HCGC Webinar Series: Behavioral Economics

Thursday, April 16, 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

OUR MISSION
To improve the quality, delivery, and value of healthcare and the overall health for all people in the Columbus region.

OUR VISION
Optimal health for all people in the Columbus region.

WHAT WE DO
Using a collaborative process, we are:
- Fostering shared learning and communication,
- Collecting and sharing aggregate health data, and
- Scaling knowledge and innovation.
HCGC Supporters

Columbus Medical Association

100% of our Board of Directors & Staff Individual & Corporate Donations

pcori CardinalHealth

Osteopathic Heritage Foundations

The City of Columbus

COLUMBUS PUBLIC HEALTH

UnitedHealthcare

Central Ohio Primary Care Foundation

OhioHealth

Aetna

Abbott

Anthem

Healthcare Collaborative of Greater Columbus
One of over 30 Regional Health Improvement Collaboratives (RHICs) across the country

HCGC is a non-profit organization with multi-stakeholder governance, fully supported by grants, sponsorships and project work
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.
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:*

*[Image of Dr. Stevens] Jack Stevens, PhD*  
Psychologist, Nationwide Children’s Hospital  
Associate Professor of Pediatrics, The Ohio State University

**Webinar 1:**  
**Thursday, April 16th**  
10:00 - 11:30 AM

**Topics:**
- Behavioral Economics (BE) background.  
- BE work across the country that has been featured in the New England Journal of Medicine and Journal of the American Medical Association Network publications.  
- BE strategies to reduce no-shows and late cancellations for healthcare appointments.

**Webinar 2:**  
**Thursday, May 14th**  
10:00 - 11:30 AM

**Topics:**
- BE strategies to address the opiate crisis and improve pain management.  
- Community discussion around other BE topics of interest.
Behavioral Economics – First Webinar
April 16, 2020

Jack Stevens, Ph.D.
Psychologist, Nationwide Children’s Hospital;
Associate Professor of Pediatrics, The Ohio State University
Jack.Stevens@nationwidechildrens.org
“The final common pathway for the application of nearly every advance in medicine is human behavior. No matter how effective a drug, how protective a vaccine, or how targeted a therapy may be, a clinician usually has to prescribe it, and a patient accept and use it as directed, for it to improve health” (pg. 214).

--Leaders of the nation’s first health care system “Nudge Unit” (established 2016)
Why health care providers/systems 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)
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
• Some focus on adult health, but less explicit attention to maternal and child health
• You may have novel applications of BE!
Five Theoretical Articles on BE Regarding Pediatric Health


Stevens J & Keim SA. How research on charitable giving can inform strategies to promote human milk donation to milk banks. Journal of Human Lactation. 2015 epub Feb 17.


What BE is **not**

- Economic behavior
- Mental health economics
- Solely concerned about money/financial incentives
- Solely concerned about psychiatric conditions
This is Behavioral Economics (From *Nudge* by Thaler & Sunstein)
This is NOT Behavioral Economics
First BE Idea for Getting Your Team Members Interested in Your Initiative

A. Ultimatum Game – Fairness matters

Proposer:

Responder:

B. Implications for changing clinical practice:
“WHEN POSSIBLE, ADD A TASK FOR SOMEONE ONLY AFTER TAKING ANOTHER TASK AWAY”
Second BE Idea for Getting Your Team Members Interested in Your Initiative

- The IKEA Effect
- People (over) value their contribution to an overall project.
BE Strategy: Changing The Default (The Automatic Selection – The Presetting)

A classic example from behavioral economics: Retirement savings

Why might defaults work? (Sunstein, 2013)
   A. Effort to switch from default
   B. Signals preferred path
Opt-Out Example #1: Generic Medication Prescribing (Patel et al., 2016; *JAMA Internal Medicine*)

**Opt-in:** Prescriber must specify a generic medication from a formulary.

**Opt-out:** Prescriber must click a checkbox labeled “dispense as written” in order for a brand name medication to be given when a generic equivalent is available.

- Cost savings
- Autopopulate other medication fields
Two examples of opt-out

Scenario 1: Optimal dose is generally 3mg.
Opt-in dose:  
Opt-out dose: 1 mg 2 mg 3 mg [no recommendation]

Scenario 2: Optimal prescription is generally 10 pills.
Opt-in Number of Pills:  
Opt-out Number of Pills: 10 [field is prefilled]
Opt-Out Example #2: Laboratory Test Ordering (Probst et al., 2013; *Health Psychology*)

Opt-in: Clinician must select individual tests from a lengthy list.

“Recommended” condition involving Opt-out: Clinician may deselect tests that were previously selected by experts for a particular condition.

- Test C
- Test H
- Test W

Under what circumstances are electronic order sets triggered?
Continuum from Most Effort to Least Effort

• Obscure smart phrase
• Flexible or easy-to-remember smart phrase
• “Badge buddy” with smart phrase
• Smart phrase stickers on frame around computer screen
• Electronic order sets automatically appear after other routine information (e.g., patient age, unit/clinic, diagnosis) is provided in the EMR.
Opt-Out Example #3: Encouraging pediatric vaccinations (Brewer et al., 2017, *Pediatrics*)

**Justification:** The benefits of vaccination greatly outweigh any harms.

**Opt-in:** “What do you want to do about shots today?”

**Opt-out:** “We have some shots we need to do today.”

Routine primary care is often presumptive.
Non-EMR examples to change clinician behavior

1. Increasing double gloving for certain types of surgery
   Opt In: Surgical team member must request two sets.
   Opt Out: _____________________

2. Increasing use of checklists for certain pieces of medical equipment
   Opt In: Review manual or online material
   Opt Out: _____________________
Non-EMR examples to change patient behavior

