

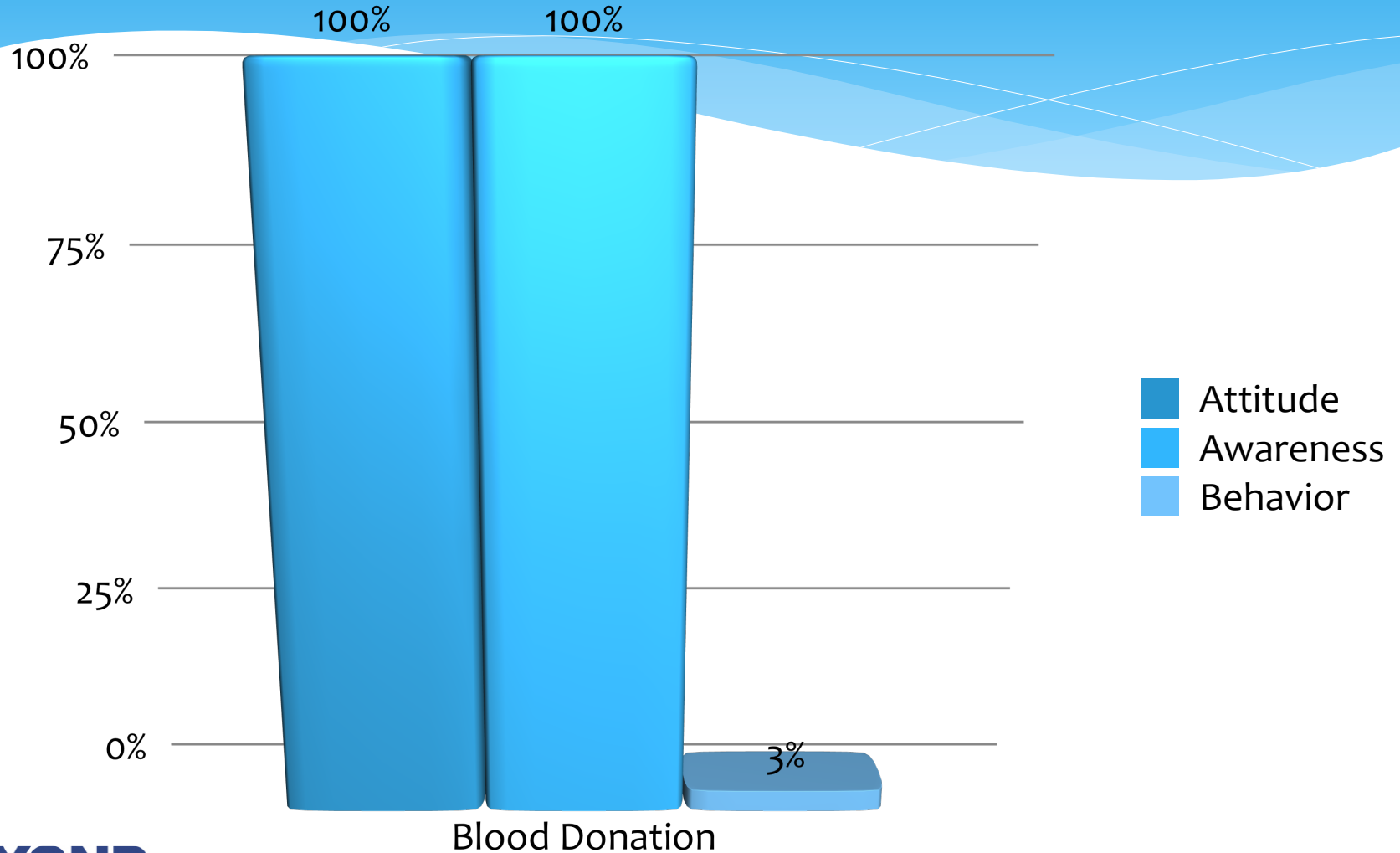
# Applying Behavioral Psychology to Stop Invasive Species

