COST ESTIMATE STUDY OF AUTOMOBILE INSURANCE BILLS

PREPARED FOR THE
BUSINESS LEGISLATION COMMITTEE
SENATE, STATE OF MAINE

STUDY CONDUCTED BY
MILLIMAN & ROBERTSON, INC.
PASADENA, CALIFORNIA

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This report has been prepared as part of the cost estimate study authorized by the Committee on Business Legislation of the 106th Maine Legislature. The study was designed to evaluate the cost implications to the consumer of enactment of any of the following four automobile insurance bills:

1) Legislative Document No. 1
2) Legislative Document No. 1420
3) Legislative Document No. 1425
4) Legislative Document No. 1882

The study has been completed, and a synopsis of the results is presented in Exhibits A. The exhibits show the estimated premium change for the average insured vehicle to be expected from enactment of the proposed legislation, subject to the very important caveats in Exhibit H. For example, the study finding regarding LD 1 is that the personal injury portion (i.e. bodily injury liability, first-party medical payments, and uninsured motorist coverage) of the average automobile insurance premium would increase 8%, which is approximately equivalent to a 3% increase in the total premium (i.e. the foregoing plus property damage liability and physical damage coverages).

Exhibits A are based on a hypothetical model that is representative of the state of Maine in proportional, but not absolute, terms. The 100,000 injury radix and the other nonproportional entries of the exhibits are probably five or six times larger than actual Maine experience. This relationship was

not thoroughly explored in the course of the study, however, for it has no bearing on the proportional conclusions at the bottom of each exhibit, and it is these percentages that the study was designed to develop.

Exhibit A-1 indicates that enactment of LD 1 would increase total insured losses, including loss adjustment expenses, by 20%. Assuming that other expenses would retain the same proportional relationship to losses, the total personal injury automobile premium pool would also increase 20%. Compulsory insurance features of the bill, however, are assumed to cause the proportion of motorists having insurance to increase from 84% to 93%. Thus, the total premium pool would be spread over a larger base, and the personal injury premium increase would average only 8%. A similar analysis pertains in the case of the other bills.

Exhibits B present the findings of Exhibits A broken out between first party and residual liability components under the no-fault system. The sums of the two columns of Exhibit B for each bill equal the amounts in the last column of Exhibit A for that bill.

Exhibits C show the major cost-significant provisions of the bills as submitted for evaluation. Alternative provisions and their cost implications are discussed elsewhere.

LD 1 is a non-threshold bill that limits tort actions exclusively by precluding no-fault benefits as evidence. First-party benefits are limited to $10,000, with few inside limits by coverage and no offsets, but with no survivor benefits. There is a 12-month duration limit concerning no-fault benefits but since losses need merely be determinable during that period, and not necessarily accrued, it has been assumed that this limit has no appreciable

cost impact on wage loss benefits. Property damage liability and physical damage coverages are provided in the bill, but the cost implications thereof, which are not believed to be major, have not been addressed by the study. Coverage is mandatory, including $25,000 liability coverage.

LD 1420 is a $500 threshold bill that limits no-fault benefits to a maximum of $2,000 and to an accrual period of four years. The 20% coinsurance feature is assumed to apply to wage loss benefits after deduction of the 15% income tax offset. Subrogation is permitted only when a tort claim is pursued, which is assumed to be 25% of the time. The threshold applies to suits for economic loss as well as general damages, and includes an aggregate exemption of $2,000 in addition to the medical cost qualifying point of $500. Coverage is mandatory, including $20,000 minimum liability insurance.

LD 1425 is a high-threshold bill that places no aggregate limit on no-fault benefits. The threshold actually is expressed in terms of the requirement that disability last six months or more, and in addition there is a $5,000 deductible applied to general damage awards, although it is assumed that jury awards will reduce this to an effective $2,500 deductible. Wage loss and survivor benefits are limited to $200 per week. Coverage is compulsory, including $25,000 or more of bodily injury liability insurance.

LD 1882 is a non-threshold bill that limits no-fault benefits to a maximum of $10,000. There is no inside limit on medical costs, but wage loss benefits are limited to $3,900 and service benefits to $1,300. The death benefit is automatic full payment of the maximum no-fault benefit, whether or not there are survivors. Premium rates from 1975 are required to be functions of subrogation recoveries and interest earnings, and as well to generate a

minimum 80% loss ratio, but these future requirements were not considered in the study. No-fault coverage is compulsory, but liability coverage is optional under the bill.

