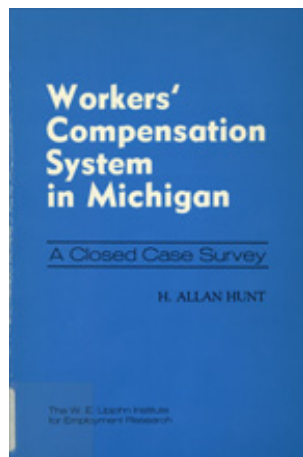




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Michigan Closed Case Survey: Origins and Technical Description

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MICHIGAN CLOSED CASE SURVEY

ORIGINS and TECHNICAL DESCRIPTION

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Introduction

This study was conceived in 1978 as an attempt to bridge the very serious information gap inhibiting discussion of workers' compensation reform in Michigan. While the issues were acknowledged to be intensely controversial, discussion of specific reform proposals was made even more difficult by the absence of an acceptable data base for analysis of workers' compensation issues in Michigan.

Unfortunately, the Michigan Department of Labor's Bureau of Workers' Disability Compensation had never developed this capability. This was due to a combination of budget stringency and the laissez-faire philosophy of the Michigan statute. Michigan relies primarily on the private parties involved in a workers' compensation case to look after their own interests. The Bureau does require reports from the employer or insurer at the time of the injury, when compensation begins, when compensation is terminated, and other significant dates. But aside from notifying the worker of the earnings reported by his or her employer (for calculating the weekly benefit level) and checking the accuracy of the benefit calculation, there is little agency involvement in the typical uncontested workers' compensation case in Michigan.

One result is that there are very few statistics available on the Michigan case population.¹ The Bureau of Workers' Disability Compensation publishes an annual report which summarizes the year's case activity (in one table); they also conduct a Pay Lag Study which measures the promptness of payment of benefits by individual carriers and self-insurers.² In addition, the Statistical Information Division of the Bureau of Safety and Regulation uses the Employer's Basic Report of Injury to analyze compensable accidents in Michigan.³ But none of these efforts provides the information on durations of disability, weekly compensation amounts, or the other case details required for a well informed discussion of the impact of various reform proposals. It was an attempt to fill this gap that motivated the Michigan Closed Case Survey (MCCS).

For some purposes the MCCS has been successful in filling the gap, for others less so. It is fair to say that the workers' compensation system in Michigan proved much more complex than anticipated. In some cases, the system itself affects behavior so profoundly as to make it impossible to determine what is stimulus and what is response. This will be shown to be particularly vexing for the contested or litigated cases in Michigan. Since they are observed through the eyes of the official system itself, it is impossible to do more than repeat what is reported, with the appropriate caveats about the sources of the information.

Fortunately for the State of Michigan, the actual reform efforts quickly overtook the attempt to complete and publish this analysis. During the period of reform activity, from mid-1979 through late 1981, the data base described herein was repeatedly tapped for answers to questions which ranged from the prosaic to the arcane. Hopefully, the MCCS was a useful source of information in the process of overhauling Michigan's workers' compensation system; that, after all, was the major objective of the data collection effort.

To the extent this objective was achieved, the present volume describes a workers' compensation system that no longer exists. The amendments enacted in 1980 and 1981 have substantially altered Michigan's system.⁴ Nevertheless, the publication of this volume was judged to be worthwhile. It provides a quantitative picture of the system in 1978, a point prior to any statutory changes. This may prove useful in assessing the impact of amendments to the statute. It also contributes in a minor way to filling the information gap about specific workers' compensation systems.

It is important not to promise too much, however. This volume does not constitute an introduction or guide to the Michigan workers' compensation system of 1978. It describes a data base derived from that system, but provides only a very imperfect reflection of the richness of detail present in the original.

This study also registers a substantial comment about the methodological difficulties of studying workers' compensation cases in general. It is submitted with the hope that someone else will find the inspiration to expand the frontiers of knowledge a little farther. If this can be accomplished, the Michigan Closed Case Survey and this description of it will be judged even more successful.

Sampling Design

The technical description of a sample is not very exciting, but it is very important. An understanding of the way in which the data were accumulated is crucial to comprehending the significance of particular results. This is especially true in the case of research on workers' compensation.

There is no standard accepted method of representing a workers' compensation case population. Because of the incredible variety of statutory provisions and administrative arrangements in state workers' compensation programs,

there probably is no possibility of creating such a standard.⁵ But owing to the significance of the issues and the lack of discussion of the alternatives elsewhere in the workers' compensation literature, the presentation of the empirical issues in this chapter is even more involved than usual.

