APWA AMERICAN PUBLIC WORKS ASSOCIATION

DRIVECAM
TAKING RISK OUT OF DRIVING

Driving the Risk Out of Public Fleet Management

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Agenda

- Background on how a video technology based driver risk management program works
- Why this approach can be a game changer
- Examples of commonly identified risky behaviors
- Case study from Orange County Florida

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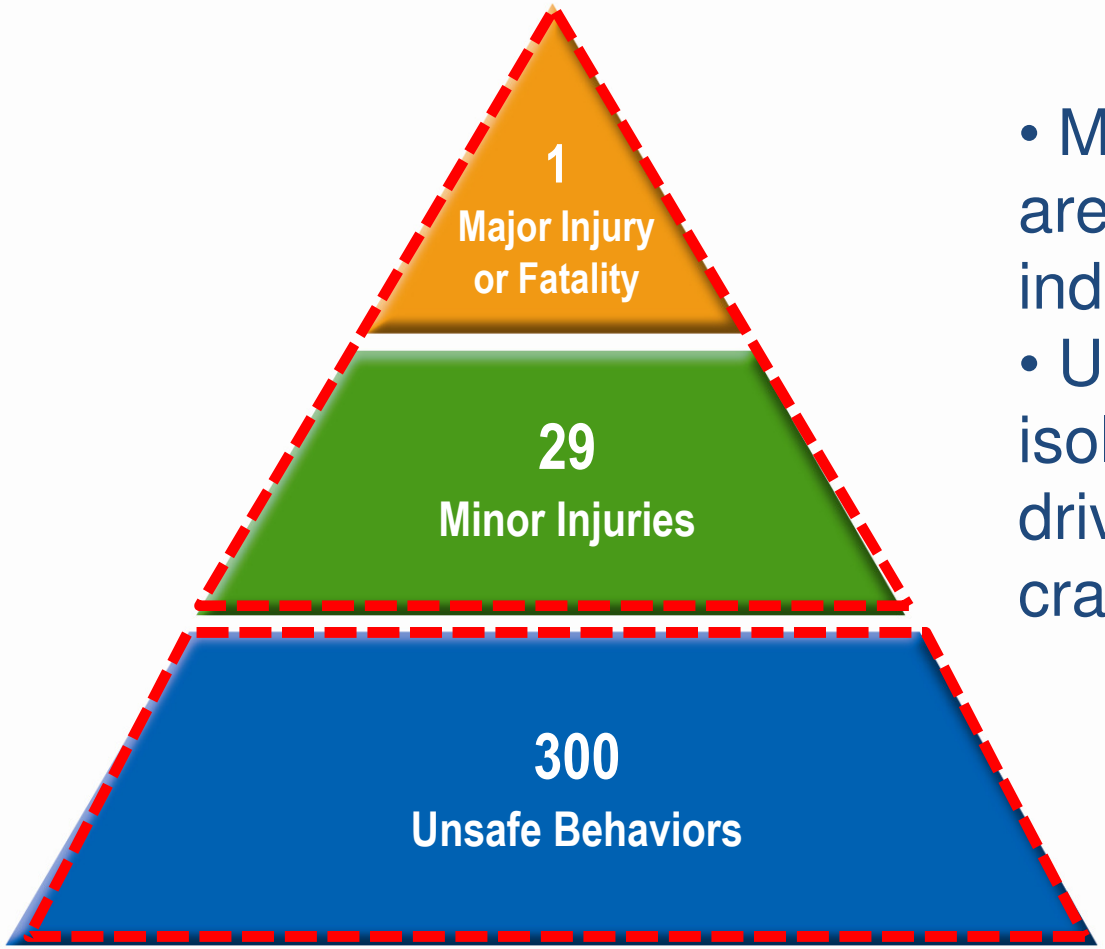
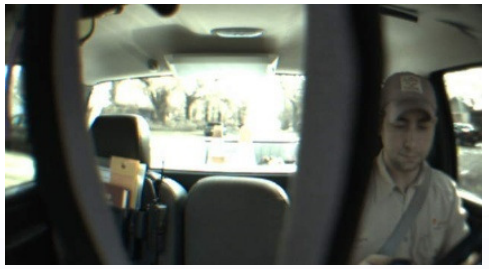
Improving Fleet Safety



