COMMUNITY-INFORMED POLICY APPROACHES TO RETHINK YOUR DRINK

Mary LaGarde-Agnew, Minneapolis American Indian Center
Teresa Ambroz, Minnesota Department of Health
Patty Bowler, Minneapolis Health Department.
Welcome and Overview

• Introduction of workshop presenters and goals
• Background information on sugary drink work in MN
• Impact of sugary drinks on health and CHOICES Study
• Minneapolis Rethink Your Drink project
• Call to Action
• Q & A
Seeding the ground

Hospital becomes first in Minnesota to stop selling sugar-sweetened beverages

Allina ready to dump sugary soft drinks and french fries

Improvement Partnership
Convene ~ Catalyze ~ Collaborate
Minneapolis ReThink Your Drink, Every Sip Counts

Partners include:

<table>
<thead>
<tr>
<th>St. Mary's Health Clinics</th>
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<tbody>
<tr>
<td>• Risen Christ Catholic School</td>
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<tr>
<td>• The Consulta de Ecuador in Minnesota</td>
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<td>• The Consulta de Mexico</td>
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<td>• Centro Guadalupano of Holy Rosary Church</td>
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<td>• Centro Tyrone Guzman</td>
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<td>• Iglesia Catolica de San Cirilo y Metodio</td>
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<td>• Incarnation/Sagrado Corazon de Jesus Catholic Church</td>
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<tr>
<th>Hmong American Mutual Assistance Association</th>
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<td>• New Millennium Academy, Charter School</td>
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<td>• Hmong International Academy, Minneapolis Public School</td>
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<td>• United Secret Service Guerilla Unit (U.S.S.G.U.)</td>
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<td>• Glenwood Funeral Home, Inc.</td>
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<th>Neighborhood Hub</th>
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<td>• Appetite for Change</td>
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<td>• Camden Neighborhood Center, Pillsbury United Communities</td>
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<td>• Christ English Lutheran Church</td>
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<td>• Positive Image</td>
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<td>• Mad Dads</td>
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<td>• The Lowry Café</td>
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<td>• Northside Economic Opportunity Network (NEON)</td>
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<tr>
<th>Minneapolis American Indian Center</th>
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<tr>
<td>• Division of Indian Work</td>
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<td>• Native American Community Development Institute</td>
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<td>• Minnesota Indian Women’s Resource Center</td>
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<tr>
<td>• Little Earth of United Tribes</td>
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<tr>
<td>• Dog Soldier Academy</td>
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<td>• White Earth Urban Office</td>
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<td>• Bois Forte Urban Office</td>
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<td>• Wicie Nandagikendan Early Childhood Urban Immersion Program</td>
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<tr>
<th>Brian Coyle Center, Pillsbury United Communities</th>
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<td>Million Artist Movement</td>
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<td>Edison Beacons, YMCA of the Greater Twin Cities</td>
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<td>MIGIZI Communications, Inc.</td>
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<tr>
<td>Cookie Cart</td>
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<td>Minneapolis Youth Congress</td>
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<tr>
<th>Minneapolis Park and Recreation Board</th>
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<tr>
<td>• Rev. Dr. Martin Luther King, Jr. Recreation Center Youthline Program</td>
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<tr>
<td>• Teen Teamworks Program</td>
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<td>• The Backyard Initiative</td>
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<tr>
<td>• A partnership between the Cultural Wellness Center, Allina Health, and the residents of South Minneapolis</td>
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<tr>
<td>• Children’s Dental Services</td>
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<tr>
<td>• Hennepin County Human Services and Public Health Department – WIC Program</td>
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<tr>
<td>• Children’s Hospitals and Clinics of Minnesota</td>
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<td>• Fairview Health Services</td>
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Community-Informed Policy Approaches

• At two community gatherings in May and September 2017, the Healthy Beverage Collaborative prioritized policy approaches from a menu of evidence-based strategies based on:
  • Feasibility (forces that help/hinder)
  • Impact

• CHOICES Grant received in early 2017

• At the October 2017 CHOICES stakeholder meeting, the core team chose the interventions for the CHOICES modeling study based on:
  • Strategic value
  • Level of interest to decision makers & community
  • Population health impact
Options Considered by Healthy Beverage Collaborative

