



# SHRP 2 Naturalistic Driving Study

## **What We Have Learned So Far**

Ann M. Brach

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# The Team

- Technical coordination and quality control:



- Data Collection:



- Guidance: SHRP 2 Oversight Committee, Safety Technical Coordinating Committee, and Expert Task Groups

- Sponsorship:

TRANSPORTATION RESEARCH BOARD  
OF THE NATIONAL ACADEMIES



- Staff: K. Campbell, C. Fay, W. Diewald, A. Horosko, J. Hedlund, C. Ford, R. Wassel

# Study Objectives

Improve highway safety through greatly increased knowledge of *driver behavior*:

- How the driver interacts with and adapts to *real* vehicles, roadway characteristics, traffic, weather, emergency situations & crashes
- Differences in *crash risk* associated with these factors & their interactions
- Propose *countermeasures* based on the findings

Build the SHRP 2 NDS/RID database and make the data accessible to researchers



# Study Design Overview

- 3,100 primary drivers, all age/gender groups.
- 3,900 data years; 2.5M trip files
- ~3 years of data collection (some participants for 1 year, some for 2 years)
- All light vehicle types:
  - Passenger Cars
  - Minivans
  - SUV
  - Pickup Trucks
- 6 sites
- 12,500 center-line mile
- Cell phone records, supplemental data



# Examples from SHRP 2 Database

**Data Dissemination**

**Data Access**

# SHRP 2 NDS Data: Summary

- Driving data: from instrumentation
- Driver data: from questionnaires, tests
- Vehicle data: vehicle inspection
- Roadway data: mobile data collection van
- Crash data: detailed investigations
- “Context data”: (supplemental data) crash history, weather ...

# Plans for Initial Datasets

- Trip summaries: descriptive information for each trip (distance, average speed, age, gender, vehicle info). *See sample variable list on website.*
- Crash events: categorical or summary variables, manual video reduction. *See draft video reduction dictionary on the website.*
- Epoch file (30 seconds prior, 10 seconds after): time-history on variables of interest, possibly include forward video, roadway data. *See sample variable list for event and epoch files on website.*



# SHRP 2-Sponsored Analysis Projects

- *Rural 2-lane curves* – Iowa State University
- *Offset left-turn bays* – MRI Global
- *Driver inattention* – SAFER, Chalmers University
- *Crashes on congested freeways* – University of Minnesota

