

**Facing the Challenge of Measuring  
Motorcycle Safety Outcomes**

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The concept of "Program Evaluation" is defined with examples of types of program evaluation and previous research on the topic. Results from a small survey of state administrators is presented. The survey questions asked administrators what type of program evaluation they engaged in. Types of program evaluation research conducted by MSF is reviewed along with an overview of the types of data MSF could provide to state administrators who are seeking to complete a program evaluation.



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**MOTORCYCLE**  
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# Facing the Challenge of Measuring Motorcycle Safety program Outcomes

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*Sherry Williams & Cathy Rimm*  
*Quality Assurance & Research Department*

*State Motorcycle Safety Administrators Conference*  
*Bismarck, ND - 2005*

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At some point in every program,  
someone asks:

How's It Going?  
Does Training Work?

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# Overview

- What is Program Evaluation?
- Why engage in Program Evaluation?
- Types of Program Evaluation
- The status of Program Evaluation in Motorcycle Safety Programs
- Examples of Motorcycle Safety Program Evaluation Techniques



# What is Program Evaluation?

- “Program evaluation is carefully collecting information about a program or some aspect of a program in order to make necessary decisions about the program”
- “Evaluation is the process of determining whether programs – or certain aspects of programs – are appropriate, adequate, effective, and efficient and, if not, how to make them so”
- “Without evaluation, we cannot tell if the program benefits or harms the people we are trying to help”



## *Why engage in Program Evaluation?*

1. Tell the GOOD NEWS! To inform your stakeholders.
2. To make a case for continued or expanded funding
3. To have an early warning system for problems
4. To monitor whether programs are producing desired results
5. To understand why or why not (related to context or to implementation factors)
6. To learn whether programs have any unexpected benefits or problems.
7. To demonstrate program effectiveness
8. To establish future benchmarks



# What Program Evaluation is NOT

- A useless activity that generates lots of boring data with useless conclusions...
- Only able to show the program's failures
- A proof of success or failure of a program
- Complex and for experts only
- A process that only produces what we expect



# Types of Program Evaluation

- 35 different types according to some
  - Formative
  - Process
  - Impact Evaluation
  - Outcome Evaluation







# Types of Program Evaluation

- **Formative**
  - Research conducted (usually while the program is being developed) on a program's proposed materials, procedures, and methods
  - Understand how the program was implemented or feasibility
- **Process**
  - Shows how well a program is operating – can give the hows and whys
  - Often overlooked



# Types of Evaluation

- **Impact Evaluation**

- Research that shows the degree to which a program is meeting its intermediate goals
- Shows changes in knowledge, beliefs & attitudes in stakeholders and community

- **Outcome Evaluation**

- Research that shows the degree to which a program has met its ultimate goals
- Generally conducted at specified intervals
- Includes changes in mortality, morbidity



# Thoughts on Program Evaluation

- The type of evaluation you undertake to improve your programs depends on what you want to learn about the program
- Essential to a successful grant application
  - NHTSA – from 20 to 30% of evaluation criteria
  - 15% of total budget
- Everyone in rider education must shoulder a share of the responsibility for ensuring quality in rider education programs
- Evaluation is an ongoing process



# Results of Previously Published Survey

- Survey of motorcycle safety programs re: program evaluations
- Study Conclusions
  - Most states did not plan to perform impact evaluations
  - Effectiveness of training programs could not be defended
  - Funding could be lost
- Recommendations
  - Administrators should consider the benefits of program evaluation
  - Motorcycle program specific evaluation criteria should be established & tested



## *Current Status of Program Evaluation Efforts*

### *MSF initiated recent review*

- *Interviews with program managers*
- *Reviewed MSF State Reports / State program-based web pages*
- *Reviewed motorcycle program evaluation presentations*



## *Interviews with program managers*

- *Over a dozen interviews*
- *Various regions of the country*
- *Various program delivery models*
- *Various program sizes*



## *Various Delivery models*

- *State-administered*
- *Privately-administered, State regulated*
- *State-administered with private programs allowed*
- *State-administered with independent contractors*
- *MSF-administered*
- *Privately-administered – no State Coordinator*



## *Data collected by states/programs*

- *Collected by ALL we contacted*
  - *Pass/fail totals*
  - *Dropped/counseled out*
  - *Student evaluations*





## *Data collected by states/programs*

- *Additional data collected by some states/programs*
  - *# of active RiderCoaches*
  - *# of active sites*
  - *# of training incidents*



## *Quality Assurance efforts*

- *Formal – usually larger programs*
  - *Set # of site visits*
  - *Standardized forms/reports*
  - *Training incident tracking*
  - *PDW's held several times annually*



## *Quality Assurance efforts*

- *Informal – usually smaller programs*
  - *Little or no documentation of visits*
  - *Site visits “as needed”*
  - *Corrections by “nudging”*
  - *Annual PDW’s*
    - *Some smaller programs hold more frequent PDW’s as needed*



## *Quality Assurance efforts*

- *Student/Consumer Complaints*
  - *All programs actively follow up on negative complaints*
  - *Severe complaints usually arrive at the State Coordinators desk*
  - *Often generate topics for PDW's*



# Current Examples of Program Evaluation

- Maryland Program Web Page
- Ohio
  - Peer Observers Web Page
- Indiana
  - Course graduate comments
- Massachusetts
  - Training Numbers
- Texas



## Reviewed other program web pages

California, Connecticut, Georgia, Illinois, Iowa, Louisiana, Minnesota, Montana, Nevada, New York, North Carolina, Pennsylvania, Oregon, South Carolina, Tennessee, Washington, West Virginia, Wisconsin



# RETS System Evaluation

<b>Formative</b>	Development Process
<b>Process</b>	Infrastructure/Context
<b>Impact</b>	Availability of Training Activity of RiderCoaches Satisfaction/Effectiveness of RiderCoaches
<b>Outcome</b>	# of Students Trained Effectiveness Effective Resource Utilization