2018 Agriculture, Food & Environmental Systems In-service  
Cornell University  
November, 2018

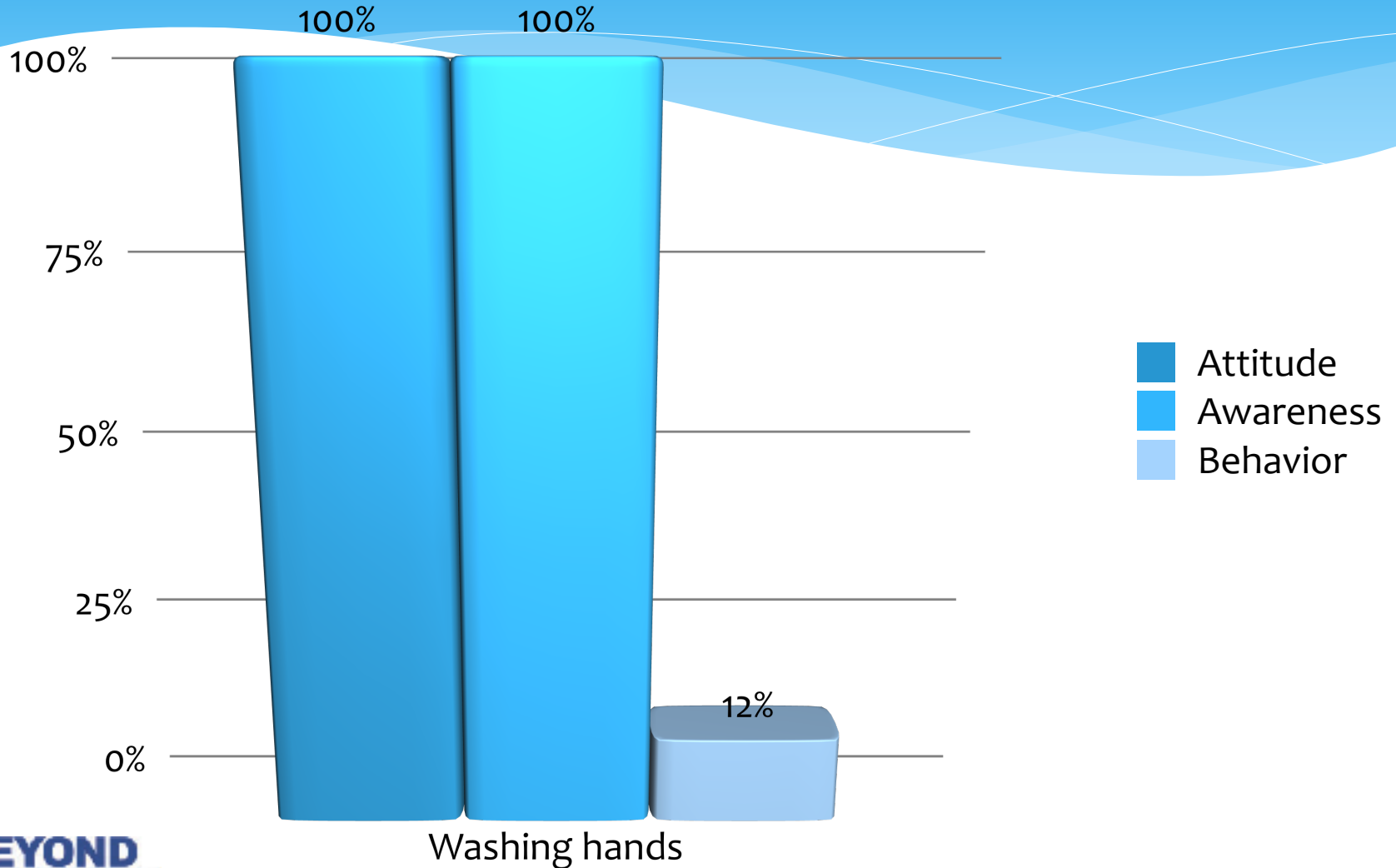
*Ken Donnelly*  
*President, Beyond Attitude Consulting*

**BEYOND  
ATTITUDE**

# Blood Donation in USA



# Doctors Washing Hands



EXCLUSIVE NATIONAL HEALTHCARE

# Hospital doctors neglect washing their hands when no one's looking

By [Esther Han](#)

6 July 2018 — 10:13pm



f t e A A A

20

[View all comments](#)

Doctors and nurses at a major Sydney hospital failed to properly wash their hands when no one was watching, risking patients' lives, a new study found.

Researchers from University of NSW found the staff's hand-washing compliance rate dropped from 94 per cent to 30 per cent when human auditors stopped monitoring their behaviour and automated surveillance kicked in.



# Metrics of Hand-Washing Study

- \* 2015 study at 34 US hospitals
- \* 4,000+ caregivers (2/3 were nurses)
  - \* 14,000,000 washing hands “opportunities”
  - \* Only 50% compliance rate
  - \* Worse in afternoon, when compliance dropped 38% from what it was in the morning
- \* Extrapolates to 600,000 unnecessary infections, 35,000 unnecessary deaths, and \$12.5 billion in added costs in US annually





Attitude and Awareness

Behavior

# Remember This

*Thinking is easy, acting difficult,  
and to put one's thoughts into  
action the most difficult thing in  
the world.*

--- Goethe

# CBSM Places





# What is Behavior Change Marketing?

- \* Application of Behavioral Psychology to environmental program promotion
- \* Builds upon awareness
- \* Focuses on behavior
- \* Emphasis on personal contact
- \* Dr. Doug McKenzie-Mohr, St. Thomas University, Canada
- \* [www.cbsm.com](http://www.cbsm.com)



# Bridging the Gap

- \* Don't focus on awareness
- \* Don't focus on attitude
- \* Focus on behavior
- \* Having the right attitude does not guarantee right behavior



# Just Do It!



- \* We need tools that foster preferred behaviors
  - \* Recycling/composting
  - \* Conserving water
  - \* Reducing energy use
  - \* Reducing spread of invasive species
  - \* Stopping engine idling

**BEYOND  
ATTITUDE**

# The CBSM Toolbox

- \* **Research**
- \* Choose behavior
- \* Break down barriers
- \* Small questions
- \* Prompts
- \* Commitment strategies
- \* Norms
- \* Effective Communications





# The Toolbox - Research

- \* Why do people move firewood or keep their bait or release animals?
- \* Have to find out actual reasons, cannot guess
- \* Don't assume you know
- \* You don't need to know all the answers all of the time. You just need to know how to get them. That takes research.



