 'uneven playing field, in terms of trying to balance those two issues' (which they refer to as medical impact, likely referring to public health impact).

These struggles that overpower in the COVID-19 policymaking ecosystem highlight the importance of considering the context of boundary-work in a public health emergency context. When non-experts in public health expanded the boundaries of their proficiency to include public health, it reflected an 'uneven playing field' where the advice of health officials was being downplayed and the public's health was inadequately considered in a public health emergency. In these quotations, this health advisor was doing boundary-work, to borrow from Gieryn (1983), to demarcate health expertise from non-health expertise, to reinscribe the intellectual authority of health officials and experts in the COVID-19 pandemic. Boundaries around expertise work to define who is included and who is excluded as an expert, and thus whose testimony regarding information or policies should count and to what extent.

Role two: Balancing multiple considerations

Instead of 'staying in the lane' of public health by focusing only on minimising the health impact of COVID-19 in policy discussions, several respondents described their understanding of their role as that of helping to reach a policy recommendation that also took account of other interests and objectives. The 'balancing multiple considerations' perspective involves what Wimmer (2008) refers to as 'shifting boundaries through expansion', which occurs when 'actors... create a more encompassing boundary by grouping existing categories into a new, expanded category' (p. 987). This may have involved expanding the *boundaries of public health itself* to include considerations beyond pathogen-focused disease prevention. It also may have left the boundaries of public health as a discipline discrete from other non-health-related disciplines intact, while doing boundary-work to expand *the boundaries of what must be considered by public health officials and experts in policymaking*. The following quote from a health official illustrates this 'balancing multiple considerations' approach:

> I do think that the perception in the public was that we [in public health] were just focused on disease, disease, disease, which is not true. We were also aware of economic impact and... of isolation and mental wellness. ...I always say...the best way for a person to get their ribs healed is if they would just stop breathing. But of course, you're not going to make somebody stop breathing to heal their ribs. Right? Because you need them to live. In the perfect world, we would've isolated everyone in their own little bubble, and we would've ended the outbreak. But we couldn't do that. ...I didn't agree with everything, but I think we hit a good balance.
>
> (p. 111)

Another state health official highlighted the impossibility of responsibly instituting policies that would fully prevent the spread of COVID-19. In this quote, the participant reflected on whether they felt angry when their governor made decisions that ran counter to their counsel:

> I can honestly say I never felt that way about any of that because it is about compromise. It is about trying to thread the eye of the needle between two fundamental directions [in the extent to which actions are taken to control the virus], which in moderation are good, but in extreme are existentially destructive. It's that simple. You are never going to get through this war without casualties.
>
> (p. 104)

These participants were engaging in the expansion of the boundaries of public health policymaking, by making the 'big picture' (beyond health) part of their purview in public health policymaking. For example, an external health advisor to a governor (p. 109) stated that considering the 'downstream impact' of policies, such as school closures causing limited access to school meals, is vital for public health policymaking practice.

A related reason that some of the health officials and experts said that they participated in the weighing of multiple considerations was so that the policies adopted by the state would be accepted by the public (Interviewees 100-1, 104, 110, 206 and 208). For example, some participants described numerous considerations that went into policy decisions, which often included evaluating public sentiment regarding the acceptability of policies:

> We had to think about what was actually doable. It wouldn't do us any good to have a policy that did a good job of protecting people, if it really couldn't be implemented. So, we did weigh some of those considerations. Some of which were political, but some of it was actually [related to] mental health. You want to talk about how well people could tolerate [restrictions before it] got to a point where people were so isolated that they needed a way to come together and receive that social support. So that was part of it too, in terms of our considerations and part of our communication as well.
>
> (Interviewee 100-1)

The following quotation from a state epidemiologist illustrates the contrast between the balancing multiple considerations role, which the interviewee was taking, and the 'staying in the lane' of public health role, which they describe as the approach taken by the academic researchers that were involved in the COVID-19 response:

> I think what the [vaccination] committee may have lacked at times is that inside track [into the leadership's process]. While I attend [those meetings] and try to provide that, the academic perspective sometimes doesn't recognise all of the constraints of the political situation. ... I think there were people in the academic group that were very concerned about continuing to have really strict mitigation measures at a time when political will was falling away. ...I think we agree in principle that the risk is there and that we need to communicate it to people, but there's also reading your audience, and if you're continuing to tell people to do something that they simply no longer have an interest in doing, trying to turn it into fear mongering may not be helpful.
>
> (p. 206)

Incorporating the perspectives of those to whom policies apply was a piece to this puzzle, according to a state epidemiologist:

> I think it needs to be a two-way conversation that we need to hear from people in different communities and bring that back and think about it. ...I think at the end of the day, recommendations are not helpful if people don't follow them. If people don't value how recommendations are going to protect them and their families and their loved ones, they're not going to follow them.
>
> (p. 208)

Another state public health official was quite critical of those in public health who 'don't know how to collaborate and get involved, lead, to compromise, to anticipate'. They added that those believing that public health is above the political realities of policymaking in the state government, where 'every elected official is one bad incident away from being unelected,' will not be effective in that environment and that they 'shouldn't be leading a public health department' (p. 110).