• Sugary Drink Excise Tax
• Hydration Stations in Schools
• Healthy Kids Meal Defaults in Restaurants
• School Sugary Drink Restrictions
• Eliminate Sugary Drinks in Child Care Settings
## Evidence of Impact

<table>
<thead>
<tr>
<th>Policy</th>
<th>Quality of Evidence</th>
<th>Effect on Obesity</th>
<th>Reach</th>
<th>Impact on Health Disparities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugary Drink Tax</td>
<td>Strong</td>
<td>Medium</td>
<td>5.34 million</td>
<td>Reduce</td>
</tr>
<tr>
<td>Hydration Stations in School Cafeterias</td>
<td>Strong</td>
<td>Low</td>
<td>~67,000</td>
<td>Unknown</td>
</tr>
<tr>
<td>Healthy Kids Meal Defaults</td>
<td>Limited</td>
<td>Potentially High</td>
<td>~124,000</td>
<td>Potentially reduce</td>
</tr>
<tr>
<td>Eliminate SSBs/Juice and Reduce Screen Time in Child Care</td>
<td>Mixed</td>
<td>Really Low</td>
<td>~55,000</td>
<td>Could increase unless targeted toward vulnerable populations</td>
</tr>
<tr>
<td>SSB-free Afterschool Programs</td>
<td>Limited</td>
<td>Low</td>
<td>TBD</td>
<td>Could increase unless new programs added for low-income youth</td>
</tr>
</tbody>
</table>
Help Kids Grow Up Healthy
Why focus on sugary drinks for kids?

- Children and youth consume more sugar than recommended\(^1\)
- Sugary drinks are the #1 source of added sugars in the U.S. diet\(^1\)
- There are persistent disparities by race/ethnicity in how much sugary drinks children consume\(^2\)
- Research shows that sugary drinks have negative health outcomes for children and adults:
  - Excess weight gain\(^3\)
  - Tooth decay\(^4\)
  - Diabetes\(^5,6\)
  - Heart disease\(^5,6\)
  - Kidney disease\(^7\)
  - Fatty liver disease\(^5,6\)

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\(^1\) Dietary Guidelines for Americans
\(^2\) Bleich et al, *Obesity*. 2018
\(^4\) Sheiham and James, *Public Health Nutr*. 2014
\(^5\) Malik et. al, *Circulation* 2010
\(^6\) Malik and Hu, *J Am Coll Cardio*, 2015
\(^7\) Bomback et al, *Kidney International*, 2010
3 of 4 Minnesota students reported consuming at least one sugary drink on a typical day.

One 20 oz. soda contains 17 teaspoons of added sugars. That’s nearly 3 times the maximum the American Heart Association recommends for children in one day.
Minnesota Sugary Drink Consumption

12 ounce servings of sugary drinks per person per year

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Number of Servings</th>
</tr>
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<tbody>
<tr>
<td>White</td>
<td>189</td>
</tr>
<tr>
<td>Black</td>
<td>411</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>583</td>
</tr>
<tr>
<td>Asian</td>
<td>214</td>
</tr>
<tr>
<td>Hispanic</td>
<td>418</td>
</tr>
<tr>
<td>Multiracial</td>
<td>526</td>
</tr>
<tr>
<td>Other</td>
<td>278</td>
</tr>
</tbody>
</table>
Per capita calories from SSBs in both children and adults have increased since the mid 1960’s.
“To build pervasiveness of our products, we’re putting ice-cold coca-cola within reach, wherever you look: at the supermarket, the video store, the soccer field, the gas station ... everywhere.”