# Research Goals



- \* What are people doing now?
  - \* Establish a baseline
- \* Measure knowledge and attitude
- \* Identify barriers and benefits
- \* Determine best communication channels

# Research Methods

- \* Literature Reviews
  - \* Find out best practices
- \* Surveys
  - \* Statistical significance
- \* Focus Groups
  - \* Ability to drill down
- \* Observations



# The Toolbox - Research



## Literature Review

- \* examine articles on the subject
- \* learn from previous research
- \* trade magazines, newsletters
- \* research journals
- \* talk to authors of reports
- \* ask if there are lit reviews already out there

# The Toolbox - Research

## Surveys

- \* Surveys can fairly represent community perspectives
- \* Statistical representation, if a representative sample
- \* Identify barriers/motivators
- \* Telephone can cost \$25,000 to \$30,000
- \* Online is much cheaper (about half)



# The Toolbox - Research

## Focus Groups

- \* Explore issues raised through the literature review and survey
- \* Random community members
- \* Organization
  - \* Facilitator and note-taker
- \* Get feelings, opinions and perspectives
- \* About \$3,000 each, usually do 4 to 6



# The Toolbox - Research

## Observations

- \* Can post someone to watch and record
- \* Need to be unobtrusive and respectful
- \* Can use cameras if in a public place
- \* People who work in the field have important insights

# The Toolbox - Research

- \* Target audience identified
- \* Barriers/benefits identified
- \* Current behavior established
- \* Best communications options understood
- \* Plan for intervention can be developed

- 
- 1. Inconvenient*
  - 2. Too expensive*
  - 3. Complicated*
  - 4. Too busy*



# The CBSM Toolbox

- \* Research
- \* **Choose behavior**
- \* Break down barriers
- \* Small questions
- \* Prompts
- \* Commitment strategies
- \* Norms
- \* Effective Communications



# Choosing a Behavior





Cannabis Disposal  
ONLY

Veuillez déposer  
le cannabis ici



# Choosing a Behavior(s)

- \* Choose candidate behaviors with impact
  - \* Likelihood of adoption
  - \* Effect
  - \* (1/Market Penetration)
- \* Consider if the behaviors are divisible
- \* Use evaluation matrix
- \* Will help to choose which behaviors to pursue

# Example - Water Conservation

- \* 3 candidate behaviors
  - \* Low-flow faucets/showerheads
  - \* Shorter showers
  - \* Reduced lawn watering
- \* These should have been identified as potential behaviors earlier and examined in the research stage

# Evaluation Matrix

<i>Behavior</i>	<i>Likelihood of Adoption</i> 1-5	<i>Effect of Behavior</i> 1-5	<i>Market Penetration</i> 100-x%	<i>Total</i>
Install low-flow faucets/ showerheads				
Take shorter showers				
Reduce lawn watering				

# How to Fill it Out?

- \* Gather information
  - \* Market Research
  - \* Experts
  - \* People in the field/practical knowledge
  - \* Good judgement

# Evaluation Matrix

<i>Behavior</i>	<i>Likelihood of Adoption</i> 1-5	<i>Effect of Behavior</i> 1-5	<i>Market Penetration</i> 100-x%	<i>Total</i>
Install low-flow faucets/ showerheads				0
Take shorter showers				0
Reduce lawn watering				0



# Behavior Chosen

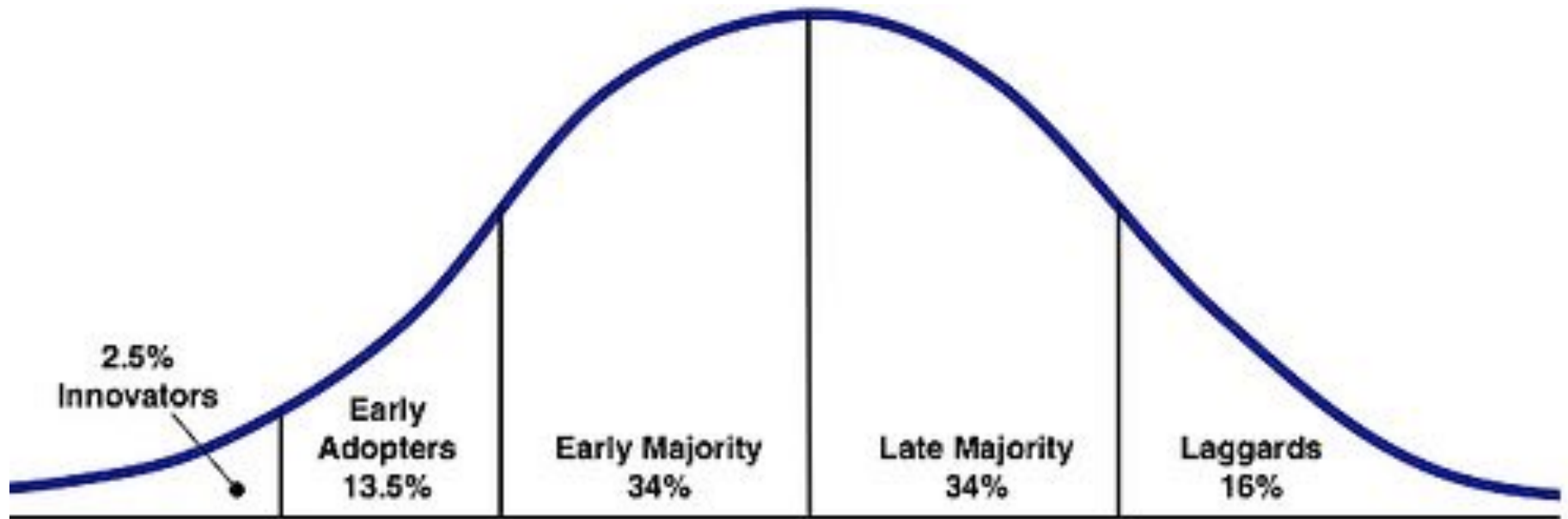
- \* Based on the evaluation, the behavior with the most impact will be identified

# The CBSM Toolbox

- \* Research
- \* Choose behavior
- \* **Break down barriers**
- \* Small questions
- \* Prompts
- \* Commitment strategies
- \* Norms
- \* Effective Communications



