SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Filing at a Glance

Company: Insurance Services Office, Inc.

Product Name: PR-2009-IALL1	SERFF Tr Num: ISOF-125999334	State: District of Columbia
TOI: 11.0 Medical Malpractice - Claims Made/Occurrence	SERFF Status: Closed-APPROVED	State Tr Num:
Sub-TOI: 11.0000 Med Mal Sub-TOI Combinations	Co Tr Num: PR-2009-IALL1	State Status:
Filing Type: Rule		Reviewer(s): Clark Simcock
	Authors: Sheila Lemley, Donna Jaffee, Arlene Byrd, Jane Golden, Allison Weisberg, Patricia Prial	Disposition Date: 06/11/2009
	Date Submitted: 01/21/2009	Disposition Status: APPROVED
Effective Date Requested (New): 09/01/2009		Effective Date (New): 10/01/2009
Effective Date Requested (Renewal): 09/01/2009		Effective Date (Renewal): 10/01/2009

State Filing Description:

General Information

Project Name: Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability

Project Number: PR-2009-IALL1	Domicile Status Comments:
Reference Organization:	Reference Number:
Reference Title:	Advisory Org. Circular:
Filing Status Changed: 06/11/2009	
State Status Changed:	Deemer Date:
Created By: Allison Weisberg	Submitted By: Allison Weisberg

Corresponding Filing Tracking Number:

Filing Description:

Medical Professional Liability Increased Limits Filing for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and Allied Healthcare classes.

SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Company and Contact

Filing Contact Information

Jane Golden, Regional Director
3131 Princeton Pike Bldg 4
Suite 208
Lawrenceville, NJ 08648

jgolden@iso.com
609-895-0185 [Phone] 206 [Ext]
201-748-1803 [FAX]

Filing Company Information

Insurance Services Office, Inc.
545 Washington Boulevard

Jersey City, NJ 07310-1686
(201) 469-2207 ext. [Phone]

CoCode:
Group Code:

Group Name:
FEIN Number: 13-3131412

State of Domicile: Delaware
Company Type: Advisory/Rating Organization
State ID Number:

Filing Fees

Fee Required?	No
Retaliatory?	No
Fee Explanation:	
Per Company:	No

COMPANY	AMOUNT	DATE PROCESSED	TRANSACTION #
Insurance Services Office, Inc.	$0.00		

SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Correspondence Summary

Dispositions

Status	Created By	Created On	Date Submitted
APPROVED	Clark Simcock	06/11/2009	06/11/2009

Amendments

Schedule	Schedule Item Name	Created By	Created On	Date Submitted
Rate	Corrected Pages	Allison Weisberg	02/18/2009	02/20/2009

Filing Notes

Subject	Note Type	Created By	Created On	Date Submitted
Change of Effective Date	Note To Reviewer	Allison Weisberg	06/12/2009	06/12/2009
Pending ISO filing	Note To Reviewer	Jane Golden	04/03/2009	04/03/2009
Corrected Pages	Note To Reviewer	Allison Weisberg	02/18/2009	02/18/2009

SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Disposition

Disposition Date: 06/11/2009
Effective Date (New): 10/01/2009
Effective Date (Renewal): 10/01/2009
- Effective Date (New) changed from 09/01/2009 to 10/01/2009 and Effective Date (Renewal) changed from 09/01/2009 to 10/01/2009 by Simcock, Clark on 06/16/2009.
Status: APPROVED
Comment:

Company Name:	**Overall % Indicated Change:**	**Overall % Rate Impact:**	**Written Premium Change for this Program:**	**# of Policy Holders Affected for this Program:**	**Written Premium for this Program:**	**Maximum % Change (where required):**	**Minimum % Change (where required):**
Insurance Services Office, Inc.	-2.400%	-2.400%	$		$	%	%
	Percent Change Approved:						
	Minimum:	%	**Maximum:**	%	**Weighted Average:**		%

SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Schedule	Schedule Item	Schedule Item Status	Public Access
Supporting Document	Cover Letter All Filings		Yes
Supporting Document	Consulting Authorization		Yes
Supporting Document	Actuarial Certification (P&C)		Yes
Supporting Document	District of Columbia and Countrywide Experience for the Last 5 Years (P&C)		Yes
Supporting Document	District of Columbia and Countrywide Loss Ratio Analysis (P&C)		Yes
Rate	Revised Rules		Yes
Rate	Corrected Pages		Yes

SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Note To Reviewer

Created By:
Allison Weisberg on 06/12/2009 09:47 AM
Last Edited By:
Allison Weisberg
Submitted On:
06/12/2009 09:50 AM
Subject:
Change of Effective Date
Comments:
Dear Commissioner Hampton:

The above captioned filing was submitted to the District of Columbia Insurance Department on January 21, 2009 and was approved for a September 1, 2009 effective date.

At this time, we wish to change the effective date to October 1, 2009.

Your prompt acknowledgment will be appreciated.

Very truly yours,

Jane Golden
Regional Director
Government Relations

SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Note To Reviewer

Created By:

Jane Golden on 04/03/2009 09:02 AM

Last Edited By:

Jane Golden

Submitted On:

04/03/2009 09:03 AM

Subject:

Pending ISO filing

Comments:

This filing has been pending for two months and we are getting close to the print deadline. Are there any issues as to why it has not been acknowledged.

Thanks, Jane

SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Amendment Letter

Submitted Date: 02/20/2009

Comments:

We have discovered a typographical error in the above captioned filing. Three of the Increased Limits Tables pages -- Physicians, Surgeons, and Allied Health Care -- have the wrong column headings (incorrect occurrence limits). We have uploaded the revised version of pages A-8, A-9, and A-10 with the corrected column headings under the rate/rule tab.

Changed Items:

Rate/Rule Schedule Item Changes:

Exhibit Name:	Rule # or Page #:	Rate Action:	Previous State Filing Number:	Attach Document:
Corrected Pages	Please see attached	Replacement		PR-2009-IALL1 -DC - Corrected Pages.pdf

SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Note To Reviewer

Created By:

Allison Weisberg on 02/18/2009 12:30 PM

Last Edited By:

Allison Weisberg

Submitted On:

02/18/2009 01:11 PM

Subject:

Corrected Pages

Comments:

We have discovered a typographical error in the above captioned filing. Three of the Increased Limits Tables pages -- Physicians, Surgeons, and Allied Health Care -- have the wrong column headings (incorrect occurrence limits). We have uploaded the revised version of pages A-8, A-9, and A-10 with the corrected column headings under the rate/rule tab.

SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Rate Information

Rate data applies to filing.

Filing Method:

Rate Change Type: Decrease

Overall Percentage of Last Rate Revision: -3.000%

Effective Date of Last Rate Revision: 09/01/2007

Filing Method of Last Filing:

Company Rate Information

Company Name:	Company Rate Change:	Overall % Indicated Change:	Overall % Rate Impact:	Written Premium Change for this Program:	# of Policy Holders Affected for this Program:	Written Premium for this Program:	Maximum % Change (where required):	Minimum % Change (where required):
Insurance Services Office, Inc.	N/A	-2.400%	-2.400%				%	%

SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Rate/Rule Schedule

Schedule Item Status:	Exhibit Name:	Rule # or Page #:	Rate Action	Previous State Filing Number:	Attachments
	Revised Rules	Please see attached	Replacement		PR-2009-IALL1 - DC - Section A - Scope of Revision.pdf
	Corrected Pages	Please see attached	Replacement		PR-2009-IALL1 -DC - Corrected Pages.pdf

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SECTION A - SCOPE OF REVISION

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SUMMARY OF INCREASED LIMIT FACTOR CHANGES

Changes By Table and in Total

The following shows the average indicated and filed changes for risks in each Table. The changes shown here are for policies that are subject to occurrence limits, but not annual aggregate limits. These indicated summary changes can also be found in Section G.

Major Lines

Table	Indicated Change	Filed Change
Hospitals	-2.6%	-2.6%
Physicians	-2.3%	-2.3%
Surgeons	-3.1%	-3.1%
Physicians and Surgeons Combined	-2.7%	-2.7%
Overall	-2.7%	-2.7%

Minor Lines

Table	Indicated Change	Filed Change
Nursing Homes	-5.0%	-5.0%
Dentists	-0.7%	-0.7%
Allied Health Care	-1.4%	-1.4%
Overall	-1.6%	-1.6%

ALL MEDICAL

	Indicated Change	Filed Change
All Medical	-2.4%	-2.4%

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SUMMARY OF INCREASED LIMIT FACTOR CHANGES

Comparison of Current and Revised Increased Limit Factors

The following compares the current and revised occurrence/aggregate increased limit factors for a sample of policy limits:

Table	Policy Limit ($,000) (Occurrence/ Aggregate)	(1) Current Factor (100/300 Basic Limit)	(2) Revised Factor (100/300 Basic Limit)	(3) [(2)-(1)] (1) % Change
Nursing Homes	1,000/3,000	1.29	1.22	-5.4%
	2,000/4,000	1.53	1.43	-6.5%
	3,000/5,000	1.68	1.57	-6.5%
Dentists	1,000/3,000	1.07	1.07	0.0%
	2,000/4,000	1.12	1.12	0.0%
	3,000/5,000	1.16	1.15	-0.9%
Hospitals	1,000/3,000	1.36	1.34	-1.5%
	2,000/4,000	1.75	1.67	-4.6%
	3,000/5,000	2.00	1.86	-7.0%
Physicians	1,000/3,000	1.38	1.34	-2.9%
	2,000/4,000	1.73	1.67	-3.5%
	3,000/5,000	1.91	1.85	-3.1%
Surgeons	1,000/3,000	1.43	1.38	-3.5%
	2,000/4,000	1.86	1.74	-6.5%
	3,000/5,000	2.11	1.95	-7.6%
Allied Health Care	1,000/3,000	1.21	1.20	-0.8%
	2,000/4,000	1.37	1.36	-0.7%
	3,000/5,000	1.47	1.47	0.0%

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

REVISED INCREASED LIMIT FACTORS

Pages A-5 to A-10 display the revised Medical Professional Liability increased limit factors as they will appear in Division Seven of the Commercial Lines Manual, for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons, and Allied Health Care (Tables 17.E.1, 17.E.2, 17.E.3, 17.E.4, 17.R.5, 17.E.6., respectively). All factors are relative to the basic limit of $500,000 per occurrence/$1,500,000 aggregate.

To generate the occurrence/aggregate increased limit factors, we begin with the calculation of indicated increased limit factors, displayed on pages B-7 to B-12. We reflect the aggregate policy limit by combining the indemnity severity distribution (described in Section C) to model the loss size, and the Negative Binomial distribution to model the number of occurrences. This combined distribution produces limited losses at various combinations of occurrence and aggregate limits.

The increased limit factors shown are the ratio of the sum of indemnity, ALAE, ULAE and risk load at each specific limit to the same sum evaluated at the basic limit. Therefore, the factor listed for the basic limit is 1.00.

Certain factors have been judgmentally modified to maintain consistency within the tables.

On pages A-11 through A-16 we list the classes used to evaluate the factors for the Nursing Homes, Dentists, Hospitals, Physicians, Surgeons, and Allied Health Care Liability increased limits tables. We also provide a list of class descriptions for your convenience. Please note that the data used in this review is evaluated on a state group basis for Hospitals, Physicians, and Surgeons and on a multistate basis for Nursing Homes, Dentists, and Allied Health Care. Therefore some classes listed may not be applicable for rating in this jurisdiction. In addition, data from some related and superseded classes were mapped to equivalent or similar current classes and included in this increased limit review. Finally, note that "D.O." means Doctor of Osteopathy for the applicable Physicians and Surgeons Classes.

REVISED INCREASED LIMIT FACTORS

(Limits are in thousands)

RULE 17.
INCREASED LIMITS TABLES

E. Increased Limits Tables

1. Convalescent Or Nursing Homes, Rehabilitation Hospitals, And Skilled Nursing Facilities - Short Term

	Per Medical Incident						
Aggregate	**$100**	**200**	**250**	**300**	**500**	**750**	**1,000**
$300	0.58	0.67	0.70	0.71			
400	0.59	0.70	0.74	0.76			
500	0.60	0.72	0.76	0.80	0.85		
600	0.61	0.74	0.78	0.82	0.89		
750		0.76	0.80	0.84	0.93	0.96	
900		0.78	0.82	0.86	0.96	1.01	
1,000		0.79	0.83	0.87	0.97	1.03	1.07
1,500		0.80	0.84	0.88	1.00	1.10	1.16
2,000				0.89	1.01	1.12	1.20
2,500						1.13	1.21
3,000							1.22

The following factors MUST be referred to company before using.

	Per Medical Incident			
Aggregate	**$1,500**	**$2,000**	**$2,500**	**$3,000**
$1,500	1.22			
2,000	1.28	1.33		
2,500	1.32	1.38	1.42	
3,000	1.33	1.41	1.46	1.49
4,000	1.35	1.43	1.49	1.55
5,000	1.36	1.44	1.51	1.57

Table 17.E.1. Convalescent Or Nursing Homes, Rehabilitation Hospitals, And Skilled Nursing Facilities - Short Term

REVISED INCREASED LIMIT FACTORS

(Limits are in thousands)

RULE 17.
INCREASED LIMITS TABLES

E. Increased Limits Tables

2. Dentists

Aggregate	Per Medical Incident $100	200	250	300	500	750	1,000
$300	0.80	0.84	0.85	0.86			
400	0.81	0.86	0.87	0.88			
500	0.82	0.88	0.89	0.90	0.92		
600	0.83	0.90	0.91	0.92	0.94		
750		0.92	0.93	0.94	0.96	0.98	
900		0.94	0.95	0.96	0.98	1.00	
1,000		0.95	0.96	0.97	0.99	1.01	1.03
1,500		0.96	0.97	0.98	1.00	1.02	1.04
2,000				0.99	1.01	1.03	1.05
2,500						1.04	1.06
3,000							1.07

The following factors MUST be referred to company before using.

Aggregate	Per Medical Incident $1,500	$2,000	$2,500	$3,000
$1,500	1.06			
2,000	1.07	1.09		
2,500	1.08	1.10	1.11	
3,000	1.09	1.11	1.12	1.13
4,000	1.10	1.12	1.13	1.14
5,000	1.11	1.13	1.14	1.15

Table 17.E.2. Dentists

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

REVISED INCREASED LIMIT FACTORS

(Limits are in thousands)

17. INCREASED LIMITS TABLES

E. Increased Limits Tables

3. Hospitals

Aggregate	Per Medical Incident $100	200	250	300	500	750	1,000
$300	0.58	0.64	0.65	0.66			
400	0.59	0.68	0.70	0.71			
500	0.60	0.70	0.73	0.75	0.80		
600	0.61	0.72	0.76	0.78	0.84		
750		0.74	0.78	0.81	0.89	0.90	
900		0.76	0.80	0.83	0.93	0.96	
1,000		0.77	0.81	0.84	0.95	0.99	1.03
1,500		0.78	0.82	0.86	1.00	1.11	1.18
2,000				0.87	1.03	1.18	1.27
2,500						1.21	1.32
3,000							1.34

The following factors MUST be referred to company before using.

Aggregate	Per Medical Incident $1,500	2,000	2,500	3,000
1,500	1.24			
2,000	1.37	1.42		
2,500	1.45	1.52	1.55	
3,000	1.50	1.59	1.64	1.67
4,000	1.55	1.67	1.74	1.80
5,000	1.57	1.70	1.79	1.86

Table 17.E.3. Hospitals

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

REVISED INCREASED LIMIT FACTORS

(Limits are in thousands)

17. INCREASED LIMITS TABLES

E. Increased Limits Tables

4. Physicians

Aggregate	Per Medical Incident $100	150	200	250	300	500	1,000
$300	0.52	0.62	0.67	0.70			
400	0.53	0.64	0.69	0.73			
500	0.54	0.66	0.71	0.76	0.87		
600	0.55	0.68	0.73	0.78	0.90		
750		0.70	0.75	0.80	0.93	1.02	
900		0.72	0.77	0.82	0.96	1.07	
1,000		0.73	0.78	0.83	0.97	1.09	1.16
1,500		0.74	0.79	0.84	1.00	1.16	1.26
2,000				0.85	1.01	1.19	1.31
2,500						1.20	1.33
3,000							1.34

The following factors MUST be referred to company before using.

