

# Evaluation of the 2014 Changes to Ontario's "80 and Over" Licence Renewal Program

Canadian Association of Road Safety Professionals  
June, 2018

# Outline

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Ontario's Senior Drivers

02

Senior Driver's Licence Renewal Program

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Descriptive Statistics

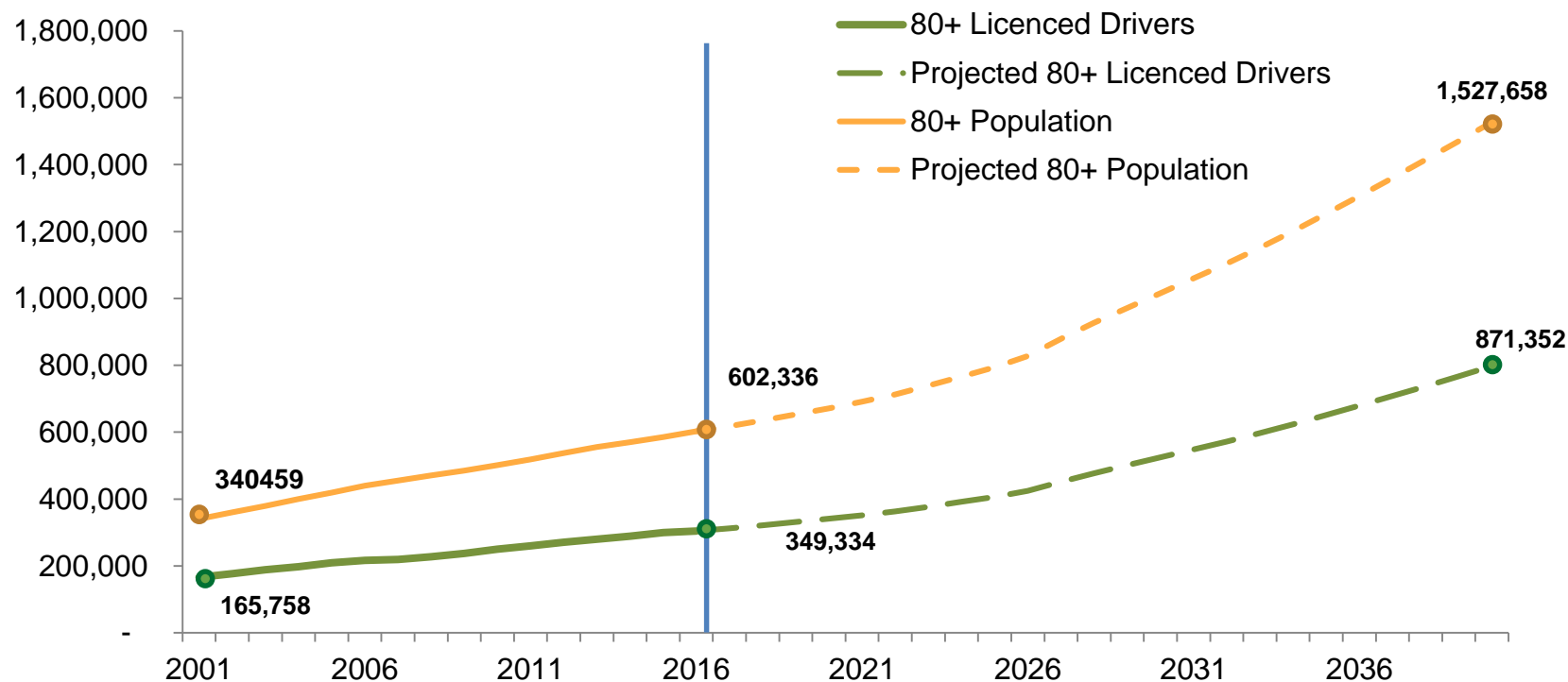
04

Some Evaluation Results

05

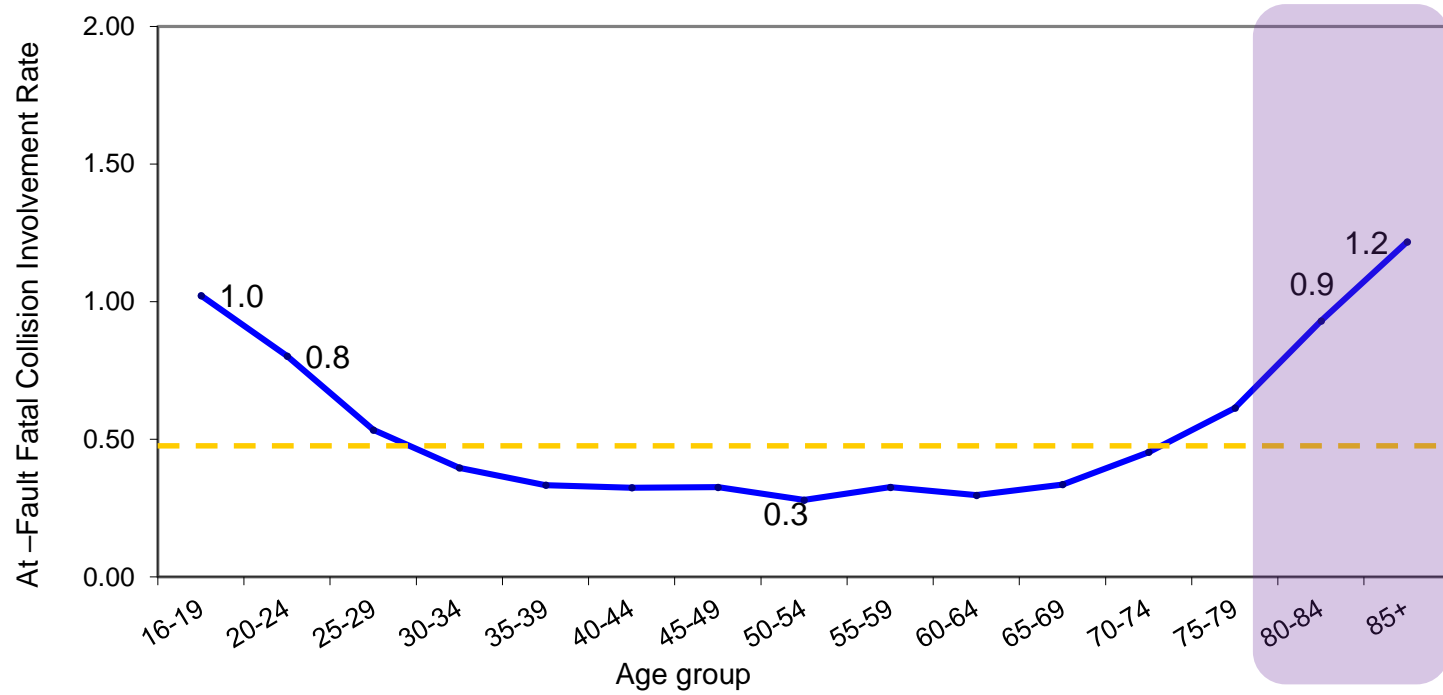
Conclusions

# Ontario's Senior Drivers: The 80+ Population



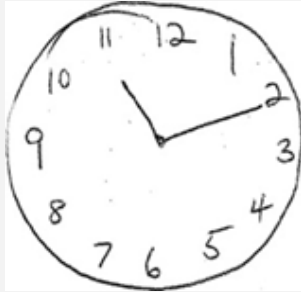
Licence data from MTO Driver Annual Statistics 2014  
Population projections from Ministry of Finance 2016 (using 2011 Census)

## 80+ Collision Involvement



## Current SDRP Process: Introduction of In-Class Screening Component

### Clock Drawing Test



3-7 points = good  
1-2 points = moderate  
0 points = poor

### Letter Cancellation Test (H)

BDAHCFBHD E H D A F H I C H F H  
D H C E H I H G D H G E B H E G H I H C  
C G D H C B A H G D E H C H B E H D G H

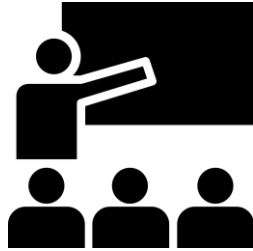
0-5 omissions = good  
6-10 = moderate  
11+ = poor

H C D H F H C D H B H D H F A C H C H F  
E B H G F B H F A H E B G H G F E H D B  
G E H G H D E H C G H D H E B A H F B H

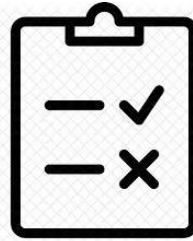
## Current SDRP Process: Program Pathway



