

AN ANALYSIS OF A SELF-ADMINISTERED QUESTIONNAIRE TO MEASURE
EMPLOYER SATISFACTION WITH MEDICAL CARE FOR OCCUPATIONAL
INJURIES IN A MANAGED CARE ORGANIZATION

By

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Abstract:

The delivery of medical care for occupational injuries contributes significantly to total health care costs in the United States, and in an attempt to control the escalating costs associated with Worker's Compensation (WC), several states have investigated the utilization of managed care organizations (MCO) in the medical management of work-related injuries. This represents a significant shift in health care policy, and an analysis of the transition is warranted. The current investigation was conducted to develop an instrument to measure employer (purchaser) satisfaction with medical care for occupational injuries delivered by a MCO, to investigate whether a contractual service agreement between employers and a certified MCO for WC is associated with higher levels of employer satisfaction, and to study dimensions of occupational health service of highest importance to employers.

A self-administered questionnaire was developed and distributed to employer representatives (n=300) whose injured workers received care from a certified MCO for WC during a two-month period. A ten-item index measured employer satisfaction with multiple dimensions of service delivery, including access, communication, dispute resolution, and the MCO's return-to-work philosophy. A response rate of 43% was achieved, representing the experience of small, medium, and large size employers in the states of Oregon and Washington. The multiple-item index had an acceptable measure of internal consistency reliability (Cronbach's $\alpha=0.85$), and factor scores for the index had significant positive associations with measurements of overall satisfaction (Spearman's $\rho=0.86$). The majority (65%) of respondents were satisfied or highly satisfied with the MCO's services. Employers with a contractual service agreement with

the MCO had significantly higher levels of satisfaction than employers who did not. The return-to-work philosophy and the prompt communication of return-to-work information were the most frequently cited dimensions of service of highest importance to respondents. The primary prevention of work-related injuries was not a dimension of service of highest importance to any of the respondents to the questionnaire. The results of this investigation are consistent with observations in other regions of the country where the utilization of MCO's for WC has been studied. Further investigation is warranted to study the retest reliability and construct validity of the questionnaire.

Introduction:

In the past ten years, consumer satisfaction with the quality of health care services has become an increasingly important accountability factor influencing the delivery of medical care in the United States. Mechanisms for the measurement and reporting of performance data, including consumer satisfaction, have become important tools to control the growth of health care spending by introducing the discipline of market forces to the delivery of organized medical care. By giving health care consumers the ability to make more informed decisions, it is expected that the market for health care will become more efficient and competitive, and may lead to wider participation in quality improvement initiatives by health care organizations.¹

Despite published reports demonstrating that public dissemination of accountability measures is associated with improvement in the quality of health care services,^{2,3} many questions and controversies remain regarding the assessment of health care quality. Part of the problem is that the number of indicators of quality that have been proposed to measure performance far exceeds the ability of a health care system to realistically implement and use.⁴ In addition, much of the published work on quality assessment in health care has been based upon implicit assumptions about how health care consumers define quality, without assessing the extent to which these assumptions are valid.⁵

The past several years have seen considerable growth of the science of measuring quality in health care, particularly with respect to the performance of managed care organizations. The criteria used by health care purchasers to evaluate managed care organizations previously focused on cost and coverage of services,^{6,7} although this has changed to include a larger perspective focused on the quality of services offered by the managed care organization, and how well they perform in multiple areas of service delivery. Agencies such as the National Committee for Quality Assurance (NCQA) have defined criteria that designate that a particular managed care organization has met standards

designed to evaluate a MCO's clinical and administrative systems. In addition to accreditation activities, the NCQA has developed performance measures which are reported in the Health Plan Employer Data and Information Set (HEDIS), including assessments of access to care, utilization of preventive services, and consumer satisfaction, among other indicators.⁸ The clinical measures for earlier versions of HEDIS were fairly narrowly focused on preventive health care, although more recent versions of HEDIS have expanded to include process measures relating to populations with injury or illness. The NCQA has developed a series of advisory panels consisting of outside scientists to study measures the organization thinks are important but not yet ready to include in HEDIS, including evaluation criteria for chronic diseases such as cancer and asthma.

It is clear that such accreditation standards and performance measures are in early stages of development, and that significant modification to the process will evolve over time. Given this observation, it is likely that the development and interpretation of performance measures for medical care issues of high complexity will be a difficult task. Purchasers of health care services that are costly or highly utilized will continue to place high priority on the performance of managed care organizations with whom they interact. Employers, who are major health care purchasers, will demand accountability from health care organizations whose delivery of care may affect the health and productivity of their workforce.

The purpose of this investigation is to develop and evaluate the application of a measurement tool to evaluate the level of employer satisfaction with medical care for occupational injuries and illness, a process which involves more complex and direct interactions between purchasers (employers), payers (insurers), and providers than other medical care issues. The delivery of medical care for occupational injuries is a significant burden to total health care costs in the United States, and recent changes in health care policy have increased the ability of employers and insurers to enter into contractual service agreements with provider networks and managed care organizations (MCO's) for the

medical management of workers injured on the job. In an effort to be accountable to their purchasing customers, MCO's will need to develop precise and accurate methods to report their performance. Very little research has been published to date on the assessment of quality in the delivery of medical care for occupational injuries,⁹ and the measurement of outcomes is problematic for many reasons which will be further analyzed.

Specific research questions to be addressed include an assessment of the level of overall satisfaction among employers whose injured workers receive medical care within a certified managed care organization. This investigation seeks to determine whether the level of employer satisfaction can be measured with precision and accuracy using a multiple-item satisfaction index. Levels of satisfaction between employers with and without contractual service agreements with a certified MCO will be compared to test the hypothesis that that such a contractual agreement is associated with differences in levels of employer satisfaction. Finally, in a setting where not much is known about the definition of quality, this investigation seeks to identify drivers of satisfaction among purchasers of health care services for occupational injuries and illnesses.

Background and Significance:

A recently published report estimated the annual incidence, mortality, direct and indirect costs associated with occupational illness and injuries in the United States in 1992.¹⁰ Using large regional data sets collected by the Bureau of Labor Statistics and the National Council on Compensation Insurance, there were approximately 6,500 job-related deaths from injury, and 13.2 million non-fatal injuries. The estimated direct (\$65 billion) plus indirect (\$106 billion) costs totaled \$171 billion. This greatly exceeds estimates for the direct and indirect costs of AIDS (\$30 billion),¹¹ and Alzheimer's disease (\$67 billion)¹² during the same time period. Other studies have shown that the costs of occupational injuries and illness have increased sharply in the past 10 years, doubling between 1985 and 1990.¹³

Several studies have investigated factors which may contribute to the high costs of medical care for work-related injuries, particularly when compared to costs for similar illnesses and injuries which occur away from the workplace. After adjusting for age, sex, and severity of injury, factors which have been reported as positively associated with higher costs include higher rates of reimbursement for medical services under the worker's compensation system,¹⁴ and higher rates of utilization of medical services by injured workers under WC.¹⁵ While studies disagree about the relative influence of price and utilization on the outcome of overall costs, a consistent observation is that for similar diagnoses, medical care for occupational injuries is more expensive than for injuries that are not work-related.

An analysis of the significance of this issue is not complete without an understanding some of the unique aspects of the process of providing and paying for medical care for work-related injuries. In the United States, the delivery of medical care for occupational injuries and illness is governed by State legislatures which have developed

WC systems holding employers strictly liable to their employees for injuries and diseases caused by the workplace. WC legislation mandates that the employer (or their WC insurer) pay benefits for lost wages (indemnity costs), medical treatment, and rehabilitation services to injured workers. Unlike other health care financing programs, WC provides complete medical care (first-dollar coverage for services). Deductibles or co-payments cannot be used to control the utilization of medical services.

Physicians delivering medical care under the WC system are in a unique position of making assessments that influence an injured worker's benefits (including whether an injury is compensable under WC, and the extent of impairment), and because of this role patient-physician communication may be challenged. The situation is complicated by observations that major contributors to occupational disability are often psychosocial in nature^{16,17} and that objective assessments (such as the diagnosis and physical examination) by the provider often have little predictive value regarding the level and duration of occupational disability.¹⁸ As the majority of occupational injury care in the United States is provided by primary care providers who possess little training in either identifying work-related illness or treating injured workers differently than other patients,¹⁹ many physicians take a traditional patient-centered approach to treating work-related illness and managing disability. This approach often fails to emphasize the prevention and mitigation of workplace illness. A physician without experience in managing work injuries may be reluctant to return a patient to work against the patient's wishes, even if the patient is physically capable of doing so. When this is the case, non-medical (indemnity) costs of the worker's care are high, and sometimes equal or exceed the total cost of care.²⁰ These indemnity costs are borne by the employer, who must compensate the injured worker while losing that worker's productivity during their absence from the workplace. As the choice of treating provider may affect how quickly workers return to work and the level of benefits they receive, these issues are of central concern to labor unions and employers

alike.²¹ All of these factors suggest that the behavior of consumers and providers in the purchase and delivery of medical care for work-related injuries may differ from other settings of medical care delivery, and that methods of analyzing and reporting performance measures will require the construction of new scales of measurement.

In an effort to control costs of medical care for occupational injuries, many states have adopted methods which have been previously demonstrated to lower medical costs. The use of medical fee schedules has been implemented in many states, although the effectiveness of the intervention on medical costs has not been demonstrated to be consistent in multiple studies.^{22,23} Limiting the injured worker's choice of treating provider has also been studied, again yielding mixed results on medical costs of WC.^{24,25} The predominant method that is being investigated and implemented in the United States at this time is the use of managed care in the delivery of medical care for occupational injuries. It has been forecasted that managed care will soon dominate health care delivery for WC in nearly all states because of cost concerns.²⁶ This change in health care policy has significant implications to all consumer stakeholders, and a better understanding about the role of managed care in this process is warranted.