This discussion is offered in the hope that it will contribute to an understanding of the conceptual difficulty of representing a dynamic workers' compensation population and the way in which the type of representation elected shapes the results. The reader who has little patience with such technical matters can omit this material. Where the sampling design has critical implications for the interpretation of empirical results later in the monograph, the problems raised here will be reiterated in terms that are directly relevant to the issue at hand.

A workers' compensation case population can be thought of in either static or dynamic terms, that is, either as a stock or a flow. On any given day there are a specific number of cases receiving weekly benefit payments, awaiting a hearing before an administrative law judge, pending appeal from a decision, or in any other status. It is theoretically possible to inventory the case population in any such state on any particular day and derive a measurement of this sub-population.

The Michigan Bureau of Workers' Disability Compensation conducts one such measurement of the stock of cases receiving weekly benefits as of December 31 each year. For each case in weekly benefit payment status, the employer is required to report the date of the injury, the insurer carrying liability for the injury, the weekly rate of compensation, the total amount of weekly compensation paid in the past calendar year to this individual, and the period for which such payments were made. This information is very useful for some purposes, but ultimately it is the underlying flow of workers' compensation cases through the system that is needed to assess what is happening in the program.

While it is interesting to know how many cases are in current payment status right now, it is more interesting to ask, How long have they been there? or, How long did it take to get there? or, What route did they follow to get there? or even, How long will they be there? Therefore, the essence of a workers' compensation case population is dynamic rather than static, a flow rather than a stock concept. The issue for the observer is how best to represent this dynamic population in a sample of cases for detailed analysis.

Since the population is dynamic, the sampling strategy must include a "slice-in-time" element; it is necessary to artificially interrupt the continuous flow of cases through the system to derive a sample. Thus the time signature of the cases from which a sample will be drawn must be carefully specified. Conceptually, there are three slice-in-time sampling designs that could be employed. One could accumulate a sample of cases (1) as they enter the system, (2) as they leave the system, or (3) somewhere in between. The bulk of the available statistics in Michigan have been based on the first approach.

The Employer's Basic Report of Injury (Form 100) must be filed for any occupational injury or disease involving seven or more lost workdays, or for a fatality, or any scheduled injury. It includes information about the injured employee, the nature and cause of the injury, and in addition identifies the employer and the insurance carrier. This form initiates a case in the Bureau of Workers' Disability Compensation files. It is subsequently coded for machine processing by the Injury Analysis Division of the Michigan Bureau of Safety and Regulation, which uses these data to study the pattern of industrial injury in Michigan in order to target safety education and inspection resources in an optimal manner. They also are reported to the U.S. Bureau of Labor Statistics' Supplementary Data System (SDS), a data bank providing comparable information on a number of states.⁶

This new SDS resource is expected to be valuable in guiding federal decisions about occupational safety and health policy as well.

The fundamental flaw in these data for describing the functioning of the Michigan workers' compensation system lies in the fact that only about three-fourths of the claims begin with a Form 100. In a great many cases there is no obvious accident implying worker disability and hence no reason for an employer to file Form 100. Many occupational disease disabilities, for instance, cannot be traced to a particular incident, identifiable as to time and place, but rather arise gradually over a period of time. The same would be true in situations where subsequent disability develops as a consequence of an incident that seemed relatively harmless at the time, as in infectious disease or even cumulative trauma cases.

Since these cases present the greatest evidentiary problems for workers' compensation, and frequently involve the most serious disabilities, an examination of compensation in only those cases that commence with Form 100 would be seriously flawed. This is confirmed by the fact that among the litigated workers' compensation cases in Michigan (those that involve an application for hearing), the MCCS reveals that two-thirds have *never* had a Form 100 filed.

There is an additional problem with a common case origin date as a sampling strategy, particularly in litigated cases. If a claim is contested, a hearing is scheduled. But it took an *average* of 468 days for disposition of a case by the Bureau's Hearings Division in 1978.⁷ Thus, to get a relatively complete picture of the compensation experience for cases originating in one slice-in-time, it would be necessary to wait two or three years just to be sure that decisions are reasonably certain in contested cases. If one wanted to also observe a substantial period after resolution of the dispute to deter-

mine how the case was proceeding, even longer delays would be necessary.⁸

The problem is that workers' disabilities have continuous histories just like the workers, and to rush to judgment on the compensation system before the full consequences of an injury became apparent would be to bias the results in favor of the adequacy of the system. The really tough test comes in the difficult, involved cases that may take many years to draw to a conclusion. While these cases may not be very numerous, they are important to the social judgment of the efficacy of the workers' compensation system.

