



# HHS Public Access

Author manuscript

*J Public Health Manag Pract.* Author manuscript; available in PMC 2024 April 24.

Published in final edited form as:

*J Public Health Manag Pract.* 2022 ; 28(Suppl 1): S27–S37. doi:10.1097/PHH.0000000000001444.

## Public Health Strategies: A Pathway for Public Health Practice to Leverage Law in Advancing Equity

**Samantha Bent Weber, JD,**

**Matthew Penn, JD, MLIS**

Public Health Law Program, Center for State, Tribal, Local, and Territorial Support, Centers for Disease Control and Prevention, Atlanta, Georgia.

### Abstract

This article outlines a pathway for public health departments and practitioners to incorporate law into their efforts to advance equity in health outcomes. We assert that examining and applying law can accelerate public health efforts to mitigate structural and systemic inequities, including racism. Recent events such as the COVID-19 pandemic and the community impacts of policing have brought into sharp relief the inequities faced by many populations. These stark and explosive examples arise out of long-standing, persistent, and sometimes hidden structural and systemic inequities that are difficult to trace because they are embedded in laws and accompanying policies and practices. We emphasize this point with a case study involving a small, majority Black community in semirural Appalachia that spent almost 50 years attempting to gain access to the local public water system, despite being surrounded by water lines. We suggest that public health practitioners have a role to play in addressing these kinds of public health problems, which are so clearly tied to the ways laws and policies are developed and executed. We further suggest that public health practitioners, invoking the 10 Essential Public Health Services, can employ law as a tool to increase their capacity to craft and implement evidence-based interventions.

---

This is an open-access article distributed under the terms of the [Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 \(CCBY-NC-ND\)](#), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

**Correspondence:** Samantha Bent Weber, JD, Public Health Law Program, Center for State, Tribal, Local, and Territorial Support, Centers for Disease Control and Prevention, 1825 Century Center, Atlanta, GA 30345 (sweber@cdc.gov).

The authors acknowledge the contributions of several individuals who provided comments on drafts. The following individuals from state and local public agencies offered insightful comments as well as conceptual and substantive suggestions: Evette Brandon, MPH, Quality Improvement and Accreditation Director, Alameda County Department of Public Health; Taylor T. Ingram, MPH, Senior Director, Louisville Metro Department of Public Health and Wellness; Claude Alix Jacob, DrPH, MPH, Health Director, San Antonio Metropolitan Health District; Staci Lofton, JD, MPH, Senior Health Policy Planner, Harris County Department of Public Health; and Hayley Penan, Deputy Legislative Counsel, California Office of Legislative Counsel. The authors also thank their colleagues at the Centers for Disease Control and Prevention (CDC) for their robust and thoughtful reviews of the paper, some of whom they do not name here but who include Courtnei Andrews, MPH, CHES, ORISE Fellow, Initiatives and Partnerships Team, Office of Minority Health and Health Equity, CDC; Abigail Ferrell, JD, MA, Public Health Law Program, CDC; Amanda Moreland, JD, MPH; Tara Ramanathan Holiday, JD, MPH, CDC Office of Appropriations; and Brienne Yassine, MPH, Public Health Law Program, CDC. Finally, the authors appreciate the generous assistance, insights, and conversations with Catherine Clodfelter, JD, MPH; Rebecca Rieckhoff, JD; Montrece Ransom, JD, MPH; Rachel Shuen, JD; and Robert F. Weber, JD.

The findings and conclusions in this article are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

The authors declare no conflicts of interest.

## Keywords

equity; law; public health practice; structural racism

---

## A Case Study on Structural and Systemic Inequities

For the residents of Coal Run Road, part of a small neighborhood in an unincorporated area of Zanesville, Ohio, running water in their homes is still a relatively new phenomenon.<sup>1</sup> Throughout the almost 50 years before they received public water access in 2004, residents “used wells, hauled water, had water delivered to their homes, and even collected rainwater and melted snow” for basic uses, such as “drinking, cooking, and bathing.”<sup>2(p463)</sup> Pollution from abandoned coal mines had rendered the groundwater unsafe, sometimes turning it blood red.<sup>1,2(p463)</sup> Residents said they spent more money to purchase clean drinking water, in some instances up to 10 times more, than it would have cost to pay for public water.<sup>3(p3, p99)</sup> And although they lived in a county where lack of access to running water was not uncommon,<sup>4</sup> they went to these extraordinary lengths despite being *surrounded* by an extensive network of waterlines some of which stopped a mere 50 yards from their homes (Figure 1).<sup>1,5,6</sup>

This almost entirely Black neighborhood—one of the few in Muskingum County—experienced clear racial disparities in access to water.<sup>2(pp463–469)</sup> Some families might be driving to the nearby water treatment plant to purchase drinking water or waiting to reuse their dishwater while observing, at the very same moment, residents of the predominantly White part of the area run their lawn sprinklers and fill their swimming pools.<sup>1,6,7</sup> There was no law explicitly denying residents access to water on account of race, but the waterlines stopped where the Coal Run neighborhood began (Figure 2).<sup>4–7</sup> Some residents asserted that over the years, they had suffered various medical conditions caused by “their consumption of water and/or lack of potable water.”<sup>8</sup>

For decades, Coal Run residents regularly made public and private pleas with officials at the city, county, and township agencies that administered water and other municipal services. Although some individuals attempted to help them, their requests were consistently ignored, disregarded, or abandoned.<sup>2(pp464–469)</sup> Public officials relied upon the opacity and complexity of the governing water laws to absolve their respective agencies of responsibility for addressing the neighborhood’s needs.<sup>2(pp464–477)</sup> In 2001, one family said that when it raised its concerns with the County Commission Board, a commissioner responded that they “would not see water unless President Bush dropped a spiral bomb in their neighborhood and it hit good water[,]” and that “their great-grandchildren would be lucky to see water.”<sup>1</sup> Another family in the community stated that when they contacted the health department about obtaining water services, they were told “to dig a well.”<sup>2(pp469,475)</sup>

Coal Run residents were able to access plumbed water after they retained counsel and filed a complaint in 2002 with the Ohio Civil Rights Commission.<sup>3</sup> They alleged a “pattern and practice of [racial] discrimination” that violated federal fair housing laws.<sup>2(p469)</sup> Shortly after filing the complaint, the governor’s office convened various public officials to discuss the matter and the County subsequently executed a plan to transmit water to the

neighborhood.<sup>2(p469)</sup> It took a little more than a year to accomplish what had been a source of friction for almost a half century.

Residents thereafter initiated a civil lawsuit for damages.<sup>6,13</sup> A federal jury returned a verdict in 2008 that found the city and county were liable for “racial discrimination [that] resulted in predominantly African American town residents being denied public water service.”<sup>9</sup> As it turned out, the solution for the community was not to construct another well but rather to transform a discriminatory practice by running public water lines into the community.

