Public Health Law Series Webinar

The Flint Water Crisis: Lessons in Public Health, Law, and Ethics

Wednesday, May 18, 2016
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Lead, Connect, Innovate: Strategies for Achieving Health Equity

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- Bridging Health Care Delivery with Public Health
- Cross-Sector Innovation
- Public Health Law - Practice Challenges
- Health Equity and Social Determinants of Health
- Emerging Issues
The Flint Water Crisis: Lessons in Public Health, Law, and Ethics

Wednesday, May 18, 2016
Moderator


- J.D., Seton Hall University School of Law
- M.P.H., Johns Hopkins University

Research interests/areas of expertise:
- Health equity
- Health crisis and humanitarian assistance
- Vulnerable populations
Presenter Introduction

Denise Chrysler, Director, The Network for Public Health Law – Mid-States Region; Member, Ingham County (Michigan) Board of Health; Previously, Public Health Legal Director, Privacy Officer, Michigan Department of Community Health

- J.D., University of Michigan Law School
- Research interests/areas of expertise:
  - Health equity
  - Legal issues related to data collection, use, sharing and protection
  - Public health statutory and regulatory authority
  - Bed bugs
  - Newborn screening samples and research

Bill Piermattei, Managing Director, Environmental Law Program, University of Maryland Carey School of Law

- J.D., University of Maryland School of Law
- Areas of expertise:
  - Health equity
  - Environmental law
Presenter Introduction

Daniel S. Goldberg, Assistant Professor, Department of Bioethics & Interdisciplinary Studies, East Carolina University

- J.D., University of Houston Law Center
- Areas of expertise:
  - Health equity
  - Applied ethics
  - Social determinants of health
  - Public health policy and chronic illness
Conclusion

“The Flint water crisis is a story of government failure, intransigence, unpreparedness, delay, inaction, and environmental injustice.”

Flint Water Advisory Task Force Final Report (March 2016)
Overview

» Facts
» Context
» Legal framework
» Final thoughts
Facts (briefly)

» Flint changes source drinking water:
  - Flint River to Detroit Water & Sewerage Dept (1967)
  - DWSD to Flint River (April 2014)
  - Flint River to DWSD (Oct 2015)

» Emergency manager in charge of City’s operations (2011-2015)

» River water not treated with anti-corrosive agents

» Immediate resident complaints about water
Facts, continued

» E coli, water advisories, elevated disinfection byproducts, Legionellosis concerns, etc.

» Evidence elevated lead levels in water (beginning Dec 31, 2014 and continued; Edwards/VT reports show serious lead levels Aug 2015)

» Evidence elevated blood lead levels (beginning March 2015 and continued; Dr. Hanna-Attisha presents Hurley Med Cnt results Sept 2015)

» Data wars – state vs. outside experts
Facts, continued

» State health dept confirms Hurley blood level data, Oct 1, 2015

» Genesee County Health Dept issues “do not drink” advisory, declares public health emergency, Oct 1, 2015

» Flint reconnected to DWSD, Oct 16, 2015

» Gov. Snyder announces formation of Flint Water Advisory Task Force

» Local and state declarations of emergency/disaster to request federal assistance, Jan 2016
Task Force unambiguously assigned blame

» Failure of government at all levels; but ≠ among each level and agency

» Primary responsibility MDEQ

» MDEQ and EPA ignored sound environmental science in administering the Safe Drinking Water Act (SDWA)
Flint
» Genesee County
» Population≈100,00
» 41% below poverty
» Race/Ethnicity:
  - 57% black
  - 37% white
  - 4% Latino
  - 4% mixed race
Flint shares characteristics with many older U.S. cities

- Financial decline from loss of manufacturing base, population, and revenue sharing;
- Aging infrastructure
- States’ use of emergency manager laws to prevent bankruptcy, stabilize finances and ensure residents continue to receive essential services.
Michigan’s Emergency Manager Law

» Local Financial Stability and Choice Act

» Governor determines financial emergency

» Governor may appoint an emergency manager to take control of a local government