Managed care in worker's compensation has been defined as the active process of reducing work-related injuries and assuring that when an injury does occur, the employee can find cost-effective medical care and return to work quickly and safely.²⁷ The process involves utilization review, case management, and the implementation of clinical practice guidelines in an effort to improve quality of care, minimize impairment and disability, and reduce the incidence of unnecessary services. In the past several years, many states (including Oregon, Florida, Missouri, Minnesota, Rhode Island, and Ohio) have passed managed care laws or are developing rules or pilot projects for their application.²⁸

Oregon has been very progressive in this initiative since 1990, when Senate Bill 1197 was implemented. Senate Bill 1197 introduced WC reform legislation authorizing

any health care provider or group of medical service providers to make written application to the director of the Department of Consumer and Business Services (DCBS) to become certified to provide managed occupational health care to injured workers. The application process for certification involves a proposed plan of operation for the MCO, including details of how workers will either access MCO providers within reasonable distance from the place of employment or have the option of receiving treatment by a non-MCO provider when they reside outside an MCO's geographic service area (defined by postal zip codes). MCO's must have a panel of medical service providers of sufficient size and diversity to ensure quality care. Under the legislative rules, MCO's may only contract with insurers or self-insured employers. If an insurer or self-insured employer has entered into a contractual agreement with a certified MCO, the legislation requires that injured workers covered by that insurer receive medical care for a work-related injury from that MCO under most circumstances.

There are several common elements and services that MCO's must offer in order to qualify for certification by the DCBS. All MCO's are required to satisfy access and coverage requirements (defined by the legislation), a quality assurance program for monitoring the medical care provided by the provider panel, a program to promote early return-to-work for injured workers, and a workplace safety and health consultation program. In response to consumer demands, some MCO's have responded to market pressures by providing additional services not required by their MCO certification.

The type of financial arrangements used on contracts between insurers and MCO's generally falls into one of three categories: fixed-fee arrangements, volume-based fee agreements, or performance-based fee agreements. A fixed-fee arrangement usually involves an agreement to provide a basic array of MCO services for a negotiated fixed fee that covers a specified time frame regardless of the number of injured workers that are enrolled in the MCO by the insurer. Volume-based agreements are a flat fee per covered employee, per enrolled claim, type of service, or hourly rate. Performance-based fee

understanding of factors which contribute to consumer satisfaction, an important component of the current investigation.

In an effort to study the effectiveness of managed care on outcomes in work-related injuries, several states have initiated pilot projects. Early pilot projects were focused primarily on costs, and not clinical outcomes. A pilot study in Massachusetts compared the costs of industrial injuries between postal employees enrolled in an HMO with those in a fee-for-service plan.³⁰ After adjusting for age, occupation, and injury type, medical and indemnity costs among the HMO enrollees were significantly lower. The method of payment for services in both groups was fee-for-service (which is the traditional method of payment for WC services), although the HMO provided lower cost care than non-HMO providers. These data suggest that the HMO practice style carried over to the delivery of medical care for work injuries under WC, resulting in lower costs.

The State of Florida conducted a pilot intervention which compared medical and indemnity costs of work-related injuries treated in an HMO (emphasizing case management, utilization and peer review) where the traditional method of payment (fee-for-service) was changed to capitated monthly payments for enrolled workers.³¹ Detailed demographic and claimant characteristics were collected for over 5,000 claims of work-related injury. After adjusting for differences in diagnosis, age, and severity of injury, workers enrolled in the capitated intervention had significantly lower medical and indemnity costs of work-related injuries when compared to workers whose care was managed on a fee-for-service basis. The differences were attributed to lower use of hospital services, lower incidence of indemnity (time loss) claims, and less costly use of physician services. Part of the evaluation of the program's effectiveness involved a satisfaction survey which was mailed to injured workers who were participants in the pilot project. The results showed that the majority of respondents in both groups were satisfied overall with their medical care, although further inference from the data is limited due to low rates of response to the questionnaire (<25%).

The results of these early pilot projects suggest that managed care in WC can achieve cost-savings, although the evaluation component of both projects were narrow in focus and did not adequately assess the importance of consumer perceptions in the overall success of the intervention. This is an important limitation, as critics of the transition to managed care for WC argue that if the emphasis of managed care relies solely on reductions in treatment costs, that indemnity and overall costs may remain unchanged or increase over time because of lost work time resulting from inferior medical treatments.³² In addition, neither intervention emphasized the role that a managed care organization can play in the prevention of workplace injuries and the development of return-to-work programs, important factors which could contribute to significant reductions in indemnity and medical costs of WC.

The state of Washington took the issue of consumer satisfaction with managed care for WC a step further with its pilot project, which was summarized in a report to the legislature in April, 1997.³³ The pilot project evaluated the experience of workers receiving care for occupational injuries and illnesses under conditions where the method of payment was changed from a fee-for-service arrangement to experience-rated capitation. It also evaluated the delivery of medical care for work-related injuries in the traditional office-based fee-for-service model in comparison to an occupational medicine model with clinical oversight and care provided by physicians with specialized training in occupational medicine. In sum, the intervention involved a capitated method of payment utilizing occupational medicine physicians, in comparison to traditional methods of payment and service delivery. The intervention group consisted of 120 employer groups representing over 7,000 workers. The control population included 392 employer groups representing over 12,000 workers, with a strategy to select control firms by a hierarchical set of matching criteria which included county, risk class, retrospective rating status, and employer size. The analyses conducted in the pilot project included costs, medical outcomes, and worker as well as employer satisfaction.

Information on medical outcomes and worker satisfaction were obtained through phone interviews with injured workers at six weeks post-injury and again at six months post-injury for workers with accepted claims. Employer satisfaction was assessed by conducting telephone interviews with personnel identified as the most knowledgeable about the WC system at intervention and control firms. Interviews with employer representatives were conducted three to four months after the filing of a claim. Employers were asked to relate their experience with the most recently injured worker as well as their overall experience during the study period. The initial research design intended to measure the level of employer satisfaction at several points in time, although many employers were unwilling to be interviewed multiple times and the decision was made to contact employers only once, after the first injury was reported.

The major findings of the pilot project showed the most significant differences to be in medical costs, with the intervention group having a 27% lower total medical cost per claim. The intervention group had lower rates of time loss claims and duration of time loss per claim, although the differences were not statistically significant. The medical outcome and worker satisfaction survey revealed that the control group perceived better outcomes from their injury than the intervention group, although functional outcomes (pain, role functioning, physical functioning, mental health) did not differ significantly between the groups. Satisfaction with treatment was found to be significantly higher among workers in the control groups when measured at the six-week survey, with significant differences observed in overall satisfaction, satisfaction with attending physician, and overall access to care. There were no differences in satisfaction in these categories of service when measured at six months post-injury.

The results of the employer satisfaction survey revealed that for most aspects of services received, including the quality of information received regarding injured workers (time loss, work modification restrictions), the time elapsed between injury and release to regular work, perceived commitment of providers to improving workplace safety, and

quality of medical access information, the level of satisfaction was significantly higher among employers in the intervention group. For the majority of survey items, responses did not differ when asking the employer to evaluate their experience with the most recently injured worker versus their overall experience during the study period. When asked about their overall experience during the previous three-month period, the intervention group reported significantly higher satisfaction levels than the control group. This is an observation which has been reproduced in survey research in other geographic areas of the country, which has measured higher levels of satisfaction among employers whose workers are assigned to receive medical care for work-related injuries from a managed care network of occupational medicine providers.³⁴

The nature of the intervention in the Washington pilot project makes it difficult to assess what factors contributed to the observed differences in costs and satisfaction, whether it was the method of payment for services or the utilization of physicians specializing in occupational medicine for the treatment of these injured workers. Nonetheless, the Washington pilot project brought significant advances to understanding the implications of the implementation of managed care for WC for several reasons. It expanded the evaluation of the program's effectiveness to include the perceptions of workers, payers, and purchasers of the service. The project also investigated the utility of a new instrument to measure worker satisfaction with managed WC services using appropriate statistical methods.³⁵ Although the investigators report that the employer survey in the Washington pilot project was tested for its reliability and validity in a pre-test of 100 employer firms, the methods and results of their analysis have not been published or reported. The development of objective and testable measures of quality healthcare are key elements of accountability, and this sets the groundwork for the current investigation.

The purpose of this investigation is to develop an instrument to evaluate employer satisfaction with occupational health services, and test the instrument on a sample of employers whose workers receive care within a certified MCO for WC which has

demonstrated effectiveness at reducing the medical and indemnity costs of medical care for occupational injuries. A set of indicators reflecting employer satisfaction with medical care for occupational injuries in a managed care environment will be constructed, and the multiple-item index will be tested for its internal consistency reliability and criterion validity. Building upon previous observations, and in an effort to evaluate the construct validity of the multiple-item index, the hypothesis that employers with a contractual service agreement with a MCO will have higher levels of satisfaction than employers without a service agreement will be tested. In a setting where little is known about drivers of satisfaction among purchasers of medical care for work-related injuries, this investigation seeks to explore those dimensions of service that are of highest importance to employers.

Research Setting:

This investigation was conducted within the context of operation of Kaiser on the Job (KOTJ), a certified MCO for WC care since 1991. The MCO delivers occupational health services in a geographic distribution from Longview, Washington to Salem, Oregon. Nine clinics specializing in occupational medicine are staffed by 22 physicians, ten of whom are board certified in occupational and environmental medicine. Each clinic employs a lead nurse with formal occupational health training, and is assisted by a regional case coordinator.

The majority (85%) of occupational health visits take place within the occupational health clinics, with the remainder distributed between primary care providers and the emergency room and urgent care setting. A specialized database, the “Industrial Medicine Patient and Claim Tracking” (IMPACT) system is used to compile demographic and epidemiologic variables for every WC claim managed by the MCO. Data fields include diagnosis, point of service within the MCO, provider utilized, time loss and modified work days authorized, and several other variables. The database is used to report summary information to employers and insurers with a contractual agreement with the MCO.

