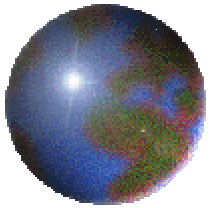

Monitoring

Bill Walsh

AA Plans and Policy

Introduction

- Monitor the performance of advanced air bags:
  - Low speed crashes w at risk populations
  - High speed crashes especially unbelted occupants

Monitoring Approach

- Real world performance
- Research Tests
- Technology Assessment
- Biomechanic Research on IARV's*
- Compliance Margin Report*
- Safety belt use including technology*
- Costs*

Technology Assessment

- Survey Suppliers & Manufacturers
- Procure Innovative Hardware
- Test and Evaluate Technology

Research Tests on Advanced ABs

- Critical Focus Areas
  - 25/30 mph Unrestrained (5, 50,95%)
  - 35 mph Restrained (5%)
  - 37.5/40 mph Offset Deformable (5,50%)
  - Static OOP Low Risk Deployment

Real World Performance

- Data Sources
  - Anecdotal/Statistical: NASS CDS, SCI, CIREN
  - Statistical: FARS, CODES
- Analytic Agenda
  - Low Speed (0-25 mph)
  - Higher Speed (25+ mph)

Analytic Agenda

- Low Speed Crashes
  - Out of Position Occupants
    - Driver/Passenger
    - Small Children and child seats
  - Technology: Low Risk vs Suppression
    - Deployment Thresholds
    - Crash Severity/Type Crash
    - Sensor Designs
    - Dual Speed Inflators

Analytic Agenda

- High Speed Crashes (+25 mph frontal)
  - Unrestrained
    - Out of Position
    - Occupant size (5%/95%)
    - Crash Type
  - Restrained (Size)
  - Technology
    - Deployment (speed/inflator stage)
    - Sensor ~Crash Type

Data on Advanced Systems

CY	Dl Spd	Adv Bg	Ind Dl	Ind Adv
2002	27	0	5	0
2003	45	0	8	0
2004	66	5	10	4
2005	104	12	16	10
2006	162	25	23	20

Effectiveness of Airbags

AB vs UR	4th Rpt. 99	FRIA 00	AB Data Pt
Fatal	14%	13%	500-1500
AIS 2+	10	10	250-1250
AIS 3+	42	na	125-650
AB&R v UR	50	50	
AIS 2+	66	55	
AIS 3+	64	na	