We highlight the Coal Run story not to single out one community or one injustice or one set of public officials but rather to offer a narrative frame for the intersections of public health, law, and structural and systemic inequities. It is, among other things, an example of structural “racism and its many manifestations,” which our society has had to confront in stark relief with the “the death[s] of George Floyd and countless others; the COVID-19 pandemic and its disproportionate impact on communities of color, and the [assaults and killings of] members of the Asian community.”<sup>10</sup> These blunt examples contrast with the Coal Run story, which represents the often ambiguous and even hidden nature of inequity and racism that can be embedded in laws and legal practices.<sup>11–14</sup> Coal Run also underlines the intersectional forces likely entangled with the discrimination the community experienced: limited income, rurality, byzantine systems governing property and land ownership, the persistent effects of environmental degradation, complex and confusing public institutional practices, and circumscribed community voice, to name a few.<sup>2,6,\*</sup>

As our society engages in a contemporary public reckoning over racism and other inequities, we invoke the Coal Run story to emphasize this embedded and less overt aspect of law. We seek to underscore how innumerable communities can be disproportionately harmed by the inequitable application of laws, policies, and practices.<sup>11–14</sup> For example, residents of Coal Run finally got running water in 2004, but diverse communities around the country, including economically vulnerable areas elsewhere in Appalachia,<sup>15</sup> small towns such as Sandbranch, Texas,<sup>16</sup> cities such as Flint, Michigan,<sup>17,18</sup> and tribal jurisdictions such as the Navajo Nation,<sup>19</sup> continue to face comparable lack of access due to deficiencies in the creation, implementation, or enforcement of laws and policies. We also tell the Coal Run story to highlight how law can be central to resolving structural and systemic inequities. The community was able to get running water by utilizing an important feature of our legal system: antidiscrimination law. Indeed, many of the mechanisms that can help transform inequities are to be found in law.<sup>11–13</sup>

## Where Does Public Health Fit?

In this vein, the stories of Coal Run and others discussed here raise an important question for public health departments and practitioners: what is the role of public health in addressing those unfair or unjust structural and systemic conditions that are rooted in laws and policies?

---

\*We acknowledge here that this article is neither exclusively centered on structural racism nor meant to address many other related topics. For example, the question of whether the discrimination affecting Coal Run residents was intentional and the nuances of antidiscrimination law are beyond the purview of this discussion.

In the case of Coal Run, delivery of safe drinking water through chlorination, treatment, and regulation of public supplies was one of the great public health achievements in the 20th century<sup>20</sup>; it did not benefit from these advancements because of a complex confluence of legal and social factors. But we can imagine a scenario in which public health had a central role to play in addressing the neighborhood's needs—in gathering information about the problem, informing the public about it, and convening relevant actors to seek accountability. Invoking the recently revised 10 Essential Public Health Services framework, which identify “public health activities that all communities should undertake,” we assert that public health practitioners have a substantial role to play in mitigating the effects of structural and systemic inequities, in part, by incorporating law into their efforts.<sup>21</sup> For this article, we define law as constitutions, treaties, statutes, regulations, case law, judicial opinions, executive orders, ordinances, and policies that have a binding effect as well as the mechanisms for executing, implementing, and enforcing them.<sup>22</sup>

This article outlines a potential pathway for state, tribal, local, and territorial public health departments that builds law into efforts to achieve equity in health outcomes and to mitigate the effects of structural and systemic inequities, such as racism. We first discuss the increased emphasis on equity in public health practice as well as the challenges that public health departments may encounter in pursuing equity-focused initiatives. We subsequently discuss the 4 elements of a pathway for incorporating law into equity initiatives, which we hope can inform public health practitioners' strategic efforts on these topics. First, law can be understood as a key social determinant of health that can help refine how public health practitioners, and the communities they serve, understand equity. Second, law can be studied. The examination, assessment, and surveillance of law's functions as a social determinant can expand and strengthen the evidence base for achieving equity by helping public health practitioners and the communities and populations they serve to trace *when*, *why*, and *how* certain structural and systemic conditions give rise to health inequities. Third, law can be centralized in public health efforts to translate and disseminate information and data about the root causes of inequities. Fourth, law can be a springboard for collaboration among public health departments, the communities and populations they serve, and policy makers to expand the range of potential strategies for advancing equity (Figure 3).

## Public Health Departments Face an Equity Challenge

Public health departments and practitioners are increasingly reimagining their roles as drivers of efforts to center equity in health outcomes—by gathering data and exploring interventions to help address the inequitable conditions experienced by members of communities such as Coal Run and elsewhere.<sup>21</sup> Indeed, these efforts are centralized by today's guidance for public health practice, including the updated 10 Essential Public Health Services.<sup>21</sup> As public health practitioners pursue research and programmatic initiatives that emphasize addressing the social determinants,<sup>23</sup> they face the challenge of actualizing large-scale transformation of conditions that spring from systems of inequality, originate largely outside of the traditional public health domain, find voice in law and policy making, and, as a senior policy planner in the field characterized it, are dependent on the development and application of “political capital” (S. Lofton, JD, MPH, oral communications, June–November 2020).<sup>24,25</sup>

It is now well established that health outcomes are influenced by the conditions of the environments in which people are born, grow, live, work, play, and age.<sup>26–28</sup> These social determinants of health are the structural, economic, cultural, and political factors that order relationships, assign social status to members of different populations, distribute money and power, and build or disrupt communities.<sup>28</sup> They largely exist outside of any one person's control and “are mostly responsible for health inequities.”<sup>26</sup> Social determinants are established and maintained by institutional structures that systematically distribute resources and power in ways that cause certain populations to experience deeply entrenched disadvantage, and as in Coal Run, over generations.<sup>28</sup> Typically, this disadvantage is traced to sociopolitical constructs—many of which intersect and reinforce each other—such as race and ethnicity, sex and gender, disability, socioeconomic status and societal class, or geography.<sup>27,29</sup>

Structural racism is a social determinant of health.<sup>30</sup> It has been defined as the “macrolevel systems, social forces, institutions, ideologies, and processes that interact with one another to generate and reinforce inequities among racial and ethnic groups.”<sup>31(p116)</sup> Because it goes beyond the values, beliefs, or actions of any single person, even in the absence of interpersonal racism, structural racism provides that racial inequities likely would persist.<sup>14,29</sup> It is an elemental, if not foundational, factor in the entrenchment of structural and systemic inequities in the United States that saps the potential of our entire society.<sup>29,30,32</sup>

Recognizing these structural and systemic factors that impact health, researchers and practitioners increasingly emphasize the achievement of *health equity*<sup>33</sup> and more recently *equity* without the *health* modifier.<sup>21</sup> Equity is an ethical concept that seeks to confront and redress structural and systemic disadvantages while articulating a principle that all people's lives should be treated with value, regardless of race, gender, disability, or other markers of social position.<sup>34</sup> Equity is also a practical concept that requires “focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities.”<sup>34(p416)</sup>

While public health practitioners note a growing awareness of and facility with the social determinants of health and equity, they may struggle in their efforts to formulate a strategic approach to addressing them.<sup>35–36</sup> Indeed, some have reported many challenges: gathering data that pinpoint with sufficient precision the relationship between structural and systemic conditions and health outcomes<sup>37</sup>; developing and disseminating narratives that translate these data to build support among policy makers and the public for advancing equity as a public health priority<sup>36,38</sup>; and formulating and pursuing policies aimed at confronting these structural and systemic conditions, which can require working with institutions and actors outside of the “traditional” public health domain.<sup>34,35</sup>

## A Pathway for Public Health and Law Toward Equity

### Law is a determinant of health

Law is frequently an unacknowledged or missing determinant of health, despite having implications for most, if not all, of the conditions that contribute to health outcomes.<sup>39,40</sup>

