QUARTERLY PROGRESS REPORT

to the

NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP)

on Project 17-18(3)

LIMITED USE DOCUMENT

This Quarterly Progress Report is furnished only for review by members of the NCHRP project panel and is regarded as fully privileged. Dissemination of information included herein must be approved by the NCHRP.

for period

April 1, 2005 to June 30, 2005

from

CH2M HILL

NATIONAL HIGHWAY COOPERATIVE RESEARCH PROGRAM
TRANSPORTATION RESEARCH BOARD
NATIONAL RESEARCH COUNCIL

PROGRESS SCHEDULE

PHASES 1, 2, 3 AND 4, and LEAD STATE OREINTATION MEETING

NCHRP Project No. 17-18(3) Phases 1, 2, 3, 4 and Lead State Orientation — Month June — FY 2005
Research Agency CH2M HILL
Principal Investigator Ron Pfefer, Kevin Slack, Howard Preston, Nick Antonucci, Tim Neuma

	2005												2006					
RESEARCH TASK	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	ESTIMATED % COMPLETION
PHASE 1	COMPLETE																	100
PHASE 2	COMPLETE																	100
PHASE 3																		
1. Identify Strategies	COMPLETE																	100
2. Meet With Experienced Practitioners	COMPLETE																	100
3. Revise Guides	COMPLETE																	100
4. Agency Quality Review	COMPLETE																	100
5. Refine Materials	■	■	■	■	■	■												79
	51	56	63	75	90	100												
Phase 3 Percent Complete	89%	90%	92%	94%	98%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	**95.1**
PHASE 4																		
1. Identify Strategies	■	■	■	■	■	■												100
	15	30	50	70	90	100												
2. Meet With Experienced Practitioners		■	■	■	■	■	☆											45
		5	25	40	50	75	100											
3. Revise Guides							■	■	■	■								
							25	50	75	100								
4. Agency Quality Review									■	☆								
									50	100								
5. Refine Materials											■	■	■	■	■	■	■	
											15	25	40	60	80	90	100	
6. Develop Data Guide	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	21
	5	10	15	20	30	40	50	60	65	70	75	80	85	90	95	95	100	
Phase 4 Percent Complete	4%	8%	14%	20%	26%	31%	40%	48%	62%	76%	80%	83%	86%	91%	95%	97%	100%	**26.1**
LEAD STATE ORIENTATION	COMPLETE																	100
1. Lead State Orientation Meeting																		100
OVERALL % COMPLETED	82%	83%	84%	86%	87%	89%	90%	91%	94%	96%	97%	97%	98%	98%	99%	100%	100%	87%

FIG. A -- OVERALL PROJECT SCHEDULE

■ denotes scheduled work ■ denotes progress ☆ denotes workshop

Overall Project Financials (Includes Phases 1, 2, and 3)

Funds Expended (All Phases)	78.7%	Time Expended	% 85
Contract Amount	$4,051,574	Starting Date	1-May-00
Expended This Month	$45,712	Completion Date	31-May-06
Total Exp. To Date	$3,189,243		
Balance	$862,331		

Salaries and Wages Estimated This Month	$53,108
Salaries and Wages Spent This Month	$45,712
Accumulated Salaries and Wages To Date	$3,189,243

FIG. B -- CONTRACT FUNDS

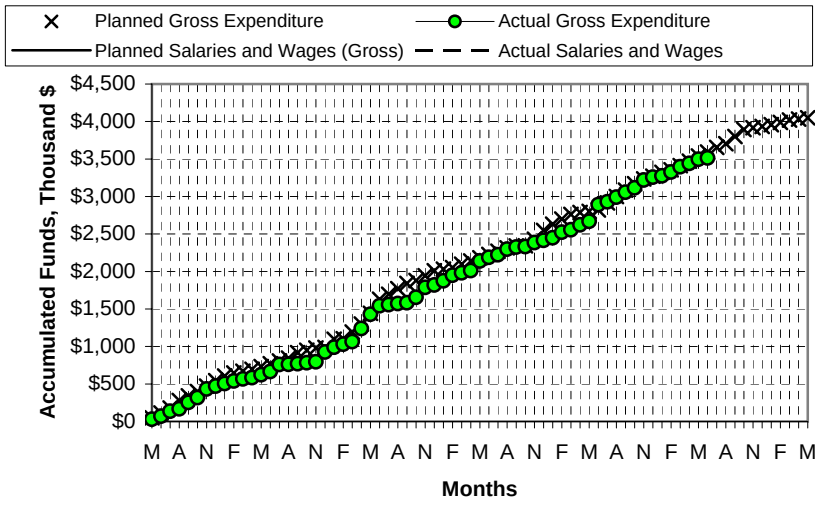
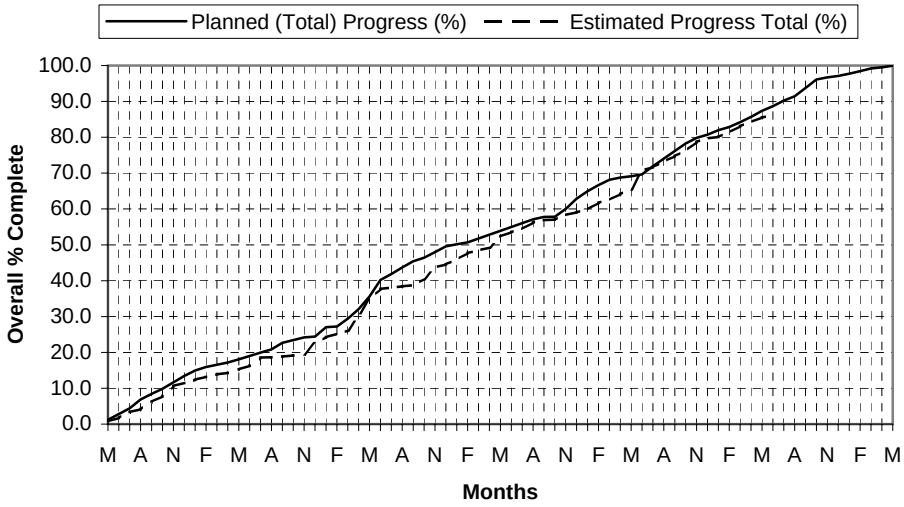


