Leveraging Vehicle Based Safety Technology to Curb Distracted Driving

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Director Fleet Safety
Perdue’s Private Fleet

- 680 Power Units, 70 Straight Trucks, 1900 Trailers
- 650 drivers
- 615 Non-Commercial vehicles,
- VMT, 37 MM Commercial / 11MM Non-Commercial.

Our entire commercial fleet has “Vehicle Based Video Technology”. We also strategically use a host of other vehicle based safety technology.

Videos for PPT\EWT21067 ACC .dce
Hierarchy of Controls

- Elimination: Physically remove the hazard
- Substitution: Replace the hazard
- Engineering Controls: Isolate people from the hazard
- Administrative Controls: Change the way people work
- PPE: Protect the worker with Personal Protective Equipment

Distracted Driving
ELIMINATION

• Fleet Utilization
  – Increase payload
  – Equipment specification
  – State Legislating Agencies
SUBSTITUTION

- Mobile Device Cradles / Docking Stations
- Intervention for repeated offenders

You’ll Need to Plug-in Your Smartphone To Start the Truck

Hierarchy of Controls of Distracted Driving

Videos for PPT\168728 Cell Ph ..dce
Engineering Controls

• **Collision Avoidance**
  – **Passive and Active (Autonomous) Intervention**
  – (FWD Radar; Lane Departure & Blindside)
    • Alert for slower or stopped vehicles ahead
    • See through fog and alert to vehicles ahead
    • See and alert for unintentional lane drift / departure

Hierarchy of Controls of Distracted Driving

Videos for PPT\FDW80375 FWD.dce

Videos for PPT\ESM90181 FWD Glare.dce

Videos for PPT\FDA78734 Lane Depart.dce
Engineering Controls

– **Speed Governance / Speed Limiting**
  • Short haul fleet = 58 MPH
  • Over the road fleet = 62 MPH

– **Vehicle Stability Controls**
  • Roll stability truck and trailer

– **Auto-Shift**
  • Hands on wheel
  • Less cognitive process
  • Less fatigue
Engineering Controls

- Low Center of Gravity
- Vehicle visibility & lighting
ADMINISTRATIVE CONTROLS

- Coach the Driver via Event (ERDs)
- Training on Distracted Driving
- Driver Meetings
- Media Releases/Newsletters
- Policies & SOPs to include driver accountabilities

Cornering Policy – 10 MPH Below the Advanced Warning

Hierarchy of Controls of Distracted Driving
• **Proximity Controls**
  – Less or no “Reaching”.

• **Seat Belts**
  – Creating the “Visual Standard”
  – Seat Belt Chimes

• **Blue Tooth Technology**
  – Hands Free noise cancelling

• **Active intervention**
  – Adaptive cruise control
  – Active visual and audible alerts

• **Fatigue reducing seats**
  – Lumbar and side support

• **Protect Driver and Company**
  – [Videos for PPT\FDF03695 Active FWD .dce](#)

[Images of a vehicle interior with controls and a seat focus]
Vehicle Based Behavioral Safety
Distracted Driving
Vehicle Based Safety Systems

• **Know what you want to achieve**......

  – Driver Behavior management?
  – Maintain compliance with changing rules & regs?
  – Reduce accidents and risk exposure to litigation?
  – Action based improvement required by insurance?
  – Reduce the cost of accidents?
  – Driver acceptance to add technology
Active Alert to the Driver
Report to manager / Coach
Document for protection & training
Does it give you the data you need?

Total Distractive Activity 2014 - 2016

- **458, 46%**
- **542, 54%**

**Distraction by Type and Year**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cell Phone</th>
<th>Food Drink</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>20</td>
<td>15</td>
<td>68</td>
</tr>
<tr>
<td>2015</td>
<td>44</td>
<td>38</td>
<td>105</td>
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<tr>
<td>2016</td>
<td>48</td>
<td>42</td>
<td>78</td>
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</table>

**Near Collision From a Distracting Event by Year**

<table>
<thead>
<tr>
<th>Year</th>
<th>Near Collision</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>10</td>
</tr>
<tr>
<td>2015</td>
<td>20</td>
</tr>
<tr>
<td>2016</td>
<td>7</td>
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</table>

**Action Items**

- ✓ Increase accountability for Cell Phone (24%)
- ✓ Focus on drivers who repeat behaviors (13%)
- ✓ Near Collision IRB Review (required)
## Does it Bring Value?

### Total Highway Cases by Class, Commercial vs., Non-Commercial

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Cases</th>
<th>Commercial</th>
<th>Commercial HWY</th>
<th>Non-Commercial</th>
<th>Non-Commercial HWY</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY09</td>
<td>339</td>
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<tr>
<td>FY10</td>
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<td>FY15</td>
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<tr>
<td>FY16</td>
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<td>FY17</td>
<td>124</td>
<td>98</td>
<td>33</td>
<td>26</td>
<td>8</td>
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</table>

**Size of Commercial Fleet**
- Avg. # PWR Units: 650
- Avg. Miles: 37 MM

**Commercial Highway Crashes**
- Does it Bring Value?
Crashes Arising From Distracted Driving
10 Year Trend (CMV)

Does it make sense?

Percent of Total Crashes Attributed to Distracted Behavior (CMV)

Does it reduce management time?

Single Vehicle “Roll Over” reduction.

Total Rollover - 88 (FY07 – FY16)
Adding Value to your, “Case Management Process”

Vehicle Mounted Camera Process

Eliminate the guess work. Previously we spent over 80% of our energy reaching agreement on what happened, and less than 20% on preventing re-occurrence.

Now we see what happened and we get closure very quickly. Now we spend most all of our time on preventing re-occurrence.

Create a level platform:

By paralleling the “Truck Camera” process with Defensive Driving education, we eliminate the barrier between the Transportation Supervisor and driver.

Coach, using defensive driving strategies

Coaches and drivers now use the common language of DDC.

Coaches and drivers alike learn by engaging in the process.
Lessons Learned

No matter what technology you choose consider the following;

Train managers so they deliver **effective coaching**. (Annual Refresher). (Coach to Defensive Driving)

Don’t get stale (revitalize)  Add to your deliverables and find continuous ways to improve. Check and keep process integrity.

Seek “Continuous Improvement” on deliverables. Every couple years compare the process and service.

Networking with industry. (NPTC, ATA, ASSE, MATS, Etc.)

Create “Visual Standards” to associates and motoring public alike.

Use the PIP (Performance or Driver Improvement Process) to improve driver behavior. Avoid the negative impact of “Discipline”

Focus “Behavioral Management” on “Repeated Behaviors”
Active Participation in National and Local Associations & Agencies, Conferences, Webinars, Industry Networking, Trade Shows and Local Events.

• ASSE (American Society of Safety Engineers)
• NPTC (National Private Truck Council)
• FMCSA, webinars, rulemaking correspondence, etc.
• State Highway Police and Commercial Truck Enforcement Agencies
  – Invite enforcement officers to speak at your driver meetings
  – Leverage them as a resource for solutions during disaster events
  – Call on them about compliance… How the laws are enforced
• State Trucking Associations
• State Highway Associations, participate in meetings and events
• Operation Lifesaver (Rail Grade Safety)
• Use of College and Technical Schools for training, recruitment and leadership
• Follow the trade journals, CCJ, HDT, Transport Topics, etc.
• Trade Shows, Mid America Truck Show, etc.
• Get Certified… Programs available through, NATMI, NPTC, ASSE, OLI, etc.
Questions,

Thank you for your time.