



Commonwealth of Massachusetts
Board of Registration in Medicine

Medical Malpractice Analysis

November 2004

Members Of The Massachusetts Board Of Registration In Medicine

Martin Crane, M.D., Chairman

Dr. Crane, who joined the Board in 2000, is Board-certified in obstetrics and gynecology. He has a private practice in Weymouth and is affiliated with South Shore Hospital. He is a graduate of Princeton University and Harvard Medical School, with training in general surgery at the University of Colorado Medical Center and a residency in obstetrics/gynecology at Boston Hospital for Women. He also performed endocrine research at the Royal Karolinska Institute in Sweden. Dr. Crane also chairs the Board's Patient Care Assessment Committee. He has also been elected to the Board of Directors of the national Federation of State Medical Boards.



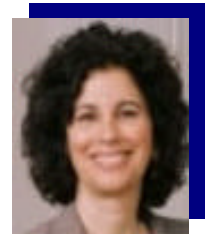
Roscoe Trimmier, Jr., J.D., Vice Chair

Mr. Trimmer, a trial lawyer and partner at Ropes & Gray, was named to the Board in 2001 as a public member. A graduate of Harvard College and Harvard Law School, Mr. Trimmier joined the esteemed law firm in 1974, shortly after graduation from law school, and became a partner in 1983. Attorney Trimmier has represented numerous health care providers in disputes concerning the operation and management of Health Maintenance Organizations. He chairs the Board's Complaint Committee.



Randy Ellen Wertheimer, M.D., Secretary

Dr. Wertheimer, who joined the Board in 2002, is a Board-certified family practitioner, is on the staff of University of Massachusetts Memorial Health Care in Worcester and the University of Massachusetts School of Medicine, where she is vice-chair of the Department of Family Medicine and Community Health. She is a graduate of the Boston University School of Medicine and was named one of the "50 Most Positive Doctors in America" in 1996 by the American Hospital Association. Dr. Wertheimer serves on the Board's Complaint Committee.



Guy Fish, M.D., Physician Member

Dr. Fish, who was named to the Board in 2003, is a graduate of Harvard College, the Yale University School of Medicine, and the Yale School of Management. He works as a senior consultant at Fletcher Spaght Inc., Boston, with interests in health care policy, biotechnology and finance issues. Research projects completed include The Economic Rationale for Cultural Competency in Medicine; and Magnitude Estimates of Fraud, Waste, and Abuse in U.S. Healthcare. He serves on the Board's Data Repository Committee.





Honorable E. George Daher, Public Member

Before joining the Board in 2002, Justice Daher was Chief Justice of the Housing Court Department of Massachusetts. He is a graduate of Northeastern College of Allied Sciences (New England College of Pharmacy); Suffolk University Law School; and Boston University Graduate School of Education. Chief Justice Daher has written several books and articles concerning landlord/tenant issues and serves as a lecturer for the American Trial Lawyers Association. He is a member of the Massachusetts Bar Association and Judicial Council and is a former member of the Board of Governors for the Shriners Burns Hospital. He is also a registered pharmacist and serves on the Board's Licensing Committee.

Asha P. Wallace, M.D., Physician Member



Dr. Wallace, who joined the Board in 2002, is a Board-certified family practitioner and graduate of the University of Adelaide Medical School. In addition to her medical practice, she served as chair of the International Medical Graduates Caucus of the American Medical Association; president of the Massachusetts Branch of the American Medical Women's Association; a member of the Board of Directors of the Tufts HMO; and president of Needham Physicians Inc., a Tufts HMO-affiliated physicians' practice at Deaconess Glover Hospital. She is also a former member of the Committee on Ethics and Discipline and the Legislative Committee for the Massachusetts Medical Society. Dr. Wallace is a past winner of the American Medical Women's Association Award for Outstanding Service to Women in Medicine. She chairs the Board's Licensing Committee and serves on the Patient Care Assessment Committee.

John B. Herman, M.D., Physician Member



Dr. Herman, who is Board-certified in psychiatry and neurology and specializes in psychiatry and clinical pharmacology at Massachusetts General Hospital, joined the Board in 2003. A graduate of the University of Wisconsin Medical School, Dr. Herman did his medical internship at Brown University Medical School and his residency in psychiatry at MGH. He has been on staff at the MGH Psychopharmacology Clinic since 1984. Dr. Herman serves as Director of Clinical Services and Director of Postgraduate Education in the Department of Psychiatry at MGH. He is also Medical Director for the Partners Health Care Employee Assistance Program. He is co-editor of the MGH Guide to Psychiatry in Primary Care and is past president of the American Association of Directors of Psychiatry Residence Training. He is a member of the Board's Licensing Committee and serves as the Board liaison to the Physician Health program.



Massachusetts Board of Registration in Medicine

Introduction

The Board of Registration in Medicine's mission is to ensure that only qualified physicians are licensed to practice in the Commonwealth of Massachusetts and that those physicians and health care institutions in which they practice provide to their patients a high standard of care, and support an environment that maximizes the high quality of health care in Massachusetts. The Board of Registration in Medicine consists of seven members who are appointed by the Governor to three-year terms. There are two public members and five physician members. Each member also serves on one or more of the Board's committees. The Board of Registration in Medicine sets standards for medical licensure, reviews the credentials of applicants, and investigates all patient and consumer complaints against physicians. The agency also serves as the central repository of many statutorily mandated reports related to the practice of medicine in Massachusetts.

In 1986 the Massachusetts Legislature enacted the Medical Malpractice Act of 1986, a reform measure proposed in response to large and costly increases in both volume and cost medical malpractice claims. One part of the Act charged the Board of Registration in Medicine with the responsibility to collect information on malpractice payments made in Massachusetts.

Pursuant to this charge the Board became the central repository for medical malpractice data, collecting information from reports by the court system, medical malpractice insurance carriers, hospitals and other medical care facilities, and physicians themselves. The Board has methodically collected the required data, used that data in its ongoing investigatory and disciplinary duties, and analyzed it to determine patterns and trends in the number and type of malpractice claims and payments.

In 2000, the Board of Registration in Medicine released a Special Report on Medical Malpractice that analyzed data for medical liability claims paid between 1990 and 1999. The information in this 2004 report adds new data from the period of 2000 through 2003, looks at new trends and revisits issues identified in the 2000 Report.

Sources Of Malpractice Data

The majority of mandated reports submitted to the Board's Data Repository fall into five categories:

- license renewal applications
- court reports
- closed claim information
- disciplinary action reports
- health care provider reports regarding peers

Most of these reporting obligations were established by the Medical Malpractice Act of 1986 and the regulations promulgated thereunder. Statutory authority for the collection and storage of these various reports is derived from Massachusetts General Laws (M.G.L.) Chapter 112 s. 5, which provides in pertinent part:

There shall be established within the board of registration in medicine a data repository which will be responsible for the compilation of all data required under sections five A through five J, inclusive, and any other law or regulation which requires that information be reported to the board.

M.G.L. Chapter 112, s. 5C requires closed claim reports to be filed by insurers and risk management organizations, which provide professional liability protection for physicians. Any claim or action for damages for personal injuries alleged to have been caused by error, omission or negligence in the performance of professional services must be filed within 30 days of a final judgment, a settlement or a final disposition not resulting in payment.

Each Closed Claim Report must include the following:

- name, address, specialty and policy number of the physician
- name, address and age of the claimant/plaintiff
- nature and substance of the claim
- date and place of the incident leading to the claim
- amounts paid, and date and manner of disposition, judgment or settlement
- date and reason for final disposition, if no judgment was entered or settlement reached
- any additional information the Board may require

Pursuant to M.G.L. Chapter 112 s. 5E, any physician without professional liability insurance must report every settlement or arbitration award of a claim or action for damages related to his or her practice of medicine. The report must be made within 30 days of a written settlement agreement or within 30 days of a service of the arbitration award on all parties. (N.B.: pursuant to 243 CMR 2.07(16), a physician who does not have professional liability insurance must obtain a bond or letter of credit unless he or she falls into one of three exceptions.)

The Federal Health Care Quality Improvement Act of 1986 established a National Practitioner Data Bank (NPDB) to collect adverse information about physicians and other health care providers. Regulations implementing the act were codified in Chapter 45 of the Code of Federal Regulations (CFR) part 60.

45 CFR 60.7 mandates reporting by “[e]ach person or entity...which makes payment under an insurance policy, self-insurance, or otherwise, for the benefit of a physician...in settlement of or in satisfaction in whole or in part of a claim or a judgment against such a physician...for medical practice.” A copy of the report sent to the NPDB must be forwarded to the licensing board in the state where the alleged act or omission took place.

Special Report On Medical Malpractice

Major Findings of the 1990-1999 Report

In 2000, having collected medical malpractice payment information sufficient for cogent analysis, the Board issued its Special Report on Medical Malpractice Payments. The report, which analyzed payment data for the period 1990 through 1999, came to several conclusions, among them:

- A single paid claim, or even two, on a physician's record is not prima facie evidence of either professional misconduct or substandard care.
- The system by which medical malpractice claims are adjudicated does not lend itself to sound professional or clinical scrutiny, and any reports of paid claims must be carefully evaluated before considering them in a disciplinary context.
- Physicians with more than two paid claims, however, do warrant scrutiny, and tend to have a higher incidence of other problems that often become evident before their histories of malpractice are generally known.
- Even if physicians with multiple payments are determined not to be providing substandard care, they still represent a huge cost to the overall healthcare system.

Response of the Board of Medicine to the 1990-1999 Findings

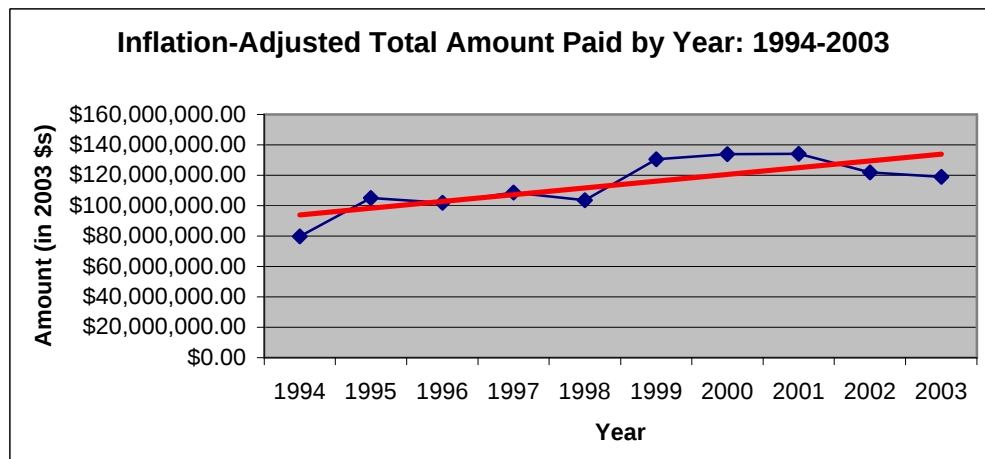
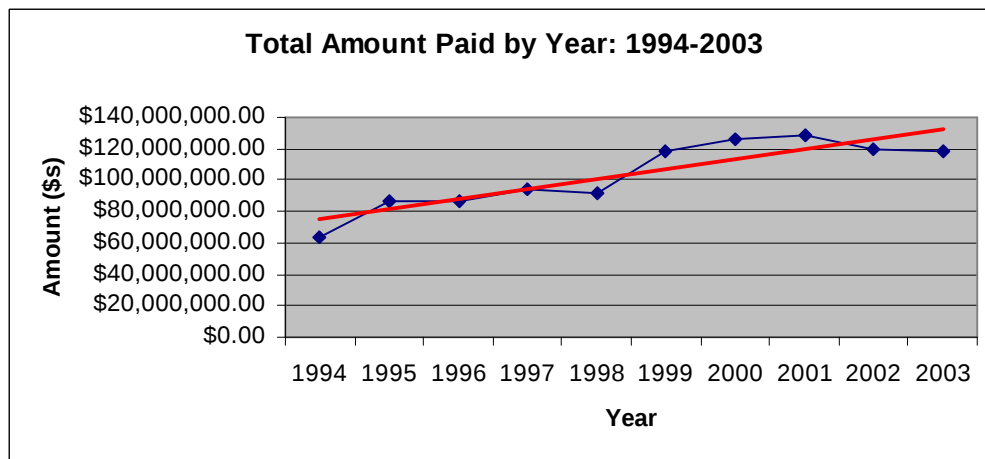
In light of these conclusions, the Board began flagging any physician when a third malpractice payment was reported to the Board. The performance of any physician with more than three paid claims in a ten-year period undergoes a clinical review. The results of this review may be used as the basis for a recommendation of formal disciplinary action.

The Board of Registration in Medicine has also worked with members of the plaintiff's bar to obtain copies of Orders of Proof as soon as a medical malpractice case is filed after an incident that may rise to a level of gross negligence. Such a finding may meet the Board's statutory threshold for disciplinary action for a single adverse incident. The Board continues to work with the Courts to improve both timeliness and compliance in the reporting of pending malpractice cases.

Cost Implications of Medical Malpractice Payments

From 1994 to 2003, 2,307 physicians made 2,876 malpractice payments totaling \$1,035,453,336. This represents an overall health care cost component of approximately \$161 for every man, woman and child in the Commonwealth. That much is known with certainty. One can only speculate whether the mere fact of this aggregate payment drives health care costs even higher. Do physicians practice what is popularly known as “defensive medicine,” ordering tests and/or procedures that are medically unnecessary, but might shield the physician from a particular line of legal attack? It is a question this report, perhaps no report, can answer, but one which reasonable people might believe the answer to is yes.