FIG. C -- CONTRACT PERIOD



NATIONAL HIGHWAY COOPERATIVE RESEARCH PROGRAM
TRANSPORTATION RESEARCH BOARD
NATIONAL RESEARCH COUNCIL

PROGRESS SCHEDULE

NCHRP Project No. 17-18(3A) Technical Support for Lead States FY 2005 Month June
Research Agency CH2M HILL
Principal Investigator Howard Preston & Kevin Slack

	2004												2005												
RESEARCH TASK	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	ESTIMATED % COMPLETION
1. Team Communications and Coordiation	5	10	12	15	17	20	22	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100		80
2. Technical Support to Lead States										10	20	30	40	50	60	65	70	75	80	85	90	95	100		92
3. Maintenance of Technical Content of Web Guides										10	25	40	50	60	70	80	90	100							
OVERALL % COMPLETED	1%	2%	3%	3%	4%	4%	5%	5%	6%	15%	25%	35%	44%	53%	62%	68%	74%	81%	84%	88%	92%	96%	100%	100%	68.8

FIG. A -- OVERALL PROJECT SCHEDULE

denotes scheduled work denotes progress

FIG. B -- CONTRACT FUNDS

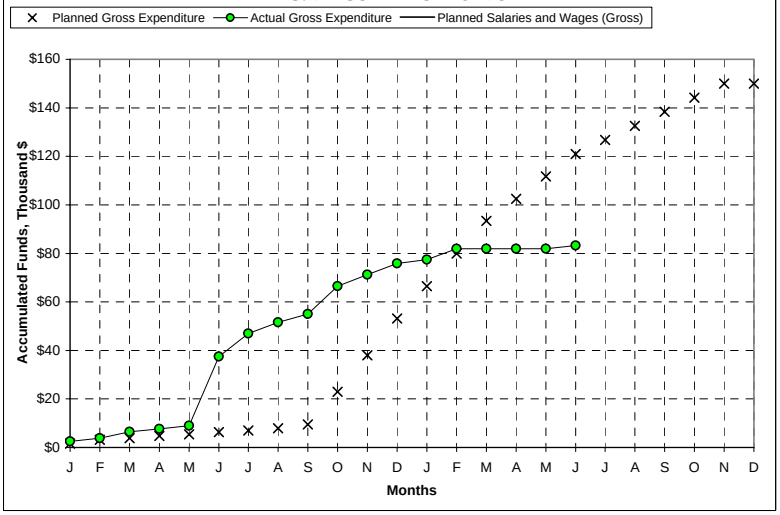
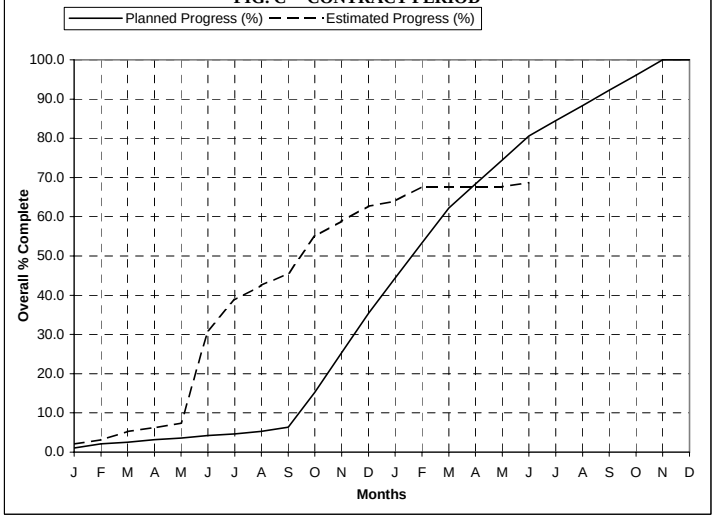


FIG. C -- CONTRACT PERIOD



Funds Expended	% 54	Time Expended	% 78
Contract Amount	$ 150,000	Starting Date	1-Jan-04
Expended This Month	$ 3,821	Completion Date	30-Nov-05
Total Exp. to Date	$ 81,595		
Balance	$ 68,405		

Salaries and Wages Estimated This Month	$ 9,185
Salaries and Wages Spent This Month	$ 3,821
Accumulated Salaries and Wages To Date	$ 81,595

Summary of the Problem Being Researched

In the summer of 1988, the AASHTO Standing Committee on Highway Traffic Safety (SCOHTS) established a task force to develop a comprehensive highway safety strategy. The task force worked cooperatively with the TRB to produce the Highway Safety Strategic Plan: 1991-2000, in early 1990. The plan identified a number of strategies applicable to the driver, vehicle, highway environment, and traffic records. The strategies were estimated to cost $1.46 billion annually, and to save a minimum of 64,000 lives over the coming decade.

In late 1996 and early 1997, in an effort to update and improve upon the existing plan, AASHTO, with assistance this time from FHWA and NHTSA as well as TRB, held workshops designed to arrive at a new plan. Nearly 100 individuals were involved, and they represented driver, vehicle, emergency medical service (EMS), safety management, pedestrian, and bicycle areas, as well as the areas of highway facilities and information management that are more typically identified as within the scope of AASHTO activities. It was a truly comprehensive effort, which involved several stages of development, between the invited experts and individuals acting in a "staff arm" capacity for the effort. The invitees included representatives from federal agencies and TRB, as well as many other stakeholders in the highway safety arena.

In 1998, AASHTO approved the Strategic Highway Safety Plan. The plan included strategies in 23 key emphasis areas that affect highway safety. The goal of the plan, as it moves from the research phase to the implementation phase, is to reduce fatality rate from 1.5 to 1.0 deaths per 100 million vehicle miles traveled (mvmt) by 2008.

Project Objectives

The objective of the project has been to develop and validate guidance documents to assist state and local agencies in implementing strategies to reduce the fatality rate from 1.5 to 1.0 deaths per 100 mvmt. The targeted areas are being addressed as funding becomes available. The three phases of this project focus on the following areas:

Phase 1

- Aggressive Driving
- Head-on Crashes on Two-Lane Roads
- Run-Off-The-Road Crashes on Two-Lane Roads
- Drivers With Suspended and Revoked Licenses
- Hazardous Trees
- Unsignalized Intersections

Phase 2 [SPR-2(209)]

- Older Drivers
- Unbelted Occupants
- Pedestrians
- Horizontal Curves
- Signalized Intersections
- Utility Poles

- Heavy Trucks

Phase 3 [TPF-5(058)]

- Distracted/Drowsy Drivers
- Motorcycles
- Rural Emergency Medical Services
- Work Zones
- Alcohol

Phase 4

- Head-on Crashes on Freeways [TPF-5(058)]
- Bicyclists
- Younger Drivers
- Speed Guide
- Data Needs, Sources, and Analysis

The implementation aspect of the first two phases of the project emphasizes program development, evaluation, testing, and measuring, through a demonstration process. The Phase 3 and Phase 4 guides will not be demonstrated but will undergo an additional agency review.