**1. 80+ Attend  
GES**



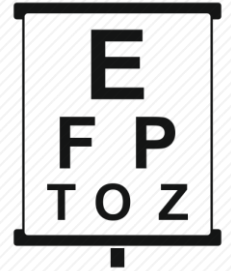
**2. Presentation**



**3. In Class  
Screening**

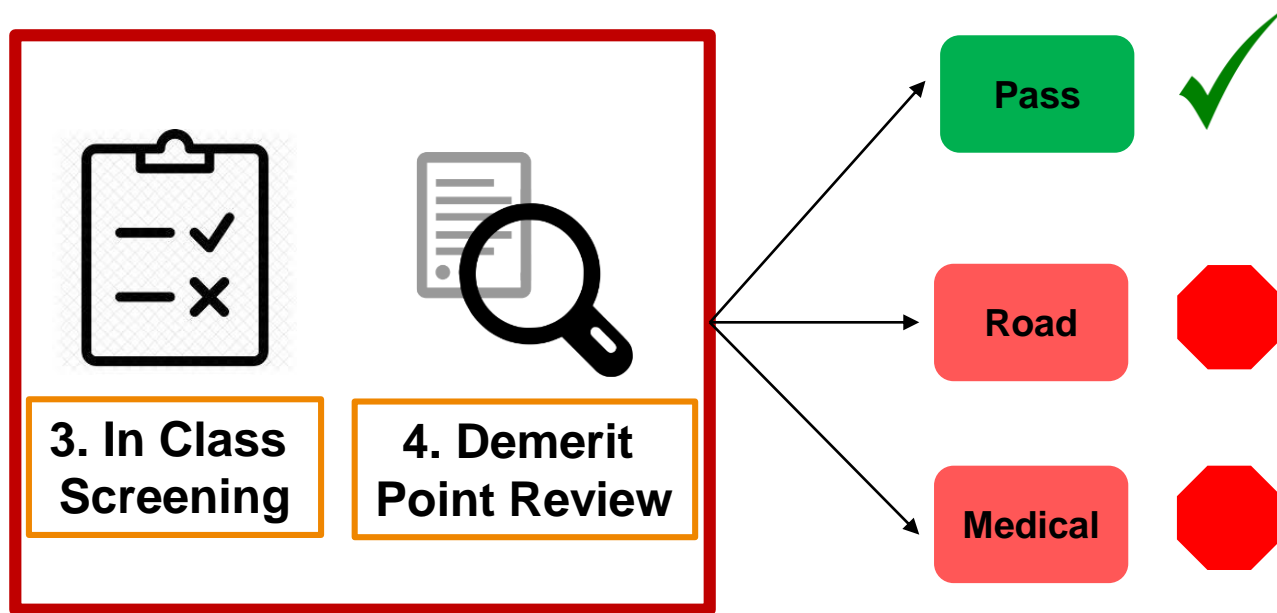


**4. Demerit  
Point Review**

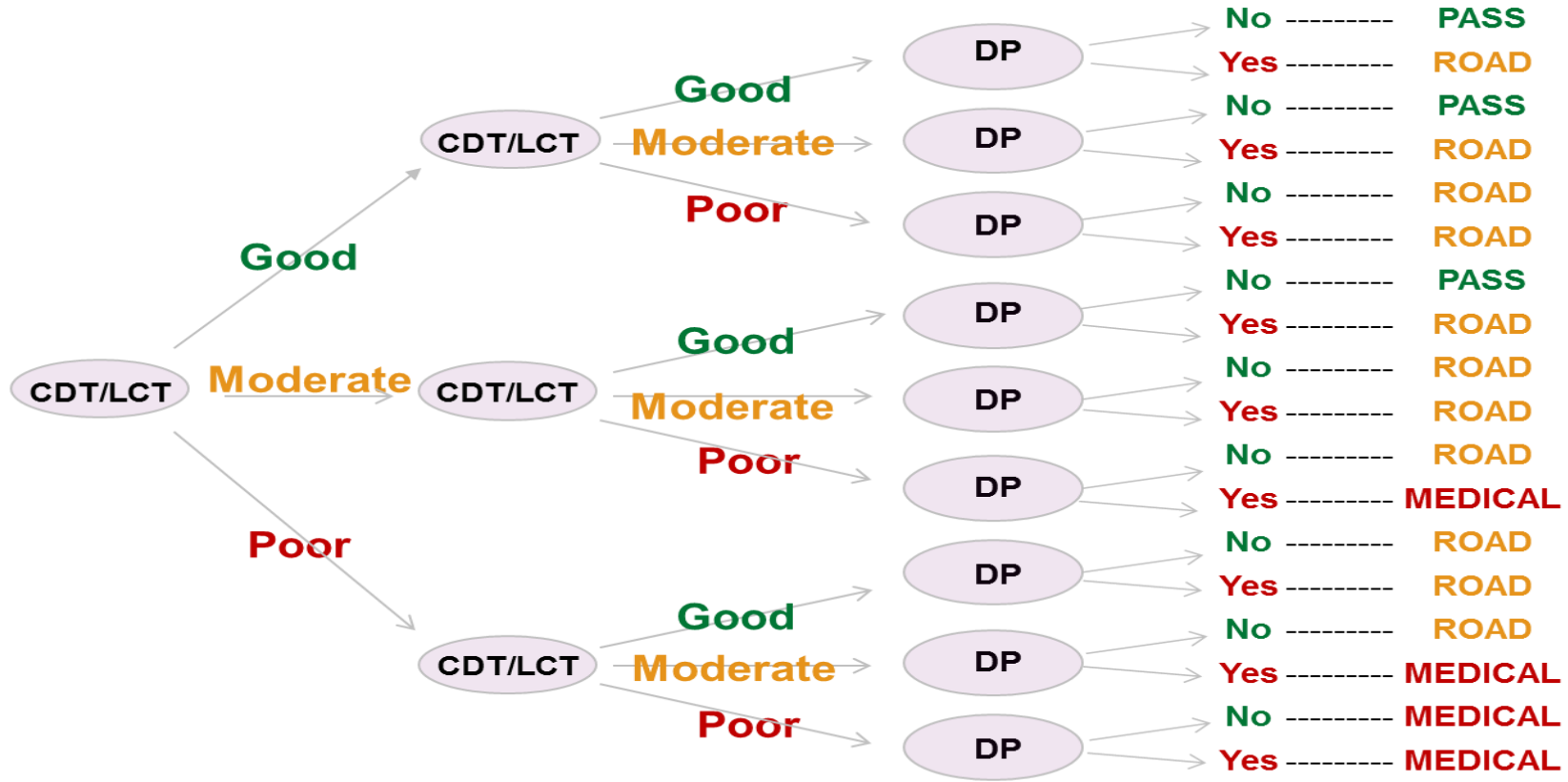


**5. Vision  
Test**

## Current SDRP Process: Program Pathway



# Current SDRP