Medical malpractice payments are a significant driver of malpractice insurance premiums, and malpractice premiums are a definite component of health care costs. Moreover, “cost” is not limited strictly to monetary awards -- no money may change hands, but surely there is a cost when a physician abandons his or her practice because of high insurance premiums. And in the end, of course, only one person actually pays for all of these costs: the patient.



Medical Specialty Differences in Malpractice Payments

The Board's previous malpractice report clearly showed that certain specialties generate a disproportionate number of malpractice suits and payments, and in many of those same specialties a higher than average percentage of physicians make malpractice payments. Among these high incidence specialties were:

- Obstetrics & Gynecology
- Orthopedic Surgery
- Neurological Surgery
- Otorhinolaryngology/Otolaryngology

The disproportionate distribution of malpractice claims across specialties is just as clear today. This report takes a deeper look into the Board's malpractice database for the period 1994-2003. A more complex analysis of the data allows for more than a "follow the dollars" approach to determining what factors affect medical malpractice payments. To that end, in addition to gross totals of payments by specialty and other broad demographic variables, included here are other statistical analyses to demonstrate the strength (or weakness) of relationships between and among variables. For example, malpractice payments appear unrelated to whether a physician attended a medical school inside or outside the United States.

By 1990, the Board's data collection system had matured to the point where compliance with Board reporting requirements and the reliability of the data were both very high. At that time, ten years was deemed a time long enough to identify patterns and trends in the data. The quality of the Board's data has only improved during the intervening years, and a ten-year longitudinal study period remains a sufficiently robust one from which to draw conclusions.

The reader must bear in mind, however, that medicine is divided into many specialties, some with very few active physicians. One or two malpractice payments can skew statistics significantly in such a small specialty. Ten years of data does help to minimize these effects, and this report focuses more sharply on larger specialties, but in some cases the actual numbers remain small. The underlying physician population in a given specialty must be noted before conclusions are drawn from the statistical incidence of malpractice in that specialty.

Analysis of Selected Specialties – Ten-Year Trends

Eleven specialties were selected for more refined trend analysis: Anesthesiology, Diagnostic Radiology, Emergency Medicine, Family Practice, General Surgery, Internal Medicine, Neurological Surgery, Obstetrics/Gynecology, Orthopedic Surgery, Pediatrics and Psychiatry.

These specialties were selected because they have a large number of physicians, experienced a significant number of malpractice payments or a combination of both. Together these eleven specialties cover over 24,500 individual physicians practicing between 1994 and 2003. The data within the charts summarizing these eleven specialties account for 73% of all malpractice payments made, and 72% of all physicians making a payment during the 10-year period analyzed.

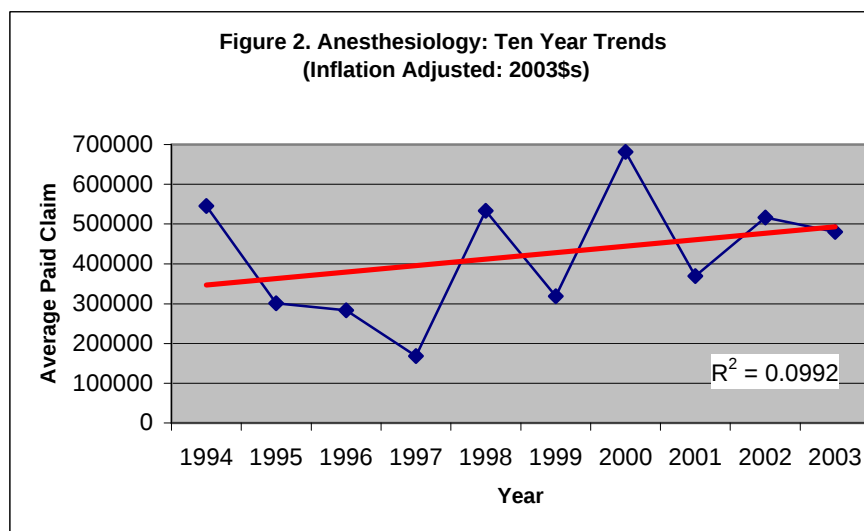
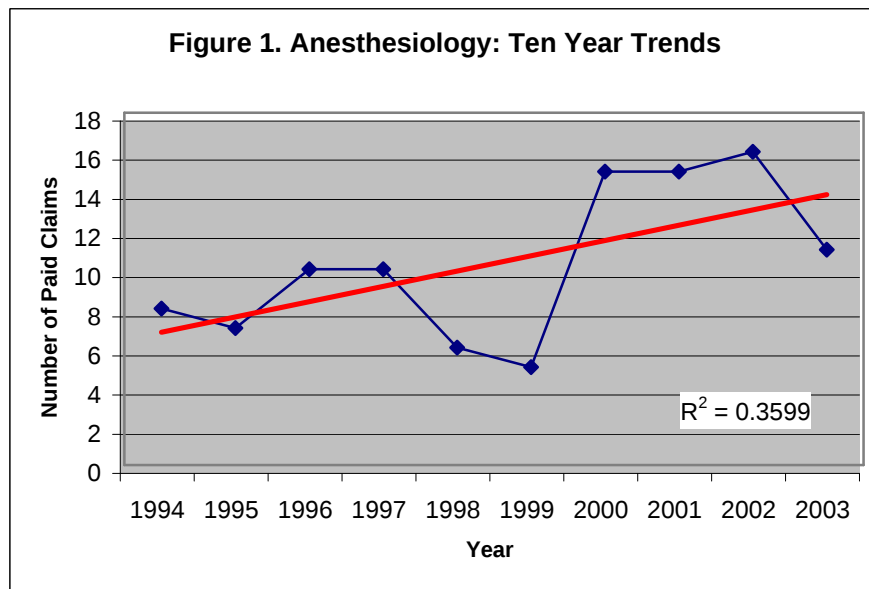
Figures 1 through 22 display the 10-year trends for number of paid claims and the average paid claim amount in 2003 inflation adjusted dollars. The inflation adjustment used is the standard Consumer Price Index (CPI) from the U.S. Department of Labor, Bureau of Labor Statistics. The linear trend line (in red) overlays the data displayed on the graph, and attempts to “model” the relationship between the two variables, as does the R² value. The R² value is a measure of association between the variables, in this case the number of claims and year, and the average paid claim and year. For example, the R² value for inflation adjusted Anesthesiology claims is 0.0992. In other words, less than 10% of the increase in average claims is the result of time, and this is considered a non-significant relationship.

Internal Medicine is the only specialty that shows a significant upward trend in both number of claims and average amount of claim. Psychiatry is the only specialty showing a significant downward trend for both number of claims and average amount.

Anesthesiology, Diagnostic Radiology and Emergency Medicine all show upward trends in number of claims and non-significant trends in average claim. General Surgery and Obstetrics/Gynecology show significant upward trends in average claims paid, but non-significant trends in number of claims. In Orthopedic Surgery, Neurological Surgery, Pediatrics and Family Practice, the trend data are inconclusive.

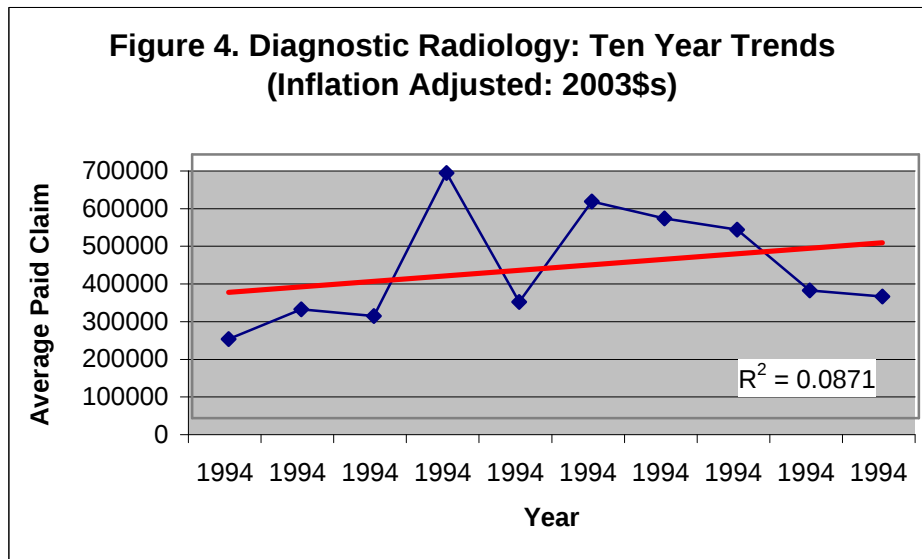
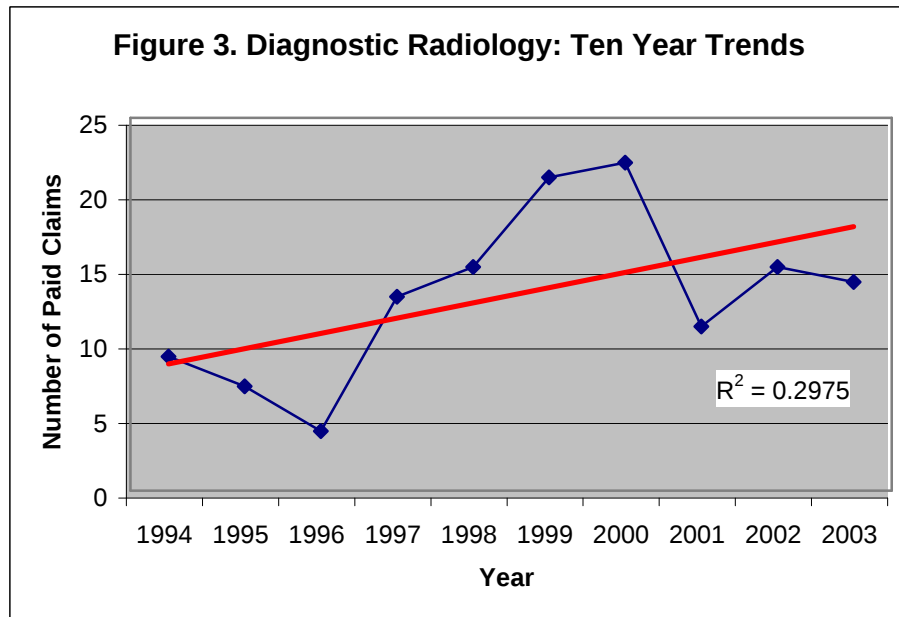
Anesthesiology

In general, the field of Anesthesiology has demonstrated great leadership in the field of patient safety and medical error reduction. Figure 1, demonstrates the number of paid claims per year, and may indicate that these efforts are successful in reducing adverse outcomes. There is a significant downturn in the number of paid claims in 2002 and 2003. It is reasonable to expect a three to five year delay for before the impact of error reduction efforts shows in malpractice claims. A recent Congressional study found that the median period from incident date to payment date was 51 months for a jury verdict.



Diagnostic Radiology

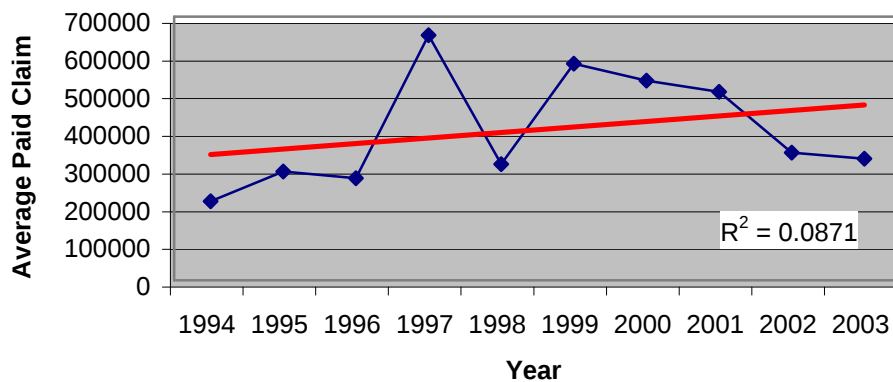
The exponential growth in frequency (i.e. number of malpractice claims) and average payment per claim in the late 1990s is most likely the result of a large number of cases related to the failure to diagnose cancer. In particular, patient education and awareness efforts during the early and mid-1990s raised patient awareness about appropriate screening and treatment protocols for breast cancer. It appears that both frequency and severity in these claims began to stabilize between 2000 and 2003.



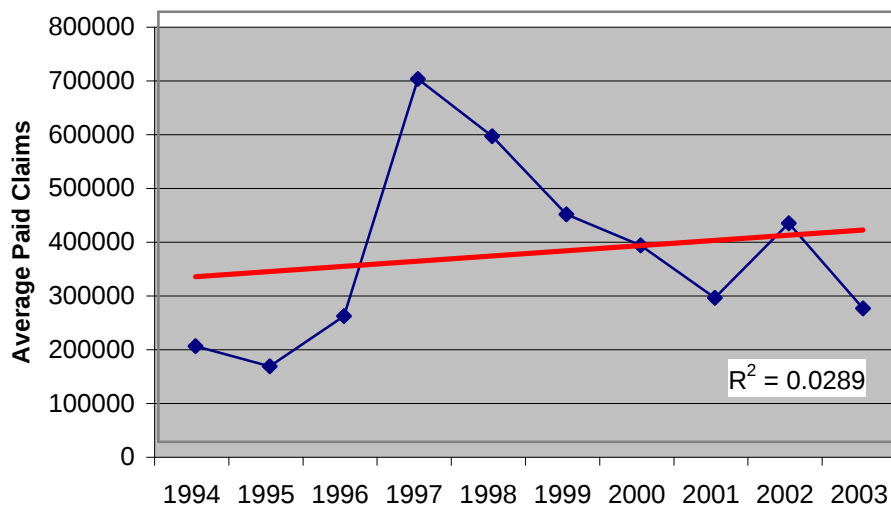
Emergency Medicine

Emergency Medicine has stabilized in terms of severity (*i.e.* average dollars paid per claim) but is trending upward in terms of frequency. External factors, such as growing numbers of uninsured patients using Emergency Departments in lieu of regular primary care, may be driving this trend, and it is one worth closer scrutiny over time to see if that trend continues.

