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**Urban Mass
Transportation
Administration**

Study of Operator Absenteeism and Workers' Compensation Trends in the Urban Mass Transportation Industry

**Office of Planning,
Management &
Demonstrations**

Washington, D.C. 20950

Transportation Management Program

Final Report
March 1980

UMTA-PA-06-0050-80-1

MARCH 1980

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Peat, Marwick, Mitchell & Co.

1990 K Street, N.W.
Washington, D.C. 20006

March 26, 1980

Mr. James R. Maloney
Executive Director
Port Authority of Allegheny County
Beaver and Island Avenues
Pittsburgh, Pennsylvania 15233

Dear Mr. Maloney:

Peat, Marwick, Mitchell & Co. (PMM&Co.) is pleased to present the final report for your study of absenteeism and workers' compensation trends in the urban mass transportation industry. The report consists of:

- an executive summary;
- an introduction describing the purpose, conduct, and limitations of the study (I);
- a section reviewing the nature, extent, and costs of operator absence (II);
- a section describing the state of the art and relative effectiveness of attendance programs (III);
- a section describing labor agreement provisions that influence attendance and their effectiveness (IV);
- a summary of findings and recommendations (V); and
- appendices presenting:
  - literature search (A);
  - survey (B);
  - interviews (C);
  - survey data correlation analyses (D); and
  - details of cost estimates (E).

Peat, Marwick, Mitchell & Co.

This report contains ground-breaking work on the issue of absence in transit and presents significant recommendations for the industry. It establishes the extent and nature of absence, and describes for managers the range of methods currently used to control absence. The report does not fully explain the differences among transit systems' absence rates, nor does it offer total solutions to the problem. The most productive test of the ideas resulting from this work, of the evidence presented concerning the relative effectiveness of attendance programs, and of the lessons learned about data definition and collection, will be the deliberate implementation and monitoring of attendance programs.

We are grateful for the opportunity to assist you and the transit industry in such a valuable effort. We appreciate the cooperation of you and your staff, particularly Mr. Francis Routh, whose dedication and knowledge enriched this study.

Very truly yours,

Peat, Marwick, Mitchell & Co

STUDY OF

OPERATOR ABSENTEEISM AND WORKERS' COMPENSATION TRENDS

IN THE URBAN MASS TRANSPORTATION INDUSTRY

March 1980

Final Report
Under Grant PA-06-0050

prepared by

Peat, Marwick, Mitchell & Co.

Donald Hyde
F. Norman Hill
Paul Goodman
Joseph Stevens
Business Research Associates

under the direction of

The Port Authority of Allegheny County

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16. Abstract

The average vehicle operator missed 28.57 days of work in 1978 in addition to vacations and holidays. Of these, 17 were sick leave days (up from 14 days in 1974) and 3.4 were occupational injury days (up from 1.4 in 1974). The cost of operator absence, including sick pay, workers' compensation, medical payments under workers' compensation laws, fringe benefits for replacement operators, and overtime premium payments for replacement operators totalled 187 million dollars. This represents 27 percent of the Federal operating subsidy and does not include disruption or administrative costs.

Transit systems have implemented agressive programs for absence control. However, attention to the internal motivation of the employees, information system development, and labor-management cooperation hold potential for reducing absenteeism and its adverse effects.

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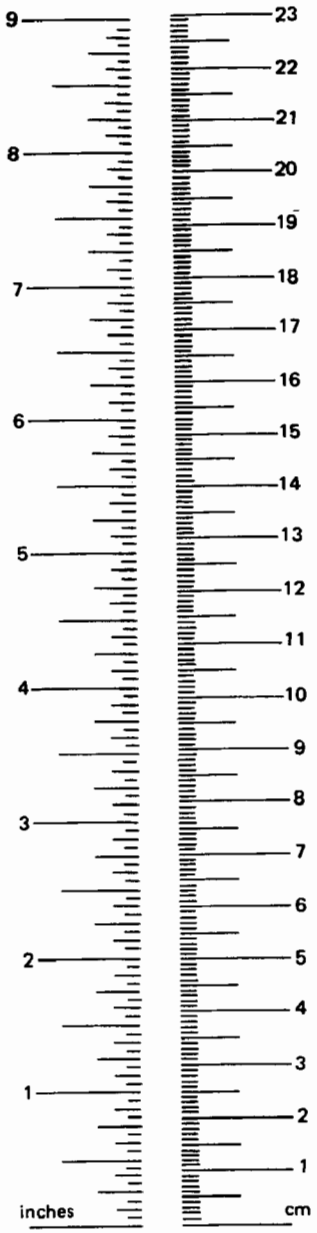
METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in. = 2.54 cm (exactly). For other exact conversions and more detail tables see NBS Misc. Publ. 286, Units of Weight and Measures. Price $2.25 SD Catalog No. C13 10 286.



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	36	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
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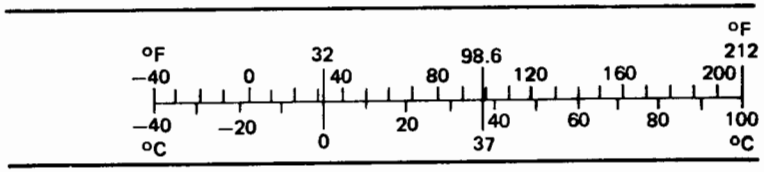

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LIST OF EXHIBITS

EXECUTIVE SUMMARY

Absence has been increasing rapidly throughout the transit industry, and in the category of job-related injury leave in particular. This study was conducted by the Port Authority of Allegheny County (Pittsburgh, Pa.) to document absence trends, to assess the costs, and to identify methods of reducing the adverse effects of absence. This executive summary touches upon:

- key findings of the study;
- resulting recommendations to the industry;
- conduct of the study; and
- policy implications.

KEY FINDINGS

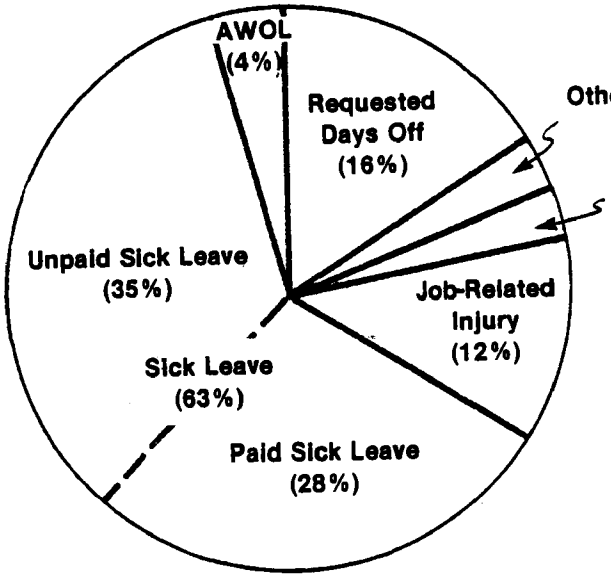
Operator absence of all types other than holidays and vacation averages 29 days per operator per year. Exhibit 1 (upper portion) illustrates the components of operator absence and the nationwide implications. The two principal categories studied, sick leave and job-related injury leave, have increased by 24 percent and 148 percent, respectively, between 1974 and 1978. Although definitive statistics for overall absence in other industries were not available, data on job-related injury leave from the Department of Labor indicate that transit operator absence of this type was three times higher than in the private sector as a whole and approximately 50 percent higher than that of the average private sector transportation employee.

The identifiable costs of operator absence total approximately $187 million, or $1,780 per operator per year. Absence of other employees, although proportionately lower, would add one-third more to these costs. As indicated in Exhibit 1, (lower portion) additional administrative and payroll costs could not be estimated. The estimated costs of vehicle operator absence represent more than one quarter of the total federal operating subsidy for transit in 1978. As illustrated in Exhibit 2, sick leave expense and worker's compensation expense per operator increased by 175 percent and 238 percent, respectively between 1974 and 1975. In addition, the unpredictability of operator absence seriously impairs the quality of service.

The transit industry has addressed the problem of absence aggressively. Almost all transit systems have a performance code (whether formal or informal) involving suspensions or discharges for excessive absence. However,

EXHIBIT 1

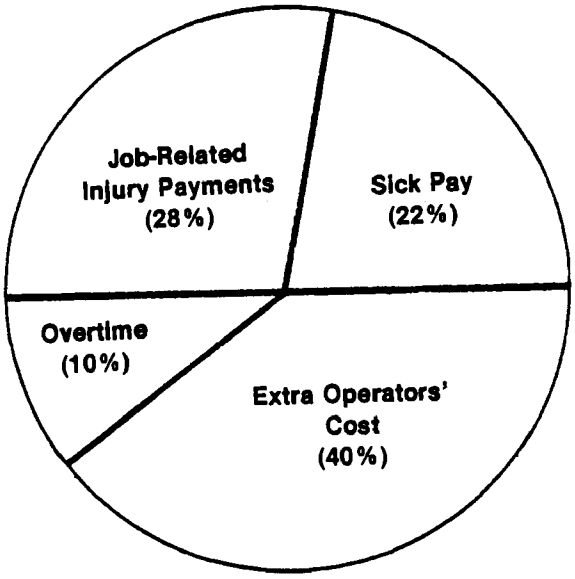
EXTENT OF OPERATOR ABSENCE



Total Absence (Excluding Vacations, Holidays, and Scheduled Days Off)

= 28.57 days per operator
= 3,000,000 operator-days nationwide

COST OF OPERATOR ABSENCE



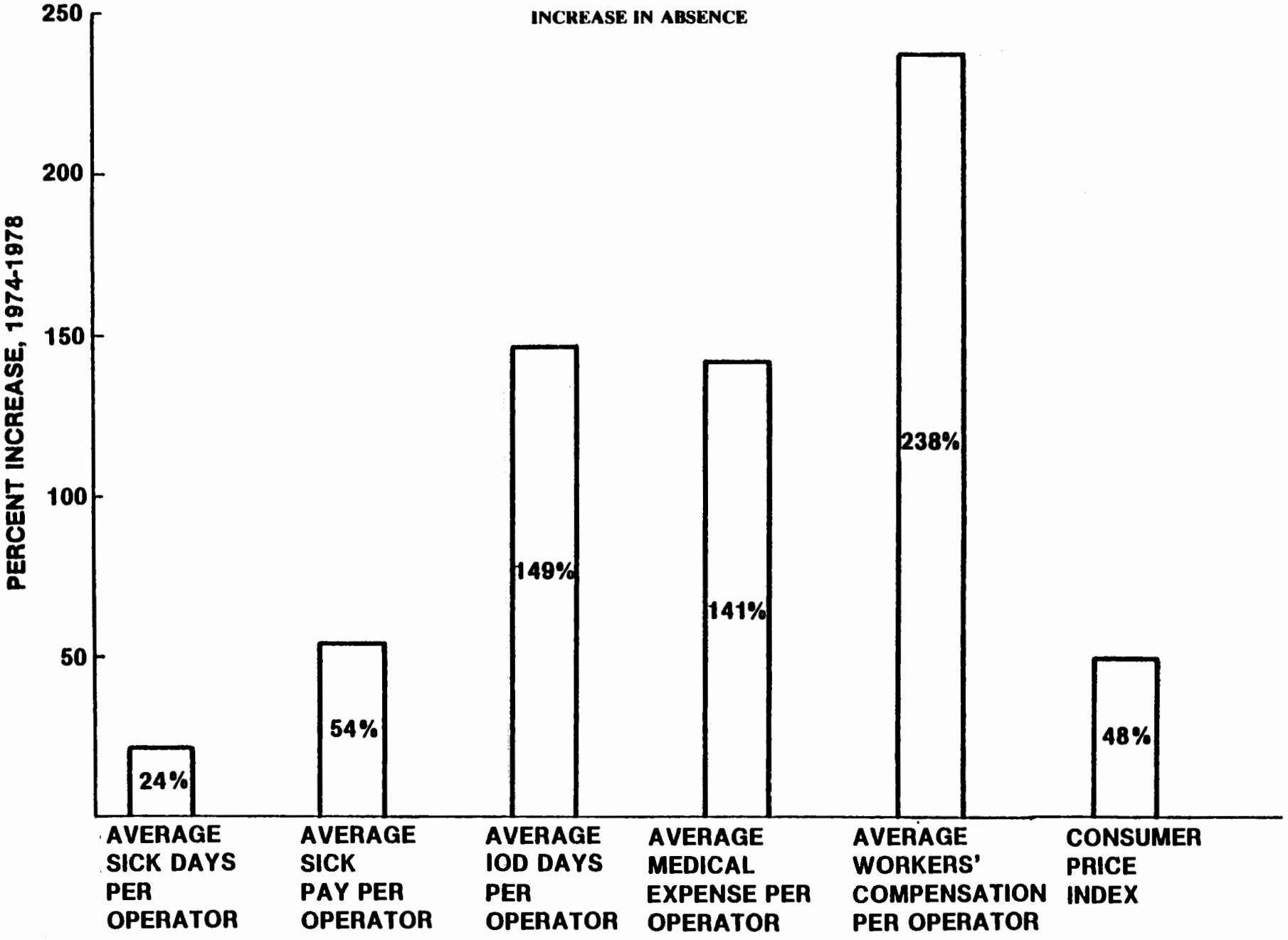
NOTE: This estimate excludes disruption costs (e.g., minimums, waiting time, travel time, spread premium) and administrative costs (e.g., dispatching, recruiting, hiring, training, accounting, claims processing.)

Total Estimated Cost = $187 million
$1,780 per operator
27% of federal operating subsidy

NOTE: Figures may not total because of rounding.

EXHIBIT 2

INCREASE IN ABSENCE



far fewer systems provide recognition for good attendance. These two types of attendance programs, which affect the employee's external incentive to attend, are not complemented by attention to the employee's internal motivation which is affected by his view of his job and employer as well as his individual characteristics.

Representatives of organized labor also indicated a strong interest in overcoming abusive absence. In addition to impairing the efficiency of the industry, excessive operator absence soils the dignity of the occupation and manifests a disregard for the importance of reliable transit service. While there is substantial opportunity for cooperation between labor and management, the survey indicated that the extent of cooperation was closely related to the extent of absence. Labor-management cooperation was the area of effort most widely supported by the participants in the absenteeism workshop, described below.

Finally, the adequacy of information concerning absence available for managers is uneven across systems. Although most systems maintain employee records to support the administration of a performance code, management information concerning the extent, problem areas, trends, and costs of absence is only beginning to be thoroughly maintained.

KEY RECOMMENDATIONS

This study resulted in three major recommendations to transit management:

- Attendance programs should be balanced to address various aspects of the absence problem.
- Management should work with employee representatives in addressing the absence problem.
- Using terminology that is as standard as possible, absence data should be collected and analyzed regularly.

These recommendations are briefly described below and detailed in the accompanying report.

Attendance programs have their effect through one or more of five influences on the employee's decision to attend:

- the effects of absence on the employee;

- the effects of attendance;
- supervision;
- the employee's view of his job and employer; and
- the employee's individual characteristics.

The first two influences determine the employee's external incentive to attend; the last two determine his internal motivation. In order to improve attendance, methods such as performance codes that penalize absence should be reinforced by "reverse discipline" or attendance recognition programs that reward attendance. Many systems must more whole heartedly implement the latter type of program to make their efforts more effective. Further gains can be made by addressing internal as well as external motivation. Through work improvement committees that permit the employee some dignity and self-management, and through counseling programs that demonstrate the system's interest in the employee as a person, the employee's view of his job and employer can be enhanced. Furthermore, through aggressive use of recruiting before screening and probation after hiring, the characteristics of the work force may be more closely matched to the requirements for vehicle operators. In summary, attendance programs should be balanced to use all five of the influences on attendance.

The work improvement committee deserves particular attention from management. Although some of the forms in which it has been practiced in other industries would represent a radical departure for transit labor relations, the potential for labor-management cooperation in transit was demonstrated by the survey and interviews, and corroborated by the workshop. While the collective bargaining process is a forum in which labor and management meet as adversaries, and while management must maintain the authority necessary to protect the interests of the passengers and taxpayers, labor and management can cooperate outside the context of the collective bargaining process on issues of common interest. The ability of organized labor to affect absence is substantial. Therefore, management should establish channels of communication and organizational processes for labor to assist in the attendance improvement effort. One method of doing so is to form work improvement committees, which would develop and recommend comprehensive attendance programs.

Finally, management information systems should be developed to analyze absence. In general, the most efficient way to collect data is through the payroll process. Absence data should be collected in terms of incidents and workdays lost (rather than calendar days). Data should be collected by department or responsibility center, and costs should be accounted for in the same manner.

Absence types, such as those listed in Exhibit 1, should be reported, rates of change should be computed, and exception reports should identify individuals with excessive absence. Extra operator hiring should be adjusted based on overtime and fringe benefit costs, and days off should be scheduled to complement absence patterns. Naturally, the extent to which this recommendation for improved information can be implemented will depend on the size of the system and resources available.

CONDUCT OF STUDY

A survey of absence and related data was pretested at 23 major systems, revised, and issued to 185 additional systems with an overall return rate of 29 percent, or 57 systems. Fifty percent of the vehicle operator work force is included in the responding systems. Interviews were conducted with managers, operators, and labor representatives at 23 systems. A two-day workshop to discuss the information collected and suggest approaches to the problem involved:

- managers from the Port Authority;
- two former presidents of the industry association (Donald Hyde and Norman Hill);
- labor representatives from the Amalgamated Transit Union Division 85 (Pittsburgh);
- Dr. Paul Goodman of the Graduate School of Industrial Administration at Carnegie-Mellon University;
- Mr. Joseph Stevens of Tully and Roddy, Attorneys at Law;
- representatives of the Urban Mass Transportation Administration (Dr. Frank Enty) and the American Public Transit Association (Ms. Jenny Laster); and
- Peat, Marwick, Mitchell & Co. (PMM&Co.) staff.

Finally, statistical analysis of the data was performed and the accompanying report was prepared. It should be noted that this study did not attempt to collect and analyze data concerning differences among absence rates of employees, but only differences among absence rates of transit systems. Furthermore, much of the requested data was not readily available from the surveyed systems, so that statistical analysis only partially explains the differences among absence rates. It should also be noted that data from New York

City were not available, and significant differences (if any) in New York's experience could affect the estimates of national transit absence and its costs.

POLICY IMPLICATIONS

In addition to the recommendations presented above, the study raises issues that are appropriately addressed at a policy level and in the state or federal government.

First, the magnitude of the problem and the implications of continued increase in absence rates deserve the attention of policymakers. Further study to explain the differences in absence rates among systems and individuals, to experiment with the effects of attendance programs, and to support the development of labor-management cooperation as discussed above are efforts that need the support of policymakers and funding agencies.

Second, agencies at the national level can assist in standardizing terminology, both to encourage more sophisticated record keeping by systems and to enable analysis of data and decision making on an industry-wide basis.

Most importantly, the effects of workers' compensation statutes on transit costs and quality of service are shown in this study to be significant and increasing. While this study has not considered workers' compensation from a policy perspective, the magnitude of the increase suggests that reconsideration of the laws and particularly their administration is appropriate.

I. INTRODUCTION

Absence of transit operators has generally been recognized as an important management issue: a transit operator's work must be performed as scheduled even though overtime penalties or extra operators must be paid to do so. In recent years, the absence per operator has been increasing rapidly, particularly in the category of operators injured on duty. This study was undertaken to identify ways of reducing the adverse impact that absenteeism has on service quality and costs. More specifically, the objectives of the study include:

- estimation of the extent, increase, and costs of operator absence;
- estimation of the extent, increase, and costs of injuries on duty;
- analysis of tactics for reducing the adverse effects of absence; and
- assessment of the results.

The manner in which the study was conducted and the limitations that must be considered in interpreting the results are discussed below.

CONDUCT OF THE STUDY

The Port Authority of Allegheny County or Port Authority Transit (PAT) applied for and received a federal grant to study absenteeism and workers' compensation trends in the transit industry. PAT designed the study and selected Peat, Marwick, Mitchell & Co. (PMM&Co.) to assist in its execution. Six tasks were performed:

- Absenteeism literature was reviewed.
- A survey was designed, pretested at 23 major systems, and issued to 185 additional systems in its final form.
- Managers, labor representatives, and/or operators were interviewed at 23 transit systems in visits that ranged from one to three days.
- The data that had been collected were reviewed at a workshop involving transit managers, labor representatives, and consultants from the fields of industry psychology, labor relations law, and transit management.

- The survey data were analyzed.

- Findings and recommendations were documented.

Each of these tasks was carried out by PMM&Co. consultants together with PAT staff. Additional comments were provided by the remaining members of the consultant team: Dr. Paul Goodman, Joseph Stevens, Donald Hyde, Norman "Pinky" Hill, and Business Research Associates. To provide a basis for evaluating and interpreting the study results, each of the tasks is described below.

Literature Review

Journals were searched for articles addressing blue collar absenteeism, and an annotated bibliography was prepared. This bibliography is contained in Appendix A of this report. Although useful subjective analyses and experiments involving absence were found, information concerning the overall extent and costs of absence was sparse. There was no updated treatment of the interaction of workers' compensation statutes and absenteeism. During the course of this study, additional material on absenteeism in transit began to appear and has been incorporated in Appendix A. The literature review also provided the basis for the conceptual model of absence that is presented at the end of Section II.

Mail-Out Survey

A survey document was designed to be mailed to transit systems. The document was intended to assist in measuring the extent and costs of absence, as well as to provide data that might provide some evidence concerning causes or cures. The document underwent substantial review by the entire study team. Twenty-three major systems (including PAT) were selected to play a major role in the study, and each agreed to participate. The survey document was mailed to the systems, and their comments as well as their responses were solicited. After a majority of the responses were received, the survey was substantially shortened and a number of problems uncovered in the pretest were corrected. The final survey document is included as Appendix B. The revised survey document was mailed to 185 additional systems with 50 or more employees.

Of the 208 systems surveyed, 60 returned the survey document, representing a response rate of 29 percent. Although this is not a particularly high rate, it represents substantial interest on the part of the industry when the length and difficulty of the survey document is considered. Systems reported spending up to 60 person-hours in the preparation of their responses. The names of the respondent systems are included in Appendix B, following the

document itself. Any further mention of the system names or system-specific data has been avoided to protect the confidence of the systems. Three of the responses were too late or incomplete to be used in the study. It should be noted that the remaining 57 systems represent approximately 50 percent of the transit industry employment, or 60 percent of the employment excluding the Metropolitan Transportation Authority (MTA) in New York. None of the MTA systems are included in the data presented in the report, except to the extent that estimates of national statistics include extrapolations for MTA.

After the responses were received, a series of data checks was conducted. An extensive telephone campaign was used to verify questionable data and to fill in missing data that were deemed critical to the study. The data were then entered into a computer for summary and analysis.

Interviews

On-site interviews were conducted at the 23 major systems selected for the survey pretest. A list of the systems is presented in Appendix C. In addition to the list, the appendix includes a sample of the interview guide that was used to structure these investigations. In most cases the guide was not strictly recited, but was used as a source of relevant questions and as a means of establishing a common thread among all the interviews. The interviews at each system covered from one to three days, with two interview teams working simultaneously in some cases. Interviews were conducted with the following personnel, although not all were interviewed at each system:

- board members;
- general manager;
- personnel manager;
- labor relations manager or attorney;
- claims manager or attorney;
- transportation manager;
- maintenance manager;
- local union officials;
- vehicle operators;
- maintenance foremen; and
- dispatching personnel.

In all cases, explanations for the recent increase in absences and methods of reducing absence were discussed with the interviewees.

Workshop

A technical memorandum was prepared documenting the responses to the survey and the interview results. This memorandum was provided to the study team which met in Pittsburgh for two days with PAT personnel. The data and some interpretations were presented and discussed. Afternoon discussion groups provided an opportunity for the study team to talk about the issues with PAT personnel, including several vehicle operators and union officials. On the second day, the workshop was divided into smaller groups of six or seven. Each group addressed the questions of effective attendance programs and suggestions for further study efforts. Each group presented its results to the others, and a final round table discussion was held.

Analysis of Survey Data

Statistical analysis of the absence data in the survey was designed based on:

- original hypotheses postulated during the survey design;
- hypotheses suggested during the course of the interviews; and
- hypotheses raised at the workshop.

The various hypotheses were tested using the Statistical Package for the Social Sciences (SPSS) programs and the 57 survey responses. Univariate analysis was used to compute operator-weighted means (e.g., average days lost per operator). A basic tool in the analysis was bivariate correlations, used to compare system characteristics and practices with measures of absence. Full results of the correlations are presented in Appendix D. Promising correlations were further developed using multivariate regression analyses.

Documentation of Findings and Recommendations

This final report presents the findings and recommendations that have resulted from the study. It is being made available to all systems that participated in the survey.

The study was begun in March 1979 and completed in January 1980. PAT staff worked directly with PMM&Co. staff throughout the study, and the remaining members of the study team played advisory roles. This study represents a significant step in understanding the overall size and manifestations

of the absenteeism problem in the transit industry and presents an assessment of the current state of the art of managing absenteeism as it is practiced in the industry. Nevertheless, major questions concerning the causes of recent increases and the most effective methods of reducing the adverse impact remain unanswered.

LIMITATIONS OF THE STUDY

Among the factors that restrict the comprehensiveness and conclusiveness of the findings and recommendations are:

- intra-property analyses were excluded from the study design;
- non-driver absence and tardiness (misses worked) were not analyzed in detail; and
- the desired data were often not available from the systems surveyed.

Intra-Property Analyses Excluded

The study design was based on a review of the extent and nature of absence and of the remedial activities currently proposed or ongoing; it did not include analysis of individuals' absence patterns, of the difference among individuals' absences, or of the change in individuals' absences. During the course of the study, the Southern California Rapid Transit District conducted a complementary analysis dealing with detailed records of individuals.[1] The results of that study are taken into account in some of the findings and recommendations, below.

The study did not attempt to develop a predictive model of absence. Although some statistical analysis was performed to assess the effectiveness of various attendance programs, the analysis was deliberately limited in its extent and depth. Patterns of absence (as distinct from the overall level) were a peripheral issue in this study.[2]

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[1] Leahy, Schlegel, Sprague, "Bus Operator Absenteeism: Some Causes and Cures," Transit Journal, 5 (Fall 1979), 29 ff.

[2] A concurrent study by C. A. Lave at the Institute for Transportation Studies at the University of California, Irvine, addresses some of these issues.

Non-Driver Absence and Tardiness Excluded

Based on prior studies in this area and data available from PAT, it was determined that vehicle operator absence was a more critical issue than absence in other employee categories. During the survey pretest, PMM&Co. did collect data concerning absenteeism of maintenance employees. However, to reduce the survey to a manageable scope and to concentrate on the key issues, maintenance questions were eliminated from the final survey document. As indicated below, enough data concerning maintenance and administrative employees were available to determine that absence rates in the other two groups were lower than for vehicle operators.

Although the definition of absence used was a broad one, information concerning tardiness (misses worked) was not included in the study. Practices concerning tardiness vary so greatly among properties, and tardiness is a problem of such small proportion in transit, that it was not considered worthwhile to attempt to collect comparative national data.

Unavailable Data

The statistical analyses were severely constrained by the availability of data. Several factors account for the lack of data. First, more than 70 percent of the systems requested to respond did not do so. In view of the length and difficulty of the survey and the number of surveys conducted in the industry, this is not surprising. However, the systems that responded are not a strictly random sample of the industry, and the results may be biased. Among the potential biases are two countervailing possibilities: on the one hand, systems may have chosen to respond because of their higher than average absence problem while those with no absence problems were not interested; on the other hand, the systems that responded may be those that have the information available, are in general tightly managed, and have devoted attention to controlling the problem as evidenced by the availability of the data requested.

In particular, it should be noted that the New York MTA systems, which comprise nearly 15 percent of transit industry employment, are not included in the data. To the extent that MTA experience is significantly different from that of the systems used to make national estimates, including MTA could substantially affect the estimates of total nationwide operator absence and its costs.

In addition to the problem of nonresponding systems, many of the respondents did not supply all of the data requested. The response rates for each question are included with the copy of the survey document in Appendix B. While PMM&Co. raised the response rate on key questions by a concerted

telephone call-back campaign, many systems were not able to supply essential data such as the number of work days lost because of illness or injury. This problem arises partially from the differences in the record keeping practices in the industry. Some systems summarize absence data by incidents (i.e., a group of successive days absent is one incident), some by work days lost, and some by calendar days of illness or injury (i.e., including scheduled days off). Some systems summarize only certain types of absence, while others do not summarize any absence data. Similar difficulties applied to all other types of data requested in the survey. Information needs are more fully addressed in the findings and recommendations section.

The problem of unavailable data becomes particularly restrictive in analyses requiring use of responses to more than one question in the survey. For example, all of the following data requests received 15 or more responses:

- operator sick days in 1974;
- operator injury days in 1974;
- operators employed in 1974;
- operator sick days in 1978;
- operator injury days in 1978; and
- operators employed in 1978.

Yet the number of responses including all six data requests (permitting analysis of the increase in sick and injury days per operator) was only 5, making any statistical inferences very tenuous. Therefore, great care should be taken in interpreting the data. In using the correlations reported in Appendix D, consideration should be given to the number of responses on which the correlation is based.

The objective of the study, as indicated above, is to provide transit managers with sound information concerning the nature of the absenteeism problem in transit and to provide an assessment of the effectiveness of existing or proposed countermeasures. The study was constrained by the exclusion of intra-system data and by the unavailability of desired data. It did not attempt a random sample of systems; nevertheless, direct data were collected for approximately one-half of the entire national work force, and significant conclusions can be drawn.