Accomplishment of the project objectives will require completion of seven primary tasks for Phase 1 emphasis areas (Tasks 0 through 6) and 5 tasks for Phase 2, 3, and 4 emphasis areas (Tasks 1 through 5). These tasks are outlined below with a brief description of the task objectives.

Task 0. Amplified Research Plan – Revise the research plan based on the panel's comments to the original proposal dated October 25, 1999. This task is not required for the Phase 2, Phase 3, and Phase 4 emphasis areas.

Task 1. Identify Promising Strategies – Review appropriate reference materials and survey/interview appropriate persons to arrive at an initial list of promising strategies for each of the emphasis areas.

Task 2. Establish Recommendations for Strategies and Their Implementation – Build on the strategies identified in Task 1 through workshops and symposiums and prepare a summary report of findings and recommendations.

Task 3. Develop Draft Implementation Guides - Produce a user-friendly implementation guide that may be readily adopted and adapted by state or local agencies to implement one or more strategies in each of the emphasis areas.

Task 4. Assist Selected States with Implementation Programs and Conduct Assessments – Test implementation guides by using them to prepare implementation plans with demonstration agencies. Task 4 of Phase 3 & 4 will include an Agency Quality Review rather than this demonstration.

Task 5. Refine Guidance Documents – Produce final set of implementation guides for each emphasis area by refining the draft documents based upon what was learned in Task 4.

Task 6. Submit Final Report – Provide a report that documents the efforts and results of the entire project. This report, originally part of Phase 1, will be deferred until the end of the project, as agreed upon in the modification to the contract made in October 2002.

NCHRP 17-18(3) A Technical Support for Lead States

A separate contract was awarded to the CH2M HILL team for technical support as Lead States develop implementation plans to reduce fatalities related to the Phase 1 emphasis areas. The emphasis area managers will provide support as needed to the Lead States. This project also includes updating of materials in the web-based guides as needed, based on results of the Lead State efforts.

Activities This Quarter

Work continued on Phase 3 and Phase 4 this quarter. Progress was made on Task 5 of Phase 3 and Tasks 1 and 2 of Phase 4. The following is a review of progress made as of the end of June 2005.

Phase 3 [TPF-5(058)]

Task 5. Refine Guides

All the preliminary draft guide has been submitted to NCHRP for the panel review. Panel's comments were received for all the guides. Responses to panel's comments and the revised guide for the Distracted & Drowsy Drivers, Rural EMS and Alcohol Guide have been submitted to NCHRP. Attached to this progress report are responses to panel comments on the guides submitted (Appendix 1). Responses to comments on the motorcycle guide will be provided after all the comments have been received at the end of the review period.

Phase 4

Task 1. Identify Promising Strategies

Work on the first draft of the Phase 4 guides continued. Emphasis area managers have submitted the draft guides to the project executive. After the internal technical and editorial review, draft guides were sent to workshop participants.

Task 2. Meet With Experienced Practitioners

Workshops have been scheduled for July 18-19, 2005, at the Keck Center. Coordination activities for the July workshop are underway.

NCHRP 17-18(3) A Technical Support for Lead States

CH2M HILL and emphasis area managers for the Phase 1 guides provided technical support to Lead States as requested.

Schedule and Budget

As of June 30, for Phase 3, we estimate that we are approximately 95 percent complete and for Phase 4 we estimate that we are 26 percent complete. We are approximately 94 percent spent for Phase 3 and 32 percent spent for Phase 4.

Plans for Next Quarter

In the next quarter, work is planned on Phase 3 Task 5 and Phase 4 Task 1 and 2.

Phase 3 [TPF-5(058)]

Task 5. Refine Guides

The project team will respond to panel comments. Once the phase 3 guides are published and we have received the final files from NCHRP, we will begin developing the web-based versions of the guides.

Phase 4

Task 2. Meet With Experienced Practitioners

Coordination activities for the July workshop will continue. A report summarizing the workshop findings and recommendations from participants will be prepared for the review of the NCHRP Panel.

Task 3. Revise Guides

Each guide will be revised based on the comments received from the Panel and the workshop participants and the additional resources obtained during the workshops.

NCHRP 17-18(3) A Technical Support for Lead States

The project team will provide technical support as needs arise.

Problems Encountered

None to report.

Appendix 1
Responses to Panel Comments on Phase 3 Guides

Response to Panel Comments on Distracted and Drowsy Driving Guide

Reviewer#1:

Comment:

Page III-3, Second Paragraph: NHTSA's Poll?

Response:

Yes, this is the NHTSA survey. The statement read, "according to a recent NHTSA survey conducted by the Gallup Corporation. . ." I've deleted the "conducted by the Gallup Corporation" to emphasize that this was an NHTSA poll. However, the reference to Dawn Royal as report author (rather than NHTSA) needs to remain.

Comment:

Page III-5, Exhibit III-3: Can legend be attached to numbers?

Response:

Legend has been attached to the numbers.

Comment:

Page III-8, Exhibit III-8: What percentage of sleepy crashes were night/day?

Response:

To my knowledge, the CDS data does not contain a nighttime/daytime variable. However, I've added the following information to the text: over half (52%) of all drowsy driving crashes occur at nighttime, between the hours of 10 pm and 6 am, with nearly 40% occurring between 2 am and 6 am.

Comment:

Page V-4, first paragraph: PI &E is really necessary.

Response:

I did not delete since this is part of a generic discussion of the benefits of enforcement that has been incorporated into other guides.

Comment:

Page V-4, first bullet: "Not just treatment". Discover is a critical part of EMS service improvement.

Response:

Same comment as above, although I've replaced "treatment of" with "locating and treating."

Comment:

Page V-8, last paragraph: Drowsy/distracted crashes were part (a part) of the event in the overall <?>, the data didn't exclude drowsy/distracted crashes.

