

USER GUIDE

CHANGE BLINDNESS AND DISTRACTED DRIVING INTERACTIVE MEDIA PRESENTATION

Introduction

Change Blindness is a surprising yet common perceptual phenomenon that affects us in various everyday situations. Sometimes big changes can happen in front of us that we never notice because of this perceptual phenomenon. This activity is intended to highlight how Change Blindness is involved in distracted driving.

Purpose

More than 30,000 people die on our roadways every year as a result of car crashes¹. Car crashes are the leading killer of youth 12–19 years old. A growing and significant contributor to these crashes is driving distracted, when our mind, eyes or hands are off the task of driving². Having our eyes off the road makes it more difficult for drivers to notice subtle but critical changes in the driving environment, such as cars that are slowing down in front of us. This inability to notice subtle but important changes in the driving environment when looking away from the road and back again, is called *Change Blindness*. Safe driving requires diligent focus on the roadway: continuous *scanning* our environment, *evaluating* potential threats and *executing* well-timed maneuvers to avoid a crash. This program allows us to experience change blindness and introduce a strategy to maintain our focus on the road.

Objective

By the end of this session, participants will be able to:

- Define change blindness and describe how it contributes to driving distracted.
- Identify strategies to reduce or eliminate exposure to the risks of change blindness and increase attentive driving.

Evidence-Based Approach

People may believe that they are able to multi-task and are unlikely to face negative consequences when driving and engaging in other non-driving related activities, such as dialing a cellphone while driving. The aim of this activity is to undermine this belief by allowing individuals to experience their *susceptibility* to change blindness and the potential *severity* of resulting consequences.

¹ http://www.cdc.gov/injury/wisqars/overview/key_data.html

² <http://www.cdc.gov/nchs/data/databriefs/db37.pdf>

http://newsroom.aaa.com/wp-content/uploads/2015/03/TeenCrashCausation_2015_FINALREPORT.pdf

PROGRAM

Change Blindness Activity Definition: Change blindness while driving is a perceptual phenomenon that happens when a change in the driving environment occurs and the driver does not notice it. For example, drivers often fail to notice slowing traffic when their eyes are alternatively off the road and looking at the driving environment, such as when someone is texting while driving.

Section 1

1. Introduce the activity by asking your audience to identify activities they consider to be distracted driving behaviors that take our eyes off the road.
2. Distractions take a driver's eyes off the driving scene. Change Blindness is one type of visual and mental phenomena that happens when someone drives distracted. Change blindness demonstrates our mind's inability to notice subtle but important changes in our driving environment that can lead to crashes unless we are able to react to those changes.

Section 2

3. Instruct the group that they will watch a series of traffic related pictures. The participants will have about 4 seconds to view a scene. The scene will shift to a common driver distraction and return to the original scene. There will be 5 driving scene sets. Use the provided worksheet and instruct your participants to write down any changes they notice between the two scenes. Some scenes will not have any changes. Between each scene, there will be an opportunity to pause the video so participants can write down observed changes.



4. After the distraction scenes, the same scene sets will play again but without distraction. The participants will again mark down changes they see for each of the 5 driving scenes. Discuss if there were any noticeable differences in identifying changes between the two sets of scenes.

All points of difference, demonstrating change blindness, will be clearly pointed out with arrows in the final S.E.E. section of the video. All instructors should watch the video through start to finish, before presenting the program to an audience.

Section 3

5. When practicing attentive driving, a driver should be able to recognize any changes in the scene and react accordingly. Change blindness limits the mind's ability to see changes that could result in a driving crash.

6. We can reduce our *susceptibility* to Change Blindness, and reduce our risk of a distracted driving crash by recognizing our susceptibility to change blindness and by practicing a driving strategy such as **Search, Evaluate, and Execute (S.E.E.)**.

Search: The process of scanning continuously for potential hazards. Searching helps you identify potential hazards and gives you time to take proper action.

Evaluate: Being able to quickly determine if a potential hazard exists and decide on steps you might take to avoid them.

Execute: Taking quick and appropriate action after you have evaluated your driving situation.

7. Show the example of how each step of **S.E.E.** relates to examining a typical driving scene.

Practice using this driving strategy in the sequence of five driving scene change sets. When the scene changes, discuss: *What driving decisions might we make in this scene?* When the scene changes, there will be an opportunity to pause the video to further discuss potential driving decisions with the participants.

To help frame a context for driving decisions, imagine yourself positioned as a driver in each of these scenes as follows:

Scene 1: Driving toward the green light in the intersection.

Scene 2: Driving in the left lane toward the intersection.

Scene 3: As a driver in the silver car in the center of the picture, stopped at the intersection.

Scene 4: Driving in the right lane, straight through the intersection.

Scene 5: Driving the vehicle that is circled and pointed to, toward the intersection.



WORKSHEET

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What changed in each driving scene?

FIRST SEQUENCE WITH DISTRACTION

Scene 1 _____

Scene 2 _____

Scene 3 _____

Scene 4 _____

Scene 5 _____

SECOND SEQUENCE WITHOUT DISTRACTION

Scene 1 _____

Scene 2 _____

Scene 3 _____

Scene 4 _____

Scene 5 _____

Using the S.E.E. strategy, what driving actions would you take in each driving scene?

CIRCLE AND DISCUSS POSSIBLE APPROPRIATE DRIVING ACTIONS

| Scene 1 | Scene 2 | Scene 3 | Scene 4 | Scene 5 |
|-------------------------------|-------------------------------|-----------------------------|------------------------|-------------------------------|
| Gradually accelerate | Monitor crosswalk | Monitor crosswalk | Monitor crosswalk | Monitor crosswalk |
| slow down | slow down | cross intersection | cross intersection | slow down |
| change lanes | change lanes | change lanes | change lanes | change lanes |
| check rear view mirror | check rear view mirror | check rear view mirror | check rear view mirror | check rear view mirror |
| monitor school zone | watch traffic lights | watch traffic lights | watch traffic lights | watch traffic lights |
| monitor intersection activity | use turn signal | use turn signal | use turn signal | use turn signal |
| use turn signal | monitor intersection activity | be aware of cyclist actions | slow down | monitor intersection activity |
| | | | honk the horn | |