

The Relationship Between Public Health and City Planning

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A thriving city derives strength from the physical health of its people. Long before the rise of modern medicine, city planning was perceived to be at the forefront of public health policy. Today, city planning and public health are far less intertwined than they were in the past, but that does not mean that planning professionals have no role to play in public health. While urban residents now enjoy greater access to quality healthcare than before, there are still many health problems that may be exacerbated by the crowded conditions cities give rise to. When these health issues reach a critical threshold where they may upset the quality of life for a city, they are now not only a problem for doctors and medical professionals; they become a problem for planners as well.

The Historic Link Between Public Health and Planning

In many respects, the modern planning profession began as a public health crusade. The rapid industrialization of urban areas experienced during the 19th century often resulted in overcrowding. Overcrowding, coupled with poor sanitation and infrastructure, often meant that the cities of the industrial revolution were rife with disease and substandard living conditions. Many health experts of the time theorized that cities themselves, with their poor atmosphere and large accumulations of filth and foul smells, were a leading cause of epidemic outbreaks.¹

Of the many health concerns affecting urban dwellers during the 19th century, arguably the greatest of them was cholera. Cholera, a deadly disease spread through contaminated water, was a pandemic in Europe throughout the 19th century and a real source of fear for residents of London during the industrial revolution.² The anesthetist John Snow was the first to discover the correlation between cholera and impure water when he discovered that the highest mortality rates for cholera in London centered on a pump within a Soho neighborhood. John Snow's seminal research led many public reformers to the conclusion that improved public sanitation would result in better public health outcomes. In 1858, parliament sanctioned the construction of a comprehensive sewerage system. Though the system was not fully completed until 1875, many public officials discovered that neighborhoods where the new sewer system was in place were not experiencing

cholera outbreaks. This prompted Joseph Bazalgette to note in an 1864 paper that: "However occult might be the connection between death and defective drainage, the places most formerly favourable to the spread of diseases become quite free from it, when afterwards properly drained."³

Throughout the latter half of the 19th century, other cities would soon discern the correlation between urban infrastructure investment and improved public health outcomes. In 1878, the city of Memphis, Tennessee was crippled by a yellow fever outbreak, which claimed the lives of over 5,000 people in a city of 48,000.⁴ The considerable human toll the outbreak inflicted upon Memphis prompted a total overhaul of the city's streets and neighborhoods. Wood block sidewalks in the city were replaced with hard pavement, water closets replaced outdoor privies, and cisterns were phased out in favor of a comprehensive waterworks system, which drew water from artesian wells that were 400 feet deep.⁵ Once the new infrastructure was completed, Memphis experienced marked reductions in yellow fever deaths, and the mortality rate fell from 46.6 per thousand in 1872 to 21.5 per thousand as early as 1889.

By the turn of the 20th century, municipal governments expanded the scope of their public health efforts beyond basic infrastructure and sanitation improvements. With the relationship between urban blight and infectious disease now firmly established, cities moved to enact comprehensive regulatory standards aimed at ensuring that new development was built to a minimum standard to maintain health and safety. In 1901, the City of New York passed the Tenement House Act.⁶ The Tenement House Act set basic standards for housing, such as the construction and maintenance of buildings and the provision of light and air. Other cities would soon follow suit with similar laws aimed at establishing minimum standards for urban structures and dwellings.

Yet as cities continued to grow, the number of land uses deemed noxious to public health grew as well. In 1916, New York City enacted the first comprehensive zoning ordinance, giving it the power to declare which land uses would be permissible within any given area. The 1924 Standard Zoning Enabling Act, developed by the U.S. Commerce Department, promoted zoning for use all across the country, and it wasn't

long before zoning became an established practice across much of the United States. What had begun as a modest series of public reforms aimed at improving health outcomes had fully matured into a rational policy framework aimed at resolving land use conflicts within a city. The public health crises afflicting cities in the 19th century and the subsequent reforms, which improved quality of life outcomes, not only brought public health to the forefront of government policy, they also gave birth to a new professional discipline: city planning.

Health Impact Assessments: Bringing Public Health to Bear in the Planning Process

When it comes to urban growth and development, every real estate project has the potential to have some bearing upon the physical health of a community. Accordingly, planners should incorporate public health measures into their daily work, such as by conducting a health impact assessment (HIA) for key projects and plans.

Davidson, North Carolina received a grant from the Centers for Disease Control and Prevention (CDC): Healthy Community Design Initiative to develop a new program known as Davidson Design for Life.⁷ Davidson studied the potential impacts of new street design standards by evaluating four health variables: injuries and fatalities from vehicle accidents, physical activity rates, asthma rates and air quality levels, and health equity issues associated with individuals who can't drive. Once the variables were selected, planners proceeded to assemble statistics and data for each of the four variables.

Once data for all four variables were compiled, the report established that there was a positive correlation between improved street standards and better public health outcomes. The authors examined new street design standards for the town, suggesting that greater detail be provided on what type of materials were acceptable for use in crosswalks to be safer for pedestrian use and reducing pedestrian injuries.