This difficulty is compounded by the necessity of working with public sector data. Insurance carriers have to make provision for future claims and for future developments in current claims well in advance; but they are not required to report reserves on individual claims, so these data are not available in the public sector.

To illustrate the problem, consider the experience of the insurance industry with the Michigan Special Call sponsored by the Michigan Workers' Compensation Rating and Inspection Association. They gathered data on a sample of claims filed in the months of March and October of 1976. Carriers were asked to evaluate these claims as of April 1, 1979, either two-and-one-half or three years after initiation. While only 4.3 percent of these claims were still open at the observation point, they accounted for 35 percent of the incurred indemnity costs.⁹ These are clearly the most expensive cases; they may also be the most difficult cases to resolve. The performance of the workers' compensation system in these cases could not be reviewed with any sense of finality by anyone in 1979. Lacking information about reserves, all one could report is that these cases are still open.

Another sampling design which might be adopted would be a cross-section sample of all cases in the workers' com-

pensation system at one point in time. This is the stock approach mentioned briefly earlier, a static representation of the case population flow at one "moment." Of course, all of these cases would be "unresolved" in the same sense as the difficult cases just discussed. One could not be sure what was *going* to happen in these cases; only what *was* happening at the time of the survey.

This second major conceptual approach is represented by the present Bureau of Workers' Disability Compensation Form 103, Annual Report on Payment of Compensation. These reports are to be filed by January 31 for each case being paid weekly benefits at the end of December of the preceding year. There are a given number of cases being compensated under the law at any point in time, and one might be interested in examining the compensation experience of these cases. This would be a relevant way to estimate the total weekly benefits being paid, for instance.¹⁰

However, this is not a useful approach to describing the performance of the system as a whole unless the stock of cases at a point in time can be related precisely to the underlying flow of cases through the system. This flow could be estimated for Michigan if Form 103 contained a complete retrospective compensation history, but since it is directed only at payments during the previous calendar year, it cannot yield accurate case population parameters.

There is also potential trouble with litigated cases under this design. It is not obvious when, or if, an insurer would file Form 103 in such a case. If a case is being contested, the insurer is generally not under any obligation to pay until and unless some resolution is reached. So it would not be expected that Form 103 would be filed while the case is being contested. On the other hand, once the dispute is resolved, the payments, if any, may also obviate the need for Form 103. Many of these cases are compromised and payment is

made in a lump-sum which redeems the employer's liability forever, thereby closing the case. Form 103 would not be required in these cases either. Thus with this sampling design it would seem possible to reach only those contested cases where periodic benefits are eventually paid. Results to be reported later show that in Michigan this is only about 10 percent of all contested cases.

In addition, this design would impose severe problems in obtaining the sampling frame in the State of Michigan. There is no available listing of active cases, there are only active case files. It has been estimated that there are well over 100,000 workers' compensation cases active at any time, and it is not possible to freeze these files while a sample is drawn.¹¹ Thus there is little hope of obtaining a cross-section sample of all cases in the system in the straight cross-section sampling design.

We come finally to the closed case sampling design. In this instance, the sample consists of all cases *closed* in a given period of time. The chief strength of this approach lies in the fact that every case opened must be closed. Whether compensation is paid or not, whether the case is contested or not, regardless of the outcome, the case will eventually be closed. Sometimes closed cases will be reopened in the future as circumstances change, but a sample of cases closed during any particular period should also contain the appropriate number of these cases from earlier periods, so this factor could be measured as well.

The second advantage to a closed case design is that it minimizes uncertainty. The maximum amount of information is available about the case. Not only the probability of contention, but the fact of contention and its outcome will be known at closure. Not simply the compensation rate, but aggregate compensation paid over the life of the case is known at closure. Thus more and better information can be secured than with any other design.

The drawback is that this information may not be timely. To illustrate this problem, consider an accident occurring 20 years ago which led to permanent disability and which triggered the commencement of income maintenance and medical and rehabilitation benefits at that time. If there has been no substantive change in the circumstances of the disabled worker, benefits are still being paid (absent an agreement to redeem the employer's liability). Turning up such a case in a sample has the desirable aspect that it aids in establishing estimates of the actual population of such cases coming through the system; but it is doubtful that the compensation system of today bears close resemblance to the one of 20 years ago. Hence the compensation experience of this claimant cannot tell much about the performance of the current system.