## MSF-Sponsored Formative Research

- Development of RETS Mission
  - Review of Curriculum Specifications
  - Review of Motorcycle Training and Development Processes
  - Review of Research: Task Analysis; Photographic Analysis; Hurt Study; Colorado Feasibility Study
  - Review of BRC (original); MRC; MRC:RSS; BBP; ERC
  - Review of worldwide programs
- 1996 - Curriculum Development Team
  - 1998 - Joint SMSA / MSF MRC:RSS Enrollment Questionnaire
  - 1998 - SMSA Curriculum Advisory Committee
  - 1998 - MSF / ASU Study
  - 1998 - MSF Stakeholder Focus Group Research



# MSF-Sponsored Process Evaluation

- MSF Process
  - 1999 - MSF Student Focus Group Research
  - 2002 - Rider Education and Training System Online Resource Guide (RETSORG)
  - 2003, 2004, 2005 - MSF Learning Centers
  - Ongoing - RETS Courses and Training Opportunity Additions
- CMSP Process
  - Policies and Procedures Manual
  - Professional Development Update Meetings
  - Quality Assurance Team Meetings
  - Student Feedback Tracking Process





# MSF-Sponsored Impact Research

- MSF Impact
  - 2002 - BRC RiderCoach Survey
  - 2003 - Curriculum Expert Evaluation
  - 2003 – BRC Student Evaluation Analysis
  - 2004 – BRC Student Evaluation Analysis
  - 2005 – BRC RiderCoach On-line Survey
- CMSP Impact
  - Training Stats
  - RiderCoach Stats & RiderCoach Survey Results
  - Quality Assurance Visit Analysis (Quarterly)
  - Student Feedback Forms (Qualitative & Quantitative)
  - Ongoing Random Checks of Completed Students



# RETS Impacts

- Generally Identified by MSF
  - Participant / Customer Satisfaction
  - RiderCoach Satisfaction
  - Gains in Knowledge
  - Gains in Skill
  - Training Itself is Safe
  - Graduate Input After Experience
- Working toward a Collaborative Process with MSF Stakeholders to Identify Shared Benchmarks



# Available Tools to Collect Data

QAV - Microsoft Internet Explorer

File Edit View Favori... Back Forward Stop Refresh Home Search Favorites Media

Address https://online.msf-usa.org/CMSP/QualityAssuranceVisit/QAV.aspx?QAID=0

**CMSP** California Motorcyclist Safety Program

## CMSP Quality Assurance Visit (QAV) Form

Status [0] [v]

RERP# [ ] [v] Date [mm/dd/yy]

Site Name [AMERICAN HONDA MOTOR CO. BAY AREA MOTORCYCLE TRAINING, INC. BEALE AIR FORCE BASE CABRILLO COLLEGE EXTENSION CALIFORNIA RIDER EDUCATION CAMP PENDLETON - USMC CENTRAL COAST MOTORCYCLE TRAINING CERRITOS COLLEGE COMMUNITY EDUCATION COACHELLA VALLEY MOTORCYCLE TRAINING CYCLE LLOYD'S GAVILAN COMMUNITY COLLEGE-COMMUNITY EDUCATION GRANT ADULT EDUCATION M/C SAFETY PROGRAM IMPERIAL VALLEY COLLEGE IN GEAR MOTORCYCLE TRAINING LOS ANGELES AFB MARCH AFB MARINE AIR GROUND COMBAT - 29 PALMS MARINE CORPS AIR STATION - MIRAMAR MODESTO JUNIOR COLLEGE MORENO INSTITUTE OF MOTORCYCLING MOTORCYCLE RIDER EDUCATION MOTORCYCLE TRAINING CENTER MOTORCYCLE TRAINING INSTITUTE (MTI) MOUNTAIN VIEW - LOS ALTOS ADULT ED MSF- CMSP MT. SAN ANTONIO COLLEGE NAVAL BASE VENTURA COUNTY NAVAL REGION S.W. NELSON MOTORCYCLE TRAINING CENTER INC.] [v]

Contact Person RiderCoaches Observed

Classroom Visit

# of Students in Classroom

1. Overall Condition of the Site

**A. Overall Comments:**

Save Done

\*VSD=Very Strongly Disagree  
VSA= Very Strongly Agree

**Classroom:**

2. Classroom environment was learner-centered activities (large comfortable, appropriate furniture). [NA] [v]

3. The use of AV equipment was appropriate (available, operational). [NA] [v]

4. There was a high level of student involvement in the classroom instruction. [NA] [v]

5. The RiderCoach demonstrated appropriate communication skills in the classroom. [NA] [v]

6. [ ] [v]

7. Objectives were accomplished within an appropriate amount of time. [NA] [v]

8. The RiderCoaches appeared to have prepared sufficiently for the class. [NA] [v]

9. Administrative aspects of the program are handled effectively (registration, student eligibility, liability forms). [NA] [v]

On Range [ ] [v]

SA=Strongly Agree

Done

**CMSP Online QA Site Visit Tracking & Feedback Module**

- Drop-down menus for ease of completion
- Adaptable for state-by-state adoption



# Available Tools to Collect Data

QAV - Microsoft Internet Explorer

File Edit View Favori Back Search Favorites Media

Address <https://online.msf-usa.org/CMSP/QualityAssuranceVisit/QAV.aspx?QAID=0>

### COMPLIANCE ISSUES

19. The range is Standard or Adjusted ? Stan Exercise adjustment have filed with CMSP? No

20. The range markings were clear and visible. No

21. The range was equipped with a first aid kit, fire extinguisher and emergency instructions. No

22. The range was clear of debris and contained no safety hazards. No

23. Motorcycles were clean, well maintained, in working condition and posed no safety hazard. No

24. Students and RiderCoaches wore the appropriate protective gear when on the motorcycles. No

25. Participant/RiderCoach 6:1 ratio was observed. No

26. The exercises were conducted in the prescribed sequence. No

27. The RiderCoaches follow the instructional sequence of the Range Cards. No

28. The security of the range area, classroom and student property was maintained. No

29. BRC MSF Completion cards were given to successful students at the completion of the skill test. No

30. CHP course evaluation forms were given to each student at the completion of the skill test. No

31. If applicable, RiderCoaches completed MSF Incident reports appropriately. No

### Site Comments

Done



# MSF Can Provide

- Data from MIC National RDD Survey
  - Provided to State Coordinators with permission of MIC Board of Trustees
- Availability of Training Survey (2004)
  - By zip code
- Our curriculum assessments
  - Posted in RETSORG
    - BRC History Document
    - Expert Review Results
    - BRC Student Survey Analysis Results 2003
    - RiderCoach Survey 2003
    - RiderCoach Trainer Survey 2005
  - To be Posted in RETSORG upon completion
    - BRC Student Survey Analysis Results 2004
    - RiderCoach Survey 2005