- Most fleets safety efforts are based on lagging indicators
- Use leading indicators to isolate & correct risky driving *before* it leads to a crash



Improving Fleet Safety

Many fleets attempt to identify risk

Background Checks	On-Road	Technology
• MVR records • Accident history	• Ride-along • Road observations • 800 “How am I Driving?”	• Black box devices • GPS • Exception based video

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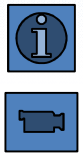
Changing Driver Behavior

- Most drivers think everyone else is the problem
- They won't change if they don't feel they need to



- Drivers need to see and understand their mistakes before they will be motivated to change
- Video technology provides objective tool to enable this process

- Drivers must be monitored on an on-going basis to insure the changes are in place
- Positive and negative feedback must be provided to direct the driver to the desired outcome

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Technology Enables the Program

Video Event Recorders

- Mount on windshield
- Triggered by excessive forces
  - Erratic driving
  - Collisions
- LED flashes when triggered
- Digital looping memory captures before and after event
- Stores “events” for later download
- Typically downloads via cellular or Wi-fi

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How the Program Works

1 Capture risky driving

2 Upload triggered event

3 Review, analyze and score

4 Access website for events, dashboards and reports

5 Coach driver

6 Safer driver returns to the field

Driver Risk Management Program

This is where traditional training leaves off

Performance Management

- Key program activities are monitored to insure application of process
  - Downloading of events (system health)
  - Coaching execution
  - Driver assignment to events
- Trending of aggregate risk score
- Trending of risky driving events
- Reduction in most frequent risky behaviors
- Improvement in riskiest drivers