The process of case management within the MCO involves occupational health staff callbacks to employers within 24 hours of an injured worker’s initial clinic visit. A standard computer-generated form is provided to employers documenting the diagnosis, return-to-work status (including time loss or modified duty restrictions), the date the worker is scheduled for follow-up, a phone number to contact the occupational health clinic, and additional space for comments by the medical service provider. Self-insured employers with MCO contracts with KOTJ (n=15) are assigned a case management team which consists of a physician and case manager. The team meets with employer representatives on a quarterly basis to discuss the employer’s rate of injury and improve the provider’s understanding of the needs and risks of workers at that site. Insurers with MCO contracts with KOTJ (n=5) are provided quarterly summary statistics on rates of injury,

time loss, and modified duty restrictions for all employers who purchase their WC insurance through that carrier. Payment for medical services follows the WC fee schedule in the State of Oregon.

Clinical practice guidelines are utilized for the treatment and prevention of work-related injury for 75 diagnoses, representing more than 95% of the ICD-9 codes billed by KOTJ to WC insurers. Medical service providers are expected to comply with the guidelines, and new physicians are oriented to departmental procedures through self-study modules. The guidelines address evaluation, treatment, criteria for specialty referral, expected length of disability, and suggested frequency of visits.

Quality management involves a formal process for the resolution of disputes (initiated by workers, employers, insurers, or providers), and the monitoring of statistics summarizing disability and modified work days authorized by physician, clinic, and specialty for high-volume and high-risk diagnoses. Worker satisfaction with occupational health clinic visits is measured on a quarterly basis through a random survey of 2% of workers receiving care, using a self-administered questionnaire which has been tested for its validity and reliability in managed care patients in a previous study.³⁶ Employers and insurers with MCO contracts receive a satisfaction survey at the time of annual contract renewal, although an attempt to evaluate satisfaction among employers without MCO contracts, whose workers contribute to the majority (approximately two-thirds) of clinic visits, has not been conducted by KOTJ in the past.

An evaluation of the performance of KOTJ was recently published.³⁷ Using data provided through the State Accident Insurance Fund (the insurer for approximately 20% of WC claims managed by the MCO) for a one-year period from 1994-5, an analysis of total costs (medical and indemnity) per claim revealed lower costs per claims managed by KOTJ when compared to SAIF claims managed by two other MCO's in the same geographic service area, by a margin of 20%. The amount of time-loss authorized by medical service providers at KOTJ was tracked over a four year period (1991-5), revealing a significant

decrease of time-loss per claim by 17.9% during this period. Patient satisfaction surveys have indicated that 90% of injured workers are either satisfied or very satisfied with their physician. All employers and insurers with MCO contracts have rated the quality of service as good or excellent, and all have renewed their contracts with KOTJ.

Methods:

The process of developing an instrument to measure employer satisfaction with WC care began with assembly of a focus group of experts. It included the Medical Director of KOTJ, the Manager of Operations of KOTJ, and the Chief Executive and Managing Officers of a national consulting group for the development and implementation of occupational health networks. The focus group possessed a high level of understanding of the organization's operations as well as its philosophy, strengths and weaknesses, and visions for the future. Initial discussions resulted in a further clarification of the scope of the project, a plan for allocation of resources to accomplish goals, and a time frame for completion. A proposal summarizing the research design was approved by the Human Subjects Committee at Kaiser Permanente's Center for Health Research.

The development of the instrument began with the conceptual task of defining the construct under investigation. Satisfaction is an abstract and complex construct, and the paucity of research on employer satisfaction with medical care for occupational injuries has already been discussed. Rather than empirically developing indices of satisfaction, an alternative strategy was adopted to develop an index that would capture a particular theory relating to the construct of interest. Oregon Administrative Rules, Chapter 436, which was enacted with the expectation that it would reduce the costs of work-related injuries and improve the quality of medical care under the WC system in the State of Oregon, provided a template from which indicators of performance were constructed for the purpose of this investigation.

An important initial consideration in the development of the index was the level of specificity upon which to measure satisfaction. The options were to base the index on the employer's level of satisfaction with medical care for a specific disease entity with high prevalence (such as lumbar strain, carpal tunnel syndrome), a generic index, or the employer's experience with the management of a specific injured worker. A generic index was chosen for several reasons: the exchange of information between medical providers

and employers regarding a claim of industrial injury is limited to pertinent medical information, and the investigational nature of this study would require informed consent from each injured worker to allow specific identifiers to be included on any communication with their employer. A diagnosis-specific index was not chosen because of the limited predictive power of the diagnosis on clinical outcomes (level and duration of disability) in occupational injuries, an observation which has already been referenced. In an attempt to maximize the generalizability of the results, and given previous research demonstrating that valid generic questionnaires can yield results comparable to disease-specific ones across a number of diagnoses and instruments,³⁸ a generic questionnaire was chosen for the purpose of this investigation.

A self-administered questionnaire was chosen as the measurement tool. The advantages to this method included economy of effort, the ability to reach a wide target population, and the ability to obtain honest responses to potentially sensitive questions. A summative (Likert) scale approach was utilized. The process involved identifying a number of indicators that would be reflective of the construct under investigation, to which the respondent would rate their level of agreement from an ordinal response scale consisting of five categories (ranging from “very satisfied,” “satisfied,” “neutral,” “dissatisfied,” to “very dissatisfied”). A sixth response category, “does not apply,” was included for each questionnaire item.

The process of item development involved a review of the rules legislating MCO requirements for WC in the State of Oregon, as well as a review of the existing body of literature on the assessment of quality in healthcare delivery.³⁹ Dimensions of service which were reflective of MCO legislation as well as high-volume, high-risk, and problem-prone services within KOTJ and for managed care organizations in general were developed. Initial drafts of the questionnaire items were distributed to key occupational health personnel, including chiefs of service, market researchers, and quality assurance directors, from other Kaiser Permanente regions in the United States in an effort to assess

the face validity and relevance of the questionnaire. After revisions were made based on consensus opinion, the questionnaire was subsequently reviewed by a small number of risk managers representing local employers (Wacker Siltronics, Esco Corporation, City of Portland Department of Risk Management) for further evaluation of the face and content validity. A list of the final questionnaire items appears in Table One.

Questionnaire items one through three addressed the issue of access to care, which has been identified as an important predictor of utilization of occupational health services.⁴⁰ Indicator one reflected access requirements defined by Oregon Administrative Rules (OAR) Chapter 436, for a MCO to become certified to provide WC services.⁴¹ Questionnaire item three was an indicator of access that was perceived as a problem-prone area within many managed care delivery settings in general, a factor which warranted its inclusion for monitoring and evaluation. Questionnaire item four reflected a high-volume service provided directly to employers, and as such was an important criterion for inclusion. Questionnaire item five was perceived as a problem area of service within the MCO, and since Oregon Administrative Rules require that certified MCO's be able to provide information to employers regarding their services on a 24-hour basis, this was considered to be relevant performance indicator. Questionnaire item six reflected Oregon Administrative Rules requirements that certified MCO's have a system to monitor and resolve disputes, an important function where employer dissatisfaction could have significant negative consequences for the MCO. In addition to reflecting OAR requirements for MCO certification, questionnaire item seven was supported by evidence that early return-to-work, even in a modified or transitional capacity, is associated with better clinical outcomes⁴² and reduced indemnity costs of work-related injuries.⁴³ Item eight was adapted from the Washington State managed care pilot program survey of employers, reflecting employer perceptions of the appropriate utilization of medical services. Item nine was perceived to be a particularly relevant indicator given OAR requirements for MCO certification, and the relatively high proportion of KOTJ providers

board-certified in occupational medicine, a specialty whose code of ethical conduct places highest importance on workplace health and safety.⁴⁴ Questionnaire item ten reflected the importance of patient satisfaction with the care received, a critical indicator of quality which is measured through other methods by the MCO, although employer perceptions of this indicator was considered important variable for inclusion.

Questionnaire item eleven served as a validation item representing the overall level of employer satisfaction. The wording of this item was carefully constructed to limit the scope of the respondent's evaluation to the two month period defined by this study. The inclusion of this validation item would allow for an assessment of the concurrent validity of the satisfaction index using correlation coefficients. This item could also be used to compare overall levels of satisfaction among employers of different categories (size, level of service agreement) using non-parametric statistics.

The final copy of the questionnaire appears in Appendix A. An important element of the questionnaire was question 12, which asked respondents to evaluate the questionnaire items from a perspective of the importance that they represent to employers in the overall context of occupational health service delivery. Previous survey research on drivers of satisfaction with occupational health services among employers has shown that when asked to rank the importance of individual performance indicators, nearly all of the indicators were identified as highly important and few significant differences were observed.³⁴ For the purposes of this investigation, counts were measured for all the questionnaire items which were determined to be of highest importance to employers, and the results were summarized in aggregate for further analysis. Similarly, data were collected in aggregate for questionnaire items which employers perceived the MCO's performance was in greatest need of improvement.

Additional data were obtained from respondents asking them to identify the location at which their employees receive medical care for work-related injuries most frequently. Differences in levels of satisfaction based on point of service within KOTJ would be highly

important to identify, as would differences in levels of satisfaction between KOTJ and other medical service providers. The questionnaire included a free-text area which encouraged further comments and suggestions from respondents.

The methodology to identify employers eligible for inclusion placed priority on identifying a sample of employer representatives experienced in the management of work-related injuries who had interacted with KOTJ within a time frame that would be recent enough to allow for recall of their experience, and lengthy enough to allow for accurate responses to the questionnaire. The IMPACT database was utilized in this process. Those employers eligible for inclusion were defined as employers in Oregon or Washington with more than one injured worker who had received medical care through the occupational medicine clinics at KOTJ during a two month period prior to the administration of the questionnaire (December 1, 1997-January 31, 1998). Data fields extracted from IMPACT included employer name, address, state, phone, point of service (clinical facility where the most recently injured worker entered the claim of injury), the modal clinic for that employer (the clinical facility used most often by injured workers for a specific employer), and whether the employer had a service agreement (MCO contract) with KOTJ. The number of injured workers during the study period for each employer was included in the database. Exclusion criteria included employers for whom local addresses could not be verified (the IMPACT database records billing addresses, which were located in other regions of the country for some eligible employers). Two weeks were allowed to elapse after the designated study period prior to the sampling process, to allow for maximum entry of data into IMPACT. A process to inform employers of the forthcoming questionnaire was then initiated.