Process: GES Decision Tree



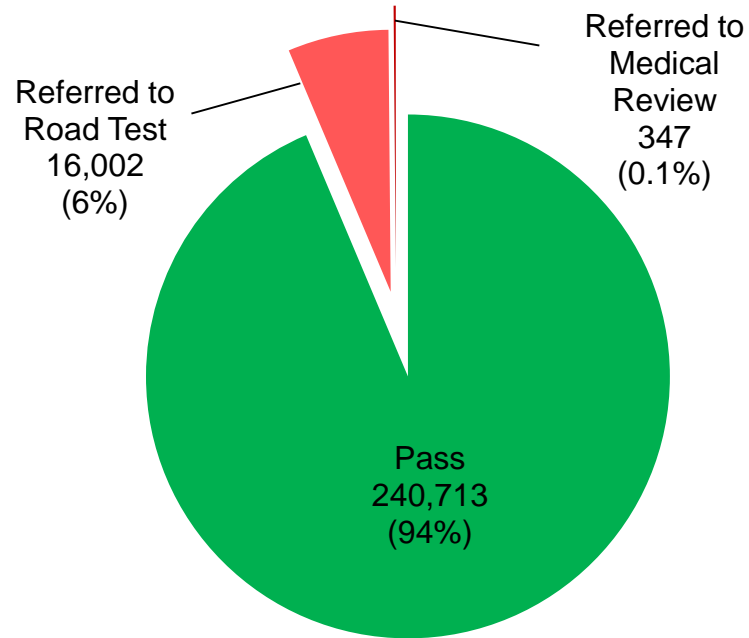
DP: Demerit Points





# DESCRIPTIVE STATISTICS

## Descriptive Statistics: Decision Tree Outcomes

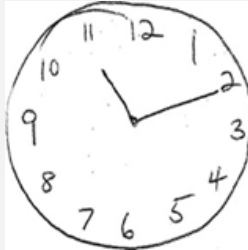


Those that “pass” the GES are assumed to be at lower risk and are eligible for immediate licence renewal.

