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#### ABSTRACT

A 1983-1984 survey by the American Bar Association gathers information on malpractice claims filed against insured lawyers. The comprehensive data were gathered in an attempt to deal constructively with the legal malpractice problem. The information obtained includes several items of environmental data such as law firm size, number of years the lawyer involved was admitted to practice and whether the claim was made after the lawyer made an effort to collect an unpaid fee. For closed claims. information is obtained on time to close and the manner and cost of disposition. Most importantly, each claim is characterized by area of law, the lawyer's activity, and the alleged error. The ultimate goal of this effort is to reduce malpractice claims, under the assumption that as laywers better understand how and where the claims arise, they will be more likely to anticipate and avoid the conduct which generates the claim.

#### I. INTRODUCTION

This study examines legal malpractice claims filed during 1983-84 and reported to the American Bar Association's National Legal Malpractice Data Center. The purpose of this paper is twofold: first, to illustrate the careful connection between the type of data collected and the appropriate use to which the subsequent analysis may be put; and second, to propose a new methodology for analysis and presentation of categorical data in situations where standard techniques may be inappropriate.

The National Legal Malpractice Data Center of the American Bar Association began its data collection effort on January 1, 1981. Information is requested from each malpractice claim opened on the alleged error on which the claim is based and the area of law and activity in which the lawyer was engaged at the time of the alleged error. In addition, information was collected on several items of environmental data: size of the law firm, number of years the lawyer involved was admitted to practice, whether the claim involved a fee dispute, and the state in which the lawyer practices. For closed claims, data is collected on time to close and manner and cost of disposition.

Such a data collection effort suggests two research objectives: first, to assign a risk of alleged error to an attorney based on characteristics of the lawyer's practice, and second, to design educational materials toward a goal of malpractice claims reduction. The objective of risk assignment has obvious implication to rate assessment. However, the form of the current data limits this extension. This particular problem is discussed in Section 1.

The specific results of the analysis of these data are subject to approval and dissemination by the ABA. This paper discusses the relationship between the data and its use and proposes two methods of analyzing and presenting catagorical data.

# II. NUMERATOR - ONLY DATA

These data were reported from open and closed claims, by persons most familiar with the file following a comprehensive set of uniform and exhaustive instructions. Thus response ambiguity was minimized. Data from 1981-1982 were viewed as a pretest and used to develop this set of instructions. Data in 1983-1984 included 16118 claims reported using the clarified directions.

Despite the careful manner in which the data were collected, information is available only for lawyers against whom a claim has been filed. Without appropriate demographic information on the entire lawyer population (that is, lawyers with and without claims), a claims risk cannot be estimated. Frederick Mosteller terms this situation "numerator-only data."

Specifically, let <u>L</u> denote a vector of attorney characteristics:

$$\underline{L} = (L_1, L_2, \ldots, L_{\kappa})$$

For example, we might take  $L_1 = \text{size of firm}$ ,  $L_2 = \text{years admitted to practice}$ ,  $L_3 = \text{area of law}$ , etc. Now, let P(C) be the proportion of all lawyer activity resulting in malpractice claims and P(L) the proportion of all lawyer activity with (joint) attorney characteristics L. then P(C|L), the desired claim risk of a lawyer with characteristics L, and P(L|C), the proportion of all claims alleged to a lawyer with characteristics L, have the following relationship:

$$P(C|L) \cdot P(L) = P(L|C) \cdot P(C)$$

Thus

$$Risk = P(C|\underline{L}) = P(\underline{L}|C) \cdot \frac{P(C)}{P(L)}$$

= data • demographics

Thus, the risk of claim cannot be estimated in the absence of information on the entire population of lawyers. This problem is illustrated in Figure 1. Without the appropriate

## FIGURE 1. NUMERATOR - ONLY DATA



population information, it is impossible to assess the location of  $\underline{L}$  relative to the sets C and C'. Thus the research objective of risk assessment depends upon access to reliable demographic information.

## III. Claims Reduction

We consider now the second objective of research, that is, preparation of educational materials to reduce malpractice-type errors. Let us suppose, hypothetically, 1 that 50% of all claims involve lawyers involved in litigation activities. Suppose, further, that it were possible to identify groups of attorneys engaged in litigation activities (i.e. L could be specified). Then a successful educational effort targeted specifically at these attorneys might reduce the number of malpractice claims by 50%. An assumption is that any claim opened results in costs: administrative costs to the insurer and loss of billable time to the attorney. Hence. the second goal of claims reduction can be addressed with the observed data.