Law establishes and underpins the authority of not only public health agencies but also the institutions, practices, norms, and rules that govern life in our society.<sup>41</sup> Law and its implementation and enforcement may be understood as critical drivers of the structural and systemic conditions that influence health,<sup>11,30–32</sup> and it can be at the center of efforts to achieve equity.<sup>40,†</sup>

To emphasize this point, we provide a few examples of how law is a powerful undercurrent of the social determinants of health, as described in Healthy People 2030.<sup>42</sup>

- Law is central to the planning, financing, development, and protection of the “Neighborhood and Built Environment,”<sup>42</sup> in which people live. For example, law sanctioned racial and economic segregation through statutes, regulations, court opinions, and practices that established redlining, exclusionary zoning, and other policies, the effects of which persist today and serve as one of the principal sources of deleterious health outcomes.<sup>11,32,43</sup>
- Law influences individual and community “Economic Stability.”<sup>42</sup> It shapes society’s economic functions by administering its financial systems, including the monetary system, banking, insurance, mortgage acquisition sectors, as well as the social welfare and tax systems.<sup>44</sup>
- Law structures “Education Access and Quality.”<sup>42</sup> State laws establish public education systems across the country, set out funding mechanisms for those systems, and set parameters of access for students from different populations.<sup>45</sup>

This select list begins to show how law and its implementation and enforcement are foundational and integral to the development of conditions that shape people’s material circumstances and day-to-day lives. And while public health has recognized the importance of law for advancing public health policy,<sup>21,46</sup> the systematic examination and application of laws and their potential influence on population-level health outcomes are still developing.<sup>42</sup>

By conceiving of law as a social determinant of health, public health and legal practitioners can examine how many health problems may be rooted in structural conditions created by law and its application.<sup>39</sup> This effort tracks with existing obligations within public health practice to conduct assessments that “investigate, diagnose, and address health hazards and root causes.”<sup>21</sup> For example, if Coal Run were confronting its water troubles today, the health department might have viewed the recently updated 10 Essential Public Health Services, which centers equity.<sup>21</sup> It might have solicited the community’s input as well as the perspectives of other relevant actors, such as the Civil Rights Commission, and assessed the laws and policies governing the area’s water administration with an eye toward their health effects. It might even have examined whether those laws were being applied equitably by conducting a geographic information system (GIS) mapping study similar to the ones that produced the maps referenced earlier in this article.<sup>5</sup> Such a study might have laid bare the denial of services to the Coal Run neighborhood. In addition, as one public health

---

<sup>†</sup>Indeed, for some, the influence of law on health is so pervasive that “health justice,” rather than “health equity” may be a more precise term for framing the relationship between law and health inequity. Berman ML, Tobin-Tyler E, Parmet WE, The Role of Advocacy in Public Health Law, *J. Law, Med. & Ethics*. 2019;47(2\_suppl):15–18.



practitioner noted (T. Ingram, MPH, oral communication, November 4, 2020), the health department might have initiated a health impact assessment that examined how changes in the governing water laws could influence equity.<sup>47</sup>

### **Law and its effects can be studied to expand and strengthen the evidence base to achieve health equity**

One burgeoning approach to the examination of how laws and policies influence health outcomes is legal epidemiology, or the “the scientific study and deployment of law as a factor in the cause, distribution, and prevention of disease and injury in a population.”<sup>48(p69)</sup> It applies public health surveillance methods, which involve the regular, systematic, and ongoing collection, assembly, analysis, interpretation, and dissemination of information about the health of the community,<sup>49</sup> to law and policy. Legal epidemiology is transdisciplinary, drawing upon applied research methods as well as the legal interpretation and policy analysis central to legal research and practice.<sup>41,50</sup>

Legal epidemiological assessments can be instructive for understanding “which laws facilitate, challenge or harm health,”<sup>48(p69)</sup> not least because they can be directly tied to health outcomes data. Correspondingly, surveillance of laws and policies can help public health practitioners make stronger evidence-based connections between structural influences and inequitable health outcomes<sup>41,50</sup>; better understand the needs and challenges of the communities they serve, not least by crafting studies with community input<sup>51,52</sup>; and support the voices and capacities of the communities and populations they serve by providing them with critical data.<sup>51,53</sup>

Legal epidemiology can be deployed in response to a broad or narrow range of needs experienced by the populations that public health practitioners serve. The Coal Run matter preceded the development of legal epidemiology.<sup>41,50</sup> But today, the health department serving Coal Run might have conducted an assessment of municipal and county laws over time to consider why 32 000 of the county’s 85 000 residents, most of whom were White, also lacked access to running water.<sup>4</sup> They also might have compared the county’s water laws with those of other counties in the region or state. Findings from such a study could have helped the department develop a strategic plan to promote the expansion of water services to other communities that faced gaps in access.

Legal epidemiological researchers can engage across agencies and communities to thoughtfully select topics, design studies, and build relationships to better understand local health inequities.<sup>53</sup> Researchers and public health practitioners have already begun to strategically pursue legal epidemiological studies with a focus on equity. We discuss some of those efforts in the following text.

Built environment has a significant influence on health outcomes,<sup>11</sup> and researchers have begun to explore the legal and policy infrastructures that shape how communities are conceived of, planned, and administered. “Complete Streets” laws and policies have garnered attention as a mechanism to promote equitable population movement and to improve health by supporting the safe and accessible physical activity of all users.<sup>54,55</sup> They are also connected to other structural mechanisms that can influence equity: land

use and zoning laws, mass transit accessibility, and community design and investment.<sup>55</sup> One legal epidemiology assessment identified 21 Complete Streets state laws across 18 jurisdictions, highlighting their substantive commonalities and identifying policy challenges, such as implementation and evaluation.<sup>55</sup> It further applied evaluation data to these findings, determining, for example, that Florida's 1984 state law "was associated with a 29-year decrease in pedestrian deaths" across the state.<sup>55(p631)</sup>

Other recent legal epidemiology research has examined a broad range of state laws concerning fair housing, predatory lending, voting rights, and minimum wage laws, among others that altogether implicate structural racism<sup>53</sup>; telehealth and broadband statutes and regulations<sup>56</sup>; and the nature, scope, and reach of Health in All Policies.<sup>57</sup> Public health department practitioners have conducted legal epidemiology assessments on housing laws, namely, how states and localities protect housing access through inclusionary zoning<sup>58</sup> and protect tenants and land-lords through just cause and retaliatory eviction ordinances.<sup>59</sup> These initiatives reflect efforts to trace the often convoluted or hidden sources of inequity that can be found in law.

These studies, completed by public health department practitioners as well as academic researchers, show that legal epidemiology is not limited to academic or large research institutions. Its methods can help demystify law by transferring the rigorous examination of laws and policies from the exclusive domain of lawyers to public health and other practitioners who seek to advance equity.<sup>60</sup> Future analyses might examine the following:

- Housing and mortgage financing systems, and other systems that facilitate wealth acquisition and accumulation;
- Financing in public administration, public health, and other areas;
- Policing laws and practices;
- Laws that criminalize certain behaviors or populations; and
- The evolution of laws governing state, tribal, and local enforcement mechanisms.

The surveillance and analysis of law may give rise to a rich body of evidence on the impact of structural and systemic conditions on health outcomes as well as identify potentially transformative legal and policy interventions in response to local issues and community-identified needs.