ORGANIZATION OF THE REPORT

Following this introductory section, Section II of this report presents the extent and nature of operator absence. Overall levels of absence, rates of increase, and classification of absence types are discussed. The effects of absence, particularly the identifiable costs, are assessed. Various theories concerning the causes of absence and a way of looking at the various factors that affect absence rates are presented at the end of Section II.

Section III discusses attendance programs that can generally be pursued without alteration of the labor agreement. Because labor agreement provisions involve a special set of considerations for both management and labor, and because changes in the labor agreement to reduce the adverse impacts of absence are not comparable to noncontract absence control measures, the labor agreement analyses are presented separately in Section IV.

Finally, Section V presents a summary of the findings and recommendations detailed in Sections II through IV. The most significant overall recommendations are detailed, and the most promising areas for further work in attendance programs are discussed.

Following the body of the report, five appendices contain the literature search, survey documentation, interview guide, statistical correlation analyses and details of absence cost estimates and source data.

II. NATURE AND EXTENT OF OPERATOR ABSENCE

This section provides the basis for discussion of absence reduction. First, the terminology that will be used to describe the nature of absence is established, and the interaction among the absence types is discussed. Then the extent of absence and its increase are documented, based on the survey data. The identifiable payroll costs of operator absence are estimated as part of the discussion of the effects of absence, and finally, the causes of absence are discussed by means of a conceptual model.

In addition to establishing terminology, the principal importance of the material in this section is to demonstrate that absence in the transit industry is high and is rapidly increasing. Operator absence is so costly that it accounted for more than one-quarter of the total federal operating subsidy in 1978.[1] It is a problem of such magnitude and is escalating at such a rate that it warrants action at the national policymaking level, as well as the careful attention of transit system managers.

NATURE OF TRANSIT ABSENCE

Operator absence, as referred to in this report, includes all days on which an operator could be expected to work but does not. That includes all days except weekly scheduled days off, vacation, and holidays. The term "operator" will be used to refer to all on-board personnel (including conductors). The absence categories discussed below include:

- work-related injury or illness;
- nonwork-related injury or illness (sick leave);
- requested days off;
- other excused absences such as for jury duty, funeral leave, military duty, union activities, and appearances in court; and
- unexcused absence (misses, or AWOL), not including misses worked (tardiness).

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[1] The estimate of $187 million as the cost of operator absence equals 27 percent of the $690 million in Section V operating subsidy in FY 1978. Clearly the additional costs of maintenance and administrative employees' absence would bring the cost estimate to at least one-third of the total subsidy.

Because of the variations in terminology and the need to clarify the role of each of these categories in the study, each will be briefly described.

Injury on Duty (IOD)

IOD absence includes all absence during which the employee claims protection or benefits for a work-related illness or injury under the applicable workers' compensation statute. It is by far the most rapidly growing category of absence in the transit industry. Under workers' compensation statutes, society holds the employer responsible for compensating the employee. Although statutes vary, employees must typically wait seven days before compensation is initiated. Although lump sum settlements are not unusual, most claimants are paid either two-thirds of their regular earnings or a specified maximum, whichever amount is less.

Sick Leave

Illness or injury which is not work-related is also a generally increasing category of absence. While IOD triggers compensation under state statutes, often supplemented by contract provisions for an initial period, sick leave introduces only the compensation called for by the contract, which is usually limited to the number of days in a sick bank. Like workers' compensation, sick leave benefits, which are tax exempt, often require a waiting period. After an employee's sick bank is exhausted, he may normally continue on unpaid sick leave.

Requested Days Off

Requested days off, within the discretion of the employee's supervisor, are an apparently controllable category of absenteeism. Yet records show that this category is also increasing, and its costs are great. While it can be argued that requested days off need only be granted when the cost is low (e.g., with a "loose board"), the generally increasing level of absence in this category leads properties to hire additional personnel and incur the associated fringe benefit costs. Therefore, this category is also a proper subject of the study.

Other Excused Absence and Suspensions

Absence in this category is largely determined by contract and discipline administered at the discretion of managers. This category will be included primarily to ensure statistical accuracy by providing an exhaustive analysis of the categories of absence. In other words, by including this category, ambiguity concerning its role will be avoided.

Unexcused Absence

Unexcused absence has traditionally been the object of stringent controls in the transit industry. While there is no direct payment for unexcused absence as there is for IOD and sickness, the costs in terms of replacement drivers and service reliability are high. Furthermore, as part of the general increase in absenteeism, unexcused absence has also been increasing slowly and is therefore a relevant subject of the study. However, misses worked, or tardiness, which for a driver is tantamount to being AWOL, will not be included in the statistics gathered for this study. Although the effect of tardiness in the transportation department may be close to the effect of absence, the recent increases in absenteeism and the causes are fundamentally different from those involved in tardiness. Therefore, unexcused absence will refer only to AWOL incidents, when the employee does not report to work at all.

INTERACTION OF ABSENCE TYPES

This study concerns absenteeism (i.e., controllable absence) and focuses on workers' compensation claims in particular. However, since the objective of the study is to improve service reliability and control costs, it must be recognized that no absence category can be addressed alone. This is true for a number of reasons, as discussed in the following paragraphs.

Categories of absence, such as workers' compensation claims or injuries on duty, are simply categories. The absence itself may shift categories and labels without being directly affected. Thus, during recent years in which workers' compensation benefits have increased dramatically while many sick leave benefits have decreased due to inflation, absence has shifted from sick leave to IOD and increased overall. At one major multimodal system, the number of sick leave incidents decreased by 12 percent from 1975 to 1977, while the number of IOD incidents increased by 16 percent. This has been further documented in a study that showed operators shifting absence from sick leave to unexcused absence.[1]

Secondly, the causes for absence share common ground (e.g., worker alienation) and must therefore be analyzed together. Similarly, many of the cures for one absence type overlap those for all other types. Finally, because of the differences in definitions and the various categories in which the employees of different properties may place themselves, comparison of one type without a consideration of other categories of absence would be invalid.

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[1] An ongoing study by C. A. Lave of the University of California at Irvine.

EXTENT OF ABSENCE

If vacation and holidays are excluded, the average transit operator was absent 28.57 days per year or 11.9 percent of the average annual scheduled workdays in 1978.[1] On a national basis this would imply a loss of 3.00 million scheduled workdays per year.[2] Workdays lost due to injury on duty (IOD) and nonjob-related illness or injuries account for 0.35 million (11.7 percent) and 1.88 million (or 62.7 percent) of the total workdays lost respectively. The remaining 25.6 percent of workdays lost include requested days off, union business, funeral leave, jury duty, and misses or AWOL. These results are shown in Exhibit II-1.

Exhibit II-2 presents detailed survey data used to estimate overall absence. These data were also used to estimate the rate of increase. A lack of standardized definitions and methods of measuring absence precludes a precise comparison of transit operator absenteeism with that of other occupations. However, according to an article on page 1 of the March 14, 1979, Wall Street Journal, "Costly Problem: Firms Try New Ways to Slash Absenteeism As Carrot and Stick Fail," Department of Labor estimates of work hours lost through absenteeism came to 3.5 percent nationally. Although no precise definitions of absence are given, it appears that transit operators as a group exhibit above average absence. In the category of job related injury, transit operators lost 50 percent more days than the average private sector transportation employee, based on Department of Labor data.

In 1978, the average number of nonjob-related sick days per operator was 17.8 as compared to 14.42 in 1974. This reflects an increase of 24 percent over the four year period from 1974 to 1978. During the same time period, job-related absence, as measured by the average number of IOD workdays lost per operator, increased from 1.35 to 3.36 or nearly six times faster than nonwork-related absence. Exhibit II-3 illustrates these increases. The significance of these absence figures and implications of a continuing increase can only be appreciated after examining the effects that absence has on a system.

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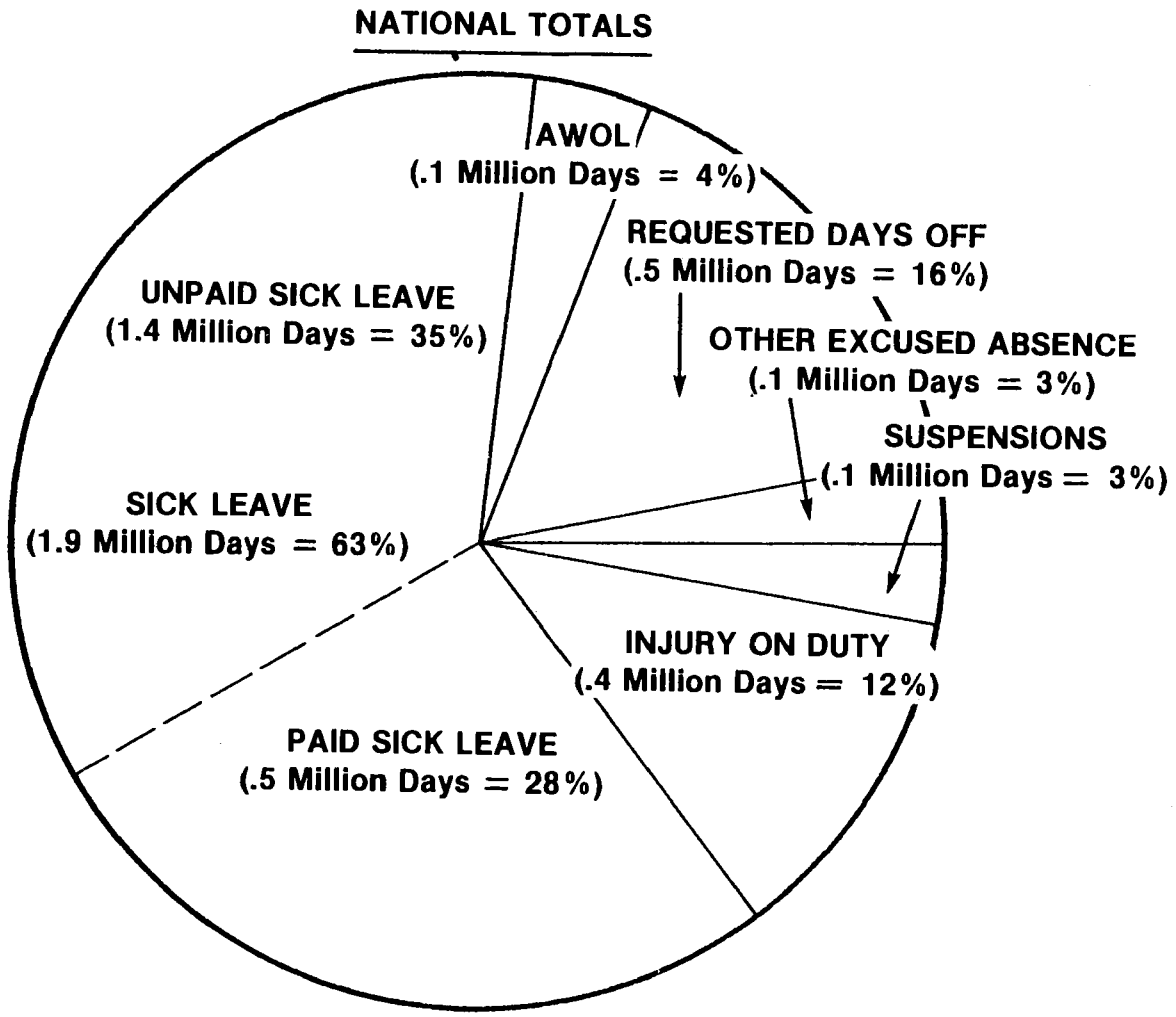
[1] This assumes an average of 240 scheduled workdays per year. It is based on the survey data which suggest that holidays and vacations account for 21 days a year on the average and that operators normally work a five-day week.

[2] These figures are based on a total estimate of 105,000 transit operators nationwide of which 78,750 are employed by APTA members. The estimate of total transit operators is based on APTA data.

EXHIBIT II-1

TYPES AND EXTENT OF OPERATOR ABSENCE



WORKDAYS LOST PER OPERATOR	
REQUESTED DAYS OFF	4.45
OTHER EXCUSED ABSENCE (Jury, Military, Bereavement, etc.)	.89
SUSPENSIONS	.85
INJURY ON DUTY	3.36
PAID SICK LEAVE	7.88
UNPAID SICK LEAVE	10.01
AWOL	1.13
TOTAL	28.57

EXHIBIT II-2

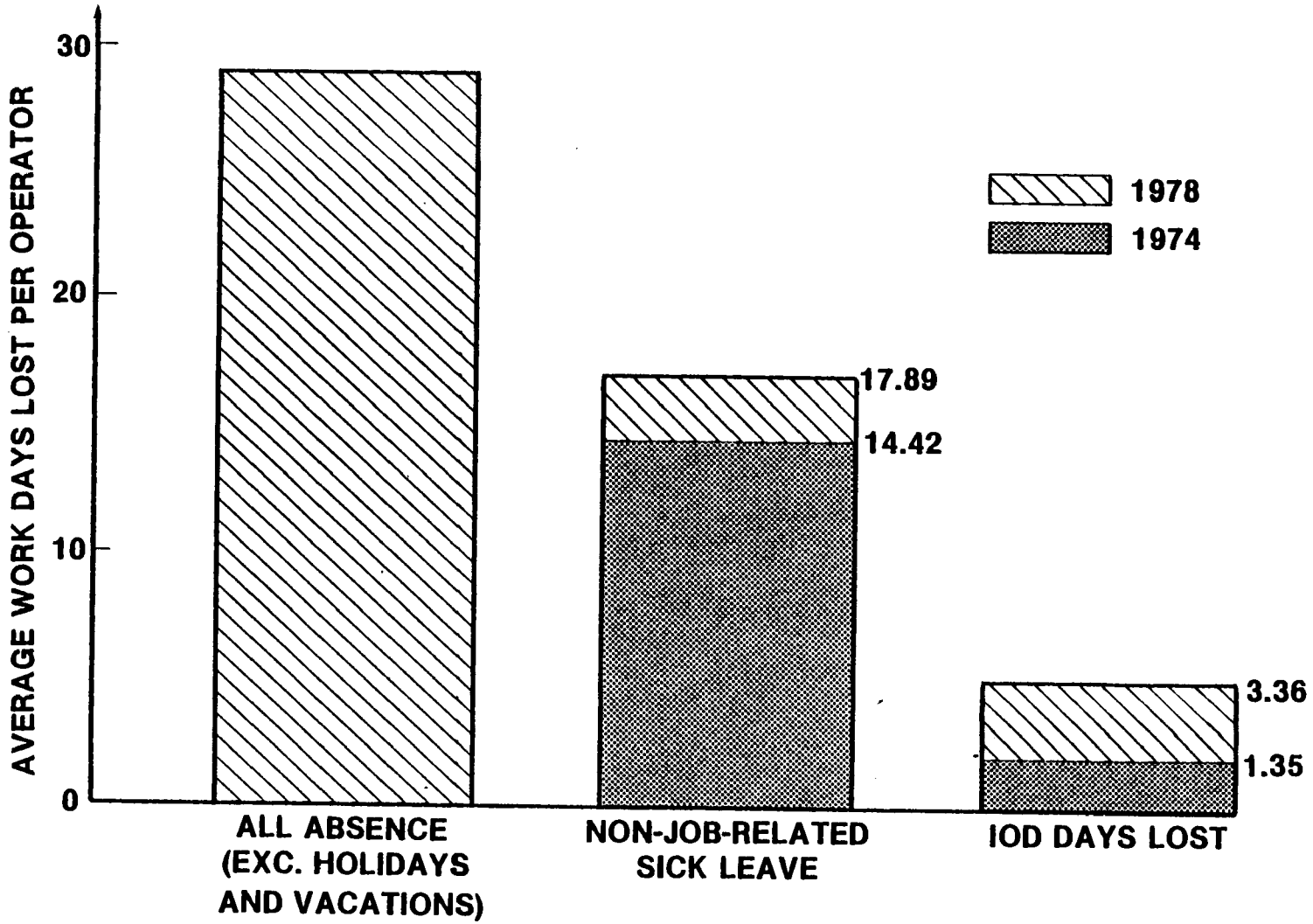
MEASURES OF TRANSIT INDUSTRY ABSENCE

MEASURE	YEAR	NUMBER OF PROPERTIES IN SAMPLE	UNWEIGHTED MEAN	STANDARD DEVIATION	NUMBER OF OPERATORS IN SAMPLE	OPERATOR WEIGHTED MEAN
IOD Days Per Operator	1978	43	4.22	8.43	24350	3.36
	1974	21	1.45	1.50	11667	1.37
Sick Leave Days Per Operator	1978	29	15.81	13.28	16468	17.89
	1974	11	13.12	12.63	6544	14.42
Paid Sick Leave Days Per Operator	1978	36	8.68	11.09	26184	8.76
Unpaid Sick Leave Days Per Operator	1978	30	7.35	6.13	17007	11.36
Requested Days Off Per Operator	1978	30	2.35	1.97	30522	4.45
Union Business Days Off Per Operator	1978	32	0.42	0.61	21180	0.22
Funeral Leave Days Per Operator	1978	34	0.24	0.14	27134	0.19
Jury Duty Days Per Operator	1978	36	0.25	0.51	28595	0.24
AWOLS (or Misses) Per Operator	1978	32	1.14	0.10	22256	1.13
Military Leave Per Operator	1978	9	0.33	0.27	10589	0.24
Suspension Days Per Operator	1978	11	0.80	0.61	5508	0.85
Other Days Off Per Operator	1978	13	2.97	5.24	6535	1.38
Sick Leave and IOD Days Per Operator	1978	26	18.04	12.09	13727	22.01
	1974	6	14.28	8.33	2749	18.03
Vacation Days Per Operator	1978	45	17.89	17.48	35351	15.19
Holidays Per Operator	1978	41	6.86	7.23	30624	5.82
Holidays and Vacation Days Per Operator	1978	40	24.83	23.49	30558	21.22
Requested Days, Holidays and Vacation Days Per Operator	1978	28	21.83	6.93	26096	24.60
Sick Leave Days Per Scheduled Workday	1978	27	0.08	0.10	12120	0.07
IOD Days Per Scheduled Workday	1978	32	0.01	0.01	16296	0.01
Paid Sick Leave Days Per Scheduled Workday	1978	32	0.05	0.09	20736	0.04
Unpaid Sick Leave Days Per Scheduled Workday	1978	32	0.03	0.03	12659	0.04
Requested Days, Holidays and Vacation Days Per Scheduled Workday	1978	28	0.09	0.032	26096	0.10

Maximum Number of Properties = 57
Maximum Number of Operators (1978) = 42899
Maximum Number of Operators (1974) = 21589

EXHIBIT II-3

EXTENT AND GROWTH OF ABSENTEEISM



EFFECTS OF ABSENCE

The primary effects of absence are on cost and service reliability. The following discussion of these effects includes estimates of nationwide costs. However, although the study did not deal with intra-system data and absence patterns, the variability of absence as well as the overall level of absence is a critical dimension of its impacts. The unpredictability of absence causes significant costs that cannot be estimated. Bearing this in mind, four effects are assessed below:

- direct costs that are specifically associated with absence such as sick pay and workers' compensation;
- identifiable indirect costs that can be estimated and result from absence, such as overtime and additional fringe benefits;
- overhead, such as personnel administration and support facilities;
- service reliability; and
- employee impacts.

An understanding of the causal chain that leads to these adverse effects will contribute to formulation of cost control methods. The details of the costing assumptions are contained in Appendix E.

Direct Costs

Three types of absence incur direct payroll costs:

- paid sick leave;
- injury on duty; and
- other excused absence, such as jury duty or funeral leave.

Because of the small magnitude of the third category, and the wide range of compensation methods, the cost was not assessed; even if full pay was the rule, the nationwide cost would be only $6.5 million.

In 1978 the average sick pay per operator for nonjob-related illness and injury was $392. Total transit industry sick pay for operators, nationally,

costs properties $41 million. Between 1974 and 1978, average sick pay per operator increased by about 171 percent across a given set of systems.[1]

Because of the almost universal practice by transit properties of aggregating workers' compensation payments for job-related illness or IOD absence across all types of transit employees, it is impossible to directly obtain data on that portion of workers' compensation payments attributable to operators only. Therefore, the ratio of total workers' compensation payments to the total number of transit operators was used only as an index to estimate the total direct costs to transit properties of all employee job-related illness and IOD absence. Total transit industry payments for job-related-illness and IOD, including state required workers' compensation payments, medical payments, supplementary labor agreement payments, and other miscellaneous payments, were estimated to be about $73 million in 1978.[2] This was based on an average index ratio of total workers' compensation payments per operator of about $700 dollars per operator.

After examination of data at selected systems where complete data concerning IOD payments by employee type are available, it is estimated that operator IOD is at least 13 percent higher than system-wide average IOD.[3] Using this assumption, IOD payments to operators in 1978 were 52 million of the 73 million. The components are detailed in Appendix E and discussed below.

State required workers' compensation payments, per operator, increased by 238 percent to $336 between 1974 and 1978. This implies a total national transit industry payment of $36 million in 1978 for mandatory compensation to operators, or $51 million for all employees.

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[1] Because of the wide variability of contract-specific provisions related to sick pay, it is important to use a consistent set of properties to estimate its growth during the period 1974-1978. Such a constraint would not be as significant for workers' compensation payments because of more conformity in their provisions.

[2] Based on survey data reported in Exhibit II-4: ($482 statutory compensation per operator + $133 medical expense per operator + $78 supplement per operator) x 105,000 operators = $72,765,000. Note that these data, unlike many that follow are based on system-wide costs for all employees, extrapolated using the number of operators.

[3] At 15 large systems with 39,000 employees, IOD days per operator were 13 percent higher than the IOD rate for maintenance and transportation together.

EXHIBIT II-4

DIRECT COST INDICATORS OF TRANSIT INDUSTRY ABSENCE

COST INDICATOR	YEAR	UNWEIGHTED MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	NUMBER OF PROPERTIES IN SAMPLE	NUMBER OF OPERATORS IN SAMPLE	OPERATOR WEIGHTED MEAN
Ratio of Workers Compensation to Medical Costs	1978	2.65	4.03	0.51	20.27	23	25665	2.90
	1974	1.88	1.02	0.34	3.56	14	10004	2.13
Average Sick Leave Expense Per Operator ($)	1978	338.47	226.19	1.00	885.25	23	15381	391.79
	1974	159.12	166.96	0.00	457.09	10	3461	254.83
Average Workers Compensation Per Operator ($)*	1978	561	1,250	7	7,353	34	38374	482
	1974	110	122	0	413	14	13884	175
Average Medical Expense Per Operator ($)*	1978	128	107	0	400	25	25817	133
	1974	64	75	0	261	12	10135	55
Total Direct IOD Expenses Per Operator ($)*	1978	332	345	17	882	7	5785	493
	1974	66	0	94	133	2	1629	130
Average Weekly Sick Leave Pay Per Operator ($)	1978	71	53	1	200	19	11126	80
Average Weekly Wage Rate Per Operator ($)	1978	273	62	164	418	49	37357	323
Average Weekly Wage Rate - Maximum Weekly Workers Comp. ($)	1978	151.01	58.63	46.08	229.41	12	19803	136.95

* IOD payments per operator are total system-wide payments for all employees divided by the number of operators.

Maximum Number of Properties in Sample = 57
Maximum Number of Operators in Sample (1978) = 42899
Maximum Number of Operators in Sample (1974) = 21589

Medical payments for job-related illness and injury increased by 142 percent during the same period. In 1974 average medical payments per operator were $38, and in 1978 the figure was $93. This implies a total transit industry payment of $10 million in 1978 to operators or $14 million for all employees.

In 1978 the supplementary payments per operator were $55. At the national level, this suggests transit industry payments of about $6 million for operators alone. These payments arise from past practices or contract provisions that require some systems to make operators "whole" during disability. These estimates may be higher than actually incurred, since it was assumed that blank survey responses were missing data as opposed to zero entries. If it was assumed that blank entries were indeed zeros, then the estimated supplementary and other payments would be lower.[1]

The total direct costs of operator absence were 93 million dollars, as illustrated in Exhibit II-5. The exhibit also shows the disproportionately high cost of IOD absence. Exhibit II-6 illustrates the increase.

Indirect Operator Payroll Costs

Other than direct payments to absent operators, the most significant cost of absenteeism is the cost of hiring additional operators and performing the work at overtime rates. These costs have three primary elements:

- the "per operator" costs associated with larger numbers of operators, such as vacation, training, holidays, pensions, and other fringe benefits ;
- the overtime premium paid to operators when absence is high so that there are not enough extra operators; and
- other mininums and allowances arising from the unpredictability of absence.

PMM&Co.'s survey results, (Section F, second portion, questions 5, 6, and 7 in Appendix B), indicate that only 960 (or 19 percent) of 5,085 weekday runs from which the operator is absent are worked at overtime. These figures represent 45 locations at 31 different systems. These data will be used in assessing the indirect costs, as follows.

[1]Since we are dealing with small amounts of 1974 data on supplementary and other payments, growth rates between 1974 and 1978 were not considered reliable.

