

Mentoring Teen Drivers – Video Feedback and Parental Support

Toward Zero Deaths

Presented by: Rusty Weiss
Director – Consumer Services

LOWER COST

INCREASE SAFETY

REDUCE RISK

Overview: Teen Drivers and Video Feedback

- Introduction
- Why We Are Here
- How It Got Started
- How It All Works
- Where It Is Today
- Where Should It Go Tomorrow
- Summary and Q and A Time

Why Are We Here?



Why Are We Here? ([audio only](#))



Getting Here

- EMS Experience
- The “Aha” Moment
- Testing
 - 10 Families and 12 Teens in Mankato (04/05)
 - Efficacy, Logistics and Teen Tolerance
 - [Example 1](#) [Example 2](#)
- Results
 - 65% Decrease in Risky Events
 - Seatbelt Use from 50% to 100%
 - [Happy Teens \(Not Right Away\)](#)

Getting Here

- TRB Workshop – Max Donath at the U
- Hired by DriveCam – Moved to San Diego
- Door Closed by Large Insurer
- Door Opened by Another – AmFam
- Moved Back to Minnesota
- U of Iowa Funded to Do Independent Methods Study
- Test Pilots Launched in MN and WI

Blue Earth County Safe Communities

- \$300,000 Donation in Services and Equipment by American Family and DriveCam
- Became Coalition Members
- Goal: Provide TeenSafeDriver Service to 500 Families throughout 2008 to See Overall Teen Crash Reduction of 25%

How It Works

- Event Recorder in Teen Vehicle



How It Works

- Teens Drive and All Trigger Events
 - Example
- Event Data Automatically Collected
 - A MUST for Successful Program
 - Can Not Rely on Parents for Data Collection
 - USB, then Wireless, Now Cellular
- Analysis and Scoring of Every Event
 - Done by Professionals
 - Centralized
 - Simplified but Mapped to Key Behaviors

How It Works

- 3 Years of Testing with Teens and Parents
- 100 Families
- Driver Age: 16 (65%) and 17 (35%)
- 9 to 12 Month Periods
- Fleet Parallels
 - Manager/Managed Relationship
 - Driver Typically not Vehicle Owner
 - “Manager” Can Reward and Sanction
- Would Teens Tolerate?



Front View FWD +0.01 LAT +0.00 TIME +10.00 Rear View

Volume ⏪ ⏴ ⏵ ⏩ ⏸ Expand Video

Driver: [Redacted] Status: Face-To-Face Coaching Group: T [Redacted] Vehicle: 1998BuickRegal Record Date: 3/23/2007 10:50:39 PM (Local Time)

- Event Trigger**
- Not Specified
 - Hard Cornering
 - Hard Braking
 - Hard Acceleration
 - Collision
 - Rough/Uneven Surface
 - Other

- Root Cause**
- Distractions**
- Cell Phone
 - Mapping/Navigation
 - Other Work Task
 - Food/Drink
 - Passenger
 - Other
- Poor Awareness**
- Not Looking Far Ahead
 - Blank Stare
 - Not Scanning Roadway
 - Not Scanning Intersection
 - Mirrors Not Checked
 - Blind Area Not Checked

- Risky Actions**
- Seat Belts**
- Driver Unbelted
 - Passenger(s) Unbelted
- Fundamentals**
- Following Too Close
 - Traffic Violation
 - Unsafe Speed
 - Failed to Keep an Out
 - Poor Lane Selection

- Adverse Conditions**
- Poor Visibility
 - Poor Road Condition
 - Heavy Traffic
- Custom**
- A little too fast
 - Music too loud
 - Driving with one hand
 - Unsafe and Unnecessary

Reviewer Coach Driver

Your following distance is around 1.75 seconds - try to make it at least 3 to 4 seconds and never let it get under 2 seconds. Thanks.

Outcome

Collision

Demeanor

No Issue

How It Works

- Event Data Placed in Relational Database
- Trends Immediately Emerge
 - 20% Relatively Safe, Calm, Focused Drivers
 - 45% Common Novice Driver Issues
 - 35% HELP!



HAND OVER THE KEYS WITH CONFIDENCE.

Home Events

Welcome, Rusty | Sign Out | Help

Driver: Rusty Weiss Go

Double click a row to view the selected event.