### **Law can aid with translating, disseminating, and narrating messages about sources of structural and systemic inequities and health equity**

Law and storytelling are intertwined. Law deals in history, conflict, and resolution. Stories were used by Greek orators as an early technique to practice law, and in many cultures, laws were passed from one generation to the next through storytelling.<sup>61</sup> Indeed, it has been stated that "a lawyer's primary task is translating human stories into legal stories and retranslating legal story endings into solutions to human problems."<sup>62(p6)</sup> Law has used storytelling to describe the effects of oppressive rules<sup>61</sup>, and stories can "constitute discourses of hope, liberation, and justice."<sup>63(p428)</sup> Public health practitioners can also be



storytellers and can draw upon the storytelling dimension of law in their efforts to educate the public and identify solutions.<sup>21</sup>

The Coal Run neighborhood offers a reminder that at the core of many developments in the law—statutes passed, regulations implemented, lawsuits adjudicated—are stories of individuals and communities. They may be working to improve their health while navigating forces that might often feel beyond them, such as implicit and explicit bias, an unyielding status quo, or imbalances of power.<sup>1,2</sup> Law, with its long historical arc and its direct impacts on communities, provides a rich repository of narratives that public health practitioners can use to educate policy makers and the public about equity<sup>36</sup> and how people, communities, and populations encounter the intersections of communities, government, and health. Significantly, this approach also comports with a key element of the 10 Essential Public Health Services: communicating effectively with the public to inform people about health, factors that influence it, and how to improve it.<sup>21</sup>

Narrating these intersections in meaningful ways can be a challenge. A recent study suggested that while senior-level leaders in major urban public health departments indicate high levels of engagement with and support for efforts to advance equity, some note that the language of “equity” marks a superficial rhetorical shift away from emphasizing health disparities that lacks substantive or practical meaning.<sup>36</sup> Law may serve as a communication tool for practitioners seeking to frame equity for audiences who might not be receptive because they perceive “equity” as inaccessible or as a political or ideological construct. In other words, one approach to discussing equity would be to frame it through the lens of laws that have inequitable impacts—or their inverse.

Alternatively, the same study suggested that health department leaders might perceive the term “equity” as overly academic and inaccessible to the very constituencies it is meant to involve.<sup>25,36</sup> This research also indicates that for some public health practitioners, the language of “health equity” hampers their work because it is “politically loaded” and risks meeting resistance in settings “that might not be automatically supportive” of a framing of disparities that invokes structural rather than individual causes for them.<sup>36(p338),64</sup>

One potential corrective to these difficulties in framing is to tell concrete stories of people and communities (or creating spaces for them to tell those stories themselves). Law can be centered in storytelling because it establishes identifiable and traceable circumstances in which people must operate, make decisions, and carry out their lives. Explaining how people and communities navigate laws and structural conditions that may impact their health does not require the use of convoluted or specialized language. Even in narrating the story of Coal Run, it is not necessary to refer to the social determinants of health or equity to demonstrate the extent to which racism, at worst, and willful neglect, at best, might have posed risks for the health of that community. The community’s need for water, their sustained efforts to address that need, the outcomes following a series of legal and policy interventions, all draw attention to the disparate conditions at their core. Moreover, the story of Coal Run draws clear attention to the need for a *public intervention*—the community *could not have accessed* public water without some governmental action.

In addition, law and policy can undergird creative and robust approaches to translating and disseminating information about the effect of structural inequities on health outcomes. By way of example, research examining the relationship between historical redlining and contemporary levels of asthma burden in several California cities identified a consistent pattern of significantly higher rates of emergency department visits due to an asthma-related event in historically redlined census tracts.<sup>65,66</sup> They concluded that “redlining policies that denied wealth generating opportunities in communities of color and undermined the physical environments of neighborhoods might have affected present-day asthma related outcomes across eight California cities”<sup>65(pe28)</sup>

By visualizing their findings in maps that contrast the geography of asthma-related visits with historical redlining maps,<sup>11,66</sup> the researchers have begun to tell a story about how asthma outcomes might be linked to a legal and policy regime, as discussed earlier, that contributed to the concentration of poverty and environmental hazards in some Black and Latino communities in California.<sup>43</sup> Similar to the GIS maps developed for the Coal Run case, the maps in this study are a visual story that provides context linking asthma to a set of laws and policies that excluded those populations from the formal housing market, denied them access to credit, and helped facilitate disinvestment and concentrate harsher living conditions within their communities.<sup>43,65,67</sup>

### **Law can aid with identifying new collaborative strategies for change**

Cross-sector collaborations and partnerships with community-based leaders and organizations<sup>68</sup> as well as officials from social services and other public agencies, such as education, housing, law enforcement, and economic development agencies,<sup>69</sup> have been identified as a critical component of public health practice.<sup>21</sup> Public health departments and practitioners increasingly seek to “cultivat[e] broadly defined collaborations,”<sup>69(pp 344–345)</sup> particularly in the effort to advance equity.<sup>21,46</sup> In this vein, as practitioners have indicated (T. Ingram, MPH, oral communication, November 4, 2020; C. A. Jacob, MPH, oral communication, October 30, 2020), public health departments can serve as partners and conveners to help develop policy solutions. These relationships can elevate the voices of populations that experience disadvantage and offer unique perspectives and solutions to issues that implicate inequity (T. Ingram, MPH, oral communication, November 4, 2020).

Applying this lens to Coal Run, the health department not only might have investigated root causes to develop an evidence base for why the system of laws, policies, and practices governing the allocation of water to residents posed risks to their health<sup>21,46</sup> but also might have convened community members and potential partners, such as local social services agencies, the Civil Rights Commission, or even sympathetic actors in the county or municipal water authorities, to brain-storm and develop policy solutions.<sup>21</sup> Such solutions might have included addressing gaps in the water administration laws, developing a broad-based plan for building new waterlines, or determining other avenues of redress, such as pursuing a legal claim.<sup>1–3</sup> Law and legal epidemiology can be a mechanism to facilitate data gathering, community collaboration, and the creation of plans to address health equity, establishing a basis from which public health practitioners can invite community-based

entities, the traditional legal sector, and governmental bodies into the process of examining laws and policies and their impact on health.

One example of health department efforts to facilitate collaboration among community actors with a focus on law is the Alameda County Health Services Agency's Legislative Council. It endeavors to evaluate legislative efforts and policy development, proffer legislative proposals, and build partnerships to pursue "community-driven public health policies."<sup>70,71</sup> It demonstrates a commitment by the public health department to identify itself as a key source of guidance in policy making.<sup>21,70</sup> Importantly, it also reflects a public health effort to effectuate mechanisms for seeking accountability among public actors.<sup>21,70</sup>

## **Conclusion: Leveraging Law Is an Important Step in the Effort to Advance Equity**

As we discuss earlier, in the years since Coal Run residents initiated their civil rights complaint, public health departments and practitioners have expanded their mandate to include emphasizing the social determinants of health as well as identifying the elimination of disparities and the achievement of equity as key goals. For many public health practitioners, these ideas are familiar. The imperatives of pinpointing the health implications of inequity-producing structural and systemic conditions such as racism and economic marginalization<sup>29,72</sup> of crafting and communicating messages to engage the public and policy makers<sup>73</sup> and of building cross-sector and community partnerships have been documented over time.<sup>46</sup> What might be underemphasized in public health is how to leverage law and its applications to meaningfully mitigate some of these challenges and to aid public health practitioners in their efforts. Law has always been a central mechanism for carrying out public health policy, but it can play a far more expansive role in pursuing and achieving equity. The time is ripe to transform our understanding and use of law to incorporate its strategies and messaging into the practice of public health to support practitioners, health departments, and communities as they work to expand health and well-being.<sup>34,60</sup>

We make this assertion acknowledging the tremendous demands already imposed on public health departments, particularly as at the time of this writing, practitioners are under strain to address the effects of a widespread global pandemic.<sup>74</sup> To that end, we must acknowledge the dilemma that many public health departments face. On the one hand, as we have discussed throughout, many have begun to develop robust strategic and programmatic efforts to promote and pursue equity. On the other hand, many carry out these and other efforts with limited personnel and strained budgets.<sup>74</sup> We recognize that the opportunity for direct engagement between public health and law that we have outlined here is more likely achievable with capacity building for those who seek to undertake this demanding work.