Aggregate	Per Medical Incident $1,500	2,000	2,500	3,000
$1,500	1.38			
2,000	1.46	1.54		
2,500	1.50	1.60	1.66	
3,000	1.52	1.63	1.71	1.75
4,000	1.54	1.67	1.76	1.82
5,000	1.55	1.68	1.77	1.85

Table 17.E.4. Physicians

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

REVISED INCREASED LIMIT FACTORS
(Limits are in thousands)

17. INCREASED LIMITS TABLES

E. Increased Limits Tables

5. Surgeons

	Per Medical Incident						
Aggregate	**$100**	**150**	**200**	**250**	**300**	**500**	**1,000**
$300	0.50	0.60	0.65	0.68			
400	0.51	0.62	0.67	0.72			
500	0.52	0.64	0.69	0.74	0.86		
600	0.53	0.66	0.71	0.76	0.89		
750		0.68	0.73	0.78	0.93	1.02	
900		0.70	0.75	0.80	0.96	1.07	
1,000		0.71	0.76	0.81	0.97	1.09	1.18
1,500		0.72	0.77	0.82	1.00	1.18	1.29
2,000				0.83	1.01	1.21	1.34
2,500						1.22	1.37
3,000							1.38

The following factors MUST be referred to company before using.

	Per Medical Incident			
Aggregate	**$1,500**	**2,000**	**2,500**	**3,000**
$1,500	1.41			
2,000	1.50	1.58		
2,500	1.55	1.65	1.72	
3,000	1.58	1.70	1.78	1.83
4,000	1.60	1.74	1.84	1.91
5,000	1.61	1.75	1.86	1.95

Table 17.E.5. Surgeons

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

REVISED INCREASED LIMIT FACTORS

(Limits are in thousands)

17. INCREASED LIMITS TABLES

E. Increased Limits Tables

6. Allied Health Care and Optometrists

	Per Medical Incident						
Aggregate	**$100**	**150**	**200**	**250**	**300**	**500**	**1,000**
$300	0.63	0.71	0.74	0.77			
400	0.64	0.73	0.76	0.79			
500	0.65	0.75	0.78	0.81	0.92		
600	0.66	0.77	0.80	0.83	0.94		
750		0.79	0.82	0.85	0.96	1.05	
900		0.81	0.84	0.87	0.98	1.08	
1,000		0.82	0.85	0.88	0.99	1.09	1.14
1,500		0.83	0.86	0.89	1.00	1.11	1.17
2,000				0.90	1.01	1.12	1.18
2,500						1.13	1.19
3,000							1.20

The following factors MUST be referred to company before using.

	Per Medical Incident*			
Aggregate	**$1,500**	**2,000**	**2,500**	**3,000**
$1,500	1.26			
2,000	1.27	1.33		
2,500	1.28	1.34	1.40	
3,000	1.29	1.35	1.41	1.45
4,000	1.30	1.36	1.42	1.46
5,000	1.31	1.37	1.43	1.47

* Per Optometric Incident for Optometrists

Table 17.E.6. Allied Health Care and Optometrists

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

MEDICAL PROFESSIONAL LIABILITY CLASS DESCRIPTIONS

NURSING HOME CLASSES

CLASS CODE	DESCRIPTION
80923	NURSING HOMES - FOR PROFIT, PER BED
80951	NURSING HOMES - FOR PROFIT, PER 100 OUTPATIENT VISITS
80924	NURSING HOMES - NOT-FOR-PROFIT, PER BED
80952	NURSING HOMES - NOT-FOR-PROFIT, PER 100 OUTPATIENT VISITS
92212	NURSING HOMES - GOVERNMENTAL, PER BED
92216	NURSING HOMES - GOVERNMENTAL, PER 100 OUTPATIENT VISITS
80522	SKILLED NURSING FACILITIES - SHORT TERM, FOR PROFIT, PER BED
80523	SKILLED NURSING FACILITIES - SHORT TERM, FOR PROFIT, PER 100 OUTPATIENT VISITS
80524	SKILLED NURSING FACILITIES - SHORT TERM, NFP, PER BED
80525	SKILLED NURSING FACILITIES - SHORT TERM, NFP, PER 100 OUTPATIENT VISITS

DENTIST CLASSES

CLASS CODE	DESCRIPTION
80210	DENTISTS - ENGAGED IN ORAL SURGERY AND ANESTHESIA.
80211	DENTISTS - NOC
80218	TEACHING DENTISTS - ENGAGED IN ORAL SURGERY AND ANESTHESIA.
80219	TEACHING DENTISTS - NOC
80220	RETIRED DENTISTS PRACTICING ON A LIMITED BASIS.

HOSPITAL CLASSES

CLASS CODE	DESCRIPTION
	CLINICS, DISPENSARIES OR INFIRMARIES - TREATMENT OF OUTPATIENTS ONLY - NO REGULAR BED AND BOARD FACILITIES
80613	FOR-PROFIT PER 100 OUTPATIENT VISITS
80614	NOT-FOR-PROFIT PER 100 OUTPATIENT VISITS
84803	OSTEOPATHIC PER 100 OUTPATIENT VISITS
	HOSPICES
80510	FOR-PROFIT PER BED
80512	NOT-FOR-PROFIT PER BED
	HOSPITALS - N.O.C.
80611 80610	FOR-PROFIT PER BED PER 100 OUTPATIENT VISITS
80612 80617	NOT-FOR-PROFIT PER BED PER 100 OUTPATIENT VISITS

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

HOSPITAL CLASSES

CLASS CODE	DESCRIPTION
	OSTEOPATHIC
84965	PER BED
84966	PER 100 OUTPATIENT VISITS
	MENTAL-PSYCHOPATHIC INSTITUTIONS
	FOR-PROFIT
80997	PER BED
80999	PER 100 OUTPATIENT VISITS
	NOT-FOR-PROFIT
80916	PER BED
80917	PER 100 OUTPATIENT VISITS
	REHABILITATION HOSPITALS
	FOR PROFIT
80516	PER BED
80517	PER 100 OUTPATIENT VISITS
	NOT-FOR-PROFIT
80518	PER BED
80519	PER 100 OUTPATIENT VISITS
	SANITARIUMS OR HEALTH INSTITUTIONS- NOT HOSPITALS OR MENTAL-PSYCHOPATHIC INSTITUTIONS
	FOR-PROFIT
80925	PER BED
80953	PER 100 OUTPATIENT VISITS
	NOT-FOR-PROFIT
80926	PER BED
80954	PER 100 OUTPATIENT VISITS
80941	DRUGLESS HEALING INSTITUTIONS SUCH AS CHIROPRACTIC, NATUROPATHIC, SANIPRACTIC AND CHRISTIAN SCIENCE INSTITUTIONS
80942	ADDITIONAL INTERESTS – PREMIUM CHARGES FOR ADDITIONAL INTERESTS AND LOSSES AND CLAIMS INCURRED BY SUCH ADDITIONAL INTERESTS WHEN THE PREMIUM IS A PERCENTAGE OF THE BASIC HOSPITAL PROFESSIONAL LIABILITY PREMIUM
	OUTPATIENT SURGICAL FACILITIES
84453	OSTEOPATHIC
80453	NOT OSTEOPATHIC

PHYSICIAN CLASSES

M.D. CODE	D.O. CODE	DESCRIPTION
80230	-	AEROSPACE MEDICINE
80254	84254	ALLERGY
80281	84281	CARDIOVASCULAR DISEASE - MINOR SURGERY
80255	84255	CARDIOVASCULAR DISEASE - NO SURGERY
80282	84282	DERMATOLOGY – MINOR SURGERY
80256	84256	DERMATOLOGY - NO SURGERY
80271	-	DIABETES - MINOR SURGERY
80237	-	DIABETES - NO SURGERY
80102	84102	EMERGENCY MEDICINE - NO MAJOR SURGERY
80272	84272	ENDOCRINOLOGY – MINOR SURGERY
80238	84238	ENDOCRINOLOGY - NO SURGERY
80421	84421	FAMILY PHYSICIANS OR GENERAL PRACTITIONERS – MINOR SURGERY
80420	84420	FAMILY PHYSICIANS OR GENERAL PRACTITIONERS-NO SURGERY
80240	84240	FORENSIC MEDICINE
80274	84274	GASTROENTEROLOGY – MINOR SURGERY
80241	84241	GASTROENTEROLOGY – NO SURGERY

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

PHYSICIAN CLASSES

M.D. CODE	D.O. CODE	DESCRIPTION
80231	-	GENERAL PREVENTIVE MEDICINE - NO SURGERY
80276	84276	GERIATRICS - MINOR SURGERY
80243	84243	GERIATRICS - NO SURGERY
80277	84277	GYNECOLOGY - MINOR SURGERY
80244	84244	GYNECOLOGY - NO SURGERY
80278	84278	HEMATOLOGY – MINOR SURGERY
80245	84245	HEMATOLOGY - NO SURGERY
80232	-	HYPNOSIS
80279	-	INFECTIOUS DISEASES – MINOR SURGERY
80246	-	INFECTIOUS DISEASES – NO SURGERY
80283	84283	INTENSIVE CARE MEDICINE
80284	84284	INTERNAL MEDICINE – MINOR SURGERY
80257	84257	INTERNAL MEDICINE – NO SURGERY
80285	-	LARYNGOLOGY – MINOR SURGERY
80258	-	LARYNGOLOGY - NO SURGERY
80240	-	LEGAL MEDICINE
-	84801	MANIPULATOR
80286	-	NEOPLASTIC DISEASES – MINOR SURGERY
80259	-	NEOPLASTIC DISEASES – NO SURGERY
80287	-	NEPHROLOGY – MINOR SURGERY
80260	-	NEPHROLOGY - NO SURGERY
80288	84288	NEUROLOGY – INCLUDING CHILD - MINOR SURGERY
80261	84261	NEUROLOGY – INCLUDING CHILD - NO SURGERY
80262	84262	NUCLEAR MEDICINE
80248	-	NUTRITION
80233	84233	OCCUPATIONAL MEDICINE
80289	84289	OPTHALMOLOGY – MINOR SURGERY
80263	84263	OPTHALMOLOGY – NO SURGERY
80290	-	OTOLOGY - MINOR SURGERY
80264	-	OTOLOGY - NO SURGERY
80291	84291	OTORHINOLARYNGOLOGY – MINOR SURGERY
80265	84265	OTORHINOLARYNGOLOGY - NO SURGERY
80292	84292	PATHOLOGY - MINOR SURGERY
80266	84266	PATHOLOGY - NO SURGERY
80293	84293	PEDIATRICS - MINOR SURGERY
80267	84267	PEDIATRICS - NO SURGERY
80234	-	PHARMACOLOGY – CLINICAL
80235	-	PHYSIATRY
80235	84235	PHYSICAL MEDICINE AND REHABILITATION
80294	-	PHYSICIANS – MINOR SURGERY - N.O.C.
80268	84268	PHYSICIANS - NO SURGERY – N.O.C.
80116	84116	PHYSICIANS OR SURGEONS ASSISTANTS
80249	84249	PSYCHIATRY – INCLUDING CHILD
80250	-	PSYCHOANALYSIS
80251	84251	PSYCHOSOMATIC MEDICINE
80236	-	PUBLIC HEALTH
80269	84269	PULMONARY DISEASES - NO SURGERY
80280	84280	RADIOLOGY – DIAGNOSTIC – MINOR SURGERY
80253	84253	RADIOLOGY – DIAGNOSTIC – NO SURGERY
80252	84252	RHEUMATOLOGY – NO SURGERY
80270	-	RHINOLOGY – MINOR SURGERY
80247	-	RHINOLOGY - NO SURGERY
-	84802	SCLEROTHERAPY
80321	-	TEACHING PHYSICIANS - NO SURGERY
80322	-	TEACHING PHYSICIANS - MINOR SURGERY

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

PHYSICIAN CLASSES

M.D. CODE	D.O. CODE	DESCRIPTION
		PHYSICIANS NO MAJOR SURGERY: THESE CLASSIFICATIONS APPLY TO ALL GENERAL PRACTITIONERS OR SPECIALISTS EXCEPT THOSE PERFORMING MAJOR SURGERY, ANESTHESIOLOGY OR ACUPUNCTURE ANESTHESIOLOGY, WHO PERFORM ANY OF THE FOLLOWING MEDICAL TECHNIQUES OR PROCEDURES:
80443	84443	COLONOSCOPY
80443	84443	ERCP (ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY)
80440	84440	LAPAROSCOPY (PERITONESOOPY)
80443	84443	PNEUMATIC OR MECHANICAL ESOPHAGEAL DILATION (NOT WITH BOUGIE OR OLIVE)
80449	84449	RADIOPAQUE DYE – INJECTIONS INTO BLOOD VESSELS, LYMPHATICS, SINUS TRACTS OR FISTULAE. (NOT APPLICABLE TO RADIOLOGISTS, CODE 80280*)
80437	84437	ACUPUNCTURE - OTHER THAN ACUPUNCTURE ANESTHESIA
80422	84422	ANGIOGRAPHY
80422	84422	ARTERIOGRAPHY
80422	84422	CATHETERIZATION – ARTERIAL, CARDIAC OR DIAGNOSTIC - OTHER THAN (1) THE OCCASIONAL EMERGENCY INSERTION OF PULMONARY WEDGE PRESSURE RECORDING CATHETERS OR TEMPORARY PACEMAKERS (2) URETHRAL CATHETERIZATION OR (3) UMBILICAL CORD CATHETERIZATION FOR DIAGNOSTIC PURPOSES OR FOR MONITORING BLOOD GASES IN NEWBORNS RECEIVING OXYGEN.
80428	84428	DISCOGRAMS
80425	84425	LASERS - USED IN THERAPY
80434	84434	LYMPHANGIOGRAPHY
80428	84428	MYLEOGRAPHY
80434	84434	PHLEBOGRAPHY
80446	84446	NEEDLE BIOPSY – INCLUDING LUNG AND PROSTATE BUT NOT INCLUDING LIVER, KIDNEY OR BONE MARRROW BIOPSY
80428	84428	PNEUMOENCEPHALOGRAPHY
80425	84425	RADIATION THERAPY
80431	84431	SHOCK THERAPY

PHYSICIANS IN ACTIVE U.S. MILITARY SERVICE

M.D. CODE	D.O. CODE	DESCRIPTION
80131	84131	PHYSICIANS - NO SURGERY
80132	84132	PHYSICIANS - MINOR SURGERY

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SURGEON CLASSES

M.D. CODE	D.O. CODE	DESCRIPTION
80166	-	SURGERY – ABDOMINAL
80141	-	SURGERY – CARDIAC
80150	84150	SURGERY – CARDIOVASCULAR DISEASE
80115	-	SURGERY - COLON AND RECTAL
80103	-	SURGERY – ENDOCRINOLOGY
80104	-	SURGERY – GASTROENTEROLOGY
80143	84143	SURGERY – GENERAL - THIS CLASSIFICATION DOES NOT APPLY TO ANY FAMILY OR GENERAL PRACTITIONER OR TO ANY SPECIALIST WHO OCCASIONALLY PERFORMS MAJOR SURGERY.
80117	-	SURGERY – GENERAL PRACTICE OR FAMILY PRACTICE
80105	-	SURGERY – GERIATRICS
80167	84167	SURGERY – GYNECOLOGY
80169	-	SURGERY – HAND
80170	-	SURGERY - HEAD AND NECK
80106	-	SURGERY – LARYNGOLOGY
80107	-	SURGERY – NEOPLASTIC
80108	-	SURGERY – NEPHROLOGY
80152	84152	SURGERY – NEUROLOGY – INCLUDING CHILD
80168	-	SURGERY – OBSTETRICS
80153	84153	SURGERY – OBSTETRICS – GYNECOLOGY
80114	-	SURGERY – OPHTHALMOLOGY
80154	84154	SURGERY – ORTHOPEDIC
80158	-	SURGERY – OTOLOGY
80159	-	SURGERY – OTORHINOLARYNGOLOGY
80156	84156	SURGERY - PLASTIC - N.O.C.
80155	84155	SURGERY - PLASTIC – OTORHINOLARYNGOLOGY
80160	-	SURGERY – RHINOLOGY
80144	84144	SURGERY – THORACIC
80171	-	SURGERY – TRAUMATIC
80145	84145	SURGERY – UROLOGICAL
80146	-	SURGERY - VASCULAR
80157	84157	EMERGENCY MEDICINE - INCLUDING MAJOR SURGERY
80151	84151	ANESTHESIOLOGY
80101	-	BRONCHO-ESOPHAGOLOGY
80323	-	TEACHING PHYSICIANS OR SURGEONS - MAJOR SURGERY
80324	-	TEACHING PHYSICIANS OR SURGEONS - MAJOR SURGERY
80325	-	TEACHING PHYSICIANS OR SURGEONS - MAJOR SURGERY
80326	-	TEACHING PHYSICIANS OR SURGEONS - MAJOR SURGERY
80327	-	TEACHING PHYSICIANS OR SURGEONS - MAJOR SURGERY

