

Protecting Community Health and the Environment:

Decision making for public health action

Echos and Early Warnings...

- * What's the *real* reason there's so much asthma in my neighborhood?
- * Why do I suddenly have asthma
- * Why is my child getting nightly nosebleeds
- * It seems a lot of people in my neighborhood have cancer
- * This is all caused by oil drilling, right?
- * What is *the* thing we should be doing to get rid of asthma, cancer, air pollution, low birth weight, learning disabilities?

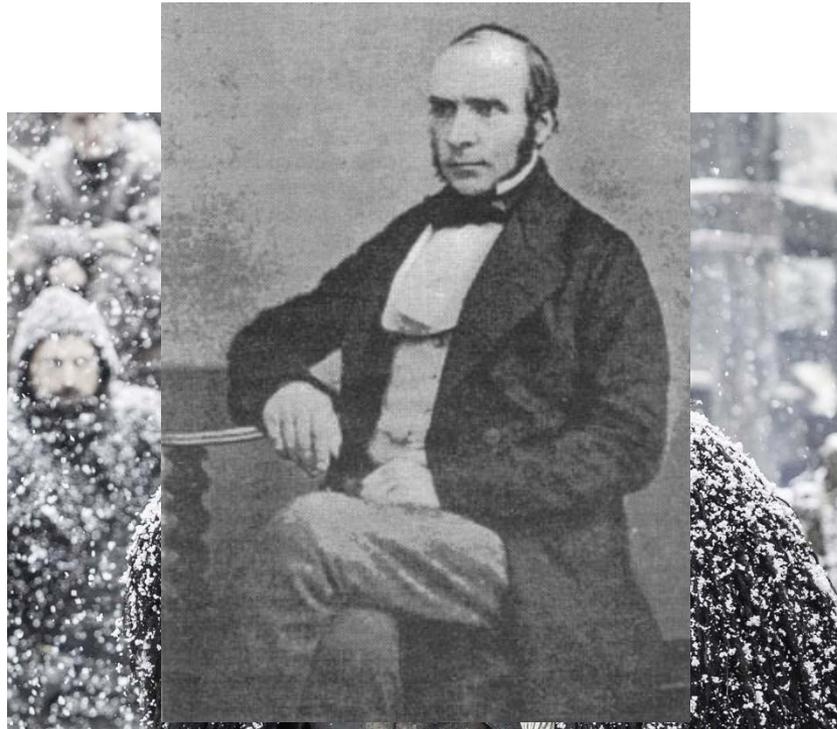
The Problems

- * STAND LA we tend to get asked questions about environmental and health science.
- * What scientists say doesn't necessarily help us in decision-making.
- * Sometimes no one knows the answers to the questions about causality, but the need to do something to address the problems are still there.

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1. We have articulated the reasons of why we are concerned about the environment and community health
 2. To learn how we *can* use environmental science to aid in decision making that is preventive and promotes social equity

