TRANSLATING RESEARCH FOR HIGH IMPACT POLICY: *EXAMPLES OF TRANSLATING SCHOOL FOOD AND WELLNESS POLICY RESEARCH FOR FEDERAL DECISION MAKERS*

Jamie F. Chriqui, PhD, MHS
Professor, Division of Health Policy and Administration
Co-I Illinois Prevention Research Center
School of Public Health
University of Illinois at Chicago

Presentation at the UPenn Prevention Research Center Symposium, "Accelerating Policies and Research on Food Access, Diet and Obesity Prevention," April 28, 2017, Philadelphia, PA

PRESENTATION OVERVIEW

- Recognize differences in “frames of reference”
- Research what matters
- Lessons learened

RESEARCHERS AND POLICY MAKERS → DIFFERENCES IN FRAMES OF REFERENCE

RESEARCHERS AND POLICYMAKERS—TRAVELLERS IN "PARALLEL UNIVERSES"

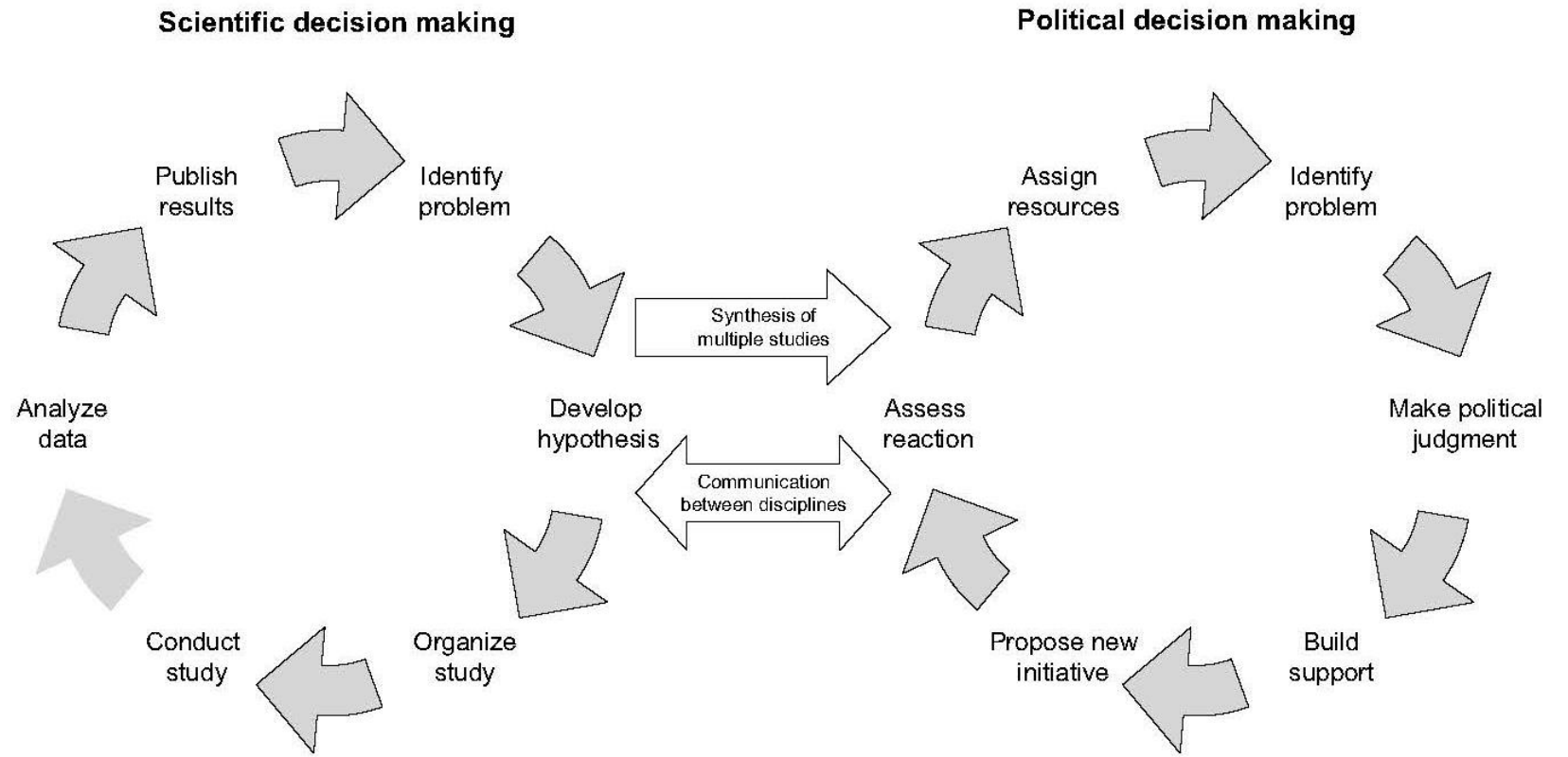


Figure 1. The "real-world" process of decision making in science and public policy.

Source: Brownson et al., *AJPM* 2006; 30(2)

DIFFERENCES IN DECISION MAKING AND PERSUASION AMONG RESEARCHERS AND POLICYMAKERS

Table 2. Differences in decision making and persuasion among researchers and policymakers

Characteristic	Researcher	Policymaker
Major incentive(s)	Grants, publications	Re-election, recognition
Opinion leaders	Leading scholars	Civic leaders, contributors, political leaders
Connection with advocates	Weak	Strong
Accountability	Editors, funders	Political parties, government, taxpayers
Knowledge span	Deep knowledge on narrow issues	Less in-depth knowledge on a wide array of issues
Willingness to accept uncertainty	Lower	Higher
Type of data relied on	Science, empirical studies	Science, the media, "real-world" stories, trusted advisors
Common methods of receiving information	Journals, scientific meetings	News media, staff, colleagues
Timeframe to action	Long	Short
Importance of disseminating results	Low to moderate	High

Source: Brownson et al., *AJPM* 2006; 30(2)

HOW RECEPTIVE WILL POLICYMAKERS BE TO HEALTH EXPERTS (AKA RESEARCHERS)?