SURGEONS IN ACTIVE U.S. MILITARY SERVICE

M.D. CODE	D.O. CODE	DESCRIPTION
80172	84172	PHYSICIANS - NO MAJOR SURGERY OR (PHYSICIANS OR SURGEONS - MAJOR SURGERY)
80173	84173	PHYSICIANS OR SURGEONS - MAJOR SURGERY
80174	84174	PHYSICIANS OR SURGEONS - MAJOR SURGERY
80175	84175	PHYSICIANS OR SURGEONS - MAJOR SURGERY
80176	84176	PHYSICIANS OR SURGEONS - MAJOR SURGERY

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

ALLIED HEALTH CARE CLASSES

CLASS CODE	DESCRIPTION
80993	CHIROPODISTS/PODIATRISTS
80944	OPTOMETRISTS - EMPLOYED OPTOMETRISTS (ADDITIONAL CHARGES)
80943	CHIROPODISTS/PODIATRISTS - EMPLOYED CHIROPODISTS/PODIATRISTS (ADDITIONAL CHARGES)
80950	CHIROPODISTS/PODIATRISTS - PARTNERSHIP LIABILITY (ADDITIONAL CHARGES)
80935	CHIROPODISTS/PODIATRISTS - IN ACTIVE U.S. MILITARY SERVICE
80936	CHIROPODISTS/PODIATRISTS - EMPLOYED FULL TIME BY THE FEDERAL GOV'T - N.O.C.
80410	CHIROPRACTORS
80411	CHIROPRACTORS - EMPLOYED CHIROPRACTORS (ADDITIONAL CHARGES)
80412	CHIROPRACTORS - PARTNERSHIP LIABILITY (ADDITIONAL CHARGES)
80210	EMPLOYEES - DENTAL HYGIENISTS
80711	EMPLOYEES - MEDICAL LABORATORY TECHNICIANS
80937	EMPLOYEES - OPTICIANS
59112	EMPLOYEES - PHARMACISTS
80938	EMPLOYEES - PHYSIOTHERAPISTS
80713	EMPLOYEES - X-RAY TECHNICIANS
80714	EMPLOYEES - X-RAY TECHNICIANS - X-RAY THERAPY (ADDITIONAL CHARGES)
80715	MEDICAL OR X-RAY LABORATORIES
80960	ANESTHETISTS
80913	NURSES -RNS - ADDITIONAL CHARGES (AR, LA, NH, OK, PR, AND WA ONLY) - X-RAY THERAPY & ANESTHETISTS
80616	NURSES - ALTERNATIVE PROG FOR RNS - EXPOSURE, TOTAL PREM AND LOSSES, EXCEPT LOSSES UNDER CODES 80989 & 89980.
80989	NURSES - ALTERNATIVE PROG FOR RNS - LOSSES RESULTING FROM BROADENING OF MED PROF COVERAGE UNDER ALTERN. PROG FOR RNS.
89980	NURSES - ALTERNATIVE PROG FOR RNS - LOSSES RESULTING FROM THE PERSONAL INJURY COVERAGE UNDER ALTERN. PROG FOR RNS.
80992	BLOOD BANKS
80994	OPTOMETRISTS - EMPLOYED OPTOMETRISTS
80956	OPTOMETRISTS - PARTNERSHIP LIABILITY
80995	PHYSIOTHERAPISTS
80945	PHYSIOTHERAPISTS - EMPLOYED PHYSIOTHERAPISTS
80955	PHYSIOTHERAPISTS - PARTNERSHIP LIABILITY
80911	PHYSIOTHERAPISTS - IN ACTIVE U.S. MILITARY SERVICE
80912	PHYSIOTHERAPISTS - EMPLOYED FULL TIME BY FEDERAL GOV'T N.O.C.
80618	VISITING NURSE ASSOCIATIONS
80962	MIDWIVES
80963	NURSES - LPNS
80964	NURSES - RNS

REVISED INCREASED LIMIT FACTORS

(Limits are in thousands)

17. INCREASED LIMITS TABLES

E. Increased Limits Tables

4. Physicians

Aggregate	Per Medical Incident $100	200	250	300	500	750	1,000
$300	0.52	0.62	0.67	0.70			
400	0.53	0.64	0.69	0.73			
500	0.54	0.66	0.71	0.76	0.87		
600	0.55	0.68	0.73	0.78	0.90		
750		0.70	0.75	0.80	0.93	1.02	
900		0.72	0.77	0.82	0.96	1.07	
1,000		0.73	0.78	0.83	0.97	1.09	1.16
1,500		0.74	0.79	0.84	1.00	1.16	1.26
2,000				0.85	1.01	1.19	1.31
2,500						1.20	1.33
3,000							1.34

The following factors MUST be referred to company before using.

Aggregate	Per Medical Incident $1,500	2,000	2,500	3,000
$1,500	1.38			
2,000	1.46	1.54		
2,500	1.50	1.60	1.66	
3,000	1.52	1.63	1.71	1.75
4,000	1.54	1.67	1.76	1.82
5,000	1.55	1.68	1.77	1.85

Table 17.E.4. Physicians

REVISED INCREASED LIMIT FACTORS

(Limits are in thousands)

17. INCREASED LIMITS TABLES

E. Increased Limits Tables

5. Surgeons

Aggregate	Per Medical Incident $100	200	250	300	500	750	1,000
$300	0.50	0.60	0.65	0.68			
400	0.51	0.62	0.67	0.72			
500	0.52	0.64	0.69	0.74	0.86		
600	0.53	0.66	0.71	0.76	0.89		
750		0.68	0.73	0.78	0.93	1.02	
900		0.70	0.75	0.80	0.96	1.07	
1,000		0.71	0.76	0.81	0.97	1.09	1.18
1,500		0.72	0.77	0.82	1.00	1.18	1.29
2,000				0.83	1.01	1.21	1.34
2,500						1.22	1.37
3,000							1.38

The following factors MUST be referred to company before using.

Aggregate	Per Medical Incident $1,500	2,000	2,500	3,000
$1,500	1.41			
2,000	1.50	1.58		
2,500	1.55	1.65	1.72	
3,000	1.58	1.70	1.78	1.83
4,000	1.60	1.74	1.84	1.91
5,000	1.61	1.75	1.86	1.95

Table 17.E.5. Surgeons

REVISED INCREASED LIMIT FACTORS

(Limits are in thousands)

17. INCREASED LIMITS TABLES

E. Increased Limits Tables

6. Allied Health Care and Optometrists

	Per Medical Incident						
Aggregate	**$100**	**200**	**250**	**300**	**500**	**750**	**1,000**
$300	0.63	0.71	0.74	0.77			
400	0.64	0.73	0.76	0.79			
500	0.65	0.75	0.78	0.81	0.92		
600	0.66	0.77	0.80	0.83	0.94		
750		0.79	0.82	0.85	0.96	1.05	
900		0.81	0.84	0.87	0.98	1.08	
1,000		0.82	0.85	0.88	0.99	1.09	1.14
1,500		0.83	0.86	0.89	1.00	1.11	1.17
2,000				0.90	1.01	1.12	1.18
2,500						1.13	1.19
3,000							1.20

The following factors MUST be referred to company before using.

	Per Medical Incident*			
Aggregate	**$1,500**	**2,000**	**2,500**	**3,000**
$1,500	1.26			
2,000	1.27	1.33		
2,500	1.28	1.34	1.40	
3,000	1.29	1.35	1.41	1.45
4,000	1.30	1.36	1.42	1.46
5,000	1.31	1.37	1.43	1.47

* Per Optometric Incident for Optometrists

Table 17.E.6. Allied Health Care and Optometrists

SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Supporting Document Schedules

Item Status: **Status Date:**

Satisfied - Item: Cover Letter All Filings
Comments:
Attachment:
PR-2009-IALL1 - DC - Cover Letter.PDF

Item Status: **Status Date:**

Bypassed - Item: Consulting Authorization
Bypass Reason: N/A
Comments:

Item Status: **Status Date:**

Satisfied - Item: Actuarial Certification (P&C)
Comments:
Attachments:
PR-2009-IALL1 - DC - Executive Summary.pdf
PR-2009-IALL1 - DC - Table of Contents.pdf
PR-2009-IALL1 - DC - Section B - Calculation of Increased Limit Factors.pdf
PR-2009-IALL1 - DC - Section C - Supporting Material - Indemnity.pdf
PR-2009-IALL1 - DC - Section D - Supporting Material - Allocated Loss Adjustment Expenses.pdf
PR-2009-IALL1 - DC - Section E - Supporting Material - Unallocated Loss Adjustment Expenses.pdf
PR-2009-IALL1 - DC - Section F - Supporting Material - Risk Load.pdf
PR-2009-IALL1 - DC - Section G - Indicated Changes By Table.pdf

Item Status: **Status Date:**

Satisfied - Item: District of Columbia and Countrywide Experience for the

SERFF Tracking Number:	*ISOF-125999334*	*State:*	*District of Columbia*
Filing Company:	*Insurance Services Office, Inc.*	*State Tracking Number:*	
Company Tracking Number:	*PR-2009-IALL1*		
TOI:	*11.0 Medical Malpractice - Claims Made/Occurrence*	*Sub-TOI:*	*11.0000 Med Mal Sub-TOI Combinations*
Product Name:	*PR-2009-IALL1*		
Project Name/Number:	*Revision of Increased Limits Factors for Nursing Homes, Dentists, Hospitals, Physicians, Surgeons and AHC - Division Seven of the CLM - Professional Liability/PR-2009-IALL1*		

Last 5 Years (P&C)

Comments:

See the attachment for the Actuarial Certification under the Supporting Documentation tab.

		Item Status:	**Status Date:**
Satisfied - Item:	District of Columbia and Countrywide Loss Ratio Analysis (P&C)		

Comments:

See the attachment for the Actuarial Certification under the Supporting Documentation tab.

Quakerbridge Executive Center, 101 Grovers Mill Rd. Suite 101, Trenton, NJ 08648
609.799.1800 ext 232 FAX 201.748.1803

JANE GOLDEN
REGIONAL DIRECTOR
GOVERNMENT RELATIONS
JGolden@ISO.COM

January 21, 2009

Honorable Thomas Hampton
Commissioner
Department of Insurance & Security Regulations
Financial Examination
810 1st Street NE, Suite 701
Washington, DC 20002

Re: PR-2009-IALL1
Revision of Increased Limit Factors for
Nursing Homes, Dentists, Hospitals, Physicians,
Surgeons and AHC Division Seven of the CLM-
Professional Liability
District of Columbia

Dear Commissioner Hampton:

Insurance Services Office, Inc. hereby files the above captioned revision on behalf of those participating insurers who have authorized Insurance Services Office, Inc. to do so. This filing revises increased limit factors for all Nursing Homes, Dentists, Hospitals, Physicians, Surgeons, and Allied Health Care classes. These increased limit factors represent a -2.7% change on average from the Hospitals, Physicians, and Surgeons increased limit factors currently in effect and a -1.6% change on average from the Nursing Homes, Dentists, and Allied Health Care increased limit factors currently in effect. The combined effect for all Medical Professional Liability tables is -2.4%.

Complete detail is contained in the attached material.

We propose that this revision become effective September 1, 2009 under the following rule of application:

These changes are applicable to all policies
written on or after September 1, 2009.

Your prompt acknowledgement will be greatly appreciated.

Very truly yours,

Jane Golden
Regional Director
Government Relations

JG/aw
Encl.

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

PR-2009-IALL1

EXECUTIVE SUMMARY

PURPOSE

This document:

- revises increased limit factors for all Nursing Homes, Dentists, Hospitals, Physicians, Surgeons, and Allied Health Care classes. These increased limit factors represent a -2.7% change on average from the Hospitals, Physicians, and Surgeons increased limit factors currently in effect and a -1.6% change on average from the Nursing Homes, Dentists, and Allied Health Care increased limit factors currently in effect. The combined effect for all Medical Professional Liability tables is -2.4%.

- provides a description of the Medical Professional Liability Classes by Table

- provides the analyses used to derive these increased limit factors.

DEFINITION OF INCREASED LIMIT FACTORS

We publish liability loss costs at the basic limit. The basic limit for Medical Professional Liability is $500,000/$1,500,000 (occurrence/aggregate). The loss cost for a given policy limit is the product of the basic limit loss cost and the increased limit factor for that policy limit.

An increased limit factor is the ratio of two sums. The numerator is the cost to the insurer of writing a policy at the desired limit, including the average prospective indemnity, all loss adjustment expense, and the risk load. The denominator is the sum of the same quantities at the basic limit. The average filed prospective indemnity reflects per occurrence and aggregate limits.

INCREASED LIMIT FACTOR CHANGES

The statewide increased limit factor changes are:

Table	Indicated	Filed
Nursing Homes	-5.0%	-5.0%
Dentists	-0.7%	-0.7%
Hospitals	-2.6%	-2.6%
Physicians	-2.3%	-2.3%
Surgeons	-3.1%	-3.1%
Allied Health Care	-1.4%	-1.4%
All Medical	-2.4%	-2.4%

INCREASED LIMIT FACTOR CHANGES (continued)

The overall Medical Professional Liability change of -2.4% is based on a comparison of the average indicated and current Medical Professional Liability increased limit factors. For the purpose of this calculation, the average Medical Professional Liability increased limit factors are a weighted-average of the overall Nursing Homes, Dentists, Hospitals, Physicians, Surgeons, and Allied Health Care factors. The State Group C basic limit loss weights used are 0.0353 for Nursing Homes, 0.0963 for Dentists, 0.0859 for Hospitals, 0.3220 for Physicians, 0.2873 for Surgeons, and 0.1732 for Allied Health Care.

In this filing, the filed factors are the indicated factors.

DEFINITION OF ALLIED HEALTH CARE CLASSES

In this document, the term Allied Health Care includes the following classes:

- Chiropractors
- Chiropodists/Podiatrists
- Employees
- Blood Banks
- Optometrists
- Physiotherapists
- Nurses

PRIOR ISO REVISIONS

The most recent Hospitals, Physicians, Surgeons, Dentists, Nursing Homes, and Allied Health Care Liability increased limits revision is:

Filing PR-2006-IALL1

Date Implemented September 1, 2007

Changes	Hospitals	Physicians	Surgeons
Indicated	-3.7%	-3.4%	-1.7%
Filed	-3.7%	-3.4%	-1.7%
Implemented	-3.7%	-3.4%	-1.7%

Changes	Nursing Homes	Dentists	Allied Health Care	Overall
Indicated	-2.8%	-4.6%	-3.3%	-3.0%
Filed	-2.8%	-4.6%	-3.3%	-3.0%
Implemented	-2.8%	-4.6%	-3.3%	-3.0%

RISK LOAD PROCEDURE

The increased limit factors in this document incorporate a procedure for reflecting the increased risk or variation in experience associated with higher limit policies in the increased limits ratemaking formula. For Hospitals, Physicians and Surgeons Liability, this procedure generates increased limit factors for limits through $10,000,000 that are on average 6.0% higher than the factors would be excluding any reflection of risk.