**Figure 5. Diagnostic Radiology: Ten Year Trends
(Inflation Adjusted: 2003\$)**

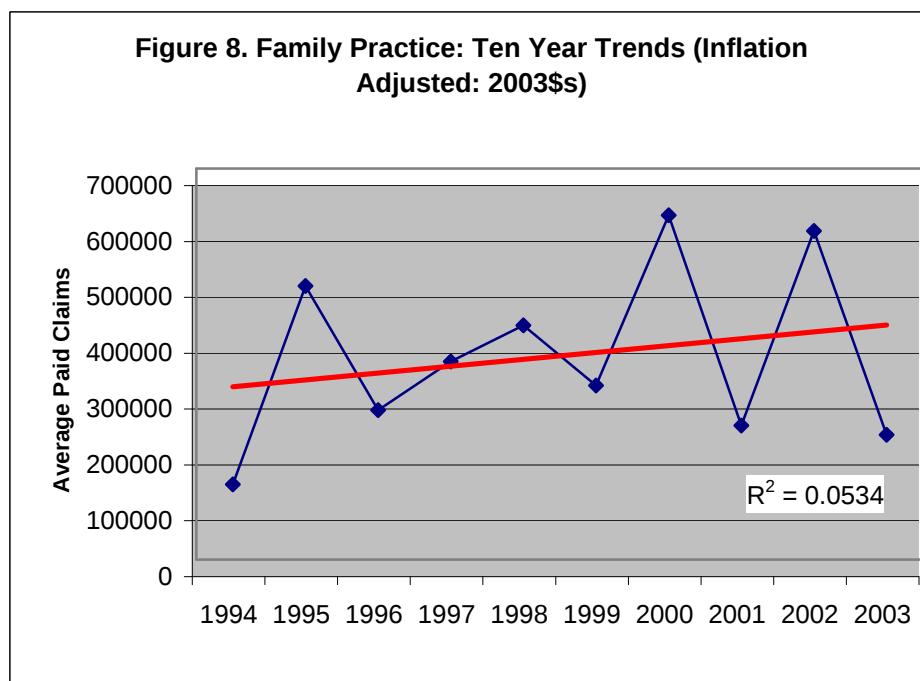
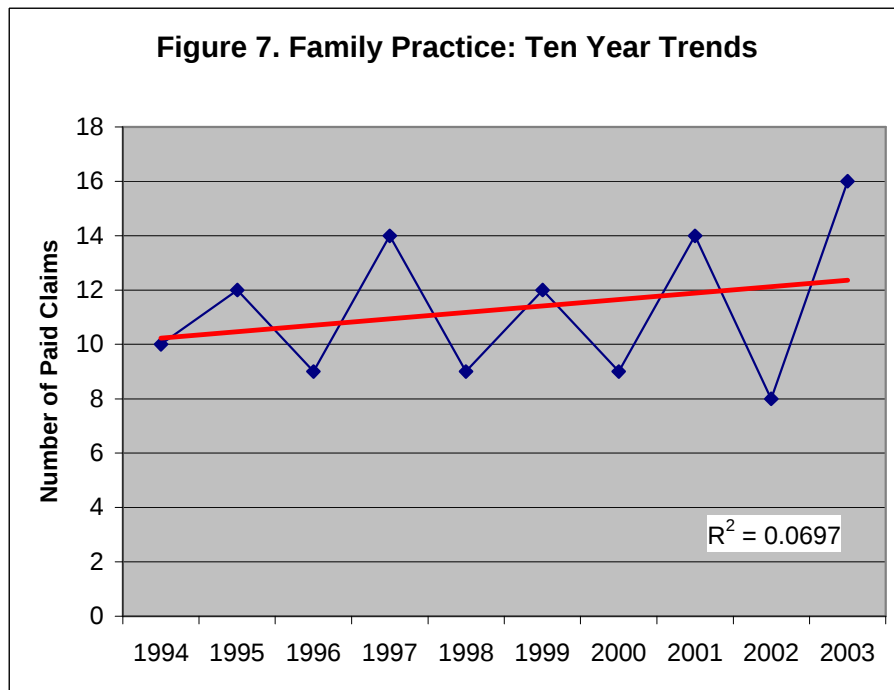


**Figure 6. Emergency Medicine: Ten Year Trends
(Inflation Adjusted: 2003\$)**



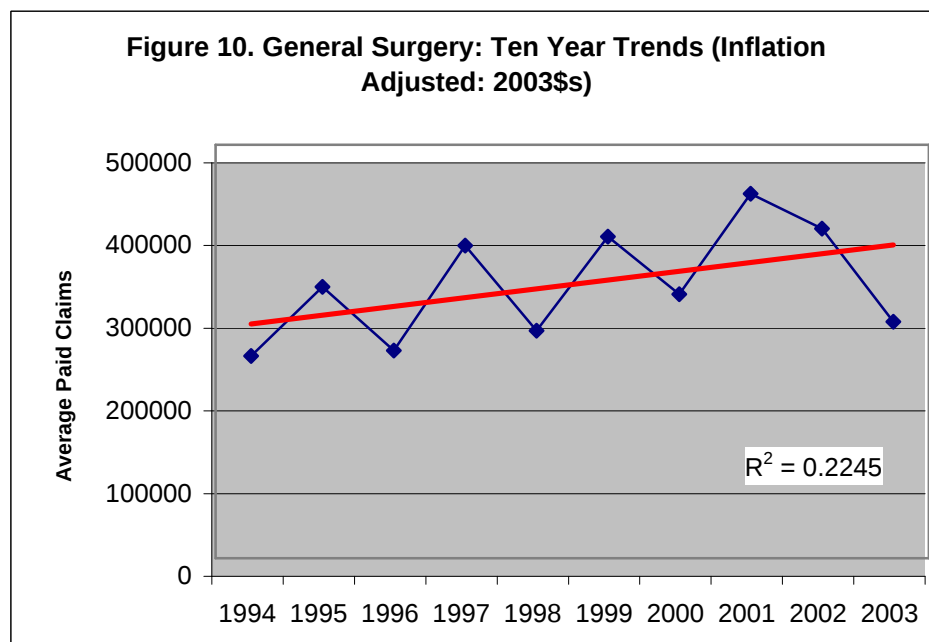
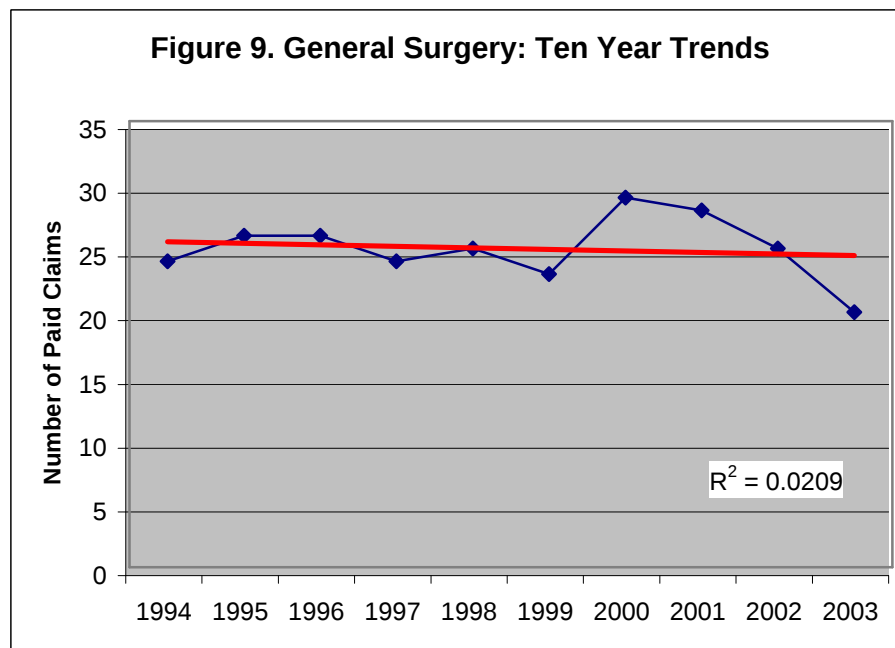
Family Practice

Trend data in the Family Practice specialty are notable for erratic swings upward and downward in both the number of claims per year and average amount of payments. This is due at least in part to the relatively small number of claims reported, which make the data particularly sensitive to small year-to-year changes in malpractice cases. The trends in this specialty are therefore inconclusive.



General Surgery

General Surgery has a large number of practicing physicians, and a diverse patient base. Claims appear to be trending flat although, as in the overall physician population, declining in recent years. This is unsurprising, given that one might expect a specialty like General Surgery to mirror, at least in part, the experience of the larger physician community. This holds true for the average payment, as well, in which one sees a significant upward trend, even after accounting for decreases in 2002 and 2003.



Internal Medicine

Internal Medicine is the largest single specialty, with over 7,500 physicians, and those physicians see the broadest range of patients. It is also the only large specialty with significant upward trends in both the number of claims and average size of payments.

Figure 11. Internal Medicine: Ten Year Trends

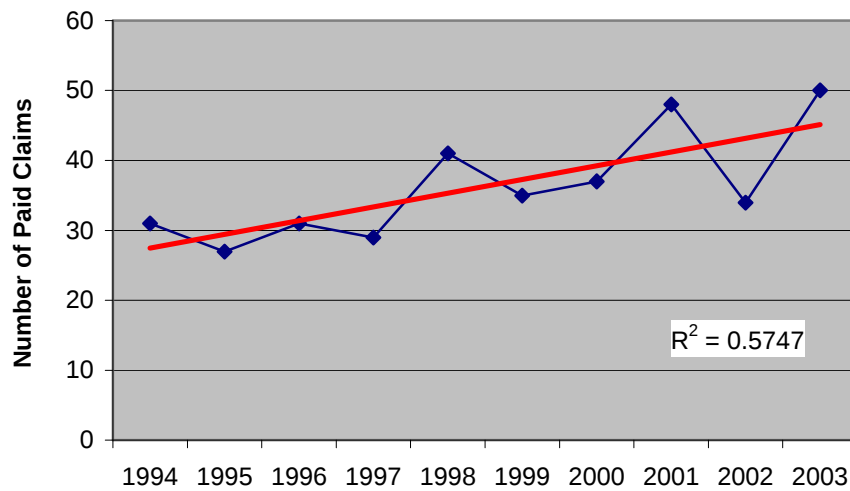
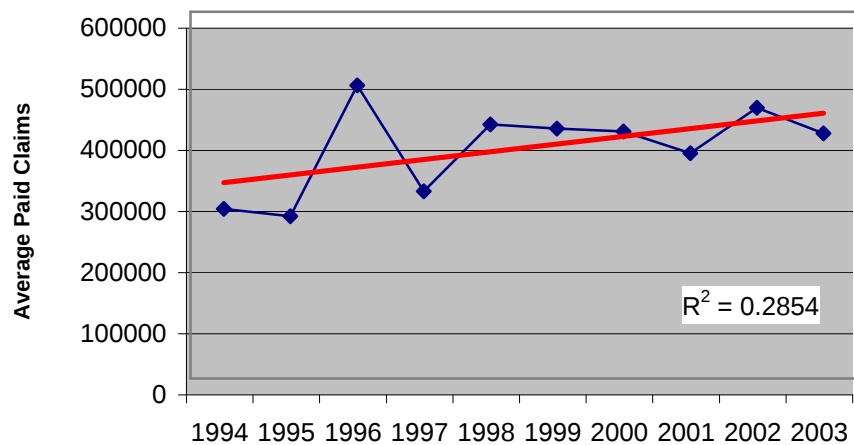


Figure 12. Internal Medicine: Ten Year Trends (Inflation Adjusted: 2003\$s)



Neurosurgery

While there is an apparent sharp drop in the number of claims, and a recent spike in the average payment, statistically the data for Neurological Surgery are inconclusive. The actual numbers of claims and payments are small and likely influenced by a few very large and very small payments.