Study Period: April 2014 to April 2016 (N = 257,062)

# Descriptive Statistics: ICSC Score Distribution

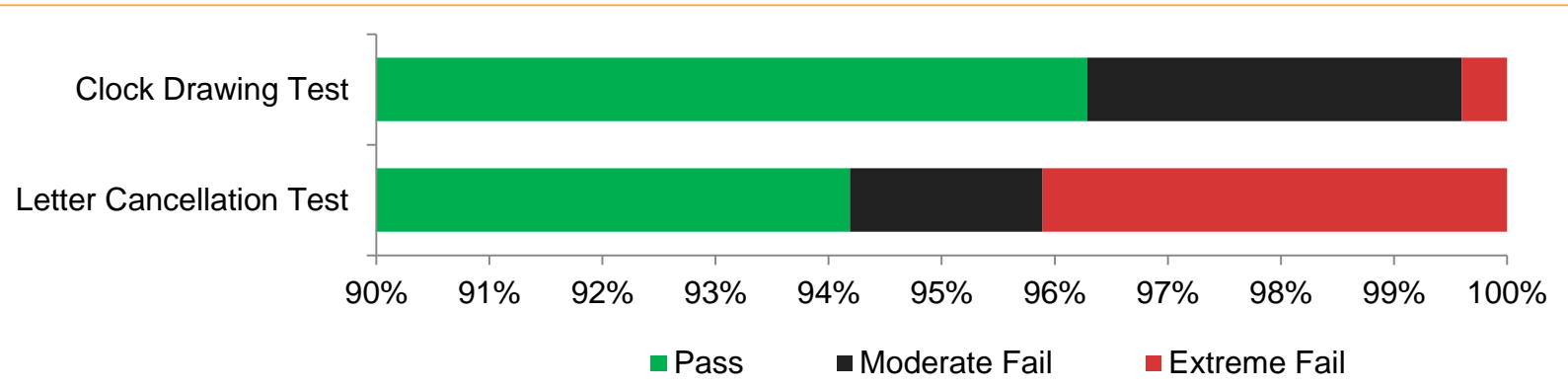
## Clock Drawing Test



## Single Letter Cancellation Test (letter H)

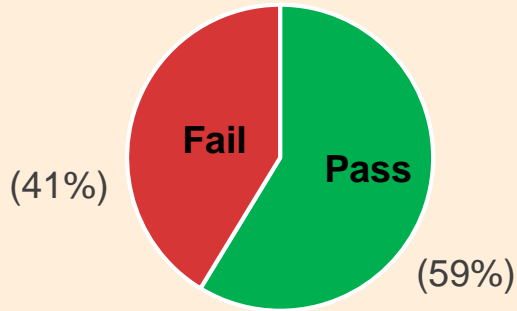
B D A H C F B H D E H D A F H I C H F H  
D H C E H I H G D H G E B H E G H I H C  
C G D H C B A H G D E H C H B E H D G H

H C D H F H C D H B H D H F A C H C H F  
E B H G F B H F A H E B G H G F E H D B  
G E H G H D E H C G H D H E B A H F B H



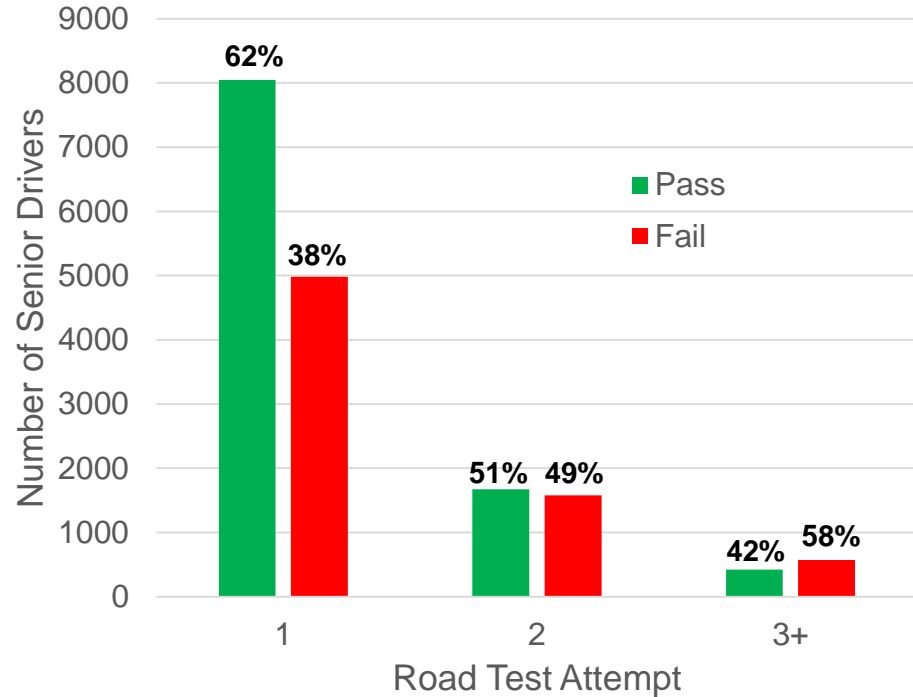
## Descriptive Statistics: Road Test Outcomes

Overall, 41% of all road test attempts resulted in failure.



