The quality of drinking water quality in the United States is among the best in the world. Nonetheless, pathogens are present in source waters that are used for drinking water. Water in general and floodwaters specifically can spread pathogens within watersheds by mobilizing pathogens in the environment and transporting them to surface waters and wells. A positive association has been found between diarrhea and meteorological variables (Curriero et al., 2001). This study supplements the existing literature by providing baseline levels of gastrointestinal illness incidence associated with heavy precipitation for North Carolina. Results confirmed that average rates of admissions to the Emergency Department (ED) for gastrointestinal illness increased after periods of heavy rainfall across the state of North Carolina. Several geographical clusters of high disease occurrence were identified at the county level; seven counties across the state showed 300% and greater increases in average rates of disease occurrence after heavy rainfall.

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