Figure 13. Neurological Surgery: Ten Year Trends

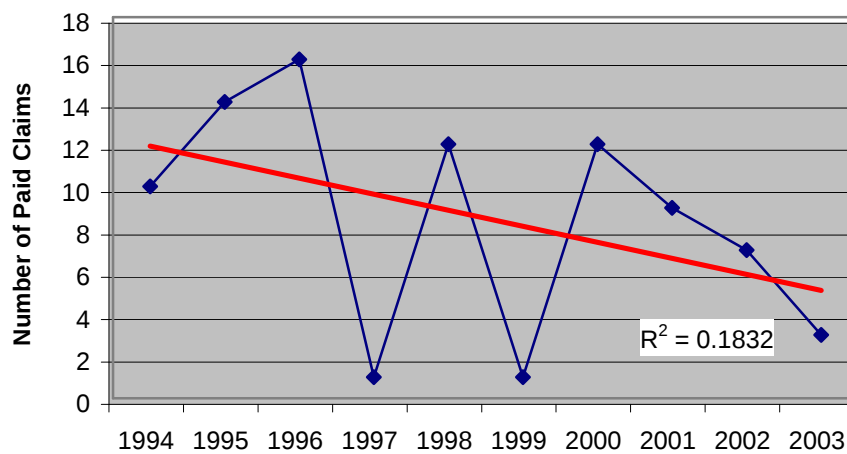
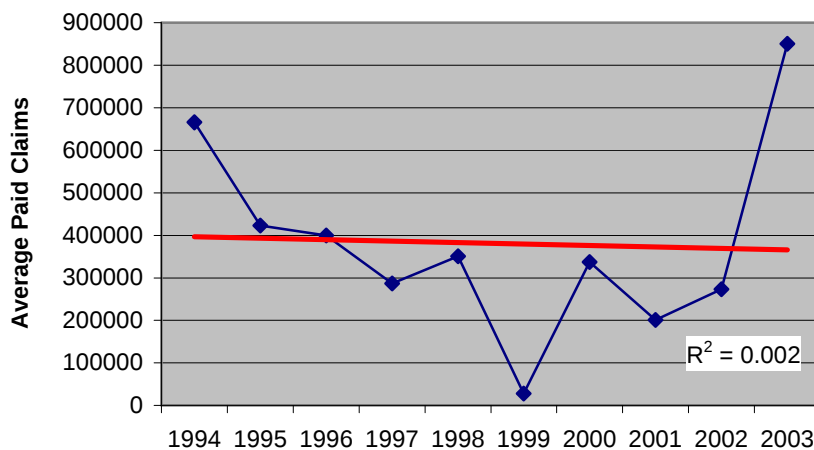
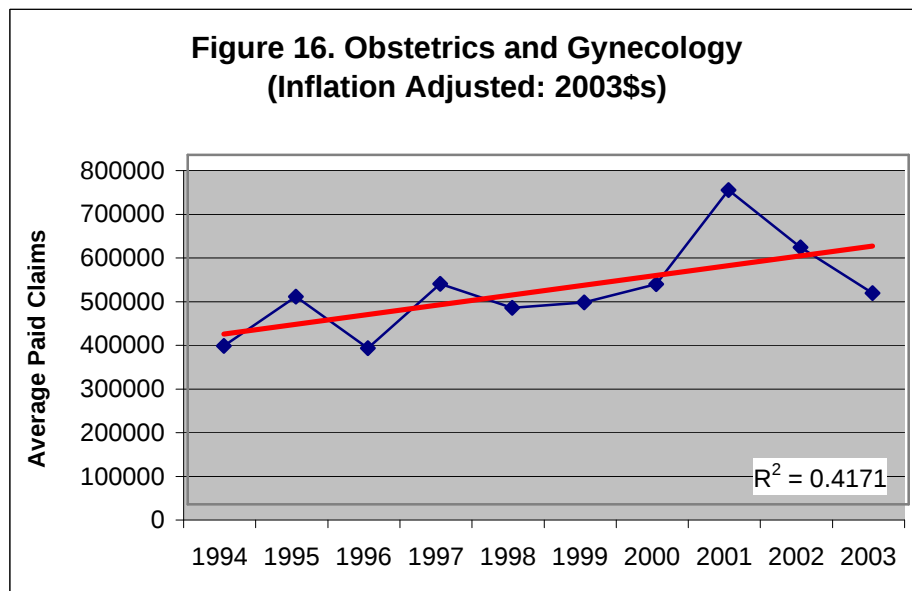
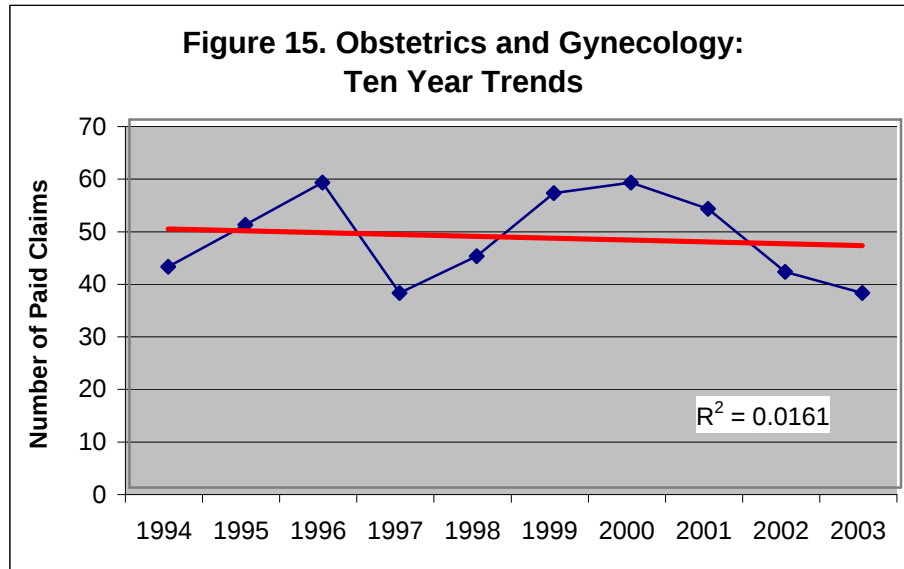


Figure 14. Neurological Surgery: Ten Year Trends (Inflation Adjusted: 2003\$s)



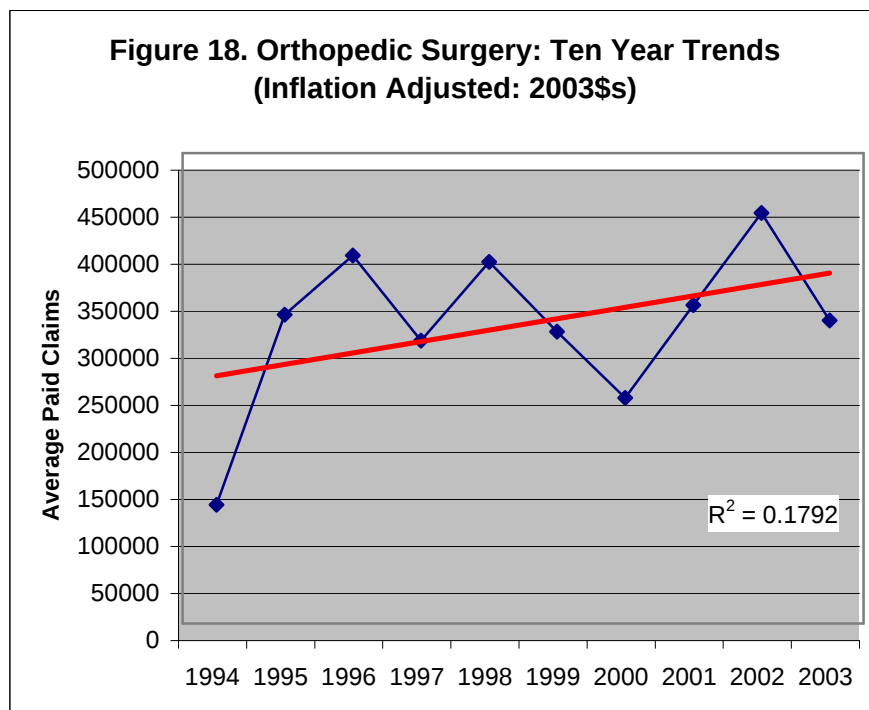
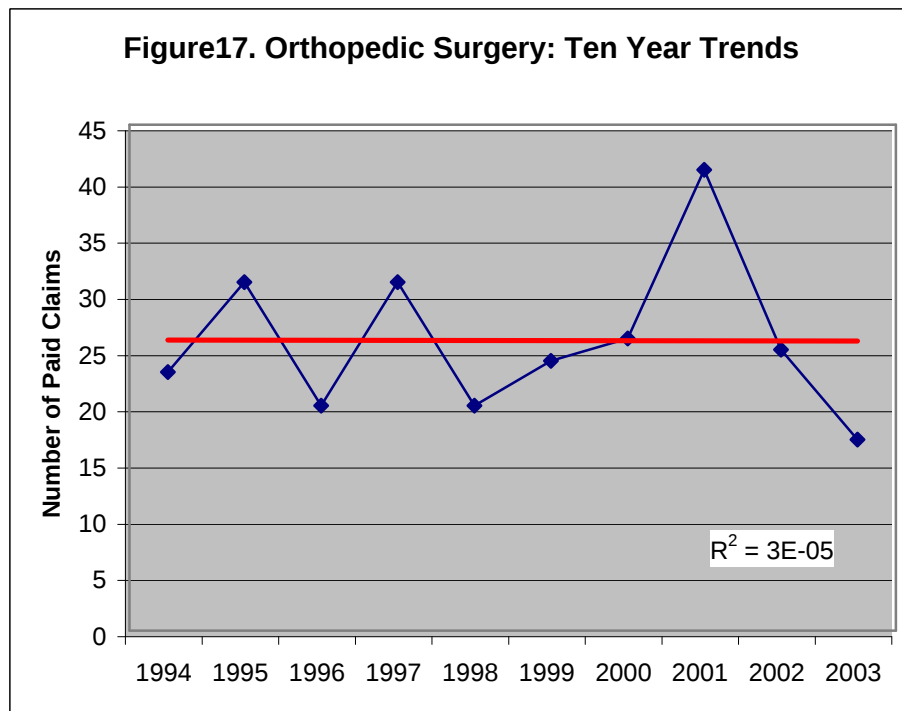
Obstetrics & Gynecology

OB/GYN is consistently among the specialties with the highest rates of malpractice claims and high average payments. The data indicate that while the number of claims is fairly stable over time, the size of payments has trended upward significantly – although down recently from a 2001 high. It is hoped this recent decline continues, and reflects a new caution on the part of physicians and education on the part of patients.



Orthopedic Surgery

In Orthopedic Surgery the ten-year statistical trend of claims is constant, but this specialty is seeing a recent drop in claims since 2001. Unfortunately, however, the average payment is increasing overall. The statistical significance of the increase is not strong, however, and perhaps this trend will moderate.



Pediatrics

Very little can be drawn from the trend data in Pediatrics. On the surface, claims are trending down and average payments are trending up, but the statistical relationships are weak. Pediatrics is, obviously, a sensitive specialty for everyone, but happily it is a relatively low malpractice incidence specialty. The overall stability of the data might suggest there is a certain base level of malpractice experience and, if so, nothing unusual is revealed by these trends.

Figure 19. Pediatrics: Ten Year Trends

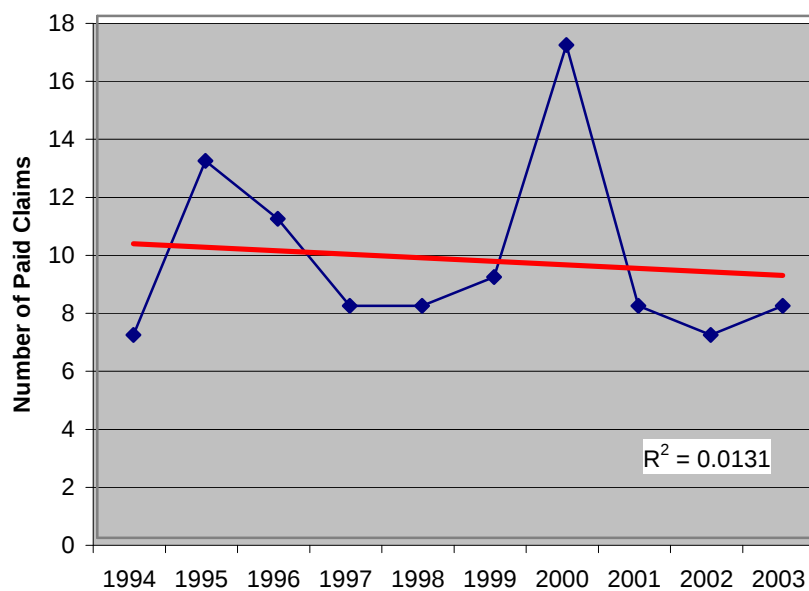
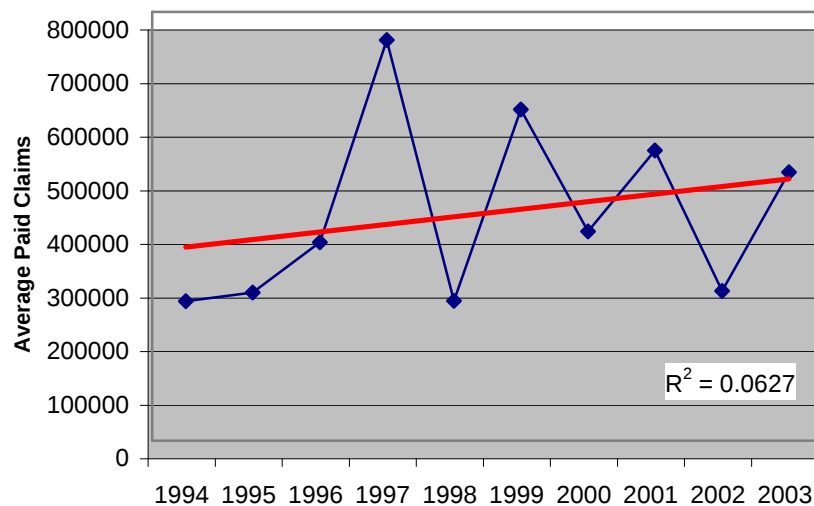
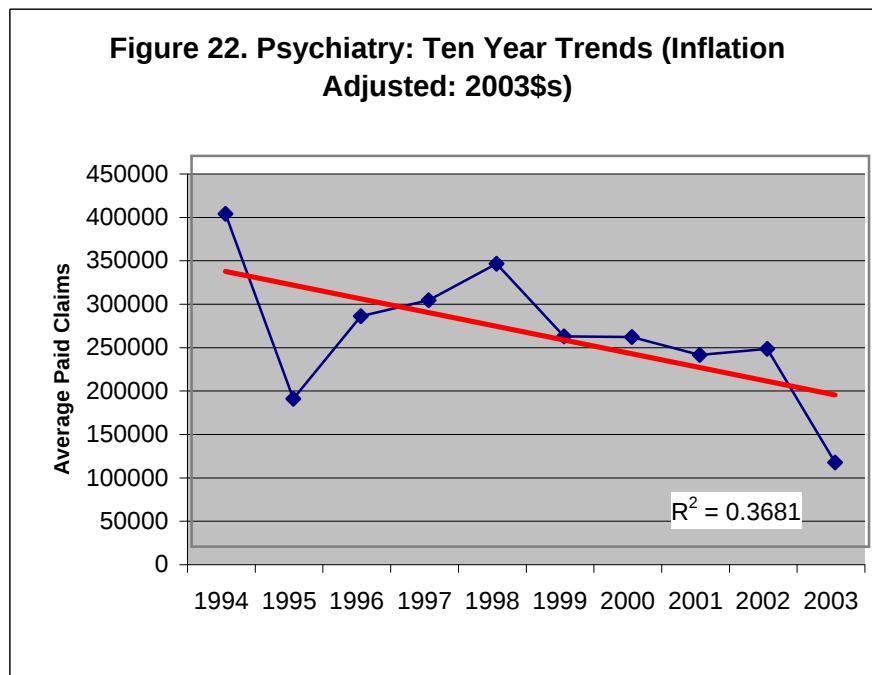
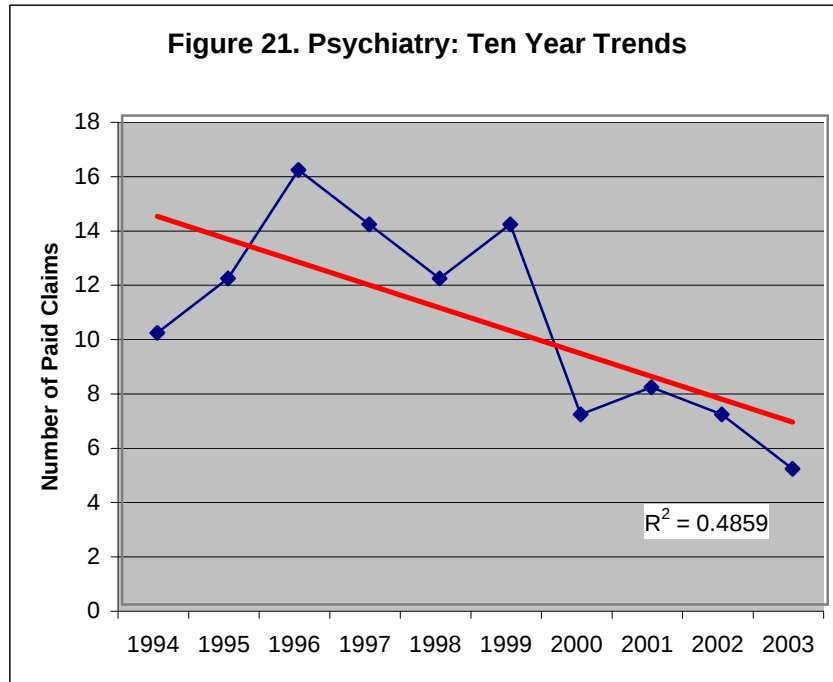