1. Increasing number of patients receiving prescription refills
   Opt In: Require periodic visits to brick-and-mortar pharmacy
   Easier Opt In: __________________________
   Opt Out: ____________________________

2. Increasing adherence for patients who forget to take their medication
   Opt In: Suggest patient set reminders for themselves
   Opt Out: ____________________________
Suboptimal Defaults (Narula et al., 2014, *Health Psychology*)

**Justification:** Many patients fail to have preventive colonoscopies.

**Opt-in:** Patients must call to schedule an appointment.

**Opt-out:** Patients are informed of the date, time, and location of an appointment already scheduled for them but these patients can call to cancel.
Suboptimal Defaults (Barascud et al., 2013, *Energy Economics*)

**Justification:** Reducing temperature settings on thermostats in the winter decrease energy costs.

** Helpful Default:** One degree decrease in default temperature setting

**Default that was less successful:** Two degree decrease in default temperature setting
BE Social Norms: Highlighting Those Exhibiting the Target Behavior

Over 200,000 copies sold
Not Highlighting Those Exhibiting the Opposite Behavior

Tens of millions of book buyers did not purchase this selection.
BE Strategy: Framing

Picture 1
Framing

Picture 2
Which is more appealing?

Picture 1

Picture 2
The WIN Framework to Framing

- **Words**
- **Images**
- **Number of Options**
WORDS – Two sentences in an Electronic Health Record System

• Presentation of options is often arbitrary in health care.

• Hypothetical Example Based Upon Enhanced Active Choice (Patel and Volpp, 2012)

  Click here to order the test that is more cost effective.

  Click here to order the test that costs four times more but has similar benefits.
Encouraging youths to purchase fewer sugar sweetened beverages

- Change “250 calories” or “10% of your daily calories” to ...

Bleich et al. (2012)
WORDS – One Word
Getting Clinicians to Wash Their Hands

- Basic idea: Hand washing and use of hand sanitizer are important aspects of infection control.

Change “Hand hygiene prevents you [the health care provider] from catching diseases” to …

Grant and Hofmann 2011
WORDS: A few letters  -- Getting People To Show Up to the Polls

• Basic idea: Voting is a critically important civic duty.

• Change wording of survey items completed by potential voters

• For example, change “How important is it to you to vote in tomorrow’s election?” to …

Bryan, Walton, Rogers & Dweck, 2011
Decreasing duplicate orders

• Change from

• Reduce unintentional duplicate ordering of lab tests and radiology tests in the ED
• Designed to occur before an interruptive alert would be given

Horng et al (2019)  *JAMA Network Open*
Image #2
Decreasing errors when dispensing medication

- Change

Heath and Heath, 2010; in Chapter 8 of the book *Switch*
Image #3
Promoting Healthy Eating

• Change to

• Coronavirus signage in stores
Decreasing littering from university cafeteria

• Change

• Effect held regardless of verbal instructions
  Ernest-Jones, Nettle, and Bateson (2011)
Image #5
Coupon redemption

• Change “text only reminder” to text reminder plus

• Visual cues may work best if not recently encountered and if distinctive in immediate environment

Rogers and Milkman (Psychological Science; 2016)
OPTIONS: Expanding the number of choices

“The compromise effect”
• Bread making machines
• An example regarding sleep problems
OPTIONS: Decreasing the number of choices

“Choice overload” (Schwartz, 2004) “Less is More”

• 1995 JAMA study of physician Donald Redelmeier and psychologist Eldar Shafir involving starting pain medication for hip pain

• When are clinicians and patients provided with too many choices, information, or tasks?
OPTIONS: What is the optimal number?

Consider the compromise effect and choice overload together.

• 2015 Psychological Bulletin Wilson et al. “There is a curvilinear relation between the number of behavioral recommendations and improvements in behavioral and clinical measures, with a moderate number of recommendations producing the highest level of change.”
EAST Framework (Halpern, 2015)

- Easy
- Attract Attention
- Social
- Timely
Untested but Promising BE Strategies to Reduce No-Show

• **Easy:** let patients know how easy cancellations are
• **Attract Attention:** novel reminder/calls as well as atypical appointment times
• **Social:** “Would you please cancel at least 24 hours ahead of time if you cannot make your appointment?” “Thanks for being such a considerate patient.”
• **Timely:** same-day reminders
Challenges for BE

1. More careful evaluation is needed regarding health.

2. These brief interventions may be readily dismissed because they are not comprehensive.
Challenges for BE – continued

3. Unknown acceptability to clinicians and patients –

Some people don’t want to be nudged. Regulation may be more powerful or necessary in those cases.

4. If/when is it ethical to nudge?
---Retirement savings programs
---John Meynard Keynes and economic depressions
Ideas for Getting Financial Leaders Interested in Behavioral Economics

• Patel et al. (2016, JAMA Internal Medicine)
  Cost savings per year: $10,000,000+

• Should Governments Invest More in Nudging? (Benartzi et al., 2017; Psychological Science)
Ideas For Getting Community Leaders Interested in Behavioral Economics

• Potential for addressing the social determinants of health


Concluding Thought #1: When to Nudge, Not Just How to Nudge

• Limitations of annual training, rotation on-boarding, and pre-rounding

• Immunizations and cancer screenings

• Leverage Index
Concluding Thought #2: April 2015
Change

Medical College Admission Test (MCAT) adds a fourth section:

Psychological, Social, and Biological Foundations of Behavior

60% Psychology, 30% Sociology, 10% Biology
Possible Next Steps

1. Reading works well for some people

2. Discussing works well for some people

Jack.Stevens@nationwidechildrens.org
Community Conversation
Continue to Engage & Thank you!

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Register Online:
www.hcgc.org/events