EXHIBIT II-5

DIRECT COSTS OF OPERATOR ABSENCE, 1978

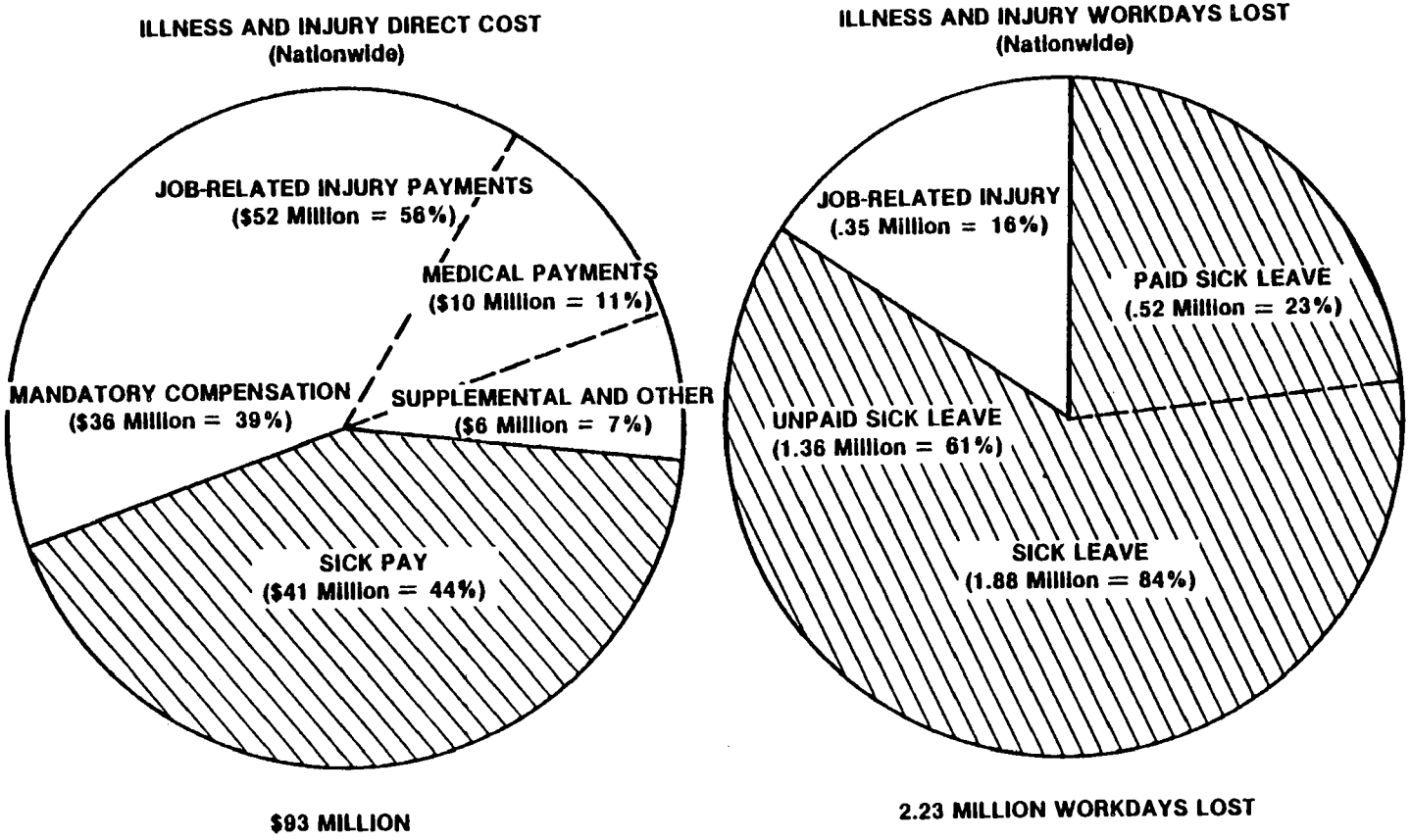


EXHIBIT II-6

INCREASE IN ABSENCE

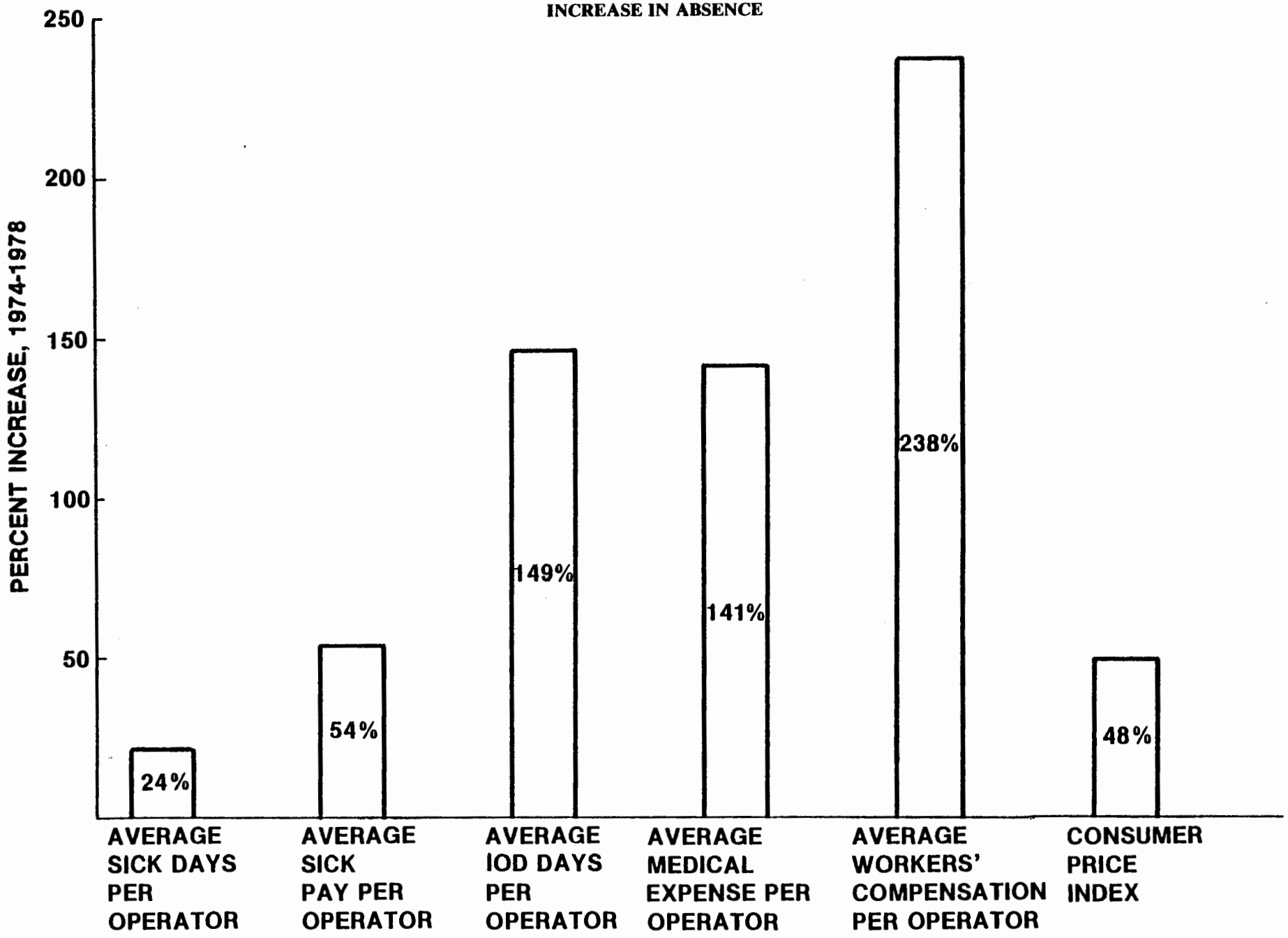


EXHIBIT II-7

PER OPERATOR COSTS

	ILLUSTRATIVE SYSTEM A	ILLUSTRATIVE SYSTEM B
Insurance (Med. & Life)	$1,285	$1,192
Uniform	114	60
Sick Pay	286	252
Workers' Compensation	295	684
Unemployment	101	73
Pension	2,487	520
Holidays	912	454
Vacation	1,243	656
Training (Allocated)	52	52
Jury, Court, Funeral, Etc.	42	25
FICA On Preceding 4 Items	136	72
TOTAL FIXED COST	$6,953	$4,040

National Average Per Operator Cost $\approx$ $\frac{\text{Illustrative Systems' Per Operator Cost}}{\text{Illustrative Systems' Fringe Benefit}}$ X Survey Average Fringe Benefit

$= \frac{\$6,953 + \$4,040}{\$5,678 + \$3,617} \times \$5,488$

$= \underline{\underline{\$6,491}}$

Per Operator Costs

The primary cost of having an extra list operator work an absentee's run is the added fringe benefits, or more precisely, those costs that are determined by the number of operators, regardless of the work performed. Exhibit II-7 shows the "per operator" costs for two sample systems. Based on the ratio of per operator costs to fringe benefits at these systems, as well as on the operator fringe benefits reported in the survey, PMM&Co. estimates the average per operator cost in 1978 to be $6,495. Since the survey data show that the average operator works 211 days per year, and since 81 percent of absence is covered with extras, 11,500 extras are employed to cover absence. Their per operator costs are $74,685,000.

It should be noted that these are only the operator payroll costs; administrative costs are covered elsewhere. It should also be noted that several significant costs require analysis at each system before the per operator costs can be computed:

- FICA is generally not a per operator cost since it is paid only on wages for work, not to the absent operator; however, FICA paid on holiday, vacation, training pay, and so forth is paid to both the absent and the working operator and should be included.

- Pension contribution, although it is often calculated as a percentage of wages, is generally a per operator cost; even though total wages may not increase with the addition of an extra to work absence runs, and though the contribution does not increase in the near term, an actuary will eventually increase the percentage contribution to cover the unfunded liability of the additional employee.

- Contractually excused absence pay (jury duty, etc.), training, and other uncertain costs that are not incurred on a per annum per person basis are most accurately estimated by allocating one or two years' actual expenditures across the work force.

Thus, per operator costs are the largest of the costs of absenteeism. However, they are complemented by the overtime costs of those runs that cannot be filled with extras. As discussed in Section III, the proportions of absence worked by extra operators and overtime operators is under managements' control. Just as extra operator costs have been estimated using the best evidence of the transit industry's current practice in balancing extras and overtime, overtime costs are similarly estimated in the following paragraphs.

Overtime

Overtime premium is paid to cover absence in two situations:

- an operator may be asked to work a second run or a portion of a run after his regularly scheduled run; or
- an operator may be asked to work a run on his scheduled day off.

Although contract provisions vary somewhat in their treatment of these situations, the general practice is to pay time and one-half for all such work. Contracts that call for double time after eight hours or permit a fifth day at straight time do exist, but they are rare. Other allowances and premiums associated with these situations are discussed later.

Based on the total operator wages reported in the survey, the average wage rate in 1978 was approximately $7.69. Assuming that 19 percent of the 3,000,000 absence days were worked at overtime, the total premium would be $17,533,000. In addition, these premium payments incurred additional FICA expense at the rate of 6.05 percent, for a total cost of $18,594,000.

Other Allowances and Premiums

While the major costs have been discussed above, there are a number of other costs that may be associated with absence. In general, absence absorbs extra operators and requires uneconomical decisions to hold operators, pay overtime, and break up scheduled runs. Among the various disruption costs that may occur are:

- spread premium for work in addition to a regular run;
- spread premium paid to an extra list operator between his show-up or report time and pull-out;
- special premiums for intervening time;
- piece minimums activated when an absentee's run is broken up so that it can be worked into replacement drivers' schedules;
- travel time (often at overtime) when runs are broken up;
- intervening time paid to hold an operator for additional work; and

- daily minimums paid on low absence days to extra operators who were hired to cover absence.

The last two of these deserve particular comment.

Some of the most subtle absence costs are exemplified by discretionary intervening time pay (sometimes called waiting, cover, protection, call, or station time). When a dispatcher is shorthanded due to absence, he may be persuaded to promise operators pay time that is not required by the contract to induce them to perform additional work. This is sometimes called "blackmail call time." In these situations, high absence has shifted the balance in the labor-management relationship to the extent that management begins to lose control over costs. The system may employ additional operators to reduce this problem, but the unpredictability of absence often makes this uneconomical as well.

The final type of the above listed unmeasured costs, extra list minimums on low absence days, may be a significant cost at some systems. PMM&Co.'s experience in analyzing extra lists suggests that the average of 19 percent of absence runs operated at overtime would not indicate widespread payments of large amounts of guarantee. In other words, short term variations in absence are seldom more than 20 percent of the average.

Administrative Costs

In addition to the payroll costs of absence, immeasurable administrative costs result. These costs include all administrative functions that directly or indirectly are involved in supervison or support of the work force. Among the more apparent functions are:

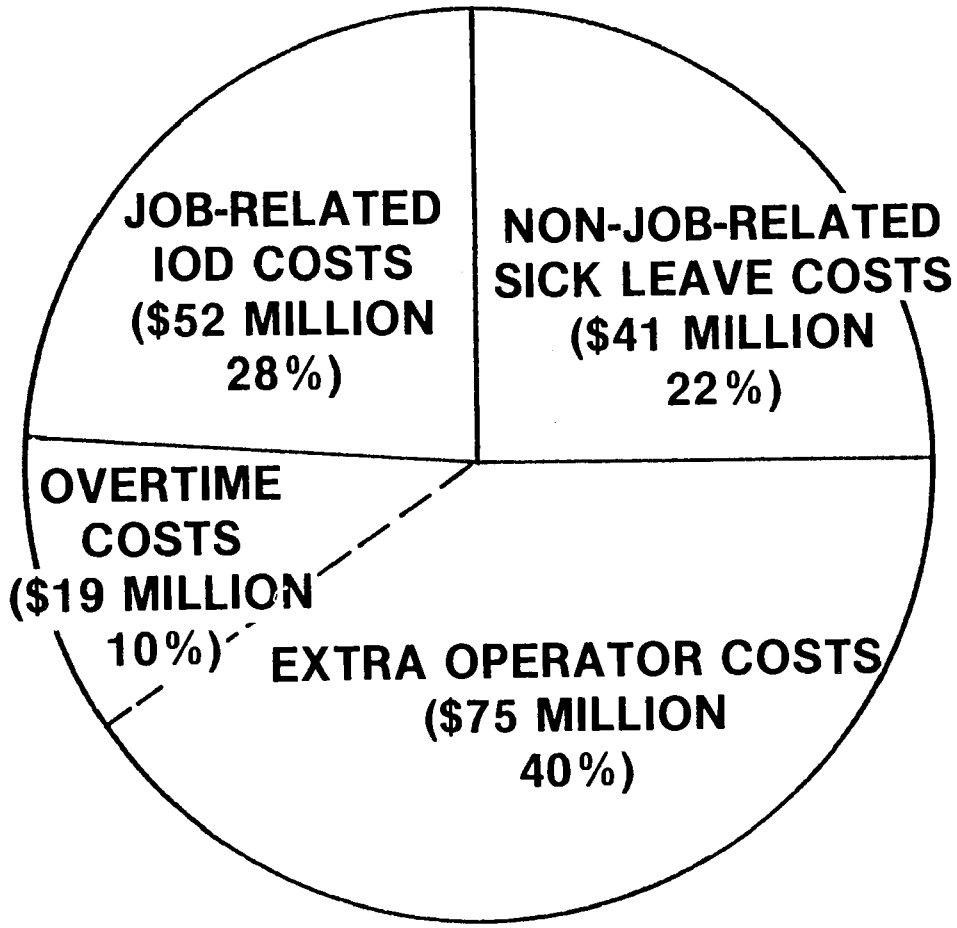
- recruiting and hiring;
- training;
- accounting;
- dispatching; and
- dispatching facilities and maintenance.

Furthermore, the medical department or payments for medical services and claims department are directly affected by absenteeism.

The total identifiable cost of 1978 operator absence of $185 million is illustrated in Exhibit II-8. In addition to the expense of absence, significant effects on service and employees are important considerations.

EXHIBIT II-8

TOTAL INDUSTRY COSTS OF TRANSIT
OPERATOR ABSENCE (1978)



TOTAL ESTIMATED COST = $187 MILLION

NOTE: Disruption costs (e.g., minimums, waiting time, travel time, and spread premium) and administrative costs (e.g., dispatching, recruiting, hiring, accounting, and claims) are not included in this estimate.

Service Impacts

The effects of operator absence on service include failure to fill the schedule because of operator unavailability, the resulting schedule decay, and lack of operator familiarity with the route.

Failure to fill the schedule is the strongest adverse effect of absence on service. Although the true impact in terms of alienated riders and lost revenue is difficult to estimate, the amount of lost service is quantifiable. Twenty-nine systems estimated the amount of service not operated because of operator absence (question C13, Appendix B). Their estimates were extrapolated to a national total of 337,000 hours. Although this is only a small fraction of the service scheduled, the confidence of the systems' ridership is shaken in those cases where service is repeatedly cancelled. Furthermore, service cancellation has a ripple effect in the form of schedule decay.

Loads on a trip following a cancelled trip are abnormally heavy. Boarding and dwell times increase and the vehicle falls behind schedule. As the vehicle falls further behind, it carries not only the load of the cancelled trip before it, but also begins to pick up riders that would otherwise board the following bus. This phenomenon, schedule decay, is fostered by cancelled trips and is a major cause of bunching.

Finally, operator absence and the resulting increase in the amounts of extra list work results in fewer operators who are familiar with their routes. This may have not only the immediate impact of poor schedule adherence and route deviations, but it also makes the service more impersonal.

Employee Impacts

Absence also has severe adverse impacts on operators themselves. Most immediately, absence requires more operators to work the extra board, which is generally (although not universally) disliked. The unpredictability of the work and lack of familiarity with routes alienates operators as well as riders. More fundamentally, absenteeism is an expression of disregard for the occupation of bus operator and for the service offered to the public. Respect for the service that the operator performs and the dignity of the employee are severely impaired when operators themselves show lack of concern. While the viewpoint of operators interviewed varied widely, those who disapproved of their coworkers' absenteeism expressed sincere frustration.

The adverse effects of operator absence on the work force itself and on service reliability are equally as important as cost considerations. Although costs can be more easily measured than some of the other effects, the rapid increase and prospect of further increases in absenteeism suggest the

importance of concerted efforts by the industry to control the problem. Before proceeding to the potential methods for control, an examination of cause is appropriate.

CAUSES OF ABSENCE

There are at least three explanations for the recent increases in absenteeism. Many in the industry have elaborated upon these explanations, and some introduce other factors as well; however, in general, three themes emerge:

- employees are paid so much for being absent that it is hardly worth their time to work;
- employee values have changed: the "new breed" rebels against authoritarian leadership, is seeking self-fulfillment beyond wages, and is not satisfied by the regimented life of the traditional transit operator; or
- management has failed to communicate with employees, to recognize them as individuals, so the employees no longer care about the organization.

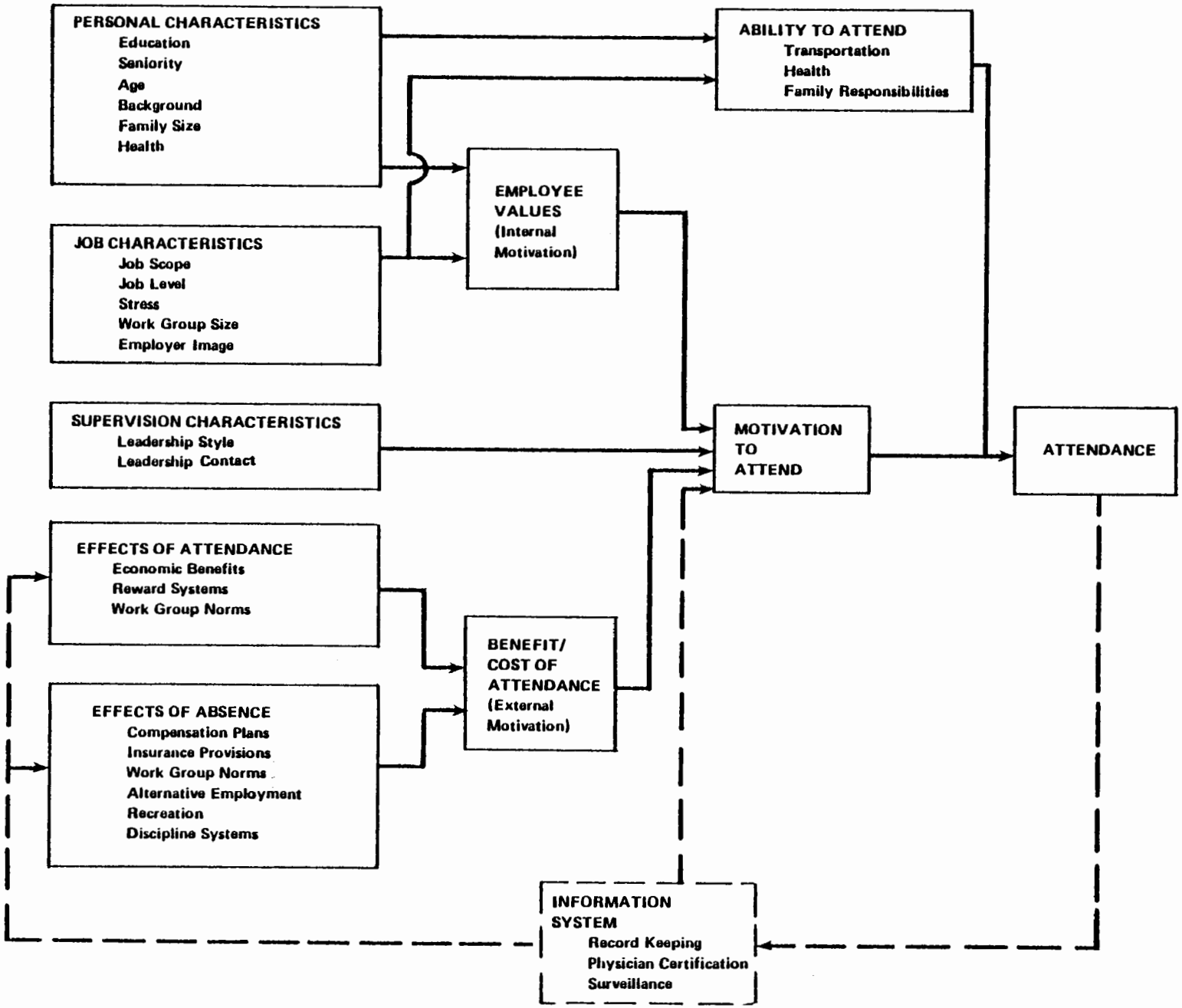
Unfortunately, only the latter of these explanations seems to allow for the improvement of the situation. The remainder of this section establishes a conceptual model of absence and attendance in order to reconcile the explanations for the increase in absence and to introduce controllable factors that offer hope for improvement.

The model is based upon earlier studies of absenteeism, and on the work of Steers and Rhodes in particular (see Appendix A). It is intended to provide a frame of reference in examining the factors that affect absence and determining ways that attendance may be encouraged. It is not intended as a quantitative model nor as a complete representation of all the complex interactions and the range of factors that may affect attendance. The model is illustrated in Exhibit II-9.

Personal characteristics of the employees are the first of five major influences on absence. The characteristics listed in the exhibit are intended only to show what has been suggested; other similar characteristics could be added to the list, and some of those mentioned may be irrelevant. For example, the Leary study (see Appendix A) found that there was no correlation between attendance and seniority; nevertheless, many believe that this is an extremely important factor. Education and background have also been related to attendance, largely as indicators of an individual's personal values. Health and family size affect the employee's ability to attend and influence internal motivation.

EXHIBIT II-9

ABSENTEEISM CONCEPTUAL MODEL



Attendance is also affected by the way the employee perceives the job in terms of its dignity and attractiveness. Stress was considered a major factor not only in the literature but also among labor leaders and managers interviewed in this study. Stress is the most apparent explanation for operators having a consistently higher absence rate than mechanics. Work group size has been related both to peer pressure and organizational commitment, which are fostered by smaller groups, and to the closeness of supervisory contact in smaller groups. The literature deals only with groups much smaller than most transit garages. However, the survey responses showed some correlation between absence rates and garage size in locations of fewer than 400 operators. No correlation appeared for locations of more than 400 operators. Many interview respondents suggested that system size may also have an effect on attendance; however, the survey data did not support this hypothesis. Another job characteristic that has been associated with attendance is the employer's image.

Personal characteristics and job characteristics combine to influence the employee's values and his internal motivation to attend. They also affect the employee's ability to attend, particularly in the case of the employee's health. It should be noted, however, that most health-related absence is not because of complete incapacity. Rather, there is a broad range of health conditions in which the employee may choose to come to work or not. Therefore, ability to attend combines with motivation rather than superseding it.

The style and amount of supervision must also be considered in an examination of absenteeism. Although the literature is not clear concerning the effect of leadership styles on attendance, there is a conscensus that the amount of supervision (e.g., the supervisor-to-operator ratio) is related to attendance.

The effects of attendance are the fourth category of factors. The economic benefits of attendance have become less clear, and this was a major factor cited in interviews as an explanation for the increase in absence. The situations in which an employee may, through tax exemptions and credit insurance provisions, have more disposable income when receiving workers' compensation benefits than when working are often cited as indicative of the loss of attendance incentives. Reward systems for attendance have been widely used, and, as discussed in Section III, the survey data supported such use. Work group norms may also act to reinforce attendance through pressure, if the work group is so disposed.

The effects of absence are the reverse side of the coin. Compensation plans, as discussed above, are widely thought to be a major factor in determining absence rates. Credit insurance provisions that are automatically activated when an employee makes a disability claim serve to reinforce the

economic effect of the compensation benefits. Alternative employment and recreation are both recognized as attractive aspects of absence, but few interviewees placed these high on their list of explanations of absence. Work group norms may serve to reinforce or chastise absence. And finally, employer discipline, the most widely used of all attendance measures in transit, operates by informing the employee that the effect of absence will be suspension and discharge.

As illustrated by Exhibit II-9, external motivation, internal motivation, and supervisory characteristics influence the employee's overall motivation to attend. Internal movtivation is affected by personal characteristics and job characteristics. External motivation is determined by the effects of absence and of attendance.

After the employee has decided to attend or not, his action is noted in information systems which feed back into discipline and reward systems. It is also felt, particularly by those who support the surveillance method of reducing absence, that merely the collection and existence of the information motivates an employee to attend. Another aspect of the information feedback loop is the physician certification.

The conceptual model of absence discussed here will be used as a framework for the discussion of attendance programs presented in the following section. Although it has little predictive value and does not automatically provide cures for absence, it serves as a basis for ensuring that attendance programs reflect a full understanding of the complex factors that influence attendance decisions.

In summary, operator absence has been increasing rapidly, particularly in the job-related injury category. Total national costs of approximately $187 million represent almost $1,780 per operator per year and one quarter of the federal Section 5 funding. Thus the need for effective attendance programs is acute.

III. ATTENDANCE PROGRAMS

Attendance programs that can generally be implemented outside the context of the collective bargaining agreement are the subject of this section. Some of the areas discussed below have been incorporated into many labor agreements. Conversely, some of the areas discussed in the succeeding section on labor agreements may have been approached informally at some systems. Because of the differences between the decision making process for contract items and the process for noncontract items, it is appropriate to discuss their potential in differing contexts.

The first portion of this section describes the methods currently used or proposed in the transit industry for reducing the adverse effects of absence. The second portion discusses the effectiveness of the various methods, including statistical evidence provided by the survey where appropriate. Finally, the principal recommendations arising from the attendance program information are presented.

RANGE OF ATTENDANCE PROGRAM METHODS

Using the conceptual model in Section II, the major methods of improving attendance and reducing the adverse effects of absence that were encountered during the study are described below. Exhibit III-1 lists methods in the categories of:

- effects of attendance;
- effects of absence;
- supervision;
- job characteristics;
- personal characteristics;
- ability to attend;
- information system; and
- cost control without absence reduction.

There is little consensus in the industry concerning attendance programs. Exhibit III-2 presents the prevalence of selected programs that were addressed

EXHIBIT III-1

ATTENDANCE PROGRAMS

METHODS INVOLVING JOB AND EMPLOYER CHARACTERISTICS
- In-House Newspapers
- Social Events
- Suggestion Program
- Education Assistance
- Employee Counseling
- Police Protection
- Labor/Management Cooperation

METHODS INVOLVING PERSONAL CHARACTERISTICS
- Applicant Testing
- Applicant Record Screening
- Probation and Discharge

METHODS INVOLVING ABILITY TO ATTEND
- Safety Programs
- Day-Care Centers
- Transportation to Work

METHODS INVOLVING INFORMATION SYSTEM
- Surveillance
- Physician Certification
- Management Information System

METHODS INVOLVING COST CONTROL
- Planning for Patterns of Absence
- Planning for Levels of Absence
- Workers' Compensation Insurance

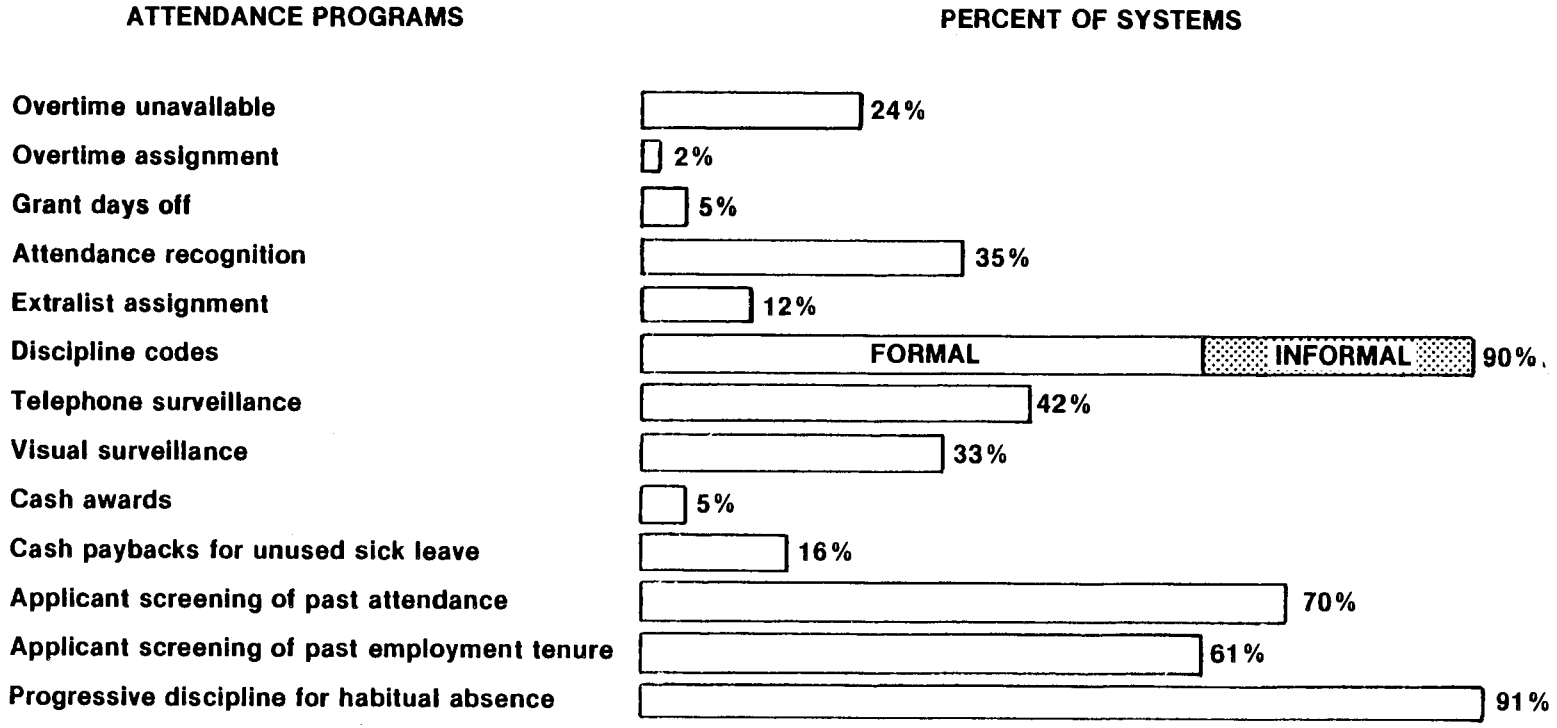
METHODS INVOLVING EFFECTS OF ATTENDANCE
- Requested Days Off
- Overtime Assignment
- Limiting Overtime
- Attendance Recognition
- Reverse Discipline
- Garage Size
- Team Activities

METHODS INVOLVING EFFECTS OF ABSENCE
- Extra list Assignment
- Performance Codes
- Friday Pay Day
- Limit Workers' Compensation Availability
- Limit Sick Pay Availability

METHODS INVOLVING SUPERVISION CHARACTERISTICS
- Training
- Employee Interviews
- Employee Performance Appraisals
- Supervisory Ratio

EXHIBIT III-2

PREVALENCE OF ATTENDANCE PROGRAMS



in the survey. Discipline codes and applicant screening are the only methods used by a majority of the systems surveyed.

Methods Using Effects of Attendance

The following methods employ positive reinforcement for good attendance.

Granting Days Off Based on Attendance - Three of 57 systems indicated that they based the decision to grant an operator's request for a day off on the operator's attendance record. This method targets precisely the group of operators who are not inclined toward good attendance, i.e., who want time off. Several systems mentioned that a liberal policy toward requested days off may reduce absence by reducing the need to take days off under false pretenses.

Assigning Overtime Based on Absence - One of 57 properties indicated that it assigned overtime work based on the operator's attendance record. Many systems suggested that the availability of overtime pay was a major factor in making it economically tolerable for the operator to be absent on regular work days.