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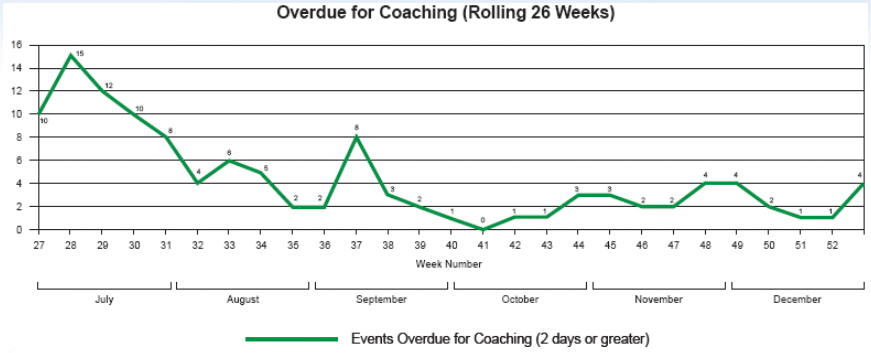
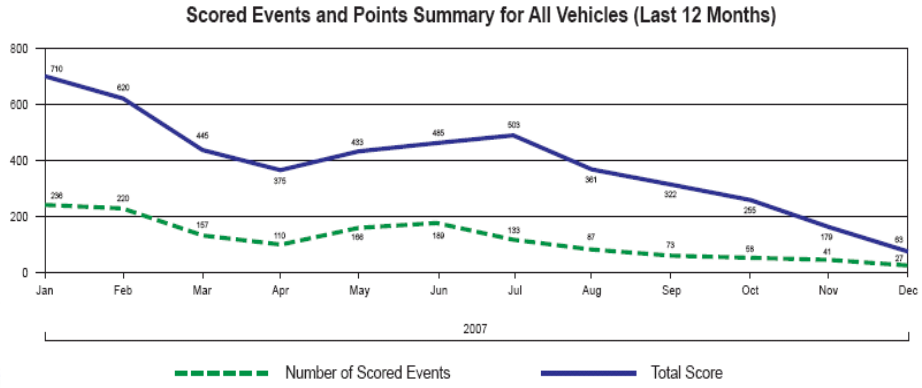
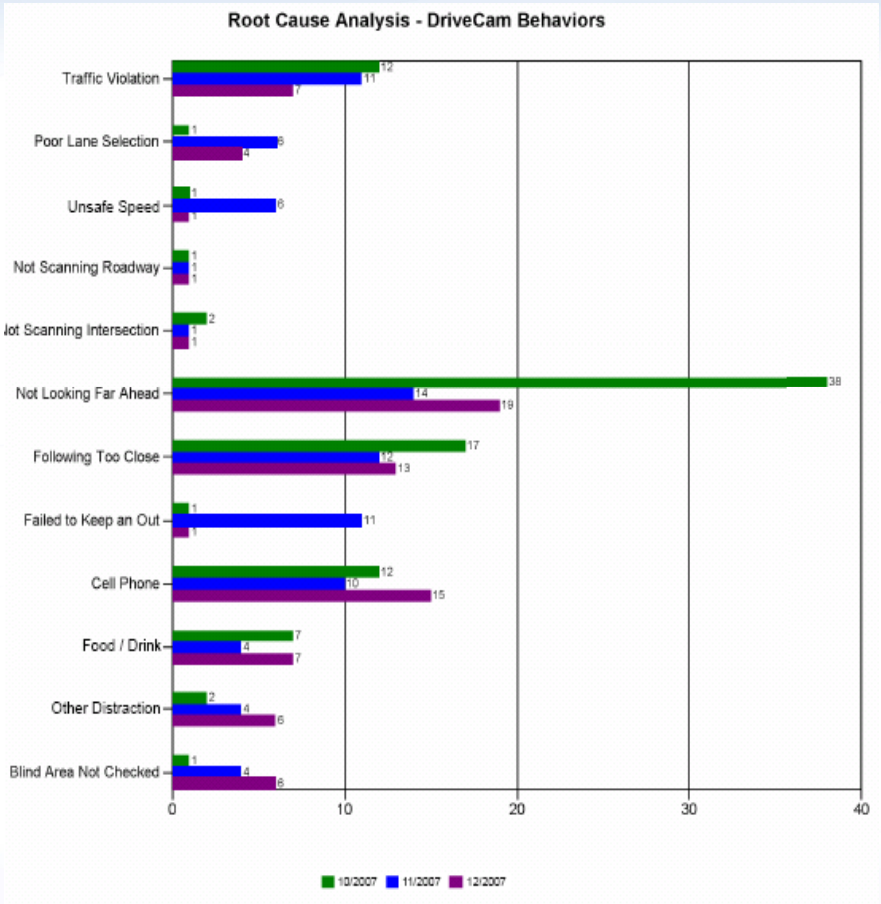
Measuring Program Effectiveness







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Results

Federal Motor Carrier Safety Administration

University of Michigan

Fleets commonly see cost and frequency reductions of 30% or greater

Recent study sponsored by Federal Motor Carriers Safety Administration found reductions in risky behavior of up to 52%

University research funded by CDC and NIH to be released later this year point to similar findings

CDC

National Institutes of Health

The University of Iowa

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Why the Program Works

The "Hawthorne Effect"

- Workers tend to perform better when they know they are being watched

Behavior Modification

- Drivers modify behavior due to positive and negative consequences

Continuous Improvement

- Coaching Process Helps Drivers Discover Faulty Driving Habits and continually get better

