A Study of Orthopaedic Practice Expense:
Workers' Compensation versus Non-Workers' Compensation Patients

EXECUTIVE SUMMARY

During the period January 1, 1998 and December 31, 1998, 18,500 patients were seen and treated by a Pennsylvania practice for a new or established condition. Workers' compensation patients accounted for 2,867 or 15.5% of the patients. The total practice expenses to treat these patients amounted to $2,431,000.17 or $131.41 per patient. Practice expense per workers' comp patient, however, was $187.23 and $121.17 per non-workers' compensation patient. We were able to determine this difference by expanding certain components of the model used.

Attachment 1 illustrates the comparison of total expenses and total revenue for workers' comp and nonworkers' comp patients. While comp revenue is 21 % higher than non-comp revenue on average, comp expense is equal to 125% of non-comp expense. Further, this table shows that comp treatment basically operates at break-even. It is fair to conclude, therefore, that a any discount applied to workers' compensation fees would result in a loss.

In 1998, payors in Pennsylvania on average paid approximately 79% of workers' compensation rates. This information is based on a survey of 8 orthopaedic practices from various parts of the state. (See Attachment 2) It is extraordinary to note that the 21 % difference in comp revenue from attachment 1 nearly perfectly complements the results of this survey which was **completely independent** of our study.

Illustrated mathematically:

Per the survey: non-comp rates (revenue) ÷ comp rates (revenue) = 79%

Per the study: (comp revenue - non-comp revenue) ÷ non-comp revenue = 21

ATTACHMENT 1

	All Patients	***Comp Patients***	***Non-Comp Patients***
Revenue	5,178,408.66	941,656.72	4,236,751.94
Revenue Per patient	279.91	328.45	271.01
Expenses	5,038,298.84	940,825.66	4,097,473.18
Expense per patient	272.34	328.16	262.11
Net Profit (loss) per patient	7.57	0.28	8.90
Profit (loss) margin	2.71%	0.09%	3.29%
Profit (loss) margin if a 10% discount were accepted (Comp only)		**-(11.01%)**	
Practice Expense Total	2,431,000.17	536,764.84	1,894,235.33
Practice Expense per Patient	131.41	187.22	121.17
Work Component per patient	126.91	126.91	126.91
Malpractice Expense per patient	14.03	14.03	14.03
Total Expense per patient	**272.34**	**328.16**	**262.11**
Physician Charges	8,030,285.47	1,506,535.02	6,523,750.45
Physician Charges per Patient	434.07	525.47	369.97

While comp ***revenue*** per patient is equal to 121 of non-comp revenue per patient, comp ***expense*** per patient is equal to 125% of non-comp expense per patient.

Attachment 2

Rate Analysis: Workers' Compensation Provider Reimbursement Rates v. Non-Workers' Comp Provider Reimbursement Rates - Prepared by the Pennsylvania Orthopaedic Society

Area **I (Philadelphia)**										
							Non-workers' comp rates as a percentage of workers' comp rates			
Description	Code	98 Comp	Aetna	IBC Prsnl Choice	Medicare	Physician Charges	Aetna	IBC Prsnl Choice	Medicare	Physician Charges
Rotator Cuff Repair	23420	1,379.11			1,114.04		XXX	XXX	81 %	XXX
Release Trigger Finger	26055	372.92			271.84		XXX	XXX	73%	XXX
Total Hip Replacement	27130	2,625.51			1,693.39		XXX	XXX	64%	XXX
Arthroscopic Lateral F	27425	864.03			455.46		XXX	XXX	53%	XXX
Total Knee	27447	2,905.55			1,801.10		XXX	XXX	62%	XXX
Revision Total Knee	27487	2,973.74			2,114.39		XXX	XXX	71%	XXX
Fracture Tibia	27750	379.43			265.96		XXX	XXX	70%	XXX
Fracture Foot	28450	190.67			187.63		XXX	XXX	98%	XXX
Arthroscopic Chromop	29826	1,201.97	796.00	750.00	784.52	3,500.00	66%	62%	65%	291%
Arthroscopic Medial/L	29881	1,005.17	679.00	720.00	666.55	2,000.00	68%	72%	66%	199%
Arthoscopic ACL Reci	29888	1,688.82			1,173.83		XXX	XXX	70%	XXX
Lumbar Microdiscecto	63030	1,476.77			1,021.31		XXX	XXX	69%	XXX
Carpel Tunnel Release	64721	487.64			373.66		XXX	XXX	77%	XXX
X-ray Shoulder	73030	37.99	31.00		33.42		82%	XXX	88%	XXX
X-ray Neck/Spine	73040	131.97			115.81		XXX	XXX	88%	XXX
X-ray Foot	73630	35.60		26.00	31.13		XXX	73%	87%	XXX
Office Visit	99212	30.32			31.78		XXX	XXX	105%	XXX
Office Visit	99213	43.29	35.00	34.00	43.96	75.00	81%	79%	102%	173%
Office Visit	99214	66.79	35.00	51.00	66.95	125.00	52%	76%	100%	187%