Finally, we acknowledge the importance of validating and testing this pathway. It is our intention to engage public health practitioners in the field and others to comment on its elements and to illuminate how to best operationalize them.

## References

1. Colfax RN. *Kennedy v. City of Zanesville* making the case for water. American Bar Association Human Rights Magazine. October 1, 2009. [https://www.americanbar.org/groups/crsj/publications/human\\_rights\\_magazine\\_home/human\\_rights\\_vol36\\_2009/fall2009/kennedy\\_v\\_city\\_of\\_zanesville\\_making\\_a\\_case\\_for\\_water](https://www.americanbar.org/groups/crsj/publications/human_rights_magazine_home/human_rights_vol36_2009/fall2009/kennedy_v_city_of_zanesville_making_a_case_for_water). Accessed August 16, 2021.
2. *Kennedy v City of Zanesville*, 505 F Supp 2d 456 (SD Ohio 2007).
3. Fourth Amended Complaint, *Kennedy v City of Zanesville*, Case No. 2:03cv1047, November 4, 2005.
4. Monger JI. Thirsting for equal protection: the legal implications of municipal water access in *Kennedy v. City of Zanesville* and the need for federal oversight of governments practicing unlawful race discrimination. *Cath U L Rev*. 2010;59:587–616.
5. Rogawski C, Verhulst S, Young A. Open data’s impact. Ohio, USA: *Kennedy v. City of Zanesville*. Open data as evidence. The Gov-Lab. <https://odimpact.org/case-kennedy-vs-the-city-of-zanesville-united-states.html>. Published January 2016. Accessed August 16, 2021.
6. Suddath C. Making water a matter of race. *Time*. July 14, 2008. <http://content.time.com/time/nation/article/0,8599,1822455,00.html>. Accessed August 15, 2021.
7. Johnson D. For a Recently plumbed neighborhood, validation in a verdict. *NY Times*. August 11, 2008. <https://www.nytimes.com/2008/08/12/us/12ohio.html>. Accessed August 15, 2021.
8. Motion in Limine to Prohibit Evidence of Plaintiffs’ Claimed Medical Conditions, *Kennedy v City of Zanesville*, Case No. 2:03cv1047, April 21, 2008.
9. Jury Verdict, *Kennedy v. City of Zanesville*, Case No. 2:03cv1047, July 10, 2008.
10. Gayle H. Expert Perspectives: Tackling Racism as a Public Health Issue Starts at Home. Atlanta, GA: Centers for Disease Control and Prevention; 2021. <https://www.cdc.gov/healthequity/racism-disparities/expert-perspectives/gayle/index.html>. Accessed August 15, 2021.
11. Bailey ZD, Krieger N, Agenor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. *Lancet North Am Ed*. 2017;389(10077):1453–1463.
12. Wiecek WM. Structural racism and the law in America today: an introduction. *Ky Law J*. 2011;100:1–21.
13. Parmet W, Burris S, Gable L, de Guia S, Levin D, Terry N. COVID-19: the promise and failure of law in an inequitable nation. *Am J Public Health*. 2021;111(1):47–49. [PubMed: 33326284]
14. Centers for Disease Control and Prevention. Racism and Health: Racism is a Serious Threat to the Public’s Health. <https://www.cdc.gov/healthequity/racism-disparities/index.html>. Reviewed April 8, 2021. Accessed August 16, 2021.
15. Born M. After generations of hauling water, a corner of Appalachia still waits for a better future. *Washington Post*. June 28, 2021. [https://www.washingtonpost.com/national/after-generations-of-hauling-water-a-corner-of-appalachia-still-waits-for-a-better-future/2021/06/27/e7b52ff4-d49a-11eb-ae54-515e2f63d37d\\_story.html](https://www.washingtonpost.com/national/after-generations-of-hauling-water-a-corner-of-appalachia-still-waits-for-a-better-future/2021/06/27/e7b52ff4-d49a-11eb-ae54-515e2f63d37d_story.html). Accessed August 15, 2021.
16. Rivas M, Keomoungkhoun N. Curious Texas: why doesn’t Sandbranch have running water? *Dallas Morning News*. June 4, 2021. <https://www.dallasnews.com/news/curious-texas/2021/06/04/curious-texas-why-doesnt-sandbranch-have-running-water>. Accessed August 15, 2021.
17. Centers for Disease Control and Prevention. CDC investigation: blood lead levels higher after switch to Flint River water [press release]. <https://www.cdc.gov/media/releases/2016/p0624-water-lead.html>. Published June 24, 2016. Accessed September 7, 2021.
18. Environmental Protection Agency. Ensuring clean and safe water—compliance with the law. management weaknesses delayed response to Flint Water crisis. <https://www.epa.gov/office-inspector-general/report-management-weaknesses-delayed-response-flint-water-crisis>. Published July 19, 2018. Accessed August 15, 2021.
19. Environmental Protection Agency. Navajo Nation: cleaning up abandoned uranium mines. Providing safe drinking water in areas with abandoned uranium mines <https://www.epa.gov/navajo-nation-uranium-cleanup/providing-safe-drinking-water-areas-abandoned-uranium-mines>. Accessed August 16, 2021.

