HCGC Webinar Series:

Behavioral Economic Strategies to Address the Opioid Crisis and the Coronavirus Pandemic

Thursday, May 14, 2020
During the Webinar:

• Please “mute” your phone and/or computer to reduce background noise.

• If you have a question please use the chat feature in Zoom or hold it until the Community Discussion at the end of the webinar.
HCGC Overview

**Health Disparities:**
HCGC's mission is designed to serve “all people.” However, we are acutely aware that total population measures can hide wide-ranging disparities among different portions of our community. HCGC is committed to seeking opportunities to close health disparity gaps.

**Employers as Key Healthcare Stakeholders:**
Employers play a special role in funding our current healthcare system. HCGC has experienced that the wide variety in the Central Ohio's self-insured and fully insured employer market makes singular employer strategies impractical. HCGC seeks opportunities to address cost issues whenever possible.
HCGC Supporters

Columbus Medical Association

pcori
CardinalHealth
Osteopathic Heritage Foundations

THE CITY OF COLUMBUS

UnitedHealthcare
Central Ohio Primary Care Foundation

OhioHealth

100% of our Board of Directors & Staff

Individual & Corporate Donations

Healthcare Collaborative of Greater Columbus
The HUB: Helping vulnerable populations maneuver COVID-19

HUB community health workers are providing updated COVID-19 education, tools, and care coordination to their clients to address health disparities in Central Ohio

- February: 219 Client Check-ins
- March: 278 Client Check-ins

As of April 1:
- 343 Pathways Opened
- 325 Pathways Completed

Exponential increase in education pathways regarding proper handwashing and social distancing

Central Ohio Pathways HUB

COVID-19 Response
#CollaborateColumbus
#CentralOhioHUB
The HUB: Helping vulnerable populations maneuver COVID-19
Other HUB projects that “nudge” vulnerable populations toward getting the help they need

• CDC Opiate Data into Action funding from FCPH-diverting opiate offenses to enrollment into the HUB for substance abuse treatment and connection to other services

• Columbus City Attorney Theft diversion program-diverting petty theft cases to enroll into the HUB to address the root cause of their offense (often lack of resources that can be addressed through the HUB.)

• Columbus Metropolitan Housing Authority partnership-providing HUB referral link to tenants so that they can self enroll in the HUB to receive other services they need beyond housing.
Welcome Dr. Stevens!

**Behavioral Economics**
Combining strategies from economics and psychology to help nudge clinicians and patients towards their long-term goals.

Join HCGC for a two-part webinar series on Behavioral Economics featuring:

Jack Stevens, PhD
Psychologist, Nationwide Children's Hospital
Associate Professor of Pediatrics,
The Ohio State University

Continue the conversation from our first webinar in this series.
Register today:

Behavioral Economic Strategies to Address the Opioid Crisis and the Coronavirus Pandemic

Thursday, May 14th
10:00 - 11:30 AM

Register Online:
www.hcgc.org/events
Behavioral Economics
Strategies to Address the Opioid Crisis and Coronavirus Pandemic --- May 14, 2020

Jack Stevens, Ph.D.
Psychologist, Nationwide Children’s Hospital;
Associate Professor of Pediatrics, The Ohio State University
Jack.Stevens@nationwidechildrens.org
Speaker Disclosure Related to Today’s Talk

- I have stock ownership in Procter and Gamble.

Acetaminophen is found in hundreds of products across dozens of companies. Procter and Gamble is one of those companies. Acetaminophen will be briefly mentioned today.
Opening Message about Today’s 90 Minute Webinar

• Today’s webinar builds upon a April 2020 webinar
• **If you did not attend that past webinar:** A brief overview of behavioral economics will be provided at the beginning of today’s webinar.
• **If you attended that past webinar:** The first 5-10 minutes of my talk may sound familiar. However, the vast majority of the remaining material will be **new**.
Opening Quote from Deborah L. Birx, MD

“There’s no magic bullet. There’s no magic vaccine or therapy. It’s just behaviors.”

March 31, 2020
What is Behavioral Economics (BE)?

Interdisciplinary field featuring insights from psychology, economics, and marketing

Goal: To improve individual decision making

- Common focus of BE: financial well-being
- You may have novel applications of BE!
What BE is not

- Economic behavior
- Mental health economics
- Solely concerned about money/financial incentives
This is Behavioral Economics (From *Nudge* by Thaler & Sunstein)
This image is NOT consistent with Behavioral Economics
The Opioid Crisis

• According to the CDC, nearly half a million people died of an opioid-related (prescription and/or illicit) overdose since 1999. 