For each subline, the risk load effect for per-occurrence limits through $3,000,000 is 7.4% for Hospitals, 5.8% for Physicians, and 5.7% for Surgeons.

For Dentists and Allied Health Care Liability, the same risk load parameters are used as in ISO's Physicians and Surgeons increased limits reviews. For Nursing Homes Liability, the same parameters (except nbara, where a specific Nursing Homes value is used) are used as in ISO's Hospitals increased limits review. The resulting increased limit factors with risk load (for limits through $3,000,000) are on average 3.5% higher for Nursing Homes, 1.2% higher for Dentists, and 3.3% higher for Allied Health Care than such factors would be excluding any reflection of risk.

See Section F for more details of the Risk Load procedure.

HISTORICAL SOURCE DATA

Statistical Plan data reported to ISO is first processed through a system of rigorous automated data verification processes so that only data that would be reliable is used. Subsequent to this initial data submission review, additional analyses involving more customized data reviews for this line were performed by staff. The ISO staff responsible for this increased limits review also reviewed the data for reasonableness, and removed or adjusted certain data where appropriate.

For this document, we used the following data:

- Experience for risks subject to Nursing Homes, Dentists, Hospitals, Physicians, Surgeons, and Allied Health Care increased limits tables as reported to ISO by companies that file detailed statistics.
- Experience from claims-made policies and occurrence coverage policies.
- Experience for occurrences with accident dates between July 1, 1993, and June 30, 2007, and average payment dates between July 1, 2002, and June 30, 2007, for claims-made and occurrence coverage data.

For Hospitals, Physicians, and Surgeons we reviewed District of Columbia in State Group C. This group consists of fifteen states with similar historical loss distributions. We continue to review Nursing Homes, Dentists, and Allied Health Care on a multistate basis.

Overall and by-table indicated and filed changes are calculated using state group weights.

EFFECT ON MANUAL PAGES

Upon implementation of this filing, we will publish revised manual pages of Nursing Homes, Dentists, Hospitals, Physicians, Surgeons, and Allied Health Care increased limit factors in Division Seven of the Commercial Lines Manual. The revised increased limit factors will appear in Rule 17 as Tables 17.E.1., 17.E.2., 17.E.3., 17.E.4., 17.E.5., 17.E.6., and 17.E.7.

COMPANY DECISION

We encourage each insurer to decide independently whether the judgments made and the procedures or data used by ISO in developing increased limit factors are appropriate. We have included within this document the information upon which ISO relied in order to enable companies to make such independent judgments.

The data underlying the enclosed material comes from companies reporting to ISO. Therefore, the ISO statistical database is much bigger than any individual company's. A broader database enhances the validity of the ratemaking analysis. At the same time, an individual company may benefit from a comparison of its own experience to the aggregate ISO experience and may reach valid conclusions with respect to the manner in which its own costs can be expected to differ from ISO's projections based on the aggregate data.

Some calculations included in this document involve areas of ISO staff judgment. Each company should carefully review and evaluate its own experience in order to determine whether the increased limit factors developed by ISO are appropriate for its use.

This material has been developed exclusively by the staff of ISO.

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SECTION B – CALCULATION OF INCREASED LIMIT FACTORS

OVERVIEW OF ISO ACTUARIAL PROCEDURES – INCREASED LIMITS

INTRODUCTION

This overview describes the methods we use to calculate increased limit factors. The factors calculated here are for policies that are subject to occurrence limits, but not annual aggregate limits. Section A describes the aggregate model and provides the resulting occurrence/aggregate increased limit factors that we are filing. The per- occurrence loss distributions and loss adjustment expense provisions that are described here (and in later sections) are key components of this aggregate model. Also, the calculation of increased limit factors for per-occurrence limits illustrates the principles underlying the calculation for occurrence/aggregate limits.

ISO defines an increased limit factor as the ratio of the expected cost (to the insurer) of a higher limit policy divided by the expected cost of a basic limit policy. The cost components of the occurrence limit increased limit factor calculation are:

- Limited Average Severity (LAS) of Indemnity

  The average indemnity per occurrence, limited to a given policy limit, at ultimate settlement value, and reflecting trend to the average accident date in the prospective experience period.

- Allocated Loss Adjustment Expense (ALAE) per occurrence

  The average claim settlement expense per occurrence for those expenses in the settlement process that can be assigned to an individual claim. The largest component of ALAE is legal defense costs.

- Unallocated Loss Adjustment Expense (ULAE)

  The average claim settlement expense per occurrence for those expenses in the settlement process that cannot be assigned to an individual claim (e.g., the salaries of claims adjusters).

- Risk Load (RL)

  A loading that varies by policy limit and compensates the insurer for the risk of issuing higher limit policies. The ISO risk load model recognizes two kinds of risk:

  Process Risk – the inherent variability of the insurance process, reflected in the difference between actual losses and expected losses.

  Parameter risk – the inherent variability of the estimation process, reflected in the difference between theoretical (true but unknown) expected losses and the estimated expected losses.

OVERVIEW OF ISO ACTUARIAL PROCEDURES – INCREASED LIMITS

INTRODUCTION (continued)

The ISO increased limit factor is the ratio of these costs at a specified limit divided by the corresponding costs at the basic limit. Given a basic limit b, the factor at occurrence policy limit PL is as follows:

$$ILF(PL) = \left[\frac{LAS(PL) + ALAE(PL) + ULAE(PL) + RL(PL)}{LAS(b) + ALAE(b) + ULAE(b) + RL(b)} \right]$$

Pages B-7 to B-12 show the indicated per-occurrence limit increased limit factors for each of the increased limits tables from ISO's 2008 Medical Professional Liability increased limits review. Also shown are the underlying components of the calculation by limit.

An overview of these four components of the occurrence limit increased limit factor calculation follows.

STATE GROUPS

For Hospitals, Physicians, and Surgeons we review the data by state group. In 2004, ISO researched severity and ILF state differences with an eye toward introducing Hospitals, Physicians and Surgeons increased limits tables that vary by state group. As a result of our research, we now review the Increased Limit Factors based on a three-tiered state group system - State Groups A, B, and C.

For the following calculations we have used multistate (all groups) experience:

- Unallocated Loss Adjustment Expense
- Severity Trend

For Hospitals, Physicians, and Surgeons we review this state in State Group C. This group consists of fifteen states with similar historical loss distributions.

For Nursing Homes, Dentists, and Allied Health Care we continue to review the data on a multistate basis and smooth the experience at limits above the truncation point. This is because the data is sparser and the loss exposure is more likely to encompass multiple states.

Overall and by-table indicated and filed changes are calculated using state group weights.

INDEMNITY

In this document, we use the term "indemnity" to mean the amount paid to the claimant (excluding all loss adjustment expense). Indemnity is subject to policy limits. We construct an occurrence-size distribution that describes the indemnity before the effect of policy limits. By using this distribution, we can calculate expected future indemnity for any given policy limit.

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OVERVIEW OF ISO ACTUARIAL PROCEDURES - INCREASED LIMITS

DATA FOR INDEMNITY ANALYSIS

The limited average severity in this increased limits review is modeled using loss data reported to ISO under the Commercial Statistical Plan. The data includes paid (settled) occurrences with accident dates between July 1, 1993 and June 30, 2007, and average payment dates between July 1, 2002 and June 30, 2007. The data is evaluated as of September 30, 2007. ISO includes data from claims-made and occurrence coverage policies.

For each occurrence we determine the increased limits table, accident year, payment lag, indemnity amount, policy limit, and any applicable deductible or attachment point.

PAYMENT LAG

We consider an occurrence to be settled if it has no outstanding reserve. If there are multiple payments, we consider the average payment date to be the dollar-weighted average of the dates of the individual payments.

We use "payment lag" or "lag" to measure the amount of time between the date an accident occurs and the average date it is paid. A lag of 1 indicates that the average payment date is in the same accident year as the occurrence. A lag of 2 indicates that the average payment date falls in the following year, and so on.

INDEMNITY DEVELOPMENT

We fit paid settled loss data to derive our occurrence-size distributions. By using losses settled at ultimate in the model, it is not necessary to develop losses.

We combine data from different payment lags using a lag-weighting procedure. This procedure implicitly accounts for development as all possible payment lags are represented and given appropriate weight at the prospective average accident date.

For each occurrence in an accident year, there is a probability that the occurrence falls in a given payment lag. We assume that this probability (which may vary by Table) is the same for all accident years. We refer to this probability as the "lag weight".

Given the total number of occurrences for an accident year, the number falling into each payment lag follows a multinomial distribution. We use maximum likelihood estimation to calculate the lag weights from the observed average payment lags in our data. To enhance stability in the more mature lags, we apply certain constraints to the relationship between consecutive lag weights.

OVERVIEW OF ISO ACTUARIAL PROCEDURES - INCREASED LIMITS

INDEMNITY SEVERITY TREND

To bring different accident years to the same level, we project each occurrence from the average date of its accident year to April 1, 2010, one year beyond the assumed effective date of April 1, 2009. In this review, we selected an annual trend of +9.0% for Nursing Homes and Hospitals Liability and +5.0% for Dentists, Physicians, Surgeons, and Allied Health Care Liability based on the review of trend indications described in Section C.

MIXED EXPONENTIAL MODEL

For each table, we fit a continuous distribution to the lag-weighted occurrence-size distribution from the data. The resulting distribution produces the limited average severity component of the increased limit factor.

The fitting procedure uses a mixture of exponential distributions to model indemnity. ISO found that the mixed exponential distribution provides a good fit to empirical data over a wide range of loss sizes, is flexible, and simple to use.

OVERVIEW OF MIXED EXPONENTIAL PROCESS

Section C describes the calculation of the limited average severities of indemnity in detail. The major steps in the calculation are:

1. Trend
Trending occurrence sizes to reflect the expected conditions during the period when the increased limit factors are assumed to be in effect.

2. Construction of the Empirical Survival Distributions
Using the trended data to calculate the empirical survival distributions by payment lag for each table and state group (for Hospitals, Physicians, and Surgeons.)

3. Payment Lag Process
Combining the empirical distributions for each payment lag to produce an overall empirical survival distribution for each table and state group (for Hospitals, Physicians, and Surgeons.)

4. Tail of the Distribution
Smoothing the tail of the lag-weighted empirical survival distribution for each table and state group (for Hospitals, Physicians, and Surgeons.)

5. Fitting a Mixed Exponential Distribution
Fitting a mixed exponential model to the empirical survival distribution for each table and state group (for Hospitals, Physicians, and Surgeons.)

6. Final Limited Average Severities
Using the fitted mixed exponential distributions to generate limited average severities for the various policy limits.

OVERVIEW OF ISO ACTUARIAL PROCEDURES - INCREASED LIMITS

ALLOCATED LOSS ADJUSTMENT EXPENSE

We estimate allocated loss adjustment expense (ALAE) per occurrence as the product of two numbers. The first number is the ratio of ALAE to total limits (all limits combined) indemnity. The second number is the average (across all policy limits) limited average severity calculated from the indemnity severity model. We assume that ALAE per occurrence does not vary by policy limit. Section D contains a description of the estimation process.

UNALLOCATED LOSS ADJUSTMENT EXPENSE

We calculate the unallocated loss adjustment expense (ULAE) for each limit as a percentage (4.5%) of the sum of the average severity and the ALAE at that limit. The selected percent is based on multistate financial data reported to ISO. See Section E for the derivation of the selected ULAE percent.

RISK LOAD

In order to properly reflect the greater risk associated with higher limit policies, we use a risk load procedure. The fundamental purpose of the risk load procedure is to make each policy limit being written equally attractive to insurers. The procedure accomplishes this by offsetting the greater risk associated with higher limit policies with an appropriate risk load provision that increases as the policy limit increases.

We calculate a risk load amount for each policy limit using the mathematical model described in Section F. This risk load amount reflects both process risk and parameter risk. Parameter risk reflects the uncertainty or variation of estimated expected results around the true expected results. Process risk reflects the uncertainty or variation of the actual results around the expected results.

The risk load procedure produces indicated increased limit factors that are on average 3.5% higher for Nursing Homes, 1.2% higher for Dentists, 7.4% higher for Hospitals, 5.8% higher for Physicians, 5.7% higher for Surgeons, and 3.3% higher for Allied Health Care Liability (for limits through $3,000,000.)

SUMMARY

In summary, we calculate limited average severities from a continuous model of indemnity. In this model, we fit mixed exponential distributions to trended lag-weighted occurrence-size distributions by table.

We calculate allocated loss adjustment expense per occurrence that does not vary by policy limit. We calculate unallocated loss adjustment expense by limit as a percentage of the sum of the limited average severity and allocated loss adjustment expense. We calculate risk load amounts reflecting process and parameter risk.

Finally, we calculate the sum of the average severity, allocated loss adjustment expense, unallocated loss adjustment expense, and risk load. The ratio of this sum at the limit desired to this sum at the basic limit is the per occurrence increased limit factor.

AGGREGATE LIMITS

This and later sections describe the production of increased limit factors reflecting per occurrence limitation. Section A contains the procedure for also reflecting annual aggregate limits, and the resulting factors.

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CALCULATION OF INDICATED INCREASED LIMIT FACTORS

MULTISTATE

NURSING HOMES

(1)[a] Policy Limit ($,000)	(2)[b] Limited Average Severity	(3) ALAE per Occurrence	(4) ULAE per Occurrence	(5) Process Risk Load	(6) Parameter Risk Load	(7)[c] ILF With Risk Load
100	72,548	88,898	7,265	2,421	28,558	0.59
200	117,525	88,898	9,289	6,698	46,275	0.76
250	133,805	88,898	10,022	8,886	52,692	0.82
300	147,221	88,898	10,625	10,992	57,981	0.87
500	183,262	88,898	12,247	18,334	72,199	1.00
750	209,163	88,898	13,413	25,713	82,420	1.12
1,000	226,482	88,898	14,192	32,101	89,253	1.20
1,500	250,106	88,898	15,255	43,514	98,572	1.32
2,000	266,332	88,898	15,985	53,854	104,972	1.41
2,500	278,576	88,898	16,536	63,496	109,803	1.49
3,000	288,375	88,898	16,977	72,664	113,668	1.55
4,000	303,495	88,898	17,658	90,049	119,632	1.65
5,000	314,937	88,898	18,173	106,543	124,146	1.74
10,000	348,859	88,898	19,699	181,829	137,527	2.07

[a] ISO does not file factors for occurrence limits above $3,000,000 for Medical Professional Liability. Limits above $3,000,000 are shown for informational purposes only.

[b] Reflects trend to an average loss date of April 1, 2010 and development to ultimate maturity. Calculated from continuous indemnity model described in Section C.

[c] Reflects per occurrence-only limitation. For limits less than or equal to the basic limit ($500,000): Derived by taking the ratio of columns [(2) + (3) + (4)] at the policy limit to columns [(2) + (3) + (4)] at the basic limit ($500,000).
For limits greater than the basic limit ($500,000): the ratio of columns [(2) + (3) + (4) + (5) + (6)] at the policy limit to columns [(2) + (3) + (4) + (5) + (6)] at the basic limit ($500,000).

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CALCULATION OF INDICATED INCREASED LIMIT FACTORS

MULTISTATE

DENTISTS

(1)[a] Policy Limit ($,000)	(2)[b] Limited Average Severity	(3) ALAE per Occurrence	(4) ULAE per Occurrence	(5) Process Risk Load	(6) Parameter Risk Load	(7)[c] ILF With Risk Load
100	33,427	39,684	3,290	493	1,396	0.80
200	42,633	39,684	3,704	963	1,802	0.90
250	45,166	39,684	3,818	1,155	1,914	0.93
300	47,100	39,684	3,905	1,330	2,000	0.95
500	51,967	39,684	4,124	1,933	2,215	1.00
750	55,161	39,684	4,268	2,534	2,358	1.04
1,000	57,030	39,684	4,352	3,022	2,442	1.07
1,500	59,244	39,684	4,452	3,826	2,541	1.10
2,000	60,616	39,684	4,514	4,522	2,601	1.12
2,500	61,583	39,684	4,557	5,151	2,644	1.14
3,000	62,311	39,684	4,590	5,727	2,677	1.15
4,000	63,351	39,684	4,637	6,765	2,723	1.17
5,000	64,078	39,684	4,669	7,698	2,755	1.19
10,000	65,970	39,684	4,754	11,531	2,839	1.25

[a] ISO does not file factors for occurrence limits above $3,000,000 for Medical Professional Liability. Limits above $3,000,000 are shown for informational purposes only.