20. Centers for Disease Control and Prevention. Ten great public health achievements—United States, 1900–1999. *MMWR Morb Mortal Wkly Rep.* 1999;48(12):241–243. [PubMed: 10220250]
21. The DeBeaumont Foundation and Public Health National Center for Innovations in Health. The futures initiative: how the 10 Essential Public Health Services framework was updated in 2020 [https://phnci.org/uploads/resource-files/EPHS-Final-Report\\_Final.pdf](https://phnci.org/uploads/resource-files/EPHS-Final-Report_Final.pdf). Published March 2021. Accessed August 15, 2021.
22. Gostin LO, Wiley LF. *Public Health Law: Power, Duty, Restraint*. Berkeley, CA: University of California Press; 2016.
23. US Department of Health and Human Services, Office of Minority Health (HHS-OMH). State and territorial efforts to reduce health disparities: findings of a 2016 survey by the U.S. Department of Health and Human Services Office of Minority Health. <https://minorityhealth.hhs.gov/assets/PDF/OMH-Health-Disparities-Report-State-and-Territorial-Efforts-October-2018.pdf>. Published October 2018. Accessed August 15, 2021.
24. Hunter EL. Politics and public health—engaging the third rail. *J Public Health Manag Pract.* 2016;22(5):436–441. [PubMed: 27479306]
25. O’Brien S. Better storytelling for the public health workforce. *J Public Health Manag Pract.* 2019;25(1):98–99. [PubMed: 30507808]
26. Centers for Disease Control and Prevention. Social determinants of health: know what affects health. <https://www.cdc.gov/socialdeterminants/about.html>. Reviewed March 10, 2021. Accessed August 16, 2021.
27. World Health Organization. A conceptual framework for action on the social determinants of health. [https://www.who.int/sdhconference/resources/ConceptualframeworkforactiononSDH\\_eng.pdf](https://www.who.int/sdhconference/resources/ConceptualframeworkforactiononSDH_eng.pdf). Published 2010. Accessed August 15, 2021.
28. Braveman P, Gottlieb L. The social determinants of health: it’s time to consider the causes of the causes. *Public Health Rep.* 2014; 129(suppl 2):19–31.
29. Jones CP. Levels of racism: a theoretic framework and a gardener’s tale. *Am J Public Health.* 2000;90(8):1212–1215. [PubMed: 10936998]
30. Yearby R. Structural racism and health disparities: reconfiguring the social determinants of health framework to include the root cause. *J Law Med Ethics.* 2020;48(3):518–526. [PubMed: 33021164]
31. Gee GC, Ford CL. Structural racism and health inequities: old issues, new directions. *Du Bois Rev.* 2011;8(1):115–132. [PubMed: 25632292]
32. Bailey Z, Feldman JM, Bassett MT. How structural racism works—racists policies as a root cause of U.S. racial health inequities. *N Engl J Med.* 2021;384:768–773. [PubMed: 33326717]
33. Braveman P. What are health disparities and health equity? We need to be clear. *Public Health Rep.* 2014;129(suppl 2):5–8.
34. Liburd L, Hall JE, Mpofu JJ, Williams SM, Bouye K, Penman-Aguilar A. Addressing health equity in public health practice: frameworks, promising strategies, and measurement considerations. *Ann Rev Public Health.* 2020;41:417–432. [PubMed: 31900101]
35. Brunton C, Smedley B. Building public health capacity to advance equity. *J Public Health Manag Pract.* 2019;25(4):411–412. [PubMed: 31136518]
36. Henson RM, McGinty M, Juliano C, Purtle J. Big city health officials’ conceptualizations of health equity. *J Public Health Manag Pract.* 2018;25(4):332–341.
37. Chowkwanyun M, Reed AL. Perspective: racial health disparities and COVID-19—caution and context. *N Engl J Med.* 2020;383:201–203. [PubMed: 32374952]
38. Bye L, Ghirardelli A, Fontes A. Promoting health equity and population health: how Americans’ views differ. *Health Aff.* 2016;35(100): 1982–1990.
39. Genn H. When law is good for your health: mitigating the social determinants of health through access to justice. *Curr Legal Probl.* 2019;72(1):159–202.
40. Gostin LO, Monahan JT, Kaldor J, et al. The legal determinants of health: harnessing the power of law for global health and sustainable development. *Lancet.* 2019;393:1857–1910. [PubMed: 31053306]

41. Burris S, Wagenaar A, Swanson J, Ibrahim J, Wood J, Mello M. Making the case for laws that improve health: a framework for public health law research. *Milbank Q.* 2010;88(2):169–210. [PubMed: 20579282]
42. Healthy People 2030. Social determinants of health. <https://health.gov/healthypeople/objectives-and-data/social-determinants-health>. Accessed August 15, 2021.
43. Rothstein R. *The Color of Law: A Forgotten History of How Our Government Segregated America*. New York, NY: Liveright Publishing; 2017.
44. Bahradaran M. Jim Crow credit. *UC Irvine L Rev.* 2019;9(4):887–952.
45. Parker E; Education Commission of the States. 50-state review. Constitutional obligations for public education. <http://www.ecs.org/wp-content/uploads/2016-Constitutional-obligations-for-public-education-1.pdf>. Published March 2016. Accessed August 16, 2021.
46. Centers for Disease Control and Prevention. 10 Essential Public Health Services: The original Essential Public Health Services framework <https://www.cdc.gov/publichealthgateway/publichealthservices/originalessentialhealthservices.html>. Reviewed September 8, 2020. Accessed August 16, 2021.
47. Pew Charitable Trusts. Do health impact assessments help promote equity over the long term? [https://www.pewtrusts.org/-/media/assets/2020/10/do\\_health\\_impact\\_assessments\\_report\\_v3b.pdf](https://www.pewtrusts.org/-/media/assets/2020/10/do_health_impact_assessments_report_v3b.pdf). Published November 2020. Accessed August 16, 2021.
48. Ramanathan T, Hulkower R, Holbrook J, Penn M. Legal epidemiology: the science of law. *J Law Med Ethics.* 2017;45(1)(suppl):69–72. [PubMed: 28661299]
49. Thacker SB, Qualters JR, Lee LM. Public health surveillance in the United States: evolution and challenges. *MMWR Suppl.* 2012;61(3): 3–9.
50. Burris S, Cloud L, Penn M. The growing field of legal epidemiology. *J Public Health Manag Pract.* 2020;26(suppl 2):S4–S9. [PubMed: 32004217]
51. ChangeLab Solutions. A blueprint for changemakers: achieving health equity through law & policy. [https://www.changelabsolutions.org/sites/default/files/2019-04/Blueprint-For-Changemakers\\_FINAL\\_201904.pdf](https://www.changelabsolutions.org/sites/default/files/2019-04/Blueprint-For-Changemakers_FINAL_201904.pdf). Published 2019. Accessed August 16, 2021.
52. Foster S, Cannon Y, Bloche G. Health justice is racial justice: a legal action agenda for health disparities. *Health Aff Blog.* <https://www.healthaffairs.org/doi/10.1377/hblog20200701.242395/full>. Posted July 2, 2020. Accessed August 15, 2021.
53. Agénor M, Perkins C, Stamoulis C, et al. Developing a database of structural racism-related state laws for health equity research and practice in the United States. *Public Health Rep.* 2021;136(4):428–440. [PubMed: 33617383]
54. Centers for Disease Control and Prevention. Activity-friendly routes to everyday destinations. <https://www.cdc.gov/physicalactivity/activepeoplehealthnation/strategies-to-increase-physical-activity/activity-friendly-routes-to-everyday-destinations.html>. Reviewed December 11, 2020. Accessed August 15, 2021.
55. Porter J, Lee J, Davis M, Bryan S, Corso P, Rathbun S. Complete streets state laws & provisions: an analysis of legislative content and the state policy landscape, 1972–2018. *J Transp Land Use.* 2019;12(1):619–635.
56. Bauerly BC, McCord RM, Hulkower R, Pepin D. Broadband access as a public health issues: the role of law in expanding broadband access and connecting underserved communities for better health outcomes. *J Law Med Ethics.* 2019;47(S2):39–42. [PubMed: 31298126]
57. Pepin D, Winig BD, Carr D, Jacobson PD. Collaborating for health: Health in All Policies and the law. *J Law Med Ethics.* 2017;45 (suppl 1):60–64.
58. Cook County Department of Public Health. Local inclusionary zoning laws. <https://lawatlas.org/datasets/inclusionary-zoning>. Published December 1, 2018. Accessed August 2, 2021.
59. Kansas City Missouri Health Department Community Engagement, Policy, and Accountability Staff. Local just cause eviction and retaliation laws. <https://lawatlas.org/datasets/local-eviction-protections>. Published January 1, 2019. Accessed August 2, 2021.
60. Burris S, Ashe M, Levin D, Penn M, Larkin M. A transdisciplinary approach to public health law: the emerging practice of legal epidemiology. *Ann Rev Public Health.* 2016;37:135–148. [PubMed: 26667606]