Limit Availability of Overtime - Managers often reported that the absence problem was compounded by the operators' ability to be absent on workdays and more than compensate by working an off-day at time-and-one-half. By reducing the overall amount of overtime, the economic benefit of attendance (i.e., wages) is reinforced.

Attendance Recognition - Twenty of 57 systems replied that they have some form of nonmonetary attendance recognition. These vary from a junior and senior "operator of the month" to a fully developed annual competition culminating in an awards banquet. Most such programs include other factors in addition to attendance in determining the operator to be recognized.

Reduction in Discipline Record - Several disciplinary systems include not only the recording of points or days missed for absence, but also the reduction of points, or the removal from the records of days missed, after extended periods of good attendance.

Work Group Size - The norms of a work group may reward attendance, and the normative strength of small work groups has been discussed in Section II. Although no experiments were found, the suggestion of a cadre of operators on a route with specific vehicles and possibly a mechanic team was discussed. One system has experimented with work grou size as an organizational technique. A large division was split in two (within the facility) with apparent success. Several systems mentioned the importance of the number of operators

in determining the manageability of a location. Statistical analysis indicates that the number of operators at a location may have a positive correlation with the absence rate per operator, particularly for locations of fewer than 400 operators.

Work Group Teams - Several systems reported or suggested team programs. These are commonly instituted as competitions among the operating locations for prizes such as trophies, special social events, or plaques. The competitions often include other criteria as well as attendance.

Methods Using Effects of Absence

The effect of absence on the operator is the most widely used of the five determinants of attendance. This was often attributed to the idea that its complement, attendance, is expected and needs no reward.

Extra List Assignment - Seven of 57 properties indicated that absence resulted in either assignment of a regular operator to the extra list or in the reduction in an extra list operator's status in assigning work.

Performance (or Discipline) Codes - Discipline systems involving suspension or discharge are by far the most common control tactic used. Fifty-one of 57 properties have either an informal or a formal performance code. Thirty-five indicated that their codes were formal while the remainder indicated that the code was informal. Formal codes are generally written and usually prescribe the punishment for specific absence frequencies. Progressive codes prescribe the punishment in increasingly severe amounts, often culminating in discharge. The definition of absence that is subject to the code varies from unexcused absence only to all absence, including sick leave and absence excused in advance by a supervisor. Some codes create a separate offense for abuse of sick leave or job-related injury leave. In addition, the strictness of enforcement varies. Five of 30 systems (17 percent) indicated that they had administered no suspensions for absence in 1978. Ten of 57 (18 percent) did not discharge anyone for absence. Of 3,917 suspensions reported, 1,745 (45 percent) were for absence. Finally, some systems questioned whether a code should be published and made available to the employees, or should be formalized but known only to the supervisors.

A number of legal issues have been raised concerning performance codes. These include:

- Under a typical labor agreement, what are management's and the union's rights in establishing the performance code?

- May illness or injury-on-duty be treated as a disciplinary matter under a performance code?

- May an employee be terminated because of absence on sick leave or job-related injury leave?

These are questions that may turn upon the precise wording or circumstances surrounding the application of a code. As with many labor relations issues, arguments can be made on both sides of these questions. However, this study's research indicated the following. First, management may implement a code of progressive discipline for absence.[1] An employee may challenge the code's provisions, when applied, but management retains the authority to initiate a code. For reasons discussed below concerning organized labor's role in the absenteeism issue, unilateral imposition of a code is not recommended.

Second, several codes include absence because of illness in the employee's disciplinary record. Arbitrations have upheld the appropriateness of this practice. However, a strong argument can be made that illness is unintentional and should not be punished. Furthermore, no instances were found where IOD leave was successfully included in an employee's record for disciplinary purposes; this may be attributable to statutory provisions that prevent retaliation against an employee for exercising his rights under a workers' compensation act. Some performance codes include a separate category of offense (in addition to absenteeism) that prescribes discipline for employees who abuse their sick leave or IOD leave privileges.

Another approach to the question of disciplining alleged sickness and IOD is suggested by the third of the above questions. Indeed, it seems that termination based on inadequate attendance is possible. While recognizing that absence, as a behavioral matter, is a complex problem that is not subject to legal distinctions, litigation may make a distinction between disciplinary actions to prevent controllable absence (which would be considered retaliation if applied to IOD) and termination for the economic reason that the employee is too unproductive to be employed as an operator.

Friday Payday - Absence is higher on Fridays than other days of the week. This has been attributed primarily to the attractiveness of long weekends, but also at some systems to the receipt of pay on Thursday and the resulting feelings of release, spending sprees, or hangovers. It was suggested that the absences would be reduced by distributing pay with operators' regular runs on Friday. If an operator were absent, he would not receive his pay until Monday.

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[1]This result was reached in at least two reported arbitrations: Jeffrey Mining Machinery Co. and Machinists Local Lodge 1038, 61 BNA Labor Arbitrations 220, and Cambell Industries, Marine Division and Machinists District Lodge 50, Local Lodge 389, 62 BNA Labor Arbitrations 17.

Limit Workers' Compensation Availability - Among the primary effects of absence that have been related to high absence levels is the high level of compensation provided by workers' compensation statutes. Workers' compensation benefits are usually computed as two-thirds of the employee's average earnings up to a statutory maximum that is linked to the statewide industrial wage average. A seven-day waiting period is common, with some longer waiting periods and some retroactivity once the waiting period is exceeded. The benefits are tax free and are supplemented by availability of various other disability benefits such as eligibility for food stamps, exemption from garnishments, and automatic payment of installment credit liability by insurance programs. Depending on the individual employee's credit obligations and withholding status, workers' compensation benefits may provide more disposable income than regular earnings. Transit system managers have attempted to attenuate these inducements in several ways:

- reassignment to light duty;
- aggressive litigation of claims; and
- deferral of payment on contested claims.

Temporary or permanent reassignment to other duties was often seen as the least retaliatory and disingenuous attack on abuse of workers' compensation. Seventy-five percent of the systems reported that their states permitted reassignment of claimants, 25 percent reported that their states were neutral, and none indicated that reassignment was prevented by law. Union cooperation was slightly favorable: 29 percent of the locals encouraged reassignment, 16 percent somewhat encouraged the practice, 27 percent were neutral, 4 percent were perceived to somewhat discourage the practice, and 24 percent discouraged it. Forty-three percent attempted temporary reassignment of a claimant in 1978. Thirty-seven percent attempted permanent reassignment. Fifteen percent of the responding systems attempted to place claimants at another employer. Employees were often said to deny their physical fitness or qualifications for reassignments, reassigned employees were sometimes unproductive, and forced reassignments were less than fully successful.

Contesting claims was a tactic that was also frequently recommended. Approximately half of the 41 responding systems reported that they had contested claims in 1978. Of 575 contested claims reported by 41 systems, only 193 were denied.

Some systems reported unilateral deferral of payment of benefits while claims were being contested. In many such cases, the claim is settled. One system is attempting this in cases with clear physician concurrence in the claim. No court tests of such actions were reported.

Termination of Fringe Benefits - Termination of employment status based on an employee's inability to work an amount that can be reasonably expected by an employer is discussed above; this may apply to an employee with a poor attendance record, including IOD incidents. In addition, if the action is not retaliatory, the employee may be terminated after he has been absent and receiving workers' compensation. In most states, the workers' compensation benefits continue, but the employee loses other fringe benefits and loses the option to return to work. Twenty-five systems indicated that they discontinued fringe benefits after a specified length of disability leave. The length of leave ranged from three months to five years, with almost half of the 25 discontinuing benefits after one year. Nine systems indicated that they discontinued fringe benefits if an employee rejected an alternative work offer, with six of the nine discontinuing benefits immediately and the others waiting up to one year after rejection of the offer before discontinuing benefits.

Limit Sick Pay Availability - Fewer management efforts for attenuating the inducement of sick leave were reported than for workers' compensation. The only administrative policy that falls in this category is the requirement to file a special claim for sick leave, in addition to reporting to an immediate supervisor. Eighty-one percent of the responding systems indicated that they required employees to file sick leave claims.

In addition, many of the systems have physician certification requirements of various types. These are discussed under "Information System."

Methods Affecting Supervision Characteristics

Interviews at the systems as well as the workshop discussions indicated strong support for the hypothesis that both quality and quantity of supervision affect absence rates. The following were determined to be effective supervisory techniques.

Supervisory Training - Several systems, specifically several personnel managers, indicated an interest in supervisor training. The need identified lies in providing supervisors with techniques for reinforcing organizational commitment and administering reward/punishment systems.

Interviews - Many of the progressive discipline codes incorporate interviews into their schemes. In addition, several systems reported routine interviews by supervisors upon return to work, on a periodic (e.g., annual) basis, or at the time a claim is made.

Performance Appraisals - An annual review of employees' records with interviews or letters to the employees was reported.

Supervisory Ratio - The ratio of supervisors to operators may affect absence rates. The relatively low supervisory ratio of transit operators, as compared to other industries, is frequently noted in this regard. The number of operators per road supervisor ranged from 12 to 100 and averaged 31. The number of operators per dispatcher (station clerk, mark-up clerk, etc.) ranged from 16 to 250 and averaged 35.

Methods Using Job and Employer Characteristics

The employee's attitude toward his occupation, including his image of his employer, was one of the most frequently suggested reasons for the increase in absence. Several programs were reported that were intended to enhance the employee's attitude toward the employer and to increase organizational commitment. Although few programs to change job characteristics were reported, several were suggested.

In-House Newspapers - Publishing transit system newspapers was among the most common of programs for improving the work group's commitment to the organization.

Social Events - Annual gatherings of staff were also mentioned. In some cases, reward programs were combined with social events to honor the recognized employee. The most common event cited as a help in improving organizational commitment was the bus rodeo.

Suggestion Programs - Employee suggestion programs were also frequently reported. Cash rewards for suggestions adopted by management ranged up to ten thousand dollars. Suggestion programs were often criticized for the shallowness of the implementation effort.

Education Assistance - Many of the systems provide employees with full or partial tuition assistance as a manifestation of the system's interest in the employee. Tuition assistance programs are often not well publicized nor fully used, based on comments in many of the interviews.

Employee Counseling - Several systems provide employee counseling programs that vary in scope. Drug addiction and alcoholism counseling are the most common: 32 percent of the systems reported alcoholism programs and 23 percent reported drug abuse counseling. In addition, many of these programs provide counseling concerning the employee's personal problems. These programs embody the transit system's concern for its employees as people rather than as productive units.

Police Protection - Because of the often mentioned stress on a transit operator who is constantly exposed to the public, improvement in the job environment through provision of police protection was suggested.

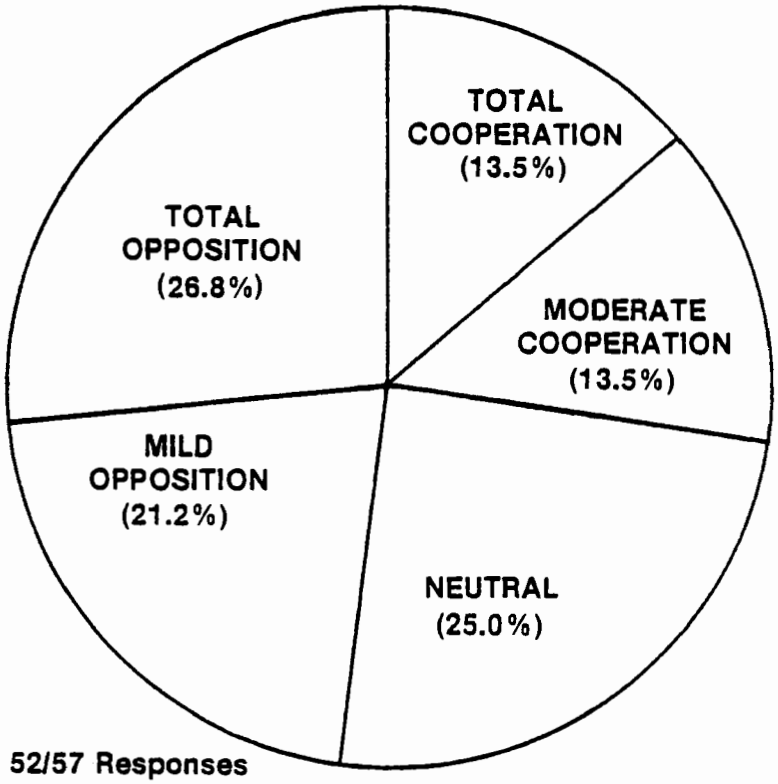
Labor/Management Cooperation - Reducing absence and reinforcing the work group norms that promote attendance through joint labor/management programs was suggested. Although no clearly defined examples of such programs were identified, many managers commented on the great potential that labor/management cooperation might have in reducing absence. Labor officials in general condemned abusive absenteeism and supported the reduction of absence in the interest of the employee's image as well as the productivity of the transit system. Yet the examples that most closely approximated labor/management cooperation consisted of labor's approval of a performance code. It should also be noted that in several cases labor opposed a performance code, and in at least one case were succesful in achieving its recision. Like the failure of many progressive and mutually beneficial proposals, the failure of that performance code may have been as much a result of the decision-making process as of the content of the proposal.

Exhibit III-3 illustrates the survey response to questions concerning union cooperation. Forty-eight percent of the systems indicated that the union opposed efforts to reduce sick leave, and 61 percent reported union opposition to efforts to reduce IOD. In both cases only approximately 25 percent of the systems reported that the union and management had been able to cooperate. Yet, in interviews, union officials indicated that they were interested in reducing absence if the end could be achieved through acceptable means. At least one local president went as far as to suggest that significantly stricter discipline would be appropriate.

Various forms of labor/management cooperation, centering around work improvement committees, were discussed at the absenteeism workshop described in Section I. Of all the attendance programs discussed, widest consensus advocated exploring labor management cooperation and the work improvement committee. The function of the work improvement committee is to allow labor and management to jointly address issues concerning transit work outside the context of the collective bargaining relationship. While it must be recognized that the structure of collective bargaining laws creates an inherently adversarial relationship, a growing number of experiments in other industries have shown that labor and management can work together productively to make many decisions outside the scope of the collective bargaining agreement. The work improvement committee, composed of management and labor representatives who are not necessarily labor relations personnel or union officials, is assigned the task of developing recommendations regarding issues such as bus specifications, bus rodeo administration, safety procedures, data collection procedures, or attendance programs. The amount of

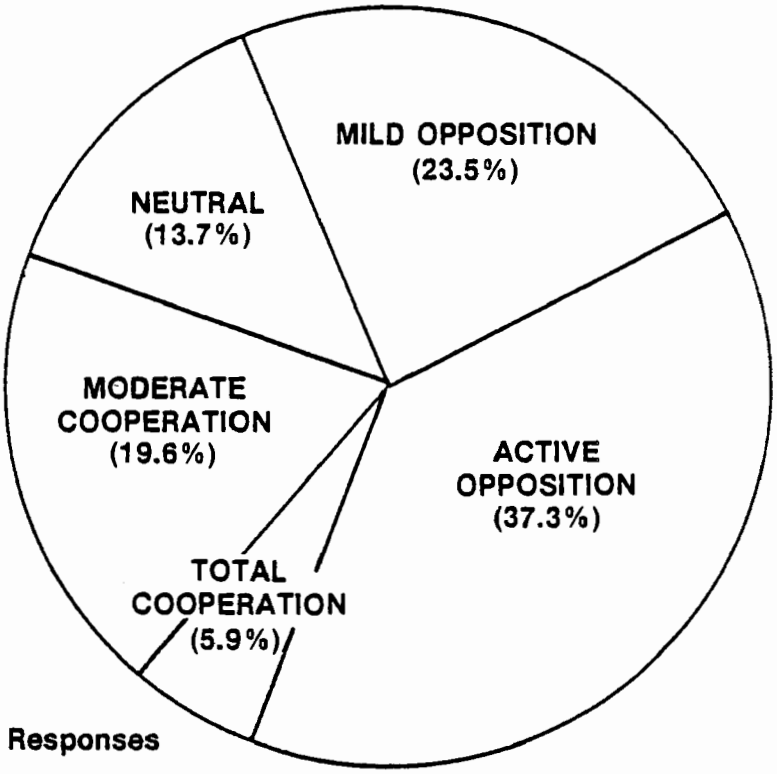
EXHIBIT III-3

MANAGEMENT VIEW OF UNION COOPERATION
IN REDUCING NON-WORK-RELATED INJURY
AND TIME OFF



52/57 Responses

MANAGEMENT VIEW OF UNION COOPERATION
IN REDUCING WORK-RELATED INJURY AND
TIME OFF



51/57 Responses

authority accorded the committee's decisions by both top management and union officials is the critical factor in the success of the committee. Giving operators a role in the decision-making process awakens their commitment to the organization and their ability to appreciate a total system viewpoint. Similarly, management's awareness of employee interests and ability to incorporate work environment considerations in management decisions is enhanced.

Exhibit III-4 illustrates the intended sequence of effects of a work improvement committee structure. By addressing issues such as those listed in the left-hand column of the exhibit, it is anticipated that a working relationship will be developed that will be characterized by the work culture ideals listed in the center of the exhibit. These ideals are centered on a desire for equity, high skill, and quality of service levels, which can be achieved in an atmosphere of mutual labor/management trust, if all parties adopt a total system viewpoint. To the extent that these ideals are fostered, the intended results at the right of the exhibit can be achieved. The work improvement committee may contribute directly to improved safety and service; furthermore, the sense of participation developed by the committee will lead to improved attendance and overall productivity. For the employee, the adoption of the desired ideals is intended to result in higher self-esteem and economic well being, as well as a greater assurance of security. Both employer and employee would benefit from the effects of the relationship, including an improved ability to communicate on the contract and grievance issues that do not come within the purview of the work improvement committee.

Methods Using Personal Characteristics

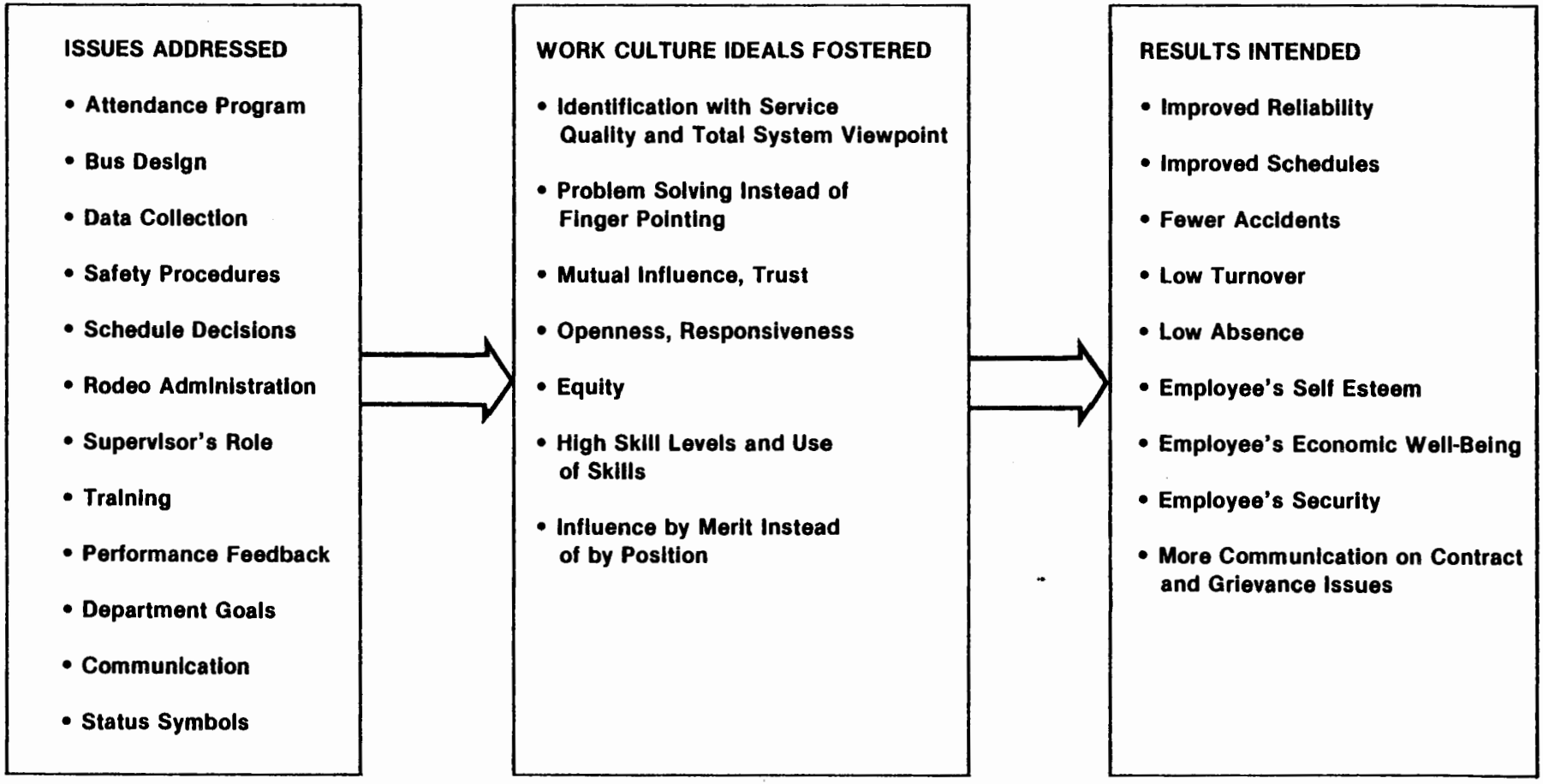
Another point on which management and labor often agreed was that the characteristics of the work force affected attendance, and that recruiting and screening procedures could be improved. The following are attendance programs that are intended to change the composition of the work force and foster personal characteristics that result in higher attendance.

Recruiting - Most transit systems have more than enough applicants for the position of operator because of the high pay and good benefits relative to jobs with similar prerequisites. Therefore, most systems devote their efforts to screening applicants. Few attempts to influence the type of applicant by actively recruiting in locations that would tend to produce good operators.

Effective Validated Screening Tests - Many of the systems use the test battery validated by the University of Chicago. There was some mixture of response concerning the battery, and opinions were negative on average; however, many systems were at a loss for a more effective legal alternative.

EXHIBIT III-4

LABOR-MANAGEMENT COOPERATION
WORK IMPROVEMENT COMMITTEE



Many traditional tests have not been validated to prove the lack of illegal discriminatory effects. One system reported substantially more satisfactory results from combining a validated intelligence test with the Chicago test battery. Other systems indicated a preference for job reference tests, i.e., tests that replicate elements of the job such as making change and reading maps and schedules. At least one other validated operator test has been developed.

Screening Applicants' Attendance Records - Seventy percent of the systems reported that they screened applicants' attendance records. Where this was done, interviews at the systems revealed that attendance was a major factor in rejecting applicants. Many systems expressed doubt concerning the legality of screening based on workers' compensation claim records.

Probation and Discharge - Although most systems with performance codes theoretically have provisions for discharging employees for absence, this is seldom accomplished. A type of termination is discussed above under Performance Codes that relates not to the prevention of future absence by employees in general but simply to the termination of a specific employee because he cannot or does not work enough. This is an attendance improvement method that operates through personal characteristics as much as through effects of absence. A similar program involves the employee's probationary period. Most systems reported that few employees were terminated during probation other than those terminated for inability to complete the training course properly. While many managers believe that employees are on their best behavior during their probationary period and therefore do not run afoul of the normal attendance standards, no attempts to purposefully screen employees during their probationary period were reported. It was suggested that strict screening of probationary employees would both improve the personal characteristics of members of the work force and reinforce morale through making the operator position more difficult to obtain.

Methods Involving Ability to Attend

Attempts to enhance the employee's ability to attend were few. To the extent that employees' ability to attend has not changed, changes in management efforts were deemed unnecessary. Most managers believe the recent increase in absence, and any opportunity for improvement, involve motivational factors. However, the following methods were suggested.

Safety Program - Occupatonal safety programs are already in place at most large systems, and a few look to these programs to relieve their IOD costs. For example, after frequent reports of operator injuries on fareboxes, one system undertook a program to pad all fareboxes.

Day Care Centers - Recognizing the increasing proportion of working spouses in the work force, it was suggested that day-care centers would improve attendance. Some systems attribute a significant protion of the increase in absence to child-care problems.

Transportation - It has been suggested that encouraging pooling would improve attendance, not only by overcoming the actual transportation problems of employees but also by exerting some peer pressure on the employee at the critical moment in the impulsive type of absence. Alternatively, scheduled paratransit for transit employees could be provided.

Methods Using An Information System

Many of the respondents reported the inadequacy of their information systems. The survey results indicate that, even after repeated attempts to correct or complete the responses received, 12 of 57 systems could not report the number of work days lost per operator. Only 32 of 57 could report the total amount paid in workers' compensation. However, information systems played an important part in many systems' control strategies.

Surveillance - Telephoning absentees or visiting their homes is a method supported by many managers. Both expense and allegation by employees or union leaders of harassment were seen as obstacles to surveillance. Many properties used surveillance only to spot check employees or only after a minimum period of absence. At least one system sees that every absentee is visited on the first day of his absence. Twenty-four of 57 systems indicated that they practiced surveillance by telephone. Nineteen reported that they visited employees' homes.

Physician Certification - Physician certification of an employee absence is among the most common management tactics for controlling the abuse of sick leave and workers' compensation. Exhibit III-5 presents the results of the survey questions concerning physician certification. In addition to the types of certification and the tactics for using certification that are implicit in the survey questions, several other types of certification were reported. Annual medical examinations were used in combination with certifications to adduce evidence of fraud. Certification of fitness was required by one system after one day of absence and before the employee could return to work, effectively forcing the employee to take additional time without pay. Finally, adverse medical examinations, or examinations of a claimant by a system-designated physician, were used to constantly monitor a claimant's condition and to assure claimants that fraudulent claims would be challenged.

Management Information System - Several interviews emphasized the importance to managers of access to absence information, either through thorough

EXHIBIT III-5

PHYSICIAN CERTIFICATION REQUIREMENT SURVEY RESULTS

Question C-9, Survey page 6

9. When is a physicians's certification required? (Check all that apply.)

	In House Physician Only (When Possible)	System's Designated Physician (s)	Physician of Employee's Choice
For all sick leave	0	8	10
For all sick leave of a specified duration (days)	0	6(2-30)	16 (2-20)
Only for all paid sick leave	1	6	14
Only for all paid sick leave of a specified duration (days)	1 (7)	5(3-30)	12(1-30)
Only for sick leave excused for disciplinary purposes	1	0	3

Not required - 1

Question D-9, Survey page 10

9. When is a physician's certification required? (Check all that apply.)

As soon as possible after injury	5	20	29
Within a specified time after injury (hours)	5(1-48)	9(1-48)	7(1-24)
Periodically during disability	5	35	27
For return to work	7	35	28

Not required - 0

Notes:

Figures outside parentheses indicate the number of systems, of 57 responding, that reported the respective physician certification requirements. Figures in parentheses represent the range of the time periods reported by the systems.

and efficient manual systems or through automated information systems. Integration of the attendance reports with the payroll systems, together with careful design of exception reports on attendance, were recommended information system design features.

Cost Control Methods

All of the attendance programs discussed above are intended to improve attendance and thereby reduce the adverse effects of absenteeism. In addition, the transit industry widely practices several methods of reducing the cost of a given level of absence. The two principal methods in the transportation department are planning for patterns of absence and planning for levels of absence.

Planning for Patterns of Absence - Although most systems, through experience, have determined those days on which absenteeism is highest, this information is not universally used to control costs. Many systems carefully monitor absence and have developed profiles of the week and of the year for the purpose of anticipating absence. In addition, specific factors such as sports events, the opening day for a popular race track, the beginning of hunting season, or weather forecasts may assist in predicting the level of absence.

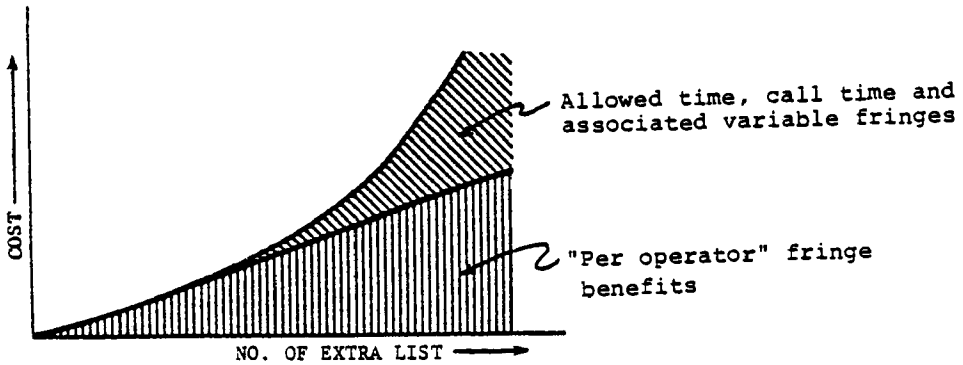
The principal way of using this information is in scheduling off-days for extra operators. Most (but not all) systems schedule fewer off-days on Fridays and Mondays, when absence is generally the highest. Furthermore, while regular operators are assigned days off in three or four picks per year, extra operators are assigned days off more frequently. Some systems are not required to provide each extra operator with two days off each calendar week, but only with an average of two days off during the period in which the off-day assignment applies. Because of the significant savings involved in having enough extras to minimize overtime and not having so many that excessive guarantees must be paid, it is worthwhile scheduling extra operators' days off on a day-by-day basis at most systems. However, the most that can be accomplished on this basis is tailoring the number of extra operator off-days to the absence pattern; the total number of off-days is already fixed by the size of the extra list itself.