Science Public Health Decision Making in history

Acting on Early Warnings



Cigarettes and lung cancer when do we act

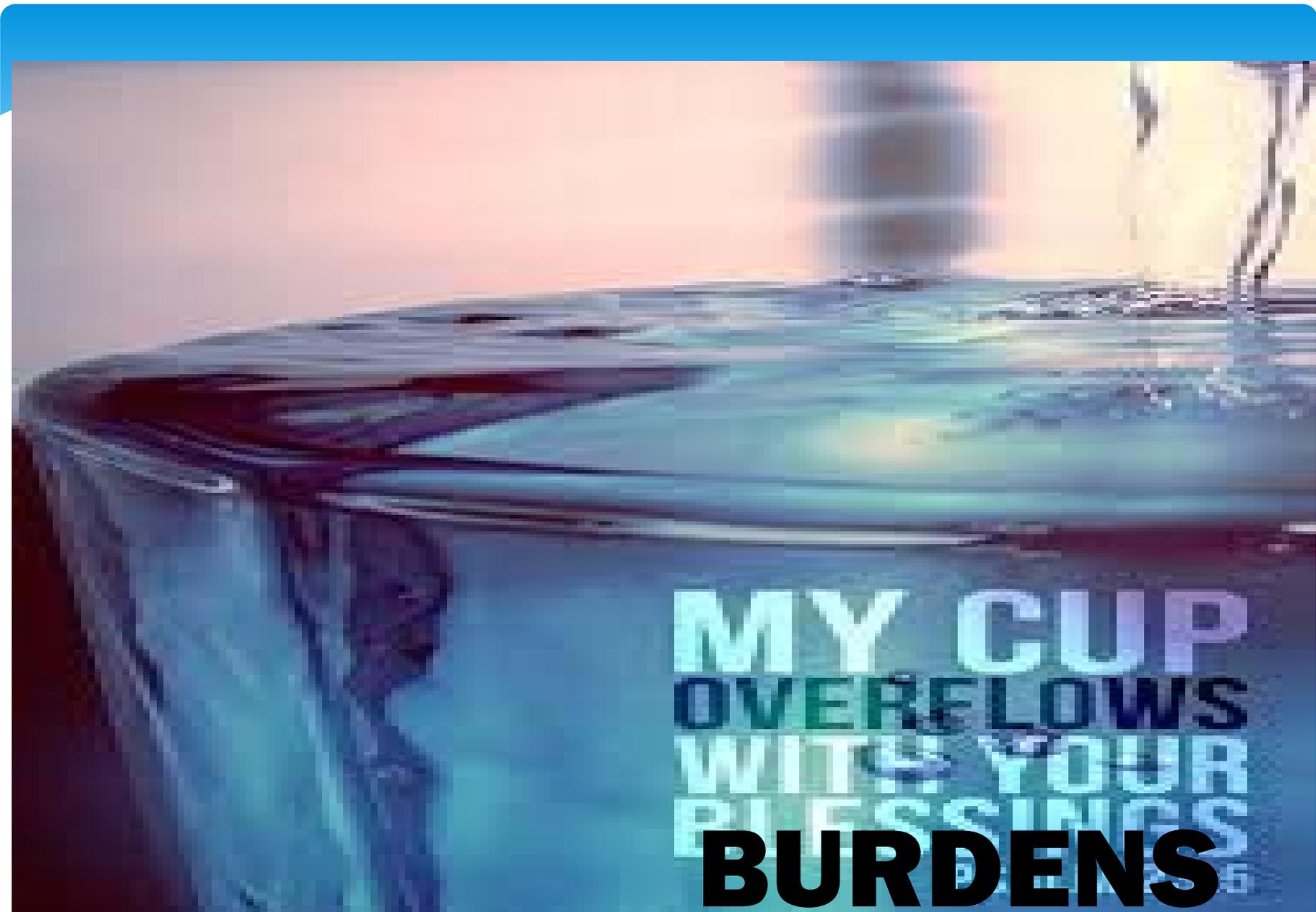
- * 1945—Ochsner—Incidence rises together
- * 1950—Doll & Hill—case-control study
- * 1953—Wynder—tar causes cancer in mice
- * 1954—Follow up studies show association, and that greater exposure > greater risk

- * 1990s—biological mechanism(s) described (genetic factors; mutations)

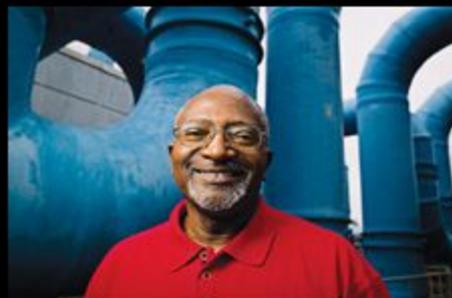
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Questions to ask:

- * At what year would you urge your child not to smoke?
- * When would you advocate that cigarette smoking be banned in public places
- * When would you hold tobacco companies legally accountable for the effects of smoking?



Bullard's New Environmental Justice Framework



1. Ground the framework on the principle that all individuals have the right to be protected from environmental degradation.
2. Also ground the framework on the precautionary principle to protect workers, communities, and ecosystems.
3. Shift the burden of proof to polluters and dischargers who do harm, who discriminate, and/or who do not give equal protection to all racial and ethnic groups.
4. Adopt a public health model of prevention as the preferred strategy to eliminate a threat before it occurs.

Evidence that Neighborhood Drilling poses an unacceptable risk

- * Magnified Impacts due to Proximity and Population Density
- * Approximately 1.7 million people live within one mile of an active oil and gas well. More than 32,000 people live within 100 meters. Studies from outside CA indicate that exposures to toxic air contaminants are most significant within ½ a mile from active oil and gas development.³
- * Oil and gas operations release large amounts of reproductive, immunological, and neurological toxins, carcinogens, and endocrine disrupting chemicals (EDCs).

- * “Residents living within ½ mile of an unconventional gas well were found to have an increased risk of neurological and respiratory health effects than residents living greater than ½ mile away. The risk of cancer was increased in these residents as well, with benzene and ethylbenzene as the primary hydrocarbon contributors”^{vi}
- * Maryland Institute for Applied Environmental Health School of Public Health recommended a minimum setback distance of 2000 feet from well pads (University of Maryland School of Public Health 2014)
- * “In the geographic areas we studied, the most common setback distances from buildings were 300 and 500 feet, with a range of 150 to 1500 feet. Based on historical catastrophic events, thermal modeling, vapor cloud modeling, and air pollution data, these distances do not appear sufficient to protect public health and safety”
- * “A setback does nothing to control the location or strength of the multiple possible sources at a well site and so it cannot be considered a control at all.”
- * “Although appropriately set distances may provide some measure of safety, setbacks do not necessarily reduce risk associated with potentially hazardous air emissions”

What is the precautionary principle?

Wingspread Statement (1998): “When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.”

This is an inherently dangerous practice occurring dangerously close to people and poses an unacceptable risk for a practice for which we have alternatives

Making decisions based on what we cherish

- * How and when do we decide