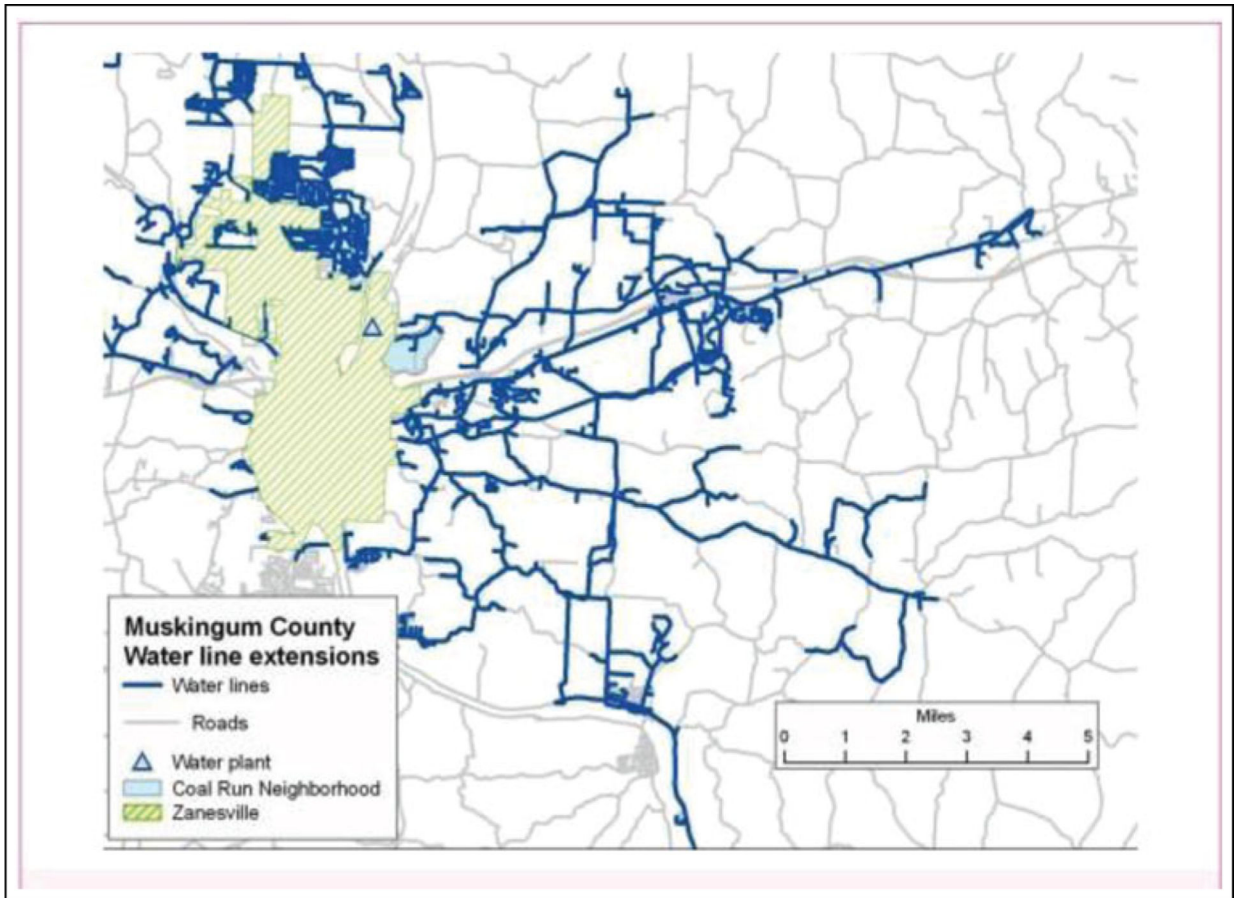


61. Levit N. Legal storytelling: the theory and the practice—reflective writing across the curriculum. *J Legal Writing Inst.* 2009;15:259.
62. Bell D. *And We Are Not Saved*. New York, NY: Basic Books; 1987.
63. Braithwaite J. Narrative and “compulsory compassion.” *Law Soc Inq.* 2006;31(2):425–446.
64. Gollust SE, Lantz PM, Ubel PA. The polarizing effect of news media messages about the social determinants of health. *Am J Public Health.* 2009;99(12):2160–2167. [PubMed: 19833981]
65. Nardone A, Casey JA, Morello-Frosch R, Mujahid M, Balmes JR, Thakur N. Associations between historical residential redlining and current age-adjusted rates of emergency department visits due to asthma across eight cities in California: an ecological study. *Lancet Planet Health.* 2020;4:e24–e31. [PubMed: 3199951]
66. Klivens L, Green M. Asthma rates higher in California’s historically redlined communities, new study finds. KQED. May 23, 2019. <https://www.kqed.org/news/11749299/asthma-rates-higher-in-californias-historically-redlined-communities-new-study-finds>. Accessed August 15, 2021.
67. Aaronson D, Hartley D, Mazumder B. The Effects of the 1930s HOLC “Redlining” Maps. Chicago, IL: Federal Reserve Bank of Chicago; 2020. Working Paper No. 2017–12. <https://www.chicagofed.org/publications/working-papers/2017/wp2017-12>. Accessed August 15, 2021.
68. Mattesich PW, Rausch EJ. Cross-sector collaboration to improve community health: a view of the current landscape. *Health Aff.* 2014;33(11):1968–1974.
69. Narain KDC, Zimmerman FJ, Richards J, et al. Making strides toward health equity: the experiences of public health departments. *J Public Health Manag Pract.* 2019;25(4):342–347. [PubMed: 31136507]
70. Health Services Agency Legislative Council, Alameda County. Legislative Council. <https://acphd.org/legislative-council>. Accessed August 16, 2021.
71. Health Services Agency Legislative Council, Alameda County. Brochure. San Leandro, CA: Alameda County Public Health Department; 2021.
72. Institute of Medicine Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. *Unequal treatment: confronting racial and ethnic disparities in health care*. <https://pubmed.ncbi.nlm.nih.gov/25032386>. Published 2003. Accessed August 15, 2021.
73. Institute of Medicine. *The future of public health*. <http://www.nap.edu/openbook.php?isbn=0309038308>. Published January 1988. Accessed August 16, 2021.
74. Centers for Disease Control and Prevention. Introduction to COVID-19 racial and ethnic health disparities. <https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/what-we-do.html>. Updated December 10, 2020. Accessed August 16, 2021.