Planning for Levels of Absence - The size of the extra list should be determined in advance based on the level of absence that is expected, together with other requirements such as vacationers' runs, tripper work, charters, and unpicked runs. Determining the most efficient size of the extra list involves trading off overtime pay against guarantees and fringe benefits for additional extra operators. Exhibit III-6 illustrates the nature of the cost trade-off. As the number of extra list operators increases, the guarantee pay increases

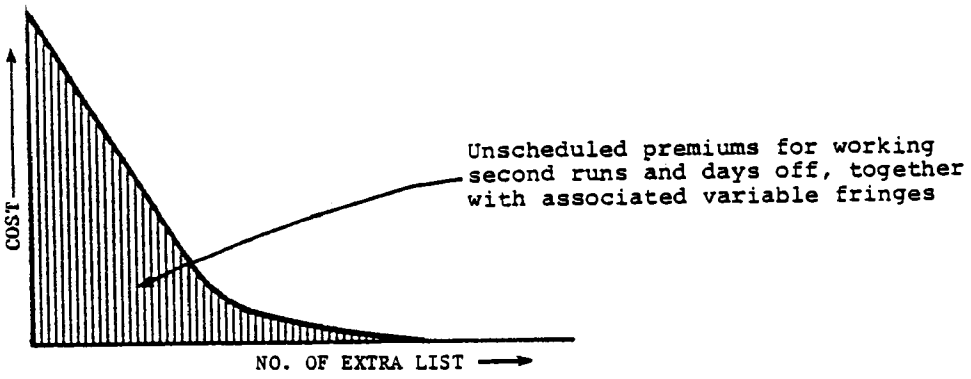
EXHIBIT III-6

THE NATURE OF THE COST TRADE-OFF

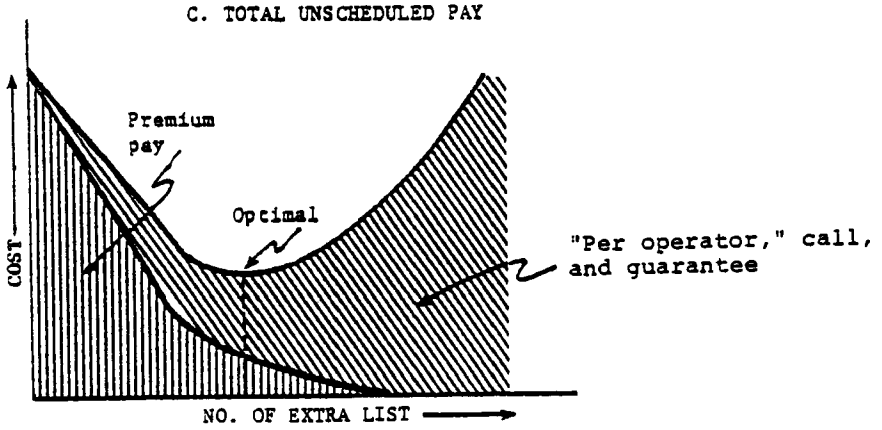
A. COST OF EXTRA OPERATORS



B. COST OF PREMIUM PAY



C. TOTAL UNSCHEDULED PAY



more and more rapidly, until the additional operators are doing no work at all (Exhibit III-6A). Simultaneously, the amount of overtime premium paid to regular operators decreases more and more slowly (Exhibit III-6B). At that point, as the extra list increases where the additional cost of an extra operator is as much as the savings in overtime, the optimal number of extra operators has been reached (Exhibit III-6C). In all systems where PMM&Co. has analyzed extra list requirements, this optimal number of extra list operators is more than enough to ensure that the schedule will be filled (i.e., to ensure an acceptably low number of missed trips). While there are a number of ways of computing the extra list, few take into account the changing balance between overtime and fringe benefits. The most rigorous way of planning the extra list for the expected level of absence involves a probabilistic analysis of the cost of extras, using historical absenteeism variability.

Workers' Compensation Insurance - The final cost control method is the analysis of insuring workers' compensation claims. Many state statutes constrain the employer's ability to self-insure, and others specify reserve requirements for those that self-insure. Seventeen systems reported maintaining a reserve, while 29 systems reported paying an insurance premium. As workers' compensation claims have become more routine, and the variability in payments has decreased, the value of insurance has also decreased. An analysis of the variability in claims and the exposure of the system in the event of multiple claim accidents provide the basis for determining whether the system is so small that full insurance coverage is economical. It should also be noted that some large systems contract for administration and/or litigation of their workers' compensation claims.

The attendance programs discussed above reflect the state of the art of attendance management in the industry. As suggested by the wide range of programs and the many variations, there is little agreement concerning those that are most effective.

EVIDENCE OF EFFECTIVENESS

The effectiveness of the various attendance programs was investigated through documented results at specific systems or through statistical analysis of the survey data. The survey data did not indicate clearly the effectiveness of most of the programs. The correlation analysis (reported in Appendix D) was complicated by the apparent tendency for systems with high absence to implement a number of programs. Thus, many of the systems that use the methods described above are those with high absence rather than low. Nevertheless, the persistence of high absence rates at systems that have implemented many of the programs suggests that an effective solution to the absenteeism problem has not been completely defined.

Evidence of effectiveness for the following methods was found during the study:

- limiting overtime;
- attendance recognition;
- work group size;
- performance codes;
- limitation of workers' compensation availability;
- close supervision; and
- labor/management cooperation.

The available evidence is discussed below; no meaningful data to establish the effectiveness or lack of effectiveness of the other methods were found.

Limiting Overtime - Several systems indicated that their experience suggested that reducing available overtime was effective in reducing absence. One system documented an experiment with increasing the extra list which showed a resulting drop in overtime premium, in total pay hours per platform hour, and in missed trips. The survey data do not show a statistically significant relationship between the respondent's statement that overtime was available and high absence. However, the data do show a high correlation between unpaid sick leave and the total weekly wages of the employee. A possible explanation would be the use of overtime to compensate for unpaid sick leave.

Attendance Recognition - In question C-14 of the survey (Appendix B), PMM&Co. asked whether selected attendance programs existed, including performance codes, surveillance, applicant screening, and meritorious attendance recognition. Of these, the only one that showed a statistically significant relationship with low absence is meritorious attendance recognition. PMM&Co. does not interpret this to mean that attendance recognition is a panacea; rather, those systems that approached the issue of absence in a way that included meritorious attendance recognition seem to have succeeded in controlling their absenteeism problems.

Work Group Size - The effect of the number of operators at a division has been discussed. One system that divided a location into two parts, still housed within the same building, experienced a reduction in absence. This may be caused by closer superivison, or by greater peer pressure. The survey data

indicate that there may be a relationship of absence rates with garage sizes of fewer than 400 operators, but that further increases in size do not affect the absence rate.

Performance Codes - The systems that reported using a formal discipline code had greater absence than those without. This may indicate that only systems with severe problems have implemented a formal code. However, it also suggests that the performance code has not been successful in reducing the problem. Informal codes showed no statistically significant correlation. However, systems were subsequently asked whether they applied progressive discipline to absence. Those that responded "no" had substantially higher absence rates than those that responded "yes." Based on these data, informal codes that contain an element of progressiveness appear to be the most effective; however, the data are not conclusive. Of further interest is a moderate correlation between the number of suspension days per operator and low absence rates.

Limitation of Workers' Compensation Availability - Several systems report success with a crackdown on abuse of workers' compensation. The survey data do not strongly support the methods of limiting compensation in that there is a positive correlation between IOD absence and percentage of claims contested but a negative correlation between IOD absence and fringe benefit termination. However, there is a strong correlation ($r = 0.67$ with $s = .017$) between IOD absence and maximum workers' compensation rate. As this strong correlation appears to be a true causal relationship, it is reasonable to conclude that a limitation of the availability of workers' compensation and an effective reduction in the rate would restrain IOD absence.

High Supervisory Ratio - There is a strong correlation between the number of supervisors per operator and low incidence of unpaid sick leave. Furthermore, the variations in work group size appear to be related to supervisory ratio as well.

Labor/Management Cooperation - Although there are no definitive experiments with labor/management concepts such as the work improvement committee, the survey suggests the tie between labor/management relations and absence. The correlation between union opposition to job-related absence reduction and combined job-related and nonjob-related illness and injury leave is high ($r = 0.31$, $s = 0.067$). Furthermore, it was noted in the interviews that exacerbated labor/management relations were often associated with high absence.

RECOMMENDATIONS

Based on the findings presented in this section, and in particular on the evidence of effectiveness, PMM&Co. makes the following recommendations:

- The transit industry, including both organized labor and management, should actively develop labor/management cooperation, in a form such as work improvement committees.

- Where an attendance program works through the effects of absence and attendance on the employee, the program should contain both absence effects (such as a fully enforced progressive performance code) and attendance effects (such as meritorious attendance recognition).

- Information systems should be developed around industry-wide definitions of attendance terminology and should be used in planning for both patterns of absence and levels of absence.

IV. LABOR AGREEMENT ATTENDANCE PROVISIONS

Absenteeism control tactics that generally would involve revision of the labor agreement are presented in this section. All pay provisions, fringe benefits, and seniority rights are included. As in the preceding section, the range of provisions will be described, followed by a presentation of evidence concerning the effectiveness of the provisions.

RANGE OF PROVISIONS

The major provisions that affect absence, classified by the five determinants in the conceptual model, include:

- effects of attendance:
  - sick leave payback;
  - cash bonus; and
  - weekly overtime.
- effects of absence:
  - seniority system;
  - loss of guarantee;
  - loss of holiday pay;
  - sick pay rates per day;
  - sick pay waiting periods;
  - allowed sick leave per year;
  - maximum accumulation; and
  - workers' compensation supplements.
- job characteristics:
  - compressed work week;

- job diversification; and
- part-time operators.

Effects of Attendance

In recognizing the need to overcome the inducements to be absent, many systems have negotiated provisions that require the expenditure of funds as a reward for attendance. Other systems feel that these practices may undermine the work ethic, in that employees are being rewarded for attendance that should be expected in any case. Other, more radical provisions have been suggested that would relate the earning of basic wages and fringe benefits to fulfillment of the employer's attendance expectations.

Sick Leave Payback - Nine of 57 systems reported that they pay all unused sick leave or some portion of unused sick leave to the employee. If 100 percent is paid back, the outlay for sick pay would increase. At systems where allowed sick leave is already almost exhausted, the amount paid back may be more than justified by the savings in overtime, "per operator" costs, and operations reliability. Some systems pay back only a percentage of the unused sick leave.

Cash Bonus - Three of 57 systems reported that they paid cash bonuses to operators for good attendance records. These bonuses normally take the form of an annual (e.g., Christmas) bonus, or quarterly supplement.

Weekly Overtime - Fourteen of 57 systems indicated that overtime was paid for more than 40 hours of work per week rather than eight hours per day. The effect of the provision is that the operator is not really earning overtime until he is working his fifth day. At some systems, the 40 hours is prorated in the case of excused absence.

Seniority Systems - It was suggested that seniority should be based on days worked rather than calendar days employed.

Effects of Absence

As in the case of noncontract practices, the industry has concentrated more on penalizing absence than on rewarding attendance. Some of the contract provisions that specify the effects of absence follow.

Loss of Guarantee - Nine of 57 systems pay guarantee only if five days are worked in the week.

Loss of Holiday Pay - Thirty of 57 systems reported that holiday pay is paid only if the day before and after the holiday is worked.

Sick Pay Rates Per Day - Of the systems reporting their method of computing sick pay, the following was the distribution:

- flat rate (ranging from $10 to $59 per day) - 9 systems;
- eight hours at regular rate - 30 systems;
- regularly scheduled earnings - 11 systems;
- percent of regular earnings - 2 systems; and
- other methods - 6 systems.

Some systems permit sick pay to be drawn to supplement workers' compensation up to the amount of regularly scheduled earnings. Some systems, particularly where insurance programs are used, compute sick pay on a calendar day basis, thus permitting sick pay for off-days. Although most managers interviewed felt that a reduction in sick pay would be effective, it was not often felt to have a strong likelihood of success. Revision of calendar-day systems to workday systems is more feasible.

Sick Pay Waiting Periods - Reported waiting periods ranged from 0 to 8 days, and retroactivity ranged from none to all of the waiting period. Retroactivity was sometimes staged according to the duration of the illness. Extended waiting periods were frequently advocated as a cost-effective means of reducing absence. Leahy of SCRTD (see Appendix A) argues that waiting periods encourage employees to take their leaves.

Sick Leave Days Allowed Per Year - Unlimited sick leave is permitted at some systems, but 0 to 30 days was the range at systems with a limit. The mean number of sick days allowed by the responding systems was 9.72.

Maximum Accumulation - Days of leave in a sick leave bank that can be carried forward or accumulated ranged from 0 (carry-forward) to 180. Many systems also permit unlimited accumulation.

Workers' Compensation Supplements - Many systems reported supplemental payments with workers' compensation, normally in an amount to make the employee whole (before taxes). In some systems these payments were made only for employees who were judged not to have contributed to their injuries. Others made these payments out of the employee's sick bank.

Job Characteristics

Compressed Work Week - A four-day work week was suggested in both 40-hour and 32-hour versions. This change was suggested primarily for two reasons:

- to permit the operators to have the time off that they apparently need; this need was often associated with the number of working spouses in the work force; and

- to reduce the operators' income to the level that both seems to satisfy them and would make good attendance more necessary.

Job Diversification - The stress of constant exposure to the public was often mentioned by both managers and operators as a factor contributing to absence. Relief of stress and job-enrichment through combining operating work with other types of work was discussed. Transit unions in general have strongly resisted such proposals.

Part-Time Operators - Although the reported experience with part-time operators is not universally favorable, several systems view part-timers as a means of dealing with the variability in attendance. In addition, part-timers, by working largely trippers, reduce the availability of overtime, which is believed to increase the pressure to attend.

EVIDENCE OF EFFECTIVENESS

As demonstrated in Appendix D, it is difficult to discern any general effect of contract provisions on attendance. Several provisions apparently divert absence from one category to another. Only three provisions showed statistical correlations that support intuitively useful propositions.

Sick Pay Waiting Period - Although the length of the waiting period did not produce strong correlations ($r = 0.22$, $s = 0.15$), the retroactivity did bear out some relationship with combined sick leave ($r = 0.47$, $s = 0.013$). Naturally, the length of the waiting period and the retroactivity are both correlated with the proportion of sick leave that is unpaid. Furthermore, one system reported a measurable increase in sick leave following a decrease in the waiting period. The evidence here contradicts suggestions that waiting periods, which are incentives to extending absence be eliminated.

Cash Payback - Payback has a strong correlation with low unpaid sick leave. This could be interpreted as indicating that employees resist using sick leave and reaching the point of unpaid sick leave. Cash awards have a slight correlation with low absence.

Part-Time Employees - In spite of receiving mixed reviews on other criteria, part-timers do contribute to low absence. Two major systems with part-timers report that their absence is lower than that of regular drivers and that they help control regular drivers' absence by reducing overtime.

In summary, although labor contract provisions do apparently assist in channeling absence into one category or another, there is no good correlation between overall absence and the contract provision.

V. SUMMARY

PRINCIPAL CONCLUSIONS

Operator absence already accounts for more than one quarter of federal operating subsidies and is increasing rapidly. It currently costs American transit systems approximately $185 million in identifiable payroll expense, plus an immeasurable amount in unidentifiable payroll and administrative expense. Absenteeism seriously impairs service quality and the manageability of transit because of its unpredictable nature.

The most rapidly increasing and already the most costly category of operator absence is job-related injury and illness. The number of days that the average operator was absent for job-related injury increased by a factor of 2 1/2 (i.e., by 150 percent) from 1974 to 1978. While much of this increase may be caused by more lucrative benefits, a broadened scope for the term "job-related injury," and the increased protection offered claimants under workers' compensation statutes, these may not be the only reasons for the increase. Sick leave (nonjob-related illness or injury) increased between 1974 to 1978 as well, and still accounts for the great majority of operator workdays lost.

To explain the extent and increase in operator absence, a conceptual model has been developed that identifies five determinants of attendance rates:

- the effects of attendance;
- the effects of absence;
- supervision characteristics;
- job and employer characteristics; and
- employee characteristics.

With respect to the first two determinants, the transit industry has many programs in place that make absence less attractive, but fewer programs that make attendance more attractive to the employee. Furthermore, the latter programs, exemplified by meritorious attendance recognition, are supported by stronger statistical evidence of success than other attendance improvement techniques. Of the programs that use effects of absence, PMM&Co. found that active enforcement of progressive performance codes was more important than the formality of the code. PMM&Co. also found statistical evidence that close supervision is an important determinant of attendance. Finally, with

respect to job, employer, and employee characteristics (which are factors that determine internal motivation), attendance programs are not fully developed in the industry. In particular, the statistics indicate and the consensus of the absenteeism workshop confirmed that labor-management cooperation is a key area to be explored in attempts to reduce the adverse effects of absence.

RECOMMENDATIONS

1. PMM&Co. recommends that transit managers implement balanced attendance improvement programs. These programs should provide not only punishment for absence, but also rewards for attendance, and aggresive recruiting and probation programs to ensure the quality of the work force.

The conceptual model in Section 2 suggests the complexity of the absence phenomenon. After brief reflection on the relationships presented in the model, it can be seen that even the model is over-simplified. Therefore, a single approach to attendance directed toward an operator stereotype is not likely to succeed. Rather, a well balanced program that takes advantage of all the determinants of absence is necessary. The industry's emphasis on performance codes and similar reactions to absence are somewhat effective for some absence and some individuals; nevertheless, a more comprehensive approach is necessary.

2. The industry should develop labor-management cooperation in implementing attendance programs; such cooperation might take the form of a work improvement committee.

In some respects, Collective bargaining laws establish unions as adversaries to management. However, employers and employees have many common interests which can be better achieved through a cooperative relationship. By working together on real issues of concern in the workplace, employer and employee can build a relationship outside the context of the collective bargaining arena that is conducive to trust and to mutual appreciation of a total system viewpoint. These ideals foster improved attendance and productivity as well as increased selfesteem and economic well-being. Attendance is an issue on which there is broad ground for cooperation of labor and management. Based on the research in this study, and in particular on the recommendations emerging from the absenteeism workshop, it is apparent that there is significant potential for labormanagement cooperation in attendance programs.

3. Standardized absence terminology should be promulgated, and transit systems should develop their information systems to assist them in measuring and analyzing absence.

Many transit systems do not summarize absence data for management purposes. Absence data, along with as much of the cost as possible, should be collected and reported by responsibility center where responsibility centers are used. No system was found where managers were budgetarily accountable for the absence in their departments. Furthermore, systems cannot compare data because there are no standard definitions of "workday lost," "miss (or AWOL)," "absence," "percent absent," and "injury on duty." To limit the information processing cost, absence data should be collected through the payroll process. Management diagnostic information, such as rank-ordered lists of employees with the worst and best attendance records and changes in absence rates by type, should be included.

POLICY IMPLICATIONS

In addition to the recommendations developed for the industry, presented above, and the information contained in the report, the study raised several issues with substantial policy implications.

First, the severity of the problem is such that policymakers should be aware of its magnitude, and policy initiatives may be justified. The identifiable costs of operator absence represent 27 percent of the federal operating subsidy and almost 4 percent of the total operating budget of transit. The overall cost of absence including nonoperator absence and the unmeasured payroll and administrative costs cover a significant portion of the operating budget. Even a small reduction in absence, for example a reduction of operator absence from its 1978 level to its 1974 level, would have made 62 million dollars[1] in operating funds available in 1978.

Second, it is apparent that current methods of controlling the adverse effects of absence are not making progress but are rapidly losing ground. Throughout the industry, management has generally recognized the problem

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[1]Assume a 60 percent reduction in IOD and a 20 percent reduction in other categories of absence (based on figures in Section 2). Of the $187 million cost estimate, $52 million is direct IOD expense, and 11 percent of the $94 million in indirect expense is IOD-related. [(94 x .11 + 52) x .60 + (94 x .89 + 41) x .20 = $62 million (1978 dollars)].

of absence, has examined alternatives both traditional and innovative, and has marshalled resources to control absence; however, widespread lasting reductions in absence have not been accomplished. As understanding of the problem of absenteeism develops, it may become clear that major new management approaches to the issue are necessary. The resources necessary to understand absenteeism and develop methods to control it, as well as the initiative necessary to adopt new approaches to the problem, require leadership at the policy level.

Third, a major factor in the increase in absence, and an even greater factor in its increasing costs, is the change in workers' compensation statutes in the 1970s. This study has not investigated the legal aspects of workers' compensation from a policy perspective; rather it has examined the impacts of workers' compensation statutes on absenteeism. Because of the severity of those impacts, and the amount of absence that is being funded through these statutes and their administrative procedures, a reconsideration of the workers' compensation statutes and the methods by which they are administered is necessary.

FURTHER STUDY NEEDED

This report examines and documents the nature, extent, and trends of absenteeism. A thorough review of the methods currently used in the transit industry has been performed, and analysis has enabled the study team to make recommendations to assist transit managers in their efforts to reduce the adverse effects of absence.

However, this report does not fully explain the differences among absence rates in the industry, has not examined the effect of attendance programs on individuals, and cannot provide full assurance of the effectiveness of the recommendations. Therefore, the seriousness of the problem and the associated problems in transit labor relations warrant continuing study. Based on the results of this study, PMM&Co. recommends three types of investigation:

- further analysis of absence data;
- a labor-management experiment, such as a work improvement committee to develop attendance programs; and
- a test of other attendance programs using control groups and careful monitoring of results.

Each of these suggestions is briefly described below.

Further analysis of absence data may yield significant additional information. Substantial data collection efforts from systems that may not have the data readily available, as well as collection of data concerning individuals, would be necessary. Based on the statistical analysis reported above, it is likely that valuable progress could be made in explaining the differences in absence rates among properties and individuals.

The most promising innovative approach to attendance that received substantial objective support from the information collected in this study is the use of labor-management cooperation techniques. In addition to the statistical relationship between cooperation and low absence, interviews with employees, labor representatives, and managers suggested that there is significant potential for improving attendance through joint union-management activity. In a two-day absenteeism workshop conducted with managers, union representatives, industry leaders, and consultants, exploration of labor management cooperation elicited the broadest consensus of approval of all the suggestions made.

Finally, this study has resulted in several suggestions for attendance programs. A complete list of methods currently in use was developed, and industry data were examined for evidence of these methods' relative efficacy. However, the complexity of the absence phenomenon is such that no assertions concerning the "best" attendance program can be made without experimentation. Therefore, the most productive type of research from this point forward will be carefully designed and monitored experiments. Several systems may be involved. Different approaches to attendance programs should be applied at different divisions within each system, so that the relative improvement can be compared among attendance program approaches, as well as verified among systems. Control groups would be monitored to track the effect of exogenous factors. Such experiments would enable more confident statements concerning the effectiveness of the various attendance programs.

CONCLUSION

This study has documented the fact that absenteeism in transit is a severe and rapidly worsening problem. A significant factor is the effect of compensation available under workers' compensation statutes, as well as the changing nature and ideals of the work force. Improved information systems and standardized absence terminology, balanced attendance programs, and labor-management cooperation are the ste s that the study data most strongly support. Finally, further analysis and experimentation may add to the industry's ability to control a problem that absorbs 26 percent of the federal subsidy.

APPENDIX A
LITERATURE SEARCH

LITERATURE SEARCH

This appendix is divided into two parts. Part I contains an annotated bibliography of major publications on absenteeism, particularly those which relate to: (1) understanding the causes of absenteeism, and (2) developing potential methods of controlling it. In Part 2 key publications on workers' compensation are reviewed in a similar manner.

PART I.

ABSENTEEISM

Allen, S.G. Absenteeism And The Labor Market. Ph.D. Thesis. Harvard University. Cambridge, Massachusetts. May, 1978.

Abstract

The purpose of this research was: (1) to construct and estimate ar economic model of the work attendance decision and (2) to analyze the effects of that decision on productivity and individual earnings. Using regression techniques, absence rate equations were developed over individual survey data and a sample of paper industry establishments. It was shown that the probability of absence decreases with the wage rate. The probability of absence will be significantly higher if the worker is young, white or a union member. Absence rates were found to be higher in jobs characterized by inflexible working hours and unsafe working conditions. It was estimated that a one percent reduction in the number of people who miss work at least once during any given week (the incidence rate) would increase GNP by $3.1 to $12.6 billion.

An excellent review of the literature on absenteeism is presented. Highlights of this review are presented below:

- In the 1960s and early 1970s the aggregate absence rate appears to have increased. It fell during the 1974-75 recession and has still not reached former levels.
- Manufacturing has the highest absence rates across industries. Blue collar workers have the highest absence rates across occupations.
- Absence rates are lowest among workers making less than $3600 and more than $15,000annually.

. The relationship between absenteeism and firm size seems non-linear. The correlation is positive in firms with 100-449 workers but lower in firms with 500 or more workers.

. Union members have higher absence rates than non-union members.

. Workers who work more than 40 hours a week report to their jobs more regularly than workers who work less than 40 hours.

. Absence rates are higher in jobs where the worker is exposed to physical dangers or unhealthy conditions.

. Women miss work more frequently than men.

. Absence likelihood decreases with age. Younger workers are more likely to be absent short periods while older workers are more likely to be absent for longer periods.

. The likelihood of being absent increases with increased commuting time.

Baker, A.W. Absenteeism Methods for Control of Absenteeism and Analysis of Absenteeism Clauses in Ohio Collective-Bargaining Contracts. Ohio Studies in Personnel. Research Monograph Number 58. Bureau of Business Research. The Ohio State University. 1950.

Abstract

This monograph was designed to provide managers of Ohio business concerns with the results of studies on absenteeism and suggest methods for its control. These are two major sections. The first covers causes and methods of controlling absenteeism and the second discusses absenteeism clauses in union contracts. Unfortunately many of the statements made are not supported by references to actual studies or other empirical data.

Common causes of absenteeism cited are (1) conflicting motivations of the worker; (2) physical incapacity of the worker; (3) interfering personal obligations and needs of the worker; and (4) wage conditions. Potential management options for controlling absenteeism include: (1) financial and privilege penalties; (2) financial incentives; (3) social sanctions; (4) sound use of workers' skills and time; (5) provision of good working conditions; (6) provision of good community conditions; and (7) use of absenteeism clauses in collective bargaining contracts. The author observes that without strong positive leadership, a key objective of which is to promote teamwork and self-discipline among employees, efforts to control absenteeism will not be very successful. Positive leadership refers to management efforts to improve employee morale by providing fair wages, opportunity for advancement, good working conditions, etc. A vital component of a positive leadership program is a well-planned industrial relations program including: (1) plant medical service; (2) a safety program; (3) adequate employee and supervisor training; (4) absentee reports; (5) careful pre-screening of potential employees; and (6) provision of recreational facilities and activities

Baum, J.F. Effectiveness Of An Attendance Control Policy In Reducing Chronic Absenteeism. Personnel Psychology. No. 38 1978. pp. 71-81.

Abstract

This paper reports the results of an empirical assessment of an attendance control policy, based on the imposition of legitimate management sanctions, in reducing absenteeism in a large industrial organization. This attendance control policy was implemented in one department of a large manufacturing concern with two comparable departments used as controls. It was hypothesized that a control policy based on legal compliance would reduce absenteeism among high absence workers or chronic absentees.

Significant opposition to the use of sanctions exists. This is primarily because of the beliefs that (1) positive reinforcement of attendance is more suitable and effective for reducing absenteeism and (2) possible undesirable side effects of punishments may occur. Other research indicates that an absence control system based on legal compliance with established organizational norms can significantly improve attendance and performance. In this investigation the company classified absenteeism as either casual, long-term illness related, or contractual absenteeism. A formal, progressive absenteeism control policy was instituted. Workers were then divided into three groups according to their total number of casual absences during the previous year. The high absence group was considered chronic absentees. After one year of the experiment it was found that chronic absenteeism was reduced in the high absence group. The analysis also indicated that the control policy was not effective in reducing absenteeism in the low and medium absence groups. This would be expected as these workers were already conforming to organization attendance norms and the control policy provided no incentive to exceed these norms. The fear that chronic absentees would substitute long-term illness absence for casual absence in order to avoid legal sanctions was not substantiated by the results of the study.

In summary, by effectively concentrating on portions of the work force which were habitually absent the organization was able to reduce the overall absence rate. The behavior pattern of chronic absentees appears such that they are not motivated to reduce absence by positive reinforcement alone. Perhaps management policies should use a two pronged approach of implementing (1) positive reinforcement of attendance behavior which would affect the majority of workers and (2) legal compliance sanctions to control chronic absenteeism.

Brookshire, M. Absenteeism. Institute of Industrial Relations. University of California at Los Angeles. 1960.

Abstract

This pamplet was designed to disseminate general absenteeism information to management, labor organizations, government officials, schools and universities, and the general public. The scope is broad and fairly easy to comprehend. Key chapters focus on domestic and international absenteeism, the roles of management and labor unions in controlling absenteeism, causes of absenteeism, and guidelines for company policy.