The process of directing the questionnaire to the most qualified employer representative used several strategies. The questionnaire was to intended to be completed by the employer representative most experienced with WC and the management of work-related injuries. The MCO maintains rolodex files at each occupational health medical

office which include the telephone and telefax numbers of employers with whom the MCO has frequent interaction. These often include names of key employer contacts. For employers where this information was not readily available, the electronic medical record system was utilized. During the previous six months, the occupational health department had phased in the utilization of a computerized medical record system, and in many cases when the occupational health staff contacted an employer to inform them of an injured worker's status, the name (and often the telefax) of the employer contact was documented in the medical record. A standard phone script was used to inform employer contacts of the forthcoming questionnaire. In situations where faxes were available, the same script was utilized and faxed to employers.

Questionnaires were sent in a mass mailing, and were addressed to specific employer contacts (the risk manager or WC specialist) when this information was available (52% of eligible cases). In cases where the employer contact was not known, the questionnaire was addressed to the attention of the risk or human resources manager. The questionnaire packet included the questionnaire, a cover letter, and a business-reply (postage-paid) envelope. The cover letter included the signatures of this investigator as well as the Medical Director of KOTJ. A copy of the cover letter appears in Appendix B. Response envelopes were addressed to market research personnel at Kaiser Permanente Health Plan [Susan Pozdena], who forwarded the unopened response envelopes to this investigator as they were returned. A period of thirty days was given to allow for respondents to return the questionnaires. Follow-up calls were initiated after thirty days to employers who did not return questionnaires to encourage their response, and were repeated on a weekly basis for a period of three weeks.

Analysis of data for this investigation included measurement of the internal consistency reliability coefficient for the 10-item index, using Cronbach's alpha. Previous research has suggested a value of .70 as a lower acceptable boundary for this value,⁴⁵ although it is considered advisable during the development stage of a scale to strive for

higher values.⁴⁶ Cronbach's alpha value of .80 was considered adequate for the comparison of groups in this investigation. The sample size estimation to measure a reliability coefficient of .80 with a confidence interval of $\pm .10$, and an alpha of .05 would require a minimum of 100 subjects (rounding up from 90).⁴⁷ Item analysis included the calculation of corrected item-total correlations, following accepted guidelines that items with correlation values of less than 0.20 with the total index score should be discarded.⁴⁸ Additional criteria for elimination of items from the index included high rates of endorsement (greater than 5 percent) of "does not apply" for a specific questionnaire item.

An exploratory factor analysis of the questionnaire was conducted to study the dimensionality and relationship of the questionnaire items, and to compute factor scores based upon the factor loadings. Respondents with one or more responses of "does not apply" to a questionnaire item were excluded from analysis. The analysis began with diagnostic checks on the correlation matrix to determine whether it differed significantly from an identity matrix. The Bartlett test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy were used. Principal components analysis followed. Criteria for extraction of factors relied on Kaiser's *eigenvalue one* test.⁴⁵ Variables with significant factor loadings were retained and summated to compute a factor score. Critical values for statistical significance of factor loadings were derived from reference textbooks, using a significance level of .01.⁴⁹ Criterion validity of the factor scores were assessed by measuring the strength of association between the factor scores for each employer and their response to questionnaire item eleven (overall satisfaction during the study period) using Spearman's rho. Sample size estimation for the factor analysis followed guidelines that that there must be an absolute minimum of 5 subjects per variable and a minimum of 100 subjects.⁴⁹

Construct validity of the satisfaction index was assessed by comparing the satisfaction scores of employers with and without contractual service agreements with

KOTJ, using a t-test for independent samples. A sample size table was consulted to determine the number of respondents required per group using a t-statistic to compare means of continuous variables.⁵⁰ The estimate of the standard deviation was obtained from previous research on employer satisfaction with medical care for occupational injuries delivered in a managed care setting.³⁴ In this scenario, with a two-tailed alpha level of .05, a beta level of .10, and standardized effect size of .80, the sample size per group would be a minimum of 33. Logistic and financial support were provided for the administration of 300 questionnaires. It was anticipated that the rate of response to the questionnaire would be greater than 25%, and this would satisfy the requirements to adequately test these hypotheses.

Results:

During the period from December 1, 1997 to January 30, 1998, a total of 2,546 workers filed claims of industrial injury at KOTJ, representing 1,400 employers. The majority of employers (77%) had a single injured worker during this period. A total of 322 employers had greater than one injured worker and were eligible for sampling. Twenty-two employers from this subset were excluded from analysis. Ten employers were excluded as local addresses could not be verified, and twelve employers were excluded as records at that time indicated that the injured workers had not received care through the occupational medicine clinics (they had either received care in the emergency room, urgent care, or from a primary care physician). Overall, 93% employers who were eligible for inclusion were mailed questionnaires.

A summary of the study sample characteristics appears in Table 2. A response rate of 43% was achieved, representing the experience of 130 employers with 731 claims of industrial injury receiving care at KOTJ during the study period. The majority of respondents (82%) represented employers of medium (50-500 employees) or large (greater than 500) size. There were no statistically significant differences in characteristics between respondents and non-respondents based upon the MCO contract status, the average number of claims per employer, the state in which the claim was based (Oregon versus Washington), or the occupational health clinic used most frequently by workers for that employer. Among respondents, the mode clinical facility used by workers for each employer did not differ significantly based upon the employer's MCO contract status. There were significant differences in the distribution of respondents with MCO contracts based upon employer size, with a higher proportion of large size employers having MCO contracts ($X^2=6.04$, 2 df, $P=.0480$).

The frequency of endorsement for questionnaire items 1-11 appears in Table 3. For the majority of items, respondents endorsed categories within the ordinal scale. Questionnaire items six (addressing the dispute resolution process) and nine (addressing

injury prevention) had high rates (greater than 5%) of endorsement of the “does not apply” category. Figure 1 displays boxplots indicating measures of central tendency and dispersion of the individual questionnaire items. Coding for the ordinal scale ranged from 5=very satisfied, 4=satisfied, 3=neutral, 2=dissatisfied, 1=very dissatisfied. For the majority of questionnaire items, median responses were in the “satisfied” category. Questionnaire items 6 and 9, addressing the dispute resolution process and the medical provider’s commitment to workplace safety, had lower median values in the “neutral” category. Interquartile ranges were highest for questionnaire items measuring the prompt scheduling of follow-up care, and the communication of return to work information to employers within 24 hours of the initial visit. Histograms showing the distribution of responses for individual questionnaire items appear in Figures 2-12. For the majority of questionnaire items the data demonstrate a leftward skew, indicating a higher proportion of respondents in the “satisfied” or “very satisfied” categories. Item five (occupational health staff are easily reached by phone to answer your questions), and item seven (the physician emphasizes returning the worker to the workplace as soon as it is medically safe and appropriate), had the highest rates of endorsement of the dissatisfied and very dissatisfied categories. Figure 12 summarizes the distribution of responses to measures of overall satisfaction during the study period. The majority of respondents (65%) endorsed the “satisfied” or “very satisfied” categories.

A reliability analysis of the 10-item index appears in Table 4. Item means tended to have values towards the middle of the six-category scale, with a mean item variance of 1.2457. There was an average inter-item correlation of .3678, with a range from .1372 to .6684. Corrected item-total correlations were greater than .20 for all of the items. Cronbach’s alpha for the 10-item scale was .8377. The coefficient alpha increased with the deletion of questionnaire items six and nine, indicating that the exclusion of these questionnaire items would increase the homogeneity of the index. When these two items

were eliminated, Cronbach's alpha increased from .8377 to .8535. Items six and nine were excluded from the subsequent factor analysis.

Principal component analysis is presented in Table 5, displaying the correlation matrix for the eight-item scale. Diagnostic tests confirmed that the correlation matrix differed significantly from an identity matrix. Factor extraction resulted in a single latent variable, with an Eigenvalue of 4.67, accounting for 58.4% of the total variance. A Catell's Scree plot of the Eigenvalues appears in Figure 13, indicating a sharp break after the first latent variable. The factor loadings for the questionnaire items appear in Table 6. Factor loadings for each item had positive and statistically significant ($P < .01$) measures of association with the latent variable. Factor scores were computed by summing responses to each questionnaire item, and multiplying the value of each response by the factor loading for that item. A frequency histogram showing the distribution of factor scores appears in Figure 14. The factor scores had a strong and significantly positive association with measures of overall satisfaction (item 11), Spearman's $\rho = .8565$ ($p < .0001$). A scatter plot showing the relationship between these variables appears in Figure 15.

When utilizing non-parametric statistics (Mann-Whitney U) to compare levels of overall satisfaction among employers (questionnaire item 11), employers with a contractual service agreement with the MCO reported significantly higher levels of overall satisfaction than employers who did not ($U = 814.0$, $Z = -5.3185$, 2-tailed $P < .00001$). Boxplots showing these differences appear in Figure 16. Employers with MCO contracts with KOTJ had significantly higher factor scores than employers without MCO contracts, $t(116) = 6.01$, $p < .0001$, $CI_{95\%}$ for difference $[3.12, 6.18]$. Boxplots showing these differences appear in Figure 17. Within the group of employers with MCO contracts, there were no significant differences in factor scores between self-insured employers and employers with MCO contracts through the WC insurers.

Employers in the state of Oregon had factor scores significantly higher than employers in the state of Washington [$t(116) = 3.07$, 2-tailed significance = .003, $CI_{95\%}$ for

difference [.965,4.479]. There were no significant differences measured in scores based upon the mode facility used by employers [$F_{8,109} 1.557, p=.1461$]. There were significant differences in scores among employers of different size [$F_{2,115} 3.143, p=.047$], and post-hoc comparisons showed that large employers (greater than 500 employees) had higher scores than small or medium-sized employers (Tukey-Honestly Significant Difference with significance level .05).