# Data MSF can provide

## RiderCoach Survey Results (Posted in RETSORG)

Chart will Facilitate Comparisons Between Peer State Programs

		General Perceptions of BRC			Perceptions: BRC Effectiveness			
		Satisfaction	Confidence In	Enjoyment of	Range Exercises	Classroom	Street Readiness	State Update
<b>NATIONAL</b>	<b>3049</b>	<b>82%</b>	<b>83%</b>	<b>89%</b>	<b>83%</b>	<b>83%</b>	<b>75%</b>	<b>77%</b>
STATE	TOTAL N per STATE							
AK	12	86%	92%	93%	90%	90%	83%	80%
AL	21	77%	67%	85%	77%	79%	75%	74%
AR	21	82%	85%	93%	83%	86%	73%	85%
AZ	65	84%	84%	88%	82%	84%	73%	76%
CA	234	77%	78%	85%	79%	79%	71%	69%
CO	71	82%	85%	89%	83%	84%	73%	79%
CT	47	79%	79%	88%	81%	81%	71%	87%
DE	13	89%	89%	97%	89%	90%	80%	90%
FL	155	87%	89%	93%	86%	87%	77%	79%
GA	44	83%	82%	87%	80%	79%	73%	85%
IA	32	78%	81%	88%	79%	75%	70%	69%
IL	110	79%	79%	87%	80%	80%	70%	85%
IN	82	79%	81%	89%	83%	84%	74%	85%
KS	40	86%	88%	91%	83%	87%	76%	75%
KY	37	90%	92%	94%	89%	88%	80%	82%
LA	14	89%	89%	91%	85%	88%	79%	81%
MA	57	79%	77%	86%	80%	78%	70%	64%
MD	94	82%	84%	89%	81%	84%	69%	74%
ME	15	87%	91%	95%	88%	90%	83%	90%
MI	89	81%	81%	89%	79%	82%	70%	74%
MIL*	68	86%	87%	92%	88%	88%	84%	80%
MN	83	81%	84%	90%	84%	79%	74%	71%
MO	58	87%	90%	94%	87%	87%	84%	80%
MS	15	85%	90%	93%	88%	87%	82%	73%
MT	21	79%	81%	93%	80%	83%	74%	76%

### VARIABLE KEY

**Satisfaction:** Rating of Overall Satisfaction when Teaching the Basic RiderCourse  
**Confidence In:** Rating of Current Confidence in the BRC Training Program  
**Enjoyment of:** Level of Enjoyment when Teaching the BRC  
**Range Exercises:** Rating of How Well BRC Range Exercises Teach Five Basic Skills  
**Classroom:** Rating of How Well BRC Classroom Teaches Basic Concepts