# Adoption Curve



Source: Everett Rogers (1962) Diffusion of Innovations

# Subconscious

## The Human Mind



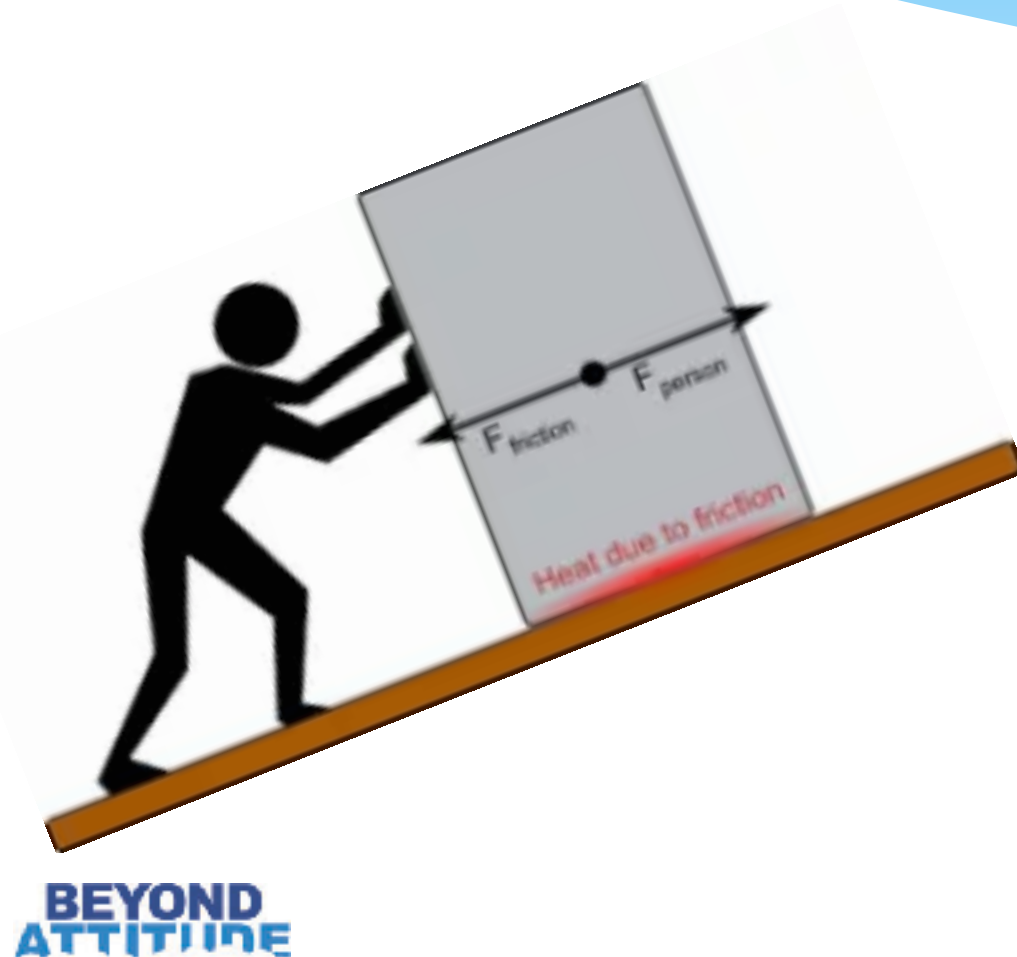
# Barrier Removal



# Barrier forms

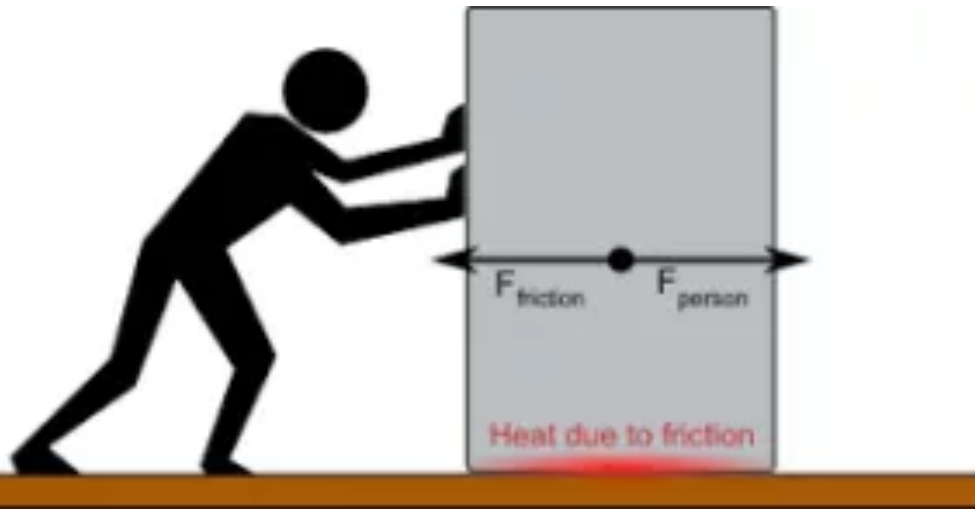
- \* Barriers can be
  - \* systemic
  - \* physical
  - \* attitudinal
  - \* knowledge-based
  - \* based on ability
  - \* based on perceptions
  - \* others....