Table 3. Factors affecting receptivity of policymakers to inputs of health experts

Factor	Specific questions
Transparency of methods	Are the methods appropriate and transparent in their use and replication?
Plausibility of analysis	Does the analysis fit with the policymaker's analysis?
Experts' credentials	What are the personal credentials of the expert?
	What are the credentials and prestige of the institution that they represent?
Perceived impartiality	Has the researcher shown impartiality in reaching conclusions and policy steps?
	Who sponsored the expert's study?
	Does this create a conflict of interest?
Perceived track record	What are the expert's previous efforts?
Perceived honesty	Has the expert adequately expressed uncertainty in framing a conclusion?
Involvement of policymakers and stakeholders	Have the policymaker and/or stakeholders been included in development of policy solutions?
	Is the information from the expert locally relevant?

Adapted from Andrews,[40] Busenberg,[41] Cash et al.,[42] and Weiss.[43]

Source: Brownson et al., *AJPM* 2006; 30(2)

RESEARCH WHAT MATTERS

UNDERSTANDING POLICY MAKER INFORMATION NEEDS

Policy Data Sources	Rationale for Policy Measures	Communicators/ "Connectors"
• Bridging the Gap/National Wellness Policy Study • NCI CLASS	• Legislative/regulatory requirements • Questions from policy makers and advocates • Scientific experts • WellSAT	• Advocates • Communications experts Researchers' friends!

POLICY MAKER ISSUE

- Child Nutrition and WIC Reauthorization Act of 2004 mandated that all school districts participating in federal child nutrition programs adopt and implement a wellness policy by the beginning of SY 2006-07 (PL 108-265, Section 204)
- Healthy, Hunger-Free Kids Act of 2010 (PL 111-296, Section 204) reauthorized the provision and required USDA to develop regulations governing wellness policy content, compliance and reporting
- **USDA Question: How have districts complied with the mandate? What opportunities exist?**
  - Targeted translation example

BRIEF OVERVIEW OF NATIONAL WELLNESS POLICY STUDY

- **Largest, ongoing nationwide evaluation of school district wellness policies for SYs 06-07 through 14-15**

- **Primary policy collection and analysis, included wellness policy and all associated regulations/guidelines/procedures**

BEYOND ACADEMIC PUBLICATIONS…

FROM OPPORTUNITY TO ACTION

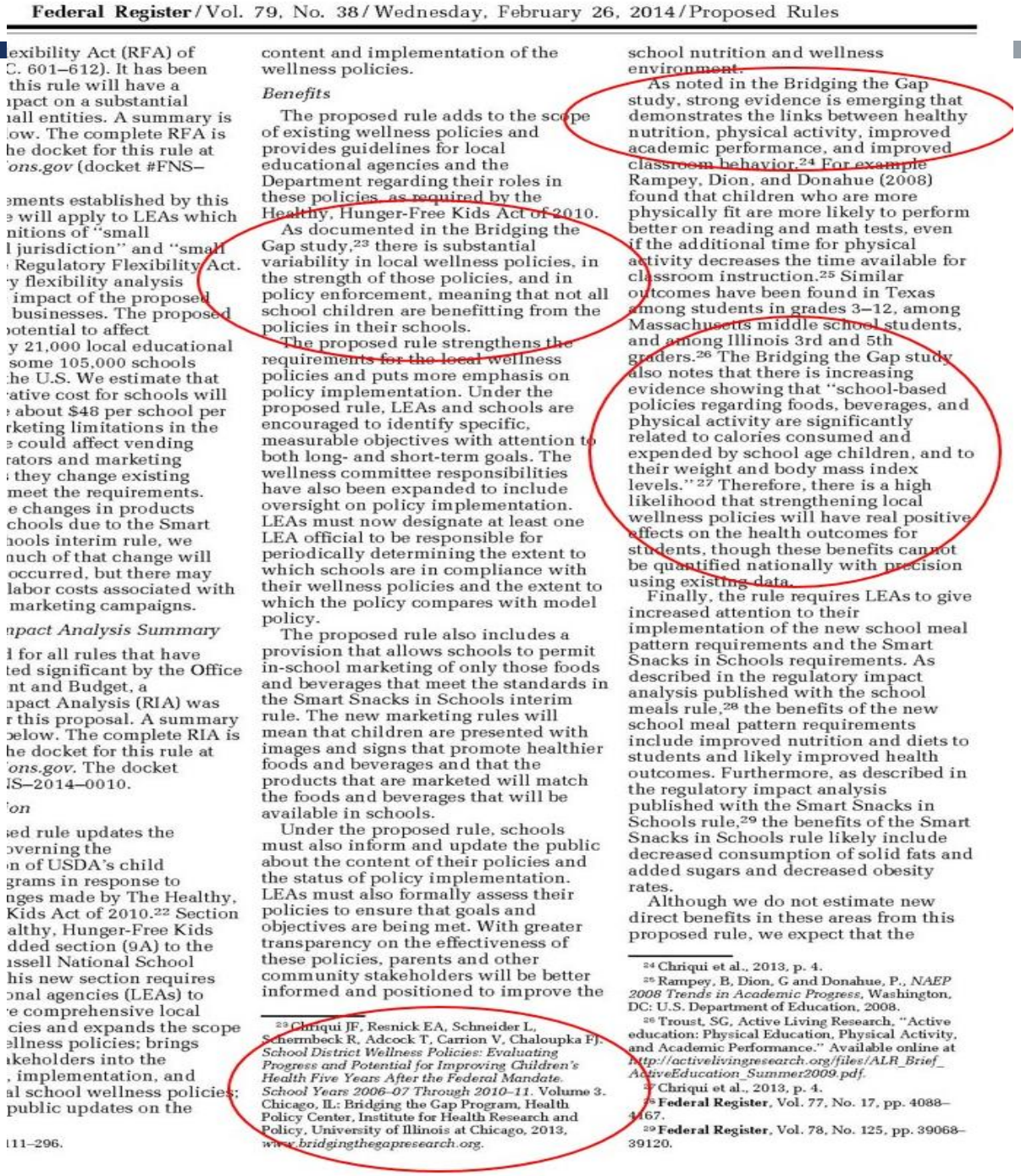
Key Policy Opportunities Identified

- Lack of restrictions on food marketing
- Lack of transparency
- Lack of reporting, review, and oversight