Motorcycles are excluded from compulsory coverage under LD 1882, but are included under the other three bills. No-fault coverage is substantially more expensive to motorcyclists than is liability coverage.

Reasonable enforcement of the compulsory features of the bills is anticipated by the study. The conclusions drawn are quite sensitive to the insured ratio assumptions, and nonenforcement of mandatory provisions would have an adverse effect that could be significant.

With the exception of LD 1, benefits are overdue if not paid within 30 days of receipt of reasonable proof by the carrier. The monthly interest penalty on overdue payments is 1% in LD 1420, 1-1/2% in LD 1425, and 2% in LD 1882.

The study is addressed only to the compulsory coverage provisions of the bills and not to any optional deductibles or incremental benefits that may be expected, respectively, to reduce or increase accordingly the premium payable by an insured exercising the option.

Exhibit D presents some of the input assumptions to the computer model that is the foundation for the study. The goal has been to set forth those assumptions having a relatively high degree of subjectivity in order that the careful reader may understand the extent (which is moderate) to which actuarial judgment combines with relevant statistics to form the input to the model. For example, it is our judgment that permissible charges for

providing claim information under LD 1420 will add 2% to medical costs in the data base. Conversely, it is also our judgment that the one-year time limit provision of LD 1 will reduce medical costs by 5%. To the extent that these and other judgments are in error, of course, the study conclusions will be affected accordingly.

One of the more important sets of assumptions and statistics is that supporting the calculation of survivor benefit costs under LD 1425. Approximately half the total cost under this bill is in death costs, which includes residual liability and funeral and pre-death medical costs as well as no-fault survivor benefits. Statistics show the average survivor to be a female age 40, and it is assumed that the decedent, or the survivor in the case of service benefits, is a male age 43. Wage loss benefits are assumed payable for 22 years (to age 65 of the husband) and service loss benefits are assumed payable for life. Remarriage rates are assumed to be negligible, in part because of the size of the benefit provided. The mortality table used is the 1959-61 United States White Male and Female Life Table, and the interest rate 5% per annum. The resulting death cost projection can be seen to contribute heavily to the cost increase projection under LD 1425.

Exhibit E deals with the alternative provisions specified in the costing instructions. For example, removing the dollar threshold under LD 1420 would have the net effect of increasing the average personal injury premium by 17% relative to the impact of the basic bill. Since that impact is expected to be a 15% reduction, as shown in Exhibit A-2, the corresponding impact of the revised bill (with the alternative provision) may be taken to be a 2% increase in the personal injury premium and a 1% increase in the total auto premium.

A potentially significant provision in LD 1882 is that which provides that the no-fault carrier must offer insurance under which group health and related benefits would be primary coverage, the goal being to avoid duplicate payments. Since this offset package is optional, our basic costing of LD 1882 assumes that the provision will not be effective. We have also costed the bill on the assumption that the provision would be fully effective in all policies, however, and the study shows a relative personal injury premium saving of 15%. Accordingly, on this assumption, the revised Exhibit A-4 change would be a 6% reduction in the average personal injury premium, and correspondingly a 2% reduction in the average total premium. Underlying assumptions are that 80% of the population is covered by basic group health insurance that covers half of all medical costs and that 40% have as well group major medical insurance that covers 80% of the other half. It is also assumed that 25% of the population has group income replacement coverage that is fully as effective as the wage loss provision in LD 1882.

It has been contended that the expense level of a no-fault system will depend on the type of carrier providing insurance. This contention is not denied, but neither has it been endorsed in the course of the study. The result, of course, is the implicit assumption that expenses will not vary by type of carrier. To the extent that the assumption can be demonstrated to be in error, the conclusions drawn should be adjusted accordingly. If, for example, no premium tax is to be payable under one of the proposed bills, the premium payable by the average insured motorist will be reduced in direct proportion. A similar result will apply if the average commission level is reduced, provided there is no offsetting increase in other costs of administration. As stated above, this study assumes that loss adjustment expenses will

change under a no-fault system but will not vary by type of carrier, and that other expenses will not change proportionally and also will not vary by type of carrier.