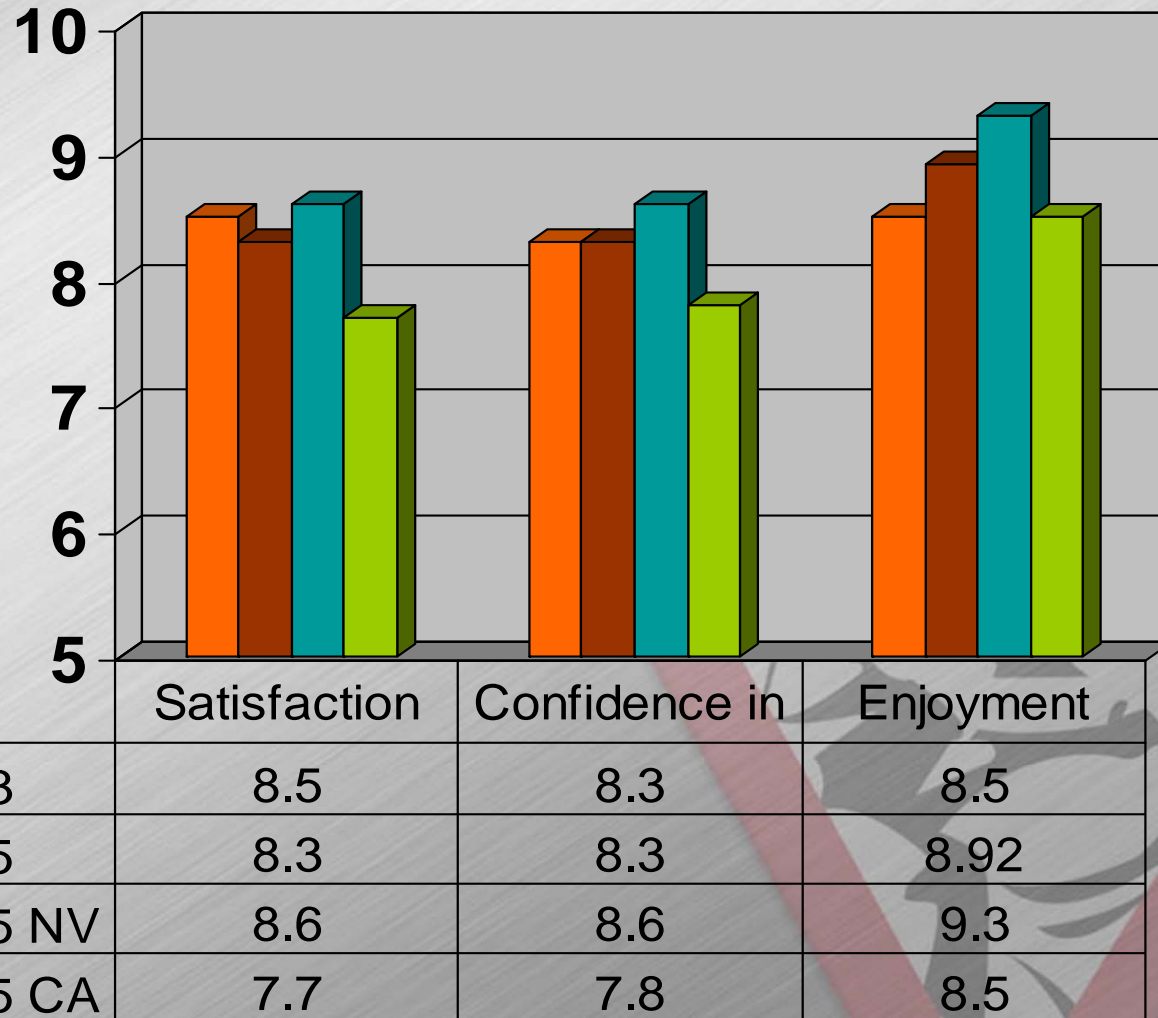


# Data MSF can provide

Comparative  
Bar Graphs

Can be  
created

From Excel  
Worksheet





# Other Variables for Comparison

Groups can be pulled out and compared:

- State
- RiderCoach Demographics
  - Age, Education, Gender, Type of other work
- Rider Ed roles (RC, RCT, Site Manager, State Personnel)
- Number of BRC/ERC classes taught
- Riders Edge Involved RiderCoaches
- Years certified as RiderCoach
- Those who were MRC:RSS certified and those who weren't
- Those who attended MSF Learning Center
- List serve participants
- Open-ended comments by groups/states

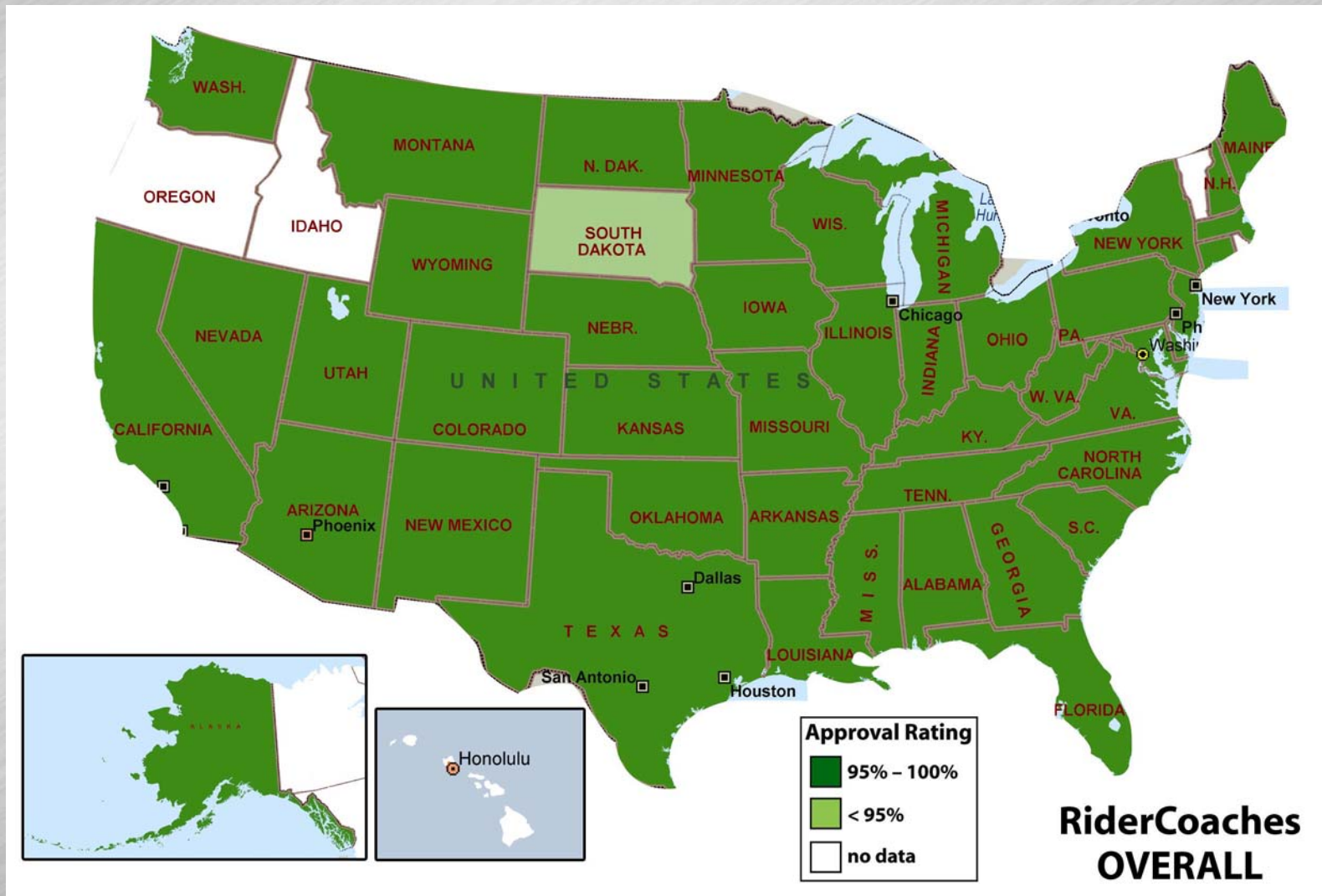
**Request additional  
Stats Runs or  
Group Comparisons  
By contacting:  
swilliams or atyra  
@msf-usa.org**