Study Period: April 2014 to April 2016  
(N = 17,270)

### Number of Road Test Attempts





# OUTCOME EVALUATION



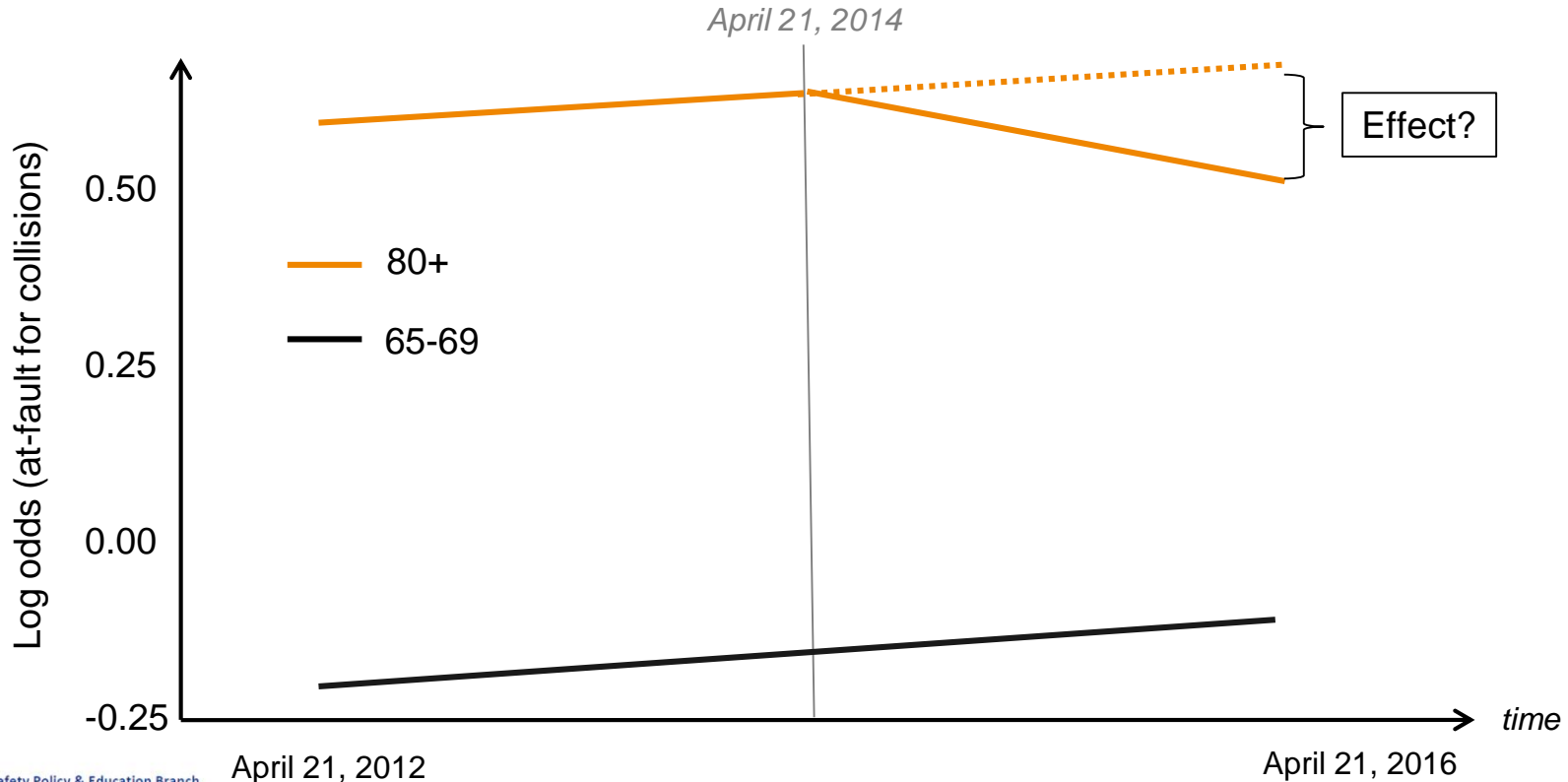
# Objectives

## **We will share preliminary results on:**

1. Overall impacts of the 2014 changes to the SDRP on road safety outcomes of senior drivers
2. Ability of Decision Tree to “select out” safer drivers
3. Road safety outcomes of drivers who passed road test compared to drivers who passed the GES