Response:

I have edited the text to try to capture the reviewer's comment.

Comment:

Page V-19, General Description Section: (Phrase talking on a cell phone is circled.) Eating and drinking is a more common and longer lasting activity.

Response:

I haven't made any changes in response to this comment. Both cell phone use and eating and drinking are noted as potential sources of distraction.

Comment:

Page V-33, first paragraph under Exhibit V-10: NHTSA/NSF should be changed to NHTSA/NCSDR, 1988).

Response:

I've corrected the reference (but do assume that the reviewer meant 1998 and not 1988). I also added a reference to the NHTSA/NCSDR Expert Panel report published the same year, and removed another reference that I can no longer find on NHTSA's revamped website. Some websites have also been updated.

Comment:

Page V-33, last paragraph: National Sleep Foundation should be changed to National Center for Sleep Disorders Research.

Response:

I have made this change.

Comment:

Page V-34, under Technical Attributes, Expected Effectiveness: National Sleep Foundation should be changed to NCSDR.

Response:

Changed to NCSDR.

Reviewer#2:

Comment:

Page III-1, first paragraph: Just an observation, this was also used in the introduction.

Response:

It is repeated, but I'm hoping that is O.K.

Comment:

Page III-3, second paragraph, phrase "driving safely": Should be changed to driver safety?

Response:

Changed to driver safety.

Comment:

Page III-7, Exhibit III-7: Change "Vehicle Tuming" to "Vehicle Turning".

Response:

Corrected the typo.

Comment:

Page V-1, Exhibit V-1, Strategies; Please spell all aspects of the strategies out.

Response:

I'm uncertain as to what the reviewer is referring to, but if it is to the use of P, T and E for proven, tried and experimental, standard procedure for all of the guides has been to use the letters rather than spelling these out after each strategy. No changes have been made.

Comment:

Page V2, Explanation of Strategy Types: Should this section go before Exhibit V-1?

Response:

This is the standard order for all the guides. No changes have been made.

Comment:

Page V-24, under Exhibit V-7, Potential Difficulties: Change BAC to Blood Alcohol Content.

Response:

Blood Alcohol Concentration is spelled out.

Comment:

Page V-28, Key References: Journal Title should read *Journal of the American Medical Association*.

Response:

Changed.

Comment:

Page V-29: Second Paragraph: Please spell North Carolina out (North Carolina crash data.)

Response:

North Carolina has been spelled out.

Comment:

Page V-46, First Paragraph under Information on Agencies or Organizations Currently Implementing this Strategy: Spell out FMP.

Response:

Done

Comment:

Page V48, Exhibit V-14, Expected Effectiveness: Spell Ytterstad and Norton correctly.

Response:

This is spelled correctly.

Comment:

VI-21, first paragraph: Rework the sentence to read: It must now be conducted in greater detail and scope.

Response:

This is generic material which is the same in all reports. Change was not incorporated.

Reviewer#3:

Comment:

Editing Comment – Texas Department of Transportation is referred to as TxDOT not TexDOT (see V-16). In several places, the key references appear to be missing something and have a blank underline, (examples V_14, III_13).

Response:

I've corrected the TexDOT on p.v-16, and also did a "find and replace" to be sure I hadn't done this elsewhere.

With regard to references, I used the underline in both cases because there was no identified author for the reports cited. I checked with our librarian, and have followed her recommendations for updating the two citations noted.

Reviewer#4:

The guidebook looks really good and should be published. Two small edits relating to GHSA:

Comment:

MMUCC is a NHTSA effort not at GHSA effort. It was developed with NHTSA funding. GHSA served as the coordinator of the effort. The MMUCC website is www.mmucc.us

Response:

I have removed "published by GHSA" from bottom of p. III-11, and have also changed text on page III-13 and the reference. The website connection to the document was correct.

Comment:

Information about cell phone information on the GHSA website is at http://www.ghsa.org/html/state_info/laws/cellphone_laws.html.

Response:

This website did not work for me. The naghsr website address, however, does still work, as does a website for "statehighway safety.org." I finally figured out that the ghsa address does work, but only if you omit the "www". So, in place of the naghsr site on p V-26, i.e., I have put

http://ghsa.org/html/state_info/laws/cellphone_laws.html

Comment:

GHSA's website is ghsa.org not naghsr.org.

Response:

See comment above. The following site address works for me: http://ghsa.org/

Reviewer#5:

Comment:

Publish!

Response:

Thanks!

Reviewer#6:

Comment:

Excellent Report!

Response:

And more thanks!

Response to Panel Comments on Rural Emergency Medical Services (EMS) Guide

Reviewer#1:

I am quite disappointed with the final report. In my opinion, it will have little impact in terms of improving the survivability of severe crashes in rural areas. I had much higher expectations.

Comment:

I am concerned that some of the key comments given at last summer's workshop were not incorporated into the guide. Of prime concern are the following:

Response:

We feel that we were very responsive to all the comments that were mentioned at each of the workshops and to the formal comments submitted by panel members. Based on the June 2004 workshop, we submitted a summary report that contained approximately 70 items that were discussed during the workshop. Modifications were made to the document to address most of these items. In some cases, an item identified in the summary report may not have resulted in a direct modification to the document either because as authors of the guidance document we respectfully disagreed with the suggestion and made a conscious decision not to incorporate the recommendation. In other cases, efforts were made to obtain information from outside agencies, but in the end either nothing was provided from the agencies or the information that was provided was not applicable for the guide. Similarly, based upon the November 2004 workshop we submitted a summary report that contained approximately 95 items to be addressed. Again the document was revised in response to a majority of these items. If an item did not directly result in a modification to the document, it was because of similar reasons as discussed above (i.e., either we respectfully disagreed with the recommendation or efforts to obtain additional information proved fruitless). In addition, the panel submitted 5 specific comments to the guide. A response to each of these comments was provided back to the panel.

Comment:

The strategies are essentially statewide strategies. If resources are scarce, there won't be enough to accomplish on a statewide basis. Rural fatalities are not uniformly distributed throughout the rural area. They concentrate on the high volume rural routes, including the interstate. If resources are scarce, that is where implementation emphasis should be placed. There is no mention of giving emphasis to applying the right strategies in these areas.