Figure 20. Pediatrics: Ten Year Trends (Inflation Adjusted: 2003\$)



Psychiatry

Psychiatry is the only large specialty in which both the number of claims and the average size of claims is trending downward significantly. A keener awareness on the part of consumers and a deeper commitment by regulators and the profession to report and police incidences of inappropriate behavior in the profession may be responsible for these positive trends.



THE COMPLEXITY OF MEDICAL MALPRACTICE ISSUES

*Competence,
like truth,
beauty and
contact lenses,
is in the eye of
the beholder.*

Laurence J. Peter

Medical malpractice is not a subject that lends itself to easy analysis, understanding, adjudication or remediation. Moreover, the system of medical malpractice insurance, investigation and adjudication is not one that lends itself to easy reform. As noted, a major finding of the Board's 1990-1999 Malpractice Payment report was that there is, "no discernible 'cause and effect' link between the occurrence of a paid medical malpractice claim and the proper practice of medicine."

The 1990-1999 report rightly pointed out that negative medical outcomes can have truly tragic results. Those results, however, may be caused by culpable negligence -- or by circumstances beyond the control of any physician. Tribunal review of malpractice suits, designed to separate out meritless cases, is not intended to be conclusive. Ultimately, the judgment of a malpractice suit is made by a jury, or by the economics of the insurance industry in the case of a settlement. As the 1990-1999 report noted, "In neither case is the outcome the result of a deliberate and dispassionate clinical professional evaluation on the merits."

By their very nature, medical malpractice cases are emotional, often passion-filled, proceedings. The death of a child, the permanent impairment of a spouse or the trauma inflicted on an elderly parent on the one side; a physician defending his reputation, competence and livelihood on the other. Put a jury with almost certainly no member possessing any clinical experience into the mix, and it is not hard to understand the conclusion that a malpractice payment may or may not have anything to do with the proper practice of medicine.

It is important to remember that there are both economic damages (medical costs, lost wages, etc.) and non-economic damages (pain and suffering, etc.) addressed by medical malpractice payments. It is possible, if not likely, that payments made in certain specialties may have unique characteristics in terms of the relative weight given to either type of damage. Further study is needed to determine the impact of these disparities on the medical malpractice system. Moreover, the disparity in payments among specialties is not the only variable. While some specialties are atypical in the size of malpractice payments awarded, others are atypical with respect to the likelihood of a physician in that specialty making a payment.

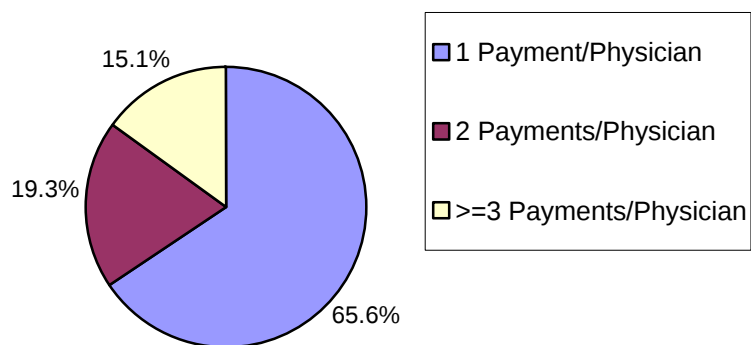
Two examples of the data presented in this report seem to illustrate of this point. Almost one quarter of all Obstetrics & Gynecology specialists made a malpractice payment between 1994 and 2003. Sixteen percent of Neurosurgeons did. But only about three percent of Pediatricians and Oncologists made a payment. What explains the disparities in malpractice payments among the specialties? Do juries and insurers view specialties, and the malpractice cases that arise from them, differently? Are the medical conditions of the typical neurosurgery patient more complex than a typical oncology patient, and hence more likely to result in an adverse outcome? Is there simply more negligence in some specialties than in others?

These are not questions that can be answered merely by statistical analysis, but statistics can help illuminate the complex, conflicting issues that dominate the medical malpractice system and its outcomes. The Board has compiled this report and offers it to the medical community, the insurance industry, policy makers and the public to use as a tool for considering reasonable -- and to the greatest extent possible, factually-based -- changes to the Massachusetts medical malpractice system.

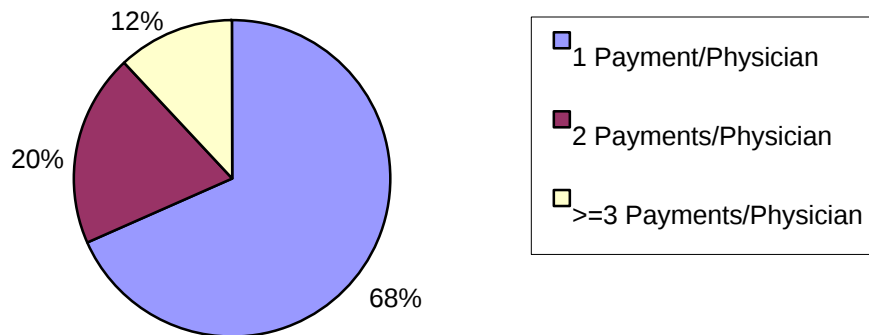
Medical Malpractice – Number of Payments by Physician

An encouraging fact that can easily be overlooked among the various statistics regarding medical malpractice is the relative rarity of it. From 1994 to 2003 only 6.7% of all physicians made a payment. Although this is an increase over the 1990-1999 period, it is a small one and, one might argue, merely a reflection of society's general tilt toward litigation. Further, the vast majority of those making a payment made only one. Even more encouraging, Figures 22 and 23 show how the proportion of physicians making more than one payment is shrinking.

**Figure 23. Number of Payments for Individual Physicians:
1994-1998**



**Figure 24. Distribution of payments by Physicians:
1999-2003**



The Medical Malpractice Insurance Market In Massachusetts

The market for malpractice insurance in Massachusetts is divided between commercial carriers that insure physicians in the open market, and so-called “captives,” or insurers affiliated with teaching hospitals, HMOs and other health care entities. A commercial insurer covers the physician in solo or independent group practice. A captive insures physicians from within the universe of an individual captive’s affiliates, such as an HMO.

Today there are only two active commercial carriers writing malpractice policies in Massachusetts: Boston-based ProMutual Group, and a small carrier based in Connecticut, Connecticut Medical Insurance Co. In 2005 these two companies are expected to insure over 40% of all practicing physicians in the Commonwealth.

Commercial Medical Malpractice Insurance Market

ProMutual Group is by far the single largest malpractice insurer, commercial or captive, in the state. Currently ProMutual insures 38% of all physicians in Massachusetts. Two other commercial carriers, however, are leaving the Commonwealth. The Massachusetts Medical Society reports that more than 1,600 Massachusetts physicians will be forced to find another insurer because the Medical Liability Mutual Insurance Co. is leaving the state. Further, GE Medical Protective, the third largest commercial carrier is also leaving. Soon 2000 or more physicians will be forced to procure malpractice insurance from another carrier in the wake of these two companies leaving the state. Ultimately ProMutual is expected to insure nearly 100% of the commercial market here.

Captive Medical Malpractice Insurance Market

The remaining 50+% of all practicing physicians in the Commonwealth are insured by a variety of captives, the largest of which, the Controlled Risk Insurance Company (CRICO), insures physicians affiliated with Harvard University and various affiliated institutions. CRICO insures approximately 29% of all physicians. The second largest captive is the UMass-Memorial Medical Center Self-Insurance Trust Fund, which insures roughly 7% of all physicians. Other captives include affiliates of Boston University, the Lahey Clinic, Baystate Health Care and a variety of HMOs.

Clearly, physicians seeking a malpractice insurance carrier today have fewer -- and different -- options to choose among than in years past. How this does and will affect malpractice insurance premiums, physician recruitment efforts, the configuration of the health care provider network and the actual delivery and quality of health care in Massachusetts, is open to speculation. One need not strain to imagine, however, that the change in the malpractice insurance market is not occurring in a vacuum, but having effects in the broader health care delivery system.

Medical Malpractice Claims In Massachusetts, 1994-2003

Summary of Significant Findings

Physicians Making Payments

- The number of physicians making payments from 1994-2003 increased by 5% over 1990-1999, from 2,183 to 2,307.
- During this time the total number of physicians remained fairly constant.
- The percentage of physicians making payments increased from 5.4% to 6.17%.
- Regardless of specialty, age and gender are very significantly related to number of payments.
- Only 98 physicians, or 4.2% of the 2,307 physicians who made a payment, and one quarter of one percent of all physicians, had more than two paid claims.
- These 98 physicians, however, were responsible for 388, or 13.5%, of all paid claims, and \$133,988,105, or 12.9%, of all dollars paid.
- Of the 98, 50 remain in active practice, of whom 9 have been disciplined by the Board. The remaining 48 were removed from practice by Board action, retired, allowed their licenses to lapse, are inactive or are deceased.
- The three specialties with the most paid claims are still Obstetrics & Gynecology, Internal Medicine and General Surgery.
- The three specialties with the highest percentage of physicians making payments are still Gynecology, Obstetrics/Gynecology and Neurological Surgery. Note: two specialties with fewer than 100 physicians have higher percentages, but the small number of physicians and payments make percentages unreliable.

Table 1. Five Specialties with the Highest Percentage* of Physicians Making Payments in 1994-2003 compared to 1990-1999. (* among specialties with more than 200 physicians)

Specialty	Total # Physicians in Specialty	% Change in Number of Physicians	# of Claims	% Change in Number of Paid Claims
OB/GYN	1,404	3.0%	476	3.0%
Gynecology	203	- 9.0%	64	33.0%
Neurological Surgery	253	5.4%	85	29.0%
General Surgery	1,363	no change	250	8.2%
Orthopedic Surgery	1,208	4.0%	258	3.6%

Medical Malpractice Payments – 1994 through 2003

The results of the data analysis of the ten-year period from 1994-2003 are remarkably similar to the 1990-1999 results. The same medical specialties were identified as most highly correlated to malpractice payments. Again, most physicians had no malpractice payments; among physicians reporting a paid claim, the overwhelming majority had only a single paid claim.