Table 7 summarizes the frequency of endorsement of questionnaire items one through ten that were perceived as most important to employers when choosing a provider of occupational health services. The dimension of service that was endorsed most frequently by all subgroups of employers was the return-to-work philosophy. The return-to-work philosophy of the MCO was also the most frequently cited dimension of service needing improvement (Table 8). Communication issues (timely communication of return to work information, and the ability to reach occupational health staff by phone) were also frequently cited as dimensions of service of highest importance to employers. Questionnaire item 10, assessing the medical provider's emphasis on improving workplace safety, was not endorsed as a dimension of highest importance by any of the respondents to this questionnaire.

A high proportion of respondents were either uncertain about the clinical facility used most often by their injured workers (12%), or did not provide a response to this section of the questionnaire (21%). Data from this section of the questionnaire were not included in subsequent analysis. Information on the modal clinical facility used by injured workers for a given employer were abstracted from the IMPACT database.

Thirty-one percent of employers provided written comments at the conclusion of the questionnaire (Appendix C). Comments included positive feedback on the computer-generated form documenting return to work information, as well as facility and provider-specific feedback which indicated that employer call-backs were not being completed as efficiently as they had been done in the past. Several respondents reported dissatisfaction

with disputes arising from the work-relatedness of their employees' claims of injury. There were also several employers who commented that the MCO was over-utilizing medical services or delaying returning a worker to their job in cases where the work-relatedness of an injury was in question or not substantiated by objective findings. Despite the confidential and voluntary nature of the questionnaire, several employer representatives included business cards and personal identifiers requesting further communication with the MCO about the employer's philosophy on injured worker management and their return-to-work programs.

Discussion:

A questionnaire administered to a sample of employer representatives revealed that the majority of respondents were satisfied overall with the services provided by a certified managed care organization for WC. A multiple-item index reflecting employer satisfaction was found to have acceptable levels of internal consistency reliability. A single latent factor accounted for the majority of the variation measured by the index, and summary scores reflecting this factor were found to have concurrent validity with measures of overall satisfaction during the defined study period. The hypothesis that employers with a contractual service agreement with an MCO have higher levels of satisfaction than employers who do not was confirmed. An analysis of drivers of satisfaction from the perspective of the employer offers important insights relevant to the current nationwide transition in health care policy which is affecting the delivery of medical care for occupational injuries.

The rate of response to this self-administered questionnaire was similar to rates of response among control group employers in the State of Washington pilot project (47%), which differed from the current investigation in that it utilized a telephone survey which was administered by the Department of Labor and Industries, an organization not directly involved in the provision of medical care for injured workers. The limitations of self-administered questionnaires have been well-described in the literature,⁴⁷ and techniques which have been used to circumvent these limitations (cover letters, advance notice, confidentiality, pre-paid postage for responses, and follow-ups) were utilized to maximize the rate of response in this investigation. An important limitation to the current investigation is that the employer representative most qualified to respond was not identified for every eligible employer, leading to difficulties in determining whether non-response was due to refusal to participate or the inability to direct the questionnaire to the most appropriate employer representative. An alternate explanation for the relatively low rate of response to the survey is that it may have been too lengthy, given the observation

that the latter sections had significantly higher rates of non-endorsement by respondents. This is a factor which has been shown to limit rates of response to mailed surveys in other investigations.⁵¹ Despite these limitations, the number of respondents were adequate to answer the primary research questions proposed in this investigation.

An analysis of characteristics of respondents and non-respondents did not reveal statistically significant differences in several important factors relating to the study sample, including the level of service agreement, the average number of injuries per employer, employer location (Oregon versus Washington), or the mode clinical facility utilized by injured workers for specific employers. One important variable which was only measured among respondents was employer size, and it is unclear whether the higher distribution of respondents representing employers of larger size was due to higher rates of response among this group, a sampling methodology which favored the inclusion of larger employer groups, or a combination of these factors. Although nearly all eligible employers were mailed questionnaires, the experience of this investigator in the process of attempting to identify the most appropriate representative to whom to target the questionnaire revealed that employers with presumably smaller workforces (such as convenience stores, restaurants) tended to delegate the responsibility of injured worker management to the manager on duty at the time, whereas employers with larger workforces tended to have designated personnel on a full-time basis for these responsibilities. It may be the case that larger employers were more likely to have personnel consistent with the target population for this investigation, thus explaining the relatively low distribution of respondents representing employers with small workforces.

An alternate explanation is that small employers were under-represented because they tend to have lower rates of injury than employers of larger size,⁵² and the sampling methodology for the current investigation excluded employers with only one injury during the study period. Although the sampling methodology sought to maximize the inclusion of employer representatives who had interacted frequently with the MCO during the study

period, the possibility remains that selection bias may have influenced the measurements in this investigation by excluding employers of small size. As large employers reported higher levels of satisfaction than smaller employers in this sample, this may have contributed to an over-estimation of the prevalence of satisfaction among respondents and may in part explain the leftward skew to the distributions of responses to several of the individual questionnaire items.

The multiple-item index which was constructed to measure employer satisfaction was found to have an acceptable degree of internal consistency reliability. The cross-sectional nature of this study, however, warrants caution in the interpretation of the reliability coefficient. The measurements in this investigation were based upon a single observation, relatively early in the course of treatment for the injury, and the nature of occupational injuries suggest that such measurements may be subject to considerable variation over time. One factor that has been shown to influence outcomes (length of disability) in occupational injuries is the amount of time between the filing of a claim and its acceptance or denial.⁵³ In the State of Oregon, a 90-day period may follow between the filing and acceptance or denial of a claim of industrial injury. These factors would argue that further evaluation is warranted to measure the retest reliability of the questionnaire instrument. An appropriate method to investigate this would be to obtain measurements at the time an industrial injury claim is filed, and again when the claim is closed or determined to be medically stationary (a legal term indicating that no further improvement in a worker's condition is anticipated over time). Previous experience (such as in the Washington Pilot project) has shown that the collection of repeated measurements from employers is a difficult task to accomplish, and is complicated by low rates of cooperation. One technique that may enhance participation (which was not used in this investigation or the Washington State Pilot Project) may include the use of incentives,⁵⁴ which has been shown to increase response rates for some mailed questionnaires.

The reliability analysis of the multiple-item index resulted in the elimination of two of the ten initial questionnaire items, addressing the dispute resolution process and the commitment of medical care providers to improving workplace safety. In the case of the dispute resolution process, it is felt that this remains a very important criterion upon which to evaluate an MCO's performance. However, written comments in the free-text area of the questionnaire suggested that some respondents perceived this item to include disputes about the work-relatedness of a worker's injury. The resolution of disputes arising from the work-relatedness of an injury is not mediated by the MCO, it is process that is resolved through litigation. Employer disputes against an MCO which are processed by the WC Division of the DCBS include those that arise regarding medical fees, the appropriateness of medical treatment, palliative care, or requests for insurer medical examinations. The majority (85%) of disputes involving MCO's in fiscal year 1996 related to medical treatment (excessive or ineffectual medical care).⁵⁵ As questionnaire item eight did measure satisfaction relating to this variable, it is felt that the inclusion of this item captured an important aspect of the dispute resolution process. The elimination of item nine, assessing the medical provider's commitment to improving workplace safety, was based upon several factors. In addition to low rates of endorsement of this item and the improvement of the homogeneity of the index with the exclusion of this item, the primary prevention of workplace injuries does not appear to be a dimension of service of highest importance to employers. This is an interesting and important observation that will be further analyzed.

The elimination of questionnaire items also raises other issues regarding the sensitivity of the instrument. Included within the questionnaire were items that may not have reflected aspects of services which were applicable to the target population. This complicates the interpretation of responses in the "neutral" and "does not apply" category. Although attempts were made to standardize the format of the instrument, this may have contributed to a level of ambiguity which impairs the ability to extract meaningful

information from the measurements. An alternate strategy of combining dichotomous (yes/no) responses with ratings of satisfaction may make the interpretation of some of the individual items more straightforward and meaningful in a future investigation.

The index included variables representing multiple dimensions of satisfaction. With the exception of items one through three, which tapped subdimensions of access to medical services, the remainder of the items were conceptually distinct. Although this was not anticipated in advance, the results of the factor analysis suggest that the level of satisfaction with these dimensions were highly inter-correlated and a single factor explained the majority of index variation. An important feature of factor analytic techniques is that the results are a function of the number and the nature of items entered. It may be the case that the inclusion of additional items within each dimension of service may have resulted in the extraction of additional factors. Given the experience with this questionnaire, however, the inclusion of additional items may have decreased the overall rate of response to the questionnaire by making it too lengthy.

The strong and positive association between each of the individual items and the latent variable in the factor analysis, as well as the strong and positive associations between factor scores and the validation item (item eleven) would seem to lend support for the validity of the multiple-item index as an accurate reflection of overall employer satisfaction. The advantage to using a weighted (as opposed to a simple), summated scale in the analysis of the correlation matrix is that the factor scores reflected the relative contribution of each of the individual questionnaire items to the latent variable extracted from the matrix. Alternate explanations could also be proposed to explain the strong associations between the factor scores and the validation item, including a halo effect,⁵⁶ which could explain the observed associations if respondents were basing their responses to the individual questionnaire items primarily on their rating of overall satisfaction. If this were the case in this sample, however, one would not have expected to observe individual survey items with high rates of endorsement of "does not apply," an observation which suggests that respondents were

able to give a discriminating rating to the questionnaire items. Within the halo effect, some authors have described a “true halo” to explain high intercorrelations among scales and subscales.⁵⁷ In this case, the observed correlations are a true reflection of reality, which would suggest that the level of employer satisfaction with a highly integrated MCO product like KOTJ may be such that performance in one dimension of service is dependent upon the same or similar traits contributing to performance in other dimensions of service.