The problem is that there are three reasons why a case may be old (i.e., many years since injury) at time of closure. The case may have been processed rapidly, compensation established without serious contention, and benefits paid for many years before recovery, or perhaps death, of the claimant. On the other hand, the case may have been littered with delays and contention for years, then finally redeemed with a lump-sum payment and it is all over in a matter of weeks. The third possibility is one where the disability is not manifest for some years and a claim is not entered until considerable time has passed, as in a latent occupational disease case. The closed case survey approach tolerates the first of these types, even though little useful information is gleaned from such cases, in order that the possibility of including the last two shall be maintained.

A closed case sample is representative of the underlying population, but, in a sense, it represents the workers' compensation case populations at the times the cases originated rather than at the time of closure. The 12-year-old disability cases that closed during the sample period represent not to-

day's cases, but rather the cases of 12 years ago with a 12-year disability duration. Since the number of cases tends to grow through time, the less serious short duration cases are "representative" of a more recent (and generally larger) case population cohort than are the long duration cases. Therefore, the number of long duration cases in the sample understates the number of similar length disability cases in the current population, other things equal.

This problem, referred to by one insurance executive as the "small potatoes" effect, cannot be overcome with a closed case data base. If the case population is growing through time, a closed case sample will underestimate the incidence of long term disability claims, and overemphasize the short term, relatively routine cases. When one combines this underrepresentation of long term cases with the fact that these cases will not be representative of current policy by virtue of their distant origins, the closed case design is revealed to have significant failings as well.

Nevertheless, as a practical matter, a closed case design was judged to be preferable for the descriptive tasks that are the objective of this effort. It is the most workable sampling design, given the type of access to the population provided by the Michigan workers' compensation administrative system. No other claims will be made for the superiority of a closed case sampling design. Later in this chapter, however, the durations of disability from the MCCS will be compared to those from the Michigan Special Call to assess empirically the actual magnitude of the bias introduced.

MCCS Sampling Procedure

The Bureau of Workers' Disability Compensation case closure, or retirement, process was the focal point of the sampling design employed for this study. Since all workers' compensation claims, regardless of compensation status or litigation status, come through the case closure procedure in

much the same way, it was the logical place to look for a handle on this dynamic case population.¹²

Case files at the Bureau of Workers' Disability Compensation are divided into uncontested (called "flats") and contested (called "folders") according to their administrative treatment. The flats generally consist simply of the Bureau forms reporting the injury itself (Form 100, Employer's Basic Report of Injury), the commencement of weekly compensation payments (Form 101, Notice of Commencement of Compensation Payments), and the termination of those payments (Form 102, Notice of Stopping of Compensation Payments). As mentioned earlier, the contested cases frequently do not have the Employer's Basic Report of Injury, but they do have Bureau Form 104, Petition for Hearing, which initiates a folder containing all the other papers attendant to a litigated claim. This paper trail can be quite voluminous in a case with a full hearing and transcript, or it can be minimal in a case that was redeemed without weekly compensation payments.

Active cases are maintained in a common file in alphabetical order according to the claimant's name. Upon retirement, or closure, the flats and folders are separated and accumulated in temporary storage space within the Bureau offices. As the temporary storage space is filled, the flats or folders are boxed and shipped to the state records center at another physical location. Litigated cases are shipped approximately once a month, unlitigated about three times a year.

The funneling of all cases through this closure procedure was judged to provide the most efficient way of accumulating the slice-in-time samples from the continuous flow of cases through the workers' compensation system. The separation of litigated and unlitigated cases at that point also facilitated different sampling ratios from the two

populations. This was thought to be desirable because it was anticipated that there would be more variety within the litigated case population, and a higher sampling ratio for litigated cases would provide a more rational allocation of case abstracting resources.¹³

The litigated sampling frame was one shipment lot, litigated cases that were retired between October 9 and November 9, 1978. A sampling ratio of 0.50 was used within that lot to achieve a completed litigated sample of 1,224 cases for analysis. Since the closure period was exactly one month, the sampling ratio for the slice-in-time litigated sample relative to the annual flow of litigated cases would be 1 in 24.