Status	Details	Risk Score	Comments
New	Event 1339 Apr 06 2007, 03:29 PM PST	0	
New	Event 1255 Apr 06 2007, 05:33 AM PST	6	Too fast in this dangerous area - busy railroad tracks and a truck pull-out area on a high speed curve (I should know better).
Overdue	Event 1006 Apr 03 2007, 07:15 AM PST	1	Pot hole - slow it down or avoid it.
Resolved	Event 980 Apr 02 2007, 10:44 AM PST	0	Test event - hard braking.
Resolved	Event 976 Apr 02 2007, 10:39 AM PST	0	
Resolved	Event 418 Mar 14 2007, 04:29 PM PST	3	
Resolved	Event 417 Mar 14 2007, 11:38 AM PST	3	
Resolved	Event 385 Mar 13 2007, 05:09 AM PST	6	Stop at stop signs - pedestrians, bicycles and entire vehicles can hide in your blind spots. Give them time to appear. Nice job on the seatbelt.
Resolved	Event 373 Mar 09 2007, 05:08 AM PST	2	Be careful backing up on a street - avoid it if at all possible.
Resolved	Event 372 Mar 05 2007, 12:44 PM PST	0	Red-tailed hawk carrying a pheasant hen from the side of the road.

10 results per page 17 results Back Page 1 of 2 Next Jump to Page Go

Event 385 - Teen Safe Driver Program - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Mail Print Print Preview Print with Selection

Address <https://ww2.teensafedriver.com/EventView.aspx?Referrer=Events.aspx> Go Links File Print FedEx Kinko's

Search Web Upgrade Now! Mail My Yahoo! HotJobs Games Music Answers Personals Sign In

TEENSAFE DRIVER PROGRAM SM

HAND OVER THE KEYS WITH CONFIDENCE.

Home **Events** Welcome, Rusty | Sign Out | Help

Driver: [Rusty Weiss](#)

Analysis

Event Trigger: Hard Cornering Risk Score: **6**

Outcome: No Collision

Risky Actions

- Fundamentals: Unsafe Speed
- Fundamentals: Traffic Violation

Comments

Stop at stop signs - pedestrians, bicycles and entire vehicles can hide in your blind spots. Give them time to appear. Nice job on the seatbelt.

Event 385

Tuesday, March 13, 2007 5:09:55 AM PST

Paused 00:12

Close This Event Resolve This Event

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start | Inbox - Microsoft Out... | DriveCam for Teens ... | Event 385 - Teen Saf... | 95% | Internet | 10:29 AM

Results

- Anecdotal
 - Parents Surprised by
 - Frequency and Severity of Risky Events
 - Driving Behaviors NOT Seen when Supervised
 - Dramatic Drop in Seatbelt Use

DriveCam/AmFam Results

- Seatbelt Use Weeks 1 - 4
 - 45 to 50% for Drivers and Passengers
- Seatbelt Use Weeks 5 – 39
 - 95 to 100% for Drivers and Passengers
(fewer events for observation but when triggered, seatbelts were worn)