# Data MSF can provide

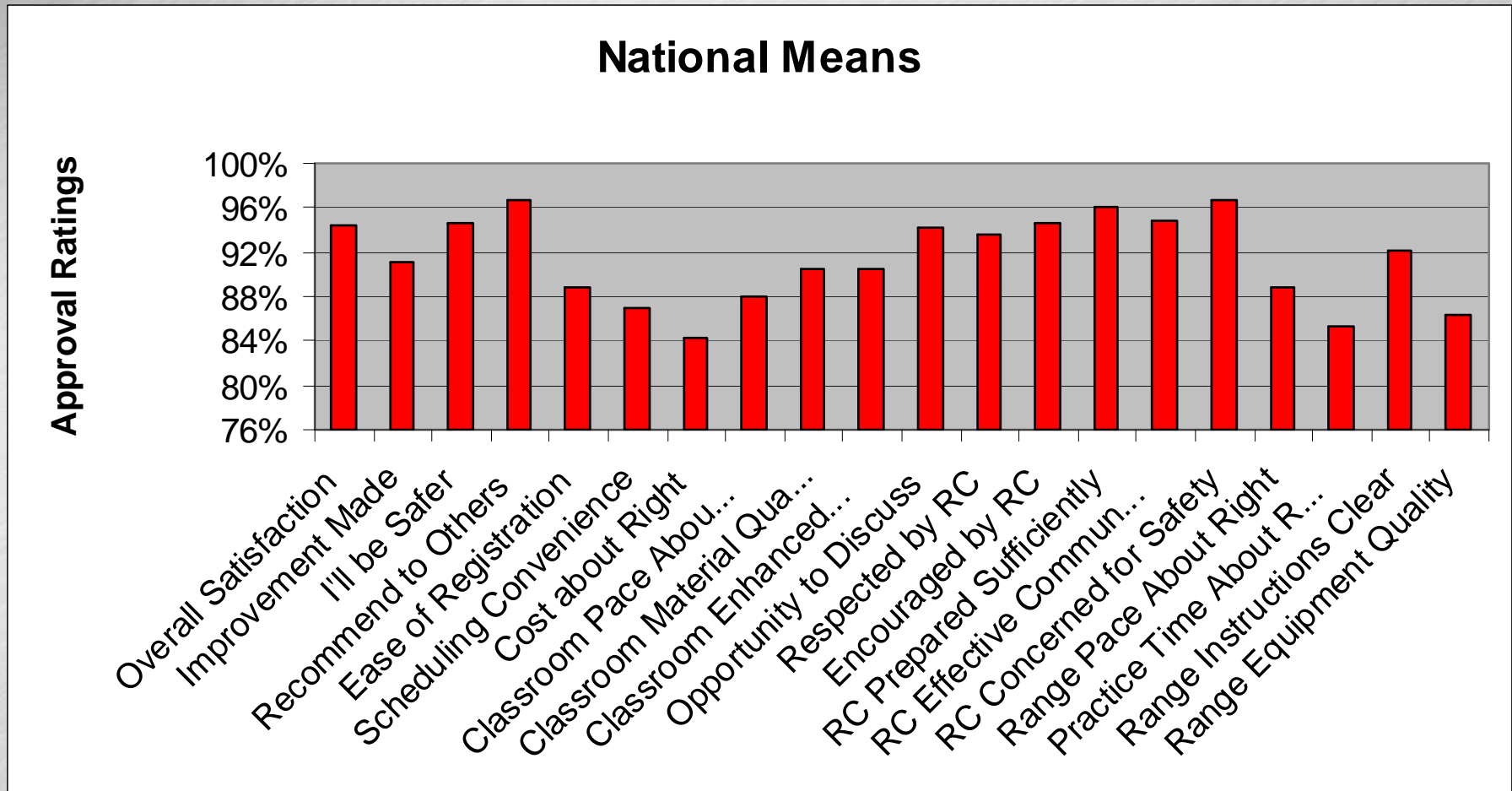
- BRC Student Participant Ratings and Observations