The unlitigated sampling frame consisted of 3,085 flats retired from November 1 through November 7, 1978. This was a fairly large batch, as the average had been 1,667 closures per week up to November 1. It had been planned to sample every other case here too, but due to the unexpectedly large frame, a sampling ratio of 1 in 3 was employed. After elimination of the cases with no lost time (i.e., not compensable), this procedure yielded a completed sample of 954 unlitigated cases for analysis. This slice-in-time sample is estimated to represent a 1 in 86 sample of all compensated unlitigated workers' compensation cases closed in 1978 in the State of Michigan.¹⁴

A copy of the instruments used for data collection in the two samples is included as an appendix. It also contains the set of instructions given to the case abstractors, who were retired Bureau of Workers' Disability Compensation employees.¹⁵ The instruments were oriented to Bureau forms and sought to collect most of the significant case elements that could be quantified.

Are the Samples Representative

Using the slice-in-time sampling ratios, it is possible to inflate the completed samples of the Michigan Closed Case Survey to represent the population. This estimate can then be compared to official figures from the Bureau on the 1978 case population to help assess the representativeness of the samples. Table 1-1 presents these results for the estimated population (MCCS) and the actual population (Bureau) by type of case.

There are a number of discrepancies between the two distributions. First, since the official total of "Voluntary Payment" cases is on the basis of cases *accepted* for pay-

Table 1-1
1978 Case Population Estimated
from the Michigan Closed Case Survey
Compared to Actual

Bureau of Workers' Disability Compensation*		Category	Michigan Closed Case Survey**	
Number	Percent		Number	Percent
74,885	69.6	Voluntary payments	77,572	72.5
20,324	18.9	Redemptions (contested and uncontested)	20,520	19.2
2,612	2.4	Judges' opinions (including stipulations)	1,800	1.7
1,366	1.3	Contested and accepted	1,416	1.3
8,356	7.8	Withdrawn or dismissed	5,640	5.3
<u>107,543</u>	<u>100.0</u>	Total	<u>106,948</u>	<u>100.0</u>

*As reported in *LABORregister*, July 1979, pp. 203-204. Voluntary payments are estimated on an accepted case basis. Other categories are actual counts of case determinations in 1978.

**Estimated 1978 closures based on samples of 954 unlitigated cases closed November 1 through November 7, 1978 and 1,224 litigated cases closed October 9 through November 9, 1978. Sampling ratios of 1 in 86 for the unlitigated sample and 1 in 24 for the litigated sample were used to inflate the sample to represent the entire 1978 closed case population. It should be noted that "closure" in the samples refers to the date the Bureau filed the cases for permanent storage, not the date the insurer closed the case.

ment, it would be expected to differ somewhat from the number of cases *closed* in a like period just because of the gradual expansion in the number of cases. The growth in the case population should bias the MCCS estimate upward as well, since the sample cases closed come from later in the year. Assuming the number of cases closed grows month by month, the true population for the entire year should be overestimated by a late-year sample. Table 1-1 shows that the number of voluntary payment cases is overestimated slightly by the MCCS.

A more serious sample problem revealed by table 1-1 is the deficit in "Judges' Opinions" and in the "Withdrawn or Dismissed" categories. While it is impossible to say for certain, this could be due to an unanticipated seasonality in litigated case closures. As reported earlier, the sample litigated cases were retired by the Bureau between October 9 and November 9, 1978. But the hearings for over three-fourths of these cases took place in July and August, prime vacation months. It may be that the number of hearings was lower than normal due to summer vacations.

The number of redemptions appears to be estimated closely by the samples, but the proportion is slightly higher due to the deficits in other categories. Given these various discrepancies, the very close estimation of the total workers' compensation case population for 1978 by the Michigan Closed Case Survey should not be taken too seriously. To some degree, it reflects the *ex post* method of calculating the sampling ratio for unlitigated cases, and to some degree it is a result of offsetting errors. There is no way to verify the representativeness of the samples within each case type due to the lack of any official data.