# Removing Barriers



- \* Barriers are like friction: they make adoption of the new behavior difficult
- \* Removing barriers is an important step to getting people to adopt your preferred behavior

# Removing Barriers



- \* If you make the preferred behavior as easy to do as the current behavior, it becomes much easier to get people to change what they are doing



# Removing Barriers



- \* If you can also add in benefits for the person you are trying to persuade, it can make the new behavior more attractive than the old

# The CBSM Toolbox

- \* Research
- \* Choose behavior
- \* Break down barriers
- \* **Small questions**
- \* Prompts
- \* Commitment strategies
- \* Norms
- \* Effective Communications



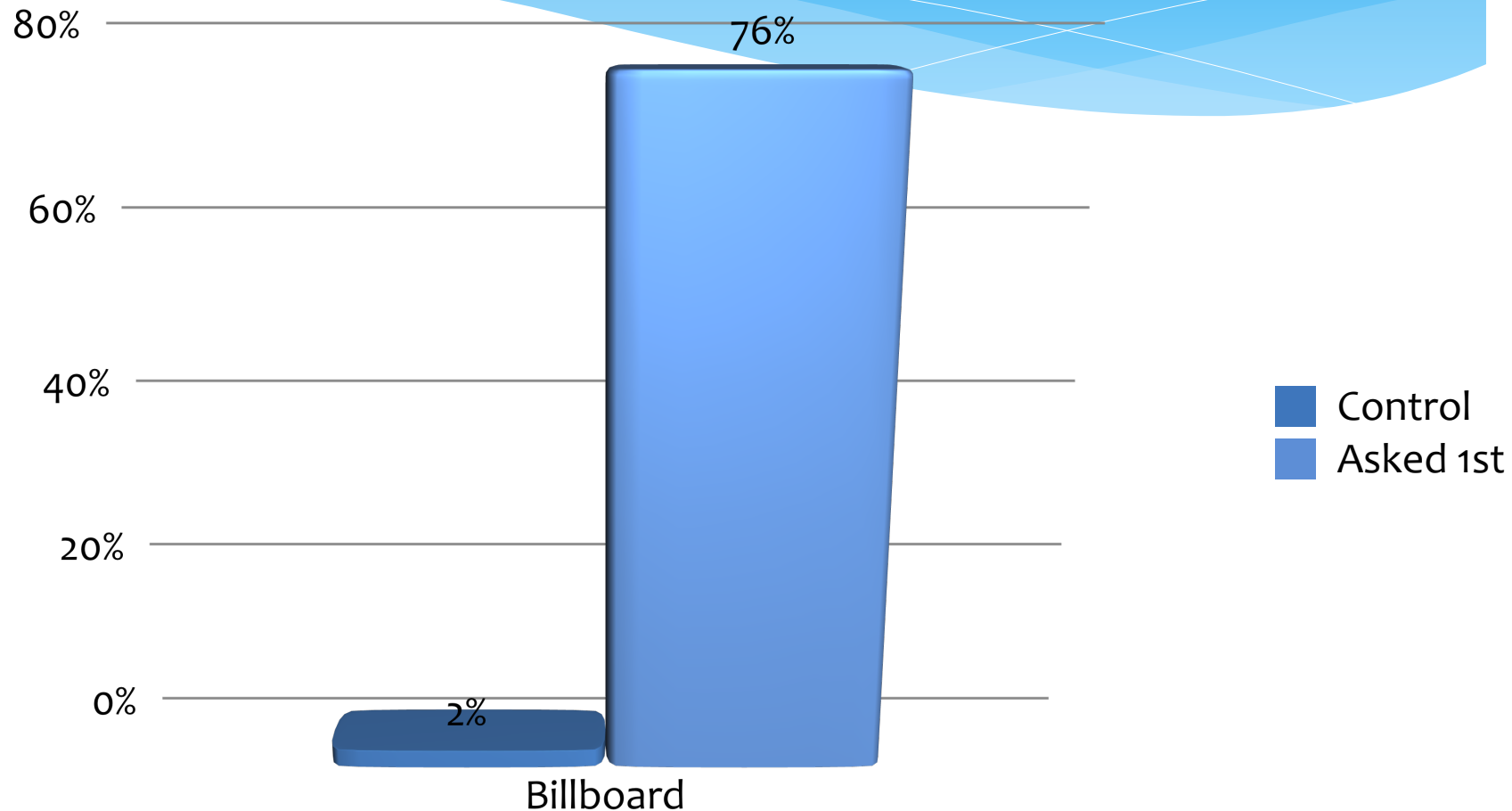
# Small Question



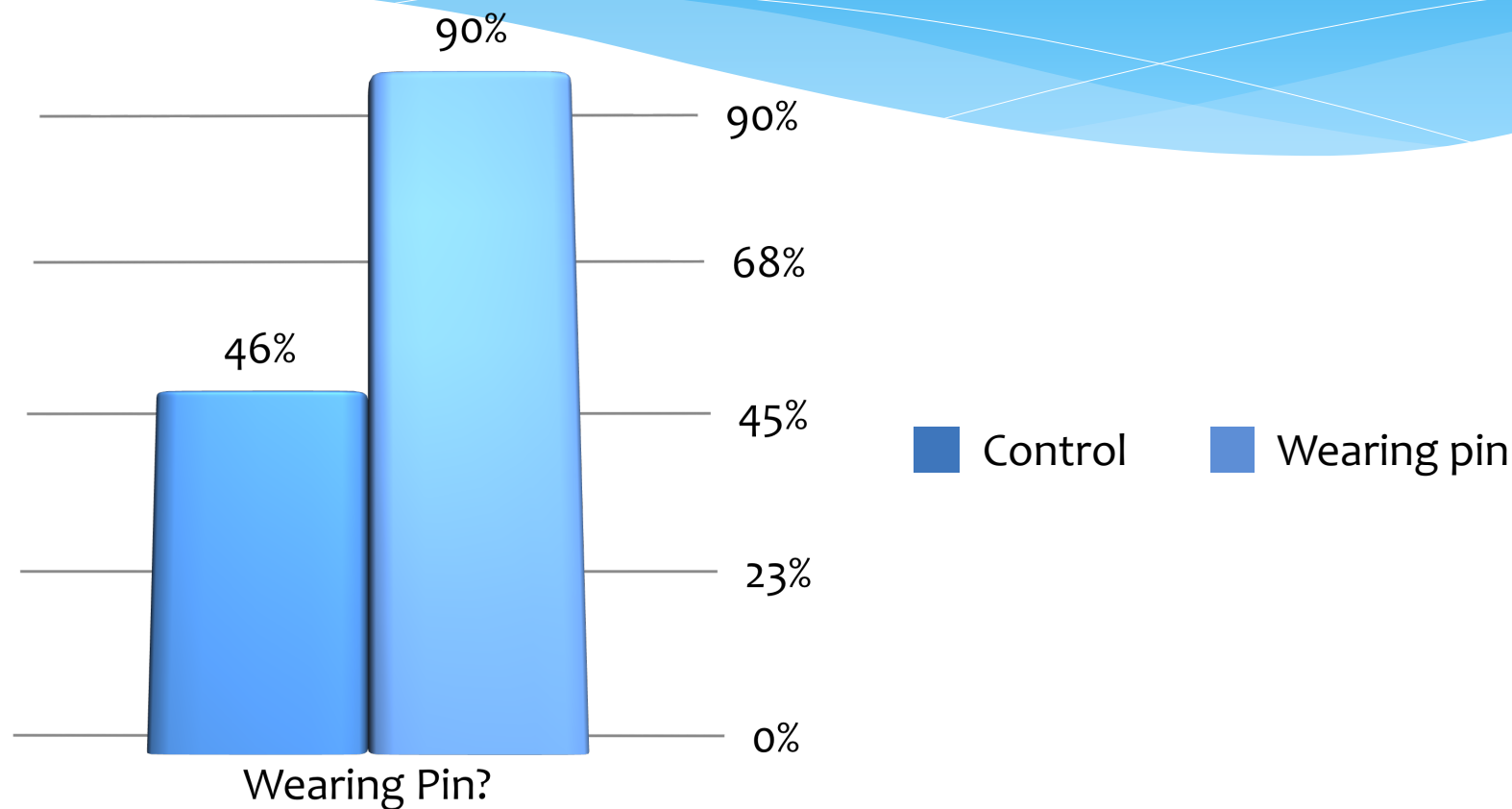


**We Support  
Safe Driving**

# The Toolbox – Small Question



# Small Question – Cancer Society Pin



# The Small Question

- \* Asking a small question first can make a bigger question more palatable