[b] Reflects trend to an average loss date of April 1, 2010 and development to ultimate maturity. Calculated from continuous indemnity model described in Section C.

[c] Reflects per occurrence-only limitation. For limits less than or equal to the basic limit ($500,000): Derived by taking the ratio of columns [(2) + (3) + (4)] at the policy limit to columns [(2) + (3) + (4)] at the basic limit ($500,000).
For limits greater than the basic limit ($500,000): the ratio of columns [(2) + (3) + (4) + (5) + (6)] at the policy limit to columns [(2) + (3) + (4) + (5) + (6)] at the basic limit ($500,000).

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CALCULATION OF INDICATED INCREASED LIMIT FACTORS

STATE GROUP C

HOSPITALS

(1)[a] Policy Limit ($,000)	(2)[b] Limited Average Severity	(3) ALAE per Occurrence	(4) ULAE per Occurrence	(5) Process Risk Load	(6) Parameter Risk Load	(7)[c] ILF With Risk Load
100	62,986	97,925	7,241	1,924	28,215	0.59
200	102,472	97,925	9,018	5,410	45,973	0.74
250	117,733	97,925	9,705	7,328	52,846	0.80
300	131,082	97,925	10,305	9,303	58,860	0.85
500	172,734	97,925	12,180	17,520	77,633	1.00
750	209,860	97,925	13,850	28,023	94,387	1.17
1,000	237,262	97,925	15,083	38,219	106,780	1.31
1,500	274,720	97,925	16,769	56,670	123,767	1.51
2,000	299,098	97,925	17,866	72,584	134,844	1.65
2,500	316,544	97,925	18,651	86,665	142,772	1.75
3,000	329,964	97,925	19,255	99,522	148,868	1.84
4,000	349,891	97,925	20,152	122,911	157,916	1.98
5,000	364,398	97,925	20,805	144,208	164,503	2.09
10,000	404,099	97,925	22,591	232,907	182,538	2.49

[a] ISO does not file factors for occurrence limits above $3,000,000 for Medical Professional Liability. Limits above $3,000,000 are shown for informational purposes only.

[b] Reflects trend to an average loss date of April 1, 2010 and development to ultimate maturity. Calculated from continuous indemnity model described in Section C.

[c] Reflects per occurrence-only limitation. For limits less than or equal to the basic limit ($500,000): Derived by taking the ratio of columns [(2) + (3) + (4)] at the policy limit to columns [(2) + (3) + (4)] at the basic limit ($500,000).
For limits greater than the basic limit ($500,000): the ratio of columns [(2) + (3) + (4) + (5) + (6)] at the policy limit to columns [(2) + (3) + (4) + (5) + (6)] at the basic limit ($500,000).

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STATE GROUP C

PHYSICIANS

(1)[a] Policy Limit ($,000)	(2)[b] Limited Average Severity	(3) ALAE per Occurrence	(4) ULAE per Occurrence	(5) Process Risk Load	(6) Parameter Risk Load	(7)[c] ILF With Risk Load
100	86,191	127,812	9,630	2,210	22,310	0.52
200	152,190	127,812	12,600	7,193	39,503	0.69
250	179,668	127,812	13,837	10,225	46,690	0.75
300	204,205	127,812	14,941	13,460	53,124	0.81
500	280,562	127,812	18,377	27,183	73,234	1.00
750	344,757	127,812	21,266	44,049	90,241	1.19
1,000	389,334	127,812	23,272	59,617	102,103	1.33
1,500	447,479	127,812	25,888	86,691	117,638	1.53
2,000	484,009	127,812	27,532	109,411	127,430	1.66
2,500	509,463	127,812	28,677	129,093	134,257	1.76
3,000	528,562	127,812	29,537	146,696	139,378	1.84
4,000	556,028	127,812	30,773	177,844	146,737	1.97
5,000	575,333	127,812	31,642	205,363	151,910	2.07
10,000	625,356	127,812	33,893	314,281	165,319	2.40

[a] ISO does not file factors for occurrence limits above $3,000,000 for Medical Professional Liability. Limits above $3,000,000 are shown for informational purposes only.

[b] Reflects trend to an average loss date of April 1, 2010 and development to ultimate maturity. Calculated from continuous indemnity model described in Section C.

[c] Reflects per occurrence-only limitation. For limits less than or equal to the basic limit ($500,000): Derived by taking the ratio of columns [(2) + (3) + (4)] at the policy limit to columns [(2) + (3) + (4)] at the basic limit ($500,000).
For limits greater than the basic limit ($500,000): the ratio of columns [(2) + (3) + (4) + (5) + (6)] at the policy limit to columns [(2) + (3) + (4) + (5) + (6)] at the basic limit ($500,000).

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STATE GROUP C

SURGEONS

(1)[a] Policy Limit ($,000)	(2)[b] Limited Average Severity	(3) ALAE per Occurrence	(4) ULAE per Occurrence	(5) Process Risk Load	(6) Parameter Risk Load	(7)[c] ILF With Risk Load
100	87,027	128,231	9,687	2,247	23,993	0.51
200	155,731	128,231	12,778	7,482	43,017	0.67
250	185,086	128,231	14,099	10,760	51,167	0.74
300	211,720	128,231	15,298	14,320	58,575	0.80
500	297,078	128,231	19,139	29,967	82,404	1.00
750	370,999	128,231	22,465	49,840	103,157	1.21
1,000	422,724	128,231	24,793	68,339	117,744	1.37
1,500	490,273	128,231	27,833	100,527	136,853	1.59
2,000	533,439	128,231	29,775	127,951	149,076	1.74
2,500	564,401	128,231	31,168	152,357	157,841	1.86
3,000	588,233	128,231	32,241	174,712	164,586	1.95
4,000	623,321	128,231	33,820	215,148	174,518	2.11
5,000	648,506	128,231	34,953	251,559	181,649	2.24
10,000	716,784	128,231	38,026	402,391	200,977	2.67

[a] ISO does not file factors for occurrence limits above $3,000,000 for Medical Professional Liability. Limits above $3,000,000 are shown for informational purposes only.

[b] Reflects trend to an average loss date of April 1, 2010 and development to ultimate maturity. Calculated from continuous indemnity model described in Section C.

[c] Reflects per occurrence-only limitation. For limits less than or equal to the basic limit ($500,000): Derived by taking the ratio of columns [(2) + (3) + (4)] at the policy limit to columns [(2) + (3) + (4)] at the basic limit ($500,000).
For limits greater than the basic limit ($500,000): the ratio of columns [(2) + (3) + (4) + (5) + (6)] at the policy limit to columns [(2) + (3) + (4) + (5) + (6)] at the basic limit ($500,000).

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

CALCULATION OF INDICATED INCREASED LIMIT FACTORS

MULTISTATE

ALLIED HEALTH CARE

(1)[a] Policy Limit ($,000)	(2)[b] Limited Average Severity	(3) ALAE per Occurrence	(4) ULAE per Occurrence	(5) Process Risk Load	(6) Parameter Risk Load	(7)[c] ILF With Risk Load
100	59,024	75,305	6,045	1,208	7,111	0.63
200	89,764	75,305	7,428	3,124	10,898	0.77
250	100,991	75,305	7,933	4,139	12,289	0.83
300	110,553	75,305	8,364	5,166	13,477	0.87
500	138,222	75,305	9,609	9,203	16,949	1.00
750	159,196	75,305	10,553	13,730	19,622	1.12
1,000	172,584	75,305	11,155	17,640	21,342	1.20
1,500	189,184	75,305	11,902	24,251	23,475	1.30
2,000	199,630	75,305	12,372	29,949	24,815	1.37
2,500	207,071	75,305	12,707	35,085	25,770	1.43
3,000	212,732	75,305	12,962	39,807	26,497	1.47
4,000	220,932	75,305	13,331	48,352	27,551	1.55
5,000	226,742	75,305	13,592	56,074	28,296	1.60
10,000	242,188	75,305	14,287	88,172	30,279	1.81

[a] ISO does not file factors for occurrence limits above $3,000,000 for Medical Professional Liability. Limits above $3,000,000 are shown for informational purposes only.

[b] Reflects trend to an average loss date of April 1, 2010 and development to ultimate maturity. Calculated from continuous indemnity model described in Section C.

[c] Reflects per occurrence-only limitation. For limits less than or equal to the basic limit ($500,000): Derived by taking the ratio of columns [(2) + (3) + (4)] at the policy limit to columns [(2) + (3) + (4)] at the basic limit ($500,000).
For limits greater than the basic limit ($500,000): the ratio of columns [(2) + (3) + (4) + (5) + (6)] at the policy

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SECTION C - SUPPORTING MATERIAL - INDEMNITY

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SUPPORTING MATERIAL - INDEMNITY

OVERVIEW

In this document, we use the term "indemnity" to mean the amount paid to the claimant (excluding all loss adjustment expense). Indemnity is subject to policy limits. We construct an occurrence size distribution that describes the indemnity before the effect of policy limits. By using this distribution we can calculate expected future indemnity under any given policy limit.

STATE GROUPS

For Hospitals, Physicians, and Surgeons we review the data by state group. In 2004, ISO researched severity and ILF state differences with an eye toward introducing Hospitals, Physicians and Surgeons increased limits tables that vary by state group. As a result of our research, we now review the Increased Limit Factors based on a three-tiered state group system - State Groups A, B, and C.

Additionally, for the following calculations we have exclusively used multistate (all groups) experience:

- Unallocated Loss Adjustment Expense
- Severity Trend

For Hospitals, Physicians, and Surgeons we review this state in State Group C. This group consists of fifteen states with similar historical loss distributions.

For Nursing Homes, Dentists, and Allied Health Care we continue to review the data on a multistate basis and smooth the experience at limits above the truncation point. This is because the data is sparser and the loss exposure is more likely to encompass multiple states.

Overall and by-table indicated and filed changes are calculated using state group weights.

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SUPPORTING MATERIAL - INDEMNITY

DATA FOR ESTIMATING INDEMNITY

The limited average severity in this increased limits review is modeled using loss data reported to ISO under the Commercial Statistical Plan. The data includes paid (settled) occurrences on occurrence-coverage policies with accident dates between July 1, 1993 and June 30, 2007, and average payment dates between July 1, 2002 and June 30, 2007. The data is evaluated as of September 30, 2007. ISO includes data from claims-made and occurrence coverage policies.

We consider an occurrence to be settled if it has no outstanding indemnity reserve. If there are multiple payments, we consider the average payment date to be the dollar-weighted average of the dates of the individual payments.

For each occurrence we determine the increased limits table, accident year, payment lag (described later), indemnity, policy limit, and any applicable deductible.

MIXED EXPONENTIAL MODEL

For each table, we fit a continuous distribution to the lag-weighted occurrence-size distribution from the data. The resulting distribution produces the limited average severity component of the increased limit factor.

Using a continuous distribution (such as the mixed exponential) offers several advantages over using a purely empirical fit, including:

- calculation of limited average severity for all possible limits
- smoothing of data
- simplified handling of trend, and
- calculation of higher moments used in risk load.

The fitting procedure uses a mixture of exponential distributions to model indemnity which allows greater flexibility than the previously-used mixed Pareto and truncated Pareto distributions. ISO found that the mixed exponential distribution provides a good fit to empirical data over a wide range of loss sizes, is flexible and is simple to use.

OVERVIEW OF MIXED EXPONENTIAL PROCESS

The major steps in the calculation of Limited Average Severities of the indemnity are:

1. Trend
Trending occurrence sizes to reflect the expected conditions during the period when the increased limit factors are assumed to be in effect.

2. Construction of the Empirical Survival Distributions
Using the trended data to calculate the empirical survival distributions by payment lag for each table and state group (for Hospitals, Physicians, and Surgeons.)

OVERVIEW OF MIXED EXPONENTIAL PROCESS (continued)

3. Payment Lag Process
Combining the empirical distributions for each payment lag to produce an overall empirical survival distribution for each table and state group (for Hospitals, Physicians, and Surgeons.)

4. Tail of the Distribution
Smoothing the tail of the lag-weighted empirical survival distribution for each table and state group (for Hospitals, Physicians, and Surgeons.)

5. Fitting a Mixed Exponential Distribution
Fitting a mixed exponential model to the empirical survival distribution for each table and state group (for Hospitals, Physicians, and Surgeons.)

6. Final Limited Average Severities
Using the fitted mixed exponential distribution to generate limited average severities.

INDEMNITY SEVERITY TREND

For a given payment lag, we expect severity to increase by the inflation rate from accident year to accident year.

If annual inflation is 4.0%, an injury that results in a $100,000 paid claim in 2005 should cost 1.04 x $100,000 in 2006. The probability of that particular accident stays the same -- only the nominal value of it changes.

To bring different accident years to the same level, we project each occurrence from the average date of its accident year to April 1, 2010, one year beyond the assumed effective date of April 1, 2009. In this review, we selected an annual trend of +5.0% for Dentists, Physicians, Surgeons, and Allied Health Care Liability and +9.0% for Nursing Homes and Hospitals Liability based on the review of trend indications described below.

TREND SELECTION

Trend calculations are based on claims-made and occurrence coverage paid indemnity data. Trend information is provided on page C-13 (trend indications are currently reviewed on a multistate basis). Because of the similarity of liability exposure, we use Physicians and Surgeons experience to help evaluate trends for Allied Health Care and Dentists data, and we use Hospitals experience to help evaluate trends for Nursing Homes.

For Dentists, Physicians, Surgeons, and Allied Health Care Liability we selected annual loss severity trends of +5.0% (compared to +7.0% in the 2006 review). For Nursing Homes and Hospitals we selected annual loss severity trends of +9.0% (compared to +11.0% in the 2006 review). This selection was based on an examination of Total Limits paid indemnity severity trends (fiscal calendar years ending 1996-2007).

CONSTRUCTION OF THE EMPIRICAL SURVIVAL DISTRIBUTIONS

The construction of the empirical survival distributions is based on the Kaplan-Meier product-limit estimator described in Loss Models: From Data to Decisions[1]. First, paid (settled) occurrences are organized by accident year and payment lag and trended to the average accident date for which the loss distribution is desired.

Payment lags seven and beyond generally have similar loss sizes and are combined to increase credibility. Other lags are handled separately. We define payment lag and explain the reasons for its use later in this section.

Next, a survival distribution is constructed for each payment lag using discrete loss size layers. The probability that an occurrence exceeds the upper bound of a discrete layer given that it exceeds the lower bound of the layer is known as the conditional survival probability (CSP). The ground-up survival distribution is generated by multiplying the successive CSPs of the discrete layers.

This procedure allows for the easy inclusion of censored losses as well as deductible data. Two conditions must be met in order for a particular occurrence to be used in the calculation of the conditional survival probability in a particular layer of loss. These conditions are:

- The policy limit (plus any applicable deductible) must be greater than or equal to the upper bound of the layer of loss. This avoids a downward severity bias by excluding losses that are precluded by their policy limit from penetrating the upper bound of a layer of loss.

- Only those occurrences with deductibles less than or equal to the lower bound of the layer of loss are included. This condition is necessary to avoid an upward severity bias since loss information below the deductible is unknown.

ILLUSTRATION

An illustration should aid in the conceptual understanding of this construction.

Assume we have twelve occurrences, all for a single payment lag. We will calculate the empirical survival probabilities for three layers using combinations of conditional survival probabilities. The three layers used are $10,000, $20,000, and $40,000 (in practice we begin with layers as small as $10 - but larger layers better illustrate the handling of deductibles and policy limits). The following two pages display sample calculations for these three layers.