General Findings

- Total aggregated payments over the 1994 to 2003 period were \$1,035,453,336, an increase of 27% over 1990-1999.
- Total annual payments from 1994 to 2003, however, grew by 85.3%. Even adjusted for inflation, annual payments jumped 50%.
- Annual payments peaked in 2001 at \$129,095,469. Since then payments have dropped by 7.8%.
- Total aggregated number of payments from 1994 to 2003 rose 4%, from 2,766 to 2,876.
- The annual number of payments from 1994 to 2003 grew by 8.2%.
- Annual payments peaked at 332 in 2001, and have since declined by nearly 17%.
- Over the 10-year period the average payment was \$360,000. In 2003 the average was \$431,016.
- In 2001 the average payment in the U.S. was approximately \$300,000. In Massachusetts it was \$388,841.
- The number of payments over \$1,000,000 grew from 163 or 5.9% of all payments to 244, or 8.5% of all payments (a 50% increase).
- Payments ranging from \$500,000 to \$1,000,000 rose from 368 to 455, a 19% increase.
- Payments under \$100,000 dropped from 1,013 (36.6% of total) to 841 (29%).
- Only 57 (2%) of the 2,876 malpractice payments were the result of a jury verdict, but jury verdicts are strongly related to higher payment amounts.
- The average jury award from 1994-2003 in Massachusetts was \$976,147. The average jury award nationally in 2001 was about \$500,000.
- There is no significant relationship between board certification and the incidence of malpractice payments.
- There is no significant relationship between paid claims and whether a physician graduated from a domestic or international medical school.
- A relationship between physicians' years of experience and paid claims is difficult to demonstrate statistically. Years of experience is so closely related to age that the correlation values become unstable and of no use.

MEDICAL MALPRACTICE CLAIMS IN MASSACHUSETTS, 1994-2003

Physician Population

During the period from January 1, 1994 to December 31, 2003, the total physician population in Massachusetts included 37,369 individual practitioners, down 7.6% from the period 1990-1999. For comparison, in October 2004 the total number of active physicians was 31,080.

- The gender mix of physicians in 2003 was 68.6% male and 31.4% female. This marks an increase in the proportion of women of over 5 percentage points from 1990-1999.
- 80% of this population graduated from U.S. or Canadian medical schools, while 20% graduated from international medical schools. This is roughly equivalent to 1990-1999.
- 75% were board certified in at least one specialty.
- 98% of the active physicians were Medical Doctors (M.D. degree) and 2% were Osteopathic Doctors (D.O. degree).
- Table 2 (next page) presents the total physician population sorted alphabetically by specialty, and includes total physician population, number paying claims, number of claims paid, and the percentage of physicians making a payment. Table 3 displays the 15 specialties with the highest percentage of physicians making a payment.

Table 2.**Malpractice Claims by Medical Specialty, 1994-2003**

Specialty	Total Physician Population	Physicians who Paid Claims	Total Number of Paid Claims	% of Physicians with Paid Claims [# of Total Population]
Abdominal Surgery	22	3	4	13.6%
Aerospace Medicine	20	2	3	10.0%
Allergy and Immunology	119	2	2	1.7%
Anatomic Pathology	416	9	11	2.2%
Anesthesiology	2256	100	103	4.4%
Cardiovascular Diseases	1178	54	60	4.6%
Cardiovascular Surgery	135	11	11	8.1%
Child Neurology	107	1	1	0.9%
Child Psychiatry	293	4	4	1.4%
Clinical Pathology	74	1	1	1.4%
Colon and Rectal Surgery	38	3	4	7.9%
Critical Care Medicine	105	3	3	2.9%
Dermatology	569	32	44	5.6%
Diagnostic Radiology	1389	117	131	8.4%
Emergency Medicine	1327	97	119	7.3%
Endocrinology	295	13	15	4.4%
Facial Plastic Surgery	7	2	2	28.6%
Family Practice	1679	100	113	6.0%
Family/General Practice	37	2	2	5.4%
Forensic Pathology	30	1	1	3.3%
Gastroenterology	440	23	25	5.2%
General Practice	441	20	21	4.5%
General Surgery	1363	199	250	14.6%
Geriatrics	114	5	5	4.4%
Gynecological Oncology	43	5	7	11.6%
Gynecology	203	42	64	20.7%
Hand Surgery	62	4	5	6.5%
Head and Neck Surgery	19	1	2	5.3%
Hematology	262	6	6	2.3%
Infectious Diseases	312	8	8	2.6%
Internal Medicine	7532	324	363	4.3%
Maternal and Fetal Medicine	39	2	2	5.1%

Specialty	Total Physician Population	Physicians who Paid Claims	Total Number of Paid Claims	% of Physicians with Paid Claims [# of Total Population]
Neonatal-Perinatal Medicine	160	6	6	3.8%
Nephrology	263	7	7	2.7%
Neurological Surgery	253	41	85	16.2%
Neurology	846	33	37	3.9%
Nuclear Medicine	78	1	2	1.3%
Nutrition	27	1	1	3.7%
Obstetrics	23	9	15	39.1%
Obstetrics and Gynecology	1404	339	476	24.1%
Occupational Medicine	185	3	4	1.6%
Oncology	368	11	11	3.0%
Ophthalmology	1082	34	40	3.1%
Orthopedic Surgery	1208	163	258	13.5%
Orthopedics (No Surgery)	66	2	2	3.0%
Other Specialty	294	12	14	4.1%
Otolaryngology	126	6	9	4.8%
Otorhinolaryngology	157	23	25	14.6%
Oto/Otorhinolaryngology	91	15	20	16.5%
Pathology	555	24	26	4.3%
Pediatric Allergy	13	1	1	7.7%
Pediatric Cardiology	108	4	4	3.7%
Pediatric Hematology-Oncology	107	1	1	0.9%
Pediatric Surgery	61	4	4	6.6%
Pediatrics	2839	90	96	3.2%
Physical Medicine & Rehab	347	9	12	2.6%
Plastic Surgery	291	30	45	10.3%
Psychiatry	3265	85	105	2.6%
Pulmonary Diseases	393	15	18	3.8%
Radiation Oncology	161	3	3	1.9%
Radiology	565	32	36	5.7%
Reproductive Endocrinology	49	3	5	6.1%
Rheumatology	197	6	6	3.0%
Therapeutic Radiology	105	5	5	4.8%
Thoracic Surgery	129	11	11	8.5%
Trauma Surgery	24	2	2	8.3%
Urological Surgery	216	28	33	13.0%
Urology	221	34	41	15.4%
Vascular Surgery	148	17	17	11.5%
Vascular/Intervent'l Radiology	18	1	1	5.6%
TOTAL	37,369	2,307	2,876	

Table 3. Fifteen Highest Ranked Specialties for Number of Claims 1994-2003**(sorted by % of Physicians w Paid Claims)**

Specialty	Total Population	# of Physicians who Paid Claims	Total # of Paid Claims	% of Physicians with Paid Claims*
Obstetrics and Gynecology	1404	339	476	24.1%
Gynecology	203	42	64	20.7%
Neurological Surgery	253	41	85	16.2%
General Surgery	1363	199	250	14.6%
Orthopedic Surgery	1208	163	258	13.5%
Plastic Surgery	291	30	45	10.3%
Diagnostic Radiology	1389	117	131	8.4%
Emergency Medicine	1327	97	119	7.3%
Family Practice	1679	100	113	6.0%
Dermatology	569	32	44	5.6%
Cardiovascular Diseases	1178	54	60	4.6%
Anesthesiology	2256	100	103	4.4%
Internal Medicine	7532	324	363	4.3%
Pediatrics	2839	90	96	3.2%
Psychiatry	3265	85	105	2.6%

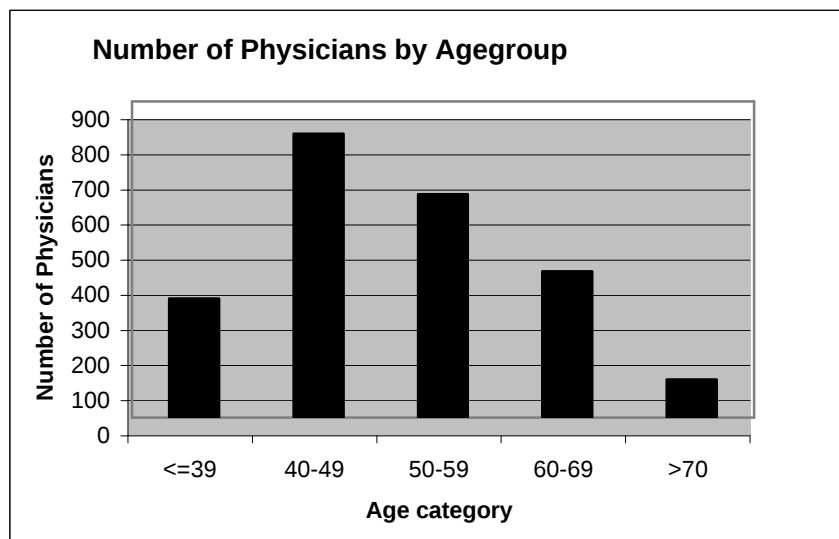
**as a percentage of the total physician population in that specialty*

Age and Gender

The relationship between age, gender and both the number of payments and total dollars paid were explored via descriptive tables and figures below, and as a series of simple univariate and multiple regressions. Age was computed as the age during the midpoint of the 10-year data series (age as of January 1, 1999). The relationships are complex because of the different age distributions within a gender. In addition, the relationships may be further complicated by the differences in gender distribution in various specialties.

Table 4. Number of Physicians Making Payments by Age Group

Age	Number of Physicians w/ Payments	% of Total Physicians w/ Payments
<39	339	14.7
40-49	808	35.0
50-59	636	27.6
60-69	416	18.0
>70	108	4.7
TOTAL	2,307	100.0



The table below shows the gender distribution for the entire population of active physicians and for the population of physicians in the malpractice database. Females make up approximately 31% of the total population and approximately 16% of the malpractice population while males are 69% of the total population and 84% of the malpractice database.

Table 5. Gender distributions for the entire population of active physicians and population of physicians with malpractice payments

	# Male	% Male	# Female	% Female
All Active Physicians	19,917	68.6%	9,116	31.4%
Physicians Making Payments	1,931	84.0%	369	16.0%

The table below displays the age distributions by gender. Approximately 75% of the females are under 50 years of age, while only 40% of the males are under 50. (Note: gender was missing for 7 records.)

Table 6. Age Distribution for Physicians by Gender

AGE Females	Number of Female Physicians With Paid Claims	% of Female Physicians with Claims
<=39	102	27.6%
40-49	177	48.0%
50-59	72	19.5%
60-69	18	4.9%
>=70	0	0.0%
TOTAL	369	100.0%

AGE Males	Number of Male Physicians with Paid Claims	% of Male Physicians with Claims
<=39	177	9.2%
40-49	603	31.2%
50-59	592	30.7%
60-69	432	22.4%
>=70	127	6.6%
TOTAL	1931	100.0%

Figure 25. Age Distribution for Female Physicians

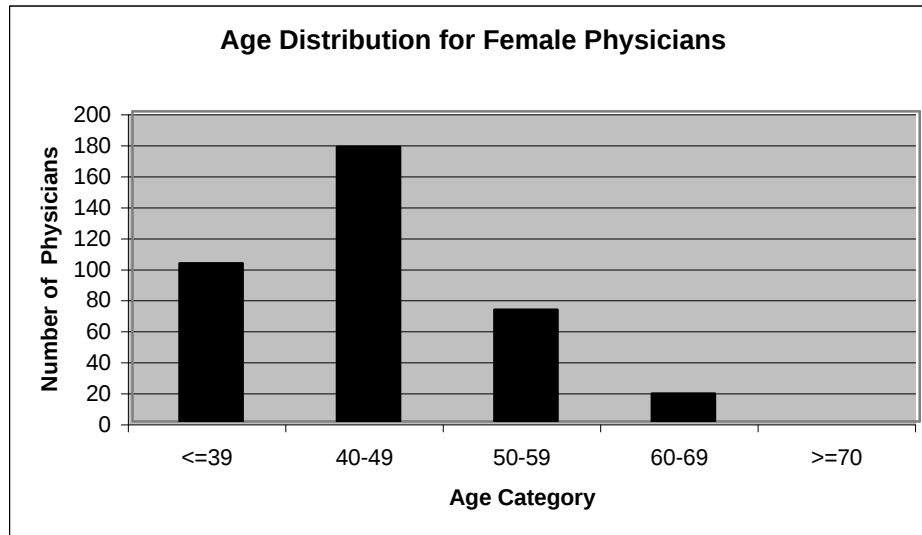
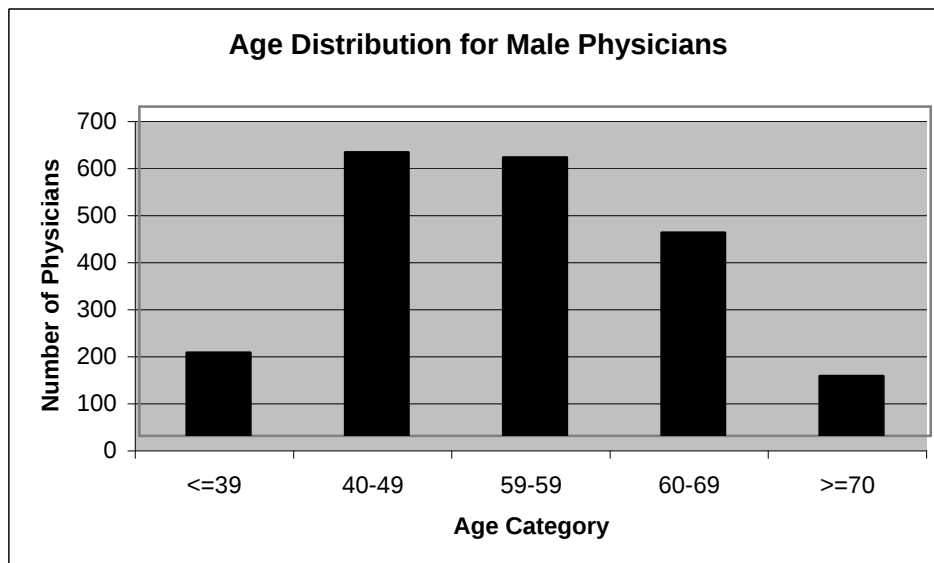


Figure 26. Age Distribution for Male Physicians



Age

Univariate linear regressions were performed using number of payments and total dollars paid as the dependent variables. When age was used as the independent variable, it was significantly related to the number of claims ($p\text{-value} < .01$). In other words, the greater the age, the greater the number of payments, but age is not significantly related to the size of the payment. ($p\text{-value} > .8$).