Mississippi Coastal Communities Tackle Public Health Challenges

One area of common interest that city planners and public health officials have is the need for timely data and statistics that provide critical insight into local issues and policy challenges as they come into being. Recognizing this, the Gulf Coast Community Design Studio, an outreach program of Mississippi State University, has partnered with local government officials and non-profits across the Mississippi

coast to form the Gulf Coast Healthy Communities Collaborative (HCC). The HCC is the product of additional funding from the Community Design Studio to the Gulf Coast Community Exchange to provide up-to-date community health data and serve as a local resource library.⁸

With the data resources of the Community Exchange at its disposal, the HCC is able to devote time and personnel to the continued acquisition of unique public health datasets, which are able to provide greater insight into coastal Mississippi's health problems. Visitors to the website can gain access to comprehensive datasets such as Robert Wood Johnson Foundation's 500 Cities Project, which reports city and census tract-level data for 27 chronic disease measures within America's largest cities.⁹ In addition to the comprehensive health data, website users can also access basic demographics profiles of coastal cities and counties and sort data to as discrete a geographic level as local zip codes. While many city planning departments can offer a similar level of geographic precision, the key difference is that planners aggregate data primarily to inform city zoning and land use policies, so they are not as able to engage in cross-cutting initiatives that move across multiple disciplines. By comparison, the HCC is organized primarily for the purpose of promoting cross-sector collaboration.

Although the HCC has only been in place since 2018, the presence of the organization is already making an impact within Mississippi's coastal communities. In 2019, a \$3.4 million grant was awarded to the HCC, Coastal Family Health Center, and the Mississippi Public Health Institute.¹⁰ The grant funds, which were provided by the CDC's Racial and Ethnic Approaches to Community Health (REACH) program, will go towards developing new outreach methods to teach families about nutrition. One specific outreach opportunity being developed in conjunction with the grant funding will be organizing and setting up "baby cafes" at Merit Health in Biloxi and Singing River Hospital in Pascagoula. These baby cafes will serve as a support system for breastfeeding mothers. In addition to the baby cafes, the HCC and the Coastal Family Health Center will consult with the REACH program to identify additional goals and benchmarks for the grant initiative. By stepping in to serve as a local clearinghouse for the Mississippi coast's data, the Healthy Communities Collaborative is able to set the foundation for unique projects that cut across multiple disciplines to address common areas of need.

Conclusion

While public health may no longer be a dominant concern within the city planning profession, that should not imply that health is something to be relegated entirely to doctors and nurses. New data gathering tools and techniques means that planners can quickly compile reports to substantiate public health research. Health Impact Assessments, such as the one employed in Davidson, provide a useful template for integrating local health data into city regulations. Also, data clearinghouses, such as the Gulf Coast Community Exchange, can serve as a critical go-between for both public officials and medical professionals. A city is fundamentally a human undertaking and in order to have livable communities planners must have a vested interest in seeing that new urban activities and partnerships result in healthier living habits for city dwellers. 🦋

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Endnotes

1. Joseph Schilling & Leslie Linton, *The Public Health Roots of Zoning*, American Journal of Preventive Medicine.
2. ESRI, *The Spread of Cholera in 19th Century London* (2019).
3. Stephen Halliday, *Death and miasma in Victorian London: an obstinate belief*, British Medical Journal (Dec. 22, 2001).
4. Christopher Caplinger, *Yellow Fever Epidemics*, Tennessee Encyclopedia (March 1, 2018).
5. Bernard A. Weisberger, *Epidemic*, American Heritage (Oct/Nov 1984).
6. Atlanta Regional Health Forum and Atlanta Regional Commission, *Land Use Planning for Public Health: The Role of Local Boards of Health in Community Design and Development* (2006).
7. Town of Davidson, *Davidson Design for Life* (Oct. 22, 2019).
8. Gulf Coast Community Exchange, *About Us* (Oct. 22, 2019).
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Court Rejects Move to Yank Alabama's Permitting Authority

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Alabama environmental groups claimed that the Alabama Department of Environmental Management (ADEM) failed to live up to its duties as a permitting authority under the Clean Water Act (CWA). It petitioned the federal Environmental Protection Agency (EPA) to revoke that permitting authority, and when EPA did not, the group sued. The Eleventh Circuit Court of Appeals upheld the agency's decision.¹

Cahaba Riverkeeper (Riverkeeper) and others argued that EPA needed to revoke ADEM's authority for issuing National Pollutant Discharge Elimination System (NPDES) permits because the state did not comply with the CWA. Riverkeeper claimed that ADEM did several things wrong regarding the discharge permits, for example, by not indicating where the unpermitted spills were occurring, and by not inspecting as often as the law requires. Other shortcomings alleged by the plaintiffs included having regulatory board members with conflicts of interest, and being unable to bring suit against state agencies that violated their permits.

The standard, according to the court, is whether the EPA "acted within the bounds of permissible discretion" in denying

Riverkeeper's petition to revoke ADEM's permitting authority. The court found that the alleged problems occurred, but held that despite the fact that ADEM did not do everything right, EPA did nothing wrong in continuing the state's permitting authority. The court quoted precedent from a 1977 case in which environmental groups tried to get Mississippi's permitting authority revoked for making concessions to a large chemical company.² The court in that case stated that only the "most egregious flouting of federal requirements" by a state would justify revoking a state's permitting authority. In both cases, the courts did not find that the drastic step was warranted. Neither the laws nor the regulations of the CWA provided a procedure or method for revoking permitting authority, according to the court; therefore, EPA appropriately used its discretion. 🦋

Endnotes

1. Cahaba Riverkeeper v. U.S. Environmental Protection Agency, No. 17-11972 (11th Cir. Sept. 12, 2019).
2. Save the Bay, Inc. v. Administrator of EPA, 556 F.2d 1282 (11th Cir. 1977).