Area 1 (Pittsburgh)										
							Non-workers' comp rates as a percentage of workers' comp rates			
Description	Code	98 Comp	Health America	Select Blue	Medicare	Physician Charges	Health America	IBC Prsnl Choice	Medicare	Physician Charges
Rotator Cuff Repair	23420	1,379.11		1,241.37	1,000.04	1,850.00	XXX	90%	73%	134%
Release Trigger Finger	26055	372.92	188.60		215.38	475.00	51 %	XXX	58%	127%
Total Hip Replacement	27130	2,625.51	1,539.00	1,902.22	1,538.98	4,500.00	59%	72%	59%	171%
Arthroscopic Lateral F	27425	864.03		505.17	396.50	1,050.00	XXX	58%	46%	122%
Total Knee	27447	2,905.55		2,011.12	1,644.67	4,300.00	XXX	69%	57%	148%
Revision Total Knee	27487	2,973.74			1,937.22	3,330.00	XXX	XXX	65%	112%
Fracture Tibia	27750	379.43			236.31	585.00	XXX	XXX	62%	154%
Fracture Foot	28450	190.67			101.41	660.00	XXX	XXX	53%	346%
Arthroscopic Chromop	29826	1,201.97			694.35	2,520.00	XXX	XXX	58%	210%
Arthroscopic Medial/L	29881	1,005.17		758.85	595.08	2,150.00	XXX	75%	59%	214%
Arthoscopic ACL Rec	29888	1,688.82	1,308.04	1,348.59	1,063.66	4,500.00	77%	80%	63%	266%
Lumbar Microdiscecto	63030	1,476.77			919.90		XXX	XXX	62%	0%
Carpel Tunnel Release	64721	487.64		390.19	324.50	910.00	XXX	80%	67%	187%
X-ray Shoulder	73030	37.99	28.94	32.49	28.36	85.00	76%	86%	75%	224%
X-ray Neck/Spine	73040	131.97			98.87	94.00IXXX		XXX	75%	71%
X-ray Foot	73630	35.60		30.52	26.76	85.00 XXX		86%	75%	239%
Office Visit	99212	30.32	18.42	25.36	26.39	50.00	61%	84%	87%	165%
Office Visit	99213	43.29	33.06	36.56	37.71	65.00	76%	84%	87%	150%
Office Visit	99214	66.79	50.98	54.70	57.05	80.00	76%	82%	85%	120%

Rate Analysis: Workers' Compensation Provider Reimbursement Rates v. Non-Workers' Compensation Provider Reimbursement Rates - Prepared by the Pennsylvania Orthopaedic Society

Area 2 (Pittsburgh)										
							Non-workers' comp rates as a percentage of workers' comp			
Description	Code	98 Comp	Keystone	Select Blue	Medicare	Physician Charges	Keystone	Select Blue	Medicare	Physician Charges
Rotator Cuff Repl	23420	1,370.60	1,184.89	1,184.89	1,000.04	2,300.00	86%	86%	73%	168%
Release Trigger F	26055	366.72	257.42	257.42	215.38	550.00	70%	70%	59%	150%
Total Hip Replace	27130	2,578.32	1,902.22	1,902.22	1,538.98	4,100.00	74%	74%	60%	159%
Arthroscopic Later	27425	769.31	505.77	505.77	396.50	1,875.00	66%	66%	52%	244%
Total Knee Replac	27447	2,882.30	2,011.12	2,011.12	1,644.67	4,300.00	70%	70%	57%	149%
Revision Total Knee	27487	2,917.44	2,322.65	2,322.65	1,937.22	5,000.00	80%	80%	66%	171%
Fracture Tibia	27750	398.26	273.75	273.75	236.31	550.00	69%	69%	59%	138%
Fracture Foot	28450	189.20	155.09	155.09	133.25	370.00	82%	82%	70%	196%
Arthroscopic Chrom	29826	1,191.48	895.01	895.01	694.35	2,250.00	75%	75%	58%	189%
Arthroscopic Medi	29881	988.14	758.85	758.85	595.08	2,000.00	77%	77%	60%	202%
Arthoscopic ACL	F 29888	1,658.03	269.72	269.72	1,063.66	2,900.00	16%	16%	64%	175%
Lumbar Microdiscec	63030	1,449.92	1,212.57	1,212.57	919.90	3,600.00	84%	84%	63%	248%
Carpel Tunnel Rel	64721	482.94	390.19	390.19	324.50	1,050.00	81%	81%	67%	217%
X-ray Shoulder	73030	37.35	32.49	32.49	28.36	87.00	87%	87%	76%	233%
X-ray Neck/Spine	73040	129.80	113.57	113.57	98.87	XXX	87%	87%	76%	X
X-ray Foot	73630	35.74	30.52	30.52	26.76	93.00	85%	85%	75%	260%
Office Visit	99212	29.96	25.36	25.36	26.39	45.00	85%	85%	88%	150%
Office Visit	99213	42.79	36.56	36.56	37.71	50.00	85%	85%	88%	117%
Office Visit	99214	65.57	47.05	54.70	57.05	70.00	72%	83%	87%	107%