• Prescription opioids sometimes lead to use of illicit opioids.

• For mild/moderate nociceptive and inflammatory pain, ibuprofen and acetaminophen are indicated (Finnerup, 2019, NEJM).

• For chronic noncancer pain, opioids and NSAIDs are comparable (Busse, 2018, JAMA).
EAST Framework (Halpern, 2015; *Inside the Nudge Unit*)

- **Easy** – Change Default & Opt-Out
- **Attract** Attention – Death Notification Letters
- **Social** – Peer Comparisons
- **Timely** – Change Default & Opt-Out

(Stevens & Bhalla, 2019, *Journal of Consulting and Clinical Psychology* commentary)
Strategy #1: -- Changing the Default “The Presetting(s)”

Tipping Taxi Cab Drivers

Old Defaults:
10%  14%  18%  Other  No Tip

New Defaults:
15%  20%  25%  Other  No Tip
Decreasing the amount of opioid medication prescribed after surgery

(Chiu et al., 2018, JAMA Surgery)

Old Number of Pills as the Default: 30 [prepopulated in a suboptimal way]

New Number of Pills as the Default: 12 [prepopulated in a better way]

KEY FINDINGS: 1. Decrease in pills dispensed
2. No difference in opioid refill rates
What Message Would This Default Send To a Prescriber When An Opioid is Ordered?

Old Number of Pills as the Default: 30 [prepopulated in a suboptimal way]

New Number of Pills as the Default: 1

Is just one pill too presumptive? Might it backfire?

Could smart defaults – customized based upon a particular procedure -- achieve better results?
Strategy #2: Opt-Out to eliminate some opioid prescriptions

Opt-in: Clinicians order a non-opioid analgesic as part of their post-discharge instructions

Opt-out: Clinicians can deselect a non-opioid as part of an order set that appears automatically:
✓ Limit physical activity for 24 hours
✓ Keep the wound clean and dry
✓ Alternate between acetaminophen and ibuprofen for pain
Strategy #3: Death Notification Letters

Jason Doctor and colleagues (Science, 2018)

- Letters to prescribers of opioids regarding a patient who suffered a fatal overdose
- **Advantages:** May overcome optimism bias
- **Disadvantage:** Long delay between prescribing and feedback
Strategy #4: Peer Comparisons

--Social influences, not just biological facts, can encourage people to behave in a more optimal fashion.

--The Hotel Towel Study
Strategy #4: Peer Comparisons – Which Clinicians Might Respond Favorably?

• Those Who Respond to Social Proof
  a. Acceptable
  b. Feasible

• Those Who Care about Relative Performance

• Those Who Are “Rebellious” Might Respond the Other Way
Empirical Studies of Peer Comparisons Resulting in Improved Medication Prescribing

1. Emergency department opioid prescribing

2. Primary care antipsychotic prescribing

3. Primary care antibiotic prescribing
   Meeker et al. *JAMA*, 2016.
Peer Comparisons -- Type of Benchmark

• Superstar
• Achievable benchmark (top 10%)

• A nearby clinician/unit/health care organization
• A rival (OSU versus That School “Up North”)

How might BE reduce the energy bill for 129 West 81st Street, NYC?
Peer Comparisons

Impact of using descriptive norms

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<td>TOTAL:</td>
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(based on Schultz et al., 2007)
Peer Comparisons for Top Performers

Impact of combining descriptive and injunctive norms

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<td>TOTAL</td>
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Meeker et al. (JAMA; 2016) “You Are a Top Performer”
Peer Comparisons Involving Patients

“Many patients similar to you have benefitted from this [non-opioid] treatment.”

Might work better than solely:

--Expert opinion (“This is what I recommend.”)
--A biological based explanation for the rationale of the treatment (“This is how the treatment works.”)