Causes of absenteeism are classificed into the following three interrelated categories: (1) situations external to the work relationship, (2) personal and economic characteristics of the work group, and (3) situations in the work relationship. Of interest to management are the six company guidelines on controlling absenteeism. They are as follows:

- Relate benefits to absence control;
- Formulate clear and comprehensive policies on (1) paid absences, (2) acceptable reasons for unpaid absence, (3) procedures for informing supervisors of the absence and (4) penalties, disciplinary procedures, grievance procedures, and records;
- Inform supervisors of the nature, details and objectives of absence control programs;
- Inform employees about the absence control program;
- Seek union cooperation; and
- Administer the program consistently and fairly.

Bureau of National Affairs, Inc. Absenteeism and Its Control. Personnel Policies Forum. Survey No. 90. 1970.

Abstract

The Bureau of National Affairs, Inc. surveyed members of its voluntary Panel of the Personnel Policies Forum, which consists of top personnel officials from a broad range of companies, on the problem of absenteeism. Subjects discussed included: (1) the use of absenteeism rates; (2) methods of recording and controlling absenteeism; and (3) disciplinary methods and penalties used by various companies and their effectiveness. Samples of company absenteeism policy statements and forms used in absenteeism control were also presented.

Major findings of the Panel were as follows:

- Most members are in wide agreement that the young half of the workforce and females have above-average absenteeism.
- Most members believe management employees have below-average absenteeism.
- Absenteeism rates appear to have remained nearly constant between 1965 and 1970.
- Of the 55 percent of the companies that have studied the causes of absenteeism 71 percent felt that the major cause was injury or illness.
- For females, child care and family responsibilities are also significant causes of absence. Transportation and marital difficulties are also major causes.
- Job factors such as pay, working conditions, job opportunities and supervision were not viewed as very significant causes of absenteeism. This was also true of alcoholism.
- Employee supervisors are responsible for maintenance of attendance records in close to 50 percent of the companies. Attendance records

are reviewed regularly on an individual basis by over 80 percent of the companies.

. Only 30 percent of the companies train first-line supervisors in absenteeism control. Several companies examine requests for job transfers, garnishments, etc., and try to correlate these factors with an individual's absence rate.

. Most companies require advance notice for excused absences other than emergencies.

. Most companies administer progressive discipline; that is an oral or written warning, suspension and ultimately discharge and termination.

. Only 12 percent of the companies investigated all unexcused absences, 10 percent rarely investigated, and 39 percent had no formal policy. In over half of the companies the supervisor was responsible for initiating the investigation. Investigations were made by telephone, home visits, company doctors upon return to work,personal department interviews, and supervisor interviews.

. The most effective methods of controlling absenteeism were believed to be: (1) counseling and interviews and (2) oral and written warnings. Incentive rewards and sick leave bonus programs were not viewed as very effective.

Culley. J.F. Prevention and Control of Industrial Absenteeism. Information Series No. 2 Pamphlet. Bureau of Labor and Management. College of Commerce. State University of Iowa, Iowa. June, 1959.

Abstract

This pamphlet was the second in a series published by the Bureau of Labor and Management to synthesize information in the fields of industrial relations

and economics which is not readily available in the general literature. Topics discussed cover: (1) definition and measurement of absenteeism; (2) factors influencing absenteeism; (3) preventative measures; and (4) control measures. The material is presented in a clear manner and several references are cited to support observations made.

A key highlight of the report is the section on factors influencing absenteeism. It presents a comprehensive framework for classifying these factors under four major categories as follows:

. General Factors

Type of industry and geographical location

Weather and season of the year

Holidays and day of the week

Marginal worker, job-shopper and "moonlighter"

High wages and high taxes

. Personal Factors

Sickness and injury

Age, sex and marital status

Family responsibilities

Morale

Alcoholism

. Community Factors

Housing

Utilities and sanitation services

Shopping and recreational centers

Community health and child care services

Public transportation

. In-Plant Factors

Production planning and scheduling

Working conditions

Supervision

Labor relations

Gaudet, F.J. Solving the Problems of Employee Absence. AMA Research Study 57. American Management Association. 1963.

Abstract

This study is based on an AMA survey, an exhaustive literature search, and the author's extensive experience on absenteeism. It is divided into six major sections. These are (1) Absence from Work: Whose Responsibility; (2) The Measurement of Absence; (3) The Extent of Absence and The Need for Better Statistics; (4) The Cost of Absence: Company Experience; (5) Factors Related to Employee Absence; and (6) Control and Reduction: Scientific and Unscientific methods.

Although the author cites case studies or surveys for each statement, there is no attempt to synthesize the findings and develop general conclusions. The myriad of studies reviewed, and often contradictory nature of their results, show the difficultes encountered in trying to generalize about absenteeism on the basis of uncoordinated case studies performed under a wide range of circumstances.

In discussing the relationship between company benefit policies and absenteeism, the author reviews a case study by G.W. Peterson (medical director of Kimberly-Clark Corporation) on absenteeism in lumber-mills. In this study all variables were controlled. The study concluded that the more liberal sickness benefits are (1) the more sickness there will be among employees of all types and (2) the higher the frequency of illness, particularly short term illnesses or "minor indispositions."

Another interesting section of the report was that which dealt with potential ways of controlling and reducing absenteeism. In an AMA survey of companies asking what policy they use to control absenteeism, 8 used labor-management committees, 4 used rotation of shifts to ease

pressure of night work, and the remaining 36 used alternative techniques. It appears that companies are using a wide range of methods to control absence. This probably reflects the lack of adequate research and data on the comparative effectiveness of these techniques and the personal biases of particular companies.

This discussion of the industrial medical department's role and influence on absenteeism was not very conclusive due to the limited data available. The AMA survey showed that of the 33 firms filling out the survey, only seven claimed to have dependable evidence on how industrial medicine reduced absenteeism while the other two felt there was no impact. No firm felt that the implementation of industrial medicine increased absence.

Health League of Canada (Quebec Division)
Absenteeism In Industry
A study by the Committee on Absenteeism in Consultation with the medical services of the Bell Telephone Co. of Canada, the Canadian National Railways, and the Canadian Pacific Railway.
(No Date)

Abstract

Although no single cause explains excessive absenteeism, the Health League of Canada made the following observations:

. A small number of workers are responsible for most absences. Johnson (American Public Health Journal, 1942) estimated that 55% to 60% of lost time is attributable to 12% to 15% of the employees.

. If degenerative diseases are excluded, the absenteeism rate decreases as the age of the employees increases. The U.S. Bureau of Labor Statistics showed that workers under 20 years of age had the highest rate, and that in every age group above 50 years, the workers were absent less than in any group below 50.

Women are absent more frequently than men, the rate for women being about twice that of men.

It is estimated that about 1 in every 20 of the present labor force is affected by chronic use of alcohol. This rate represents only individuals where alcohol use has affected their productivity in industry. Monday through Friday and after payday absenteeism may be largely caused by alcoholism.

Physically handicapped exhibit low absenteeism rates.

The reasons commonly given for absences are: (1) personal causes - primarily illnesses and accidents; (2) community-related causes such as poor transportation, inadequate housing, etc.; and (3) work-related causes. The most commonly reported cause of absence is personal sickness, more than 50 percent of which is not job related.

The authors suggest that the following steps be followed in setting up an absenteeism control plan: (1) isolate the problem to determine its location and its limits; (2) encourage active supervisory participation by trained supervisors; (3) educate and counsel employees; and (4) provide medical supervision. It was observed that the role of the medical department, usually used for treating accidents and preplacement medical examinations, should be expanded to include motion and illness prevention programs. This expanded role may aid in reducing sickness-induced absenteeism.

Hedges, J.N., Absence From Work Measuring The Hours Lost, May, 1973-76. Special Labor Force Report 207. Monthly Labor Review. October 1977. Bureau of Labor Statistics, U.S. Department of Labor.

Abstract

The major findings of this report indicate that (1) national rates of absence, whether measured in incidence or the percent of scheduled hours lost, have been stable in recent years; (2) absence in manufacturing consistently exceeds the all-industry levels (reflecting blue-collar worker absence attributed to illness and injury);(3) finance, insurance, and real estate have lower absence rates; and (4) differences in absence between males and females are affected by age, marital status, and occupation.

Full time wage and salary workers lost 3.5 percent of scheduled hours (80 million hours) for both health and personal reasons in 1976. On a per person basis, illness and injury caused the average worker to lose about six days of work and personal and civil reasons another three days. The author of the report cites studies which suggest that a rate of three percent of available worktime is a reasonable level of absence, with the "attainable minimum" at about two percent or below.

Kuzmits, F.E., Managing Absenteeism. Personnel. May-June 1977. pp. 73-76

Abstract

In this brief article the author expresses the belief that before resorting to an off-the-shelf method of curbing absenteeism, management should be aware that the uniqueness of every organization may require a specific control policy. The author states that a manager confronted with an absenteeism problem should make sure that the following guidelines are followed:

1. Gather absence data and record it by type of absence - at least four ways: sick leave, vacation leave, unscheduled leave, and special leave. A distinction should be made between scheduled and unscheduled absences.
2. The organization should have standards (goals) and policies on absenteeism.
3. Absence standards should be communicated to employees.
4. Try to identify absence behavior that indicates probable abuse of absence standards and that which substantiates the illness claim. Frequency and duration of absence are good indicators.
5. Incorporate absence standards into the formal performance appraisal system.
6. Establish formal disciplinary procedures for absence abuses.
7. Discuss absence policies and standards with job applicants during the pre-employment interview.

Lawson, J.W. and Lawson, W.R., A Management Guide How To Reduce Employee Absenteeism - Cure Tardiness - and Build Employee Morale. Published by the Dartnell Corporation. Chicago, Illinois. 1973.

Abstract

Building upon extensive experience in labor-related studies, the authors have produced a management guide for controlling absenteeism. Key chapters cover: (1) attitudes toward absenteeism; (2) the common causes of absenteeism; (3) measuring, comparing, and costing absenteeism; (4) absenteeism forms and procedures; (5) ways of controlling absenteeism; (6) job enrichment and attitude improvement; (7) employee absenteeism attitudes and surveys; (8) preemployment/orientation procedures; (9) role of supervision in improving attendance; (10) discipline and absenteeism; and (11) attendance award programs.

This publication does not emphasize the causes of absenteeism but rather methods for controlling absenteeism when it occurs. A number of useful aids, including procedures, forms, example guidelines, etc. are provided in the report to guide management in developing an absence control program. There is a considerable amount of discussion on actions management can take to limit absenteeism and control absence costs.

Leahy, Schegel, and Sprague, "Bus Operator Absenteeism: Some Causes and Cures" Transit Journal Vol. 5, No. 4, Fall 1979. pp 29-38

Abstract

174 operators from the Southern California Rapid Transit District were selected based on attendance records. Analysis showed: (1) absenteeism was widespread; (2) manpower shortages can increase absenteeism; (3) one-day absence is linked with weekends; (4) problem absenteeism is not correlated with seniority; (5) problem absenteeism is correlated with misses; (6) problem absenteeism is not correlated with accidents; (7) problem absenteeism operators average 40 hours pay per week in spite of absence; (8) many problem absence operators claim little sick pay; (9) one-day absence represents 22 percent of total absence. The article concludes with suggested absenteeism reduction alternatives.

Luthans, F. and Martenko, M., An Organizational Behavior Modification Analysis of Absenteeism. Human Resource Management. Fall, 1976. pp.11-18

Abstract

This article outlines an organizational behavior modification approach to controlling absenteeism. The basic steps in this process are: (1) identify behavioral performance problems; (2) chart the frequency of target behavior; (3) identify the existing behavioral contingencies through functional analysis, that is antecedent - behavior - consequence; (4) develop and apply appropriate contingency intervention strategies such as reinforcement,

punishment, extinction, and combination; (5) chart frequency of resulting behavior, and if satisfactory, maintain desirable behavior by applying reinforcement - continuous, intermittent, and self-reinforcing.

Reinforcement and punishment intervention strategies are generally used in many absence control programs and are fairly familiar. Extinction strategies specify situations where undesirable behavior is not reinforced or ignored. It avoids the undesirable side effects of punishment strategies; however, it takes a relatively longer time to decrease negative behavior. Behavior intervention policies should generally be combined and applied in an appropriate manner.

Rhodes, S.R. and Steers, R.M., Summary Tables of Studies of Employee Absenteeism. Technical Report No. 13. Department of Management, College of Business Administration, University of Oregon. Prepared under ONR Contract N000 14-76-C-0164 NR 170-812. January 1978.

Abstract

The results of 104 empirical studies of employee absenteeism in various work organizations are reviewed and presented in tabular form. The study findings are divided into seven categories. The categories are: (1) general job attitudes; (2) economic factors; (3) organizationwide factors; (4) immediate work environment factors; (5) job content factors; (6) personal factors; and (7) organizational change or experimental studies. Under each category further subdivisions are made.

For each study reviewed, the following information is provided: (1) the specific factor under study; (2) the researchers; (3) the characteristics of the sample work group; (4) the sample size; (5) whether the study was a group or individual design; (6) the types of absence measures used - these being frequency or number of separate absence occasions, total number of days absent, sickness or certified absences, uncertified or unauthorized absences, and a general category for all other absence measures; and (7) the results.

Although no generalized observations or conclusions were stated, the authors noted that the practice of using divergent absence measures has apparently resulted in many contradictory findings which might have been avoided if more uniform measures of absenteeism had been used. This study serves as an excellent starting point for postulating hypotheses on factors which might influence absenteeism and performing further research.

Robins, J., Costly Problem Firms Try Newer Way to Slash Absenteeism As Carrot and Stick Fail. Wall Street Journal. March 14, 1979, p.1.

Abstract

This article cites statistics which indicate absenteeism costs workers and the economy nearly $20 billion a year in lost pay alone. Industry spends an additional $10 billion a year in sick pay and $5 billion on fringe benefits that is independent of work attendance. The latest Federal Bureau of Labor Statistics study, in May 1976, showed about 3.5 percent of total work hours were lost due to absenteeism.

The author suggests that increases in the hourly wage and more demand for leisure activities have reduced the effectiveness of disciplinary and incentive approaches for controlling absenteeism. An increasing trend toward job enrichment and employee awareness programs at major companies may be observed. Specific programs at General Electric Co., General Motors Co., and Ford Motor Co. are described. These programs are unique for each firm.

Steers, R.M. and Rhodes, S.R., Major Influences on Employee Attendance: A Process Model. Journal of Applied Psychology. Vol. 63. No. 4. 1978. pp. 390-407.

Abstract

Based on a review of 104 empirical studies on employee absence, the authors developed a conceptual model of employee attendance in work organizations. This model suggests that employee attendance is influenced by two primary factors: (1) attendance motivation and (2) ability to come to work. Attendance motivation is mainly influenced by both (1) satisfaction with the

job situation, and (2) various internal and external pressures to attend. The model takes into account both voluntary and involuntary absence. Unlike earlier analyses, the model indicates that absenteeism is not primarily caused by job dissatisfaction and also that absenteeism and turnover do not share a common basis. The model is structured only as a conceptual guide for further investigation, since there is insufficient data available in the literature to validate it.

Key observations made by the authors include the following:

- Absenteeism as a category of behavior differs from turnover in three primary respects: (1) negative consequences associated with absenteeism for the employee are usually much less than that for turnover; (2) absenteeism is more likely to be a spontaneous and relatively easier decision than termination; and (3) absenteeism is often used as a substitute form of behavior for turnover, particularly when alternative employment may not be available.
- Most empirical studies of absenteeism have focused on bivariate correlations, many of the variables being investigated being only tenuously related to absenteeism. This is particularly true for variables related to job satisfaction. This suggests that a more comprehensive theory, taking into account personal and organizational variables, may improve our understanding of absenteeism.
- Several past studies have assumed that employee decisions on whether or not to attend work are strictly voluntary. However, several recent studies show that situational constraints such as poor health, family responsibilities, availability of transportation, etc., may constrain that choice. Therefore, a comprehensive model of attendance would have to include situational constraints.

The conceptual model presented by the authors is basically an attempt to synthesize the results of previous investigations of absenteeism and incorporate the observations mentioned.

U.S. Department of Labor. Bureau of Labor Statistics. Occupational Injuries and Illnesses in the United States by Industry, 1975. Bulletin 1981. 1978.

Abstract

This publication contains extensive data on the occurrence of injuries and illnesses resulting from working conditions over which the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor, the Mining Enforcement and Safety Administration of the U.S. Department of Interior, and the Federal Railroad Administration of the U.S. Department of Transportation exercise statutory authority. These data cover the injury and illness experiences of employers in the private sector for the years 1972-1975, and are based on annual surveys. Comparable data for 1976 is also available from the Bureau of Labor Statistics. Information is presented in a tabular format.

There is also additional information, although not as detailed, on: (1) work time lost due to injuries; and (2) the availability of medical examinations and safety training programs in various industries. With respect to the latter, it was observed that medical examinations tended to be provided by those establishments exhibiting the greatest incidence of job-related injuries and illnesses. The same situation appears to apply to establishments providing safety training programs.

Data in this report may be used to compare occupational injuries and illnesses among industries or to compare injuries and illnesses in a specific industry to national averages.

Yolles, S.F., Carone, P.A., and Krinsky, L.W.
Absenteeism In Industry. Charles C. Thomas.
Springfield, Illinois. 1975.

Abstract

This publication contains the proceedings of a conference sponsored by the South Oaks Foundation in conjunction with the Department of Psychiatry, School of Medicine, State University of New York at Stony Brook (1973) on absenteeism in industry. Conference sponsors arranged for an intensive discussion of the causes of absenteeism from the perspective of industrial psychologists, labor representatives, family physicians, public officials, personnel directors, and psychiatrists. Psychiatric and psychological aspects of absenteeism were emphasized throughout the conference.

The first group of papers focused on the roles of management, labor, and the industrial psychologist in applying motivational techniques to reduce absenteeism. Recurrent themes in many of the presentations and panel discussions suggest the need for management to show greater interest in workers as total human beings and to increase blue collar workers' involvement in their jobs by making jobs more interesting and challenging. In cases where production processes make it extremely difficult to make jobs more exciting or challenging, another possibility would be to try to actively involve workers in decisions affecting their jobs. Alcoholism was often cited as a major cause of illegitimate absenteeism by several of the conference participants.

The second set of papers explores the viewpoints of the medical and psychiatric professions on absenteeism. Conference participants discussed the role of the family physician versus that of the company doctor, the reluctance of family physicians to diagnose alcoholism in their patients,

and the lack of control many family physicians have exercised in determining the duration and timing of absenteeism related to injuries or illness. Various psychiatric theories were discussed which postulated various ways of viewing relationships between companies and their workers and between workers. Very little hard data was presented to support many of the points raised.

PART II.

WORKMENS' COMPENSATION

Chamber of Commerce of the United States

Analysis of Workers' Compensation Laws. 1978.

Abstract

This annual publication provides current information on (1) coverage of workmen's compensation laws including the various requirements for determining what employments, injuries or diseases are covered, (2) benefits provided in the form of income replacement and medical benefits and (3) administration of the laws. This information is presented in a tabular format for each state, federal workers and the Canadian provinces. Changes made in various state workers' compensation laws are also shown.

There are four tables of particular relevance to analyzing and comparing workers compensation laws across various states. These tables contain the following data, by state:

- type of law (compulsory or elective) and insurance (required in state fund, self insurance);
- occupational diseases covered and role of medical boards; and
- income benefits for temporary total disabilities including maximum percent of wages, maximum and minimum weekly payments, and time and amount of compensation limits.

In discussing changes in the annual costs of workers' compensation, the following observations about rapidly increasing costs were made:

- In the Social Security Bulletin, the U.S. Department of Health, Education and Welfare estimated that employers spent $10.8 billion dollars to insure or self-insure their work injury risks. This was about 22.5 percent, or $2 billion, more than that in 1975.
- In 1975 the percentage increase in costs of workers' compensation was 13.1, and the 1976 growth rate was more than double the average rate for

1970-1975.

. In 1976 medical costs were $2.33 billion while compensation payments amount to $5.13 billion - a total of $7.46 billion.

Encouraged by the recommendations of the National Commission on State Workmens' Compensation Laws and by the fear of federal legislation on minimum standards; 49 state legislatures enacted 300 laws on benefits, medical care, coverage of occupational diseases and coverage in 1977. The results of these laws may be summarized as follows:

. Indemnity benefits were increased in fifty-one jurisdictions. Forty-two of these states now automatically adjust benefits annually based on the state average weekly wage. In forty-three states, the average or weekly benefit for temporary total disability cases equals or exceeds 66 2/3 percent of the average weekly wage. Twenty-three of these states pay 100 percent or more.

. Medical care benefits are now unlimited in all states.

. Broad coverage of all occupational diseases exists in all states.

. Compulsory coverage under the workers' compensation law is provided in all but three states - South Carolina, New Jersey and Texas. In 1976 88.5 percent of wage and salary employees, accounting for 84 percent ($730 billion) of total civilian wage and salary disbursements, were covered by workers' compensation laws.

How Job Injury Benefits Are Rising.

Nation's Business. June, 1977 pp. 38-40.

Abstract

The current status of Workers' Compensation Laws are briefly reviewed. Recent changes in several State Workers' Compensation Laws, primarily in response to recommendations of the 1972 National Commission on State Workers'

Compensation Laws, have been enacted. This has decreased the need for Federal legislation. However, efforts to pass such legislation were made in the 93rd and 94th Congresses to force states to comply with the Commission's recommendations.

Lending strength to the forces opposing Federal legislation, the Inter-Agency Task Force on Worker's Compensation submitted a report to the White House and Congress highly critical of the 1972 Commission's effect to increase benefits and extend coverage. They argued that 95 percent of workers' compensation cases are well served by the current system. The remaining 5 percent, primarily involving permanent disability or death, are not well served. These 5 percent of the cases represent 50 percent of the cost of workers' compensation to employers.

In order to hold down the cost of workers' compensation benefits, the Task Force policy group urged these reforms: (1) compensation for wage loss must be separate from other benefits and paid as wage loss accrues: (2) increased benefit incentives fo rehabilitation and reemployment and (3) increased financial incentives to employers to reduce the likelihood of accident and job-caused illness.

U.S. Interdepartmental Workers Compensation Task Force.

Report To The President And The Congress Of The Policy Group Of The Interdepartmental Workers Compensation Task Force. January 19, 1977

Abstract

This is the official report of the Policy Group of the Interdepartmental Workers' Compensation Task Force and contains their recommendations based on the two-year Task Force's findings. Major highlights of the Task Force's findings are as follows:

. Although their overall assessment of the workers' compensation system is mixed, they believe that the medical only and temporary disability

claimants are handled well. These cases represent about 95 percent of those in the system. With respect to the remaining 5 percent, which are primarily permanent disability, work-related death, and occupational disease cases, they view the current workers' compensation system as inadequate. These cases account for 50 percent of the benefit payments.

. They recommend that states be given a longer time period to strengthen their workers' compensation programs and believe legislation to Federalize the system is not warranted at this time. This appears to show a shift in philosophy from that of the earlier study by the National Commission on State Workers' Compensation in 1972.

. The Task Force tended to be somewhat critical of the Commission's emphasis on increasing benefits and extending coverage. "More and more may be less the answer than better and better," the report said, adding that it was time to "improve the efficiency of the workers' compensation system."

. The Task Force urged three principles for reform of workmen's compensation to improve the efficiency and lower the costs of workers' compensation: (1) compensation for wage loss separate from other benefits and paid as wage loss accrues; (2) increased benefit incentives for rehabilitation and reemployment; and (3) increased financial incentives for employers to reduce the likelihood of accident or job-caused illness.

U.S. National Commission on State Workmen's Compensation Laws.

Compendium On Workmen's Compensation. 1973.

Abstract

The Compendium on Workmen's Compensation is a survey of the important issues and available information on the State Workmens' Compensation system. It was used to provide the members of the National Commission with a broad overview

without too much detail. The Compendium is divided into five major sections. These are: (1) The economic cost of industrial injuries; (2) Development and objectives of workmen's compensation; (3) A summary review of present programs; (4) A comprehensive review of the existing U.S. system; and (5) Some policy alternatives.

This publication contains a wealth of information on the way of worker's compensation system operates. Unfortunately, the date of this report is 1972, and many of the situations and conditions cited have since been modified as a result of the recommendations of the National Commission on Workmen's Compensation.

Giesel, J. Work Comp costs climb; self insuring, pools grow. Business Insurance. December 12, 1977. p. 1.

Abstract

This article pinpoints three major causes of the growing escalation in workmen's compensation costs and benefits, and suggests that self-insurance may aid businesses in controlling their costs. The three causes of spiraling workmens' compensation costs and benefits are: (1) pressure placed on states to increase benefit levels due to fear of national legislation on minimum benefit standards; (2) failure of state compensation boards to hold down workmens' compensation administrative costs due to sloppy administration and the use of political appointments to administrative jobs and (3) the failure of the Occupational Safety and Health Administration (OSHA) standards to curb workplace accidents due to the misplaced emphasis on meeting standards as opposed to preventing accidents.

One possible response to rising workers' compensation costs appears to be the trend toward self-insurance. Aided by specially trained staff and program administrators these plans are able to provide workmens' compensation coverage at levels below that prevailing in the conventional market. Stiff licensure requirements, primarily the need for adequate funds for surety bonds,

make this an option only for companies having sufficient financial resources.

U.S. National Commission on State Workmen's Compensation Laws, The Report of the National Commission on State Workman's Compensation Laws, 1972

Abstract

Expressing concern over the fairness and adequacy of workmen's compensation laws, Congress established the National Commission on State Workmen's Compensation Laws under provisions of the Occupational Safety and Health Act of 1970. This Commission was directed to "undertake a comprehensive study and evaluation of state workmen's compensation laws in order to determine of such laws provide an adequate, prompt and equitable system of compensation." The general objectives of Workmen's Compensation, the Commission's evaluations and recommendations, and a discussion of the future of Workmen's Compensation are discussed.

The Commission termed these of its recommendations essential:

. Coverage under state laws should be compulsory rather than elective.

. State laws should cover all employers of one or more workers, exempting no occupational groups.

. Weekly cash benefits in disability and death cases should be no less than two-thirds of the worker's gross weekly wage, subject to a maximum of 66 2/3 percent of the state's average weekly wage by July 1, 1973, and 100 percent by July 1, 1975.

. There should be no arbitrary limits on duration or sum of benefits.

. State laws should provide full coverage of work related diseases.

. Full medical care and physical rehabilitation services should be provided for any work-related impairment, without statutory limits on dollar amounts or length of time.

Employees should be able to choose to file claims in the state where injured, where hired, or where employment principally takes place.

Additional details on these recommendations and supporting materials are included in the report.

U.S. National Commission on State Workmen's Compensation. Supplemental Studies for the National Commission on State Workmens' Compensation Laws. Vol. I, II and III. 1973.

Abstract

The Supplemental Studies were designed to provide the National Commission on State Workmen's Compensation detailed analyses of selected issues. The authors are recognized medical, economic and legal experts. The approaches used in the studies range from descriptive to abstract theory.

In the present context, those studies relating to the costs of workmens' compensation benefits and also to the medical care objectives of workmen's compensation are of most interest. These studies are: (1) Study 16. Employer's Costs of Workmen's Compensation; (2) Study 17. The Incidence of Compensation Insurance Premium Payments; (3) Study 18. Three Issues in Compensation Medical Care; and (4) Study 19. Some Medical Issues of Workmen's Compensation.

Want To Avoid Unjustified Claims: Document Your Employee's Health. Business Insurance August 7, 1978.

Abstract

In this brief article Dr. Joseph LaDou and Dr. David M. Lipscomb cautioned employers at the National Conference on Workers' Compensation to increase their emphasis on the physical preplacement exam and the identifications of physical conditions which may become aggravated by work conditions.

This is particularly true in such states as California were recognition of "cumulative injury on the job" means there is essentially no disease that is not compensable under workers' compensation. One disease singled out for particular attention was hearing loss.

The section on employee absenteeism clauses in collective-bargaining contracts is somewhat outdated and oversimplified.

APPENDIX B

SURVEY DOCUMENT

The following pages contain the fact-finding document which was issued to 218 transit systems. A list of the 57 systems whose data were used follows the survey document.

PORT AUTHORITY OF ALLEGHENY COUNTY
Beaver and Island Avenues
Pittsburgh, Pennsylvania 15233
(412) 237-7000

July 3, 1979

Dear Transit Manager:

Absenteeism, in particular absence caused by injury on duty, has been increasing in all industries at an alarming rate. The problem is particularly acute in transit becasue of the need to ensure that scheduled service is operated. The tendency among transit employees to take advantage of their high standard of living and liberal workers compensation benefits to take time off is a cancer that will spread to every system. We enclose our own statistics at Port Authority Transit (PAT) to demonstrate the severity of this problem and to encourage your candor.

PAT applied for and received a Federal grant to study absenteeism and workers compensation in the transit industry. With the assistance of the transit consulting group of Peat, Marwick, Mitchell & Co. (PMM&Co.), PAT has surveyed twenty of the largest transit systems. We received 100% cooperation and response. To reach conclusions and justify recommendations, we are requesting information from your system as well.

Please complete the enclosed survey as follows:

- fill in the requested information to the extent available;
- include a copy of your operators' labor agreement and any rules or code affecting absenteeism; and
- use the enclosed envelope to return the survey to PMM&Co. no later than July 31, 1979.

After analyzing your responses we will prepare a report on methods of controlling absenteeism. All participating systems will receive a copy before the end of the year.

We appreciate your cooperation and are confident that this study will contribute to providing reliable and efficient service.