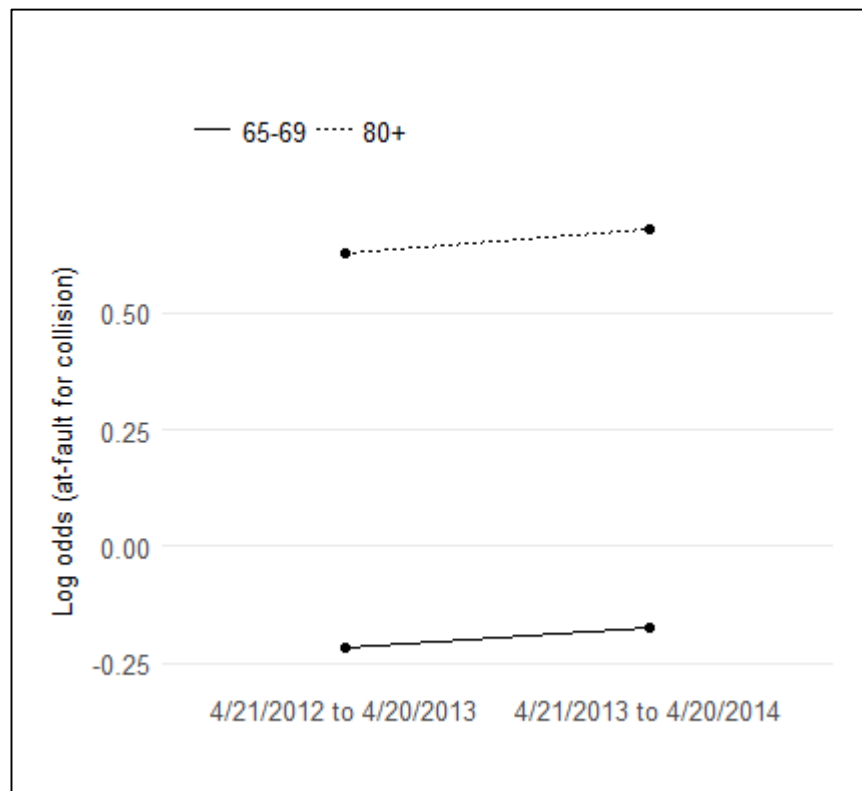
# Outcome Evaluation :

## Overall impacts of the 2014 changes to the SDRP



## Outcome Evaluation :

### Overall impacts of the 2014 changes to the SDRP





# Outcome Evaluation :

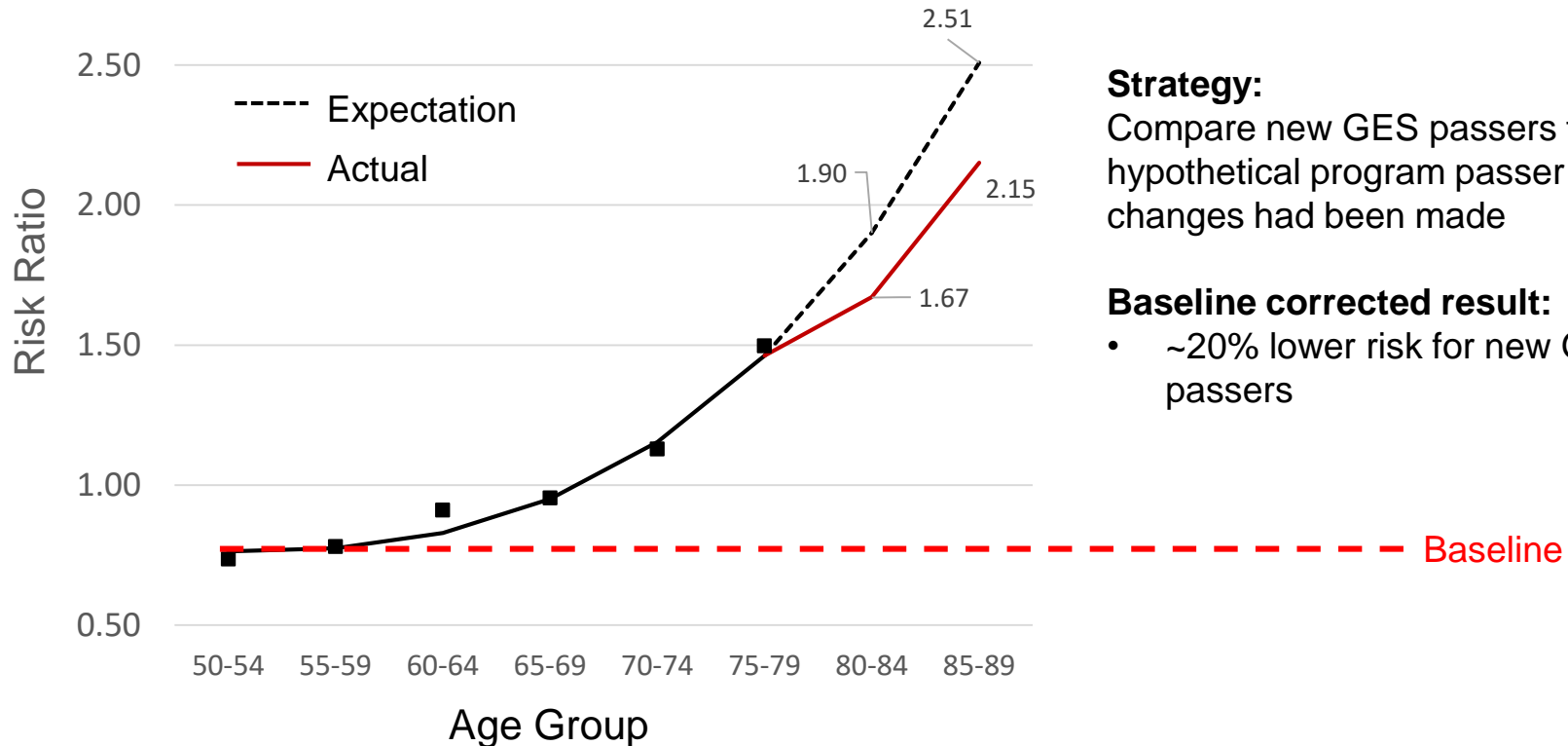
## Overall impacts of the 2014 changes to the SDRP