# Data MSF can provide

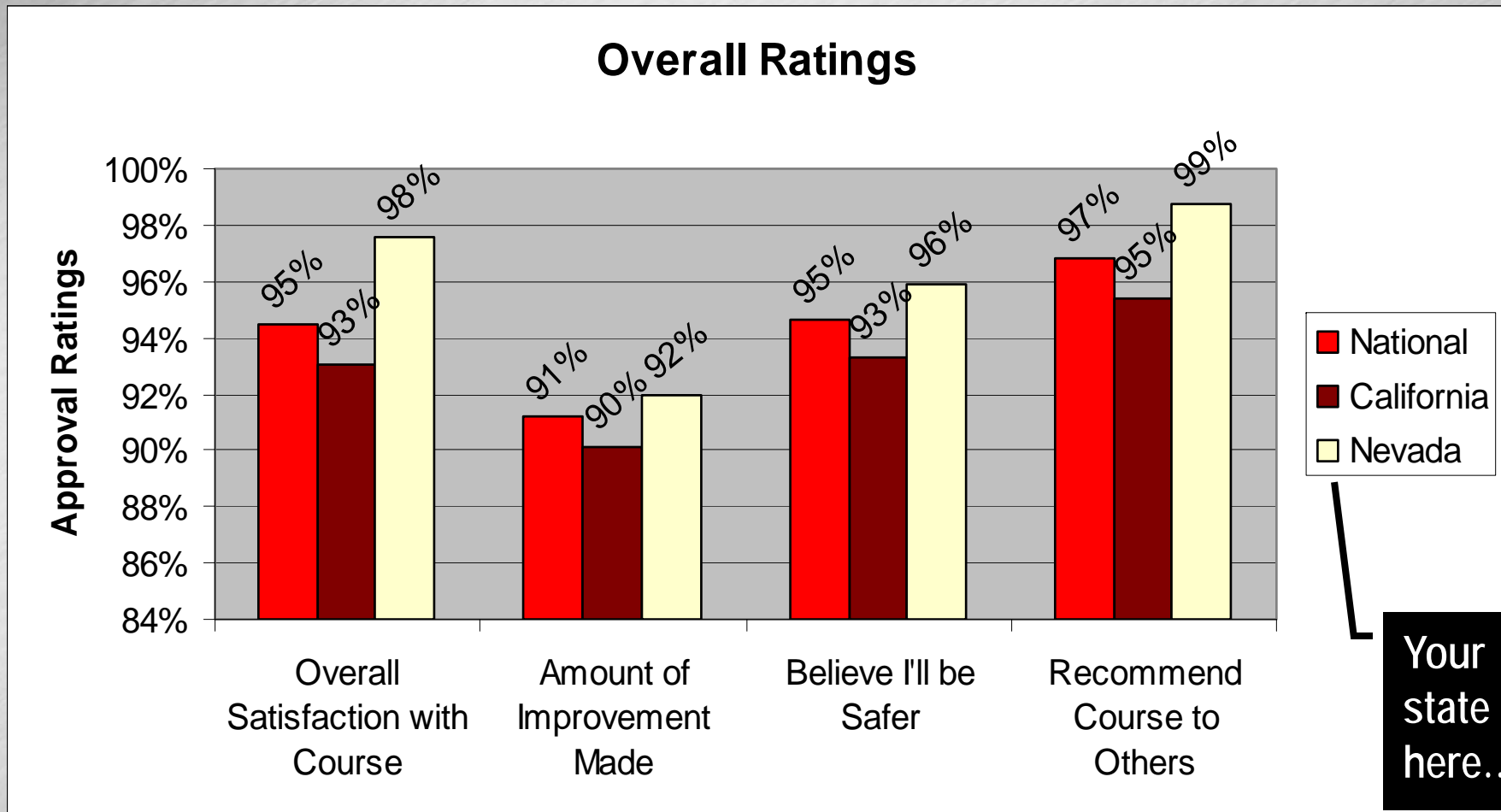
## 2004 BRC Student Feedback





# Data MSF can provide

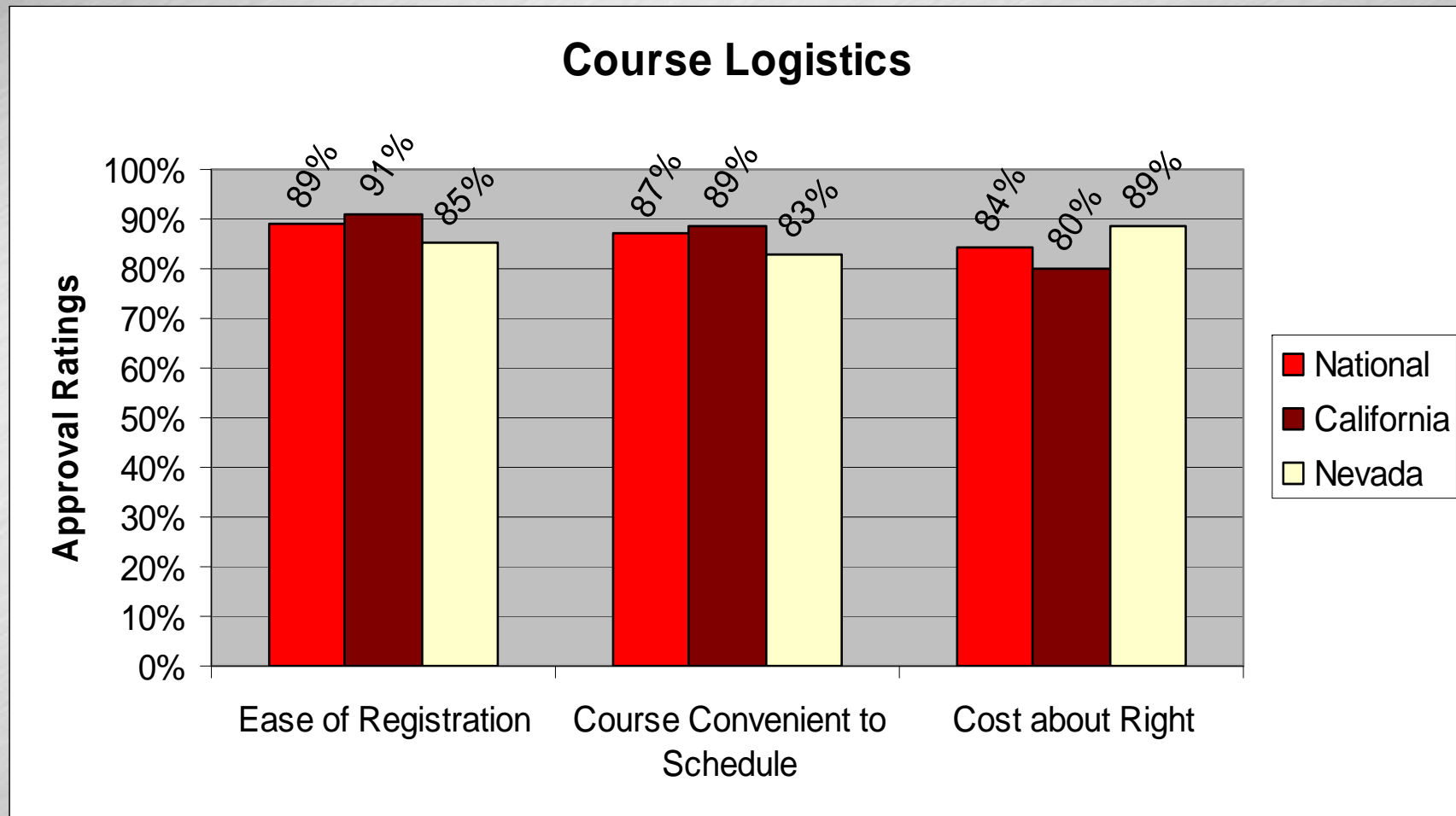
## 2004 BRC Student Feedback – Peer State Comparisons