The results of this investigation suggest that a contractual service agreement between employers and a certified MCO for WC is associated with higher levels of employer satisfaction. There are several possible reasons to explain this finding. The process of case-management may be enhanced by the requirement that injured workers maintain continuity of care within a single network of providers. Within a large group of providers and medical facilities such as KOTJ, the ability to construct specialized databases to track performance and utilization, and the requirement that the MCO communicate rates of injury to contracted insurers and employers may enhance the perceived value of services. Finally, the contractual agreement between an employer and the MCO may lead to improved communication and familiarity with services, a factor which may enhance the ability to access and utilize medical services resulting in higher quality of care.

The differences observed in levels of satisfaction between employers with and without MCO contracts with KOTJ warrant analysis for alternate explanations. The potential effects of selection bias and the higher proportion of respondents representing employers of larger size have already been discussed. This issue emerges again as a limitation which complicates the interpretation of the results, given the observation that large employers were more likely to have MCO contracts than smaller employers. To attempt to resolve this limitation effectively in a future investigation would require that the sampling methodology include data on workforce size of all eligible employers. As the MCO does not track statistics on workforce size of employer customers without MCO

contracts, this would require that such data be obtained from other sources (such as the DCBS).

In theory, a reverse association hypothesis could also be proposed to explain the observed differences in satisfaction between employers with and without MCO contracts, if the study sample included employers who previously had MCO contracts and discontinued them because of dissatisfaction with KOTJ's services. This hypothesis cannot be confirmed, however, based upon observations that since the certification of KOTJ, all of the MCO contracts that have been entered into with insurers and self-insured employers have been renewed [Personal communication, Bill Morlan, Marketing director, KOTJ]. This is an important observation that may serve as an indirect validation measure of employer satisfaction, however, much work is needed to develop more objective measures of this variable.

One factor which was not found to predict significant differences in employer satisfaction was the modal clinical facility used by injured workers for each employer. Although this was not a primary research question in this investigation, variation in levels of employer satisfaction between individual clinical facilities within an integrated delivery system such as KOTJ would be of considerable interest to the MCO to identify as part of a quality assessment initiative. Written comments from respondents to this questionnaire suggest that employers were able to discriminate differences in services obtained from different KOTJ facilities. The questionnaire that was developed for this investigation could be utilized to investigate this, although a different sampling strategy and a larger sample size than the current investigation would be required.

The differences observed in levels of satisfaction between employers in the states of Oregon and Washington is another important observation which warrants further analysis. One plausible explanation for these differences is that WC legislation differs in Washington, and does not allow insurers and employers to enter into MCO contracts with managed care organizations for WC. In this way, workers in the state of Washington were

not required to remain within the network of medical providers at KOTJ, and the lack of continuity of care may have contributed to lower levels of satisfaction among Washington employers.

The differences in WC legislation between the states of Oregon and Washington raise other issues relevant to the questionnaire developed for this investigation. One of the main goals was to develop an instrument to measure the level of employer satisfaction with medical care for occupational injuries treated within a managed care organization. The scope of the current investigation was limited to the performance of a single MCO with considerable experience relative to other health care organizations, in a state where progressive legislation has been enacted enabling employers and insurers to contract with MCO's for WC since 1991. The question arises of the extent to which the questionnaire developed for this investigation could be utilized in other study environments, and the degree to which the results of this investigation would yield consistent observations.

With respect to the first question, a review of the health care policy in other states which have enacted legislation allowing for the certification of MCO's for WC reveals that in several cases the basic tenets of the legislation are similar. The states of Minnesota⁵⁸ and Kentucky⁵⁹ have enacted legislation which is very similar to Oregon in terms of their requirements for MCO certification, coverage responsibility, and emphasis on dispute resolution, utilization and peer review, and medical case management. Given these similarities and the evidence-based nature of the construction of several of the questionnaire items, it is reasonable to speculate that the instrument developed for this study may have valid applications in other settings where a managed care organization provides medical care for occupational injuries.

The issue of whether the results of this investigation have external validity is a more difficult question to answer. Employers in this sample and in the Washington pilot project reported consistently higher levels of satisfaction with services delivered within a MCO model, despite the fact that the method of payment for medical services in the state of

Washington was based upon experience-rated capitation, whereas in the current study the method of payment was fee-for-service. Thus, even in a fee-for-service environment in which the MCO does not assume the level of financial risk associated with a capitated method of payment, employers with a contractual service agreement with the MCO had higher levels of satisfaction than those who did not. Although the findings of this investigation and the Washington Pilot Project have some important similarities, the extent to which these observations are consistent with other regions of the country remain questions which warrant further investigation.

Respondents to this questionnaire identified the return-to-work philosophy and the timely communication of return-to-work information as factors of highest importance in evaluating an MCO's performance. This is in keeping with results from previous survey research among employers in other areas of the country.³⁴ In contrast to the importance placed upon the return-to-work philosophy, the primary prevention of workplace injuries was not cited as a dimension of service of highest importance by any of the respondents to the survey. One potential explanation for this observation is that the data on effectiveness of primary prevention of occupational injuries are limited in the published literature,⁶⁰ and for this reason employers may not wish to invest in this type of service. An alternate explanation may be found in the health care policy which led to the certification of MCO's for WC in the state of Oregon. Although the legislation clearly states that an MCO must establish a workplace safety program for contracted insurers and employers, no mention is made of the methods an MCO should use to accomplish this, nor are any objective methods proposed to quantify such a program's effectiveness. This limitation makes it very difficult to evaluate the effectiveness of such a program, and even more difficult to compare performance of different MCO's. Finally, in a setting in which the method of payment for medical care is primarily fee-for-service, medical care providers have little financial

incentive towards investing in the primary prevention of workplace injuries, and the recognition of this by employers may contribute to low perceptions of its importance.

The results of this study suggest that objective measures to assess an MCO's performance should emphasize the importance of disability management (secondary and tertiary prevention), rather than the primary prevention of workplace injuries. This inference may have external validity in other settings, given that health care policy legislating the certification of MCO's for WC in other states have some similarities to the state of Oregon. The importance of primary prevention as a criterion upon which to evaluate an MCO's performance may have more utility in a capitated environment, or in a setting where the primary prevention of workplace injuries is more clearly defined.

Although the questionnaire that was developed for this investigation passed some tests of internal consistency reliability and concurrent validity, the true test of its sensitivity requires further construct validation. As the assessment of quality in occupational injury care is still in its infancy, this remains a significant challenge. Employer satisfaction is clearly an important criterion upon which to measure performance, yet this is one of multiple indicators that need to be assessed. Further validation of the questionnaire requires that the relationship between the level of satisfaction and other objective performance measures be studied. At this time, no gold standards have been established for occupational injuries. The number of time loss days per claim has been proposed and utilized as a performance indicator for occupational injuries, however the adjustment of risk based upon diagnosis, severity of injury, and other factors known to influence disability in occupational injuries make this a complex variable to measure with precision and accuracy. Although the number of modified work days per claim could be proposed as an indicator of a provider's return-to-work philosophy, this measure has additional limitations in that an employer who cannot accommodate an injured worker at a provider's modified work restrictions will generally authorize time loss and pay indemnity benefits until the restrictions are advanced or a full release to work is authorized. Thus, a provider's

reporting of such statistics may not reflect the true effects they have upon clinical outcomes or indemnity costs.

Despite the observation that the majority of respondents in this investigation were either satisfied or very satisfied overall with the MCO's services, written comments provided some important insights which validate some of the concerns that critics of the transition to managed care for WC have brought forward.³² Included in these comments are employer concerns about the over-utilization of medical services, and perceptions that medical providers are reluctant to return an injured worker to their job despite the absence of objective findings of injury. These comments have important implications on quality of care in the current study setting where the method of payment for services under WC is fee-for-service. One way to investigate whether these concerns are valid would be to compare the outcomes of injured workers treated within KOTJ to health plan members treated within the same provider network for similar injuries which occur outside the workplace. Differences in rates of utilization of services would be important to identify, yet difficult to interpret because, unlike health plan members, the lack of co-payments or deductibles for workers receiving care under WC may remove some financial barriers to the worker's utilization of medical services. The number of lost work days, or modified work days, between these two groups would be another endpoint to consider, although the adjustment of risk and the interpretation of these statistics based upon the factors already mentioned makes this a difficult task.

As published research on outcomes in occupational injury care becomes more focused upon consumer satisfaction, another step towards investigating the construct validity of the questionnaire developed for this investigation would be to compare the levels of employer satisfaction with levels of satisfaction among injured workers. The state of Washington injured worker survey, which was analyzed for its reliability and validity with existing scales of measurement,³⁵ could be used to study this relationship as it taps many of the same dimensions (access to services, communication, administrative satisfaction) which

were measured in the current study. Positive associations between levels of satisfaction of injured workers and their employers would argue for validation of the instrument, given the expectation that the provision of quality services would be associated with both employer and worker satisfaction. If negative associations were found between levels of satisfaction of employers and injured workers, this may have other important implications.

In the delivery of health care for occupational injuries, there are many customers to serve. Some of the unique aspects of the WC system have led to perceptions that employers (the purchaser) and insurers (the payer) are the primary customers in this process. As trends in health care policy indicate that employers and insurers are gaining more control over their ability to direct the medical care of injured workers, there is a significant potential for conflicts of interest. There is an obvious need to study this transition to ensure that the needs of injured workers (the patient, and primary customer in the delivery of all health care services) are being met, and that the transition is associated not only with a reduction of medical and indemnity costs of work-related injuries, but with improved quality of care.

Conclusions:

The conclusions drawn from this investigation are that the development of a specialized instrument to measure employer satisfaction with medical care for occupational injuries is a reasonable goal, and that the instrument designed for the purpose of this study warrants further evaluation. The results of this investigation are consistent with other reports indicating that a contractual service agreement between employers and a MCO for WC is associated with higher levels of employer satisfaction, although some of the unique aspects of the study environment suggest that validation in other settings is warranted. The findings suggest that a MCO specializing in disability management and the efficient communication of return-to-work information may have a competitive advantage over other health care provider groups. The extent to which these observations have external validity may be limited by other factors, including the method of payment for medical services and the nature and scope of health care policy legislating WC in other areas of the country.