Tables 1-2 and 1-3 address the issue of representativeness of the insurers in the MCCS unlitigated sample. The Michigan Bureau of Workers' Disability Compensation con-

ducts an annual Pay Lag Study on the routine cases that come through the administrative process. The time between notification of injury and issuance of first check is measured for each case. These distributions are reported for each authorized insurer in Michigan. The total number of cases listed for each insurer should approximate the number of compensable cases accepted voluntarily during 1978. This figure can be compared to the proportion of cases in the

Table 1-2
Insurance Carrier Representation - MCCA Unlitigated Sample

Insurance carriers	1978 BWDC pay lag study ^a		MCCA unlitigated	
	Cases	Percent	Cases	Percent
Michigan State Accident Fund	4,013	9.1	48	8.4
Liberty Mutual	3,845	8.7	74	13.0
Michigan Mutual Liability	3,087	7.0	39	6.8
Travelers	2,236	5.1	21	3.7
Aetna Casualty & Surety	1,984	4.5	34	6.0
Employers Mutual Liability of Wisconsin	1,916	4.3	27	4.7
Insurance of North America	1,749	4.0	20	3.5
Home Indemnity	1,721	3.9	20	3.5
Citizens of America	1,520	3.4	10	1.8
C.N.A.	1,384	3.1	16	2.8
Hartford Accident & Indemnity	1,345	3.0	16	2.8
Associated Indemnity	1,049	2.4	17	3.0
American Insurance Co.	898	2.0	9	1.6
American Mutual Liability	745	1.7	8	1.4
Sentry	689	1.6	4	0.7
American Motorist	599	1.4	8	1.4
Auto Owners	588	1.3	10	1.8
Great American	582	1.3	8	1.4
Royal Indemnity & Royal Globe	521	1.2	2	0.4
National Union Fire of Hartford	517	1.2	11	1.9
Total 20 largest insurance carriers	30,988	70.1	402	70.4
All insurance companies	44,192	100.0	571	100.0
All cases (including self-insurers)	68,516		934	
Twenty largest insurance carriers as percent of all cases	45.2%		43.0%	

a. Reported in *LABOR Register*, July 1979, pp. 205-212.

Columns may not add to total due to rounding.

Table 1-3
Self-Insurer Representation - MCCS Unlitigated Sample

Self-Insurers	1978 BWDC pay lag study ^a		MCCS unlitigated	
	Cases	Percent	Cases	Percent
General Motors	4,732	19.5	74	20.4
Chrysler	2,170	8.9	30	8.3
Ford	1,289	5.3	19	5.2
City of Detroit	1,009	4.1	12	3.3
Michigan Hospital Association	407	1.7	7	1.9
Meijers Inc.	386	1.6	4	1.1
Bormans, Inc.	368	1.5	6	1.7
National Steel	338	1.4	16	4.4
Kresge S.S.	294	1.2	4	1.1
Kroger	281	1.2	3	0.8
Gulf & Western Ind. Inc.	242	1.0	1	0.3
Detroit Tooling Association	239	1.0	3	0.8
School Employers Group	238	1.0	2	0.6
Chatham Supermarket, Inc.	236	1.0	2	0.6
Michigan Municipal Fund	225	1.0	9	2.5
Detroit Board of Education	219	1.0	4	1.1
Keeler Brass	215	0.9	2	0.6
Sears Roebuck	208	0.9	2	0.6
Michigan Bell Telephone	206	0.8	1	0.3
Eaton Manufacturing Co.	203	0.8	1	0.3
Total 20 largest self-insurers	13,505	55.5	202	55.6
All self-insurers	24,324	100.0	363	100.0
All cases (including carriers)	68,516		934	
Twenty largest self-insurers as percent of all cases	19.7%		21.6%	

a. Reported in *LABORregister*, July 1979, pp. 205-212.

Columns may not add to total due to rounding.

MCCS unlitigated sample for each insurer as a rough test of the representativeness of the insurer distribution in the MCCS.

Table 1-2 presents this comparison for the 20 largest workers' compensation insurance carriers in Michigan, according to the 1978 Pay Lag Study. The MCCS figures are subject to sampling variability, especially since the slice-in-

time sampling period was so short. However, the proportion of large carriers in the MCCA sample looks quite good, and the distribution among the 20 largest carriers appears satisfactory. Table 1-3 repeats this comparison, but for the 20 largest self-insurers reported in the 1978 Pay Lag Study. The results generally confirm the belief that the MCCA unlitigated sample adequately represents the self-insurer distribution in the population.

In summary, it appears from the very limited comparisons that can be made with the official statistics on the population of workers' compensation cases in Michigan, that the Michigan Closed Case Survey does represent that population fairly well. The proportions of various types of outcomes show some discrepancy, particularly those requiring a judge's opinion, but overall, the samples seem sound. As always when dealing with sample data, specific statistics are subject to sampling variability. Tests of significance will be reported in each table to reflect the influence of this factor.