- \* Use strategically
- \* Consider pursuing a “gateway behavior”
- \* Composting example
- \* Keep the long term in mind



# Exercise

- \* Getting people to Clean Drain and Dry their watercraft can be difficult
- \* How might a small question approach be used as a gateway to more challenging behaviors?

# The CBSM Toolbox

- \* Research
- \* Choose behavior
- \* Break down barriers
- \* Small questions
- \* Prompts
- \* **Commitment strategies**
- \* Norms
- \* Effective Communications



# Watch My Keyboard?



**BEYOND  
ATTITUDE**

# Watch My Baby?



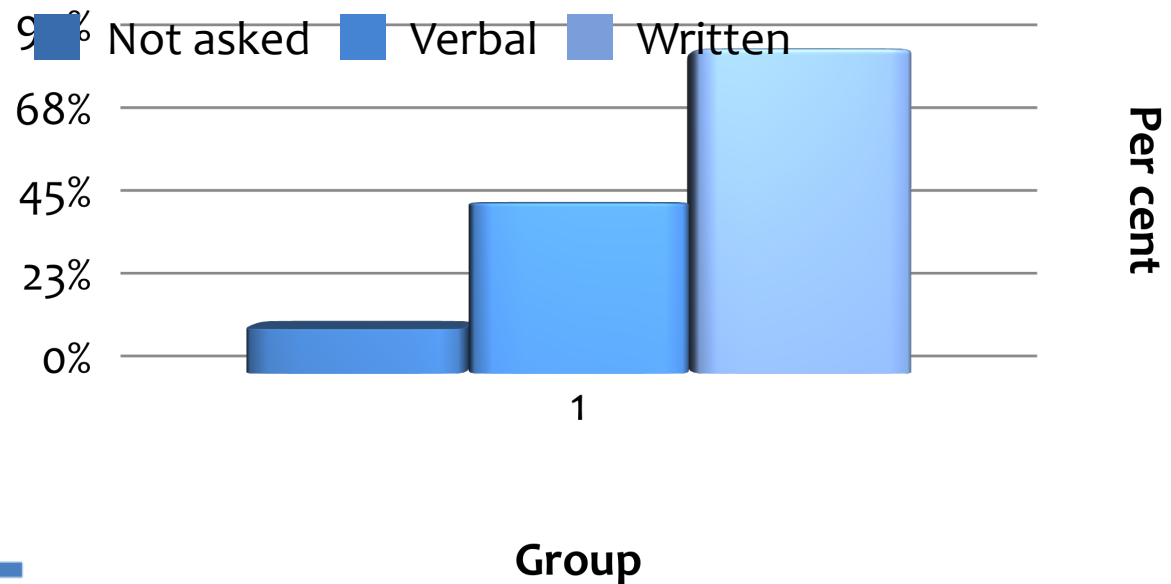
# The CBSM Toolbox - Commitment

- \* People want to be seen to be consistent with what they say
- \* Self-perception
  - \* I don't disturb nesting sites
  - \* I don't recycle
  - \* I am a blood donor
  - \* I don't idle my engine
- \* Change self-perception



# The Toolbox - Commitment

Will you sign up for recycling?