Response:

We disagree that the strategies are essentially statewide strategies. In most cases, the strategies could be applied at all levels: statewide, regional, and local. Take for example the strategies provided below, each of these may be implemented by a local EMS agency:

Strategy 20.1 A1—Establish Programs with Organizations to Utilize Nontraditional Employees as EMS Responders

Strategy 20.1 A5—Integrate EMS systems into the Safe Communities effort

Strategy 20.1 A6—Use Mobile Data Technologies That Are Interoperable with Hospital Systems (T)

Strategy 20.1 B1—Develop Resource and Performance Standards Unique to Your Rural EMS System (T)

Strategy 20.1 B3—Identify and Evaluate Model Rural EMS Operations

Strategy 20.1 B4—Provide Evaluation Results to Elected and Administrative Officials at the County and Local Levels

Strategy 20.1 C2—Establish an Exchange Program to Allow Rural EMS Providers to Spend a Specified Number of Hours in Urban/Suburban Systems

Strategy 20.1 C7—Provide EMS Training Programs in High Schools in Rural Areas

Concerning the point that resources should be concentrated in rural areas with high concentrations of accidents and that there is no mention of giving emphasis to applying the right strategies in these areas, both of these issues were discussed at the June 2004 workshop, and both of these issues are addressed in the guide. In Section V, under the general description of Strategy 20.1 A4—Integrate Information Systems and Highway Safety Activities, the following text is provided, "*For example, databases maintained by highway agencies contain information on crash frequencies and locations. EMS agencies would find this information valuable in helping to determine where to allocate resources (e.g., base stations) and to deploy personnel based upon concentrations of accidents. Identifying areas of high concentration of crashes can also be useful for establishing plans for air transport of patients where ground transport to a trauma center exceeds a certain time threshold (e.g., 1 or 2 hours).*" (Note: This last sentence has been added based on upon Comment #2.)

Concerning giving emphasis to applying the right strategies, we respectfully disagree that the guide should prioritize the strategies, and so the document reads as follows in Section II under objectives, "*State EMS Directors and system managers and policy makers at the local level are best suited to determine which objectives and strategies are best to pursue, based on their existing levels of service and resources. State and local highway agencies should also work with their respective State EMS Directors and local system managers to prioritize the objectives and strategies.*"

Comment:

I didn't see any mention of an evacuation when the times for ground evacuation to a hospital from areas having high concentrations of serious crashes are recommended. It is probable that there are sections of interstates in some Western states where ground evacuation to a hospital exceeds two hours and there are significant numbers of serious injury crashes. Any evacuation needs to be considered for these situations.

Response:

See response above concerning the identification of high crash locations.

Reviewer#2:

General comments

Overall, the *Guide for Enhancing Rural Emergency Medical Services* (Guide) is well written and generally contains reasonable recommendations for improving emergency medical services in rural areas. The format of the Objectives and Strategies is great.

The Guide would benefit from:

Comment:

Additional emphasis on the definition and functioning of an emergency medical services system. Although the definition of EMS (page II-2) references the components of an EMS system, there is not a good discussion of the systems approach and components. Perhaps the paper would benefit from the attached graphical depiction of an Emergency Medical Services System that is used by NHTSA and its several federal partners.

Response:

Text has been provided discussing the systems approach and components, and the graphic has been inserted. It was recommended that the graphic be placed on Page II-2, but instead, the text/graphic seemed more appropriate after the discussion of the various EMS team members on Page II-4, so it was added there.

Additional supporting data – particularly in the introduction. Even though many of the factors identified on page I-1 seem self-evident, additional documentation would be helpful. For instance:

Comment:

It would be helpful to cite trend data illustrating the difficulties with recruiting and retention of volunteer personnel;

Response:

We are not aware of hard data that illustrates trends associated with the difficulties of recruiting and retention of volunteer EMS personnel, and our search for references/sources that provide such information proved fruitless. The references/sources that we are aware of state that fewer people are volunteering for EMS and give some of the reasons why (a citation has been provided in the text in Section II: Page II-4). Working in EMS, we know and see this to be true, the result being an increase of incidents where paid EMS is replacing volunteerism all over the country. The "EMS Agenda for the Future" also supports this indicating that, "The number of EMS volunteer organizations is decreasing." Because we are not aware of hard trend data illustrating the difficulties associated with recruiting and retention of volunteer EMS personnel, no such data was added to the report. The only modification made to the report based upon this comment was adding a citation that indicates fewer people are volunteering for EMS and give some of the reasons why (see Section II: Page II-4). (See Specific Comment – Page II-4).

Comment:

While perhaps intuitive, it would be good to cite data that "*…by better integrating services, making better and more-informed managerial-level decisions, becoming better educated, and reducing response times, the care provided to injured patients involved in motor vehicle crashes will be improved, reducing the number of fatalities attributable to EMS deficiencies.*" We are not aware of the data specifically pointing about EMS deficiencies as causing fatalities. Perhaps this could be stated as: "Although specific data and research in EMS are sparse, it is generally assumed that by "…integrating services…"

Response:

The recommended text has been added.

Comment:

Additional emphasis on surveillance, quality improvement and surveillance as integral components of an EMS system.

Response:

This is really part of the process description, and it is covered there. However, relevant text has been added in the discussion related to systems approach and the components of EMS systems.

Comment:

Additional emphasis on the need to improve the quality of care, particularly for trauma patients, in rural hospitals. This is evidenced by the several rural preventable mortality studies.

Response:

While integration with the trauma system is emphasized in the document, the scope of the guide is rural EMS, not hospital operations. Improving the quality of care in rural hospitals is outside the scope of this guide. Thus, no modifications to the guide were made in response to this comment.

Specific Comments

Comment:

Page II-3. We appreciate the emphasis on the trauma system as a component of the emergency medical services system. However, the portrayal is a bit confusing – e.g. "*many states still do not have comprehensive trauma system legislation that provides for a comprehensive system of trauma care as a part of the EMS system*" is a bit confusing. The naïve reader may not understand a trauma system or an EMS system and thus be fairly confused by this discussion.

Response:

We feel this statement is true and not confusing, and it is important to mention that some states do not have comprehensive trauma legislation, and there is a need to push for this

legislation. Thus, no modifications to the guide were made in response to this comment. Perhaps the inserted graphic will clarify any confusion (See comment A).