Key Translation Opportunities and Approaches

- Working with communications firm
- Communicating with advocates
  - NANA was **KEY**
- Briefings on Capitol Hill
  - NANA briefing
  - Meetings with Hill staffers
- Targeted webinars
  - NCCOR
  - Action for Healthy Kids
- Responding to questions from DHHS and USDA staff
- Submitting comments to proposed rule

HOW THE WELLNESS POLICY RESEARCH INFLUENCED FEDERAL REGULATION DEVELOPMENT



exibility Act (RFA) of
C. 601–612). It has been
this rule will have a
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all entities. A summary is
low. The complete RFA is
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ons.gov (docket #FNS–

ements established by this
will apply to LEAs which
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labor costs associated with
marketing campaigns.

npact Analysis Summary

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he docket for this rule at
ons.gov. The docket
IS–2014–0010.

on

ed rule updates the
overning the
n of USDA's child
grams in response to
nges made by The Healthy,
Kids Act of 2010.[22] Section
althy, Hunger-Free Kids
dded section (9A) to the
ussell National School
his new section requires
onal agencies (LEAs) to
e comprehensive local
cies and expands the scope
ellness policies; brings
akeholders into the
, implementation, and
al school wellness policies;
public updates on the

11–296.

content and implementation of the wellness policies.

Benefits

The proposed rule adds to the scope of existing wellness policies and provides guidelines for local educational agencies and the Department regarding their roles in these policies, as required by the Healthy, Hunger-Free Kids Act of 2010.

As documented in the Bridging the Gap study,[23] there is substantial variability in local wellness policies, in the strength of those policies, and in policy enforcement, meaning that not all school children are benefitting from the policies in their schools.

The proposed rule strengthens the requirements for the local wellness policies and puts more emphasis on policy implementation. Under the proposed rule, LEAs and schools are encouraged to identify specific, measurable objectives with attention to both long- and short-term goals. The wellness committee responsibilities have also been expanded to include oversight on policy implementation. LEAs must now designate at least one LEA official to be responsible for periodically determining the extent to which schools are in compliance with their wellness policies and the extent to which the policy compares with model policy.

The proposed rule also includes a provision that allows schools to permit in-school marketing of only those foods and beverages that meet the standards in the Smart Snacks in Schools interim rule. The new marketing rules will mean that children are presented with images and signs that promote healthier foods and beverages and that the products that are marketed will match the foods and beverages that will be available in schools.

Under the proposed rule, schools must also inform and update the public about the content of their policies and the status of policy implementation. LEAs must also formally assess their policies to ensure that goals and objectives are being met. With greater transparency on the effectiveness of these policies, parents and other community stakeholders will be better informed and positioned to improve the school nutrition and wellness environment.

As noted in the Bridging the Gap study, strong evidence is emerging that demonstrates the links between healthy nutrition, physical activity, improved academic performance, and improved classroom behavior.[24] For example Rampey, Dion, and Donahue (2008) found that children who are more physically fit are more likely to perform better on reading and math tests, even if the additional time for physical activity decreases the time available for classroom instruction.[25] Similar outcomes have been found in Texas among students in grades 3–12, among Massachusetts middle school students, and among Illinois 3rd and 5th graders.[26] The Bridging the Gap study also notes that there is increasing evidence showing that "school-based policies regarding foods, beverages, and physical activity are significantly related to calories consumed and expended by school age children, and to their weight and body mass index levels."[27] Therefore, there is a high likelihood that strengthening local wellness policies will have real positive effects on the health outcomes for students, though these benefits cannot be quantified nationally with precision using existing data.

Finally, the rule requires LEAs to give increased attention to their implementation of the new school meal pattern requirements and the Smart Snacks in Schools requirements. As described in the regulatory impact analysis published with the school meals rule,[28] the benefits of the new school meal pattern requirements include improved nutrition and diets to students and likely improved health outcomes. Furthermore, as described in the regulatory impact analysis published with the Smart Snacks in Schools rule,[29] the benefits of the Smart Snacks in Schools rule likely include decreased consumption of solid fats and added sugars and decreased obesity rates.

Although we do not estimate new direct benefits in these areas from this proposed rule, we expect that the

[23] Chriqui JF, Resnick EA, Schneider L, Schermbeck R, Adcock T, Carrion V, Chaloupka FJ. *School District Wellness Policies: Evaluating Progress and Potential for Improving Children's Health Five Years After the Federal Mandate. School Years 2006–07 Through 2010–11.* Volume 3. Chicago, IL: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2013, *www.bridgingthegapresearch.org.*

[24] Chriqui et al., 2013, p. 4.

[25] Rampey, B, Dion, G and Donahue, P., *NAEP 2008 Trends in Academic Progress*, Washington, DC: U.S. Department of Education, 2008.