In a setting where objective measures of performance are still in their earliest stages of development, consumer satisfaction as an indicator of performance is a rational starting point in the assessment of quality in occupational health services. The process of performance measurement is made more valid by knowing the needs and values of the consumer. This investigation provides some insights to the definition of quality from the perspective of the purchaser of medical care for occupational injuries, and further investigation is warranted to include the perspectives of other primary customers, with the overall goal of measuring and improving quality of care.

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Table 1: Questionnaire items one through eleven

Number	Item
One	Medical care is provided within 24 hours of the worker's injury.
Two	Follow-up care is promptly scheduled.
Three	Specialty care is provided in a timely manner.
Four	Return-to-work is clearly communicated to you within 24 hours of the first office visit.
Five	Occupational health staff are easily reached by phone to answer your questions.
Six	Disputes about the injured worker's care are managed effectively by occupational health staff.
Seven	Physicians emphasize returning the worker to the workplace as soon as it is medically safe and appropriate.
Eight	The amount of medical care provided is appropriate for the worker's injury.
Nine	Medical providers are committed to improving safety in your workplace.
Ten	The worker is satisfied with the care they receive for their work-related injury.
Eleven	Given your experience in the past two months, what is your overall level of satisfaction with Kaiser Permanente's occupational health services?

Table 2: Study sample characteristics.

	Respondents	Non-respondents	Total sample
Employers	130 (43%)	170 (57%)	300
MCO contract:			
Yes	40 (31%)	37	77 (26%)
No	90 (69%)	133	223 (74%)
State:			
Oregon	94 (72%)	129	223 (74%)
Washington	36 (28%)	41	77 (26%)
Number of claims	731	653	1384
Average number of claims per employer (standard deviation) [range]	5.7 (14.9) 162	3.8 (6.2) 74	4.6 (10.9)
Modal facility:			
Mt. Talbert	27	27	54 (18%)
Central Interstate	20	31	51 (17%)
Vancouver	17	27	44 (15%)
Cascade Park	17	19	36 (12%)
North Lancaster	15	19	34 (11%)
Longview-Kelso	12	14	26 (9%)
Beaverton	13	13	26 (9%)
Rockwood	4	14	18 (6%)
Sunset	5	6	11 (4%)
Employer size:			
<50 employees	24 (18%)		
50-500 employees	58 (45%)		
>500 employees	48 (37%)		

Table 3: Frequency (percent) of endorsement of questionnaire items 1-11.

Item	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Does not apply
1	40 (31%)	62 (48%)	27 (21%)	1 (.8%)	0	0
2	33 (25%)	61 (47%)	30 (23%)	4 (3%)	1 (1%)	1 (1%)
3	17 (13%)	51 (39%)	46 (35%)	8 (6%)	1 (1%)	7 (5%)
4	37 (29%)	49 (37%)	26 (20%)	13 (10%)	5 (4%)	0
5	24 (19%)	48 (37%)	32 (25%)	20 (15%)	5 (4%)	1 (.8%)
6	14 (11%)	38 (29%)	48 (37%)	10 (8%)	6 (5%)	14 (10%)
7	31 (24%)	47 (36%)	28 (21%)	18 (14%)	6 (5%)	0
8	20 (15%)	49 (38%)	45 (35%)	11 (8%)	5 (4%)	0
9	14 (11%)	27 (21%)	58 (44%)	10 (8%)	5 (4%)	16 (12%)
10	14 (11%)	55 (42%)	44 (34%)	11 (9%)	1 (1%)	5 (3%)
11	23 (18%)	61 (47%)	33 (25%)	6 (6%)	5 (4%)	0

Questionnaire Items:

1. Medical care is provided within 24 hours of the worker's injury.
2. Follow-up care is promptly scheduled.
3. Specialty care is provided in a timely manner.
4. Return to work status is clearly communicated to you within 24 hours of the first visit.
5. Occupational health staff are easily reached by phone to answer your questions.
6. Disputes about the injured worker's care are managed effectively by occupational health staff.
7. The physicians emphasize returning the worker to the workplace as soon as it is medically safe and appropriate.
8. The amount of medical care provided is appropriate for the worker's injury.
9. Medical care providers are committed to improving safety in your workplace.
10. The worker is satisfied with the care they receive for their work-related injury.
11. Given your experience in the past two months, what is your overall level of satisfaction with Kaiser Permanente's occupational health services?

Table 4: Reliability analysis (item-total statistics) of ten item index.

Survey item	Corrected item-total correlation	Alpha if deleted
Item 1	.5852	.8221
Item 2	.5919	.8191
Item 3	.5003	.8254
Item 4	.5678	.8193
Item 5	.5616	.8192
Item 6	.3728	.8439
Item 7	.7466	.8031
Item 8	.7051	.8081
Item 9	.4043	.8399
Item 10	.4773	.8217

Reliability coefficient for 10 item index

Alpha = .8377

Reliability coefficient for 8 item index, eliminating items 6 and 9

Alpha= .8535

Questionnaire Items:

1. Medical care is provided within 24 hours of the worker's injury.
2. Follow-up care is promptly scheduled.
3. Specialty care is provided in a timely manner.
4. Return to work status is clearly communicated to you within 24 hours of the first visit.
5. Occupational health staff are easily reached by phone to answer your questions.
6. Disputes about the injured worker's care are managed effectively by occupational health staff.
7. The physicians emphasize returning the worker to the workplace as soon as it is medically safe and appropriate.
8. The amount of medical care provided is appropriate for the worker's injury.
9. Medical care providers are committed to improving safety in your workplace.
10. The worker is satisfied with the care they receive for their work-related injury.

Table 5: Principle components analysis of eight-item index.

Correlation matrix:

Item	1	2	3	4	5	7	8	10
1	1.000							
2	.64973	1.000						
3	.59350	.69399	1.000					
4	.32475	.48336	.38531	1.000				
5	.41028	.41314	.51270	.62426	1.000			
7	.47194	.58285	.58062	.67176	.58191	1.000		
8	.40216	.49061	.55229	.53537	.52793	.67722	1.000	
10	.52215	.48306	.61977	.36578	.40343	.51482	.56377	1.000

Bartlett Test of Sphericity=513.0462, significance= .000001

Kaiser-Meyer-Olkin Measure of Sampling Adequacy= .85953

Questionnaire Items:

1. Medical care is provided within 24 hours of the worker's injury.
2. Follow-up care is promptly scheduled.
3. Specialty care is provided in a timely manner.
4. Return to work status is clearly communicated to you within 24 hours of the first visit.
5. Occupational health staff are easily reached by phone to answer your questions.
6. Disputes about the injured worker's care are managed effectively by occupational health staff.
7. The physicians emphasize returning the worker to the workplace as soon as it is medically safe and appropriate.
8. The amount of medical care provided is appropriate for the worker's injury.
9. Medical care providers are committed to improving safety in your workplace.
10. The worker is satisfied with the care they receive for their work-related injury.
11. Given your experience in the past two months, what is your overall level of satisfaction with Kaiser Permanente's occupational health services?

Table 6: Factor loading values for eight-item index

Survey item	Factor 1
1	.71197 ^a
2	.78842 ^a
3	.81324 ^a
4	.71507 ^a
5	.72800 ^a
7	.83719 ^a
8	.78054 ^a
10	.73016 ^a

^aP<.01

Table 7: Frequency of endorsement of dimensions of occupational health service delivery of highest importance to employers.^a

Rank	Dimension of service	Frequency	Percent
1	The physicians emphasize returning the worker to the workplace as soon as it is medically safe and appropriate.	85	22%
2	Return to work status is clearly communicated to you within 24 hours of the first office visit.	72	19%
3	Occupational health staff are easily reached by phone to answer your questions.	53	14%
4	Medical care is provided within 24 hours of the worker's injury.	51	14%
5	The amount of medical care provided is appropriate for the worker's injury.	49	13%
6	Disputes about the injured worker's care are managed effectively by occupational health staff.	23	6%
7	The worker is satisfied with the care they receive for their work-related injury	22	6%
8	Specialty care is provided in a timely manner.	13	3%
9	Follow-up care is promptly scheduled.	11	3%
10	Medical care providers are committed to improving safety in your workplace.	0	0

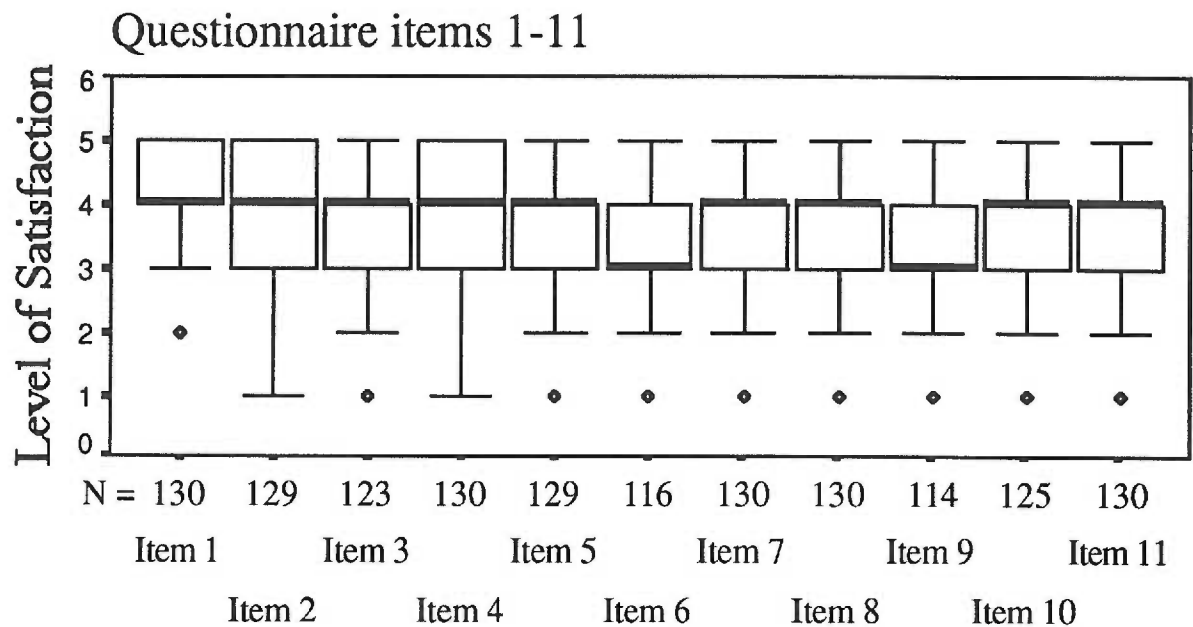
^aData based upon 126 valid observations