1997 Annual Report
• African American youth are 2x as likely to see TV ads for sugary drinks than white youth.\(^1\)

• Lower income African American and Latino neighborhoods had more outdoor ads for sugary drinks than higher-income neighborhoods.\(^2\)

1. Harris J.L., Catherine S., Gross R. (2015, August). Food advertising targeted to Hispanic and Black youth: Contributing to health disparities. UConn Rudd Center for Policy and Obesity.
Obesity in Minnesota
1990: 10.3%
2017: 30.1%
Long-term Trends in Diabetes

7 times more people have diabetes today than in the 1960s

- American Indian/Alaska Native: 15%
- Asian: 8%
- Hispanic: 12%
- Black, non-Hispanic: 13%
- White, non-Hispanic: 7%
**Estimated Costs in Minnesota**

- Total cost in 2012: **$3.14 billion***
- Total cost in 2017: **$4.7 billion***

*Numbers based on estimated cost of medical care and lost productivity at work

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**Burden of Chronic Disease**

Diabetes is a lifelong condition and can cause serious complications like blindness, loss of mobility, loss of limbs and **chronic kidney disease**.

Diabetes is also associated with other chronic diseases, like **heart disease**, **high cholesterol** and **high blood pressure**.

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Without major changes to address the increasing rates of obesity, it is estimated that 40% of today’s children are likely to develop diabetes in their lifetime.

50% of children from communities of color and Native Americans likely to develop diabetes as adults.
CHOICES Learning Collaborative Partnership

- Harvard T.H. Chan School of Public Health, Association of State and Territorial Health Officials (ASTHO), National Association of County and City Health Officials (NACCHO)
- Minnesota Department of Health, state & local partners
- Funding from The JPB Foundation, the Robert Wood Johnson Foundation, the Donald and Sue Pritzker Nutrition and Fitness Initiative and the Centers for Disease Control and Prevention.
1. **Identify** evidence-based policies and programs to prevent childhood obesity (research, expert opinion, community input)

2. **Model** impact and cost-effectiveness of prevention policies and programs

3. **Use** evidence for action and decision-making
   - Which interventions have the best results for the dollars invested?
   - What is the impact on future racial/ethnic and income disparities?
Focus on implementation of interventions to improve nutrition & physical activity environments

**CHOICES model intervention inputs**

- **Reach**: Who will benefit?
- **Effect**: What is effect of the policy/program on health?
- **Cost**: Implementation costs of program/policy and healthcare cost savings

How the model works

**BASELINE SCENARIO**

**Start: 2017**

**VIRTUAL POPULATION**
- From 2010 U.S. Census Data

**POPULATION**
- Population Growth
- BMI Trends

**INDIVIDUAL**
- Body Growth
- Personal Characteristics (e.g. dietary intake)
- Smoking

**HEALTH STATUS**
- BMI
- Obesity

**OUTCOMES**
- Obesity
- Healthcare Costs
- Mortality
- QALYs
Choices Model + Intervention

**INTERVENTION SCENARIO**

**VIRTUAL POPULATION**
- Start: 2017
- From 2010 U.S. Census Data

**POPULATION FACTORS**
- Population Growth
- BMI Trends

**INDIVIDUAL FACTORS**
- Body Growth
- Personal Characteristics (e.g., dietary intake)
- Smoking

**INTERVENTION**
- Dietary Intake/Physical Activity

**HEALTH STATUS**
- Obesity

**OUTCOMES**
- Obesity
- Healthcare Costs
- Mortality

Simulate to: 2027
Minnesota Model Results
Modeled baseline obesity prevalence

Bar chart showing modeled baseline obesity prevalence for different groups:
- White
- Black
- American Indian or Alaska Native
- Asian
- Hispanic
- Multiracial
- Other

The chart compares children (dark blue) and adults (green) for each group.
Excise tax is on the distributor/manufacturer.

Results today focused on $0.02/oz fee on ready to drink (RTD) beverages.

All beverages with added sugars (e.g. soda, sports drinks, energy drinks, slushies, flavored waters, sweet teas, coffee drinks, alcohol mixers etc.)

Excludes milk, soy milk, 100% fruit juices, infant formulas, medical beverages and beverages with less than 2 calories per fluid ounce.

A fee of $0.0025/oz on powders (e.g. Kool-Aid with sugar) was included in the model.
Reach: Who will be impacted after 10 years?