» Temporarily supplants the governing body or officer, of the local government

» Has complete authority over government operations, organization and employees

» Is immune from liability except for gross negligence that proximately causes harm

Flint Webinar, 05/16/2016
Emergency Manager Laws, generally

» 19 states authorize state intervention in local government

» Scope and nature of interventions vary: Michigan’s – one of the most aggressive

Protecting public’s health

**Federal**
- EPA oversees and sets national drinking water standards

**State**
- Michigan Dept Public Health had been responsible for Safe Drinking Water
- 1996 implementation SDWA transferred to MI Dept Environmental Quality (primary jurisdiction)
- Dept Health & Human Services responsible for health surveillance, investigation, power to issue imminent danger orders
Protecting public’s health - Local

City
- Emergency Manager holds Flint’s Mayor’s and City Council’s powers

County
- Genesee County Health Dept
  - Powers and responsibilities mirror MDHHS’
  - Primary organization responsible for providing health services
  - Contracts with DEQ to implement SDWA for Type 2, 3, and 4 water supply systems (Flint is Type 1)
Making health paramount during a financial crisis

» Need to address competing interests and elimination of govt checks and balances

» Collaboration and community engagement (e.g. Detroit, Ecorse, Allen Park)

» Receive input/listen to residents and outside experts

Health in All Policies decisionmaking – Genesee County Bd of Health adopted Health and Equity in All Policies Resolution (May 10, 2016)
Thank you!

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I ♥ LAWYERS
SAFE DRINKING WATER ACT ENFORCEMENT: FLINT IN CONTEXT

William Piermattei
Managing Director, Environmental Law Program
University of Maryland Francis King Carey School of Law
Safe Drinking Water Act
- Water treatment standard setting
- Protects underground water sources

Clean Water Act
- Protects surface waters

Federal Emergency Planning and Community Right-To-Know Act
- Hazardous and Toxic Chemical releases
SAFE DRINKING WATER ACT (SDWA)

- Federal standard setting, state implementation

- Different water systems with different requirements (e.g., small, medium, large)

- Protects underground water (aquifers) by regulating underground injections, but fracking exempt

- Does NOT regulate private wells or protect surface source water (lakes, rivers, streams)
EPA sets national health-based standards for public water systems (at least 15 connections)
- 168,000 public water systems nationwide
- Serve 90% of Americans

EPA selects contaminants to regulate
- Step 1: contaminant may adversely affect public health (frequency, level). Contaminant List
- Step 2: If regulation, determine Maximum Contaminant Level Goal (MCLG). Health-based, Unenforceable health-based goals
- Step 3: Set “feasible” Maximum Contaminant Level (MCL) or Treatment Technique (TT). ENFORCEABLE
Contaminant Candidate List (CCL)
- Published every 5 years
- Currently has 100 chemicals and 12 microbial contaminants
- Contaminants added/removed, subject to public notice and comment

EPA sets standards for water treatment plant operation (e.g., Lead and Copper Rule)
- Water testing protocols
- Operational guidance
SDWA has limited enforcement provisions, e.g., SDWA § 300g-3

- If water system violates SDWA regulation, EPA shall:
- (1) notify State and water system;
- (2) provide advice and technical assistance to achieve compliance; then
- (3) after 30 days state has not “commenced appropriate enforcement action” EPA may order compliance/initiate civil lawsuit
EPA has emergency powers under SDWA § 300i

- If contaminant presents an “imminent and substantial endangerment” to health; and
- State/local authorities “have not acted to protect health”;
- EPA “may” take action as it “may” deem necessary to protect health; BUT
- To the extent “practicable,” EPA “shall” consult with state/local authorities to confirm information and “ascertain the actions which such authorities are or will be taking.”
- Then EPA can issue an order or commence a civil lawsuit if insufficient state action
PROBLEMS WITH SDWA ENFORCEMENT