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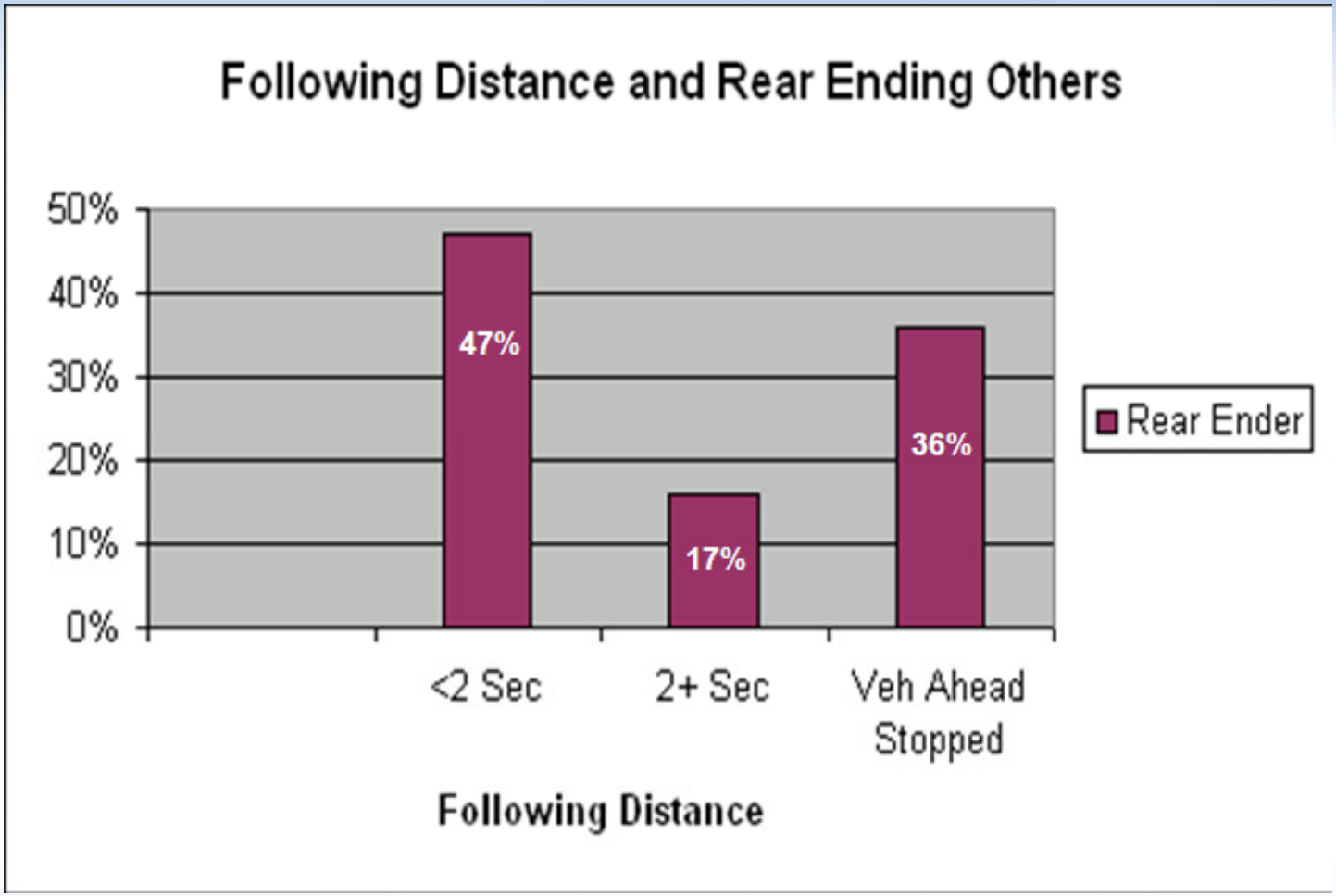
Challenges

- Funding
  - $ are tight and cost s must be justified
- Labor concerns based on misinformation & misconception
  - "Big brother"
    - Actually only saves 2-3 minutes per driver per month
  - "Just a way to get me fired"
    - Usually no new policies
  - "Could embarrass me"
    - Secure, password protected website
  - Open communication is the key
- Organizational commitment to safety
  - You must now act on what you know !