Number of people impacted by the intervention over 10 years of implementation: 6.06 million
Effect: $0.02 /ounce sugary drink excise tax

Δ in state tax ➔ Δ SSB Price ➔ SSB Purchases/Consumption ➔ Change in Weight/BMI ➔ Change in health care outcomes and cost

$0.02/oz fee = 32.7% Price Increase$^{1,2}$

39.6% Reduction in Purchases$^3$

0.15 BMI unit reduction in youth per serving
0.08 BMI unit reduction among adults$^4-8$ per serving

$^1$ Besley and Rosen, *Natl Tax Journal*. 1999;52(20):157-78. $^2$ Nielsen Homescan data 2010; $^3$ Powell et al. *Obesity Reviews*. 2013;14(2):110-28; $^4$deRuyter et al., 2010; $^5$Chen et al., 2009; $^6$Mozaffarian et al., 2011; $^7$Palmer et al., 2008; $^8$Schulz et al., 2004
Reduction in sugary drink consumption

Decrease in 12oz servings of sugary drinks per person in the first year
Reduction in sugary drink consumption by ethnic group

Decrease in 12oz servings of sugary drinks per person in the first year

White: 68.5
Black: 149
American Indian or Alaska Native: 211
Asian: 76.5
Hispanic: 153
Multiracial: 192
Other: 101
• Lower income households and some racial/ethnic groups consume higher levels of sugary beverages

• A $0.02/oz excise tax will lead to reduced consumption of sugary drinks, with greater reduction among those with higher intake

• All population groups will spend less on sugary drinks compared to before the tax

Bleich et al., Am J Clin Nutr, 2009
Cases of obesity prevented

Snapshot in 2027

34,700

Applies to both children and adults
Cases of childhood obesity prevented

Snapshot in 2027

9,250

Not cumulative; applies to only those who are still children in 2027
Relative reduction in obesity prevalence

Snapshot in 2027

- White
- Black
- American Indian or Alaska Native
- Asian
- Hispanic
- Multiracial
- Other
Deaths prevented

How many deaths are prevented in the population as a result of the intervention’s impact on obesity?

607

*Over 10 years*
On average, each 12 oz serving of sugary drinks per day increases the risk of diabetes by 26%. ¹

Once the tax has reached its full effect:

- **742 fewer cases**
- **3% reduction in incidence**

¹ Imamura et al 2016
How much is saved in health care costs as a result of the intervention impacting obesity.

$165 million

*Over 10 years
Health care costs saved per $1 invested

This is the amount you’ll get back in health care savings for every $1 you spend on implementing the intervention.

$45.60

*Over 10 years
$213 million per year\textsuperscript{1}

\textsuperscript{1} Rudd Center Calculator for Sugar Sweetened Beverage Taxes estimate adjusted by CHOICES model sugary drink consumption
• This intervention will prevent thousands of cases of childhood and adult obesity, increase healthy life years and save lives

• The intervention will save more in future health care costs than it costs to implement

• A sugary drink excise tax can effectively improve population health and also contribute to disparities reduction

• Revenue from tax could be used for education and health promotion efforts to reduce health disparities

• A sugary drink excise tax could serve as a powerful social signal to reduce sugar consumption
ReTHink Your Drink
Water story collection project
Minneapolis Health Department
Rethink Your Drink 2019 Project Overview

**GOAL:** Encourage Minneapolis residents, especially youth and people of color, to drink water and healthier beverages instead of sugary drinks

**Strategy 1**
- Gather local data and stories to inform collective policy action (*Water Story Collection Project*)

**Strategy 2**
- Build Leadership Team capacity to advocate for policy changes (*Study sessions on top ten sugary drink policies*)

**Strategy 3**
- Contribute to statewide Healthy Beverage Coalition efforts

**Strategy 4**
- Leverage connections with MPHA (*Train CHWs to provide ReThink 101 education; expand Water Story Collection Project to high-rise residents*)
2019 RYD Leadership Team

St. Mary’s Health Clinics
A ministry of the Sisters of St Joseph of Carondelet

NEIGHBORHOOD HUB
Transforming communities to make a world of difference.

Minneapolis American Indian Center

Nokomis East Neighborhood Association

APPETITE FOR CHANGE

MINNEAPOLIS YOUTH COORDINATING BOARD
Together, better.