[26] Troust, SG, Active Living Research, "Active education: Physical Education, Physical Activity, and Academic Performance." Available online at *http://activelivingresearch.org/files/ALR_Brief_ActiveEducation_Summer2009.pdf.*

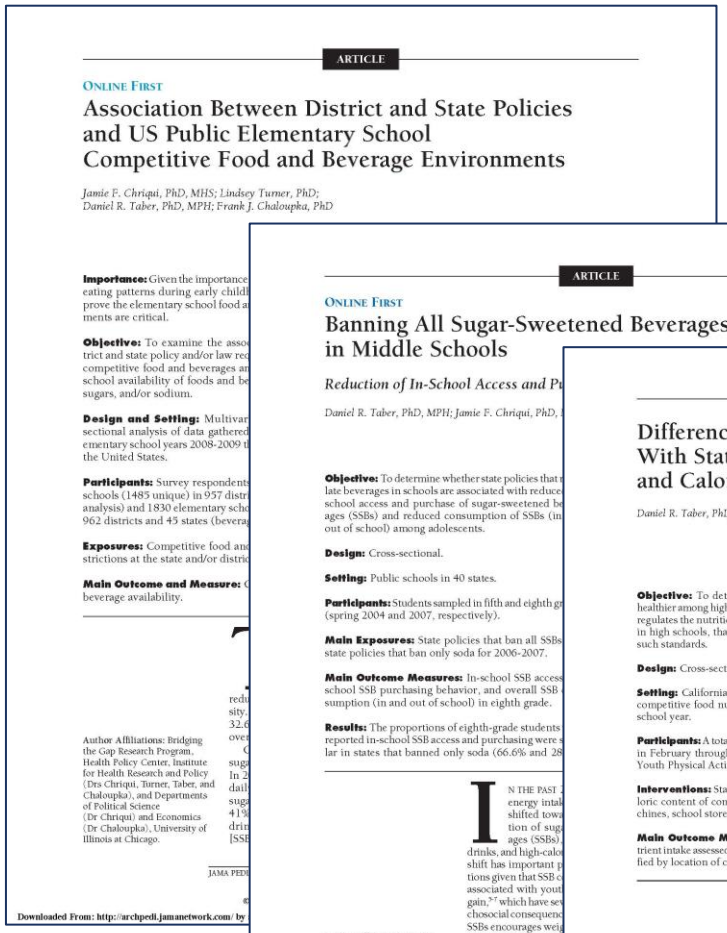
[27] Chriqui et al., 2013, p. 4.

[28] **Federal Register**, Vol. 77, No. 17, pp. 4088–4167.

[29] **Federal Register**, Vol. 78, No. 125, pp. 39068–39120.

POLICY MAKER QUESTION:

- **What impact, if any, do junk food restrictions have on school food availability and student intake?**
  - More of an indirect translation example



ARTICLE

ONLINE FIRST

Association Between District and State Policies and US Public Elementary School Competitive Food and Beverage Environments

Jamie F. Chriqui, PhD, MHS; Lindsey Turner, PhD; Daniel R. Taber, PhD, MPH; Frank J. Chaloupka, PhD

Importance: Given the importance
eating patterns during early childh
prove the elementary school food a
ments are critical.

Objective: To examine the asso
trict and state policy and/or law re
competitive food and beverages ar
school availability of foods and be
sugars, and/or sodium.

Design and Setting: Multivar
sectional analysis of data gathered
ementary school years 2008-2009 t
the United States.

Participants: Survey respondents
schools (1485 unique) in 957 distri
analysis) and 1830 elementary scho
962 districts and 45 states (bevera

Exposures: Competitive food an
strictions at the state and/or distri

Main Outcome and Measure:
beverage availability.

Author Affiliations: Bridging the Gap Research Program, Health Policy Center, Institute for Health Research and Policy (Drs Chriqui, Turner, Taber, and Chaloupka), and Departments of Political Science (Dr Chriqui) and Economics (Dr Chaloupka), University of Illinois at Chicago.

JAMA PED

ARTICLE

ONLINE FIRST

Banning All Sugar-Sweetened Beverages in Middle Schools

Reduction of In-School Access and Pu

Daniel R. Taber, PhD, MPH; Jamie F. Chriqui, PhD,

Objective: To determine whether state policies that
late beverages in schools are associated with reduce
school access and purchase of sugar-sweetened be
ages (SSBs) and reduced consumption of SSBs (in
out of school) among adolescents.

Design: Cross-sectional.

Setting: Public schools in 40 states.

Participants: Students sampled in fifth and eighth gr
(spring 2004 and 2007, respectively).

Main Exposures: State policies that ban all SSBs
state policies that ban only soda for 2006-2007.

Main Outcome Measures: In-school SSB access
school SSB purchasing behavior, and overall SSB
sumption (in and out of school) in eighth grade.

Results: The proportions of eighth-grade students
reported in-school SSB access and purchasing were s
lar in states that banned only soda (66.6% and 28

IN THE PAST
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tions given that SSB c
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SSBs encourages weig
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tion of liquid carbol
other sources of calor
tities of rapidly absor
that flavor SSBs also in
2 diabetes and metab
pendent of weight gai
consumption can po
placing milk consum

Author Affiliations: Health Policy Center, Institute for Health Research and Policy (Drs Taber, Chriqui, Powell, and Chaloupka), and Departments of Political Science (Dr Chriqui) and Economics (Drs Powell and Chaloupka), University of Illinois at Chicago, Chicago.

ARCH PEDIATR ADOLESC MED/VOL 1

ARTICLE

Differences in Nutrient Intake Associated With State Laws Regarding Fat, Sugar, and Caloric Content of Competitive Foods

Daniel R. Taber, PhD; Jamie F. Chriqui, PhD, MHS; Frank J. Chaloupka, PhD

Objective: To determine whether nutrient intake is healthier among high school students in California, which regulates the nutrition content of competitive foods sold in high schools, than among students in states with no such standards.

Design: Cross-sectional study.

Setting: California and 14 states without high school competitive food nutrition standards in the 2009-2010 school year.

Participants: A total of 680 high school students sampled in February through May 2010 as part of the National Youth Physical Activity and Nutrition Study.

Interventions: State laws governing fat, sugar, and caloric content of competitive foods sold in vending machines, school stores, and cafeterias (à la carte).

Main Outcome Measures: Several measures of nutrient intake assessed by 24-hour recall, overall and stratified by location of consumption (school, home, other).

Results: On average, California students report
suming less fat, sugar, and total calories at scho
students in states with no competitive food nutriti
dards. California students also reported less at-sc
take of vitamins and minerals. All at-school diff
in nutrient intake were null after adjusting for t
loric intake; California students consumed a lov
portion of their daily calories in school (21.5%) t
dents in other states (28.4%). Mean overall int
lower in California for most measures that we
lyzed, particularly added sugars.