# Data MSF can provide

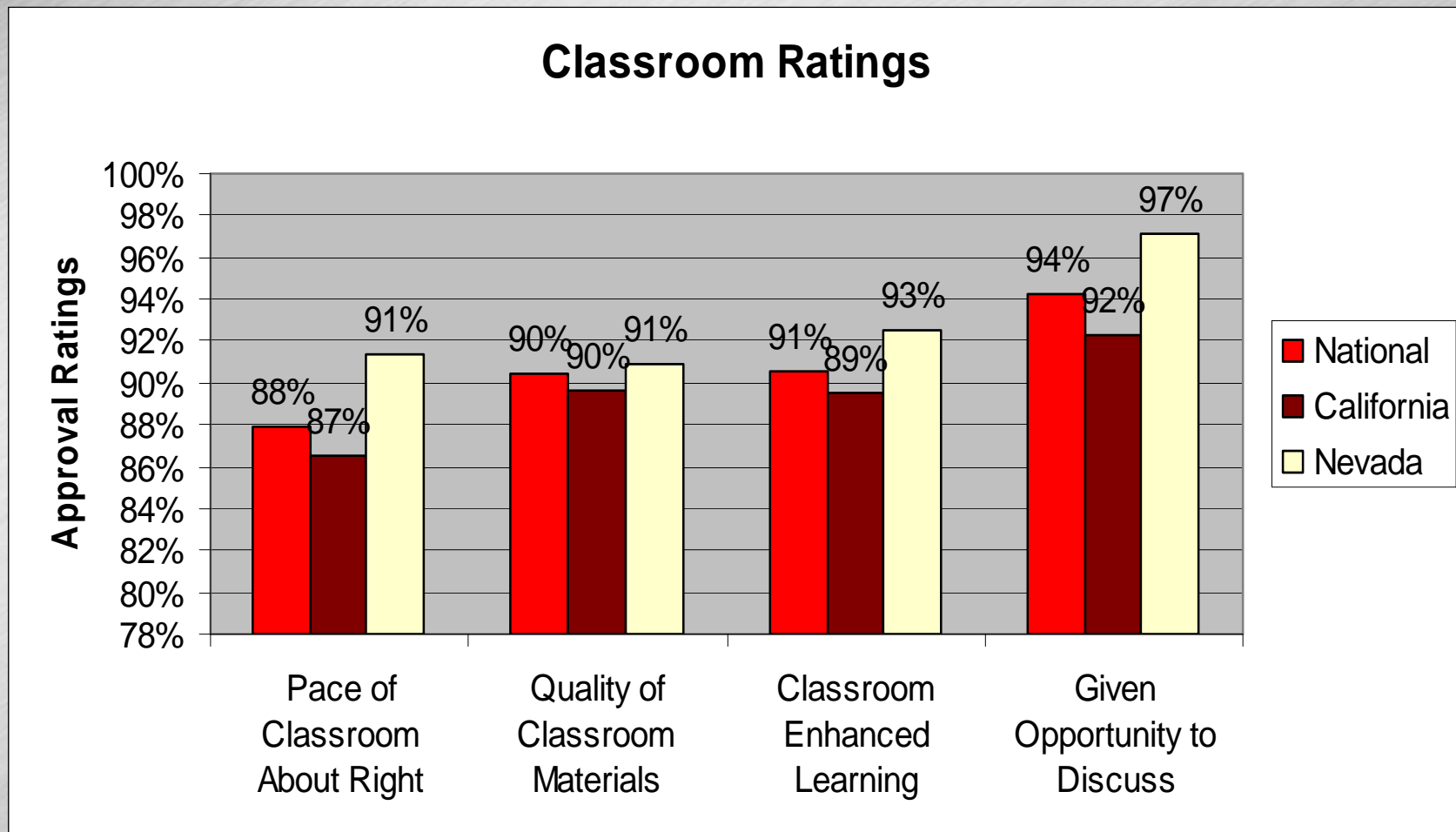
## 2004 BRC Student Feedback – Peer State Comparisons





# Data MSF can provide

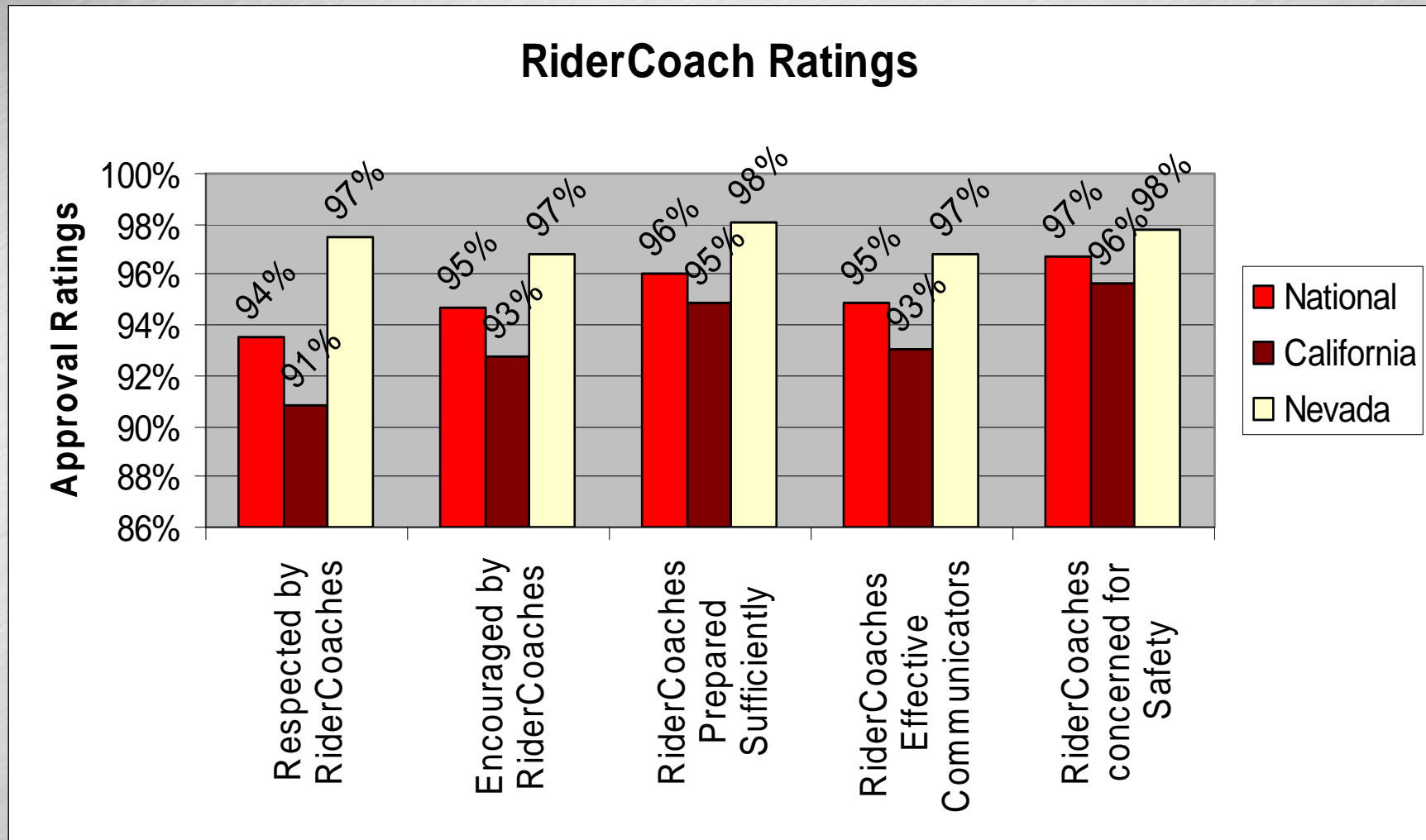
## 2004 BRC Student Feedback – Peer State Comparisons