Yours Truly,

Francis D. Routh
Assistant to the Executive Director

INVESTIGATION OF ABSENTEEISM AS WELL AS LOST TIME DUE TO INJURY-ON-DUTY SITUATIONS IN THE TRANSIT INDUSTRY

July 1979

prepared by

THE PORT AUTHORITY OF ALLEGHENY COUNTY AND

PEAT, MARWICK, MITCHELL & CO.

Funded by

The Urban Mass Transportation Administration

INVESTIGATION OF ABSENTEEISM AS WELL AS LOST TIME DUE TO INJURY-ON-DUTY SITUATIONS

Fact Finding Survey of Individual Transit Properties

This survey has been divided into six sections:

A. Transit System Identification and General Information — covers the type and size of your transit system. This section also includes questions, apparently unrelated to absensteeism, which will be used for statistical purposes.

B. Medical Facilities and Policy — covers the type of medical care your transit system provides.

C. Non-Job-Related Injuries — covers non-job-related absence and its cost, as well as your disciplinary policy and its effect on absenteeism.

D. Job-Related Injuries — covers the type, number, and costs of job-related injuries.

E. Operator Absence and Working Conditions — deals with specific work locations and their possible effect on absenteeism.

F. Causes and Remedies — seeks your opinions on the causes of absence and what has been or could be done to combat these causes.

Some of the survey questions may require estimates because data may not be readily available. In these cases, indicate "EST" for estimates. In cases where it is not possible to estimate data, indicate "N/A."

Throughout the survey, terms are used as defined by the Urban Mass Transportation Administration Section 15 Uniform System of Accounts. Other key terms are defined as follows:

- System — refers to your transit property or authority.
- Work days lost — refers to days of absence (including each partial day as a full day) because of job-related or non-job-related illness or injury. Scheduled days off are not to be included.
- Operators — refers to all on-board personnel, such as drivers and conductors.
- Injury — as defined under the applicable state workers compensation statute.

If you have any questions concerning specific data requirements or any general comments on the survey, please do not hesitate to contact Bethany Bell or Scott Baker of Peat, Marwick, Mitchell & Co., Consultants, Washington, D.C., at (202) 223-9525.

Please send us copies of both your labor agreements and your disciplinary codes, policy, practices, or procedures.

With your help, we will analyze the causes of absence to determine methods designed to reduce absenteeism in the transit industry. Therefore, we would be interested in your thoughts concerning the nature and wording of questions as well as any relevant issues which may have been neglected in this survey document. Please feel free to write you comments at the end of the survey in the space provided.

TABLE OF CONTENTS

Sponsored by the Port Authority of Allegheny County
Pittsburgh, Pennsylvania

Do not write in this box

Sample - ☐☐☐

A. Transit System Identification and General Information

1. System name: _____

   Address: _____

   City: _____ State: _____ Zip: _____

2. Name of person completing questionnaire: _____

   Title: _____

   Telephone number: (_____) _____

3. All data provided in this survey should be based on fiscal year 1978.

   Indicate time frame: from _____ _____ _____ to _____ _____ _____
   month day year month day year

   However, throughout the survey, if any answer is on a different basis, indicate below the answer, at the bottom of the page.

4. Indicate the contract management firm, if any, by which your system is managed.

   - ☐ None
   - ☐ ATE
   - ☐ ATC
   - ☐ MacDonald Transit
   - ☐ City Coach Lines
   - ☐ National City Management
   - ☐ Other (please specify) _____

5. What was the total number of boardings (unlinked passenger trips) in 1978? _____

6. What was the number of platform hours operated in 1978? _____

7. What was your total operating expense ("total expenses less reconciling items" as defined by UMTA Section 15 requirements) for 1974 and 1978?

   1974 $_____

   1978 $_____

8. What were your expenditures in 1978 for Operators training?

   1978 $_____

IN THE REST OF THE QUESTIONNAIRE, ALL RESPONSES DEALING WITH EMPLOYEES SHOULD INCLUDE ONLY ACTIVE VEHICLE OPERATORS (INCLUDING CONDUCTORS). THROUGHOUT THE SURVEY, PLEASE INDICATE WHEREVER DATA PROVIDED IS NOT ON THIS BASIS.

9. For each labor agreement, indicate the average number of active operators in 1974 and 1978 in the appropriate space. (Use this designation of labor agreements, by number, in response to subsequent questions.) If you have more than four labor agreements for these employee categories, use the four covering the greatest number.

	Operators (On-Board Personnel)	
	1974	1978
Labor Agreement 1	_____	_____
Labor Agreement 2	_____	_____
Labor Agreement 3	_____	_____
Labor Agreement 4	_____	_____

10. Indicate total annual operator earnings for 1978.

	Operators (On-Board Personnel)
Total wages	$_____
Wages & fringe benefits	$_____
Top rate per hour (mid-year)	$_____

11. What is the number of locations (divisions, depots, garages, etc.) to which your operators (on-board personnel) are assigned?_____

12. a) How many on-the-road supervisory personnel (road supervisors, point men, route foreman, etc) do you employ? _____

b) Are all road supervisors (transportation foremen) unionized? ☐ Yes ☐ No

c) How many dispatching personnel (dispatchers, starters, station clerks, etc) do you employ?_____

d) Are all dispatchers unionized? ☐ Yes ☐ No

e) In any case, are all shifts managed by at least one non-union person? ☐ Yes ☐ No

Explain: _____

_____

13. Indicate the number of days not worked in 1978 for the following reasons:
(work days/year is defined as 260 x average # of employees as specified in A-9.)
(treat each partial day as a full day of absence)

	Operators (On-Board Personnel)
Vacation	_____
Holidays	_____
Work-related disabilities	_____
Paid sick leave	_____
Unpaid sick leave	_____
Requested days off	_____
Union business	_____
Funeral leave	_____
Jury duty	_____
A.W.O.L. (Misses)	_____
Other (please specify)	
_____	_____
_____	_____

14. Estimate the 1978 percentage increase (if any) in work days lost for all reasons (as per instructions):

Immediately before or after holidays_____%

Immediately before or after scheduled days off_____%

B. Medical Facilities and Policy

1. Which of the following services do you provide (if any)?

   ☐ Alcoholism education and counseling

   ☐ Drug abuse education and counseling

2. Do you require a pre-employment physical? ☐Yes ☐No

3. Do you require periodic physical examinations of active employees? ☐Yes ☐No

4. Estimate the percentage of operator applicants rejected for medical reasons._____%

C. Non-Job-Related Illness and Injury

1. During 1974 and 1978, how much non-job-related absence (sick leave) was reported?

	Operators (On-Board Personnel)
1974: Work days lost	
1978: Work days lost	

2. Must an employee file a special request to receive sick pay? ☐Yes ☐No

Referring to the labor agreements as numbered in your response to question A-9:

	LABOR AGREEMENT NUMBER			
	1	2	3	4
3. How many days must an employee be absent (if any) before being eligible for paid sick leave?				
4. How many of the waiting period days are subsequently paid?				
5. On what basis is sick pay computed?				
a) Flat rate (indicate dollars per day)				
b) Regular scheduled earnings (check where applicable)	☐	☐	☐	☐
c) 8 Hours at regular rate	☐	☐	☐	☐
d) Percent of regular earnings (indicate percentage)	%	%	%	%
e) Other (specify) _____				
6. How many days of paid sick leave is an employee allowed per year?				
7. How many unused days of leave can be carried forward?				
8. What is the maximum number of days of paid sick leave that can be accumulated?				

9. When is a physician's certification required? (check all that apply)

	In House Physician Only (When Possible)	System's Designated Physician(s)	Physician of Employee's Choice
For all sick leave	☐	☐	☐
For all sick leave of a specified duration	_____ days	_____ days	_____ days
Only for all paid sick leave	☐	☐	☐
Only for all paid sick leave of a specified duration	_____ days	_____ days	_____ days
Only for sick leave excused for disciplinary purposes	☐	☐	☐

Not required ☐

10. Is enough overtime work usually available so that an employee can recover the wages lost when the employee took time off without pay? ☐ Yes ☐ No

What percentage of total operator pay hours is represented by unscheduled (not included in runs) overtime hours? (All hours are to be expressed as equivalent straight time hours)_____%.

11. What was the total amount paid to operators for non-job-related illness and injury in 1974 and 1978? (doesn't include vacations and should include insurance premiums)

	Operators (On-Board Personnel)
1974	$_____
1978	$_____

12. Which of the following contractual or quasi-contractual practices to control absenteeism are observed in your system?

☐ Payment of holiday pay only if holiday worked (if scheduled for work)

☐ Payment of holiday pay only if preceding day worked

☐ Payment of holiday pay only if following day worked

☐ Payment of overtime over 40 hours per week rather than 8 hours per day

☐ Payment of guarantee only if 5 days worked

☐ Assignment of overtime work based on attendance

☐ Granting of requested days off based on attendance

☐ Discouragement of absenteeism through the method of assigning extra list work

☐ Other_____

13. How many hours in runs and partial runs were not filled because of absence in 1978?_____

14. Which of the following measures have you taken to minimize employee absences? (Check all that apply and give a brief description of each block checked.)

- ☐ Formal distributed discipline code
- ☐ Informal but applied discipline code
- ☐ Meritorious attendance recognition
- ☐ Cash awards
- ☐ Surveillance of absent employees by telephone
- ☐ Surveillance of absent employees by visits
- ☐ Applicant screening regarding past attendance
- ☐ Applicant screening regarding past employment tenure
- ☐ Cash paybacks for unused sick leave
- ☐ Other (please specify)_____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

_____

_____

_____

_____

_____

_____

15. Is progressive discipline used for habitual absence? ☐ Yes ☐ No

If you have a written discipline code, please include a copy.

16. Estimate the percentage reduction in absence effected by the application of discipline._____%

17. Indicate the number of suspensions and discharges in 1978:

	Operators (On-board Personnel)	
	Discharges	Suspensions
(a) For absences	_____	_____
(b) For other reasons	_____	_____
(c) For all reasons (including absences)	_____	_____

18. How long do you continue fringe benefits (group life, health, and accident insurance, hospital and medical insurance, etc) and seniority accumulation after the first day of absence?

_____ months

If continued until employee is separated, indicate length of time before separation.

_____ months

19. How much union cooperation do you get to combat the above problems of non-work-related injury and time off? (Check one)

- ☐ Total cooperation
- ☐ Moderate cooperation
- ☐ Neutrality on the subject
- ☐ Mild opposition
- ☐ Active opposition

D. Job-Related Illness and Injuries

1. How many job-related injury claims resulting in lost time were recognized in 1974 and 1978, and how many work days were lost? (Indicate either number of claims or workdays lost, or both, if possible.)

	Operators (On-Board Personnel)
1974: Claims	
Work days lost	
1978: Claims	
Work days lost	

2. Estimate the percent of the 1978 claims in question 1 that were related to muscle or bone injuries. _____

3. Estimate the number of operator injury-on-duty claims in 1978 which were related to vehicle collisions. ____

4. What was the maximum workers' compensation weekly benefit for 1974, 1978, and 1979? (Indicate average for the year when the maximum benefit changes during the year.)

   What was the consumer price index (mid-year) in your community for 1974 and 1978? (Specify base year: 19___)

	Workers' Compensation	Consumer Price Index
1974	$	
1978	$	
1979 (estimated)	$	

5. Are you self-insured for workers' compensation?

   ☐ No

   ☐ Partially self-insured: up to what limit? $_____

   ☐ Totally self-insured

6. If insured, who is your insurer?

   ☐ Totally commercially insured

   ☐ Totally state insured

   ☐ Partially commercially, partially state insured.

7. Indicate your annual reserve (if any). Indicate any premium paid for workers' compensation coverage for 1974 and 1978.

	Annual Reserve	Premium Paid
1974	$_____	$_____
1978	$_____	$_____

8. What was the TOTAL ANNUAL COST of actual payments (including payment of claims by an insurer) to employees for on-duty injury claims for 1974 and 1978?

	State-Required Compensation Payments	Labor Agreement Compensation Payments	Medical Payments	Other* Payments
1974	$_____	$_____	$_____	$_____
1978	$_____	$_____	$_____	$_____

*Nature of other payments: _____

_____

_____

9. When is a physician's certification required? (Check all that apply.)

	In House Physician Only (when possible)	System's Designated Physician(s)	Physician Of Employee's Choice
As soon as possible after injury	☐	☐	☐
Within a specified time after injury	_____ hours	_____ hours	_____ hours
Periodically during disability	☐	☐	☐
For return to work	☐	☐	☐

Not required ☐

10. Does state law require giving employees a choice of physicians?

☐ Yes ☐ No

Briefly explain: _____

_____

_____

11. With respect to employees injured on-duty, what cooperation do the following give in the reassignment of employees (whether temporary, permanent or to other employers)? (Check one in each column)

	State Law	Labor Agreement	Union Practice
Permitted	☐	☐	☐ encouraged
			☐ somewhat encouraged
Neutral	☐	☐	☐ neutral
			☐ somewhat discouraged
Prevented	☐	☐	☐ discouraged

	Temporary	Permanent	With Other Employees
If permitted, how many times in 1978 were such reassignments offered?	_____	_____	_____
How many of those offered in 1978 were accepted?	_____	_____	_____

12. How long do you continue fringe benefits (group life, health and accident insurance, hospital and medical insurance, etc.) and seniority accumulation for absence: (specify in months)

After first day of disability _____ months

After rejection of alternative work offer _____ months

13. (a) Do you feel employees take time off by fabricating injuries or by claiming non-work-related injuries to be work-related? (Check one.)

☐ Continually

☐ Often

☐ Sometimes

☐ Seldom

☐ Never

14. How many times in 1978 did the system contest job-related injury claims? _____

How many times was a claim successfully denied in 1978? _____

15. In 1978, how many times was a workers' compensation award successfully:

modified?_____

terminated?_____

16. How much union cooperation do you get to combat the above problems of work-related injury and time off? (Check one.)

- ☐ Total cooperation
- ☐ Moderate cooperation
- ☐ Neutrality on the subject
- ☐ Mild opposition
- ☐ Active opposition

E. Operator Absence and Working Conditions

If you have only one location for operators (division, depot, garage, etc.), supply the requested information under "Location 1" below.

If you have more than one location, supply the information for each location in a separate column.

If you have more than three locations, use additional sheets. Your system may not record some of the requested data by location; if so please attempt to estimate the figures within ±25 percent. If an estimate is impossible, indicate H (high) where the figure would be above average, M (medium) where the figure would be in the average range, or L (low) if the figure would be below average.

	Location 1	Location 2	Location 3
1. Location name			
2. Number of operators (1978 average)			
3. Total operator wages			
4. Work days lost for illness, injury, or unexcused absence			
5. Suspensions for absence			
6. Discharges for absence			
7. Swing (split) runs per week (weekday swing runs x 5 plus Saturday and Sunday swing runs)			
8. Runs with more than 12 hours spread, per week			
9. Estimate the number of grievances filed in 1978			

Please estimate the following for an average weekday at each location.

	Location 1	Location 2	Location 3
1. Number of scheduled runs for this weekday			
2. Number of operators working their regular runs			
3. Extra operators working vacation runs			

(Continued on next page.)

	Location 1	Location 2	Location 3
4. Extra operators working scheduled runs not picked (including regular men's off-days if appropriate)			
5. Extra operators working other runs assigned to list on preceding day			
6. Extra operators working runs assigned on the day worked (show-up, report, cover, protection, etc.)			
7. Number of scheduled runs worked at overtime (including runs worked by more than one operator)			
8. Scheduled runs operated (total of 2 through 7)			
9. Number of operators working exclusively trippers			
10. Total person-days of scheduled work (total of 8 through 9)			

F. Causes and Remedies

1. In your opinion, what are the primary causes of employee absence (whether job-related or not) and its recent increase?

   Non-job-related: _____

   Job-related: _____

2. In your opinion, how can such absence best be reduced?

   Non-job-related: _____

   Job-related: _____

3. State any proposed contract provisions which would reduce absence. Have these been tried?

4. What amount of absence do you feel is related to operator alcholism and drug use, whether admitted or not? (Check one in each column.)

	Alcoholism	Drug Use
Very large proportion	☐	☐
Large proportion	☐	☐
Some	☐	☐
Small proportion	☐	☐
Almost none	☐	☐

LIST OF PROPERTIES

1. A.C. Transit. Oakland, Ca.
2. Orange Co. Transit Dist. Ca.
3. South Ca. Rapid Transit L.A., Ca.
4. Regional Transp. Dist. Denver, Co.
5. WMATA, Washington, D.C.
6. New Orleans Public Service. New Orleans, La.
7. MBTA. Boston, Ma.
8. Detroit DOT. Detroit, Mi.
9. S.W. Ohio Regional Transit. Cincinnati, Oh.
10. Tri-County Metro. Transit. Portland, Or.
11. SEPTA. Philadelphia, Pa.
12. Dallas Transit. Dallas, Tx.
13. MTA. Houston, TX.
14. King County Metro. Seattle, Wa.
15. MILW. Co. Transit. Milwaukee, Wi.
16. PAT. Pittsburgh, Pa.
17. SCAT. Ventura, Ca.
18. Pioneer Bus. Brooklyn, N.Y.
19. Valley Transit. Appleton, Wi.
20. Roanoke Transit, Roanoke, Va.
21. Jamaica Bus. Jamaica, N.Y.
22. RTS. Rochester, N.Y.
23. Kansas City Transit. Kansas City, Mo.

24. Lanta. Allentown, Pa.

25. MATS. Montgomery, Ala.

26. SEMTA. Detroit, Mi.

27. COTA. Columbus, Oh.

28. SBTC. South Bend, Ind.

29. OSOTA. Orlando, Fla.

30. Montgomery Co. Rockville, Md.

31. Gary Trans. Gary, In.

32. CITRAN. Ft. Worth, Tx.

33. Albuquerque. Albuquerque, NM.

34. Charlotte. Charlotte, NC.

35. Nashville, Nashville, Tenn.

36. Lackawana Trans. Scranton, Pa.

37. Newport. Newport, Ky.

38. Kalamazoo. Kalamazoo, Mi.

39. St. Petersburg. St. Petersburg, Fla.

40. Topeka. Topeka, Kansas

41. San Diego. San Diego, Ca.

42. Buffalo. Buffalo, NY.

43. Santa Clara Co. Transit Agency. Santa Clara, Ca.

44. Lousiville Lousiville, Ky.

45. Flint. Flint, Mi.

46. Richmond. Richmond, Va.

47. Duluth. Duluth, Minn.

48. Champaigne-Urbana. Champaigne-Urbana, Il.

49. Ft. Wayne, Indiana

50. VIA. San Antonio, Tx

51. Capital Area Trans. Auth. Lansing, Mi.

52. MARTA. Atlanta, Ga.

53. Fresno, Ca.

54. MTC. Minneapolis, Minn.

55. Bi-State. St. Louis, Mo.

56. RTA Cleveland, Oh.

57. CTA. Chicago, Il.

APPENDIX C

INTERVIEW GUIDE

The following pages contain the interview guide from which topics of discussion were selected at each interview. Following the guide, a list of the twenty-three systems interviewed is presented.

PORT AUTHORITY TRANSIT

ABSENTEEISM STUDY

STANDARD INTERVIEW GUIDE

NOTES:

1. The guide contains these sections:

   . policy and organization

   . causes

   . control tractics

   . union role

   . morale

   . applicant screening

   . medical program

   . discipline

   . transportation practices

   . maintenance practices, and

   . miscellaneous (including part timers, supervision, promotion, alcoholism, and drug use)

One or more of these sections may be skipped in any interview.

2. In addition to these questions, any ambiguities in the questionnaire responses should be clarified.

System Name _____

Contact _____ Date _____

Title _____ Telephone _____

Interviewer _____

Others Present _____

_____

I. POLICY AND ORGANIZATION

1. Has the system developed a formal policy toward absenteeism (e.g., an official position on when to get tough and when not to)?

_____

_____

2. If the answer to question 1 is yes, has it been distributed and proper instruction been given to supervisors and superintendents for implementation?

_____

_____

3. Is primary responsibility for dealing with absenteeism centralized? (i.e., not left to employees's immediate superior).

_____

_____

4. Are departments directly charged for illness and injury-on-duty?

_____

_____

5. Is absenteeism considered a critical problem in your system? How frequently do you receive reports concerning:

1. overall absence _____
2. absence by cause _____
3. absence by department _____
4. absence by geographical division _____
5. absence by individual _____
6. individual's absence patterns _____

II. CAUSES

6. What factors do you consider to be important causes of absenseetism?

. poor health _____

. unsafe working conditions _____

- supervisor training _____
- return-to-work interviews _____
- fairer (more consistent) discipline _____
- attitude surveys _____
- job satisfaction programs _____
- more appealing work schedules _____
- other _____

_____

_____

10. Which of the above (and what other tactics) have you implemented and what was your success?

Tactic	Success
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

11. Do you believe that absentees are primarily a small group of offenders that management can deal with?

_____

_____

IV. UNION ROLE

12. Are your first line supervisors unionized? _____

_____

13. Do you believe this (12) makes a difference in absence rates?

_____

_____

14. Is the union cooperative in:

- reducing absenteeism? _____
- negotiating contract provisions to control absenteeism?

_____

. permitting discipline of habitual absentees? _____

. reducing abuse of workers' compensation? _____

. encouraging courtesy and recognizing customer importance?

_____

. creating pride in the jobs? _____

. encouraging good rapport with management? _____

. working out means of increasing productivity? _____

V. MORALE

15. What morale-building programs do you have and what is the level of participation and the effect on morale?

. social events _____

. atheletic events _____

. optional training _____

. tuition aid _____

. in-house news-letter _____

. customer courtesy courses _____

. other customer courtesy programs _____

. employee suggestion program with cash reward _____

. displays in employee lounges _____

. displays in work areas _____

. other _____

_____

_____

16. Do operators often make suggestions for improving the schedule (from the system's point of view) or mechanics make suggestions for improved maintenance practices? Are these suggestions ever discussed with them?

_____

_____

_____

_____

17. How many grievances are filed annually? _____

18. Roughly, what proportion are resolved in favor of the system?

_____

_____

VI. RECRUITING

19. Are employee applications encouraged by the following means?

- radio advertisements _____
- block newspaper ads _____
- classified newspaper ads _____
- public bulletin boards _____
- employment offices _____
- system's bulletin board or offices _____
- other _____

_____

_____

_____

20. What screening procedures do you use, and do they contribute to the rejection of applicants?

- pre-employment physical _____
- checking past attendance record _____
- checking past workers' compensation claims _____

_____

- pre-employment physchological exam _____
- validated operator applicant test battery _____

_____

- other _____

_____

_____

21. What percentage of applicants is rejected (not including repeated rejections of deferred applications)? _____

22. How long is your probationary period (months)?

23. What percentage of new hires are rejected during probation?

24. What is the percentage rejected for attendance reasons?

25. What is your turnover rate for operators? _____

For hourly rated maintenance personnel? _____

(NOTE:

$$\text{turnover rate} = \frac{\text{hires + separations + promoted out}}{\text{work force at year's beginning + work force at year-end}}$$

26. What medical departemnt measures would you suggest to control the abuse of workers' compensation statutes?

27. What medical department measures would you suggest to control absenteeism in general?

28. Does the medical department issue an annual report or periodic reports which detail the sickness and injury on duty situation?

VIII. DISCIPLINE

29. Is your disciplinary program clear as it relates to absenteeism?

30. Is your program strictly enforced? _____

31. Is your program fairly enforced? _____

32. Do you believe that your program is effective? _____

33. Do you believe that your program, as it is written, is too lenient?

If yes, how would you improve it? _____

34. Do you attempt to reduce injury-on-duty through discipline?

IX. TRANSPORTATION

35. Are your operators required to call-in sick the day before an absence (i.e., are they charged with a miss otherwise)? _____

36. Is there any tangible encouragement for drivers to call in early?

37. May operators call in absent without a specific excuse, or is there a favotire excuse (e.g., "car trouble")?

38. Is absenteeism worse on your extra-list than among regular operators?

39. Is there any punishment for extra list absence in dispatching work?

40. Do you believe your smaller divisions have lower absence rates?

41. How much absence do your cover at time-and-a-half (average during the year)?

X. MAINTENANCE

42. Do you have a safety program?

43. Do you have any particularly dangerous conditions?

44. Do you believe that the safety program reduces injury-on-duty?

XI. MISCELLANEOUS

45. If you have part-time employees, is their attendance better than full-time employees?

GENERAL COMMENTS

SYSTEMS AT WHICH INTERVIEWS WERE CONDUCTED

Atlanta, Ga. (MARTA)

Boston, Mass. (MBTA)

Chicago, Ill. (CTA)

Cincinnati, Oh. (SORTA)

Cleveland, Oh. (GCRTA)

Dallas, Tx.

Denver, Co. (RTD)

Detroit, Mich. (DDOT)

Garden Grove, Cal. (OCTD)

Houston, Tx. (MTA)

Los Angeles (SCRTD)

Milwaukee, Wis. (MCTS)

Minneapolis, Mn. (MTC)

New Orleans, La. (NOPSI)

Oakland, Cal. (A.C. Transit)

Omaha, Neb. (MAT)

Philadelphia, Pa. (SEPTA)

Pittsburgh, Pa. (PAT)

Portland, Ore. (Tri-Met)

San Diego, Cal. (SDTC)

Santa Clara, Cal. (SCCTD)

Seattle, Wash. (Metro)

Washington, D.C. (WMATA)

APPENDIX D

CORRELATION ANALYSIS

CORRELATION ANALYSIS

Bivariate correlation provides a single number that summarizes the relationship between two variables. The correlation coefficients indicate the degree to which variation in one variable is related to variation or change in another variable. A correlation coefficient not only summarizes the strength of association between one pair of variables, but also provides a means of comparing the strength of the relationship between one pair of variables and a different pair.

In the case of a linear relationship, if a regression line doesn't fit, or if the data contain errors due to imprecision in collection, a measure of "goodness of fit" is required. The correlation coefficient ranges between -1 and +1 such that:

- \- indicates an inverse relationship;
- \+ indicates that both variables increase or decrease together;
- o indicates that the linear regression line is a poor fit;
- $r \sim \pm 1$ indicates a strong relationship; and
- $r \simeq o$ indicates a weak relationship.

Correlation printouts contain three factors:

- correlation coefficient;
- number of cases; and
- significance test factor S (based on t statistics).

One way of interpreting the S variable is as follows. The "null hypothesis" is that r is not significantly different from o, that is, the two variables are not correlated. "S" is the probability that the null hypothesis is correct. Thus, to interpret the tables, a large value for r and large number of cases, and a low value for S would indicate

strong correlation of the two variables.

Exhibit D-1 lists a key for abbreviations of variables used in the correlation tables, beginning with the measures of absence. Each of the following tables shows measures of absence as rows and a different explanatory factor in each column.

Before beginning analysis it should be noted that the causal link (if any) may be in either direction. For example, a high positive correlation between percent of claims contested and absence may indicate that high absence causes managers to contest claims.

EXHIBIT D-1

SYMBOL KEY FOR

PEARSON CORRELATION COEEFICIENTS

MEASURES OF ABSENCE

PSLD780P = Paid sick leave days per operator (1978)

USLD780P = Unpaid sick leave days per operator (1978)

SLD780P = Total sick leave days per operator (1978)

IOD780P = Injury-on-duty days per operator (19780

SLID780P = Total sick leave plus injury-on-duty days per operator (1978)

SLD78SD = Total sick leave days per scheduled workday (1978)

IOD78SD = Total injury-on-duty days per scheduled work day (1978)

PSL78SD = Paid sick leave days per scheduled work day (1978)

USL78SD = Unpaid sick leave days per scheduled workday (1978)

SLGR7478 = Growth in sick leave days per operator between 1974 and 1978

IODGR748 = Growth in injury-on-duty days per operator between 1974 and 1978

IODSLGR = Growth in total sick leave and injury-on-duty days per operator between 1974 and 1978

WKCP78MD = Ratio of state required workers' compensation payments to medical payments (1978)

PCTCMSNC = Percent of claims not related to vehicle collisions (1978)

HOLIPCT = Percent increase in work days lost before and after holidays (1978)

SCHEDPCT = Percent increase in work days lost before and after scheduled days off (1978)

FMLDISCD = Formal distributed discipline code

IFMLDICP = Informal but applied discipline code

MERITARC = Meritorious attendance awards

CASHAWDS = Cash awards

SURVANEM = Surveillance by telephone

SURVAEMV = Surveillance by vision

APSCREMP = Applicant screening of past employment.