The Closed Case Bias

As a rough check on the degree of distortion introduced by a closed case design, the disability duration distribution from the Michigan Closed Case Survey can be compared to that derived from the unpublished 1979 Michigan Special Call as analyzed by the National Council on Compensation Insurance. This was a special data collection effort sponsored by the Workers' Compensation Rating and Inspection Association of Michigan to provide input for the workers' compensation reform discussions in Michigan. The survey covered the 23 largest workers' compensation insurance carriers in Michigan, doing approximately 80 percent of the workers' compensation insurance business in the state. These carriers were asked to report as of April 1, 1979 the status of claims filed in the months of March and October of 1976, either two-and-a-half or three years earlier. In the conceptual

terms employed here, this constitutes a slice-in-time sample based on the date of entry to the system.

The evaluation of the status of these cases must in some cases be based upon anticipation, since not all will have been finally resolved in two-and-a-half or three years. In fact, of the 5,355 claims sampled, 5,124 or 95.7 percent had been closed by the evaluation date of April 1, 1979. Data reported on the unresolved claims reflect the judgment of the claims processors in the various insurance companies as to the ultimate disposition of the case. While this is their profession, and the estimates are undoubtedly done as well as possible, they will not be precisely correct. Still, a comparison of results from the two different sampling strategies at roughly the same time is illuminating.

Table 1-4 compares the duration of disability distributions from the two data sources. It should be mentioned that the MCCS figures are for the insurance carrier segment of the workers' compensation case population; self-insurers are excluded. Cases are weighted so as to provide the correct proportion of litigated and unlitigated cases. In addition, the lump-sum settlements in the MCCS were given imputed durations of disability using the *average* weekly compensation rates for carrier cases observed in the samples rather than the claimant's specific weekly compensation rate. Given the restricted range of weekly compensation rates in Michigan, this should not introduce much bias, but it depends on the average date of injury. If the lump-sum cases are considerably older than the weekly benefit cases on the average, the imputed durations for these cases will be systematically biased downward. This is because their weekly compensation rate will be overestimated. The broad duration categories of table 1-4 should minimize such distortions, however.

The four columns of table 1-4 illustrate a number of points discussed earlier. The second column demonstrates the effect

of truncating the sample at the two-and-a-half to three-year experience point. Since these cases were assessed either two-and-a-half or three years after claims were initially filed, among closed cases only lump-sum settlements could show more than three years duration. The other cases would not yet be closed. The effect is that only about one case in five anticipated to show a duration of over four years (as indicated by column 1) is actually counted in column 2. Column 2 shows a systematic bias with the degree of the bias varying directly with duration.

Column 3 shows the duration distribution of weekly payments for only those cases in the MCCI that were paid weekly compensation. It is quite similar to column 2, although the deficiency in the longest duration category is only about half as severe when compared to column 1. This column does not include any imputed durations for lump-sum cases, but does include all weekly payments made to those cases before settlement. Thus it represents only part of the compensation experience.

Table 1-4
Estimated Durations of Disability
for Michigan Workers' Compensation Cases

Duration of disability	NCCI Michigan special call		MCCI - carrier segment only	
	All cases (1)	Closed cases (2)	Weekly cases (3)	All cases (4)
Up to 26 weeks	88.9%	92.0%	92.3%	83.3%
26 to 52 weeks	4.6	4.3	3.1	6.2
1 year to 2 years	2.6	2.1	2.1	3.7
2 years to 4 years	1.9	1.1	1.5	4.0
Over 4 years	2.0	0.4	1.0	2.8
Total	100.0%	100.0%	100.0%	100.0%
	n = 5,335	n = 5,124	n = 2,125 (weighted)	n = 2,419 (weighted)

Columns may not add to total due to rounding.

The fourth column presents the distribution of durations in the MCCS, including imputed durations for lump-sum cases. It does not reveal the expected deficiency of long term cases; in fact, it seems to show an excess of such cases when compared to the NCCI distribution in the first column. Whereas the Michigan Special Call suggested that about 11 percent of compensable cases exceeded, or were expected to exceed, 26 weeks in duration of disability, the MCCS indicates nearly 17 percent had experienced this duration at closure. While these results must be taken as somewhat speculative, they certainly are interesting. In a direct interpretive sense, they mean that sampling variability may be greater than any systematic bias introduced by a closed case sampling design. Whether this conclusion would hold under other conditions is impossible to say.