# Data MSF can provide

## 2004 BRC Student Feedback – Peer State Comparisons

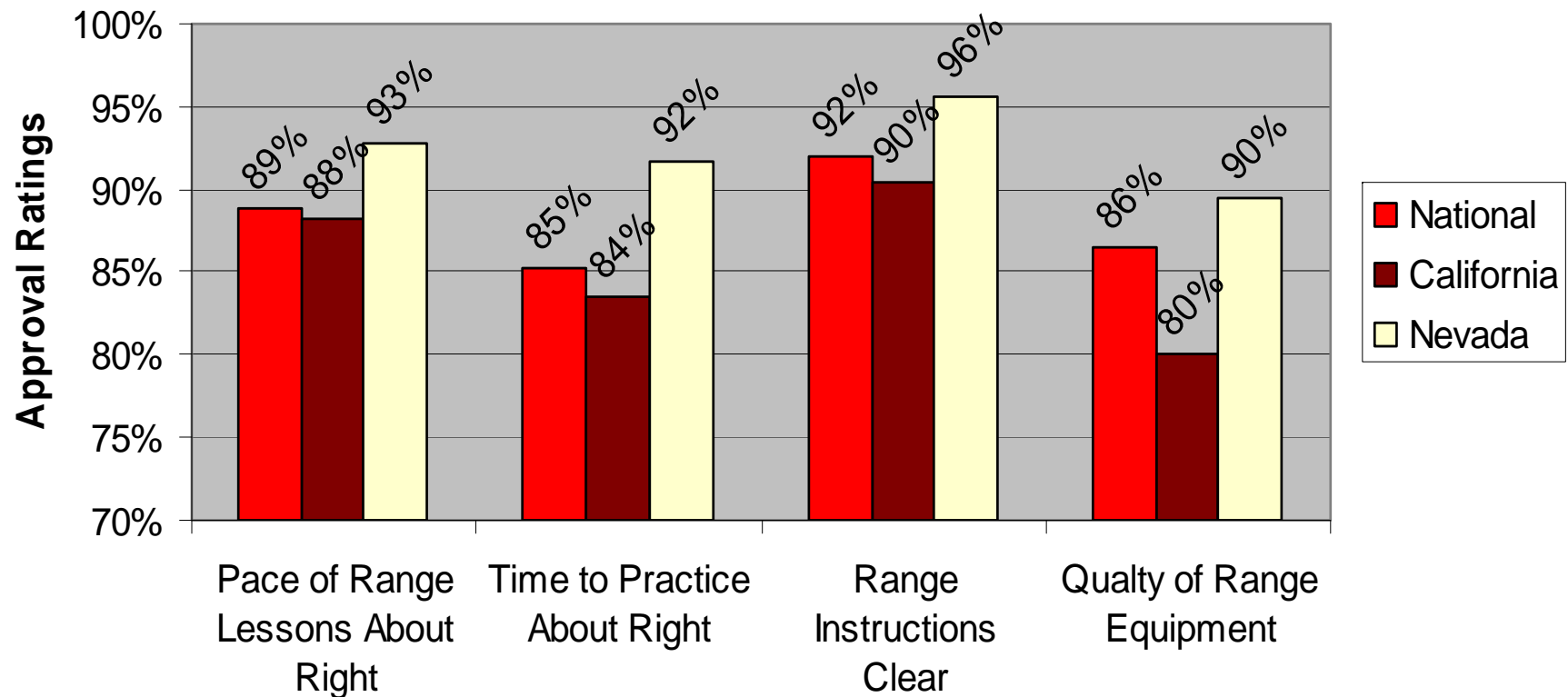




# Data MSF can provide

## 2004 BRC Student Feedback – Peer State Comparisons

### Range Exercise Ratings





# Outcome Evaluation

- CMSP Student Follow-Up Study
  - Random sample of course participants
  - Follow-up Questions about Riding Experiences
  - Telephone Sample
- The Discovery Project
  - Goal: To increase the number of and type of outcome measures
    - Self reported skill improvement
    - Self reported use of crash avoidance skills
    - Violations, Crashes, Fatalities
    - Use of protective gear that meets standards
    - Use of safety strategies





# Resources

- Demonstrating Your Program's Worth
  - <http://www.cdc.gov/ncipc/pub-res/demonstr.htm>
- W.K. Kellogg Foundation Evaluation Handbook
- American Evaluation Association
  - Find an Evaluator
  - <http://www.eval.org/consultants.htm>
- Motorcycle Safety Foundation




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## Program Evaluation

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**Thank You!**

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