Conclusions: California high school studen
sumed lower quantities of fat, sugar, and calo
school than students in states with no comp
food nutrition standards, but the nutrition co
tion of California students' in-school diet was
Policy initiatives should promote competitiv
that are consistent with the Dietary Guideli
Americans.

Arch Pediatr Adolesc Med. 2012;166(5):452-458

SEVERAL STUDIES HAVE DEMONstrated the poor nutrition content of foods and beverages sold in schools in the United States.[1-6] Federally reimbursable school meals must abide by nutrition standards set by the US Department of Agriculture, but individual foods and beverages sold in vending machines, school stores, and cafeterias (à la carte) have historically been exempt from federal regulation except for restrictions on the sale of foods of minimal nutrition value.[7-9] Foods of minimal nutrition value include only a small number of specific items such as hard candies, gum, and soda. Competitive foods are commonly foods of high caloric density and low nutrient density,[2,3] and school food environments tend to become progressively less healthy at higher grade levels.[1,3] In 2007-2008, 77% of high schools nationwide offered regular-fat an
snacks in competitive venues.[3]

Policy initiatives designed to r
nutrition content of competitive f
increasingly being promoted at t
eral, state, and local levels.[10-14] The l

See also pages 444 and

Hunger-Free Kids Act of 2010 re
among several provisions, that the
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ticipate in federally reimbursable
meal programs.[11] This will be the
tempt to regulate competitive foo
tion content on a national sc
though some states have alread
legislative and/or regulatory ac
implement similar standards.[12-14] A

Author Affiliations: Health Policy Center, Institute for Health Research and Policy (Drs Taber, Chriqui, and Chaloupka) and Departments of Political Science (Dr Chriqui) and Economics (Dr Chaloupka), University of Illinois at Chicago.

Taber et al. International Journal of Behavioral Nutrition and Physical Activity 2015, 12(Suppl 1):S7
http://www.ijbnpa.org/content/12/S1/S7

INTERNATIONAL JOURNAL OF BEHAVIORAL NUTRITION AND PHYSICAL ACTIVITY

RESEARCH Open Access

The association between state bans on soda only and adolescent substitution with other sugar-sweetened beverages: a cross-sectional study

Daniel R Taber[1,2*], Jamie F Chriqui[1,3], Renee Vuillaume[4], Steven H Kelder[2], Frank J Chaloupka[1,5]

Abstract

Background: Acro

ARTICLE

Weight Status Among Adolescents in States That Govern Competitive Food Nutrition Content

AUTHORS: Daniel R. Taber, PhD, MPH,[a] Jamie F. Chriqui, PhD, MHS,[a,b] Frank M. Perna, EdD, PhD,[c] Lisa M. Powell, PhD,[a,d] and Frank J. Chaloupka, PhD[a,d]

[a]*Health Policy Center, Institute for Health Research and Policy, Departments of [b]Political Science, and [d]Economics, University of Illinois at Chicago, Chicago, Illinois; and [c]Health Behaviors Research Branch, Behavioral Research Program, Division of Cancer Control and Population Sciences, National Cancer Institute, Bethesda, Maryland.*

KEY WORDS
competitive foods, state laws, BMI, adolescent

ABBREVIATIONS
CI—confidence interval
ECLS-K—Early Childhood Longitudinal Study–Kindergarten Class
SES—socioeconomic status
SSB—sugar-sweetened beverage
USDA—US Department of Agriculture

Dr Taber contributed to the study conception and design, led the analysis, and led the drafting of the article; Dre Chriqui, Perna, Powell, and Chaloupka contributed to the study conception and design, the acquisition of data, and the drafting and revising of the article; and all authors approved the final version that is being submitted and take public responsibility for the results.

www.pediatrics.org/cgi/doi/10.1542/peds.2011-3353

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Address correspondence to Daniel R. Taber, PhD, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 1747 W. Roosevelt Rd, Chicago, IL 60608. E-mail: dtaber@uic.edu

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WHAT'S KNOWN ON THIS SUBJECT: Policies that govern nutrition standards of foods and beverages sold outside of federal meal programs ("competitive foods") have been associated with adolescent weight status in a small number of cross-sectional studies and pre-post analyses in individual states.

WHAT THIS STUDY ADDS: This longitudinal analysis of 6300 students in 40 states provides evidence that state competitive food laws are associated with lower within-student BMI change if laws contain strong language with specific standards and are consistent across grade levels.

abstract

OBJECTIVES: To determine if state laws regulating nutrition content of foods and beverages sold outside of federal school meal programs ("competitive foods") are associated with lower adolescent weight gain.

METHODS: The Westlaw legal database identified state competitive food laws that were scored by using the Classification of Laws Associated with School Students criteria. States were classified as having strong, weak, or no competitive food laws in 2003 and 2008 based on law strength and comprehensiveness. Objective height and weight data were obtained from 6300 students in 40 states in fifth and eighth grade (2004 and 2007, respectively) within the Early Childhood Longitudinal Study–Kindergarten Class. General linear models estimated the association between baseline state laws (2003) and within-student changes in BMI, overweight status, and obesity status. Fixed-effect models estimated the association between law changes during follow-up (2003–2008) and within-student changes in BMI and weight status.

RESULTS: Students exposed to strong laws at baseline gained, on average, 0.25 fewer BMI units (95% confidence interval: −0.54, 0.03) and were less likely to remain overweight or obese over time than students in states with no laws. Students also gained fewer BMI units if exposed to consistently strong laws throughout follow-up (β = −0.44, 95% confidence interval: −0.71, −0.18). Conversely, students exposed to weaker laws in 2008 than 2003 had similar BMI gain as those not exposed in either year.