While some health officials and experts may balk at the suggestion that they take partisan politics into account in their recommendations, and they, thus, do boundary-work around the role of public health officials and experts to exclude such considerations, others might take a 'shifting boundaries through expansion' approach by viewing those who limit their role to such a degree as being ineffective or even naïve. It is not clear, though, if these participants are necessarily contesting the boundaries of public health itself (for example, to include 'politics' however it is defined), the boundaries of public health policymaking, or both. Whether in doing so they were transgressing the boundaries of their roles in public health may depend on who is asked. Some might have felt that they were stepping outside of their job description as public health officials or experts, while others (such as the participant quoted above) would say that considering these other objectives *is* in their job description.

Some contextual factors articulated by the participants may explain why they took a 'shifting boundaries through expansion' approach to public health emergency policymaking that necessitates balancing multiple objectives, in contrast to those who tried to 'stay in the lane' of public health. First, and perhaps most importantly, several of the participants who saw their role as being that of balancing multiple considerations were in senior health leadership positions in their state. This likely meant that they were in higher levels of decision-making, and thus the boundaries of their purview were different than the boundaries of those taking on an information-providing or external advisory role. Second, the context of the pandemic may have changed how the balancing approach was taken. Another participant, who was a state epidemiologist, highlighted how their decision-making process changed as more people became involved:

> Fundamentally, from my perspective, preventing infections is a critical piece, but it's not the only piece of how we make our decisions around control measures. If that was the only consideration, we would have just said: stay home, don't ever leave, and everything's closed, and there's no school, and stores are closed. But obviously there's other considerations that have to be balanced. In general, of course, we're fully capable of thinking through those balances ourselves from the perspective of public health. But then when that gets out into the broader sphere and you've got people whose primary mission is not health focused, but is economy or education or others, then sometimes... we reached different conclusions than we ultimately

> landed on when we engage with people who are sort of approaching things from different perspectives.
>
> (p. 203)

For this participant, public health departments are capable of thinking through competing considerations in general, but the 'broader sphere' of the implications of the policies under consideration during the pandemic necessitated bringing together multiple perspectives beyond those of public health. Through this process, the recommendations changed from what public health officials and experts came up with on their own, even if they were taking a type of balancing approach as a group. These contextual factors illustrate how the roles that health officials and experts may play in policy decision-making can change depending on circumstances, whether it be the role that they are playing in government or in an organisation, or the broader social and epistemological context.

DISCUSSION

In the COVID-19 pandemic, collaboration often entailed bringing together the perspectives of health officials and experts with the perspectives of other government officials/experts with expertise in other policy areas. In our conversations with participants, we found that the boundaries of what objectives should be considered by health officials and experts in policymaking were defined differently along a spectrum. In some instances, health officials and experts understood their role to be to 'stay in their lane': to provide public health information, or to assess or advocate for the policies that best protected health, to the exclusion of other (potentially) relevant considerations. The boundaries of their roles, and the boundaries of their responsibilities versus non-responsibilities (Wainwright et al., 2006), were drawn more narrowly. However, in other contexts, health officials and experts were participants in COVID-19 policy discussions where they aimed to balance multiple objectives alongside officials and experts outside of health in the interests of finding the best pathway forward that would take multiple factors such as economic considerations and the willingness of politicians to implement policies (in a politically polarised context) into account. The boundaries of these roles were defined more broadly or even blurred to some extent.

While some members of the public may have perceived that health officials and experts involved in the pandemic response were exclusively focused on infectious disease, quotes from various participants who did both types of boundary-work outlined in this article illustrate that they were quite aware that there were other important considerations at play. Many acknowledged the importance of considering competing objectives, whether they did so personally or whether they left that responsibility up to others.