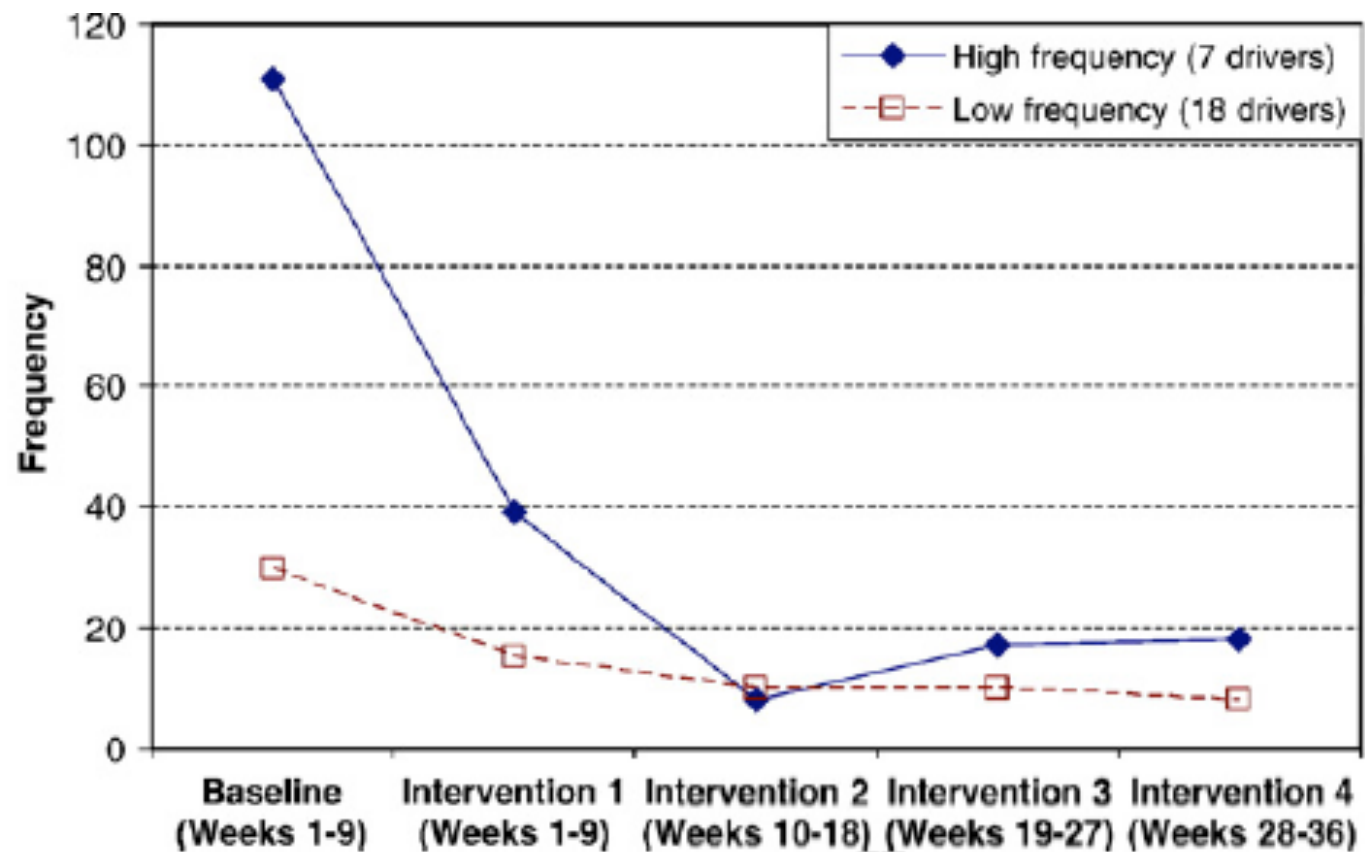
University of Iowa

- Just Published:

Journal of Safety Research
38 (2007) 215–227

University of Iowa Results

- 26 Teens from Rural Iowa
- A-B-A Design (9 weeks, 36 weeks and 9 weeks)