Area 2 (Paoli)										
							Non-workers' comp rates as a percentage of workers' comp			
Description	Code	98 Comp	Aetna	IBC Personal Choice	Medicare	Physician Charges	Aetna	IBC Personal Choice	Medicare	Physician Charges
Rotator Cuff Repa	23420	1,370.60	1,129.00	1,012.00	1,114.04	3,300.00	82%	74%	81%	241%
Release Trigger F	26055	366.72	245.00	224.00	271.84	750.00	67%	61%	74%	205%
Total Hip Replace	27130	2,578.32	1,755.00	1,800.00	1,693.39	5,200.00	68%	70%	66%	202%
Arthroscopic Later	27425	769.31	450.00	441.00	455.46	1,850.00	58%	57%	59%	240%
Total Knee Replac	27447	2,882.30	1,876.00	1,908.00	1,801.10	4,950.00	65%	66%	62%	172%
Revision Total Knee	27487	2,917.44	2,213.00	2,235.00	2,114.39	6,400.00	76%	77%	72%	219%
Fracture Tibia	27750	398.26	266.00	233.00	265.96	650.00	67%	59%	67%	163%
Fracture Foot	28450	189.20	149.00	131.00	187.63	375.00	79%	69%	99%	198%
Arthroscopic Chrom	29826	1,191.48	796.00	675.00	784.52	2,900.00	67%	57%	66%	243%
Arthroscopic Medi	29881	988.14	679.00	810.00	666.55	2,500.00	69%	82%	67%	253%
Arthoscopic ACL F	29888	1,658.03	1,213.00	1,350.00	1,173.83	4,600.00	73%	81%	71%	277%
Lumbar Microdiscec	63030	1,449.92	1,050.00	1,170.00	1,021.31	3,700.00	72%	81%	70%	255%
Carpel Tunnel Rel	64721	482.94	368.00	360.00	373.66	1,300.00	76%	75%	77%	269%
X-ray Shoulder	73030	37.35	30.00	28.00	33.42	40.00	80%	75%	89%	107%
X-ray Neck/Spine	73040	129.80	50.00	55.00	115.81	65.00	39%	42%	89%	50%
X-ray Foot	73630	35.74	28.00	33.00	31.13	40.00	78%	92%	87%	112%
Office Visit	99212	29.96	30.00	27.00	31.78	60.00	100%	90%	106%	200%
Office Visit	99213	42.79	35.00	36.00	43.96	70.00	82%	84%	103%	164%
Office Visit	99214	65.57	35.00	50.00	66.95	85.00	53%	76%	102%	130%

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Area 3 (Camp Hill)