- When SDWA violation, difficult to enforce - fining public entity punishes community
- Criminal penalties only for “tampering” with water supply, i.e. purposeful introduction of contaminant
- SDWA regulates underground injection of waste, but fracking is exempt
- Private wells not covered under SDWA standards
- Only regulates listed contaminants
30 Newark, NJ schools exceed lead levels (2016). On average, 34 lead violations per year in New Jersey

From 2012 - 2015, 2,000 lead violations nationwide supplying water to 6 million people. The older the housing, the more violations

Many of these violations involve water supplied to schools and day care centers. 3 out of 4 involve small water systems
LEAD VIOLATIONS IN SCHOOLS NATIONWIDE

LEAD EXPOSURE IN SCHOOLS, DAYCARES
Number of times water supplied to schools and daycares tested for high levels of lead between 2012-2015.

SOURCE: EPA data
KARL GELLES, USA TODAY
Obtain publicly available information on drinking water and provider
- Consumer Confidence Reports (operator)
- Source Water Assessments (state)
- EPA and State Contaminant Standards
- EPA Safe Drinking Water Information System

If violations reported, ask state regulators what is being done
- Investigate sampling methodologies
- Drinking water standards notice & comment
PUBLIC HEALTH ROLE II

- Standard setting and testing input
  - Candidate Contaminant List - Is it complete?
  - Prioritizing CCL - what should be regulated?
  - If regulated, do the standards protect public health?
  - Does your jurisdiction have a lot of old housing? Information on lead service lines?
  - Does your water supplier have corrosion treatment in place?
Professionals who are informed, vigilant and persistent in holding providers and the government accountable for the quality of drinking water they provide to our communities.
Public Health Ethics & the Flint Water Crisis

Daniel S. Goldberg, J.D., Ph.D
Assistant Professor
The Brody School of Medicine
East Carolina University
Powers & Faden: Social Justice

- health sufficiency model
- Twin aims theory
  - Overall improvements in population health
  - Compression of health inequalities
- priority: determinants that intensify densely-woven webs of disadvantage
Determinants Upstream & Downstream

“[U]nequal social positions carry with them unequal probabilities of being exposed to health hazards along the environment/risk factors/illness pathway.”

“Structural violence is one way of describing social arrangements that put individuals and populations in harm’s way... The arrangements are structural because they are embedded in the political and economic organization of our social world; they are violent because they cause injury to people... neither culture nor pure individual will is at fault; rather, historically given (and often economically driven) processes and forces conspire to constrain individual agency. Structural violence is visited upon all those whose social status denies them access to the fruits of scientific and social progress.”
Ethics in Prevention & Response

• Consider Farmer’s claim: no such thing as “natural” disasters – all man-made

• To what extent does material deprivation predict risk of lead exposure and/or risk of insufficient remediation?
Prevent & Remediate

- Inequalities in exposure & response to elevated risks
- Complex with lead, of course – anyone can be affected by corrosion in pipes, old homes
- Response varies w/ deprivation – Flint!

Krieger et al., 2002
Poverty & “Lead Traps”

• Exposure
  – More deprived > likely to live in homes w/ lead paint

• + Resistance
  – Social support (food, security, etc.) may alter rate of lead absorption

• + Survivability
  – Good medical care, social support, compensatory damages
Environmental Racism

• Historically marginalized groups far more likely to experience environmental exposure “traps” in general
  – E.g., water and Tohono O’odham in AZ
  – NC hog farm factory litigation

• Structural violence? Racism?
Ethical Takeaways

• Obvious ethical failures
• Need to think about prevention & response
  – Entire causal pathway
• History matters
• Structural violence – social obligations to act on SDOH, not only to clean up messes
  – “densely-woven patterns of disadvantage”
Acknowledgements

• Christian Warren, Ph.D
Q&A

Please type your questions in the Q&A panel.
Thank you for attending

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**Pursuing Health Equity: Promising Practices in Policy and Law**

Thursday, June 23 | 1:00 – 2:30 p.m. (ET)

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