This particular goal of the study is not adaptable to the usual methods of catagorical data analysis. The purpose here is not to classify each claim into a particular category. This problem is approached by methods such as logistic regression, and is considered in several excellent papers at this conference. Rather, the problem here is to identify specific groups of the lawyer population (defined by L) for whom a program in malpractice-type error prevention would produce the effect of reduction in the number of malpractice claims opened.

Toward such a goal, two methods of data presentation are extremely effective. Both address the problem of assessing simultaneously the effect of multiple lawyers characteristics  $\underline{L}$  on the frequency of alleged error on which the claim is based.

The first of these methods is illustrated in Table 1. Here, a hypothetical relationship among alleged error,<sup>2</sup> area of law, and years admitted to practice is presented. Each row of Table 1 contains the percentage of claims attributed to a given area of law allegedly due to a given error type. The rows are arranged in order of increasing values of P (yrs adm > 10|law area). Thus, in this example Family Law has the lowest percentage of lawyers admitted over ten years and Estates, Trusts, and Probates has the largest.

Several trends may be observed from this hypothetical presentation. Administrative errors show an increasing percentage with years admitted. Also evident are the outliers in law areas. For example, personal-injury plaintiff contains either the maximum or the minimum value for each alleged error type.

The second presentation method proposed involves a plot of conditional probabilities versus marginal probabilities. In Figure 2, a hypothetical relationship among alleged error, law area, and activity is presented. Each point plotted represents an alleged error type, here denoted A or B. The vertical ordinate of  $\textbf{A}^L$  is P(A Litigation and area), that is, the proportion of all claims from a given law area and involving litigation activities (L) attributed to alleged error A; similary for  $B^L$ . The horizontal coordinate of  $A^{L}$  is P(A|area), the proportion of all claims from a given law area (litigation L or not L') involving error A.  $A^{L'}$  and  $B^{L'}$ are defined analogously, using non-litigation claims. Hence a point  $B^{L}$  on the 45° line indicates an alleged error B for which

P(B|area and litigation) = P(B|area);

that is the occurrence of B among claims from this area is independent of litigation activity.

FIGURE 2. HYPOTHETICAL RELATIONSHIP AMONG ALLEGED ERROR LAW AREA, AND ACTIVITY



P (Error | Area)

The hypothetical graph indicates that for this area L, alleged errors A are more common among litgation activities (L) than among nonlitigation activities (L<sup>1</sup>). A tolerance band (---) can be computed based on the sample size to demonstrate which points are significantly far from the 45° line, thereby showing a significant degree of association between area alleged error and litigation activity.

The relevance of such results influences the design of educational programs aimed at reducing malpractice claims. For example, to reduce the incidence of alleged errors of type A (see Figure 2), emphasis should be placed on practices

						YR ADM	
LAW AREA	ADM	SUBS	CL REL	INT WR	OTHER	>10	
FAMILY	14	42	24	13	7	61	
COLL, BANKR	24	46	11	15	4	62	
REAL ESTATE	25	57	12	9	7	65	
PER INJ-PL	49	33	10	6	2	67	
EST,TR,PROB	24	50	11	9	6	73	

Table 1. ERROR GROUPING BY YEAR ADMITTED RANK

emphasizing litigation activity (L), since the incidence of A-type alleged errors in larger here than for all-activity claims. However, for Btype errors, litigation and non-litigation activity can be addressed simultaneously; that is, the effect of activity on type-B alleged error rate can be neglected for this law area.

## IV. CONCLUSIONS

The results of this study emphasize the importance of two important aspects of data analysis and propose innovative methods of dealing with these. The use of statistical results is directly related to the nature of the data collected. In the study described, malpractice claim risk assessment is limited by the lack of population information. However, the design of educational material targeted at reduction of malpractice-type errors is facilitated by a careful multivariate analysis of the available data. This situation is inappropriate for classical methods of categorical data analysis due to a need for visual, intuitive interpretation of methodology. An innovative graphical presentation is suggested for such situations.

### ENDNOTES

- <sup>1</sup> The values given in this report are for illustration only and do not reflect actual values resulting from the ABA data.
- <sup>2</sup> Alleged errors were grouped into five categories based on uniform definitions: administrative, substantive, client relations, intentional wrongs, and other.



## FIGURE 1. NUMERATOR - ONLY DATA

FIGURE 2 HYPOTHETICAL RELATIONSHIP AMONG ALLEGED ERROR, LAW AREA, AND ACTIVITY



P (Error | Area)