Exhibit F presents the qualifications of our firm, and of the actuaries involved, to conduct this study.

Exhibit G briefly describes the computer model that is an important tool of our no-fault costing system, and as well the developmental project for that model and system.

Exhibit H presents a number of caveats pertaining to the study results and their use, and should be read carefully by anyone having occasion to represent or describe those results to others.

We appreciate the opportunity to have been of service to the Committee, and will be happy to answer any questions pertaining to the study or its conclusions.

MILLIMAN & ROBERTSON, INC.

Frederick W. Kilbourne

Frederick W. Kilbourne
Consulting Actuary

EXHIBIT A-1

MAINE - LEGISLATIVE DOCUMENT NO. 1

COMPARISON OF PRESENT AND PROPOSED SYSTEMS

	PRESENT SYSTEM			PROPOSED SYSTEM		
Benefit	Injuries	Average	Amount	Injuries	Average	Amount
Medical Expenses	49,665	348	17,303	86,179	333	28,656
Wage Loss	18,858	611	11,522	35,033	709	24,853
Services Loss	5,292	364	1,927	18,710	358	6,705
Death Costs	758	12,686	9,616	1,533	9,740	14,931
General Damages	47,038	1,041	48,946	38,418	1,136	43,659
Total Costs of Above			89,314			118,804
Medical Payments by Option			9,343			1,710
Loss Adjustment Expenses			18,745			20,458
Total System Costs			117,402			140,972
Change in Total System Costs						+20%
Overall Insured Ratios			84%			93%
Change for Average Insured Vehicle						+8%*
Change Related to Total Automobile Insurance Premium						+3%*

Notes:

1) Injuries shown are numbers of injuries based on a radix of 100,000.

2) Averages are dollar amounts per injury.

3) Amounts are in thousands of dollars.

*4) Neither these numbers nor the other numbers in this report should be used or released without reference to the caveats in Exhibit H attached.

EXHIBIT A-2

MAINE - LEGISLATIVE DOCUMENT NO. 1420

COMPARISON OF PRESENT AND PROPOSED SYSTEMS

	PRESENT SYSTEM			PROPOSED SYSTEM		
Benefit	Injuries	Average	Amount	Injuries	Average	Amount
Medical Expenses	49,665	348	17,303	83,669	330	27,622
Wage Loss	18,858	611	11,522	34,635	433	15,004
Services Loss	5,292	364	1,927	19,466	319	6,214
Death Costs	758	12,686	9,616	1,589	8,247	13,104
General Damages	47,038	1,041	48,946	11,280	2,559	28,870
Total Costs of Above			89,314			90,814
Medical Payments by Option			9,343			4,240
Loss Adjustment Expenses			18,745			14,897
Total System Costs			117,402			109,951
Change in Total System Costs						-6%
Overall Insured Ratios			84%			93%
Change for Average Insured Vehicle						-15%*
Change Related to Total Auto Insurance Premium						-6%*

Notes:

1) Injuries shown are numbers of injuries based on a radix of 100,000.

2) Averages are dollar amounts per injury.

3) Amounts are in thousands of dollars.

*4) Neither these numbers nor the other numbers in this report should be used or released without reference to the caveats in Exhibit H attached.

EXHIBIT A-3

MAINE - LEGISLATIVE DOCUMENT NO. 1425

COMPARISON OF PRESENT AND PROPOSED SYSTEMS

	PRESENT SYSTEM			PROPOSED SYSTEM		
Benefit	Injuries	Average	Amount	Injuries	Average	Amount
Medical Expenses	49,665	348	17,303	82,656	397	32,798
Wage Loss	18,858	611	11,522	34,270	585	20,051
Services Loss	5,292	364	1,927	14,079	425	5,978
Death Costs	758	12,686	9,616	1,581	48,644	76,906
General Damages	47,038	1,041	48,946	7,300	2,076	15,157
Total Costs of Above			89,314			150,890
Medical Payments by Option			9,343			
Loss Adjustment Expenses			18,745			17,950
Total System Costs			117,402			168,840
Change in Total System Costs						+44%
Overall Insured Ratios			84%			93%
Change for Average Insured Vehicle						+30%*
Change Related to Total Automobile Insurance Premium						+12%*

Notes:

1) Injuries shown are numbers of injuries based on a radix of 100,000.