If health officials and experts taking both approaches understood that numerous objectives beyond public health needed to be considered and balanced in policymaking, why, then, did these distinct roles emerge? The specificities of the positioning of the participants in the policymaking process—whether they were siloed into a medical/public health task force, or if they were more integrated into a roundtable process where multiple perspectives were represented—likely influenced the participants' expectations for how they were to contribute to this process and thus the type of boundary-work in which they engaged. Some may have also seen it as their responsibility to engage actively in the integration of public health with other policy objectives; perhaps because they were in a leadership position, or they were more attuned to the political

dynamics of their state. Indeed, research has shown that when providing advice and trying to bring evidence to bear on public policy, health officials can be more effective if they understand the nature of decision-making, the power of stories and the reality that senior decision makers are going to use cognitive shortcuts (Oliver & Cairney, 2019). Similarly, research on public health advice suggests that senior public health officials consider their context: who they are advising and what is top of mind (Cassola, Fafard, Palkovits, & Hoffman, 2022). Perhaps they were engaging in a form of what Wainwright et al. (2006) refers to as ethical boundary-work, which they describe as departing from Gieryn's (1983) boundary-work between science and non-science to maintain scientific expertise and authority. This departure occurs through boundary-work around what is ethical practice in science (specifically with respect to stem cell research, in their case), which brings in non-science actors (such as regulatory bodies) into demarcations between what is ethical and non-ethical scientific research. Similarly, these participants were focusing on making a distinction between effective and ethical *public health policy*, which involved a range of actors and considerations, rather than distinguishing between *public health* and *non-public health*.

However, other health officials and experts may have been hesitant to evaluate policies from a perspective that was outside of their educational or professional background. Given the far-reaching implications of COVID-19, as well as the far-reaching implications of every policy that was or was not implemented, limiting one's scope to one facet of the problem may have worked better than trying to take on other dimensions such as the economy or the public's acceptance of policies. Perhaps, as Pedersen et al. (2017) noted, this boundary-work to narrow the scope of their purview was an attempt to tame the 'wicked problem' of policymaking in the pandemic.

The appropriateness of these forms of boundary-work around these roles and responsibilities can only be ethically evaluated when considering this broader context, as well as the specific policymaking context. If one is tasked with providing information about infectious disease epidemiology, then it is not ethically problematic to focus on that mandate. If one is on a health-focused COVID-19 work group as an external expert, focusing on health when discussing potential policies is similarly appropriate. Moving beyond information and assessment to *advocating* for policies involves moving beyond information-provision to trying to persuade others to implement a policy, and thus moves into more ethically complex territory. Where one is positioned in the decision-making hierarchy also has significant ethical implications. From an ethics perspective, the more directly public health officials and health experts are involved in influencing or making decisions about pandemic policies, the more important it is that they do not limit their assessment to only the public health (specifically, infectious disease) risks and benefits of policy options.

What is an 'ethical' approach to public health, however, is contested. There is no singular 'public health ethics perspective.' Within our interviews, it appeared as if health officials who served in their state's government were more likely to support the balancing multiple objectives in COVID-19 pandemic policy than health experts situated in the academy, illustrating further divisions in 'public health ethics perspectives'. Furthermore, there has been significant disagreement within public health regarding appropriate COVID-19 containment policies, and the extent to which pathogen-focused disease prevention should be prioritised over other objectives (Angeli et al., 2021). Even the boundaries of what might be considered a 'public health' consideration in any given instance are contested. For example, actions that contained morbidity and mortality from COVID-19 in the short term may have fostered inequities and mistrust that could limit the effectiveness of public health interventions in the long term. How different sectors of the public will be affected by a policy—with special consideration for more vulnerable populations—must be a part of this debate. The effectiveness of a policy and its acceptance by the target population

are ethical issues as well, particularly as the burdens of a policy increase (Childress et al., 2002; Kass, 2001). Beyond 'public health,' it is important to also evaluate how a policy affects other important moral considerations in addition to the promotion of health in an infectious disease context, such as other dimensions of wellbeing beyond health, as well as freedom, privacy or equity. In other words, what is best from a public health ethics perspective is not necessarily for public health to be considered the overriding priority.

This boundary-work also raises ethical and practical questions about which boundaries will promote greater legitimacy in the eyes of the public, or indeed, the many publics with whom trust may be fostered in different (and perhaps contradicting) ways. The repeated references by the interviewees to the importance of weighing the population's acceptance of COVID-19 mitigation measures and the well-documented influence in the US of political party affiliation on people's acceptance of such measures (Wang & Pagán, 2021) illustrate that public health is politically polarised. The populist swing driven by Trump and the resulting increase in political polarisation in the US had many wide-ranging implications for health, such as the increase in distrust of government institutions, the spread of misinformation related to every aspect of COVID-19, and the vilification of 'others' (Lindström, 2020; Speed & Mannion, 2020).

