Climate change expected to increase risk of rain-related disease in Wisconsin

Impending hydrological changes due to climate change combined with vulnerabilities due to failing infrastructure pose a public health threat.

More frequent, more intense precipitation and leaky pipes promote waterborne diseases that hit children hardest.

The problem

More storms expected for warmer Wisconsin
Weather “dice” loaded to increase odds of intense storms

Improving sewer infrastructure should reduce rain-related disease risk
Extreme rainfall leads to waterborne disease

Kids most vulnerable to rain-related disease
Acute diarrhea is greatest concern for both urban and rural kids

Well water vulnerable to rain-related disease
Waterborne disease risks expected for non-disinfected drinking water systems

Water main breaks expose public to waterborne disease risk
Distribution systems contaminated after treatment

Wisconsin climate to feel more southerly
Planners must anticipate local climate change to reassess their assumptions

Policy solutions

Stormwater risks could rival sewage overflows
More research needed to characterize health risks of stormwater vs. overflows

Long-term epidemiological studies needed to better assess rain-related disease risks
Sharing data should give a better sense of waterborne disease incidence

Incentives for residential lateral replacement can improve health
Pipe systems less vulnerable to rain-related disease risk also provide long-term returns

Proactive surveillance and alert systems can mitigate rain-related disease risks
Pathogen tracking and public communication recommended