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[1] Klugman, S. A., H.H. Panjer, and G. E. Willmot, *Loss Models: From Data to Decisions*, John Wiley and Sons, New York, 2004

INCREASED LIMIT FACTORS
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Illustrative Data (Trended) for one Payment Lag

Occurrence ID Number	Occurrence Size	Attachment Point	Policy Limit	Comment
1	5,000	0	15,000	
2	5,000	0	15,000	
3	15,000	0	15,000	Censored Data
4	5,000	7,500	15,000	Deductible Data
5	5,000	0	30,000	
6	15,000	0	30,000	
7	25,000	0	30,000	
8	10,000	15,000	30,000	Excess Data
9	15,000	0	100,000	
10	25,000	0	100,000	
11	30,000	0	100,000	
12	50,000	15,000	100,000	Excess Data

Where attachment point is non-zero, we define Policy Limit as the maximum payment.

Conditional Survival Probabilities

	Condition:
$CSP_{e1}(10{,}000 \mid 0) =$ $P(X \geq 10{,}000 \mid X > 0)$	$PL + AP \geq 10{,}000$ $AP = 0$
$CSP_{e1}(20{,}000 \mid 10{,}000) =$ $P(X \geq 20{,}000 \mid X \geq 10{,}000)$	$PL + AP \geq 20{,}000$ $AP \leq 10{,}000$
$CSP_{e1}(40{,}000 \mid 20{,}000)$ $P(X \geq 40{,}000 \mid X \geq 20{,}000)$	$PL + AP \geq 40{,}000$ $AP \leq 20{,}000$

where AP = Attachment Point, PL = Policy Limit, X= Loss Size, e_1 = empirical lag 1

Calculation of Conditional Survival Probability at $10,000

$CSP_{e1}(10{,}000 \mid 0) = P(X \geq 10{,}000 \mid X > 0) =$ Number of Occurrences with:
Occurrence Size + AP ≥ 10,000,
Policy Limit + AP ≥ 10,000, and AP = 0
Number of Occurrences with:
Occurrence Size + AP > 0,
Policy Limit + AP ≥ 10,000, and AP = 0

= 6 (occurrences 3, 6, 7, 9, 10, 11)
= 9 (occurrences 1, 2, 3, 5, 6, 7, 9, 10, 11)

Only occurrences with policy limit plus attachment point greater than or equal to 10,000 are used. Only occurrences with attachment point equal to zero are used.

INCREASED LIMIT FACTORS
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Calculation of Conditional Survival Probability at $20,000

$CSP_{el}(20{,}000 \mid 10{,}000) = P(X \geq 20{,}000 \mid X \geq 10{,}000) =$	Number of Occurrences with: Occurrence Size + AP ≥ 20,000, Policy Limit + AP ≥ 20,000, and AP ≤ 10,000 Number of Occurrences with: Occurrence Size + AP ≥ 10,000, Policy Limit + AP ≥ 20,000, and AP ≤ 10,000 = 3 (occurrences 7, 10, 11) = 6 (occurrences 4, 6, 7, 9, 10, 11)

Only occurrences with policy limit plus attachment point greater than or equal to 20,000 are used. Only occurrences with attachment point less than or equal to 10,000 are used.

Calculation of Conditional Survival Probability at $40,000

$CSP_{el}(40{,}000 \mid 20{,}000) = P(X \geq 40{,}000 \mid X \geq 20{,}000) =$	Number of Occurrences with: Occurrence Size + AP ≥ 40,000, Policy Limit + AP ≥ 40,000, and AP ≤ 20,000 Number of Occurrences with: Occurrence Size + AP ≥ 20,000, Policy Limit + AP ≥ 40,000, and AP ≤ 20,000 = 1 (occurrence 12) = 4 (occurrences 8, 10, 11, 12)

Only occurrences with policy limit plus attachment point greater than or equal to 40,000 are used. Only occurrences with attachment point less than or equal to 20,000 are used.

Calculation of Empirical Survival Distribution

The CSPs generate the following empirical survival probabilities:

$$S_{el}(10{,}000) = P(X \geq 10{,}000) = CSP_{el}(10{,}000 \mid 0) = P(X \geq 10{,}000 \mid X > 0)$$
$$= 6/9$$

$$S_{el}(20{,}000) = P(X \geq 20{,}000) = CSP_{el}(10{,}000 \mid 0) * CSP_{el}(20{,}000 \mid 10{,}000)$$
$$= P(X \geq 10{,}000 \mid X > 0) * P(X \geq 20{,}000 \mid X \geq 10{,}000)$$
$$= 6/9 * 3/6 = 1/3$$

$$S_{el}(40{,}000) = P(X \geq 40{,}000) = CSP_{el}(10{,}000 \mid 0) * CSP_{el}(20{,}000 \mid 10{,}000) * CSP_{el}(40{,}000 \mid 20{,}000)$$
$$= P(X \geq 10{,}000 \mid X > 0) * P(X \geq 20{,}000 \mid X \geq 10{,}000) * P(X \geq 40{,}000 \mid X \geq 20{,}000)$$
$$= 6/9 * 3/6 * 1/4 = 1/12$$

In practice, to generate the trended empirical loss distribution for each lag, we use sixty-eight discrete loss size layers.

SUPPORTING MATERIAL - INDEMNITY

USE OF PAYMENT LAG

Development for paid (settled) data has two aspects. One aspect is that many occurrences are paid within a short period of time after the accident, with a small number taking longer (sometimes significantly longer) to be paid. The second aspect is the tendency of larger occurrences to take longer to be paid.

To properly model an accident year at ultimate, we must include each payment lag with its appropriate weight. We do this by:

- Accounting for the rate of payment using the probability-of-payment-lag model
- Constructing severity distributions by payment lag

Payment lags seven and beyond generally have similar loss sizes and are combined to increase credibility.

PAYMENT LAG PROCESS

A "lag weighting" procedure then combines the by-lag distributions to generate an overall empirical loss distribution. This procedure implicitly accounts for development as all possible payment lags are represented and given weight at the prospective average accident date. We refer to the distribution of the overall survival probabilities by size of loss as the "empirical SDF (survival distribution function)".

PAYMENT LAG

Payment lag is the length of time between when an accident occurs and when it is paid. In the mixed exponential model, the payment date is the dollar-weighted average of indemnity payments. ISO calculates payment lag based on the year in which an accident occurs and the year in which the occurrence is paid:

$$\text{Payment Lag} = (\text{Payment Year} - \text{Accident Year}) + 1$$

Payment lag can vary considerably by line of business and by type of claim. While most property claims are paid quickly, liability claims generally take longer, particularly those involving protracted litigation. Among liability claims, there is considerable variation in payment lag.

DIFFERENCES IN LOSS SIZES BY PAYMENT LAG

Generally, occurrences with longer payment lags involve higher loss sizes. For example, the average loss size for occurrences paid in lag 4 will tend to be considerably higher than the average loss size for those paid in lag 1.

The Mixed Exponential Methodology reflects this by fitting (the continuous mixed exponential distribution) to a lag-weighted empirical survival distribution. We do not directly fit to the severity distributions of individual lags.

SUPPORTING MATERIAL - INDEMNITY

PAYMENT LAG DISTRIBUTION

The payment lag distribution is modeled to avoid distortions that may otherwise result from:

- Differing exposure amounts by accident year
- An asymmetrical experience period with fewer than five accident years for lags eleven through fourteen
- A finite number of lags (no data for lags beyond fourteen)

The lag-weighting procedure implicitly accounts for ultimate development as all possible payment lags are represented and given weight at the prospective average accident date.

The payment lag model uses four parameters (R1, R2, R3, R4) to generate the weights given to the severity distribution associated with each payment lag. The parameters are defined as follows:

$$R1 = \frac{\text{expected percentage of occurrences paid in lag 2}}{\text{expected percentage of occurrences paid in lag 1}}$$

$$R2 = \frac{\text{expected percentage of occurrences paid in lag 3}}{\text{expected percentage of occurrences paid in lag 2}}$$

$$R3 = \frac{\text{expected percentage of occurrences paid in lag 4}}{\text{expected percentage of occurrences paid in lag 3}}$$

$$R4 = \frac{\text{expected percentage of occurrences paid in lag } (n+1)}{\text{expected percentage of occurrences paid in lag } (n)}, n \geq 4$$

The weights for each lag are then determined as follows:

Lag 1 weight = $1 / k$,
Lag 2 weight = $R1 / k$
Lag 3 weight = $R1 \cdot R2 / k$
Lag 4 weight = $R1 \cdot R2 \cdot R3 / k$
Lag 5 weight = $R1 \cdot R2 \cdot R3 \cdot R4 / k$
Lag 6 weight = $R1 \cdot R2 \cdot R3 \cdot R4^2 / k$
Lag 7 weight = $R1 \cdot R2 \cdot R3 \cdot [R4^3 / (1-R4)] / k$,

where $k = \{1 + R1 + [R1 \cdot R2] + [R1 \cdot R2 \cdot R3]/[1-R4]\}$

Note that the Lag 7 weight includes lag 7 and all subsequent lags.

The lag weights represent the percentage of ground-up occurrences in each lag. Therefore, occurrences from deductible policies are not included.

SUPPORTING MATERIAL - INDEMNITY

METHOD OF ESTIMATION: PAYMENT LAG PARAMETERS

For stability, we calculate the payment lag parameters (R1, R2, R3 and R4) via maximum likelihood. An occurrence with accident year r and payment lag L is reflected in the likelihood function by the probability that the lag equals L given that the accident year equals r. This conditional probability can be easily expressed in terms of the payment lag parameters.

Page C-14 shows the resulting values of these parameters.

TAIL OF THE DISTRIBUTION

For the higher limits of liability, the empirical data is sparse. To account for this, and to limit random fluctuations between consecutive reviews in the higher limits, a procedure is used to adjust the tail of the empirical SDF.

We select a truncation point ($700,000 for Nursing Homes, $1,000,000 for Dentists, $1,000,000 for Hospitals, $1,100,000 for Physicians, $1,000,000 for Surgeons, and $1,000,000 for Allied Health Care) above which the empirical SDF is not sufficiently stable. Then we select a family of parametric curves that successfully models the behavior of the empirical distribution just below the truncation point. Percentile matching determines the parameters of this curve.

The resulting curve is used to extrapolate above the truncation point. The empirical distribution below the truncation point is unaffected by this procedure.

Essentially, this procedure smoothes the tail of the empirical distribution by extending relationships from the highest credible limits (those limits just below the truncation point) to those limits above the truncation point. A mixed exponential distribution is then fit to the resulting SDF for each increased limits table.

FITTING A MIXED EXPONENTIAL DISTRIBUTION

ISO models the lag-weighted empirical survival distribution function for each table and state group (for Hospitals, Physicians, and Surgeons) with the best fitting mixed exponential distribution. The resulting mixed exponential distribution produces the limited average severity component of the increased limit factor.

THE SIMPLE EXPONENTIAL DISTRIBUTION

To understand the mixed exponential distribution, first consider the simple exponential distribution. The simple exponential is a one-parameter distribution. The formulas for the survival distribution function SDF(x) and the limited average severity (LAS) at a given policy limit (PL) for an exponential distribution with mean parameter μ are given by:

$$SDF(x) = \exp(-x/\mu) = 1 - CDF(x)$$

$$LAS(PL) = \mu [1 - \exp(-PL/\mu)]$$

THE MIXED EXPONENTIAL DISTRIBUTION

The mixed exponential distribution is a weighted average of exponential distributions. Each exponential distribution has two parameters, a mean μ_i and a weight w_i. Since the SDF at zero is unity, the weights will sum to 1.0.

The formulas for the survival distribution function and limited average severity for the mixed exponential distribution are the weighted averages of the respective single exponential formulas:

$$SDF(x) = \sum_i [\, w_i \ \exp(-x/\mu_i) \,]$$

$$LAS(PL) = \sum_i w_i \mu_i \ [\, 1 - \exp(-PL/\mu_i) \,]$$

The mixed exponential distribution allows us to model indemnity with greater flexibility than the previously-used mixed Pareto and truncated Pareto distributions. In fact, any distribution whose probability density function (pdf) has alternating derivatives:

$$\begin{aligned} pdf(x) &> 0, \\ d\ pdf(x)/dx &< 0, \\ d^2\ pdf(x)/dx^2 &> 0, \\ d^3\ pdf(x)/dx^3 &< 0, \\ &\text{etc., for all } x > 0, \end{aligned}$$

can be constructed as a mixture of exponentials with positive means and weights. Such distributions (including the mixed Pareto, if it has a finite mean) can be thought of as special cases of the mixed exponential distribution.

THE MIXED EXPONENTIAL DISTRIBUTION SEVERITY PARAMETERS

ISO estimates the mixed exponential distribution parameters using minimum distance estimation. We compare the model SDF to the empirical SDF at each of the discrete loss size layers resulting from the construction.

We seek a mixed exponential distribution that minimizes the sum of the square of the differences of these survival probabilities (model minus empirical) taken at each loss size layer. This procedure is known as the "minimum distance" method.

The number of exponential distributions needed to produce an optimal fit to the empirical SDF may vary by table and is allowed to be as large as necessary.

To address concerns about the fitted mixed exponential distribution for higher limits of liability (above $10 million), we have revised our fitting procedure somewhat, starting with the 2008 review. Whereas in the past we limited the maximum possible mean to $10 million, we now allow means up to $100 million, in order to more closely follow the smoothed empirical distribution in layers above $10 million. Allowing means up to $100 million will tend to increase the number of means (and weights) for the fitted distribution in a given table, while having minimal effect on limits up to $10 million, the highest limit for which we publish increased limit factor information.

Page C-15 displays the mixed exponential parameters (means and weights) for each increased limits table.

SUPPORTING MATERIAL - INDEMNITY

MAY NOT BE APPLICABLE FOR ALL POLICY LIMITS

ISO's standard increased limits tables (shown in Section B) provide increased limit factors up to the $10,000,000 per occurrence policy limit. **We do not use the methodology described here to model losses above this point. We encourage the use of supplemental sources of information for analysis of these higher layers.** In addition, for Medical Professional Liability, we only file increased limit factors for limits up to $3,000,000 per occurrence.

FINAL LIMITED AVERAGE SEVERITIES

ISO calculates the limited average severities using the fitted mixed exponential distributions for each table. Page C-11 gives the formula for the limited average severity of a mixed exponential distribution. Pages C-15 shows the individual by-table severity parameters used in this formula.

Pages C-16 to C-17 compare the fitted limited average severities to the empirical limited average severities. The empirical limited average severities are constructed in a manner analogous to the empirical survival distributions. The same conditions and assumptions are used in combination with actual trended loss amounts in each layer.