Insights: Safe Following Distance



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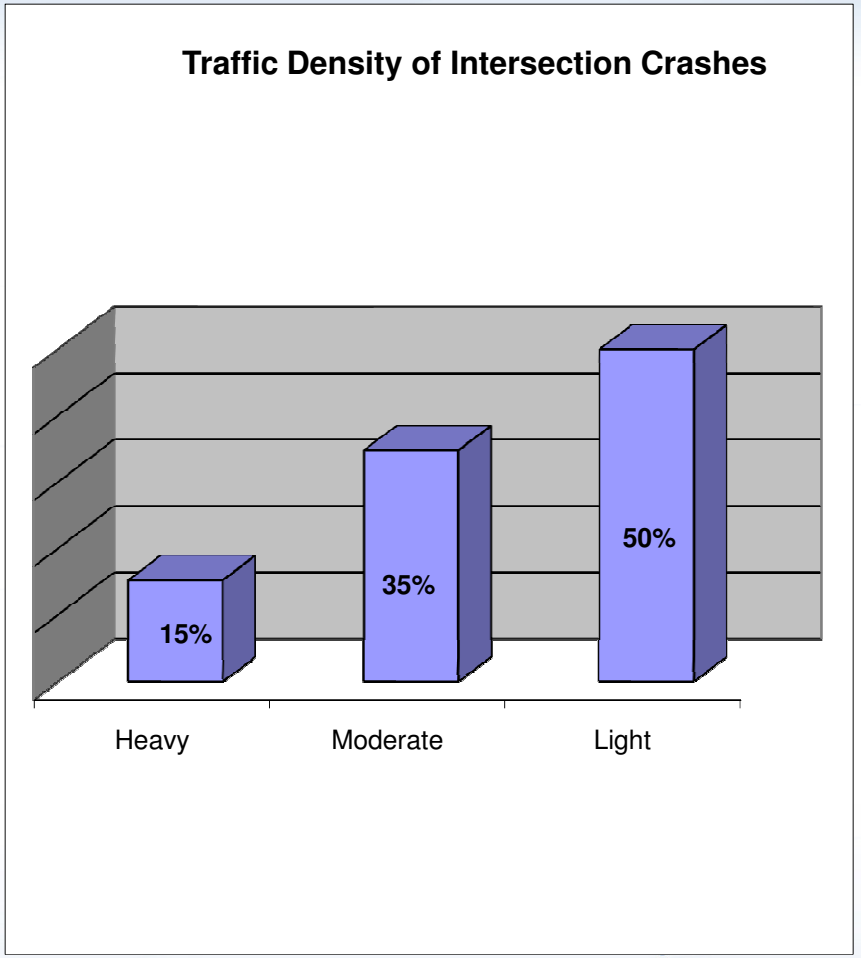
Insights – Emphasize Active Eyes

- Study of Intersection Crashes Found:
  - Only 22% involved subject driver running light
  - 73% never scanned
  - 56% of drivers had no eye activity for 10 seconds before crash
  - Traffic density, cell phones , distractions not a big factor



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Some Keys to Improving Drivers

Identify and correct risky driving before it leads to a crash

Focus on correcting drivers practicing less than a 2 second following distance

Stress the dangers in and around intersections and the need to actively scan for hazards

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Case Study: Orange County Florida

Information provided by: John Petrelli, Risk Manager

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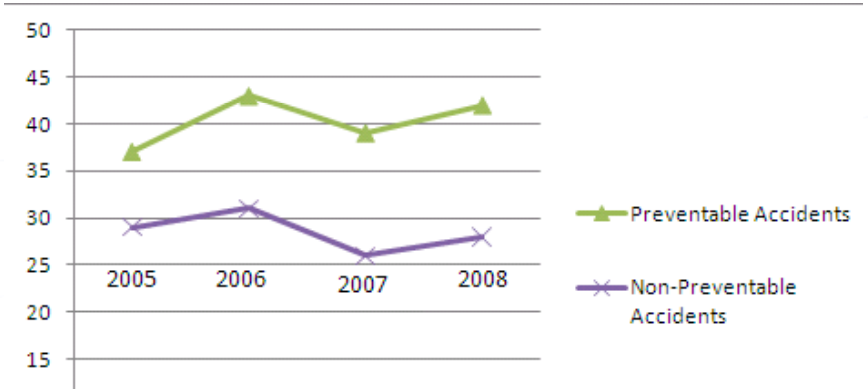
About Orange County, Florida