*Table 1. Difference-in-Difference Analysis*

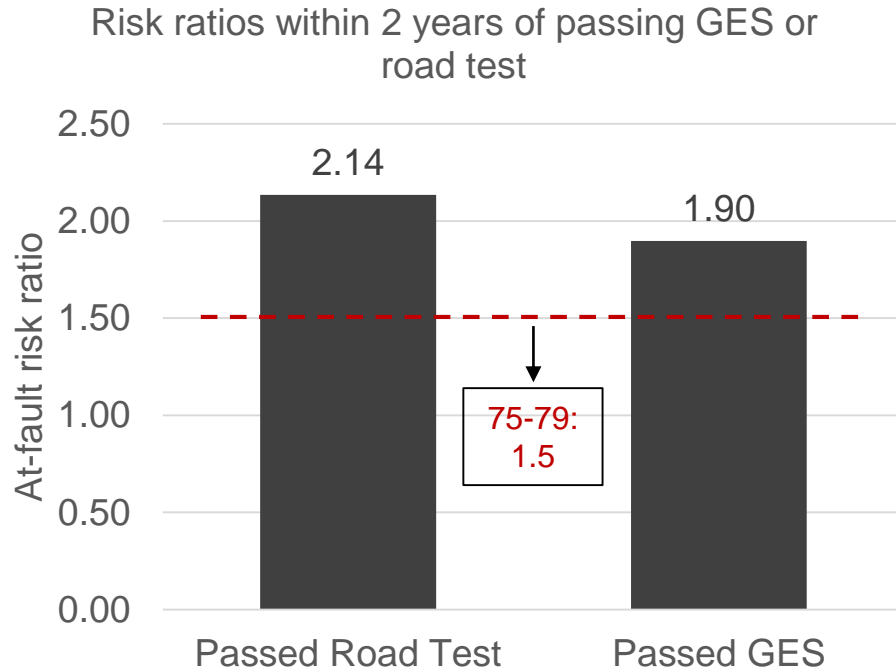
	<i>Dependent variable:</i> Odds of being at-fault for collision with 95% confidence intervals	
Group	1.009 (0.863, 1.180)	
Time	1.012 (0.970, 1.057)	
Effect (DiD)	0.828** (0.714, 0.961)	
Age	1.048*** (1.039, 1.057)	
Sex	0.747* (0.531, 1.050)	
Age x Sex	1.007*** (1.002, 1.012)	
Constant	0.034*** (0.019, 0.061)	
Observations	49,491	
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	

17% decrease in  
odds of being at-  
fault

## Outcome Evaluation : Impact of the GES Decision Tree



## Outcome Evaluation : Impact of the Road Test



**Result:** Drivers who pass the road test are not systematically different than drivers who pass the GES in terms of their future at-fault collision risk.

# CONCLUSIONS



# Conclusions

- The 2014 changes to the SDRP had a positive effect on the road safety outcomes of senior drivers overall, compared to the period prior to the changes.
- The cognitive screening tools are effective at efficiently passing safer individuals.
- The road test was not significantly different from the GES in terms of passing safe individuals, but still room for improvement.