### Implications for Policy & Practice

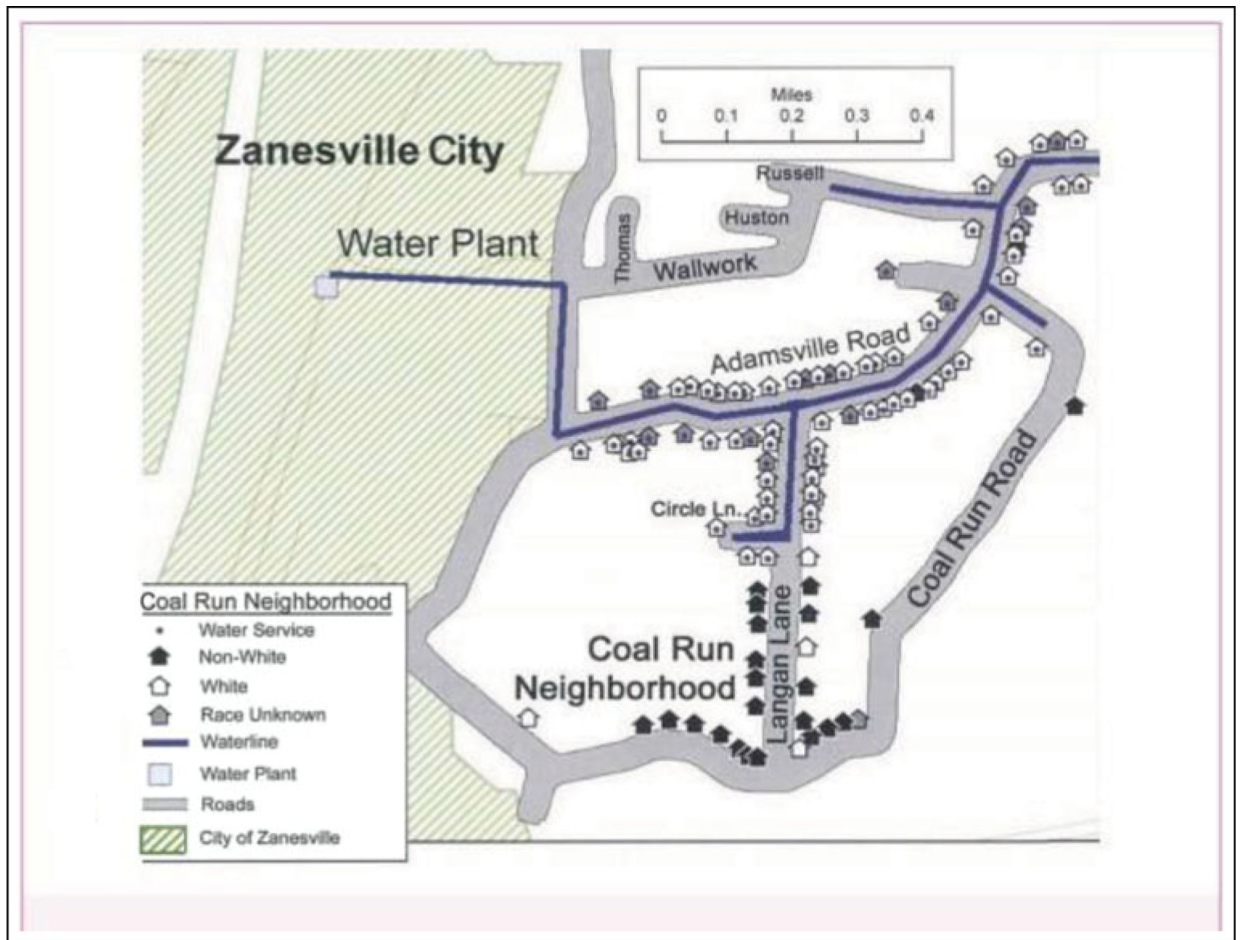
We outline 4 elements of this pathway that are both conceptual and actionable.

- Law is a key social determinant of health that can give rise to inequitable structural and systemic conditions while also functioning as an essential mechanism for undoing those conditions.
- Evaluating law using systematic and scientific methodologies, such as legal epidemiology, may allow public health practitioners to expand the evidence base for equity-advancing policies.
- Telling concrete stories that trace the legal origins of these structural and systemic conditions can be an effective way to inform policy makers and the broader public about the relationship between inequities and health outcomes.
- Law can serve as a springboard through which to convene communities, policy makers, and public health practitioners to collaborate across sectors in their effort to develop and implement policy initiatives that mitigate inequities.

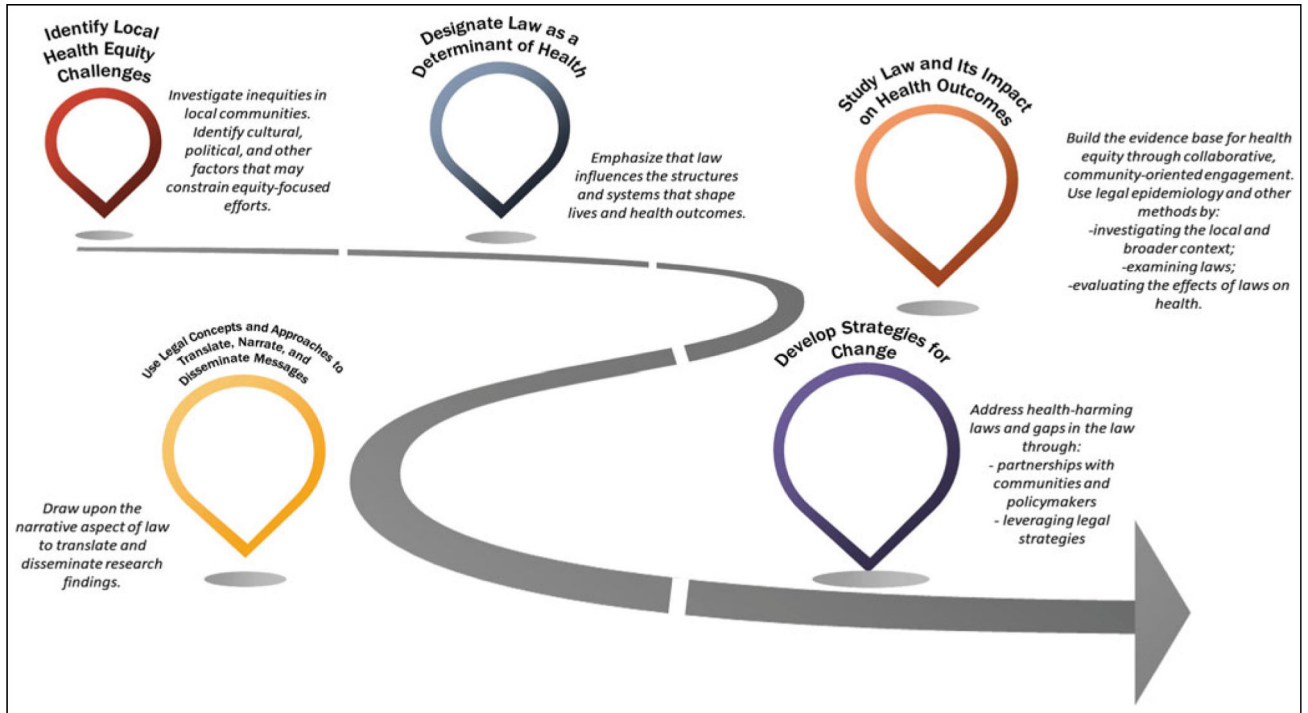


**FIGURE 1.**  
Map of Water Line Extensions in Muskingum County, Ohio<sup>a</sup>

<sup>a</sup>From A. M. Parnell, Cedar Grove Institute for Sustainable Communities, August 6, 2008.



**FIGURE 2.**  
Map of Water Line Extensions in Muskingum County With GIS Layers<sup>a</sup>  
<sup>a</sup>From A. M. Parnell, Cedar Grove Institute for Sustainable Communities, August 6, 2008.



**FIGURE 3.**  
A Pathway for Public Health Practice to Leverage Law in Advancing Equity.