Comment:

Page II-4. A reference supporting the following statements is essential to assure future decision-making is driven by data: *The statement Issues of recruitment and retention of EMS providers remains one of our biggest challenges. Many manuals and specific recruitment and retention programs have been developed, but unfortunately have not stemmed the tide of the slow demise of volunteerism. For instance, according to a National Fire Protection Association report entitled "U.S Fire Department Profile through 2002," released in October 2003, the total amount of volunteers nationwide went up 4.1% from the year before and is the highest it has been since 1995. This marks a reversal in the downward trend we have seen in the amount of volunteers in since 1983, when there were 884,600 nationwide. (NFPA WEB site)*

Response:

A reference supporting this statement has been provided in the text.

Comment:

Page II-3. Although mentioned in other sections, this page would benefit considerably for a more in-depth discussion of NHTSA's efforts to develop the National EMS Information System (NEMSIS) including its standard data definitions and dictionaries and the National EMS Database to be housed at the NHTSA's National Center for Statistics and Analysis.

Response:

The purpose of this section is not to provide a detailed discussion. It serves as an introduction to the guidance document. In fact, based upon comments from the first workshop, this section was shortened because comments were made that it was too detailed. In reassessing Section II, there does not appear to be a logical location to make reference to NEMSIS, at least in Section II – Introduction. As you mentioned, reference is made to NEMSIS in Section V under Strategies A4 and B2, and hyperlinks to the NEMSIS website are accessible from both of these strategies so if the reader desires more detailed information than what is provided in the guidance document, the guidance document provides easy access to the more detailed information. We feel this is sufficient. Therefore, no modification was made to the document based upon this comment.

Comment:

Pages V-5 & 6. Objective 20.1A is not clear; this entire section was a bit confusing and disjointed. This overall goal, it justification and its evaluation is not clear.

Response:

The text has been revised to clarify the strategy.

Comment:

Page V-22. This section implies that NEMSIS is just a national EMS database. NEMSIS, however, includes a uniform set of patient-centered data definitions and data dictionaries that are useful to local and state emergency medical services systems. This section would benefit from an update on current NEMSIS developments.

Response:

We agree that NEMSIS is more than just a national EMS database. In fact, on Page V-44 we make reference to the data dictionaries and encourage all states to adopt as a national standard. Because a hyperlink to the NEMSIS website is provided on Page V-22 (and all locations in the document where NEMSIS is referenced), the guidance document provides easy access to more detailed information about NEMSIS if the reader desires to learn more. We feel this sufficient. Therefore, no modification was made to the document based upon this comment.

Comment:

Page V-39. A reference supporting the following statement, which may be a bit controversial, is essential. "*…consideration should be given to accepting slightly greater response times if a higher level of care can be provided to the patient upon arrival of the EMS unit at the site, than if no significant medical intervention would be made until the arrival at the trauma center.*

Response:

The following sentences were inserted into the text to address this comment. "*In addition, when considering establishment of threshold response times, consideration should be given to accepting slightly greater response times if a higher level of care can be provided to the patient upon arrival of the EMS unit at the site, than if no significant medical intervention would be made until arrival at the trauma center. Although research by Liberman et al. (2003) indicates there is no benefit of having on-site ALS for the prehospital management of trauma patients in urban centers, they also indicate these conclusions may or may not apply to rural trauma patients. Because the tradeoffs between advanced treatment versus time have not been completely answered for rural areas, this is a valid consideration when establishing threshold response times.*"

Comment:

Page V-56. This section does not reference the ***Public Information, Education and Relations for EMS – Injury Prevention Modules***. This program emphasizes EMS providers' involvement in community injury prevention efforts. It would also be good to reference NHTSA's funding of a State and Territorial Injury Prevention Director's mini-grant program to involve EMS providers in injury prevention efforts.

Response:

Text has been in the "General Description" section related to the injury prevention modules, and reference to the mini-grant program has been provided in the attributes table under "Costs Involved".

Comment:

Page *V-58*. The origin, intent and factual basis for the following statement is not clear*: If NHTSA becomes involved with the development of the program, the existing review and update process by NHTSA may be resistant to this module.* This is even more unclear with the publication of the PIER Injury Prevention Modules.

Response:

The sentence in question was deleted and replaced with the following sentence, "*Given the desire of NHTSA to maximize the benefit of their EMS training, given the limited time available to place trainees in a classroom, NHTSA may be resistant to widening the focus of their training package, to include peripheral topics.*"

Comment:

Page V-*59*. References should be provided for the statements: As a result, the number of police officers trained as first responders in all likelihood is decreasing. In addition, training centers across the country have concentrated their efforts at the higher level EMS programs such as emergency medical technician-basic and paramedic. The result is the lack of emphasis being placed on training the true first responder community in EMS.

Response:

The text has been revised to indicate, "*Anecdotal evidence suggests that the number of police officers trained as first responders in all likelihood is decreasing, and training centers across the country…*"

Comment:

Page V-60. *The intent of this strategy is not to require that all public safety emergency response personnel complete the first responder training at the level required of the national standard curriculum.* Encouraging less than a national standard for public safety personnel may not be in the best interests of patient care. This promotes considerable variability and may deviate from a competency-based approach. And, as mentioned on page V-61, there may be an additional cost to develop alternative materials.

Response:

The comment is noted. However, the original title of this strategy was "Strategy C4: Require first **RESPONDER** training for all public safety emergency response personnel, including police (E)". Based upon comments from the first workshop, there was consensus with the group for the need to reword the strategy to indicate that some level of "first responder" training is needed, but might not be at the same level required of the national standard curriculum. Thus, the title of the strategy was changed to "Strategy C4: Require first **CARE** training for all public safety emergency response personnel, including law enforcement officers (E)", and the sentence/paragraph in question was added in response to comments from the first workshop as well.

Comment:

Page V-*60.* Medical direction for First Responder education and practice is not mentioned.

Response:

The following text has been added under Keys to Success, "*Especially because the level of training may be less than the national standard required for a First Responder, guidance from the Medical Director on level of training and practice will be important.*"

Comment:

Pages V-64-67. NHTSA's ***First There-First Care*** Bystander Care for the Injured program is not referenced. This has recently been revised to include care for the injured motorcyclist.

Response:

The following text has been added, "*It is possible that this strategy could be developed in conjunction with NHTSA's First There-First Care Bystander Care for the Injured program.*" A hyperlink has also been added to access the respective NHTSA website.