CONCLUSIONS: Laws that regulate competitive food nutrition content may reduce adolescent BMI change if they are comprehensive, contain strong language, and are enacted across grade levels. *Pediatrics* 2012;130:437–444

Influence of Competitiv
Beverage Policies on C
and Childhood Obesity

Research Review, July 2012

Abstract

Competitive foods is a term used to describe foo
and beverages that generally compete with schoo
programs. These foods and beverages are sold th
vending machines, à la carte cafeteria lines, scho
and other venues. They are commonly referred t
or "junk" foods, and they are often high in fat, c
calories, sugar and/or salt. Many schools also sel
of unhealthy drinks to students, including high-
and sugar-sweetened beverages (SSBs) such as so
drinks and high-calorie fruit drinks.

The influence of policies related to the sale of c
foods is worth examining because the foods and
available in school have a significant effect on d
diets and their weight. Given the high rates of c
among children and adolescents nationwide, it
to understand how competitive foods and bever
sold and consumed by students in school, as we
identify effective strategies for improving the nu
quality of those products.

Introduction

More than 23 million children and adolescents i
United States—nearly one in three young peopl
obese or overweight.[1] The foods and beverages a
in schools have a significant impact on children's
their weight. Children spend the majority of the

Healthy Eating Research and **Bridging the Gap**
are programs of the Robert Wood Johnson Foundation.

Influence of Competitive Fo
Beverage Policies on Childr
and Childhood Obesity

Issue Brief, July 2012

Introduction

More than 23 million children and adolescents in the United States—nearly one in three young people—are obese or overweight, putting them at risk for serious health problems. The foods and beverages available in schools have an influence on children's diets and their weight. In fact, children and adolescents consume more than 35 percent of their daily calories at school.

Outside of meal programs, schools sell many foods and beverages to students through à la carte lines in the cafeteria, vending machines, school stores, snack bars, canteens, fundraisers and other venues. Such snack foods often are high in fat, calories, sugar and/or salt, and offer minimal nutritional value. Many schools also sell a variety of unhealthy drinks to students, including high-fat milks and sugar-sweetened beverages (SSBs) such as soda, sports drinks and high-calorie fruit drinks.

Collectively, the snacks and beverages sold or served outside of school meal programs are known as competitiv foods because they compete with school meals for studen spending. Despite voluntary agreements by several snack and beverage manufacturers to remove unhealthy

This issue brief is based on a research review prepared by Jam Health Policy Center in the Institute for Health Research and Illinois at Chicago. The full research review, which includes www.healthyeatingresearch.org and www.bridgingthegapresea

Healthy Eating Research a

Clinical Review & Education

Review

Influence of School Competitive Food and Beverage Policies on Obesity, Consumption, and Availability
A Systematic Review

Jamie F. Chriqui, PhD; Margaret Pickel, MPH; Mary Story, PhD

IMPORTANCE The US Department of Agriculture recently issued an interim final rule governing the sale of foods and beverages sold outside of the school meal programs ("competitive foods and beverages" [CF&Bs]).

OBJECTIVE To examine the potential influence that the federal rule may have based on peer-reviewed published studies examining the relationship between state laws and/or school district policies and student body mass index (BMI) and weight outcomes, consumption, and availability of CF&Bs.

EVIDENCE REVIEW Keyword searches of peer-reviewed literature published between January 2005 and March 2013 were conducted using multiple databases. Titles and abstracts for 1160 nonduplicate articles were reviewed, with a full review conducted on 64 of those articles to determine their relevancy. Qualitative studies, studies of self-reported policies, or studies examining broad policies without a specific CF&B element were excluded.

FINDINGS Twenty-four studies were selected for inclusion. Studies focused on state laws (n = 14), district policies (n = 8), or both (n = 2), with the majority of studies (n = 18) examining foods and beverages (as opposed to food-only or beverage-only policies). Sixteen studies examined prepolicy/postpolicy changes, and 8 studies examined postpolicy changes. Study designs were cross-sectional (n = 20), longitudinal (n = 3), or a combination (n = 1). Outcomes examined included change in BMI, weight, probability of overweight or obesity (n = 4), consumption (n = 10), and availability (n = 13); 3 studies examined more than 1 outcome. The majority of studies primarily reported results in the expected direction (n = 15), with the remaining studies (n = 9) reporting primarily mixed or nonsignificant results.

CONCLUSIONS AND RELEVANCE In most cases, CF&B policies are associated with changes in consumption and/or availability in the expected direction; however, caution should be exercised, given that nearly all were cross-sectional. The influence of such policies on overall student consumption and BMI and weight outcomes was mixed. The findings hold promise for the likely influence of federal CF&B regulations on changes in student in-school consumption and in-school competitive food availability. Further research is needed to truly understand the association between these policies and overall consumption and weight outcomes.

Supplemental content at jamapediatrics.com

Author Affiliations: Institute for Health Research and Policy, School of Public Health, University of Illinois at Chicago, Chicago (Chriqui, Pickel); Duke Global Health Institute, Duke University, Durham, North Carolina (Story).

Corresponding Author: Jamie F. Chriqui, PhD, Institute for Health Research and Policy, School of Public Health, University of Illinois at Chicago, 1747 W Roosevelt Rd, Mail Code 275, Chicago, IL 60608 (jchriqui@uic.edu).