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SUPPORTING MATERIAL - INDEMNITY

TOTAL LIMITS PAID INDEMNITY TREND INDICATIONS

PHYSICIANS AND SURGEONS LIABILITY*
Increased Limits Data through Fiscal Calendar Year ending 6/30/2007

	Trend Fit	R^2
12 years	4.9%	0.95
10 years	4.4%	0.91
8 years	3.7%	0.86
6 years	3.4%	0.80

Selection	**5.0%**

HOSPITALS LIABILITY**
Increased Limits Data through Fiscal Calendar Year ending 6/30/2007

	Trend Fit	R^2
12 years	8.0%	0.95
10 years	7.6%	0.93
8 years	8.0%	0.88
6 years	7.9%	0.83

Selection	**9.0%**

* Because of the similarity of liability exposure, Physicians and Surgeons experience is used to evaluate trends for Allied Health Care and Dentists data

**Hospitals experience is used to evaluate trends for Nursing Homes.

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SECTION C – SUPPORTING MATERIAL – INDEMNITY

PAYMENT LAG PARAMETERS AND LAG WEIGHTS[a]

Payment Lag Parameters

	Nursing Homes	Dentists	Hospitals
R1 =	2.65057574	1.74792382	0.96425825
R2 =	1.46552908	0.78895465	1.13182491
R3 =	1.11712434	0.66121556	1.34774716
R4 =	0.69088065	0.57481458	0.69257084
k = 1+R1+R1•R2+(R1•R2•R3)/(1-R4) =	21.57322482	6.27152158	7.84012345

	Physicians	Surgeons	Allied Health Care
R1 =	7.66189400	7.07458963	2.28859437
R2 =	1.86866887	2.02690830	1.29581882
R3 =	1.65893210	1.37924757	0.95082565
R4 =	0.71902301	0.71941718	0.73154126
k = 1+R1+R1•R2+(R1•R2•R3)/(1-R4) =	107.51244848	92.90234921	16.75775631

Generation of Lag Weights

		Nursing Homes	Dentists	Hospitals
Lag 1 =	1/k =	0.04635376	0.15945094	0.12754901
Lag 2 =	R1/k =	0.12286414	0.27870810	0.12299019
Lag 3 =	R1•R2/k =	0.18006097	0.21988804	0.13920336
Lag 4 =	R1•R2•R3/k =	0.20115050	0.14539340	0.18761093
Lag 5 =	R1•R2•R3•R4/k =	0.13897098	0.08357424	0.12993386
Lag 6 =	R1•R2•R3•$R4^2$/k =	0.09601236	0.04803969	0.08998840
Lag 7 =	R1•R2•R3•($R4^3$/(1-R4))/k =	0.21458729	0.06494559	0.20272425
	Total =	1.00000000	1.00000000	1.00000000

		Physicians	Surgeons	Allied Health Care
Lag 1 =	1/k =	0.00930125	0.01076399	0.05967386
Lag 2 =	R1/k =	0.07126518	0.07615082	0.13656926
Lag 3 =	R1•R2/k =	0.13317102	0.15435072	0.17696902
Lag 4 =	R1•R2•R3/k =	0.22092170	0.21288786	0.16826668
Lag 5 =	R1•R2•R3•R4/k =	0.15884777	0.15315518	0.12309402
Lag 6 =	R1•R2•R3•$R4^2$/k =	0.11421520	0.11018247	0.09004835
Lag 7 =	R1•R2•R3•($R4^3$/(1-R4))/k =	0.29227788	0.28250896	0.24537881
	Total =	1.00000000	1.00000000	1.00000000

[a] The lag weight distribution excludes data with non-zero deductibles.

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SECTION C – SUPPORTING MATERIAL – INDEMNITY
MIXED EXPONENTIAL PARAMETERS
Prospective Average Accident Date - April 1, 2010

Medical Professional Liability

Nursing Homes

Means	Weights
167,639	0.720663
551,635	0.125228
12,852	0.076677
1,448,568	0.036039
899	0.017791
2,888,235	0.011028
5,929,564	0.008183
17,773,279	0.003405
100,000,000	0.000986

Physicians

Means	Weights
224,773	0.461698
592,901	0.405488
1,670,950	0.084508
4,229,267	0.020555
26,959	0.018942
9,566,836	0.005900
23,083,907	0.002315
100,000,000	0.000594

Dentists

Means	Weights
58,363	0.447797
10,387	0.408990
236,759	0.079776
1,028	0.050856
815,543	0.009839
2,334,085	0.002069
6,239,161	0.000501
16,882,771	0.000130
100,000,000	0.000021
34,970,647	0.000021

Surgeons

Means	Weights
417,439	0.636985
1,104,253	0.160475
155,558	0.074287
64,511	0.053046
2,715,227	0.047156
6,011,830	0.010876
8,586,947	0.005980
2,244	0.005679
20,872,877	0.004408
100,000,000	0.001108

Hospitals

Means	Weights
109,364	0.470964
593,903	0.265112
7,513	0.114901
1,004	0.079777
1,923,360	0.052062
5,579,315	0.012612
15,386,196	0.002998
26,675,573	0.000894
100,000,000	0.000680

Allied Health Care

Means	Weights
60,774	0.481557
281,764	0.317586
4,239	0.114286
849,782	0.064948
2,350,475	0.015339
6,090,395	0.003978
13,914,602	0.000865
19	0.000681
24,372,173	0.000547
100,000,000	0.000213

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SECTION C – SUPPORTING MATERIAL – INDEMNITY

COMPARISON OF LIMITED AVERAGE SEVERITIES

Nursing Homes

Policy Limit[a] ($,000)	Empirical LAS[b]	Fitted LAS	Percent Difference
100	72,511	72,548	0.1%
200	117,241	117,525	0.2%
250	133,442	133,805	0.3%
300	146,683	147,221	0.4%
500	183,154	183,262	0.1%
1,000	226,008	226,482	0.2%
1,500	249,656	250,106	0.2%
2,000	265,863	266,332	0.2%
2,500	278,117	278,576	0.2%
3,000	287,928	288,375	0.2%
4,000	303,049	303,495	0.1%
5,000	314,482	314,937	0.1%
10,000	348,412	348,859	0.1%

Dentists

Empirical LAS[b]	Fitted LAS	Percent Difference
33,488	33,427	-0.2%
42,783	42,633	-0.4%
45,336	45,166	-0.4%
47,294	47,100	-0.4%
52,203	51,967	-0.5%
57,275	57,030	-0.4%
59,502	59,244	-0.4%
60,877	60,616	-0.4%
61,840	61,583	-0.4%
62,565	62,311	-0.4%
63,608	63,351	-0.4%
64,337	64,078	-0.4%
66,230	65,970	-0.4%

Hospitals - State Group C

Policy Limit[a] ($,000)	Empirical LAS[b]	Fitted LAS	Percent Difference
100	62,936	62,986	0.1%
200	102,902	102,472	-0.4%
250	118,004	117,733	-0.2%
300	131,109	131,082	0.0%
500	171,968	172,734	0.4%
1,000	236,930	237,262	0.1%
1,500	274,465	274,720	0.1%
2,000	298,670	299,098	0.1%
2,500	316,170	316,544	0.1%
3,000	329,692	329,964	0.1%
4,000	349,696	349,891	0.1%
5,000	364,159	364,398	0.1%
10,000	403,819	404,099	0.1%

Physicians - State Group C

Empirical LAS[b]	Fitted LAS	Percent Difference
86,169	86,191	0.0%
151,866	152,190	0.2%
179,496	179,668	0.1%
204,376	204,205	-0.1%
282,218	280,562	-0.6%
389,996	389,334	-0.2%
448,648	447,479	-0.3%
484,982	484,009	-0.2%
510,421	509,463	-0.2%
529,586	528,562	-0.2%
557,122	556,028	-0.2%
576,401	575,333	-0.2%
626,405	625,356	-0.2%

[a] ISO does not file factors for occurrence limits above $3,000,000 for Medical Professional Liability.
[b] Empirical Limited Average Severities reflect tail smoothing.

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SECTION C – SUPPORTING MATERIAL – INDEMNITY

COMPARISON OF LIMITED AVERAGE SEVERITIES

Policy Limit[a] ($,000)	Surgeons - State Group C			Allied Health Care		
	Empirical LAS[b]	Fitted LAS	Percent Difference	Empirical LAS[b]	Fitted LAS	Percent Difference
100	87,078	87,027	-0.1%	59,283	59,024	-0.4%
200	155,645	155,731	0.1%	89,756	89,764	0.0%
250	185,091	185,086	0.0%	100,853	100,991	0.1%
300	211,954	211,720	-0.1%	110,412	110,553	0.1%
500	297,259	297,078	-0.1%	138,604	138,222	-0.3%
1,000	423,279	422,724	-0.1%	172,881	172,584	-0.2%
1,500	490,794	490,273	-0.1%	189,533	189,184	-0.2%
2,000	533,953	533,439	-0.1%	199,994	199,630	-0.2%
2,500	564,957	564,401	-0.1%	207,412	207,071	-0.2%
3,000	588,793	588,233	-0.1%	213,058	212,732	-0.2%
4,000	623,849	623,321	-0.1%	221,266	220,932	-0.2%
5,000	649,032	648,506	-0.1%	227,086	226,742	-0.2%
10,000	717,322	716,784	-0.1%	242,522	242,188	-0.1%

[a] ISO does not file factors for occurrence limits above $3,000,000 for Medical Professional Liability.
[b] Empirical Limited Average Severities reflect tail smoothing.

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SECTION D - SUPPORTING MATERIAL - ALLOCATED LOSS ADJUSTMENT EXPENSES

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SUPPORTING MATERIAL - ALLOCATED LOSS ADJUSTMENT EXPENSES

OVERVIEW

The standard liability policy contains a policy limit which represents the maximum amount an insurer will pay for any loss for which the insured is liable. However, the limit does not apply to the loss adjustment expenses. For this reason, we estimate ALAE per occurrence as a single amount that does not vary by policy limit.

For each table, we estimate allocated loss adjustment expense (ALAE) per occurrence as the product of two numbers. The first number is the average of the ratio of paid ALAE to paid total limits (all limits combined) indemnity and incurred ALAE to incurred paid total limits (all limits combined) indemnity. The second number is the average (across all policy limits) limited average severity calculated from the mixed exponential model.

In order to calculate the ALAE per occurrence, we first calculate the ratio of dollars of ALAE to dollars of total limits indemnity for the nine next-to-latest available accident years (the latest accident year is excluded from the average because its development tends to be less stable). We develop these ratios to ultimate maturity.

In 2006 we revised our calculation procedure for estimating the ALAE to total limits indemnity loss ratios. The revised procedure uses a triangle of incremental ALAE emergence (at each evaluation) as a percentage of ultimate total limits indemnity losses to determine additive incremental ALAE emergence ratios. Specifically, "incremental ALAE percentages" are calculated as the emergence of ALAE between two evaluation points, divided by ultimate paid indemnity losses. For example, the difference between historic ALAE evaluated at 27 months and ALAE evaluated at 15 months is expressed as a percentage of ultimate incurred indemnity losses. Similar percentages are calculated for the 27-to-39 month period, the 39-to-51 month period, etc. These percentages are summed, then combined with the ratios from the most recent diagonals, to determine the ratios of ALAE to total limits indemnity at ultimate.

Previously we calculated a triangle of cumulative ALAE to total limits indemnity ratios (by year and evaluation), and used the resulting multiplicative age-to-age link-ratios to determine ALAE-indemnity ratios at ultimate. The revised incremental ALAE procedure is expected to provide more stable ALAE provisions from review to review.

To further enhance stability we use a best 5-of-9 criterion and eliminate the lowest and highest paid ratios. We then average the best 5-of-9 paid ratios to determine the overall ALAE to total limits indemnity ratio for each table.

The fitted total limits average severity for each table is a weighted-average of the limited average severities at the different policy limits. The weights used are occurrences from the second, third, and fourth latest accident years.

For each table, the multi-year average ALAE to total limits indemnity ratio is then multiplied by the final fitted total limits average severity in order to calculate the ALAE per occurrence provision for use in computing increased limit factors. The total limits average severity reflects trend to the average prospective accident date. This effectively contemplates trend in ALAE in a more stable manner than relying on a separate trend analysis of ALAE. See the following pages for the ALAE calculations.

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

CALCULATION OF ALLOCATED LOSS ADJUSTMENT EXPENSE PER OCCURRENCE

Ratios of ALAE to Total Limits (TL) Indemnity - Paid Data

	Nursing Homes		Dentists		Hospitals	
Year Ending	Paid	Incurred	Paid	Incurred	Paid	Incurred
6/30/1998	0.329	0.383	0.687	0.663	0.465	0.453
6/30/1999	0.300	0.470	0.597	0.619	0.378	0.375
6/30/2000	0.424	0.404	0.636	0.716	0.346	0.345
6/30/2001	0.407	0.368	0.742	0.786	0.408	0.398
6/30/2002	0.459	0.354	0.572	0.805	0.445	0.395
6/30/2003	0.477	0.339	0.533	0.975	0.339	0.322
6/30/2004	0.528	0.340	0.559	1.037	0.391	0.393
6/30/2005	0.422	0.315	0.598	0.998	0.419	0.396
6/30/2006	0.488	0.342	0.586	0.838	0.390	0.334
Best 5 of 9 Average	0.438	0.357	0.598	0.824	0.397	0.381
Paid and Incurred Average		0.398		0.711		0.389

	Physicians		Surgeons		Allied Health Care	
Year Ending	Paid	Incurred	Paid	Incurred	Paid	Incurred
6/30/1998	0.301	0.301	0.228	0.226	0.360	0.351
6/30/1999	0.319	0.319	0.258	0.255	0.413	0.345
6/30/2000	0.314	0.309	0.273	0.265	0.414	0.366
6/30/2001	0.328	0.315	0.316	0.320	0.531	0.484
6/30/2002	0.362	0.347	0.433	0.407	0.499	0.476
6/30/2003	0.403	0.372	0.426	0.415	0.512	0.415
6/30/2004	0.429	0.414	0.364	0.380	0.537	0.443
6/30/2005	0.401	0.396	0.365	0.387	0.479	0.438
6/30/2006	0.434	0.394	0.377	0.361	0.490	0.435
Best 5 of 9 Average	0.363	0.349	0.339	0.343	0.479	0.419
Paid and Incurred Average		0.356		0.341		0.449

Indicated ALAE per Occurrence

Table	(1) ALAE per Total Limits Indemnity	(2) Mixed Exponential Total Limits Average Severity	(1) x (2) ALAE per Occurrence
Nursing Homes	0.398	223,644	88,898
Dentists	0.711	55,815	39,684
Hospitals	0.389	251,734	97,925
Physicians	0.356	359,021	127,812
Surgeons	0.341	376,043	128,231
Allied Health Care	0.449	167,718	75,305

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SECTION E – SUPPORTING MATERIAL – UNALLOCATED LOSS ADJUSTMENT EXPENSES

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SUPPORTING MATERIAL – UNALLOCATED LOSS ADJUSTMENT EXPENSES

OVERVIEW

We calculate the unallocated loss adjustment expense at each limit of liability as a percentage of the sum of the limited average severity and the ALAE at that liability limit. We select the ULAE load of 4.5% based on a five-year average of multistate financial data reported to ISO. See the following page for the derivation of this factor.

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

DEVELOPMENT OF UNALLOCATED LOSS ADJUSTMENT EXPENSE FACTOR

Medical Professional Liability
Multistate Expense Experience
Loss Adjustment Expense Special Call

ITEM[a]	CALENDAR YEAR 2002	2003	2004	2005	2006
(1) Direct Losses Incurred	1,317,026	1,290,278	782,561	672,900	465,275
(2) Allocated Loss Adjustment Expenses Incurred (ALAE)	345,079	402,824	350,983	375,840	350,245
(3) Unallocated Loss Adjustment Expenses Incurred (ULAE)	64,991	72,090	54,192	31,938	46,668
(4) Incurred Losses + ALAE [(1) + (2)]	1,662,105	1,693,102	1,133,544	1,048,740	815,520

	Incurred Percentage[b] 2002	2003	2004	2005	2006
(5) ULAE as Ratio to (Losses + ALAE) [(3) / (4)]	3.9%	4.3%	4.8%	3.0%	5.7%

Selected ULAE Factor: **4.5%**

[a] Items (1) - (3) are from an ISO special call submission for available writers. All dollar amounts are displayed in thousands.

[b] Incurred percentages are calculated on a direct basis.

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SECTION F – SUPPORTING MATERIAL – RISK LOAD

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SUPPORTING MATERIAL – RISK LOAD

OVERVIEW

Our increased limits methodology incorporates a procedure to reflect the relatively higher risk or variation in experience associated with higher limit policies. The model that we use, the Competitive Market Equilibrium Risk Load Model,[1] assumes that the insurance marketplace is competitive and efficient. In a competitive marketplace, individual insurers cannot influence the marketplace price. While individual insurers cannot influence the risk associated with a given policy limit, they will attempt to maximize their expected net revenue by choosing which lines and policy limits to write. This assumption is consistent with rational economic behavior and is reinforced by solvency regulation.

In an efficient marketplace, the supply of insurance matches the demand. ISO uses the distribution of basic limit losses by policy limit to represent the market demand for insurance at each limit. The model determines a set of risk loads that match supply and demand at each policy limit.