Comment:

Page V-68. Another potential difficulty is the frequent statutory or regulatory minimum age requirement for becoming an EMT – 18 years of age in most states.

Response:

The recommended sentence has been added to the document.

Comment:

Page V-71. Current information on Phase II compliance can be found on the National Emergency Number Association WEB site: http://nena.org/dot/ For instance, in February, 2005, approximately 40.5% of Public Safety Answering Points (PSAPs) has some level of Phase II compliance.

Response:

The following sentence was added to the text, "*Current information on Phase II compliance can be found on the National Emergency Number Association website.*" A hyperlink has also been added to access the respective website. No additional information concerning Phase II compliance was added to the text of Strategy D1 because we have made a conscientious effort to distinguish between strategies D1 (improve cellular coverage) and D2 (Phase II compliance).

Comment:

Pages V-72 – V 75. It would be appropriate to add a discussion of the *ENHANCE 9-1-1 Act of 2004* which became law on December 23, 2004. This establishes a National 9-1-1 Implementation Coordination Office and authorizes, but does not fund, a $250,000,000 grant program to assist with states and PSAPs with Phase II compliance.

Response:

The following text was added in response to this comment, "*In December 2004, Congress passed the "Enhance 9-1-1 Act of 2004" which authorized the creation of a national E9-1-1*

Implementation Coordination Office. This legislation is designed to speed E9-1-1 implementation and improve coordination among all levels of government."

Comment:

Page *V75* – V78. Reference should be included to the Department of Transportation's Next Generation 9-1-1 program funded by the Intelligent Transportation System. Specific language and information will be provided by the NHTSA EMS Division upon request.

Response:

We feel it is premature to include information on the Next Generation 9-1-1 program. It is still in the formulation stage. Thus, no modifications were made to the document based upon this comment.

Reviewer#3:

No Comments

Reviewer#4:

Publish

Response to Panel's Comments on the Guide Addressing Collisions Involving Alcohol

Reviewer#1:

Comment:

Strategy 5.1, B2, Enhance DWI Detection: I realize that this strategy does have a paragraph on the training needs of law enforcement officers on page V-25. In my opinion, this is such a critical need in most states that it should receive more focus and have its own strategy. For example, Expand DWI Training for Law Enforcement Officers in the areas of Current State Laws, DWI Detection and Apprehension Techniques, Breath Alcohol Instruments and Adjucation and Courtroom Testimony.

Response:

This issue was discussed repeatedly and at length as the Guide was developed. Although our expert panel and most others who participated in the development of this Guide agree with us and the reviewer that training of law enforcement officers (as well as judges, probation officers, and many others involved in the adjudication process) is critical, it was never suggested that this be a stand-alone strategy in any of the several meetings and dozens of individual discussions we had with this large group of highly experienced traffic safety researchers and administrators. More generally, an unfocused recommendation for "more training" is unlikely to produce the desired result. Training itself is not a strategy, but rather a critical support function without which several strategies are unlikely to be effective. Accordingly, we have discussed training of law enforcement officers under the "Training and Other Personnel Needs" section of the applicable strategies (B1, B2, B3, C1, and C2).

Comment:

Page V-42, Strategy 5.1, D2, Require Ignition Interlocks: I am concerned with the way this Strategy is written that it may not imply interlocks should also be used when an offender is given a hardship or limited driver license. To me "license reinstatement" implies a license with full driving privileges.

Response:

This is a valuable insight; we have incorporated this change to strategy 5.1 D2.

Comment:

Page V-44: This page mentions DWI Courts. Under Objective 5/1 C – Prosecute, Sanction: I think DWI Courts should be a separate Strategy.

Response:

In early versions of this Guide, we had originally proposed DWI Courts as a separate strategy. However, further study of this approach, as well as the recommendation of our panel of experts, prompted us to incorporate it into strategy D3. DWI Courts are essentially a means to closely monitor convicted offenders to ensure they comply with imposed sanctions. The methods employed in DWI Courts (individually tailored sanctions, abstinence, electronic monitoring and other alternative sanctions) are quite similar to those of Intensive Supervision Probation (ISP) and other types of programs that are designed to closely monitor offenders. Thus, these approaches seemed better described together, rather than separately.

Reviewer#2:

I have reviewed the impaired driving guidebook and have a few, minor suggestions of a technical nature:

Comment:

On page v-20, it states that 38 states have UPPL laws. The issue is broader than just UPPL laws. In fact, 47 states have an intoxication exclusion either as part of UPPL laws, insurance intoxication exclusion policies, court cases, etc. Only 3 states have repealed UPPL laws and only 5 states have statutory language expressly prohibiting insurers from excluding alcohol and drug-related injury from insurance coverage. Apparently, it's necessary for states to repeal UPPL and prohibit intoxication exclusions. Both are really big barriers and have been very difficult to achieve. (There's a project that NHTSA and several agencies of HHS are funding. That's where this data comes from.)

Response:

This information, which nobody has previously mentioned, is quite helpful and has been incorporated under strategy 5.1 A4.

Comment:

At the top of page v-30, under "legislative strategies," there is no mention of juvenile holdover programs. These programs help answer the question of what law enforcement does with young drivers who are taken into legal custody for violating the state's zero tolerance law.

Response:

We have added a reference to juvenile holdover programs, as well as a link to a guide developed by the American Parole and Probation Association for implementing such a program under Associated Needs for Strategy 5.1 B3.

Comment:

On page v-31, in the second to the last paragraph, a reference should be made to the ignition interlock discussion later in the guidebook.

Response:

We agree with the point, but we don't understand the comment. Interlocks are already mentioned (and there is a reference to the strategy) in the paragraph mentioned by the reviewer.

Comment:

On page v-37, the term of art is Screening and Brief Intervention (SBI). The term of art for more comprehensive alcohol assessments is "alcohol audits." Both of these terms should be used in the discussion under Strategy 5.1 C4

Response:

As the Guide was developed, we had extensive discussions with panel members and other resources concerning the appropriate terms to use in describing this strategy; those used were deliberately chosen to convey, as clearly as possible, the essential notions to which reference is made. From the beginning, as we created this guide, we have made a special effort to avoid disciplinary jargon that might not be clear to the unacquainted reader.