# The CBSM Toolbox - Commitment

- \* Public commitment > written > verbal
- \* Think commitment at each contact





# Getting Commitment



# Public Commitment



## A Big Thank You to Compost Users!

The Township of Langley is conducting a backyard composting pilot project this summer in Murrayville and W Loughby and would like to thank these people for participating and helping to keep our community green:

Borgford family  
Koreen family  
Catherine Potts  
Castillo family  
Kormendy family  
Protz family  
Chua family  
G. Lieuwen

Mr. and Mrs.  
Earl L. Ross  
Perry Daciuk  
Jane Maddin  
Ms. Scarr  
Mr. and Mrs. Esplen  
Lena Malubag  
Storsley family

Penny Fraser  
McNab family  
Mr. and Mrs. Ward  
Tara Henry  
Perez family  
Lorraine Weidenoorf  
Ho family  
Pimental family

Composting reduces garbage disposal costs, recovers a valuable resource, and reduces waste sent to landfills. And your garden will thank you!

If you are backyard composting and would like to add your name to the growing list of composter users in the Township of Langley, contact us at 604.532.7300 or email [wecompost@tol.ca](mailto:wecompost@tol.ca).



## Save money on a composter

Residents can purchase a backyard composter for only \$35 through the Township. To get yours, visit:

Civic Facility, 20338 - 65 Avenue

Operations Centre, 4700 - 774 Street

The Township has already sold more than 8,000 backyard composters - it's not too late to get yours!

To learn more about composting, visit the Langley Demonstration Garden at 4887 - 221 Street, log on to our website, or call an expert at the Composting Hotline at:

**Composting Hotline**  
**604.736.2250**  
**[tol.ca/composting](http://tol.ca/composting)**



**BEYOND  
ATTITUDE**

# Securing Commitments

- \* Break down barriers until there are no more
- \* Ask “can we count on you to give it a try?”
- \* Secure written commitment on a list
- \* Ask for public commitment to help convince others
- \* Ask if follow-up is ok
- \* This needs to be practiced, with a script and training

# Exercise

- \* Let's stick with firewood on this one
- \* How might you secure a commitment from people to not move firewood?
- \* How would you use other tools to support that commitment?



# The CBSM Toolbox

- \* Research
- \* Choose behavior
- \* Break down barriers
- \* Small questions
- \* **Prompts**
- \* Commitment strategies
- \* Norms
- \* Effective Communications



# The Toolbox - Prompts

- \* We forget
  - \* to pick up the dry-cleaning, milk, bread
  - \* appointments
  - \* take our medicine
- \* Prompts are reminders
  - \* last one out turns off the coffee pot
  - \* Turn off your engine when parked



# Effective Prompts



- \* Clear and simple
- \* In place where a decision is to be made
- \* Provides info in right place at the right time
- \* Is a reminder that supports other elements





**Too Vague**



**What to Do and Where To Do It!**



TO CROSS  
**Jasper Avenue**  
PUSH BUTTON



START CROSSING  
WATCH FOR  
TURNING CARS



DON'T START  
FINISH CROSSING  
IF STARTED



PEDESTRIANS  
SHOULD NOT BE  
IN CROSSWALK

# Clear!



Clear!



Not  
Clear!



# Interesting!







# Exercise

- \* Moving firewood is a pathway for the spread of invasive species
- \* How might we design prompts to remind people not to move firewood, or to buy it where you burn it?

# The CBSM Toolbox - Norms

- \* Norms
  - \* recycling
  - \* no smoking indoors
  - \* no drinking and driving
  - \* people staring at their phones