- 1.2 million people in county
- 8,000 employees
- 2,000 vehicles ranging from solid waste to trucks to Ford Focus
- $1,000,000 deductable (essentially self-insured)
- Implemented video-based driver risk management program in 2008

Background on OC Fleet Safety Experience

- Previously drivers attended the National Safety Council's DDC course
- But, auto liability losses were increasing annually.
- Changed to an online training course
- Losses stopped increasing but were flat lining
- John decided they needed a new approach to make progress
- Looked to behavior-based safety approach & felt video was best



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Case Study: Orange County, FL

- 1st step was to conduct a pilot
- 30 vehicle test with ½ heavy trucks and ½ small vehicles
- Departments involved:
  - Police
  - Fire
  - Public Works
  - Utilities

Case Study: Orange County, FL

- Initial pushback from unions (IAF,PBA,LIUNA)
  - Big brother concerns
  - Concerns over discipline
- Met with shop stewards to explain the program
- Common identified risky behaviors:
  - Failure to wear a seatbelt
  - Many were treating stop signs and red lights as an option

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Case Study: Orange County, FL

Pilot Results

- Leading indicators showed risky driving had dropped by over 50%
- Lagging indicators (collisions & claims) showed 90% reduction in frequency & severity for the pilot group

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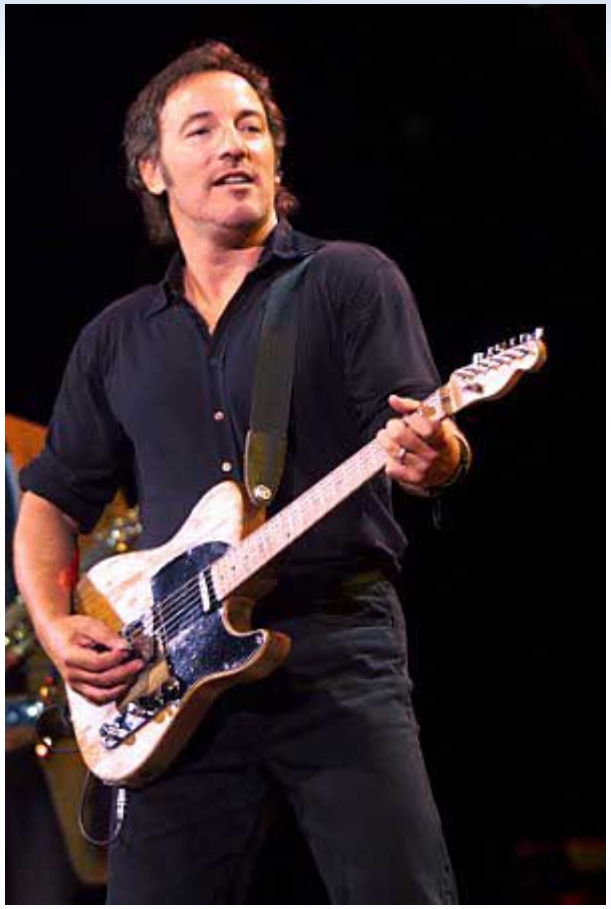
Case Study: Orange County, FL

Selling it to "The Boss"

(Getting funding)

- Successful pilot program
- Solid financial ROI
  - Projected 50% annual reduction in losses
  - 3.5 year payback
- Protection against false claims
- Reduction in at-risk behaviors & improved public image



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Next Steps

- Presented findings and recommendations to:
  - County Administrator
  - Mayor
  - County commissioners
- Project was approved
- Used “catastrophic losses” fund to pay for deployment of additional 500 vehicles
  - Fund is replenished annually