							Non-workers' comp rates as a percentage of workers' comp rates			
Description	Code	98 Comp	Health America	Capitol Blue Cross	Medicare	Physician Charges	Health America	Capitol Blue Cross	Medicare	- Physician Charges
Rotator Cuff Repair	23420	1,293.27	1,159.00	1,620.00	1,000.04	1,640.00	90%	125%	77%	127%
Release Trigger Fing	26055	338.85	255.00	350.00	215.38	365.00	75%	103%	64%	108%
Total Hip Replaceme	27130	2,423.08	1,871.00	3,300.00	1,538.98	3,350.00	77%	136%	64%	138%
Arthroscopic Lateral	27425	840.00	501.00	900.00	396.50	920.00	60%	107%	47%	110%
Total Knee Replace	27447	2,774.55	1,976.00	3,000.00	1,644.67	3,100.00	71%	108%	59%	112%
Revision Total Knee	27487	2,943.46	2,193.00	3,000.00	1,937.22	3,200.00	75%	102%	66%	109%
Fracture Tibia	27750	323.50	274.00	398.00	236.31	420.00	85%	123%	73%	130%
Fracture Foot	28450	179.46	156.00	325.00	101.41	335.00	87%	181%	57%	187%
Arthroscopic Chromo	29826	1,151.17	877.00	1,280.00	694.35	1,290.00	76%	111%	60%	112%
Arthroscopic Medial/	29881	917.81	804.00	1,280.00	595.08	1,290.00	88%	139%	65%	141%
Arthoscopic ACL Re	29888	1,530.63	1,265.00	2,750.00	1,063.66	2,770.00	83%	180%	69%	181%
Lumbar Microdiscect	63030	1,342.25	1,725.00	1,900.00	919.90	1,910.00	129%	142%	69%	142%
Carpel Tunnel Relea	64721	447.24	424.00	900.00	324.50	900.00	95%	201%	73%	201%
X-ray Shoulder	73030	35.54	30.00	50.00	28.36	55.00	84%	141%	80%	155%
X-ray Neck/Spine	73040	122.91	33.00	53.00	98.87	60.00	27%	43%	80%	49%
X-ray Foot	73630	33.89	28.00	45.00	26.76	50.00	83%	133%	79%	148%
Office Visit	99212	28.49	29.00	35.00	26.39	45.00	102%	123%	93%	158%
Office Visit	99213	40.91	39.00	40.00	37.71	60.00	95%	98%	92%	147%
Office Visit	99214	59.06	53.00	45.00	57.05	70.00	90%	76%	97%	119%

Area 3 (York)

							Non-workers' comp rates as a percentage of **workers' comp rates**			
Description	Code	98 Comp	Keystone Central	Health Guard	Medicare	Physician Charges	Keystone Central	Health Guard	Medicare	Physician Charges
Rotator Cuff Repair	23420	1,293.27	1,218.00	1,454.45	1,000.04	2,824.00	94%	112%	77%	218%
Release Trigger Fin	26055	338.85	295.00	347.69	215.38	822.00	87%	103%	64%	243%
Total Hip	27130	2,423.08	XXX	2,519.24	1,538.98	5,288.00	XXX	104%	64%	218%
Arthroscopic Lateral	27425	840.00	XXX	782.25	396.50	1,934.00	XXX	93%	47%	230%
Total Knee Replace	27447	2,774.55	2,487.00	2,785.93	1,644.67	5,346.00	90%	100%	59%	193%
Revision Total Knee	27487	2,943.46	XXX	3,054.84	1,937.22	6,032.00	XXX	104%	66%	205%
Fracture Tibia	27750	323.50	XXX	350.29	236.31	575.00	XXX	108%	73%	178%
Fracture Foot	28450	179.46	XXX	150.41	101.41	330.00	XXX	84%	57%	184%
Arthroscopic Chrom	29826	1,151.17	1,669.00	1,197.35	694.35	2,220.00	145%	104%	60%	193%
Arthroscopic Medial	29881	917.81	1,007.00	977.37	595.08	2,613.00	110%	106%	65%	285%
Arthoscopic ACL Re	29888	1,530.63	2,200.00	1,622.15	1,063.66	4,240.00	144%	106%	69%	277%
LumbarMicrodiscect	63030	1,342.25	1,900.00	1,499.85	919.90	3,869.00	142%	112%	69%	288%
Carpel Tunnel Relea	64721	447.24	477.00	489.96	324.50	1,144.00	107%	110%	73%	256%
X-ray Shoulder	73030	35.54	30.00	36.86	28.36	76.00	84%	104%	80%	214%
X-ray Neck/Spine	73040	122.91	106.00	127.83	98.87	286.00	86%	104%	80%	233%
X-ray Foot	73630	33.89	29.00	34.94	26.76	71.00	86%	103%	79%	210%
Office Visit	99212	28.49	26.00	30.83	26.39	40.00	91%	108%	93%	140%
Office Visit	99213	40.91	37.00	35.69	37.71	53.00	90%	87%	92%	130%
Office Visit	99214	59.06	57.00	65.95	57.05	68.00	97%	112%	97%	115%