THE CULTURAL WELLNESS CENTER
The Initiative With The City of Minneapolis

ReThink Your Drink. Every Sip Counts!

1. Education
   - Increase awareness

2. Policy and/or Practice Changes
   - Decrease availability of sugary drinks
   - Increase availability of healthier options

Overall goal

To increase consumption of healthier beverages and decrease consumption of sugary drinks.
MAIC Policy Work

Began in 2015

- MAIC
- DIW
- LEUT
- NACDI
- MIWRC
- MUID
- Wicoie
- Bois Forte Urban
- White Earth Urban
<table>
<thead>
<tr>
<th>No Sugar Substitutes</th>
<th>Allows Sugar Substitutes</th>
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<tbody>
<tr>
<td>• Water (free, safe drinking water through fountains and similar outlets; unsweetened, 100% fruit-infused, plain or naturally flavored sparkling/seltzer).</td>
<td>• No- or low-calorie beverages (≤10 kcal/8 oz. serving); mid-calorie beverages (light juices, teas, and other drinks with no more than 66 calories/8 oz.). (allows Diet Sodas)</td>
</tr>
<tr>
<td>• Tea/coffee (unsweetened with only naturally occurring caffeine).</td>
<td>• Fat-free or low-fat (&lt;1%) milk; if flavored, no more than 150 calories/8 oz.</td>
</tr>
<tr>
<td>• 100% fruit juice (no more than ½ cup or 4-8 ounces per serving.</td>
<td>• In vending machines, at least 50% of beverages offered should be water and no- or low-calorie options.</td>
</tr>
<tr>
<td>• Milk (plain low-fat [1%] or fat-free [skim], or other unsweetened non-dairy milk alternatives).</td>
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Communicating the Message

Signage/posters appropriate to your community, target audience

Set the date

Provide notices and press release

Meet with Staff
Incorporate Education: Get Youth Involved

- Sugar Board
- Infused Water Sampling
- Slow Roll
- Youth Posters

The Sugar Board
Healthy Results

2017 Native FAN Survey of 100 participants:

- 62% reported reduced consumption of sugar added beverages/foods
- Among elders this was even higher: 71% decreased sugar added beverages or foods
  - 68% reported their diet was more healthy than before they started the program
  - 54% had improved blood pressure measures
  - 50% had lost weight (average of 14 pounds)
  - 39% eating more traditional foods
  - 30% had improved blood sugar or A1c measures

- When asked what the biggest change in nutrition habits was after participating in Native FAN, the most common answer among participants was that they reported drinking less soda pop.

- Combining this policy with nutrition education, physical activities creates positive health changes!
Changing the Norm...

LESSONS LEARNED

INCORPORATE POLICY WITH EDUCATION
INVOLVE COMMUNITY PARTNERS
YOUTH LEADERS
SIGNAGE AND NOTICES
GET THE COMMUNITY ACTIVE
BE CONSISTENT & PERSISTENT
Water Story Collection Project Overview

- Goal: use the “Water Magic” Machine to ask people about what they drink and why
- Collect Quantitative data through the interactive display board
- Collect Demographic and Qualitative survey data through one-on-one conversations
- Work in partnership with:
  - Rethink your drink leadership team and their youth
  - The Water Bar
  - University of Minnesota Department of Community/Family Medicine
Water Story Collection Photos

Participate in 30-40 popular community events to engage with 1,000 youth and people of color
WATER STORY COLLECTION PROJECT OUTCOMES

• Host Community Conversations to share back our findings with each community organization

• identify the best ways to encourage Minneapolis residents to choose tap water
  • Citywide Communications campaign about tap water safety
  • Policy approaches
  • Funding for home testing kits
Call to Action

• Join the MN For Healthier Kids Coalition. Coalition contact: Lorna Schmidt, AHA, Lorna.Schmidt@heart.org
• Educate about the health impact of sugary drinks and support local efforts
• Explore SF 2729 that would require healthy beverage options for restaurants with kids meals
Questions

Mary Lagarde: mlagarde@maicnet.org

Teresa Ambroz: Teresa.Ambroz@state.mn.us

Patty Bowler: patty.bowler@minneapolismn.gov