Gender

A univariate linear regression showed gender to be significantly positively related to number of payments. Gender was assigned as 0 for females and 1 for males.

Age and Gender

A multivariate model was built examining the relationships between age and gender as the independent variables and number of payments as the dependent variable. Gender was assigned as 0 for females and 1 for males. Both age and gender were significant ($p\text{-value} < .001$ and $p\text{-value} < .06$ respectively) such that males were more likely to have greater number of payments even when age was controlled.

The Relationship between Number of Payments and Gender, Age, and Specialty

Multiple linear regressions were performed to determine the relationships between number of payments and gender, age, and specialty (1=Specialty present and 0=Specialty not present). Board certification (certification in the area of specialty) was also examined where it was typically autocorrelated (extremely highly correlated) with specialty. Thus, only specialty was included in the model. The specialties examined are all among those with the most physicians, with a high number of paid claims or both. Other specialties have a disproportionate number of claims, but their actual numbers are small, making useful analysis difficult. The selected specialties were: anesthesiology, diagnostic radiology, emergency medicine, family practice, general surgery, internal medicine, neurosurgery, obstetrics/gynecology, orthopedics, pediatrics, and psychiatry.

Three specialties were positively associated with number of payments: Neurosurgery, Obstetrics/Gynecology and Orthopedics. Put another way, physicians in these specialties (regardless of their age or gender) have a stronger relationship with increasing number of payments compared to other specialties. One striking finding was that regardless of specialty, gender and age were very significantly related to number of payments.

Paid Claims

Tables 7 and 7A below show the lowest and highest individual malpractice payments made by specialty, and the average payment by specialty. Table 7 is sorted alphabetically by specialty. Table 7A is sorted by average amount paid.

Table 7. Amount Paid by Medical Specialty, 1994-2003

Specialty	Count	Lowest	Highest	Average	Total
Abdominal Surgery	4	\$29,333.00	\$410,000.00	\$177,333.25	\$709,333.00
Aerospace Medicine	3	\$18,000.00	\$375,000.00	\$151,000.00	\$453,000.00
Allergy and Immunology	2	\$10,000.00	\$125,000.00	\$67,500.00	\$135,000.00
Anatomic Pathology	11	\$20,000.00	\$750,000.00	\$309,090.91	\$3,400,000.00
Anesthesiology	103	\$311.00	\$3,050,000.00	\$404,724.99	\$41,686,674.00
Cardiovascular Diseases	60	\$1,000.00	\$2,000,000.00	\$367,029.57	\$22,021,774.00
Cardiovascular Surgery	11	\$35,000.00	\$1,455,000.00	\$381,363.64	\$4,195,000.00
Child Neurology	1	\$6,000.00	\$6,000.00	\$6,000.00	\$6,000.00
Child Psychiatry	4	\$50,000.00	\$1,500,000.00	\$700,000.00	\$2,800,000.00
Clinical Pathology	1	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00
Colon and Rectal Surgery	4	\$40,000.00	\$250,000.00	\$186,250.00	\$745,000.00
Critical Care Medicine	3	\$187,500.00	\$1,100,000.00	\$605,833.33	\$1,817,500.00
Dermatology	44	\$750.00	\$880,000.00	\$129,668.75	\$5,705,425.00
Diagnostic Radiology	131	\$7,000.00	\$4,001,524.00	\$398,716.86	\$52,231,908.00
Emergency Medicine	119	\$1,500.00	\$1,600,000.00	\$314,538.08	\$37,430,032.00
Endocrinology	15	\$7,500.00	\$1,000,000.00	\$355,577.73	\$5,333,666.00
Facial Plastic Surgery	2	\$100,000.00	\$300,000.00	\$200,000.00	\$400,000.00
Family Practice	113	\$2,000.00	\$1,500,000.00	\$310,447.11	\$35,080,523.00
Family/General Practice	2	\$150,000.00	\$200,000.00	\$175,000.00	\$350,000.00
Forensic Pathology	1	\$150,000.00	\$150,000.00	\$150,000.00	\$150,000.00
Gastroenterology	25	\$60,000.00	\$1,000,000.00	\$400,074.68	\$10,001,867.00
General Practice	21	\$15,000.00	\$1,000,000.00	\$360,354.33	\$7,567,441.00
General Surgery	250	\$3,876.00	\$2,995,000.00	\$301,973.57	\$75,493,393.00
Geriatrics	5	\$79,500.00	\$1,045,000.00	\$419,900.00	\$2,099,500.00
Gynecological Oncology	7	\$10,000.00	\$2,556,603.00	\$1,014,006.14	\$7,098,043.00
Gynecology	64	\$2,500.00	\$2,466,631.00	\$400,338.36	\$25,621,655.00
Hand Surgery	5	\$25,000.00	\$145,000.00	\$67,725.80	\$338,629.00

Specialty	Count	Lowest	Highest	Average	Total
Head and Neck Surgery	2	\$1,000,000.00	\$4,900,355.00	\$2,950,177.50	\$5,900,355.00
Hematology	6	\$75,000.00	\$1,000,000.00	\$429,166.67	\$2,575,000.00
Infectious Diseases	8	\$4,000.00	\$2,000,000.00	\$418,739.38	\$3,349,915.00
Internal Medicine	363	\$371.00	\$4,345,146.00	\$350,327.35	\$127,168,829.00
Maternal and Fetal Medicine	2	\$900,000.00	\$3,000,000.00	\$1,950,000.00	\$3,900,000.00
Neonatal-Perinatal Medicine	6	\$562,500.00	\$1,850,000.00	\$1,377,961.67	\$8,267,770.00
Nephrology	7	\$52,500.00	\$750,000.00	\$381,785.71	\$2,672,500.00
Neurological Surgery	85	\$5,000.00	\$1,500,000.00	\$357,820.25	\$30,414,721.00
Neurology	37	\$10,000.00	\$2,000,000.00	\$419,358.11	\$15,516,250.00
Nuclear Medicine	2	\$250,000.00	\$400,000.00	\$325,000.00	\$650,000.00
Nutrition	1	\$350,000.00	\$350,000.00	\$350,000.00	\$350,000.00
Obstetrics	15	\$17,500.00	\$950,000.00	\$270,130.00	\$4,051,950.00
Obstetrics and Gynecology	476	\$1,000.00	\$6,728,702.00	\$447,982.81	\$213,239,816.00
Occupational Medicine	4	\$90,000.00	\$500,000.00	\$322,500.00	\$1,290,000.00
Oncology	11	\$12,500.00	\$1,000,000.00	\$332,747.73	\$3,660,225.00
Ophthalmology	40	\$9,000.00	\$2,437,086.00	\$311,598.18	\$12,463,927.00
Orthopedic Surgery	258	\$3,000.00	\$3,750,000.00	\$288,555.97	\$74,447,441.00
Orthopedics (No Surgery)	2	\$65,000.00	\$100,000.00	\$82,500.00	\$165,000.00
Other Specialty	14	\$2,750.00	\$940,000.00	\$238,783.86	\$3,342,974.00
Otolaryngology	9	\$7,500.00	\$1,300,000.00	\$392,222.22	\$3,530,000.00
Otorhinolaryngology	25	\$17,000.00	\$2,000,000.00	\$379,285.64	\$9,482,141.00
Otorhinolaryngology/Otolaryngology	20	\$25,000.00	\$2,500,000.00	\$438,750.00	\$8,775,000.00
Pathology	26	\$80,000.00	\$1,500,000.00	\$498,039.96	\$12,949,039.00
Pediatric Allergy	1	\$440,000.00	\$440,000.00	\$440,000.00	\$440,000.00
Pediatric Cardiology	4	\$400,000.00	\$3,250,000.00	\$1,412,500.00	\$5,650,000.00
Pediatric Hematology-Oncology	1	\$982,865.00	\$982,865.00	\$982,865.00	\$982,865.00
Pediatric Surgery	4	\$154,500.00	\$1,980,000.00	\$1,000,003.00	\$4,000,012.00
Pediatrics	96	\$3,500.00	\$2,000,000.00	\$378,332.14	\$36,319,885.00
Physical Medicine & Rehabilitation	12	\$2,250.00	\$750,000.00	\$177,125.00	\$2,125,500.00
Plastic Surgery	45	\$1,120.00	\$475,000.00	\$101,252.82	\$4,556,377.00
Psychiatry	105	\$3,750.00	\$1,500,000.00	\$225,959.05	\$23,725,700.00
Pulmonary Diseases	18	\$14,500.00	\$1,000,000.00	\$404,895.17	\$7,288,113.00
Radiation Oncology	3	\$4,375.00	\$250,000.00	\$86,250.00	\$258,750.00
Radiology	36	\$5,000.00	\$4,600,000.00	\$563,190.17	\$20,274,846.00
Reproductive Endocrinology	5	\$150,000.00	\$695,000.00	\$336,500.00	\$1,682,500.00

Specialty	Count	Lowest	Highest	Average	Total
Rheumatology	6	\$75,000.00	\$1,200,000.00	\$392,500.00	\$2,355,000.00
Therapeutic Radiology	5	\$20,000.00	\$775,000.00	\$423,500.00	\$2,117,500.00
Thoracic Surgery	11	\$25,000.00	\$700,000.00	\$208,454.55	\$2,293,000.00
Trauma Surgery	2	\$85,000.00	\$571,757.00	\$328,378.50	\$656,757.00
Urological Surgery	33	\$15,000.00	\$1,000,000.00	\$288,863.64	\$9,532,500.00
Urology	41	\$11,100.00	\$2,250,000.00	\$349,324.76	\$14,322,315.00
Vascular Surgery	17	\$15,000.00	\$1,000,000.00	\$249,264.71	\$4,237,500.00
Vascular/Interventional Radiology	1	\$600,000.00	\$600,000.00	\$600,000.00	\$600,000.00
TOTAL					1,035,453,336

**Table 7A. Amount Paid by Medical Specialty, 1994-2003
(sorted by Average Amount Paid)**

Specialty	Count	Lowest	Highest	Average	Total
Head and Neck Surgery	2	\$1,000,000.00	\$4,900,355.00	\$2,950,177.50	\$5,900,355.00
Maternal and Fetal Medicine	2	\$900,000.00	\$3,000,000.00	\$1,950,000.00	\$3,900,000.00
Pediatric Cardiology	4	\$400,000.00	\$3,250,000.00	\$1,412,500.00	\$5,650,000.00
Neonatal-Perinatal Medicine	6	\$562,500.00	\$1,850,000.00	\$1,377,961.67	\$8,267,770.00
Gynecological Oncology	7	\$10,000.00	\$2,556,603.00	\$1,014,006.14	\$7,098,043.00
Pediatric Surgery	4	\$154,500.00	\$1,980,000.00	\$1,000,003.00	\$4,000,012.00
Clinical Pathology	1	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00
Pediatric Hematology-Oncology	1	\$982,865.00	\$982,865.00	\$982,865.00	\$982,865.00
Child Psychiatry	4	\$50,000.00	\$1,500,000.00	\$700,000.00	\$2,800,000.00
Critical Care Medicine	3	\$187,500.00	\$1,100,000.00	\$605,833.33	\$1,817,500.00
Vascular/Interventional Radiology	1	\$600,000.00	\$600,000.00	\$600,000.00	\$600,000.00
Radiology	36	\$5,000.00	\$4,600,000.00	\$563,190.17	\$20,274,846.00
Pathology	26	\$80,000.00	\$1,500,000.00	\$498,039.96	\$12,949,039.00
Obstetrics and Gynecology	476	\$1,000.00	\$6,728,702.00	\$447,982.81	\$213,239,816.00
Pediatric Allergy	1	\$440,000.00	\$440,000.00	\$440,000.00	\$440,000.00
Otorhinolaryngology/Otolaryngology	20	\$25,000.00	\$2,500,000.00	\$438,750.00	\$8,775,000.00
Hematology	6	\$75,000.00	\$1,000,000.00	\$429,166.67	\$2,575,000.00
Therapeutic Radiology	5	\$20,000.00	\$775,000.00	\$423,500.00	\$2,117,500.00
Geriatrics	5	\$79,500.00	\$1,045,000.00	\$419,900.00	\$2,099,500.00