**BEYOND  
ATTITUDE**



Just  
for  
laughs  
**Gag's**



# Slurp



# Norms

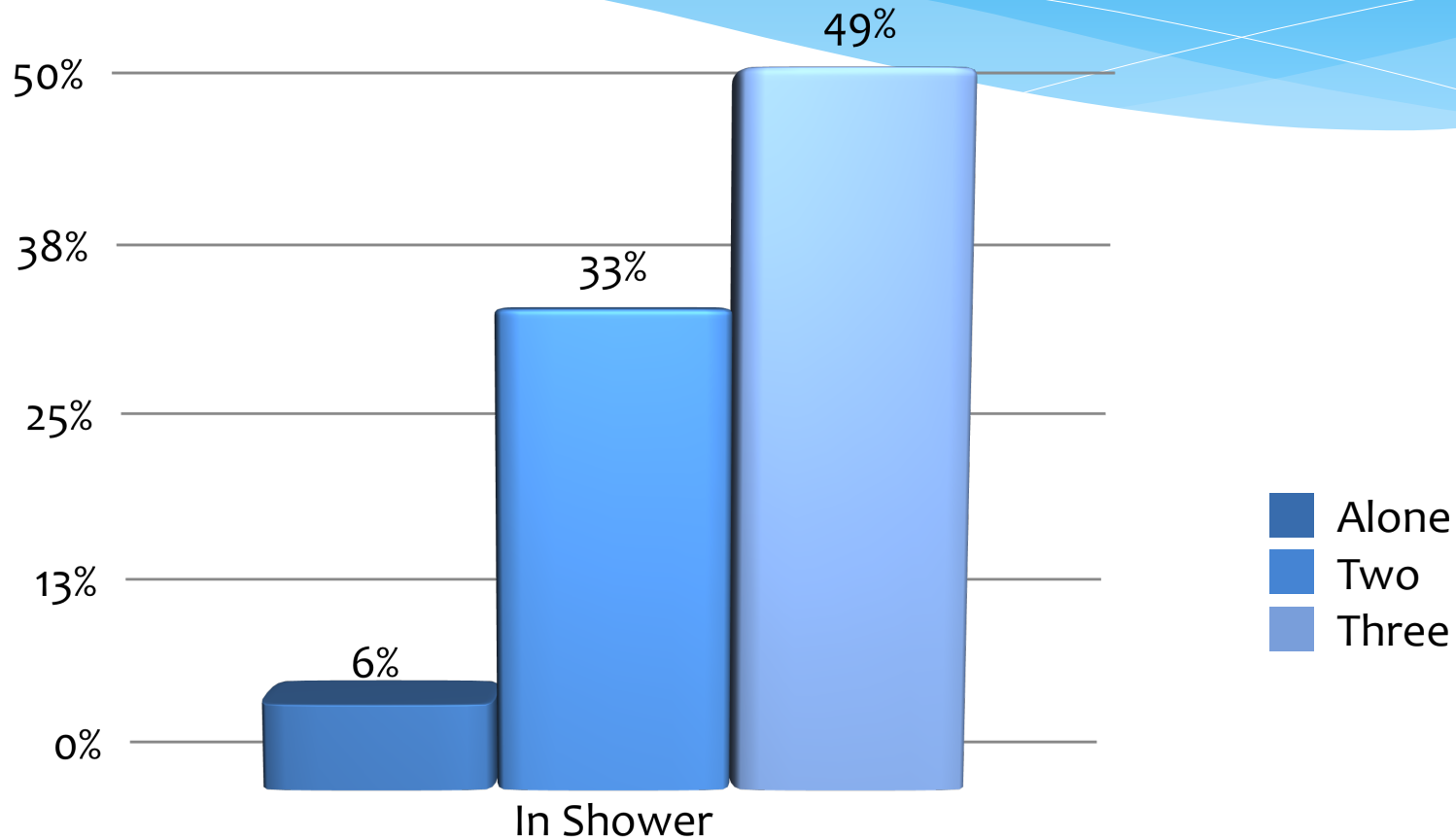
## Water Conservation Program

- \* Rinse body, turn off water
- \* Wash with soap
- \* Turn water on and rinse off





# Water Conservation













# Urinal Etiquette







# Exercise

- \* Woodlot certification can help protect natural resources, biodiversity and habitat
- \* How might you develop a social norm of woodlot owners getting certification

# The CBSM Toolbox

- \* Research
- \* Choose behavior
- \* Break down barriers
- \* Small questions
- \* Prompts
- \* Commitment strategies
- \* Norms
- \* Effective Communications



# Effective Communications

- \* Get help on messaging, events, etc. from communications staff
  - \* Branding
  - \* Eye-catching graphics
  - \* Events
  - \* Media releases
- \* But hold your ground on behavior change!
- \* Spokespeople can really help
  - \* Media personalities with credibility are good
  - \* Go for substance, not media coverage

# Effective Communications

- \* Try to develop materials that work as prompts, commitments and social norms





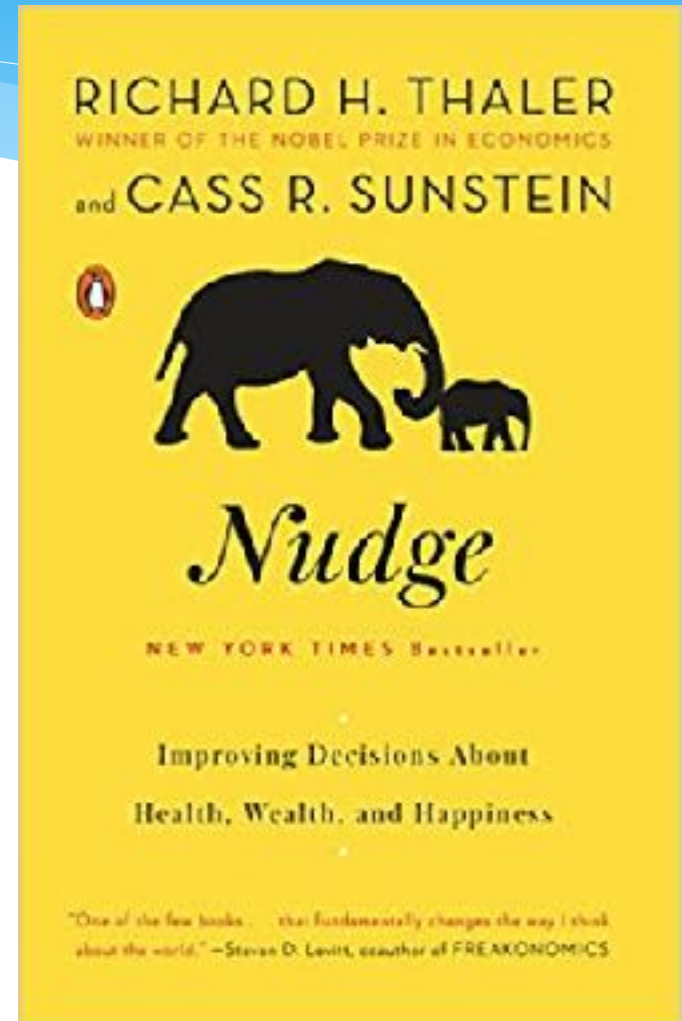
# Social Diffusion

- \* Keep in mind that when you talk to people, they talk to others
  - \* Each direct contact has indirect contacts as well
- \* Seek out community leaders
- \* Set up peer-to-peer conversations
  - \* Spreads work around, and recommendations from peers are huge
- \* Look for, and take advantage of, predictors
- \* Use Social Media



# Nudges

- \* Gentle pushes
  - \* Doctors over-prescribing opioids
  - \* Tax payment
  - \* Energy reduction



# Thank You

*Ken Donnelly*

*Beyond Attitude Consulting*

*ken@beyondattitude.com*

*(902)482-4575*

[www.beyondattitude.com](http://www.beyondattitude.com)

[@beyondattitude](#)

[Facebook.com/beyondattitude](https://www.facebook.com/beyondattitude)