GW SUMNER M. REDSTONE GLOBAL CENTER FOR PREVENTION & WELLNESS

POLICY BRIEF

UNTAPPED POTENTIAL:

Building confidence in tap water as a strategy to improve health outcomes for families in Washington, D.C.

WATER & HEALTH

Beverages, and drinking water in particular, play an important role in maintaining health. The *Dietary Guidelines for Americans* recommend that individuals drink plain water instead of sugary drinks, which are risk factors for Type 2 diabetes and other cardiometabolic disorders [1]. Consumption of sugary drinks begins at an early age, especially among minoritized populations and populations with low income, and studies have found that the cumulative effect of sugary drink consumption may have detrimental effects on dietary quality and obesity risk later in life [2]. Surveys show that children are not drinking enough water; a national survey of children conducted from 2009-2012 found that over 50% of U.S. children are inadequately hydrated [3]. In addition, avoiding tap water is associated with significantly higher daily sugary drink consumption [4].

A growing body of evidence indicates that **low tap water consumption among low-income and minority groups is driven by mistrust of tap water** [5]. At the same time, these groups spend a greater percentage of their household income on bottled beverages [6].

The public health recommendation to replace sugary drinks with plain water is ineffectual unless access to safe, affordable water is provided and perceptions about tap water safety are addressed.

HEALTH INEQUITY IN DC

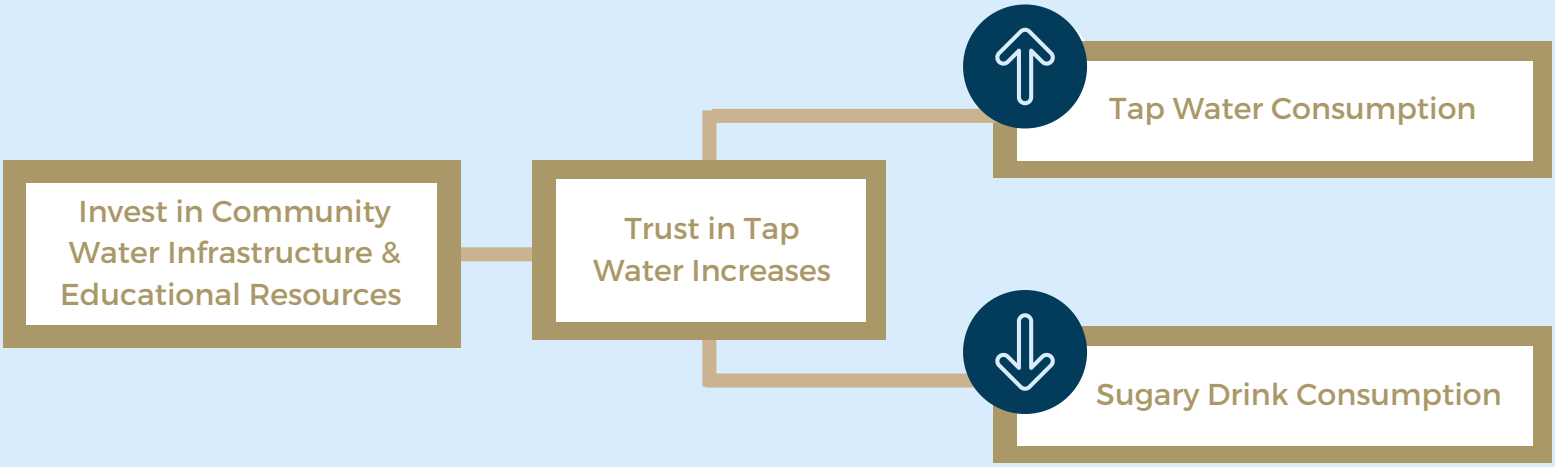
Residents in the District of Columbia suffer from pervasive health inequities along nearly all major health markers, from cancer rates to life expectancy, that persist along ward, wealth, and racial boundaries. In fact, residents living in Ward 3 can expect to live a full 22 years longer, on average, than their Ward 8 neighbors [7]. These **inequities are driven in part by diet-related chronic disease**, such as diabetes and heart disease. DC Health's 2018 Health Equity Report found that the root causes of 80% of these health outcomes are related to social determinants of health, including the food environment, which determines the food & beverage resources and infrastructure where residents live, play, and work.

For these reasons, the District is uniquely positioned to address health disparities in diet-related chronic diseases by **increasing access to and promoting tap water consumption.** In addition to benefits for diet-related chronic disease, moving households toward tap water and away from bottled beverages has multiple co-benefits: (1) It **reduces household expenditures** on bottled beverages, which can be significant particularly for families with low income at a time of high inflation; and (2) It **decreases pollution from single-use plastic bottles**, which are a significant contributor to pollution in the District's waterways [8].

A SOLUTION GUIDED BY RESEARCH

Results from an assessment by researchers at George Washington University School of Public Health of systems-level influences on tap water and sugary drink consumption in the Metro DC area found that the District could simultaneously derive multiple health, environmental, and economic benefits from promoting and increasing tap water consumption. The District should bring together agencies and sectors together under one message:

Drinking tap water is good for your health and the District is working to make its tap water safe, palatable, and accessible to everyone



A THREE-PRONGED STRATEGY

1

Celebrate drinking tap water as the safe and healthy beverage of choice in the District. **Conduct a joint public awareness campaign** by DC Water, DC Health, and the Department of Energy & Environment (DOEE) to increase consumption of tap water instead of sugary drinks to reduce diet-related chronic disease, decrease plastic pollution, and reduce household spending among other benefits.

- The GW research team has mapped systems-level influences on water and sugary drink consumption in Metro DC to identify intervention strategies. The team found that **trust in community infrastructure and cultural preference/beliefs around tap water are upstream drivers of beverage choice** and present opportunities to displace sugary drink consumption with tap water. Informing residents about investments in tap water infrastructure could increase trust in the infrastructure, leading to increased tap water consumption and reduced sugary drink consumption [9].

2

Pilot the provision of water filters for families participating in the WIC program to encourage water over sugary drink consumption in children and families, reduce household spending on bottled beverages, and decrease household waste.

- A study at GW suggests that providing a low-cost water filter pitcher to parents with low income stimulated water consumption and displaced sugary drink consumption. **The filter acted as a cue to action to drink water, improved palatability of plain tap water, and increased the perception that it was more economical** than bottled water [10].

- Since mistrust in tap water is a complex phenomenon, this pilot should monitor effectiveness of providing water filters on sugary drink consumption, household spending, and household waste to calculate return on investment of a long-term intervention of this kind.

3

Normalize tap water as the beverage of choice in District facilities by providing appealing and accessible tap water infrastructure. **Require water-filling stations at all District facilities** including schools, recreation centers, and libraries, along with reusable cups and water bottles for students, as a way to build water consumption habits for students, save families on the costs of buying beverages, and decrease school waste.

- The GW research team's systems-level analysis suggests that investments in community infrastructure could influence trust in infrastructure and thereby increase tap water consumption [9]. This finding is supported by a study in New York that found installation of water dispensers nearly tripled the water intake of students [11].

MEET THE GWU RESEARCH LEAD

Dr. Uriyoán Colón-Ramos is an investigator in public health nutrition globally, with expertise in Latin America, the Caribbean, and the United States. Dr. Colón-Ramos is trilingual (French, Spanish, English) and holds a Bachelor of Arts, and a Master's in Public Administration from Cornell University; a doctorate in public health nutrition from the Harvard School of Public Health; and a postdoctorate in Health Promotion from the National Cancer Institute.

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