2) Averages are dollar amounts per injury.

3) Amounts are in thousands of dollars.

*4) Neither these numbers nor the other numbers in this report should be used or released without reference to the caveats in Exhibit H attached.

EXHIBIT A-4

MAINE - LEGISLATIVE DOCUMENT NO. 1882

COMPARISON OF PRESENT AND PROPOSED SYSTEMS

	PRESENT SYSTEM			PROPOSED SYSTEM		
Benefit	Injuries	Average	Amount	Injuries	Average	Amount
Medical Expenses	49,665	348	17,303	75,946	366	27,777
Wage Loss	18,858	611	11,522	32,270	439	14,156
Service Loss	5,292	364	1,927	18,215	257	4,676
Death Costs	758	12,686	9,616	1,490	16,001	23,841
General Damages	47,038	1,041	48,946	39,542	1,102	43,560
Total Costs of Above			89,314			114,010
Medical Payments by Option			9,343			1,787
Loss Adjustment Expenses			18,745			18,598
Total System Costs			117,402			134,395
Change in Total System Costs						+14%
Overall Insured Ratios			84%			88%
Change for Average Insured Vehicle						+9%*
Change Related to Total Auto Insurance Premium						+4%*

Notes:

1) Injuries shown are numbers of injuries based on a radix of 100,000.

2) Averages are dollar amounts per injury.

3) Amounts are in thousands of dollars.

*4) Neither these numbers nor the other numbers in this report should be used or released without reference to the caveats in Exhibit H attached.

EXHIBIT B-1

MAINE - LD 1 AND LD 1420

NO-FAULT AND RESIDUAL LIABILITY COSTS IN PROPOSED SYSTEMS

	L. D. #1		L. D. #1420	
Benefit	No-Fault	Liability	No-Fault	Liability
Medical Expenses	25,829	2,827	20,440	7,182
Wage Loss	23,264	1,589	11,326	3,678
Services Loss	6,382	323	4,960	1,254
Death Costs	4,865	10,066	3,064	10,040
General Damages	-	43,659	-	28,870
Totals Above	60,340	58,464	39,790	51,024
Medical Payments	1,710	-	4,240	
Loss Expenses	7,921	12,537	5,222	9,675
Total Costs	69,971	71,001	49,252	60,699

Note: Entries are in thousands of dollars

EXHIBIT B-2

MAINE - LD 1425 AND LD 1882

NO-FAULT AND RESIDUAL LIABILITY COSTS IN PROPOSED SYSTEMS

	L. D. #1425		L. D. #1882	
Benefit	No-Fault	Liability	No-Fault	Liability
Medical Expenses	32,238	560	26,710	1,067
Wage Loss	19,148	903	9,771	4,385
Services Loss	5,755	223	2,640	2,036
Death Costs	70,201	6,705	14,000	9,841
General Damages	-	15,157	-	43,560
Totals Above	127,342	23,548	53,121	60,889
Medical Payments	-	-	1,787	-
Loss Expenses	13,306	4,644	5,900	12,698
Total Costs	140,648	28,192	60,808	73,587

Note: Entries are in thousands of dollars

EXHIBIT C-1

MAINE - LD 1 AND LD 1420

SIGNIFICANT BILL PROVISIONS

PROVISION	L.D. #1	L.D. #1420
No-fault benefit maximum	$10,000	$2,000*
Specific medical cost limit	None	None
Wage loss limits:		
aggregate	None	None
per week	None	None
duration	None	4 years
proportion	100%	80%
Service loss limit	None	4 years
Funeral benefit	$2,000	$1,000
Survivor benefit	None	$2,000*
Threshold:		
economic loss	None	$2,000
general damages	None	$500 medical*
Financial responsibility	$25,000	$20,000

*Note: Alternative provisions are covered in Exhibit E.

EXHIBIT C-2

MAINE - LD 1425 AND LD 1882

SIGNIFICANT BILL PROVISIONS

No-fault benefit maximum	No limit	$10,000*
Specific medical cost limit	None	None
Wage loss limits:		
aggregate	None	None
per week	$200	$150
duration	None	26 weeks
proportion	100%	75%
Service loss limit:		
per week	$200	$50
duration	None	26 weeks
Funeral benefit	$500	None
Survivor benefit	$200 per week	$10,000 flat
Threshold:		
economic loss	6 months disability	None
general damages	$5,000 deductible	None
Financial responsibility	$25,000	No change

*Note: Alternative provisions are covered in Exhibit E.