The reviewer appears to be confusing the intent of this strategy (C4) with that for brief interventions (where we have substituted "screening and brief intervention" for "brief intervention" in the relevant titles & section headings). In discussing screening, this strategy refers to the court-based and often legally-mandated procedures that involve the criminal justice system in (1) identifying individuals with an alcohol problem, (2) bringing them to the attention of the treatment community and (3) using the power of the courts to encourage compliance with needed treatment (which rarely involves a brief intervention). As such "Screening and Brief Intervention" is not the appropriate term here. "Alcohol audit" is commonly used to refer to a more general assessment of the role of alcohol in contributing to a problem in a community, jurisdiction or other relevant domain rather than within a single individual (whether the term of art, to the extent there is one, is "assessment").

Comment:

On page v-43, reference should be made to the ISP program in Multnomah County, OR. It was one of the first in the country and has been evaluated. The recidivism rate is extremely low.

Response:

We have included a link to a recent description of Judge Baker's DUI Intensive Supervision Program in Multnomah County. Unfortunately, at present there appear to be no published evaluations of this program to which we can refer. One of the authors of this Guide recently reviewed a manuscript reporting on the DISP program, which was submitted to a well-respected journal, but unless and until it is published it cannot be cited.

That's it. Otherwise, it's an excellent guidebook and should be published as soon as TRB can.

We are inclined to agree with this highly insightful comment!

Reviewer#3:

No Comments

Reviewer#4:

Publish

Reviewer#5:

Comment:

The document should include implementing engineering solutions that can reduce impaired driving crashes (e.g. rumble strips) or ensuring sufficient funding, (for example making more of 154 and 164 funds available to address impaired driving, rather than for hazard elimination).

Response:

Although this guide does not specifically recommend engineering solutions, it does explicitly encourage consideration of several other guides that include numerous engineering solutions that might help to reduce alcohol-related crashes. It was our belief that this guide should be dedicated to describing strategies not covered elsewhere and which are either unique or at least relatively specific to impaired driving. Discussing, even briefly, all the engineering solutions that might help reduce alcohol-related crashes as well as crashes by non-impaired drivers would have made this guide massive.

With respect to the use of funds, it is beyond the purview of this guide to suggest how funding should be allocated among the competing priorities within either state or federal agencies charged with ensuring reasonably safe travel. Our only charge is to identify strategies that, if adopted, will likely produce a reduction in alcohol-related crashes.

Comment:

Note that AASHTO recommends increasing State excise tax on beer. NHTSA has not adopted a policy on this issue.

Response:

It is not clear what is intended by this comment. We did explain in earlier response to panel comments that strategies were included in this guide based on a thorough assessment of the relevant research and recommendations of several experts. Those showing clear effectiveness or promise were included. Strategies were neither included nor excluded based on endorsement, or lack thereof, by any agency, group or organization.

Comment:

Please see attachment A for additional comments.

Response:

Many of these comments have been incorporated. Revisions that were not adopted include the following:

Page I-1: Declines in alcohol-related crash fatalities did not begin until roughly 1987 or 1988, not the "early 1980s" as suggested by the reviewer.

Page I-3: Using the phrase "Medical and Health Care Settings" seems idiosyncratic. "Medical" and "Health Care" are not mutually exclusive; rather "Health Care" is a general term under which a variety of medical and other services are subsumed. Accordingly, we believe the latter is the more appropriate term.

Page I-4: We trust that the published version of this Guide will appropriately recognize members of the expert panel who contributed tremendously to its development. The location where the comment about this was inserted does not seem the appropriate place to identify members of the panel.

Page I-6: It is not clear that the comment about diversion programs suggested any change in the guide; it appears merely to be an observation. And we agree that eliminating diversion programs may not be popular among prosecutors and others; nonetheless, there appears to be a strong basis for recommending this strategy.

Page I-7: The suggested change in the name of the final strategy does not accurately describe what is intended. The purpose of the strategy is not to threaten, but rather to actually incarcerate those most recalcitrant individuals who fail to comply with the various other sanctions and efforts to control their behavior. It is also named to match the strategy (2.1 D2) in the **Guide for Addressing Collisions Involving Unlicensed Drivers and Drivers with Suspended or Revoked Licenses** to which it refers and is linked.

Reviewer#6:

No comments

Response to Panel's Comments on Work Zone Guide

1. In the discussion of transportation demand management, there was a lot of discussion about the impact on congestion, but none about the impact on safety. (I know the purpose of TDM is to reduce congestion but I imagine there are some positive safety impacts as well.)

> *A primary objective of a demand management program is to reduce potential delay for all corridor uses by reducing vehicular volume through the work zone. A significant secondary benefit of effective programs is the reduction in vehicular exposure, which should translate to a reduction in work zone crashes. The General Description section of Strategy 19.1A5 explains that demand management can be expected to improve safety by reducing volumes in, and therefore exposure to, work zones. The Expected Effectiveness section of the Strategy Attributes table discusses the potential of TDM to improve safety by reducing volumes.*

2. The discussion about work zone design guidance (19.1.C.1) seemed duplicative and not very fruitful since the guidance hasn't yet been developed under NCHRP 3-69. It might be better to incorporate the main points of this strategy into other strategies and eliminate this one altogether.

> *We feel that agencies without adequate work zone guidance can benefit from ideas discussed in this strategy, as well as the upcoming products of NCHRP 3-69, and feel the need for work zone design guidance to be emphasized by discussing it in its own strategy.*

3. There is no evidence that safety awareness campaigns, by themselves, have the least impact on drivers. Such campaigns have to be part of a broader strategy, e.g., a targeted enforcement campaign. Similarly, there is little evidence that changes in drivers education make any difference.

> *The lack of information to support the effectiveness of these strategies is discussed in the Expected Effectiveness section of the Strategy Attributes table. We feel the evidence discussed in the General Description section regarding drivers' lack of knowledge of traffic control devices and work zone flagger signals provides reason for inclusion of this strategy. Public information campaigns are discussed in other strategies in the guide as appropriate, including Strategy 19.1 D1 on enhancing enforcement in work zones. We feel safety awareness campaigns have a definite role in an overall program of safety enhancements.*

4. The National Committee on Uniform Traffic Laws and Ordinances has developed a model work zone law at the request of FHWA. It should be referenced in the document.

> *The NCUTLO website shows model laws, and the web version of the work zone guide can link to the NCUTLO site when the model law is posted.*