In summary, the MCCS samples do not appear to have failed any of the tests of representativeness. There is a shortage of actual judges' decisions in the sample but, on the whole, the samples appear to represent the workers' compensation case population in Michigan fairly well. In addition, the theoretical bias introduced by a closed case design does not appear to be as serious in practice as anticipated, at least for the Michigan environment.

The data base has proved its viability in a technical sense. In chapter 2 it is used to describe Michigan's workers' compensation population in order to provide an empirical overview of the workers' compensation experience in Michigan. Chapter 3 focuses particularly on the litigation issue in the Michigan system. The correlates of litigation are explored and the outcomes are described in as much detail as is possible, given the quality of data available on litigated cases. Chapter 4 concentrates on indemnity benefit payments, reviewing both the adequacy and timeliness of indemnity payments in Michigan. The summary and conclusions of the study are presented in chapter 5.

NOTES

1. This is not just a Michigan failing. See Monroe Berkowitz and Stephen McConnell, "Uniform Data Systems and Related Subjects in Workers' Compensation," *Research Report of the Interdepartmental Workers' Compensation Task Force*, Volume 2 (Washington, DC: U.S. Government Printing Office, 1979), for a description of the general problem and a suggested solution.
2. These are published in the Michigan Department of Labor's monthly journal *LABORregister*. Annual reports of the Workers' Compensation Appeals Board and the Funds Administration are also published in this journal.
3. The results are published annually by the Michigan Department of Labor under the title *Compensable Injury and Illness Tabulations*. These data are used for diagnosing the nature of the safety problem and prioritizing areas for public attention.
4. Both sets of amendments have been briefly outlined in *LABORregister*. The changes introduced by the 1980 enactments were described in *LABORregister*, February 1981, pp. 28-30. The 1981 amendments were described in *LABORregister*, February 1982, pp. 22-23. There was also an overview of all the reforms in the Spring 1982 edition of *IAIABC Journal*, published by the International Association of Industrial Accident Boards and Commissions. See also H. Allan Hunt, "Reforms in Michigan's Workers' Compensation System," *Business Conditions in the Kalamazoo Area*, Second Quarter 1982, Vol. XXV, Number 2, pp. 19-23.
5. The most notable efforts to produce an overview of workers' compensation procedures are those of Monroe Berkowitz. See "The Processing of Workmen's Compensation Cases," Bureau of Labor Standards, Bulletin 310 (Washington, DC: U.S. Department of Labor, 1967). More recently, Monroe Berkowitz and John Burton reviewed ten state systems to determine the procedures and criteria used for permanent disability benefits. These results were reported as Part II of "Permanent Disability Benefits in the Workers' Compensation Program" (mimeo, October 1979), the final report to the National Science Foundation. An updated version of this study will be published by the W. E. Upjohn Institute for Employment Research in 1983.

6. See Norman Root and Michael Hoefler, "The First Work-Injury Data Available from New BLS Study," *Monthly Labor Review*, January 1979, pp. 76-80 and Norman Root and David McCaffrey, "Providing More Information on Work Injury and Illness," *Monthly Labor Review*, April 1978, pp. 16-21.

7. Bureau of Workers' Disability Compensation Annual Report, *LABORegister*, May 1979, p. 203.

8. It can safely be assumed that no policymaker would be willing to wait the additional two to three years for an appealed decision to be processed by the Workers' Compensation Appeal Board.

9. NCCI unpublished tabulations. Unfortunately, there is no published description of this valuable data base.

10. See H. Allan Hunt, *Inflation Protection for Workers' Compensation Claimants in Michigan: A Simulation Study* (Kalamazoo, MI: W. E. Upjohn Institute for Employment Research, 1981), for an example of the way in which a dynamic element can be extracted from these static data.

11. At least it was not possible in 1978. The computerization of a case management data base may change this situation.

12. It is important to note that this description is of the process at the time of sampling in the Fall of 1978. It is not necessarily representative of current Bureau practice.

13. This turns out to have been insufficient to maximize the analytical potential of the sample. In retrospect, the sample should have been stratified by type of resolution but that was not appreciated at the time.

14. The sampling ratio was estimated by comparing the completed sample to official case management statistics. This differs considerably from the theoretical sampling ratio of 1 in 156 (one-third of the cases from one week) due to the variability in the weekly case closure rate.

15. Thanks are due to Jo Walker of the Bureau staff for the suggestion that some former Bureau employees might be available for this work. It improved the quality of data immeasurably.