# Data Access

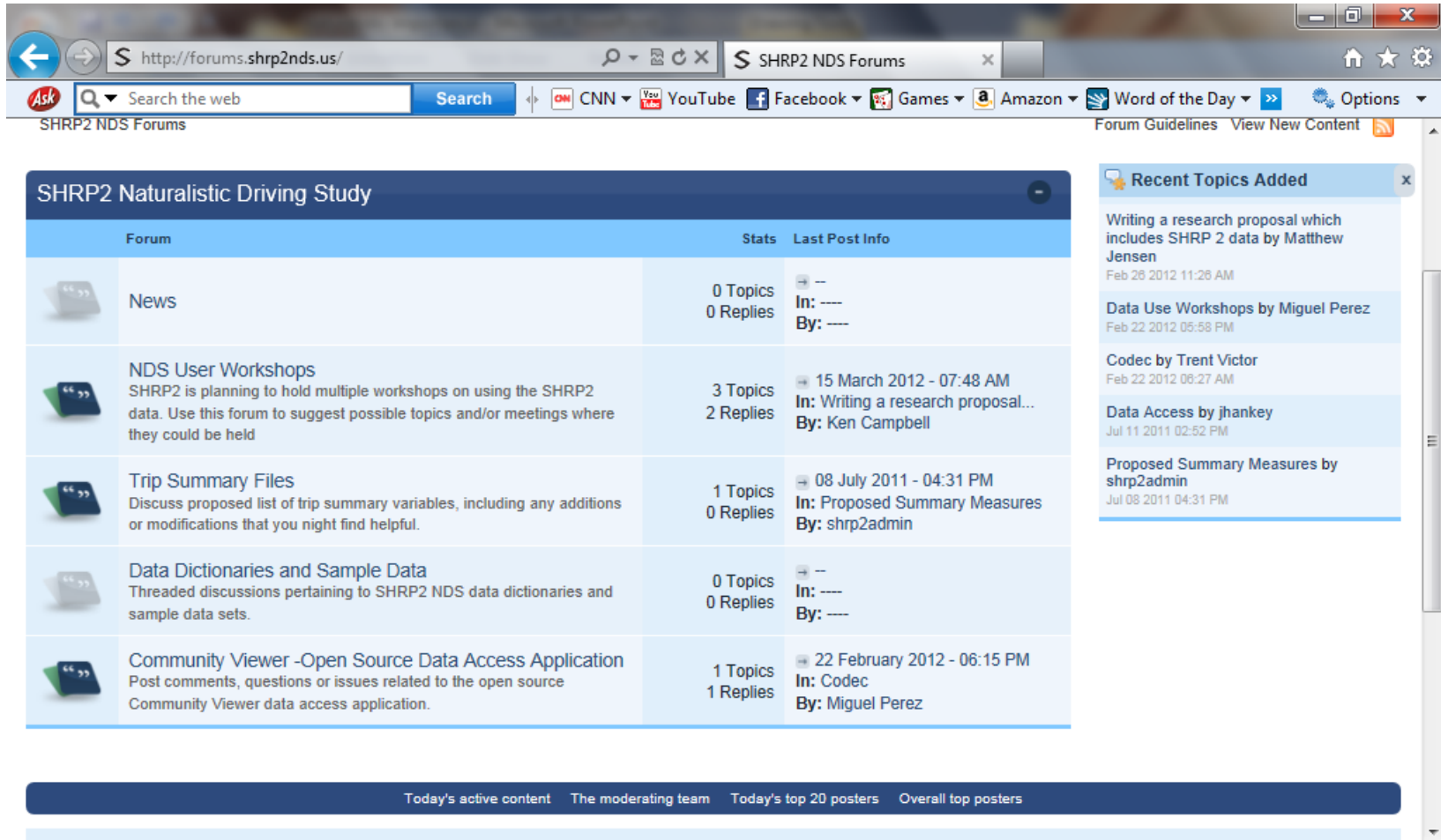
- Study was designed for future research use
- Study was done with human subjects so IRB regulations apply
- Data sharing agreement required
- Access currently through VTTI with SHRP 2 oversight

# Long-Term Stewardship






- Data access policies and processes will evolve post-SHRP 2
- Database requires hosting, maintenance, upgrades, security, user support
- Volpe Center of the USDOT conducting a study of options
- New NRC Committee is being established to provide advice

# SHRP2 Data Sharing Website

## http://forums.shrp2nds.us/



The screenshot shows a web browser window displaying the SHRP2 NDS Forums website. The browser's address bar shows the URL <http://forums.shrp2nds.us/>. The page features a search bar, navigation links for various services (CNN, YouTube, Facebook, Games, Amazon), and a main forum listing under the heading "SHRP2 Naturalistic Driving Study".

Forum	Stats	Last Post Info
 News	0 Topics 0 Replies	-- In: --- By: ---
 NDS User Workshops SHRP2 is planning to hold multiple workshops on using the SHRP2 data. Use this forum to suggest possible topics and/or meetings where they could be held	3 Topics 2 Replies	15 March 2012 - 07:48 AM In: Writing a research proposal... By: Ken Campbell
 Trip Summary Files Discuss proposed list of trip summary variables, including any additions or modifications that you might find helpful.	1 Topics 0 Replies	08 July 2011 - 04:31 PM In: Proposed Summary Measures By: shrp2admin
 Data Dictionaries and Sample Data Threaded discussions pertaining to SHRP2 NDS data dictionaries and sample data sets.	0 Topics 0 Replies	-- In: --- By: ---
 Community Viewer -Open Source Data Access Application Post comments, questions or issues related to the open source Community Viewer data access application.	1 Topics 1 Replies	22 February 2012 - 06:15 PM In: Codec By: Miguel Perez

On the right side of the page, there is a sidebar titled "Recent Topics Added" with a close button (x). It lists several recent forum posts:

- Writing a research proposal which includes SHRP 2 data by Matthew Jensen  
Feb 26 2012 11:26 AM
- Data Use Workshops by Miguel Perez  
Feb 22 2012 05:58 PM
- Codec by Trent Victor  
Feb 22 2012 08:27 AM
- Data Access by jhankey  
Jul 11 2011 02:52 PM
- Proposed Summary Measures by shrp2admin  
Jul 08 2011 04:31 PM

At the bottom of the page, there is a navigation bar with links for "Today's active content", "The moderating team", "Today's top 20 posters", and "Overall top posters".