9/29/73

EXHIBIT D

MAINE - FOUR BILLS

SIGNIFICANT INPUT ASSUMPTIONS

1) Rehabilitation provisions will add 5% to medical costs included in the data base (1420, 1425, 1882).

2) One-year incurral period will reduce medical costs by 5% (1) while a four-year period will save 1% (1420).

3) Liberal injury definition and charges for providing claim information will each add 2% to medical costs (1420).

4) Medical costs beyond $10,000 per claim will add 6% to medical costs limited to $10,000 per claim (1425).

5) Medical and wage loss costs will be reduced 5% each by offsets for workmen's compensation (1420, 1425, 1882).

6) Government program offsets will reduce medical costs by 2% under LD 1420 and LD 1425, and by 5% under LD 1882.

7) Income tax offset provisions will reduce gross wage loss costs by 15% (1420, 1425, 1882).

8) Wage loss costs beyond $10,000 per claim will add 10% to wage loss costs limited to $10,000 per claim (1425).

9) 25% coinsurance will not reduce service benefit costs due to the $50 weekly benefit maximum (1882).

10) Survivor benefits are based on population mortality, are discounted at 5% interest, and continue until the decedent would have reached age 65 (1425).

11) Subrogation by the no-fault carrier will not reduce survivor benefits received from the liability carrier (all).

12) Average liability limits will be $5,000 greater than the financial responsibility minimum (all).

13) Persons with nonserious injuries yet eligible to take tort action will do so 75% of the time under LD 1, 80% under LD 1882, 95% under LD 1420, and 100% under LD 1425.

14) Persons with nonserious injuries and ineligible to take tort action will nonetheless do so 5% of the time (1420).

15) Exclusion of diagnostic x-rays and rehabilitation expenses over $100 causes a $500 threshold to be an effective $550 threshold (1420).

16) Economic loss lawsuits are permitted for wage loss beyond $200 weekly in case of serious injury only (1425).

17) Purchase of medical payments will be reduced one-half with a $2,000 maximum (1420), four-fifths with a $10,000 maximum (1, 1882), and will be eliminated with an unlimited medical benefit (1425).

18) Loss adjustment expenses will change from 19% under the current system to 25% for general damages residual liability claims, 10% for death claims, and 13% for no-fault benefits with full subrogation (1), 12% with partial subrogation (1420) and 11% with no subrogation (1425, 1882).

19) Compulsory insurance features will cause one-fourth of those now uninsured to purchase insurance under LD 1882, and one-half to do so under the other bills.

20) The personal injury premium averages 40% of the total automobile insurance premium.

EXHIBIT E

MAINE - LD 1420 AND LD 1882

ALTERNATIVE COST STUDY PROVISIONS

Bill	Maximum Benefit	Threshold	Adjustment	Revised (Injury)	Revised (Total)
1420	$ 2,000	0	+17%	+2%	+1%
1420	10,000	0	+27%	+12%	+5%
1420	10,000	500	+8%	-7%	-3%
1420	2,000	1,000	-4%	-19%	-8%
1420	10,000	1,000	+5%	-10%	-4%
1882	2,000	0	-7%	+2%	+1%
1882	5,000	0	-3%	+6%	+2%

Note: Adjustments shown are to the Exhibit A changes for average insured vehicle in personal injury premiums payable. The revised Exhibit A changes for each alternative are also shown as applied to the personal injury premium and to the total automobile insurance premium.

EXHIBIT F

MAINE COST ESTIMATE STUDY

QUALIFICATIONS OF CONSULTING ACTUARIES

Milliman & Robertson, Inc. is an independent consulting actuarial firm with headquarters in Seattle and offices in fifteen other cities throughout the United States and Canada. Ownership of the firm, which began operations in 1947, is entirely in the hands of actuaries in its employ.

The professional staff of the firm includes five members of the Casualty Actuarial Society. Contributions to this study were as follows;

1) Frederick W. Kilbourne, FCAS - primary responsibility for the study.
2) Janet S. Graves, ACAS - secondary responsibility and operation of computer model.
3) James R. Berquist, FCAS - peer review of study conclusions and final report.