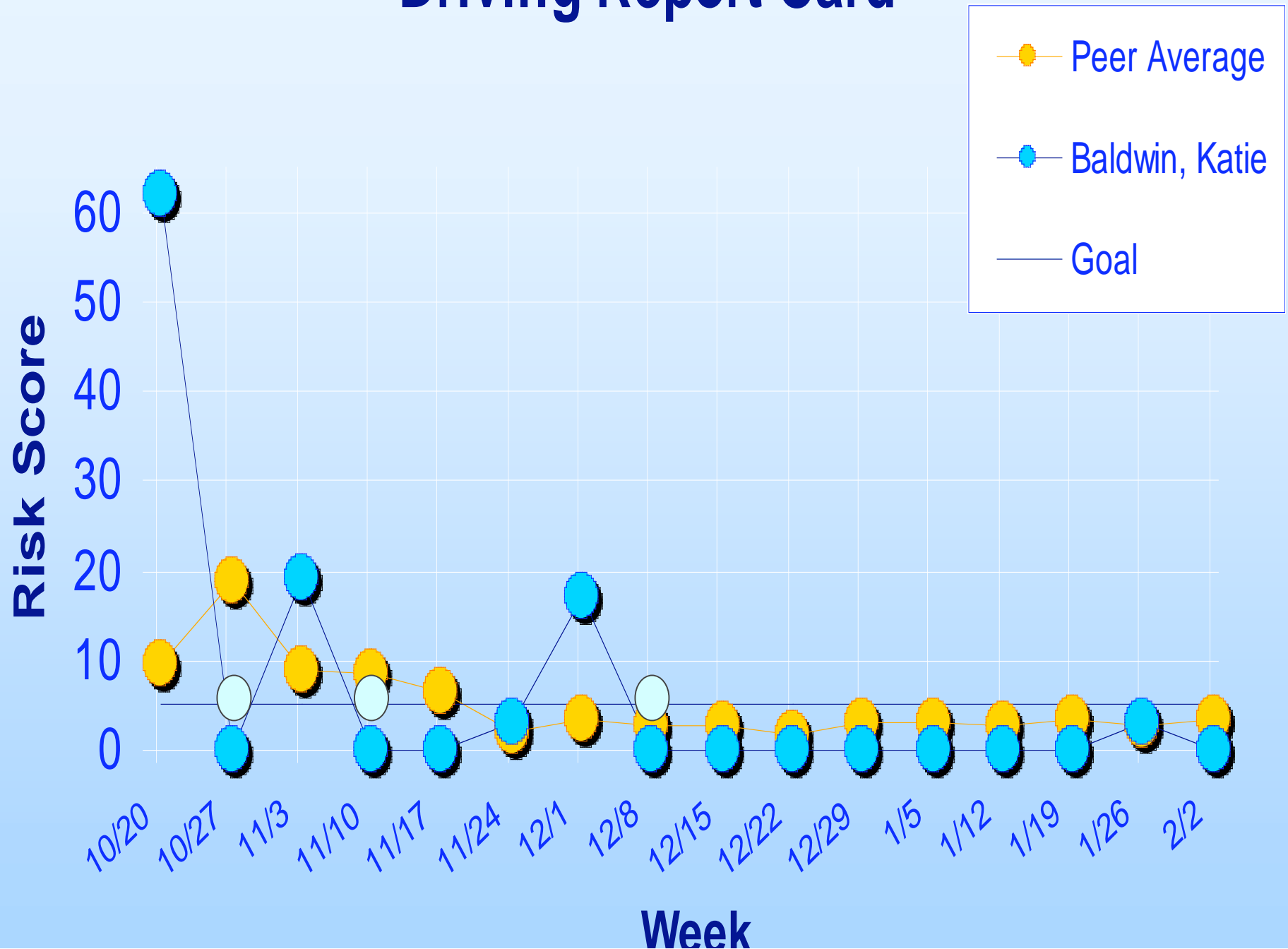
University of Iowa

- Lots of Limitations
 - Self Selected
 - Single Community
 - No Comparative Baseline
 - Small Sample
 - Designed for Developing Methods

Specific Example

- Permission to Share Granted by Teen and Parents
- Katie – 16 years old
- 4 Weeks Unsupervised Driving
- Parents Trusting and Looking Forward to Help with Transportation
- 100% Seatbelt Use – No Doubts