Specialty	Count	Lowest	Highest	Average	Total
Neurology	37	\$10,000.00	\$2,000,000.00	\$419,358.11	\$15,516,250.00
Infectious Diseases	8	\$4,000.00	\$2,000,000.00	\$418,739.38	\$3,349,915.00
Pulmonary Diseases	18	\$14,500.00	\$1,000,000.00	\$404,895.17	\$7,288,113.00
Anesthesiology	103	\$311.00	\$3,050,000.00	\$404,724.99	\$41,686,674.00
Gynecology	64	\$2,500.00	\$2,466,631.00	\$400,338.36	\$25,621,655.00
Gastroenterology	25	\$60,000.00	\$1,000,000.00	\$400,074.68	\$10,001,867.00
Diagnostic Radiology	131	\$7,000.00	\$4,001,524.00	\$398,716.86	\$52,231,908.00
Rheumatology	6	\$75,000.00	\$1,200,000.00	\$392,500.00	\$2,355,000.00
Otolaryngology	9	\$7,500.00	\$1,300,000.00	\$392,222.22	\$3,530,000.00
Nephrology	7	\$52,500.00	\$750,000.00	\$381,785.71	\$2,672,500.00
Cardiovascular Surgery	11	\$35,000.00	\$1,455,000.00	\$381,363.64	\$4,195,000.00
Otorhinolaryngology	25	\$17,000.00	\$2,000,000.00	\$379,285.64	\$9,482,141.00
Pediatrics	96	\$3,500.00	\$2,000,000.00	\$378,332.14	\$36,319,885.00
Cardiovascular Diseases	60	\$1,000.00	\$2,000,000.00	\$367,029.57	\$22,021,774.00
General Practice	21	\$15,000.00	\$1,000,000.00	\$360,354.33	\$7,567,441.00
Neurological Surgery	85	\$5,000.00	\$1,500,000.00	\$357,820.25	\$30,414,721.00
Endocrinology	15	\$7,500.00	\$1,000,000.00	\$355,577.73	\$5,333,666.00
Internal Medicine	363	\$371.00	\$4,345,146.00	\$350,327.35	\$127,168,829.00
Nutrition	1	\$350,000.00	\$350,000.00	\$350,000.00	\$350,000.00
Urology	41	\$11,100.00	\$2,250,000.00	\$349,324.76	\$14,322,315.00
Reproductive Endocrinology	5	\$150,000.00	\$695,000.00	\$336,500.00	\$1,682,500.00
Oncology	11	\$12,500.00	\$1,000,000.00	\$332,747.73	\$3,660,225.00
Trauma Surgery	2	\$85,000.00	\$571,757.00	\$328,378.50	\$656,757.00
Nuclear Medicine	2	\$250,000.00	\$400,000.00	\$325,000.00	\$650,000.00
Occupational Medicine	4	\$90,000.00	\$500,000.00	\$322,500.00	\$1,290,000.00
Emergency Medicine	119	\$1,500.00	\$1,600,000.00	\$314,538.08	\$37,430,032.00
Ophthalmology	40	\$9,000.00	\$2,437,086.00	\$311,598.18	\$12,463,927.00
Family Practice	113	\$2,000.00	\$1,500,000.00	\$310,447.11	\$35,080,523.00
Anatomic Pathology	11	\$20,000.00	\$750,000.00	\$309,090.91	\$3,400,000.00
General Surgery	250	\$3,876.00	\$2,995,000.00	\$301,973.57	\$75,493,393.00
Urological Surgery	33	\$15,000.00	\$1,000,000.00	\$288,863.64	\$9,532,500.00
Orthopedic Surgery	258	\$3,000.00	\$3,750,000.00	\$288,555.97	\$74,447,441.00
Obstetrics	15	\$17,500.00	\$950,000.00	\$270,130.00	\$4,051,950.00
Vascular Surgery	17	\$15,000.00	\$1,000,000.00	\$249,264.71	\$4,237,500.00
Other Specialty	14	\$2,750.00	\$940,000.00	\$238,783.86	\$3,342,974.00
Psychiatry	105	\$3,750.00	\$1,500,000.00	\$225,959.05	\$23,725,700.00
Thoracic Surgery	11	\$25,000.00	\$700,000.00	\$208,454.55	\$2,293,000.00

Specialty	Count	Lowest	Highest	Average	Total
Facial Plastic Surgery	2	\$100,000.00	\$300,000.00	\$200,000.00	\$400,000.00
Colon and Rectal Surgery	4	\$40,000.00	\$250,000.00	\$186,250.00	\$745,000.00
Abdominal Surgery	4	\$29,333.00	\$410,000.00	\$177,333.25	\$709,333.00
Physical Medicine & Rehabilitation	12	\$2,250.00	\$750,000.00	\$177,125.00	\$2,125,500.00
Family/General Practice	2	\$150,000.00	\$200,000.00	\$175,000.00	\$350,000.00
Aerospace Medicine	3	\$18,000.00	\$375,000.00	\$151,000.00	\$453,000.00
Forensic Pathology	1	\$150,000.00	\$150,000.00	\$150,000.00	\$150,000.00
Dermatology	44	\$750.00	\$880,000.00	\$129,668.75	\$5,705,425.00
Plastic Surgery	45	\$1,120.00	\$475,000.00	\$101,252.82	\$4,556,377.00
Radiation Oncology	3	\$4,375.00	\$250,000.00	\$86,250.00	\$258,750.00
Orthopedics (No Surgery)	2	\$65,000.00	\$100,000.00	\$82,500.00	\$165,000.00
Hand Surgery	5	\$25,000.00	\$145,000.00	\$67,725.80	\$338,629.00
Allergy and Immunology	2	\$10,000.00	\$125,000.00	\$67,500.00	\$135,000.00
Child Neurology	1	\$6,000.00	\$6,000.00	\$6,000.00	\$6,000.00
TOTAL					1,035,453,336

Conclusions and Recommendations

An encouraging finding of this report is that, since 2001, the number of malpractice payments made annually has declined, as has the total value of those payments. In contrast, the number of physicians being sued for malpractice continues to increase, as does the size of individual payments made and the percentage of the overall physician population making them. Furthermore, certain specialties continue to be affected more than others. The average pediatric surgery malpractice payment, for example, is three times the average general surgery award. From 1994 to 2003 nearly 1 in 4 obstetrics/gynecology specialists made a malpractice payment, as did 1 in 5 gynecologists and 1 in 6 neurosurgeons. And those are just the physicians making a payment. The number being sued, and defending their skills and livelihoods, is considerably higher.

Every malpractice suit is the result of a real or perceived adverse patient outcome. But what is the *cause* of those adverse outcomes? As this and a previous Board report on medical malpractice payments demonstrate, there is no direct cause and effect relationship between any given malpractice payment and the practice of good medicine, but clearly clinical competence accounts for some proportion of malpractice cases. And what other factors are at work? More importantly, what policies and procedures can be put in place to address both clinical skills and the other factors driving malpractice suits and awards?

The insurance industry, the physician community and others have made a variety of recommendations for reforming the medical malpractice system. Some have been proposed in Massachusetts and elsewhere, some have in fact been adopted in other states:

- Cap amounts awarded for non-economic damages
- Establish expert medical courts
- Limit the amount paid to attorneys
- Pay large awards over time rather than in a lump sum
- Reduce awards by amounts collected from collateral sources
- Eliminate joint and several liability

All of these proposals are worth serious and thoughtful consideration by lawmakers, and debate on them is welcome. That debate, however, will occur mostly in the halls of government. Other proposals, those to reduce the incidence of actual medical malpractice in the first place, can be debated – and adopted – in the halls of hospitals and other health care facilities, as well as by the Board. The Board's primary responsibility is patient safety, and so this report focuses on proposals whose effects will be felt *before* a malpractice event ever happens.

Central Physician Data Repository

Information is the foundation of good decision-making, but the system for collecting information on physicians in Massachusetts is fragmented, burdensome and far from user-friendly. Physicians currently report required personal and professional information, including malpractice cases and hospital discipline, biennially to three different entities: the Board at license renewal, any hospital to acquire or maintain privileges and any health plan in which they participate. The Board proposes to become a central “trusted agent” to capture and electronically store data on physicians.

Today no one party has timely or efficient access to all relevant information on any given physician. A hospital at which a physician is privileged, for example, does not necessarily have any knowledge of that physician’s record at another hospital where he or she may be, or have been, privileged. The Board may not be informed of an incident of hospital discipline until months afterward.

A single electronic data collection system will eliminate a costly and duplicative administrative burden from physicians and health care providers, reduce data entry error, allow for better and more timely dissemination of pertinent physician information, and support more informed decision-making by the Board, hospitals and health plans. It is hoped that patient safety will be the real beneficiary.

Clinical Skills Assessment

Centralized, shared information on physicians will present an opportunity to examine more closely physician performance over time and may suggest instances where an individual physician’s clinical skills should be evaluated. Clinical skills are, obviously, the very heart of good medical practice, and appropriate review of those skills can hardly be the subject of argument.

If agreement on the need to determine physicians’ clinical competence is well established, however, agreement on the methods to do so is not. In 2004 clinical skills assessment became a component of the U.S. Medical Licensing Examination (USMLE), the multi-part test all medical school students must pass before they may be licensed. The day-long test requires students to examine 12 standardized patients, people trained to act like real patients, and assesses their abilities to take a medical history, perform physical examinations, document and record findings, and communicate with the patients.

The test was not greeted with universal approval. In fact the American Medical Association (AMA) opposed it as unnecessary and unproven. Even more controversial is requiring a clinical skills assessment for physicians already in practice, either as a requirement for re-licensure or after questions of competence are raised.

The Board, however, supports creating a center for clinical skills assessment to which physicians identified as having potentially substandard skills may be referred and their skills evaluated in much the same way as the USMLE. Hospitals and other care facilities, insurers, or the Board could make referrals. This is a common sense approach: physicians who are of concern can be evaluated, and any deficiencies in skills will be identified *before* any potential patient harm – or a malpractice payment -- might occur.

As shown in this report, a tiny percentage of physicians account for a disproportionate share of malpractice payments. A clinical skills assessment center that could have identified these physicians before repeated instances of adverse patient outcomes might well have prevented both patient harm and the related malpractice costs.

Clinical Skills Enhancement

When a physician's clinical skills are found to be substandard, what is the next step? The Board believes that a skills assessment center can also function as a skills enhancement center and offer physicians the opportunity to address areas in need of improvement in a standardized and monitored clinical setting.

Clearly, the best way to drive down malpractice costs is to eliminate patient injury. The Board believes that a comprehensive approach to clinical skill assessment and skill enhancement must be implemented. Such a program would have three components:

- The establishment and tracking of objective quality data to identify physician “outliers” in terms of these objective measures. The Central Physician Data Repository could serve this purpose.
- A comprehensive clinical skills assessment program to evaluate both the “outliers” identified through aggressive quality data analysis and any other physicians who may be referred to the program by health plans, hospitals, or other means.
- A coordinated program of education and training to bring physicians whose clinical skills evaluations identify competency concerns back into safe and competent practice. This program could also be a resource for all physicians who wish to receive training on specific procedures, become familiar with new medical devices and procedures, or receive training in current “best practices” to enhance their performance.

Along with the benefit to the individual physician, such programs would position Massachusetts as a leader in the development of “best practices” standard of care. Clearly, this environment

would enhance Massachusetts' standing within the health care-technology field – an important component of the Massachusetts economy.

It is easy to envision the benefits of a comprehensive physician education and training center in terms of the implementation of new technology in hospitals and in individual physician practices. The rapid technological advancements in medicine provide tremendous opportunity to save lives and reduce suffering, but the development of these innovations is not sufficient to improve health outcomes. As biotech firms, many based in Massachusetts, bring gene therapies, micro-surgical devices, and other innovations to market, it is of vital importance that individual physicians have a safe and effective means to develop competency in using the innovations to treat patients and save lives. Massachusetts is uniquely positioned to be successful in the implementation of clinical skills assessment and improvement programs due to the quality and quantity of medical schools, teaching hospitals, and health-related industries in Massachusetts.

Doctor-Patient Communication

**Think like a wise
man but
communicate in
the language of the
people.**

~William Butler Yeats

With respect to skills improvement, the Board believes that doctor-patient communication is an area worthy of special attention. Virtually everyone in the medical community agrees that good doctor-patient communication is essential to good medical care. Unfortunately, the Board's experience with patient complaints against physicians suggests that while everyone agrees good communication is important, not every physician actually communicates well. This can lead to misunderstandings, misdiagnoses, errors and, inevitably, malpractice suits.

The Board is encouraging the development of continuing medical education (CME) programs to address good doctor-patient communication. Even when the Board has determined a particular physician's practice of medicine is negatively affected by his poor communication skills, there are few professional training options to address the problem. The creation of a doctor-patient communication CME program or programs would finally offer the Board, hospitals, group practices and individual physicians a way to improve communication skills, improve the practice of medicine and perhaps reduce the incidence of complaints and malpractice suits.

Communication training for all physicians remains a goal of the Board, and permanent CME programs will be the means to achieve it.

Other Recommendations

At the Board's request, several stakeholders, including insurers and the Massachusetts Medical Society, submitted proposals for improving the medical malpractice system in Massachusetts. Many of their proposals are among the reforms to the handling of actual malpractice suits found above.

Proposals by CRICO's Risk Management Foundation were notable for their focus on preventing malpractice suits up front. As previously mentioned, the Board is keenly interested in preventing malpractice, not just improving outcomes after a suit has been filed. The Board will carefully review the following recommendations submitted by CRICO:

- Implement team training for clinicians who function in high acuity settings such as labor and delivery, ICUs, ERs, and ORs.
- Discard the traditional "informed consent" process, and establish an "informed *decision making*" process that engages the patient more fully in vital decisions.
- Create impartial, non-adversarial ombudsman programs that have the potential to reduce the *assertion* of malpractice claims.
- Develop a statewide electronic medical record system including features such as flagging critical test results, alerting providers to unresolved patient problems, and automated decision support.

The Board's 1990-1999 Special Report on Medical Malpractice Payments observed that medical malpractice has two components: the potential for the existence of actual substandard patient care, and the tremendous cost of malpractice litigation. To that list today might be added the growth in medical malpractice insurance premiums, and the effects those higher premiums may or may not be having on medical care in the Commonwealth.

Clearly the overall upward trend in the number of malpractice suits, percentage of physicians sued and size of malpractice payments over the last 10 years is not sustainable in the long term – not if the health care system in Massachusetts is to remain viable. The improvements in overall annual payments and claims made since 2001 noted in this report are welcome, but whether they represent a systemic shift, or just a brief statistical anomaly, remains to be seen. One hopes for the former, but history suggests the latter.

But is medical malpractice really three problems, each with a set of potential solutions – or one problem with three faces? The Board, mindful of its duty to uphold the standard of medical care in the Commonwealth, views medical malpractice through the lens of patient safety. The recommendations in this report are fully focused through that lens, and the view through it sees only one problem: eliminating the incidence of actual substandard patient care and the skills deficiencies that can lead to it. Achieve that, and the rest – fewer malpractice suits, smaller awards, lower premiums – will follow.