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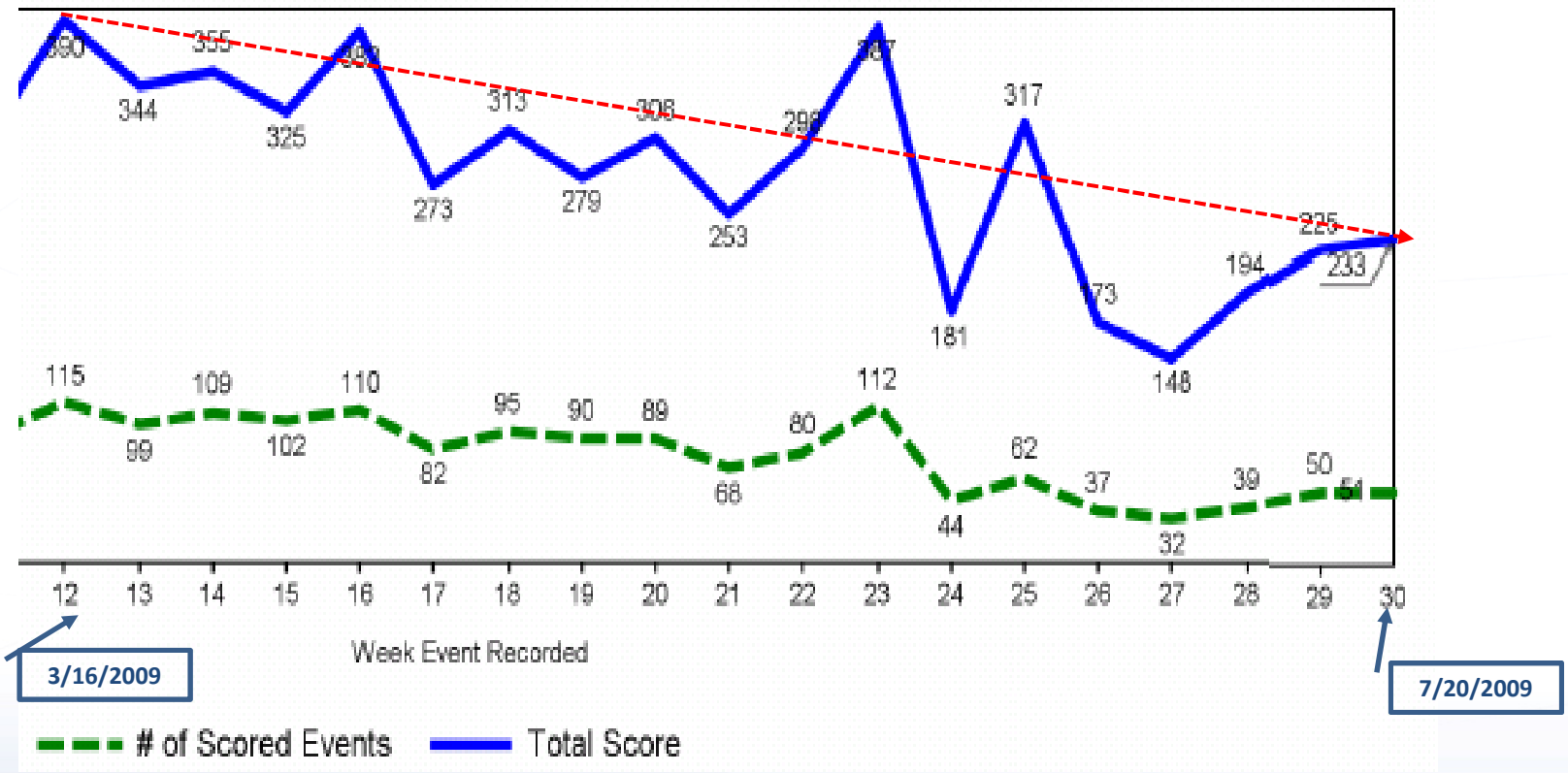
Current Results

Leading indicators are going down

- **42% drop in risk points**
- **57% drop in risky events**



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Results

- One year later
  - 530 vehicles enrolled in program
    - 250 more planned for 10/1/09
  - Vehicles enrolled in program:
    - 60 % reduction in claims frequency
    - 55% reduction in severity

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THANK YOU!

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The best car safety device is a rear-view mirror with a cop in it.

Dudley Moore

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