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FROM OPPORTUNITY TO ACTION

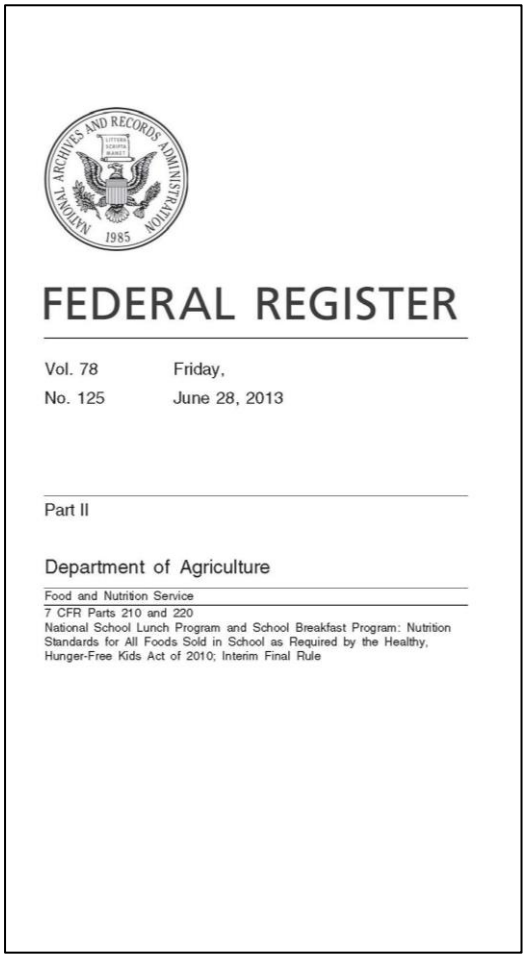
Key Policy Opportunities Identified

- Policies are changing availability of junk foods in schools
- Need for consistency in standards across grade levels
- Restricting all SSBs not just sodas
- Variations in restrictions by venue
- Potential impact on caloric intake

Key Translation Opportunities and Approaches

- Commissioned systematic review through RWJF/HER
- Working with communications firm to translate and promote findings
- Communicating with advocates
  - NANA was **KEY**
- Targeted webinars
  - NCCOR
  - Action for Healthy Kids
- Submitting comments to proposed rule

INFLUENCING FEDERAL REGULATIONS



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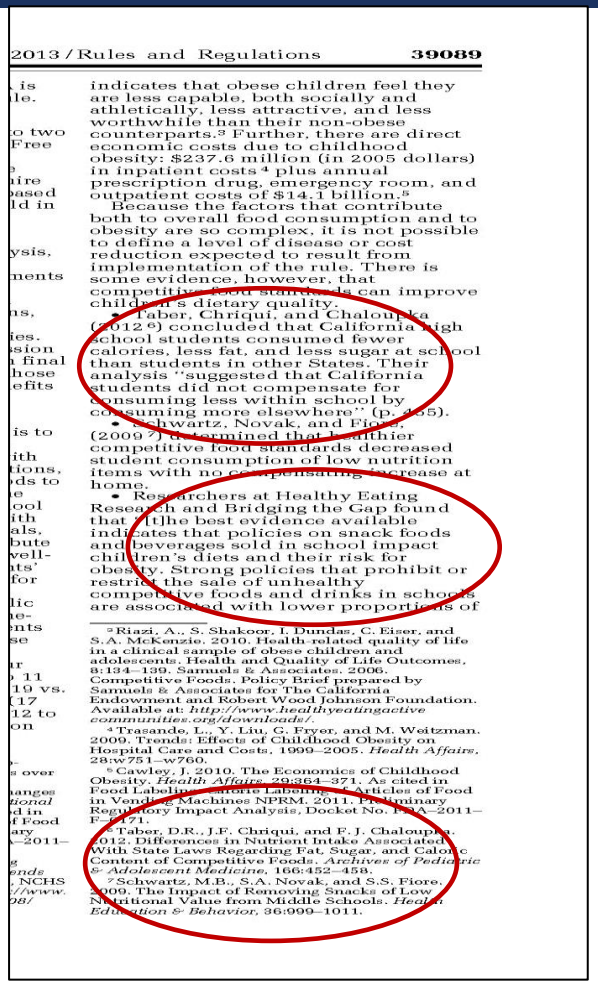
Part II

Department of Agriculture

Food and Nutrition Service

7 CFR Parts 210 and 220

National School Lunch Program and School Breakfast Program: Nutrition Standards for All Foods Sold in School as Required by the Healthy, Hunger-Free Kids Act of 2010; Interim Final Rule



2013 / Rules and Regulations 39089

indicates that obese children feel they are less capable, both socially and athletically, less attractive, and less worthwhile than their non-obese counterparts.[3] Further, there are direct economic costs due to childhood obesity: $237.6 million (in 2005 dollars) in inpatient costs[4] plus annual prescription drug, emergency room, and outpatient costs of $14.1 billion.[5]

Because the factors that contribute both to overall food consumption and to obesity are so complex, it is not possible to define a level of disease or cost reduction expected to result from implementation of the rule. There is some evidence, however, that competitive food standards can improve children's dietary quality.

- Taber, Chriqui, and Chaloupka (2012[6]) concluded that California high school students consumed fewer calories, less fat, and less sugar at school than students in other States. Their analysis "suggested that California students did not compensate for consuming less within school by consuming more elsewhere" (p. 1405).
- Schwartz, Novak, and Fiore (2009[7]) determined that healthier competitive food standards decreased student consumption of low nutrition items with no compensating increase at home.
- Researchers at Healthy Eating Research and Bridging the Gap found that "[t]he best evidence available indicates that policies on snack foods and beverages sold in school impact children's diets and their risk for obesity. Strong policies that prohibit or restrict the sale of unhealthy competitive foods and drinks in schools are associated with lower proportions of