However, even when considering this politicised public health context, it is not immediately clear which of the two approaches is best at ensuring that public health is given proper consideration. It may be that taking a more active role in advocating for policies that prioritise public health may be better at combatting misinformation and more successful at getting public health on the agenda than a balancing approach. In instances where people advocating for freedom or the economy are over-represented in decision-making processes, public health advocacy may be more appropriate. In other words, in some contexts it may be that health officials have to advocate for public health for it to get a fair hearing. On the other hand, the balancing approach might be a better tactic for promoting public health measures when public health officials and experts are regarded with suspicion, as was often the case in the politicised COVID-19 policymaking climate in the US. When large swaths of the public are sceptical about infectious disease containment measures—or indeed, if they are hostile to them—a balancing approach may illustrate that health officials and experts are taking the values and viewpoints of the public into account. Ultimately, it is not obvious which approach—if any—would be more effective at ensuring that public health is given appropriate consideration, or indeed, what an 'appropriate consideration' of public health might be.

Further research about these two roles is needed to better empower health officials and experts to ethically and effectively 'do' public health. Numerous questions remain: How are these two roles constructed—in training, in meetings and in the social and institutional contexts where health officials and experts are working? What factors shape a person's willingness to take on each of these roles? Which approach will better promote trust and collaboration between colleagues within and outside of public health? Did taking on one of these roles influence the extent to which health officials and experts experienced moral distress (Cooke et al., 2022) when they disagreed with decisions or the process of coming to a decision? And, which approach will better garner legitimacy for public health in the eyes of the public (or publics), who are significantly stratified in their interests, vulnerabilities and levels of trust (and the experiences informing those levels of trust)?

This study has limitations that should be considered when interpreting its findings. First, there may be differences between those who agreed to participate and those who did not. For example, given that it was easier to contact people who remained in their roles in the state government than those who did not, it may be that the people who participated may have

had a more positive outlook on the pandemic response in their state than those who did not. Second, these findings are based on a relatively small sample of US states. The states in which the majority of the participants were based were primarily small- to medium-size states. Size of the state government makes a difference to policy advice—larger state governments have more resources to hire better-trained, more diverse and better organised policy advisors. Furthermore, most interviewees were from states with Republican governors. While our sample provides an important perspective into key aspects of US policymaking processes, it is possible that different policymaking contexts and differences due to state public health budgets and workforce size may not have been represented here. Third, most participants were current government officials, who may have been hesitant to criticise their employers. Despite these limitations, the participants that agreed to be interviewed, and the insights that they shared, do shed light on aspects of a difficult and high-stakes policymaking process.

Health officials and experts may play different roles in policymaking processes, and they may draw different boundaries around their roles. Public health practitioners and ethicists should work to better understand the nature of these roles, and their different strengths and weaknesses for accomplishing various goals. This work will allow health officials and experts to recognise the role that they are serving, so that they can tailor their advice, advocacy or decision-making accordingly.

AUTHOR CONTRIBUTIONS

Katelyn Esmonde: Conceptualization; formal analysis; investigation; methodology; supervision; writing—original draft preparation; writing—review and editing. **Jeff Jones**: Investigation; writing—review and editing. **Michaela Johns**: Formal analysis; investigation; writing— review and editing. **Brian Hutler**: Investigation; methodology; writing—review and editing. **Ruth Faden**: Investigation; methodology; writing—review and editing. **Anne Barnhill**: Conceptualization; funding acquisition; methodology; project administration; supervision; writing—original draft preparation; writing—review and editing.

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CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest to report.

DATA AVAILABILITY STATEMENT

Research data not shared.

ETHICS STATEMENT

This study was approved by the Johns Hopkins University Institutional Review Board (IRB00017486).

PATIENT CONSENT STATEMENT

Not applicable.

PERMISSION TO REPRODUCE MATERIAL FROM OTHER SOURCES

Not applicable.

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ENDNOTES

[1] This article is a part of a broader project on the ethics of state-level pandemic policymaking in the US. Non-health-focused interviewees were included in the study sample but are not included in this article.

[2] Recruitment emails for participants for the larger study were sent to an average of 17 people in 9 states. This led to 25 interviews with 26 individuals. Of this larger group, 13 of those individuals were health officials or experts, and they form the basis of this article.

[3] Two individuals were interviewed together.

[4] Two individuals were interviewed together.

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