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Area 4 (Indiana)										
							Non-workers' comp rates as a percentage of workers' comp rates			
Description	Code	98 Comp	Select Blue	Capitol Blue Cross	Medicare	Physician Charges	Health America	Capitol Blue Cross	Medicare	Physician Charges
Rotator Cuff Repair	23420	1,290.53	XXX	XXX	1,000.04	2,150.00	XXX	XXX	77%	167%
Release Trigger	26055	356.68	XXX	XXX	215.38	570.00	XXX	XXX	60%	160%
Total Hip	27130	2,368.93	XXX	XXX	1,538.98	4,350.00	XXX	XXX	65%	184%
Arthroscopic Later	27425	837.95	252.88	XXX	396.50	1,500.00	30%	XXX	47%	179%
Total Knee Replace	27447	2,773.75	2,011.1	XXX	1,644.67	4,520.00	73%	XXX	59%	163%
Revision Total Knee	27487	2,941.51	XXX	XXX	1,937.22	4,800.00	XXX	XXX	66%	163%
Fracture Tibia	27750	343.58	273.75	XXX	236.31	500.00	80%	XXX	69%	146%
Fracture Foot	28450	180.70	155.09	XXX	101.41	495.00	86%	XXX	56%	274%
Arthroscopic Chrom	29826	1,035.16	646.78	XXX	694.35	1,950.00	62%	XXX	67%	188%
Arthroscopic Media	29881	901.14	758.85	XXX	595.08	2,150.00	84%	XXX	66%	239%
Arthoscopic ACL R	29888	1,511.77	1,017.0	XXX	1,063.66	2,975.00	67%	XXX	70%	197%
Lumbar Microdiscec	63030	1,322.51	XXX	XXX	919.90	3,195.00	XXX	XXX	70%	242%
Carpel Tunnel Rele	64721	445.74	390.19	XXX	324.50	1,000.00	88%	XXX	73%	224%
X-ray Shoulder	73030	34.24	33.49	XXX	28.36	75.00	98%	XXX	83%	219%
X-ray Neck/Spine	73040	118.86	35.77	XXX	98.87	70.00	30%	XXX	83%	59%
X-ray Foot	73630	32.98	30.52	XXX	26.76	80.00	93%	XXX	81%	243%
Office Visit	99212	28.15	15.36	XXX	26.39	35.00	55%	XXX	94%	124%
Office Visit	99213	39.70	26.56	XXX	37.71	60.00	67%	XXX	95%	151%
Office Visit	99214	59.15	XXX	XXX	57.05	75.00	XXX	XXX	96%	127%

		Area **4 (Coudersport)**								
							Non-workers' comp rates as a percentage of workers' comp rates			
Description	Code	98 Comp	Blue Cross of Western PA Plan C	Blue Cross of Western PA Plan 5000S	Medicare	Physician Charges	Blue Cross of Western PA Plan C	Blue Cross of Western PA Plan 5000S	Medicare	Physician Charges
Rotator Cuff Repair	23420	1290.53	722.00	1,084.00	1,000.04	2,299.00	56%	84%	77%	178%
Release Trigger	26055	356.68	186.00	279.00	215.38	591.00	52%	78%	60%	166%
Total Hip	27130	2368.93	1,499.00	2,250.00	1,538.98	4,132.00	63%	95%	65%	174%
Arthroscopic Later	27425	837.95	438.00	657.00	396.50	1,158.00	52%	78%	47%	138%
Total Knee Replay	27447	2773.75	1,735.00	2,604.00	1,644.67	5,209.00	63%	94%	59%	188%
Revision Total Knee	27487	2941.51	1,735.00	2,604.00	1,937.22	5,441.00	59%	89%	66%	185%
Fracture Tibia	27750	343.58	197.00	296.00	236.31	579.00	57%	86%	69%	169%
Fracture Foot	28450	180.70	173.00	260.00	101.41	390.00	96%	144%	56%	216%
Arthroscopic Chrom	29826	1035.16	543.00	815.00	694.35	2,481.00	52%	79%	67%	240%
Arthroscopic MediE	29881	901.14	543.00	815.00	595.08	2,400.00	60%	90%	66%	266%
Arthoscopic ACL R	29888	1511.77	1,260.00	2,409.00	1,063.66	2,949.00	83%	159%	70%	195%
Lumbar Microdiscec	63030	1322.51	936.00	1,405.00	919.90	2,980.00	71%	106%	70%	225%
Carpel Tunnel Rele	64721	445.74	401.00	602.00	324.50	1,389.00	90%	135%	73%	312%
X-ray Shoulder	73030	34.24	21.00	32.00	28.36	XXX	61%	93%	83%	XXX
X-ray Neck/Spine	73040	118.86	21.00	38.00	98.87	XXX	18%	32%	83%	XXX
X-ray Foot	73630	32.98	18.25	25.00	26.76	XXX	55%	76%	81 %	XXX
Office Visit	99212	28.15	12.50	25.00	26.39	37.00	44%	89%	94%	131%
Office Visit	99213	39.70	17.25	30.00	37.71	58.00	43%	76%	95%	146%
Office Visit	99214	59.15	17.25	30.00	57.05	70.00	29%	51%	96%	118%