CSHUSDSK = Cash paybacks

OTHERMEA = Other measures

CONTRACTUAL OR QUASI CONTRACTUAL PROVISIONS

HOLIPYSC = Payment of holiday pay only if holiday worked (if scheduled to work)

HOLIPYPD = Payment of holiday pay only if preceding day worked

HOLIPYFD = Payment of holiday pay only if following day worked

OVG40HR = Payment of overtime over 40 hours per week rather than 8 hours per day

GUARN5DW = Payment of guarantee only if 5 days worked

OTBSONAT = Assignment of overtime work based on attendance

DISCAEXT = Discourgement of absenteeism through the method of assigning extra list wor

GRQDYOAT = Granting of requested days off based on attendance

MANAGEGEMENT EFFORTS TO MAINTAIN ATTENDANCE

SUP780P = Ratio of road supervisors to operators (1978)

DIS780P = Ratio of dispatchers to operators (1978)

SUPDISOP = Ratio of road supervisors and dispatchers to operators (1978)

ASUS780P = Ratio of absence related suspensions to operators (1978)

ADIS780P = Ratio of absence related discharges to operators (1978)

TEXP780P = Average training expense per operator (1978)

ALCOHLED = Availability of alcoholism education program

DRUGABED = Availability of a drug abuse education program

CLMBINJ = Percent claims related to muscle and bone injuries (1978)

PCTCLMCO = Percent workers compensation claims contested (1978)

PCTCLMDE = Percent workers compensation claims denied (1978)

CONTMGMT = Indicates whether property is managed by a professional management firm (1) or is self operated (0). It is a 0,1 type variable

DISCPHAB = Indicates whether progressive discipline is applied

ECONOMIC FACTORS

SLEX78OP = Average weekly sick pay per operator (1978)

SLEX78WR = Ratio of average weekly sick pay to average weekly wage rate (1978)

WRSLEX78 = Average weekly wage rate less average weekly sick pay (1978)

WR78OP = Average weekly wage rate per operator (1978)

MAXWKC78 = Maximum weekly workers' compensation rate (1978)

WRLWKC78 = Average weekly wage rate less maximum weekly workers' compensation rate (1978)

AVAILOTW = Availability of overtime (1978)

DYSBFPL1 = Days absent before sick leave paid (1978)

WTGDYSP1 = Waiting days paid per operator (1978)

MAXPDLV1 = Maximum days of sick leave that may be accumulated per operator (1978)

HWLGFBCT = Time fringe benefits are continued after first day of sick leave, in months (1978)

LNTHFBSP = Time fringe benefits are continued before separation for sick leave, in months (1978)

MNTHFBAB = Time fringe benefits are continued after first day of disability in months (1978)

MNTHFBRJ = Time fringe benefits are continued after rejection of an alternative, work offer, in months (1978)

UNIONCOP = Management view of union cooperation as related to non-work related absence. Measured on a scale of 1 to 5 in order of increasing union opposition to management.

UNCOPROB = Management view of union cooperation as related to work related absence. Measured on a scale of 1 to 5 in order of increasing union opposition to management.

MEDICAL-SICK LEAVE POLICY

EMREQSPY = Employee requirement to request sick pay

PREMEXAM = Employee required to take pre-employment physical exam

PERDEXAM = Employee required to take periodical physical exams

EXHIBIT D-2
MEASURES OF ABSENCE AND CONTROL TACTICS
PEARSONS CORRELATION COEFFICIENTS

	FMLDISCD	IFMLDICD	MERITARC	CASHAWDS	SURVAHEM	SURVAEMV	APSCREMP	CSHUSDSK	OTHERMEH
PSLD780P	.2826	-.0290	-.1479	-.1026	.0658	.0521	.2013	.2098	-.2062
	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)
	S= .047	S= .433	S= .195	S= .276	S= .351	S= .381	S= .120	S= .110	S= .114
USLD780P	.3943	-.0974	-.0290	-.1410	.0089	-.1254	.1580	-.4491	.1340
	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)
	S= .016	S= .304	S= .439	S= .229	S= .481	S= .255	S= .202	S= .006	S= .240
SLD780P	.4193	-.0253	-.2488	-.1585	.1048	.0164	.2595	-.0059	-.1161
	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)
	S= .012	S= .448	S= .097	S= .206	S= .294	S= .466	S= .087	S= .488	S= .271
IOD780P	.1113	-.0357	-.1678	-.0743	.1882	.2519	.1745	-.0445	-.0726
	(43)	(43)	(43)	(43)	(43)	(43)	(43)	(43)	(43)
	S= .239	S= .410	S= .141	S= .318	S= .113	S= .052	S= .132	S= .388	S= .322
SLID780P	.3351	.0691	-.2715	-.1735	.2100	.0893	.2159	.0475	-.0831
	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)
	S= .047	S= .369	S= .090	S= .198	S= .152	S= .332	S= .145	S= .409	S= .343
SLD785D	.3509	-.0935	-.2180	-.1147	-.0350	-.0647	.2440	.0651	-.1591
	(27)	(27)	(27)	(27)	(27)	(27)	(27)	(27)	(27)
	S= .036	S= .321	S= .137	S= .284	S= .431	S= .374	S= .110	S= .373	S= .214
IOD78SD	-.0274	.2622	-.1654	-.0711	.0790	.1311	.3668	.1211	-.0443
	(32)	(32)	(32)	(32)	(32)	(32)	(32)	(32)	(32)
	S= .441	S= .074	S= .183	S= .349	S= .334	S= .237	S= .019	S= .255	S= .405
PSL78SD	.2493	-.0673	-.2100	-.0832	.0007	.0145	.1799	.1919	-.1439
	(32)	(32)	(32)	(32)	(32)	(32)	(32)	(32)	(32)
	S= .084	S= .357	S= .124	S= .325	S= .498	S= .469	S= .162	S= .146	S= .216
USL78SD	.4502	-.1351	.0195	-.1529	-.1415	-.2965	.1954	-.3933	-.0464
	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)
	S= .008	S= .246	S= .461	S= .219	S= .236	S= .063	S= .160	S= .019	S= .407
SLGR7478	.3121	-.3121	-.1573	99.0000	-.2799	-.1597	.2272	-.0519	-.0519
	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
	S= .207	S= .207	S= .343	S=######	S= .233	S= .341	S= .278	S= .447	S= .447
IODGR748	.2230	-.1689	.2393	.0666	-.1394	-.2071	.2049	-.0295	.4055
	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)
	S= .179	S= .245	S= .162	S= .393	S= .285	S= .197	S= .200	S= .452	S= .042
IODSLGR	.4065	-.4065	.4065	99.0000	.1375	.6199	.6515	99.0000	99.0000
	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
	S= .249	S= .249	S= .249	S=######	S= .413	S= .132	S= .117	S=######	S=######
HOLIPCT	.1680	.1462	-.1657	-.0874	.3854	.2771	.0669	-.0559	-.1140
	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)
	S= .196	S= .229	S= .200	S= .329	S= .021	S= .077	S= .368	S= .389	S= .282
SCHEDPCT	-.1174	.3601	-.2220	-.0537	.2884	.2986	.0250	-.1045	-.1294
	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)
	S= .268	S= .025	S= .119	S= .389	S= .061	S= .054	S= .448	S= .291	S= .248

99.0000 - COEFFICIENT NOT COMPUTED

EXHIBIT D-3
MEASURES OF ABSENCE AND CONTRACTUAL PROVISIONS
PEARSON CORRELATION COEFFICIENTS

	HOLIPYSC	HOLIPYFD	HOLIPYFD	OVG40HR	GUARNSDW	OTBSONAT	DISCAEXT	GRQDYOAT
PSLD78OP	.1397	.0704	.0478	.1077	.2605	.0105	.0843	-.0803
	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)
	S= .208	S= .342	S= .391	S= .266	S= .062	S= .476	S= .312	S= .321
USLD78OP	.1210	-.0152	-.1029	-.0290	.3559	.1896	.0278	-.0157.
	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)
	S= .262	S= .468	S= .294	S= .440	S= .027	S= .158	S= .442	S= .467
SLD78OP	.2274	.1539	.1014	.1136	.4664	.1020	-.0225	-.0794
	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)
	S= .118	S= .213	S= .300	S= .279	S= .005	S= .299	S= .454	S= .341
IOD78OP	-.0442	.1502	.1431	.1765	-.1265	.0879	-.0064	-.0529
	(43)	(43)	(43)	(43)	(43)	(43)	(43)	(43)
	S= .389	S= .168	S= .180	S= .129	S= .209	S= .288	S= .484	S= .368
SLID78OP	.4324	.1080	.0400	.1080	.2425	.2325	.0293	-.1176
	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)
	S= .014	S= .300	S= .423	S= .300	S= .116	S= .127	S= .444	S= .284
SLD78SD	.1214	.1577	.1577	.0401	.4494	.0285	-.0710	-.0708
	(27)	(27)	(27)	(27)	(27)	(27)	(27)	(27)
	S= .273	S= .216	S= .216	S= .421	S= .009	S= .444	S= .362	S= .363
IOD78SD	.0760	.1040	.1040	-.1823	-.1750	.3850	.1111	-.1414
	(32)	(32)	(32)	(32)	(32)	(32)	(32)	(32)
	S= .340	S= .285	S= .285	S= .159	S= .169	S= .015	S= .273	S= .220
PSL78SD	.0721	.1319	.1319	.0570	.3204	-.0126	-.0643	-.0636
	(32)	(32)	(32)	(32)	(32)	(32)	(32)	(32)
	S= .347	S= .236	S= .236	S= .378	S= .037	S= .473	S= .363	S= .365
USL78SD	.2180	.0618	.0618	-.0347	.5090	.1850	.0101	-.0239
	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)
	S= .133	S= .377	S= .377	S= .430	S= .003	S= .173	S= .480	S= .452
SLGR7478	-.2496	.0519	.0519	-.2869	.5186	-.1599	-.2263	99.0000
	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
	S= .259	S= .447	S= .447	S= .227	S= .076	S= .341	S= .279	S=######
IODGR748	-.1024	-.1916	-.1916	-.0711	-.0688	-.0599	-.0073	99.0000
	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)
	S= .338	S= .216	S= .216	S= .386	S= .390	S= .404	S= .488	S=######
IODSLGR	.4065	99.0000	99.0000	-.0607	.8199	-.3220	-.3125	99.0000
	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
	S= .249	S=######	S=######	S= .461	S= .045	S= .299	S= .304	S=######
HOLIPCT	.4332	.0712	-.2513	-.0955	-.0050	.0681	.3711	-.1262
	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)
	S= .011	S= .359	S= .099	S= .314	S= .490	S= .365	S= .026	S= .261
SCHEDPCT	.1321	.1498	-.1277	-.0972	-.2100	-.0704	.3958	.0470
	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)
	S= .243	S= .215	S= .251	S= .305	S= .133	S= .356	S= .015	S= .403

99.0000 - COEFFICIENT NOT COMPUTED

EXHIBIT D-4

MEASURES OF ABSENCE AND MANAGEMENT EFFORTS TO MAINTAIN ATTENDANCE

	SUP780P	DIS780P	SUPDIS0P	ASUS780P	ADIS780P	TEXP780P	ALCOHLED	DRUGMBED	CLMBNINJ	PCTCLMCO	PCTCLMDE	CONTMGNT	DISCPHAB
PSLD780P	.1261 (33) S= .242	.0464 (33) S= .399	.1358 (33) S= .225	-.0675* (25) S= .374	.0097 (27) S= .481	-.0992 (36) S= .282	.1593 (36) S= .177	.1845* (36) S= .141	-.4319 (30) S= .009	.6791 (25) S= .001	.0022 (25) S= .496	.0334 (36) S= .423	-.3078 (35) S= .036
USLD780P	-.4567 (28) S= .007	-.2055 (28) S= .147	-.5460 (28) S= .001	-.2119 (21) S= .178	-.1510 (23) S= .246	.2348 (30) S= .106	-.0066 (30) S= .486	.1714 (30) S= .183	-.2502 (25) S= .114	-.2111 (24) S= .161	.2844 (23) S= .094	.3857 (30) S= .018	-.1773 (29) S= .179
SLD780P	.0144 (27) S= .472	.0327 (27) S= .436	.0379 (27) S= .425	-.1413 (21) S= .271	-.0945 (23) S= .334	.0195 (29) S= .460	.0946 (29) S= .313	.2009 (29) S= .148	-.5440 (25) S= .002	.5427 (23) S= .004	.1161 (22) S= .304	.2195 (29) S= .126	-.3814 (28) S= .023
IOD780P	.0765 (37) S= .326	.1365 (37) S= .210	.1468 (37) S= .193	-.1378 (27) S= .247	-.0255 (33) S= .444	-.0470 (43) S= .382	.2732 (43) S= .038	.0301 (43) S= .424	.2841 (36) S= .047	.3108 (30) S= .047	.2821 (28) S= .073	-.0040 (43) S= .490	.0857 (39) S= .302
SLID780P	.0833 (24) S= .349	-.2228 (24) S= .148	-.1000 (24) S= .321	-.2205 (19) S= .182	-.1808 (22) S= .210	.1350 (26) S= .255	.3036 (26) S= .066	.4235 (26) S= .016	-.3278 (23) S= .063	.7185 (22) S= .001	.3128 (21) S= .084	.2517 (26) S= .107	-.4648 (25) S= .010
SLD785D	.0245 (26) S= .453	.1690 (26) S= .205	.1545 (26) S= .225	.0375 (20) S= .438	-.0422 (22) S= .426	-.0478 (27) S= .406	.0230 (27) S= .455	.1277 (27) S= .263	-.5422 (24) S= .003	.3934 (22) S= .035	-.0049 (21) S= .492	.0722 (27) S= .360	-.2098 (26) S= .152
IOD785D	.2281 (29) S= .117	.1758 (29) S= .181	.2941 (29) S= .061	-.2326 (22) S= .149	-.2155 (25) S= .150	.2989 (32) S= .048	.4548 (32) S= .004	.4878 (32) S= .002	.1952 (28) S= .160	.4464 (25) S= .013	.2805 (24) S= .092	-.1239 (32) S= .250	.0114 (30) S= .476
PSL785D	.0962 (30) S= .325	.2157 (30) S= .126	.2168 (30) S= .125	-.0339 (23) S= .439	-.0249 (25) S= .453	-.0872 (32) S= .318	.0446 (32) S= .404	.0837 (32) S= .324	-.4706 (27) S= .007	.4815 (24) S= .009	-.0618 (24) S= .387	-.0184 (32) S= .460	-.1947 (31) S= .147
USL785D	-.4188 (27) S= .015	-.1244 (27) S= .268	-.4395 (27) S= .011	.0830 (20) S= .364	-.0152 (22) S= .473	.1546 (28) S= .216	-.0763 (28) S= .350	.1251 (28) S= .263	-.3900 (24) S= .030	-.2077 (23) S= .171	.2417 (22) S= .139	.4177 (28) S= .013	-.1865 (27) S= .176
SLGR7478	-.2734 (9) S= .238	.6463 (9) S= .030	.3558 (9) S= .174	.1061 (9) S= .393	-.5266 (8) S= .090	-.1612 (9) S= .339	-.2853 (9) S= .228	-.2102 (9) S= .294	-.6258 (9) S= .036	-.0038 (8) S= .496	-.3847 (8) S= .173	-.2079 (9) S= .296	.1848 (8) S= .331
IODGR748	-.1639 (19) S= .251	.0027 (19) S= .496	-.0931 (19) S= .350	-.2725 (13) S= .184	.2401 (16) S= .185	.6246 (19) S= .002	-.2060 (19) S= .199	-.1588 (19) S= .258	-.0807 (17) S= .379	-.1473 (16) S= .293	-.1435 (15) S= .305	-.0635 (19) S= .398	-.0627 (19) S= .399
IODSLGR	.2866 (5) S= .319	-.6195 (5) S= .133	-.2379 (5) S= .350	.7231 (5) S= .084	-.5287 (5) S= .180	-.1425 (5) S= .410	-.5779 (5) S= .154	-.2148 (5) S= .364	-.7108 (5) S= .089	-.2904 (4) S= .355	-.3400 (4) S= .330	-.0607 (5) S= .461	99.0000 (5) S=######
PCTCMSNC	-.0911 (33) S= .307	.2046 (33) S= .127	.0866 (33) S= .316	.2701 (22) S= .112	-.1084 (26) S= .299	.2762 (37) S= .049	-.0233 (37) S= .446	.0373 (37) S= .413	-.1272 (33) S= .240	.2968 (17) S= .124	.3020 (17) S= .119	-.0510 (37) S= .382	-.1346 (33) S= .228
HOLIPCT	.1726 (24) S= .210	-.1503 (24) S= .242	.0386 (24) S= .429	-.1349 (19) S= .291	.0984 (20) S= .340	.2773 (28) S= .077	.0423 (28) S= .415	.0296 (28) S= .441	.0300 (23) S= .446	-.0958 (19) S= .348	.1637 (19) S= .252	.2784 (28) S= .076	-.0459 (26) S= .412
SCHEDPCT	.1754 (27) S= .191	-.1463 (27) S= .233	.0505 (27) S= .401	.1650 (21) S= .237	.2271 (22) S= .155	.1152 (30) S= .272	.0925 (30) S= .313	-.0996 (30) S= .300	.1772 (25) S= .198	.1989 (32) S= .138	-.1159 (31) S= .267	.0547 (30) S= .387	.2090 (29) S= .138

99.0000 - COEFFICIENT NOT COMPUTED

EXHIBIT $D-5$

MEASURES OF ABSENCE AND ECONOMIC FACTORS

PEARSON CORRELATION COEFFICIENTS

	SLEX78OP	SLEX78WR	WRSLEX78	WR78OP	MAXWEC78	WRLWEC78	AVAILOTW	DYSBFPL1	WTGDYSP1	MAXPDLV1	HOLGFBCT	LNTHFBSP	MNTHFBWB	MNTHFBRJ
PSLD78OP	-.4997 (19) S= .015	-.4537 (18) S= .029	.4832 (18) S= .021	.0766 (34) S= .333	-.2172 (7) S= .320	-.0152 (6) S= .489	-.0115 (35) S= .474	.0494 (35) S= .389	.2727 (28) S= .080	-.1425 (35) S= .207	.0711 (16) S= .397	.2149 (10) S= .276	-.1081 (17) S= .340	.3739 (9) S= .161
USLD78OP	-.3074 (16) S= .123	-.4369 (15) S= .052	.3854 (15) S= .078	.3723 (28) S= .026	.1384 (5) S= .412	.7655 (4) S= .117	-.2411 (29) S= .104	.3439 (29) S= .034	.5258 (23) S= .005	.0059 (30) S= .488	.5694 (14) S= .017	.2540 (7) S= .291	.4765 (15) S= .036	-.4999 (8) S= .104
SLD78OP	-.6209 (16) S= .005	-.6626 (15) S= .004	.6494 (15) S= .004	.2373 (27) S= .117	-.3498 (4) S= .325	-.5632 (3) S= .310	-.1162 (28) S= .278	.2459 (28) S= .104	.4741 (22) S= .013	-.1559 (29) S= .210	.3728 (13) S= .105	.6589 (7) S= .054	.0837 (14) S= .388	.5144 (8) S= .096
IOD78OP	-.2818 (18) S= .129	-.3393 (17) S= .091	.3396 (17) S= .091	.2205 (37) S= .095	.6715 (10) S= .017	-.4861 (6) S= .164	.0398 (41) S= .402	-.1000 (41) S= .267	.0891 (30) S= .320	.0636 (41) S= .347	.1563 (21) S= .249	-.0667 (11) S= .423	-.3722 (21) S= .048	.2926 (8) S= .241
SLID78OP	-.6603 (16) S= .003	-.7034 (15) S= .002	.6939 (15) S= .002	.2903 (24) S= .084	.5970 (3) S= .296	1.0000 (2) S=######	.0158 (25) S= .470	.2151 (25) S= .151	.3412 (20) S= .071	-.1490 (26) S= .234	.4524 (12) S= .070	.6459 (7) S= .059	-.0304 (13) S= .461	.5575 (7) S= .097
SLD78SD	-.6314 (15) S= .006	-.6241 (14) S= .009	.6319 (14) S= .008	.1571 (25) S= .227	-.4465 (3) S= .352	-1.0000 (2) S=######	-.1303 (26) S= .263	.1935 (26) S= .172	.4406 (21) S= .023	-.2104 (27) S= .146	.3154 (12) S= .159	.6569 (7) S= .054	.0685 (13) S= .412	.5539 (8) S= .077
IOD78SD	-.2758 (16) S= .151	-.3608 (15) S= .093	.3512 (15) S= .100	.1982 (30) S= .147	.9121 (5) S= .015	-.9588 (4) S= .021	.0487 (31) S= .397	.0291 (31) S= .438	.0601 (24) S= .390	.0283 (31) S= .440	.2700 (15) S= .165	-.0909 (8) S= .415	-.4337 (16) S= .047	.3972 (7) S= .189
PSL78SD	-.4583 (17) S= .032	-.4275 (16) S= .049	.4516 (16) S= .040	.0501 (30) S= .396	-.3124 (5) S= .304	.3925 (4) S= .304	-.0302 (31) S= .436	.0936 (31) S= .308	.3442 (25) S= .046	-.1570 (31) S= .199	.1318 (14) S= .327	.2795 (9) S= .233	.0108 (14) S= .485	.6339 (8) S= .046
USL78SD	-.4734 (15) S= .037	-.5061 (14) S= .032	.4992 (14) S= .035	.1761 (26) S= .195	.1064 (4) S= .447	.5007 (3) S= .333	-.2820 (27) S= .077	.4150 (27) S= .016	.6106 (22) S= .001	-.1958 (28) S= .159	.4372 (13) S= .068	.2540 (7) S= .291	.2268 (14) S= .218	-.4867 (8) S= .111
SLGR7478	.0786 (6) S= .441	.1674 (6) S= .376	-.1142 (6) S= .415	.1644 (8) S= .349	1.0000 (2) S=######	-1.0000 (2) S=######	-.2577 (8) S= .269	.0569 (8) S= .447	.1807 (8) S= .334	-.0904 (9) S= .409	.0712 (5) S= .455	-1.0000 (2) S=######	.5101 (4) S= .245	.9898 (3) S= .046
IODGR748	-.2417 (9) S= .265	-.1551 (9) S= .345	.3012 (9) S= .215	.2519 (19) S= .149	-1.0000 (2) S=######	1.0000 (2) S=######	.3202 (18) S= .098	.1270 (18) S= .308	-.2027 (15) S= .234	-.1589 (19) S= .258	-.2838 (10) S= .213	.0889 (7) S= .425	-.1757 (10) S= .314	99.0000 (4) S=######
IODSLGR	-.8817 (4) S= .059	-.6160 (4) S= .192	.6689 (4) S= .166	-.5034 (5) S= .194	99.0000 (1) S=######	99.0000 (1) S=######	-.6322 (4) S= .184	.2808 (4) S= .360	.0330 (4) S= .483	.7596 (5) S= .068	-.5936 (3) S= .298	-1.0000 (2) S=######	-1.0000 (2) S=######	99.0000 (2) S=######
WKCP78MD	.3689 (7) S= .208	.4180 (6) S= .205	-.3830 (6) S= .227	-.0485 (18) S= .424	.5335 (9) S= .070	-.3724 (5) S= .269	-.0795 (23) S= .359	-.2740 (23) S= .103	-.0981 (18) S= .349	.4420 (20) S= .026	-.0093 (8) S= .491	.1685 (4) S= .406	-.3592 (9) S= .171	.9829 (3) S= .059
PCTCMSNC	.1564 (13) S= .305	.1720 (13) S= .287	-.1867 (13) S= .271	-.1428 (32) S= .218	-.6268 (10) S= .026	-.1702 (7) S= .358	-.1133 (36) S= .255	.0922 (36) S= .296	.2592 (28) S= .091	-.0706 (35) S= .344	-.2720 (17) S= .145	-.3061 (10) S= .195	-.2486 (19) S= .152	-.2800 (6) S= .295
HOLIPCT	-.4309 (13) S= .071	-.4266 (12) S= .083	.4506 (12) S= .071	.0092 (26) S= .482	-.0669 (7) S= .443	.0370 (6) S= .472	-.2528 (26) S= .106	-.1200 (26) S= .280	.0547 (18) S= .415	-.0114 (26) S= .478	.0953 (12) S= .384	-.1745 (7) S= .354	.0013 (10) S= .499	.9198 (7) S= .002
SCHEDPCT	-.0940 (15) S= .370	-.1646 (14) S= .287	.1441 (14) S= .312	.1404 (28) S= .238	-.2205 (6) S= .337	.1685 (5) S= .393	-.0036 (28) S= .493	-.3003 (28) S= .060	-.2174 (21) S= .172	-.0474 (29) S= .403	.2006 (14) S= .246	.2532 (8) S= .273	.1350 (13) S= .330	.6790 (8) S= .032

99.0000 - COEFFICIENT NOT COMPUTED

EXHIBIT D-6
MEASURES OF ABSENCE AND MANAGEMENT VIEWS OF UNION ATTITUDES ON ABSENCE
PEARSON CORRELATION COEFFICIENTS

	UNIONCOP	UNCOPROB
PSLD78OP	.1807	.2768
	(34)	(34)
	S= .153	S= .057
USLD78OP	.5170	.3323
	(29)	(29)
	S= .002	S= .039
SLD78OP	.3205	.3747
	(28)	(28)
	S= .048	S= .025
IOD78OP	.1055	.2216
	(39)	(41)
	S= .261	S= .082
SLID78OP	.1668	.3087
	(25)	(25)
	S= .213	S= .067
SLD78SD	.2837	.3109
	(26)	(26)
	S= .080	S= .061
PSL78SD	.1979	.2528
	(30)	(30)
	S= .147	S= .089
USL78SD	.5248	.3213
	(27)	(27)
	S= .002	S= .051
SLGR7478	.2949	.2928
	(9)	(9)
	S= .221	S= .222
IODGR748	-.0790	-.0774
	(19)	(19)
	S= .374	S= .376
IODSLGR	.6912	-.1375
	(5)	(5)
	S= .098	S= .413
WKCP78MD	-.2960	.2286
	(21)	(21)
	S= .096	S= .159
PCTCMSNC	.1123	.2763
	(32)	(33)
	S= .270	S= .060
HOLIPCT	.1637	.1027
	(27)	(26)
	S= .207	S= .309
SCHEDPCT	.0305	-.0725

EXHIBIT D-7

MEASURES OF ABSENCE AND MEDICAL-SICK LEAVE POLICY

	EMREDSPY	PREMEXAM	PERDEXAM
PSLD78OP	-.1784 (28) S= .182	-.1570 (36) S= .180	-.2013 (36) S= .120
USLD78OP	.1466 (33) S= .252	-.2236 (30) S= .117	-.2392 (30) S= .102
SLD78OP	-.1285 (23) S= .280	-.2476 (29) S= .098	-.3736 (29) S= .021
IOD78OP	-.1287 (28) S= .257	-.1096 (42) S= .245	-.1589 (42) S= .157
SLID78OP	-.1839 (21) S= .212	-.3286 (26) S= .051	-.3521 (26) S= .039
SLD78SD	-.1345 (22) S= .275	-.1484 (27) S= .230	-.2861 (27) S= .074
IOD78SD	-.3318 (21) S= .071	-.2386 (32) S= .094	-.2170 (32) S= .116
PSL78SD	-.1608 (25) S= .221	-.1157 (32) S= .264	-.2365 (32) S= .096
USL78SD	.0912 (22) S= .343	-.1292 (28) S= .256	-.1994 (28) S= .154
SLGR7478	99.0000 (8) S=#####	99.0000 (9) S=#####	-.1991 (9) S= .304
IODGR748	-.1868 (12) S= .281	99.0000 (19) S=#####	-.2402 (19) S= .161
IODSLGR	99.0000 (4) S=#####	99.0000 (5) S=#####	.8444 (5) S= .036
WKCP78MD	-.1224 (13) S= .345	-.1019 (23) S= .322	-.3443 (23) S= .054
PCTCMSNC	-.2881 (25) S= .081	.3431 (37) S= .019	-.0432 (37) S= .400
HOLIPCT	.6039 (19) S= .003	-.0839 (28) S= .336	-.1288 (28) S= .257
SCHEDPCT	.4356 (22) S= .021	-.0893 (30) S= .319	-.2804 (30) S= .067

99.000 - COEFFICIENT NOT COMPUTED

APPENDIX E

DETAILS OF ABSENCE COST ESTIMATES AND SOURCE DATA

DETAILS OF ABSENCE COST ESTIMATES AND SOURCE DATA

A. DIRECT COSTS

1. Workers' Compensation

$482/operator[1] x 105,000 operators[2] x .72 operator share[3] = $36,439,000

2. Medical Payments

$133/operator[1] x 105,000 operators[2] x .72 operator share[3] = $10,055,000

3. Supplementary Payments

$78/operator[4] x 105,000 operators[2] x .72 operator share = $5,897,000

4. Sick Pay

$392/operator[1] x 105,000 operators[2] = $41,160,000

B. INDIRECT COSTS

1. Extra Operator Costs

$$\frac{3{,}000{,}000 \text{ days lost}^{5} \times .81^{6}}{211^{7} \text{ days per extra}} \times \$6{,}491^{8} \text{ per extra} = \$74{,}754{,}000$$

2. Overtime Costs

3,000,000 days lost[5] x .19[6] x 4 hours[7] x $7.69/hour[8] x 1.0605[9] = $18,594,000

$186,899,000

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NOTES

1. Exhibit II-4.

2. American Public Transit Association (APTA) estimate for U.S. Transit Industry, including non-APTA systems.

3. For 15 large systems (including 27,000 operators), data were available for both operator and non-operator job-related injuries (IOD days). Using APTA data to estimate the relationship between operator and non-operator absence:

$$\frac{\text{non-operator IOD}}{\text{operator IOD}} = \frac{\text{non-operators (from APTA) x IOD days per non-operator}}{\text{operators (from APTA) x IOD days per operator}}$$

$$= \frac{65{,}600 \times 2.54}{105{,}000 \times 4.13}$$

$$= .38$$

Therefore, operator IOD is 72 percent of the total $\left(\frac{1}{1 + .38 = .72}\right)$.

4. Based on responses to survey question D-8.

5. Nationwide operator days lost, per Section II of report.

6. Percent of operator absence covered by extra or overtime operators, based on survey section F.

7. Days worked for the average operator=

   365 - 104 scheduled off -21.22 vacation and holidays -28.57 unexpected absence = 211 days worked.

8. Exhibit II-7.

9. Employer's social security contribution in 1978 was 6.05 percent.

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