

Testing the water: Drinking water quality, public notification, and child outcomes

Michelle Marcus

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Abstract

About 1 in 12 Americans are exposed to health-based drinking water violations each year, yet we know relatively little about the health and human capital benefits of drinking water regulation. This is the first paper to study the impact of drinking water quality violations on children and adolescents in the US. I take a comprehensive approach to quantify the costs of poor drinking water quality by considering avoidance behavior (bottled water purchases), human health (stomach remedy purchases and ER visits for gastrointestinal illness), and human capital (school absences and test scores). I find that individuals successfully avoid negative health impacts of coliform bacteria only when informed immediately. Bottled water sales increase during coliform bacteria violations that require 24-hour public notice, but not during violations that require 30-day public notice, despite impacts on health, school absences and test scores. Timely public notification is a cost-effective way to induce avoidance behavior and protect health when water quality is poor.

*Vanderbilt University, Department of Economics, 415 Calhoun Hall, Nashville, TN 32740. E-mail address: michelle.marcus@vanderbilt.edu The conclusions drawn from the Nielsen data are those of the researchers and do not reflect the views of Nielsen. Nielsen is not responsible for, had no role in, and was not involved in analyzing and preparing the results reported herein.