EXHIBIT G

MAINE COST ESTIMATE STUDY

NAIC NO-FAULT COST ESTIMATING PROJECT

The costing method used in our study has at its foundation the computerized model developed by us for the National Association of Insurance Commissioners with funds provided by the federal Department of Transportation and the Ford Foundation. The sole purpose of this model is to facilitate evaluation of the cost implications of proposed changes in an automobile insurance system, generally from a tort basis to a no-fault basis.

The model operates by postulating a distribution of persons injured in automobile accidents. The cost of these injuries is then evaluated under each of the insurance systems (tort and no-fault), and total costs are then compared. The distribution of injuries recognizes such factors as vehicle type, severity of injury and the number of vehicles involved. The cost of each injury recognizes the amounts being paid under the current tort system, and first-party benefit provisions in the proposed no-fault legislation, and any residual tort rights under no-fault. The model also takes into account such factors as the eligibility for first-party benefits of various vehicle types, the percentage of vehicles insured, the provisions of the assigned claims plan, the number of injuries in the state involving out-of-state vehicles, and the number of injuries occurring outside the state.

In addition to bodily injury liability coverage, the model also recognizes the presence of uninsured motorist and medical payments coverages under the current system, and makes assumptions about the extent to which they

will be continued under the proposed system. Changes in loss adjustment expense levels are also taken into account.

This description covers the logic of the model; it must also have data to which the logic is applied. The principal data base has been the accident statistics developed by the state motor vehicle departments, and the closed claim survey conducted in 1969 as part of the Department of Transportation study of automobile insurance. This data has been analyzed on both a nation-wide and a state-by-state basis, and has been specifically tailored to Maine for the purpose at hand. Other data sources, both insurance and non-insurance, have been utilized, as has a fair amount of considered professional judgment.

This professional judgment is an inescapable part of any cost evaluation of no-fault proposals. The model attempts to predict costs under a new and substantially changed system, and while we believe that we have been as independent and objective as possible in our judgments, they are judgments nevertheless. To improve our judgments, we have visited the states of Massachusetts, Delaware, and Florida, each of which has had a no-fault law in effect for over one year. We have reviewed our model with numerous other casualty actuaries familiar with no-fault costing, employed by both insurance companies and insurance departments. But, in the last analysis, these are our own independent conclusions.

EXHIBIT H

MAINE COST ESTIMATE STUDY

CAVEATS PERTAINING TO NUMERICAL RESULTS

Although the conclusions presented in this report are probably the best estimates available, it must be recognized that they are nonetheless subject to a rather low degree of certainty, as well as being very susceptible to misinterpretation. We thus feel compelled to specify that those conclusions not be used nor released except in conjunction with the following caveats:

1) Premium change indications are generally expressed in terms of the "people damage" portion of the average automobile insurance premium, without regard to the more costly "automobile damage" portion. The expected impact on the average total automobile insurance premium is substantially smaller, as shown in Exhibits A.

2) Premium change indications refer to the average automobile insurance premium, without distinction as to type or usage of vehicle. Inclusion of motorcyclists under the no-fault law, for example, may be expected to increase premiums greatly for this group of motorists.

3) Our study did not deal with the expected changes in rating classifications and territorial relativities, which may be substantial. Generally speaking, urban areas may be expected to experience results somewhat more favorable than shown, and rural areas significantly less favorable.

4) The cost implications of the input assumptions and supporting data base to the model should not be overlooked nor underestimated. This is particularly true where there is a combination of uncertainty and cost impact, such as of psychological factors affecting tort action rates and large first-party losses based on sparse data of limited applicability to no-fault auto insurance.

5) Our study deals exclusively with the relativity between the current and proposed systems, and not with inadequacies nor redundancies in current premium rates. Mandated premium rate decrease provisions, which were not addressed by our study, should be evaluated with this caveat prominently in mind.

6) Attention has been given to the automobile insurance system only, and not to the effects of changes in that system on other lines of insurance or public institutions or personal finances.

7) The findings presented in this report reflect no more than an attempt to predict the relative cost implications of passage of a particular bill, and not the effects of various other influences on automobile insurance premiums. Such influences are many, and include changes in automobile safety features, enforcement of driver standards, and general economic conditions, to name a few.