The variability of losses is caused by process risk and parameter risk:

- Process risk reflects the inherent uncertainty of the insurance process. Even if one could estimate expected losses exactly, actual losses will almost certainly differ from the expected. We derive the process risk component from the parameters of the indemnity severity distribution.

- Parameter risk reflects the risk of not estimating expected losses accurately. The derivation of the parameter risk component is based on the historical variation of losses.

These two risk elements combined comprise the total risk load at each policy limit.

For Hospitals, Physicians and Surgeons Liability, this procedure generates increased limit factors for limits through $10,000,000 that are on average 6.0% higher than the factors would be excluding any reflection of risk. The resulting risk load formulas have a parameter, lambda (λ), which can be interpreted as a measure of the total amount of risk load over all policy limits for these Medical Professional Liability lines.

For each subline, the risk load effect for per-occurrence limits through $3,000,000 is 7.4% for Hospitals, 5.8% for Physicians, and 5.7% for Surgeons.

For Dentists and Allied Health Care Liability, the same risk load parameters (except for nbara) are used as in ISO's Physicians and Surgeons increased limits reviews. For Nursing Homes Liability, the same parameters (except for nbara) are used as in ISO's Hospitals increased limits review. The resulting increased limit factors with risk load (for limits through $3,000,000) are on average 3.5% higher for Nursing Homes, 1.2% higher for Dentists, and 3.3% higher for Allied Health Care than such factors would be excluding any reflection of risk.

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[1] Meyers, G. G., *Competitive Market Equilibrium Risk Load Model for Increased Limits Ratemaking*, Proceedings of the Casualty Actuarial Society, Volume LXXVII, 1992

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

RISK LOAD FORMULAS AND PARAMETERS

The following are the formulas underlying ISO's risk load model.

The risk load formulas incorporate parameter risk using a parameter transformation. In the following formulas, we use the notation AVSEV(PL,α) and SECM(PL,α) to represent the limited moments of a transformed loss size distribution. The distribution is transformed by multiplying all occurrences by the constant "α." AVSEV represents the limited average severity and SECM represents the limited second moment of the transformed distribution. The following formulas represent an approximation of the effect of parameter risk on the severity distribution:

$$AVSEV(PL, \alpha) = \alpha \times LAS(PL/\alpha)$$

$$SECM(PL, \alpha) = \alpha^2 \times SECM(PL/\alpha)$$

The formula for the LAS(PL) and SECM(PL) of a mixed exponential are as follows:

$$LAS(PL) = \sum_i w_i \, \mu_i \, [\, 1 - \exp(-PL / \mu_i) \,]$$

$$SECM(PL) = \sum_i 2 \, w_i \, \mu_i^2 \left[1 - \left(1 + \frac{PL}{\mu_i} \right) \exp\left(-\frac{PL}{\mu_i} \right) \right]$$

(1) *Total Risk Load*
The vector of risk load amounts for a particular increased limits table, R, is:

$$\mathbf{R} = \lambda[\mathbf{U} + 2(\mathbf{V}^{c} \cdot \bar{\mathbf{n}}^{c} + \mathbf{V}^{a} \cdot \bar{\mathbf{n}}^{a})]$$

where

$\lambda =$ the factor which reflects the overall impact of risk load over Hospitals and Physicians and Surgeons combined. ISO selected this parameter so that the average increased limit factor with risk load divided by the average increased limit factor without risk load equals 1.06. This parameter is also used for Nursing Homes, Dentists and Allied Health Care.

$\mathbf{U} =$ the vector of risk elements corresponding to process risk. Its j^{th} component is u_j, corresponding to the j^{th} policy limit.

$\mathbf{V}^{a} =$ the matrix describing severity parameter risk.

$\bar{\mathbf{n}}^{a} =$ the vector of the expected number of occurrences per insurer in the particular increased limits table. The j^{th} component of $\bar{\mathbf{n}}^{a}$ is computed as follows: the basic limit loss weight for that policy limit in the increased limits table (as a percentage) is multiplied by nbara, the multistate expected number of occurrences per insurer, in the particular increased limits table, for all limits combined.

$\mathbf{V}^{c} =$ the matrix describing frequency parameter risk.

$\bar{\mathbf{n}}^{c} =$ the vector of the expected average number of occurrences per insurer per state for all tables combined. The j^{th} component of $\bar{\mathbf{n}}^{c}$ is computed as follows: the basic limit loss weight for that policy limit in the increased limits table (as a percentage) is multiplied by nbarc, which is the expected average number of occurrences per insurer per state for all tables and limits combined. The nbarc parameter used for Nursing Homes, Dentists, and Allied Health Care is set equal to the nbarc parameter used in the Hospitals, Physicians and Surgeons increased limits review.

(2) *Process Risk Load*

The process risk component of the risk load is given by $\lambda \times \mathbf{U}$. The component u_j, associated with the j^{th} limit, is:

$$u_j = E_\alpha[SECM(PL_j,\alpha)] + d \cdot E_\alpha[AVSEV(PL_j,\alpha)^2]$$

where:

α = random variable with mean 1 and variance a. α represents severity parameter risk.

a = .001 (based on a special ISO study).

$1 + d$ = variance-to-mean ratio for occurrence count distribution, contingent on parameters being known. In other words, if there were no frequency parameter risk, the variance-to-mean ratio would be $1 + d$.

E_α = expected value across all values of the parameter α.

Let: $\alpha_1 = 1 - \sqrt{3a}\,; \quad \alpha_2 = 1; \quad \alpha_3 = 1 + \sqrt{3a}\,;$

The Gauss-Hermite approximation[2] provides a discrete approximation for the expected value of a function $G(\alpha)$ across all values of the normally distributed random variable α:

$$E_\alpha[G(\alpha)] \approx (1/6)G(\alpha_1) + (2/3)G(\alpha_2) + (1/6)G(\alpha_3)$$

for any function $G(\alpha)$.

(3) *Parameter Risk Load*

The parameter risk component of the risk load is given by $\lambda \times 2 \times (\mathbf{V}^c \cdot \bar{\mathbf{n}}^c + \mathbf{V}^a \cdot \bar{\mathbf{n}}^a)]$.

Evaluation of $\mathbf{V}^c$

v^c_{ij} = element of $\mathbf{V}^c$ corresponding to i^{th} limit, j^{th} limit

$= c \times E_\alpha[AVSEV(PL_i,\alpha) \cdot AVSEV(PL_j,\alpha)]$

c = parameter quantifying frequency parameter risk ("c" does for frequency what "a" does for severity). Values vary by line based on a special ISO study.

Evaluation of $\mathbf{V}^a$

v^a_{ij} = element of $\mathbf{V}^a$ corresponding to i^{th} limit, j^{th} limit

$= E_\alpha[AVSEV(PL_i,\alpha) \cdot AVSEV(PL_j,\alpha)] - E_\alpha[AVSEV(PL_i,\alpha)] \cdot E_\alpha[AVSEV(PL_j,\alpha)]$

[2] Ralston, A., *A First Course in Numerical Analysis*, McGraw-Hill, 1965

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

RISK LOAD FORMULAS AND PARAMETERS

NURSING HOMES LIABILITY
MULTISTATE

d	=	2
c	=	0.05
a	=	0.001
nbarc	=	125
λ	=	1.41E-07
nbara	=	12

PHYSICIANS LIABILITY
STATE GROUP C

d	=	1
c	=	0.02
a	=	0.001
nbarc	=	125
λ	=	1.41E-07
nbara	=	108.91

DENTISTS LIABILITY
MULTISTATE

d	=	1
c	=	0.02
a	=	0.001
nbarc	=	125
λ	=	1.41E-07
nbara	=	220

SURGEONS LIABILITY
STATE GROUP C

d	=	1
c	=	0.02
a	=	0.001
nbarc	=	125
λ	=	1.41E-07
nbara	=	93.79

HOSPITALS LIABILITY
STATE GROUP C

d	=	2
c	=	0.05
a	=	0.001
nbarc	=	125
λ	=	1.41E-07
nbara	=	122.81

ALLIED HEALTH CARE LIABILITY
MULTISTATE

d	=	1
c	=	0.02
a	=	0.001
nbarc	=	125
λ	=	1.41E-07
nbara	=	220

ISO determines lambda so that the ratio of the average increased limit factor with risk load to the average increased limit factor without risk load is equal to 1.06 for all Hospitals, Physicians and Surgeons Liability combined through the highest limit that we evaluate: $10,000,000. This parameter is also used for Nursing Homes, Dentists, and Allied Health Care Liability.

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SECTION G – INDICATED CHANGES BY TABLE

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SUMMARY

Pages G-3 through G-8 display the indicated per-occurrence factors and percentage changes for Physicians, Surgeons, Hospitals, Nursing Homes, Dentists, and Allied Health Care. Current and indicated factors are shown by policy limit for each table. Average increased limit factors are summarized on pages G-4 for Physicians and Surgeons, G-5 for Hospitals and Physicians and Surgeons, and G-8 for Nursing Homes, Dentists, and Allied Health Care. The average increased limit factors for all Medical lines are summarized on page G-9. These factors underlie the filed occurrence/aggregate factors shown in Section A of this document.

Basic limit loss weights are based on indemnity losses (capped at the basic limit) plus ALAE, developed to ultimate, from the second, third, and fourth latest accident years.

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

CALCULATION OF INDICATED CHANGES

PHYSICIANS LIABILITY

Policy Limit ($,000)	Basic Limit Loss Weight	Current Increased Limit Factor	Indicated Increased Limit Factor	Indicated % Change
100	0.0043	0.51	0.52	2.0%
200	0.0008	0.67	0.69	3.0%
250	0.2006	0.73	0.75	2.7%
300	0.0000	0.79	0.81	2.5%
500	0.0961	1.00	1.00	0.0%
750	0.0001	1.21	1.19	-1.7%
1,000	0.4743	1.37	1.33	-2.9%
1,500	0.0133	1.59	1.53	-3.8%
2,000	0.1389	1.73	1.66	-4.0%
2,500	0.0000	1.83	1.76	-3.8%
3,000	0.0716	1.91	1.84	-3.7%
TOTAL	1.0000	1.293	1.263	-2.3%

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

CALCULATION OF INDICATED CHANGES

SURGEONS LIABILITY

Policy Limit ($,000)	Basic Limit Loss Weight	Current Increased Limit Factor	Indicated Increased Limit Factor	Indicated % Change
100	0.0012	0.47	0.51	8.5%
200	0.0004	0.64	0.67	4.7%
250	0.2029	0.71	0.74	4.2%
300	0.0000	0.78	0.80	2.6%
500	0.0875	1.00	1.00	0.0%
750	0.0000	1.24	1.21	-2.4%
1,000	0.5653	1.42	1.37	-3.5%
1,500	0.0067	1.68	1.59	-5.4%
2,000	0.0967	1.86	1.74	-6.5%
2,500	0.0000	1.99	1.86	-6.5%
3,000	0.0393	2.11	1.95	-7.6%
TOTAL	1.0000	1.309	1.269	-3.1%

SUMMARY

Table	Basic Limit Loss Weight	Current Average Increased Limits Factor	Indicated Average Increased Limits Factor	Indicated Change
Physicians	0.5284	1.293	1.263	-2.3%
Surgeons	0.4716	1.309	1.269	-3.1%
Combined	1.0000	1.301	1.266	-2.7%

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

CALCULATION OF INDICATED CHANGES

HOSPITALS LIABILITY

Policy Limit ($,000)	Basic Limit Loss Weight	Current Increased Limit Factor	Indicated Increased Limit Factor	Indicated % Change
100	0.0000	0.60	0.59	-1.7%
200	0.0000	0.74	0.74	0.0%
250	0.0014	0.79	0.80	1.3%
300	0.0000	0.85	0.85	0.0%
500	0.0000	1.00	1.00	0.0%
750	0.0000	1.17	1.17	0.0%
1,000	0.7792	1.33	1.31	-1.5%
1,500	0.0000	1.56	1.51	-3.2%
2,000	0.2069	1.74	1.65	-5.2%
2,500	0.0000	1.88	1.75	-6.9%
3,000	0.0125	2.01	1.84	-8.5%
TOTAL	1.0000	1.423	1.386	-2.6%

SUMMARY

Table	Basic Limit Loss Weight	Current Average Increased Limits Factor	Indicated Average Increased Limits Factor	Indicated Change
Hospitals	0.1236	1.423	1.386	-2.6%
P&S Combined	0.8764	1.301	1.266	-2.7%
All Medical	1.0000	1.316	1.281	-2.7%

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

CALCULATION OF INDICATED CHANGES

NURSING HOMES LIABILITY

Policy Limit ($,000)	Basic Limit Loss Weight	Current Increased Limit Factor	Indicated Increased Limit Factor	Indicated % Change
100	0.0065	0.57	0.59	3.5%
200	0.0000	0.73	0.76	4.1%
250	0.0000	0.79	0.82	3.8%
300	0.0000	0.84	0.87	3.6%
500	0.1332	1.00	1.00	0.0%
750	0.0000	1.15	1.12	-2.6%
1,000	0.8081	1.27	1.20	-5.5%
1,500	0.0000	1.42	1.32	-7.0%
2,000	0.0105	1.52	1.41	-7.2%
2,500	0.0000	1.60	1.49	-6.9%
3,000	0.0417	1.66	1.55	-6.6%
TOTAL	1.0000	1.248	1.186	-5.0%

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

CALCULATION OF INDICATED CHANGES

DENTISTS LIABILITY

Policy Limit ($,000)	Basic Limit Loss Weight	Current Increased Limit Factor	Indicated Increased Limit Factor	Indicated % Change
100	0.0302	0.78	0.80	2.6%
200	0.0149	0.89	0.90	1.1%
250	0.0138	0.92	0.93	1.1%
300	0.0037	0.95	0.95	0.0%
500	0.0193	1.00	1.00	0.0%
750	0.0000	1.05	1.04	-1.0%
1,000	0.7734	1.08	1.07	-0.9%
1,500	0.0063	1.11	1.10	-0.9%
2,000	0.0731	1.13	1.12	-0.9%
2,500	0.0000	1.15	1.14	-0.9%
3,000	0.0653	1.16	1.15	-0.9%
TOTAL	1.0000	1.073	1.065	-0.7%

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

CALCULATION OF INDICATED CHANGES

ALLIED HEALTH CARE LIABILITY

Policy Limit ($,000)	Basic Limit Loss Weight	Current Increased Limit Factor	Indicated Increased Limit Factor	Indicated % Change
100	0.0232	0.61	0.63	3.3%
200	0.0425	0.76	0.77	1.3%
250	0.0202	0.82	0.83	1.2%
300	0.0000	0.86	0.87	1.2%
500	0.0244	1.00	1.00	0.0%
750	0.0038	1.13	1.12	-0.9%
1,000	0.8317	1.22	1.20	-1.6%
1,500	0.0160	1.31	1.30	-0.8%
2,000	0.0376	1.38	1.37	-0.7%
2,500	0.0000	1.43	1.43	0.0%
3,000	0.0006	1.48	1.47	-0.7%
TOTAL	1.0000	1.180	1.164	-1.4%

SUMMARY

Table	Basic Limit Loss Weight	Current Average Increased Limits Factor	Indicated Average Increased Limits Factor	Indicated Change
Nursing Homes	0.1158	1.248	1.186	-5.0%
Dentists	0.3159	1.073	1.065	-0.7%
Allied Health Care	0.5683	1.180	1.164	-1.4%
Overall	1.0000	1.154	1.135	-1.6%

INCREASED LIMIT FACTORS
MEDICAL PROFESSIONAL LIABILITY

SUMMARY OF ALL MEDICAL LINES

Table	Basic Limit Loss Weight	Current Average Increased Limits Factor	Indicated Average Increased Limits Factor	Indicated Change
Physicians	0.3220	1.293	1.263	-2.3%
Surgeons	0.2873	1.309	1.269	-3.1%
Hospitals	0.0859	1.423	1.386	-2.6%
Nursing Homes	0.0353	1.248	1.186	-5.0%
Dentists	0.0963	1.073	1.065	-0.7%
Allied Health Care	0.1732	1.180	1.164	-1.4%
Overall	1.0000	1.266	1.236	-2.4%