(Stevens & Bhalla, Journal of Consulting and Clinical Psychology, 2019)
BE Checklist for Addressing the Opioid Crisis

1. Create a low/recommended number of opioid pills as the default
2. Place preferred non-opioid alternatives in electronic order sets that automatically appear for clinicians
3. Compare clinicians to other practitioners regarding appropriateness of opioid prescribing
4. Highlight to a target patient the many other patients who have benefitted from non-opioid pain management
BE Strategies to Address the Coronavirus Pandemic

• Easy
• Attract Attention
• Social
• Timely
BE Strategies for Encouraging Hand Sanitizer Use – Education is NOT sufficient

• Easy – make accessible as possible
What is the shortest possible distance between a person and the hand sanitizer dispenser stand?

Birnbach et al. (2012)
right next to security desk
BE Strategies for Encouraging Hand Sanitizer Use

- Timely – provide alerts at critical intervals

- Program mobile devices to give periodic reminders – alarms throughout the day
BE Strategies for Encouraging Mask Wearing

• Easy – You have made masks widely available. How could someone encourage mask use if such usage cannot be required?

• Brewer et al (2017; Pediatrics) vaccinations
• “Would you like a mask?” versus “Please use a mask.” versus “Here is a mask for you.”
BE Strategies for Encouraging Mask Wearing

• Attract attention

• Social Influences
  • Identifiable victim effect (particularly strong regarding a blameless individual)
  • Descriptive norms – highlight the desired behaviors demonstrated by many other people
  • Injunctive norms – show gratitude/social approval
Prototype #1 (Stevens, unpublished)

My mother works here. Thanks to all of the great customers wearing masks!
Prototype #2 (Stevens, unpublished)

My grandpa works here. Thanks to all of the great customers wearing masks!
Prototype #3 (Stevens, unpublished)

My owner works here. Thanks to the many great customers who are wearing masks!
BE Strategies for Encouraging Physical Distancing

• Easy – reminding people where to stand
Increasing Influenza Vaccination Rates

- Pediatric vaccination rates have recently declined. What about flu shots in the fall?

- EASIER: Have a medical assistant initiate the order for a specific patient (Kim et al., *JAMA Network Open*, 2018)

- AUTOMATIC: Cataldi et al. (May 2020, *Pediatrics*) found that:
  -- 36% of pediatricians have standing orders for all routine vaccinations
  -- 23% of them have standing orders for some vaccines

- Increase access to flu shots in non-clinical settings
Increasing Influenza Vaccination Rates through an EMR Display

• ATTRACT ATTENTION (increasing the salience given to a health topic)

  --Passive best practice alert
  --Active best practice alert requiring an “OK” acknowledgment
  --Active best practice alert requiring a response to: ACCEPT/DECLINE
  --Active best practice alert requiring a response to: ACCEPT/REJECT
BE Checklist for Addressing the Coronavirus Pandemic

1. Strategically place hand sanitizer bottles/stands
2. Have people set periodic reminders for themselves to use hand sanitizer
3. Make masks widely available
4. Presume people often want to use masks: “Here is a mask for you.”
5. Use compelling social messages to encourage mask usage
6. Add more “Please stand here” signs
7. Consider adding standing orders and changing EMR alerts to increase flu shots in the fall
Future Directions

• None of the BE strategies discussed today are well established to address these health crises.
• Effectiveness, acceptability, unintended consequences, and ethical issues all deserve future consideration.
• Part of a “portfolio” of approaches
Appropriate Groups for Nudging

• People who are adamantly against a particular behavior will NOT respond to nudging.

• BE may have benefits for those who are:
  A. Ambivalent about a target behavior
  B. Busy/distracted but interested in a target behavior
Why you should strongly consider BE strategies

- Favorable benefit-cost tradeoff

- Patel et al. (2016, *JAMA Internal Medicine*)
  Cost savings per year: $10,000,000+
  “How to Save $32 Million in One Hour” – Freakonomics Podcast

- *Should Governments Invest More in Nudging?* (Benartzi et al., 2017; *Psychological Science*)
BE has received attention from:

• Academic organizations:
  1. Univ. of Pennsylvania School of Medicine “Nudge Unit”
  2. Center for Public Leadership at Harvard Kennedy School of Government

• Management consulting firms
  1. McKinsey and Company
  2. Boston Consulting Group

• Wall Street Journal (“Ask Dan Ariely” recurrent column)
Questions and Answers

Jack.Stevens@nationwidechildrens.org

Intervention research should focus on behavioral strategies, not just biological/pharmacological treatments, to address these two public health crises.
Community Conversation
Continue to Engage & Thank you!