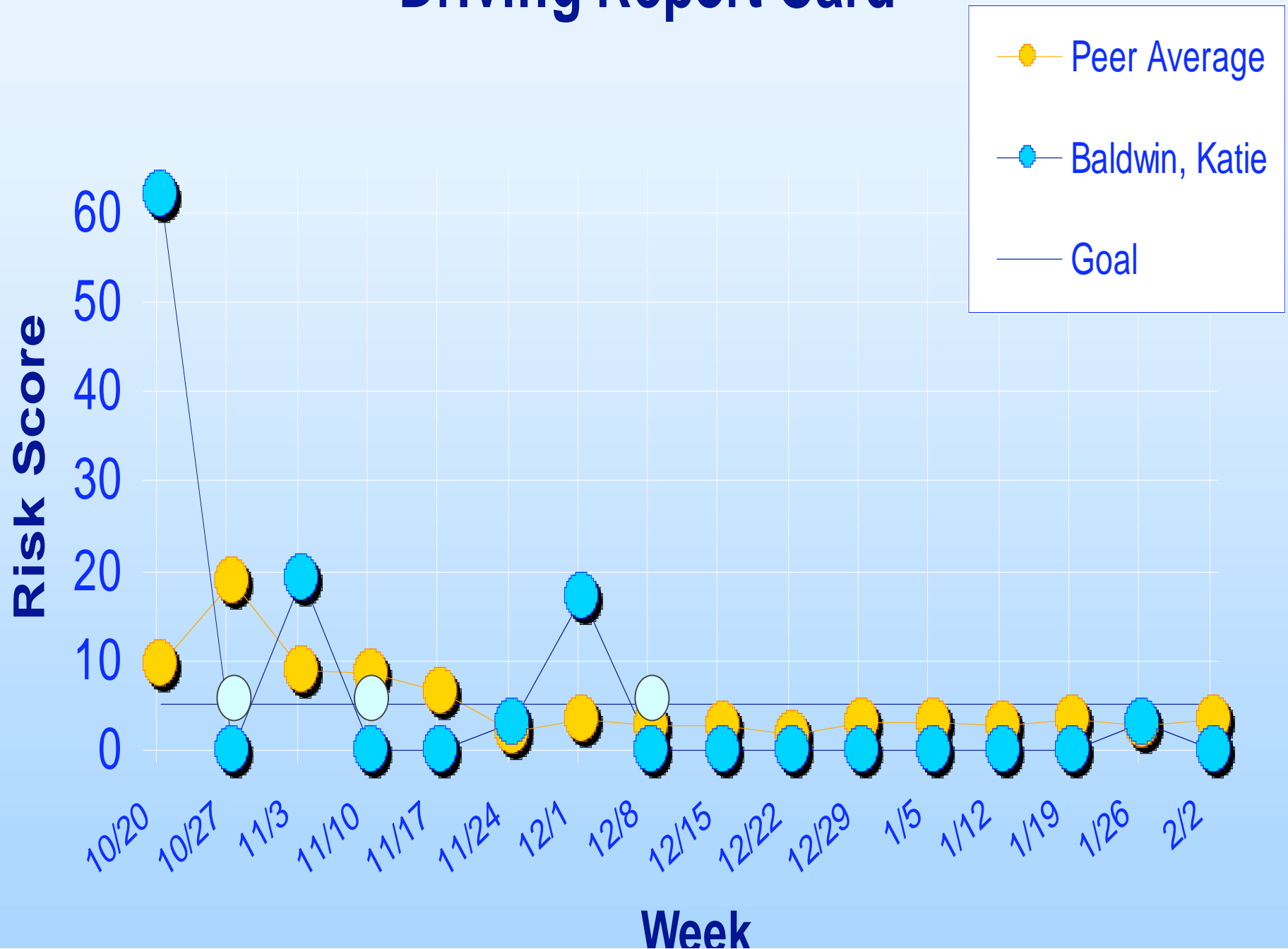
Driving Report Card



Specific Example

- Typical Events
 - [Example 1](#)
 - [Example 2](#)
- Near Fatal Close Call
 - [Example 3](#)

Driving Report Card



Rusty's Opinions

- Bell Curve of Teen Drivers
- No Good Predictors
- Moms and Dads Underestimate Their Teen's Risk Exposure
- Teens Can Drive Safely
- Key is to Maintain "Supervised" Driving Behaviors after Supervisor Steps Out
- Video Feedback is Useful Tool

Pathway to Widespread Solution?

- More Research? Absolutely!
 - Eagan (U of M and U of I)
 - NIH (UMTRI)
- Should MN Mandate it?
 - No!
 - Unintended Consequences
- Assume for a Moment it Works, Then is it
 - Scalable?
 - Affordable?
 - Adoptable?
- Free-Market Forces vs. Public Policy

Pathway to Widespread Solution?

- Rusty's Personal Opinion
 - Integrated with Insurance
 - Drivers Age 16 Heavily Subsidized
 - Cost = 3X Premiums
 - Premiums \$2500 to \$3000/yr.
 - Combined Ratio 60% Cost/40% Overhead
 - 50% Crash Reduction
 - $\$9000 / .5 / .6 = \$2700/\text{yr}$ in Savings

Pathway to Widespread Solution?

- What Could be Done with \$2700 per Teen Driver Per Year?
- 100,000 Teen Drivers = \$2.7 Billion in Gross Savings
- Families are Personally Rewarded
- Insurance Takes Lion's Share

Why Are We Here?



Q and A

–Thank You!