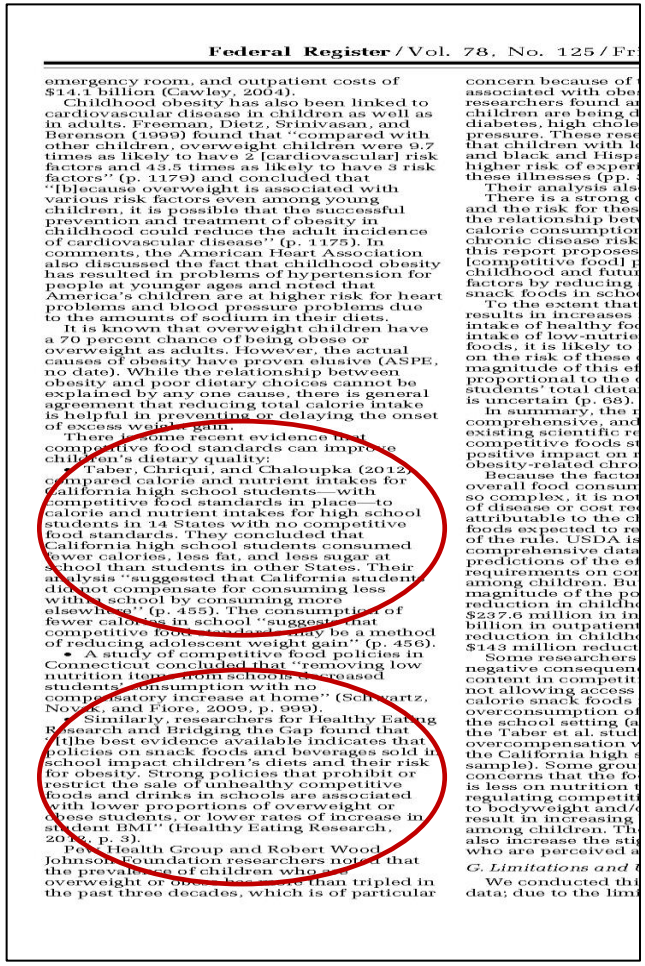
[3] Riazi, A., S. Shakoor, I. Dundas, C. Eiser, and S.A. McKenzie. 2010. Health related quality of life in a clinical sample of obese children and adolescents. Health and Quality of Life Outcomes, 8:134–139. Samuels & Associates. 2006. Competitive Foods: Policy Brief prepared by Samuels & Associates for The California Endowment and Robert Wood Johnson Foundation. Available at: *http://www.healthyeatingactive communities.org/downloads/*.

[4] Trasande, L., Y. Liu, G. Fryer, and M. Weitzman. 2009. Trends: Effects of Childhood Obesity on Hospital Care and Costs, 1999–2005. *Health Affairs*, 28:w751–w760.

[5] Cawley, J. 2010. The Economics of Childhood Obesity. *Health Affairs*, 29:364–371. As cited in Food Labeling; Calorie Labeling of Articles of Food in Vending Machines NPRM. 2011. Preliminary Regulatory Impact Analysis, Docket No. FDA–2011–F–0171.

[6] Taber, D.R., J.F. Chriqui, and F.J. Chaloupka. 2012. Differences in Nutrient Intake Associated With State Laws Regarding Fat, Sugar, and Calorie Content of Competitive Foods. *Archives of Pediatric & Adolescent Medicine*, 166:452–458.

[7] Schwartz, M.B., S.A. Novak, and S.S. Fiore. 2009. The Impact of Removing Snacks of Low Nutritional Value from Middle Schools. *Health Education & Behavior*, 36:999–1011.



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emergency room, and outpatient costs of $14.1 billion (Cawley, 2004).

Childhood obesity has also been linked to cardiovascular disease in children as well as in adults. Freeman, Dietz, Srinivasan, and Berenson (1999) found that "compared with other children, overweight children were 9.7 times as likely to have 2 [cardiovascular] risk factors and 43.5 times as likely to have 3 risk factors" (p. 1179) and concluded that "[b]ecause overweight is associated with various risk factors even among young children, it is possible that the successful prevention and treatment of obesity in childhood could reduce the adult incidence of cardiovascular disease" (p. 1175). In comments, the American Heart Association also discussed the fact that childhood obesity has resulted in problems of hypertension for people at younger ages and noted that America's children are at higher risk for heart problems and blood pressure problems due to the amounts of sodium in their diets.

It is known that overweight children have a 70 percent chance of being obese or overweight as adults. However, the actual causes of obesity have proven elusive (ASPE, no date). While the relationship between obesity and poor dietary choices cannot be explained by any one cause, there is general agreement that reducing total calorie intake is helpful in preventing or delaying the onset of excess weight gain.

There become recent evidence that competitive food standards can improve children's dietary quality:

- Taber, Chriqui, and Chaloupka (2012) compared calorie and nutrient intakes for California high school students—with competitive food standards in place—to calorie and nutrient intakes for high school students in 14 States with no competitive food standards. They concluded that California high school students consumed fewer calories, less fat, and less sugar at school than students in other States. Their analysis "suggested that California students did not compensate for consuming less within school by consuming more elsewhere" (p. 455). The consumption of fewer calories in school "suggests that competitive food standards may be a method of reducing adolescent weight gain" (p. 456).
- A study of competitive food policies in Connecticut concluded that "removing low nutrition items from schools decreased students' consumption with no compensatory increase at home" (Schwartz, Novak, and Fiore, 2009, p. 999).
- Similarly, researchers for Healthy Eating Research and Bridging the Gap found that "[t]he best evidence available indicates that policies on snack foods and beverages sold in school impact children's diets and their risk for obesity. Strong policies that prohibit or restrict the sale of unhealthy competitive foods and drinks in schools are associated with lower proportions of overweight or obese students, or lower rates of increase in student BMI" (Healthy Eating Research, 2012, p. 3).
- Robert Health Group and Robert Wood Johnson Foundation researchers noted that the prevalence of children who are overweight or obese has more than tripled in the past three decades, which is of particular

concern because of
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children are being d
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this report proposes
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childhood and futu
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In summary, the
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LESSONS LEARNED

KEY LESSONS LEARNED

- **Advocates** are your friend!!!!
  - Get input on your study questions to make sure that they are policy-relevant and responsive
  - They can help to make key connections between researchers and decision makers
- **Communication firms** working with policy community can be incredibly helpful with translation efforts
  - Simplicity
  - Focus on the key points
  - Concise
  - Recognize attention span of decision makers
- Need to use a variety of **dissemination platforms**
  - Simpler the better
  - Peer-reviewed articles are not the primary vehicle here!
- **Timing** matters
  - Pay attention to policy making windows and cycles
  - At the federal level, reauthorization "schedules"
  - Understand the policy making cycle and processes
  - Submit comments to proposed rules and attach specific reports/papers to cite
- **Make yourself available!**

FOR MORE INFORMATION

Jamie F. Chriqui, PhD, MHS
Professor, Health Policy & Administration
Illinois Prevention Research Center
School of Public Health
University of Illinois at Chicago
Email: jchriqui@uic.edu

Twitter:
@jfchriqui
@UICPRC