Table 8: Frequency of endorsement of dimensions of occupational health service delivery in strongest need of improvement.^b

Rank	Dimension of service	Frequency	Percent
1	The physicians emphasize returning the worker to the workplace as soon as it is medically safe and appropriate.	21	24%
2	Occupational health staff are easily reached by phone to answer your questions.	17	20%
3	Specialty care is provided in a timely manner.	11	13%
4	Disputes about the injured worker's care are managed effectively by occupational health staff.	10	11%
5	The amount of medical care provided is appropriate for the worker's injury.	9	10%
6	Return-to-work status is clearly communicated to you within 24 hours of the first visit.	7	8%
7	The worker is satisfied with the care they receive for their work-related injury	4	5%
8	Medical care providers are committed to improving safety in your workplace.	4	5%
9	Medical care is provided within 24 hours of the worker's injury.	2	2%
10	Follow-up care is promptly scheduled.	1	1%

^bData based upon 86 valid observations

Figure 1: Measures of central tendency and dispersion



Ordinal scaling:
 5=Very Satisfied
 4=Satisfied
 3=Neutral
 2=Dissatisfied
 1=Very Dissatisfied

Questionnaire Items:

1. Medical care is provided within 24 hours of the worker's injury.
2. Follow-up care is promptly scheduled.
3. Specialty care is provided in a timely manner.
4. Return to work status is clearly communicated to you within 24 hours of the first visit.
5. Occupational health staff are easily reached by phone to answer your questions.
6. Disputes about the injured worker's care are managed effectively by occupational health staff.
7. The physicians emphasize returning the worker to the workplace as soon as it is medically safe and appropriate.
8. The amount of medical care provided is appropriate for the worker's injury.
9. Medical care providers are committed to improving safety in your workplace.
10. The worker is satisfied with the care they receive for their work-related injury.
11. Given your experience in the past two months, what is your overall level of satisfaction with Kaiser Permanente's occupational health service?

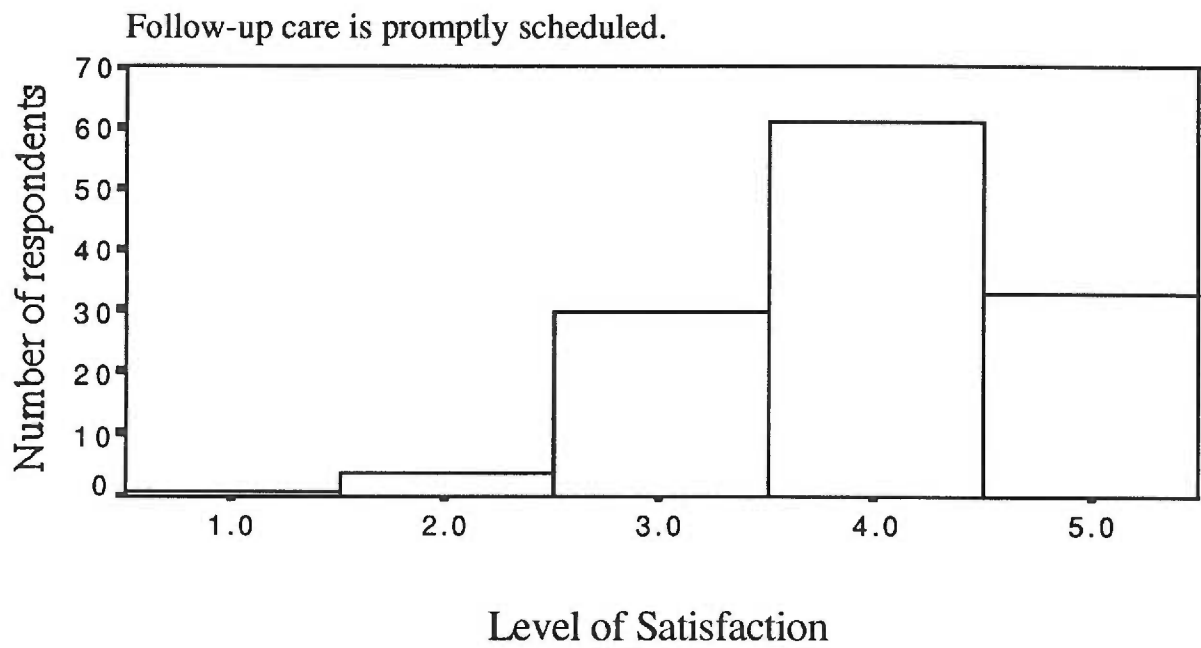
Figure 2: Frequency histogram, item one

Medical care is provided within 24 hours of the worker's injury.



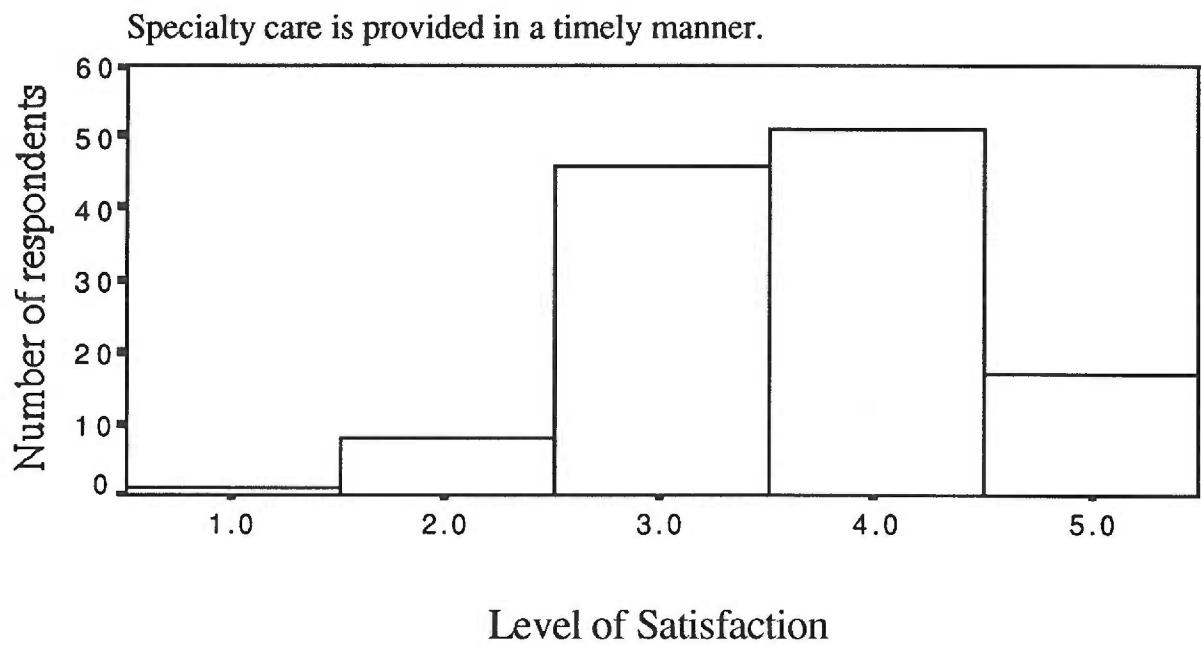
Ordinal scaling:
5=Very Satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very dissatisfied

Figure 3: Frequency histogram, item two



Ordinal scaling:
5=Very Satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very dissatisfied

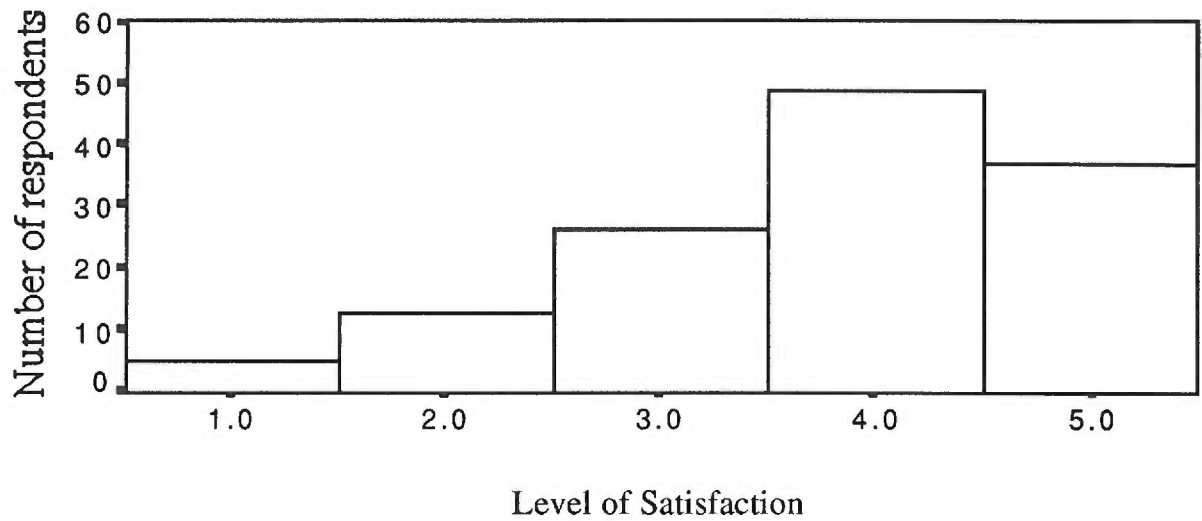
Figure 4: Frequency histogram, item three



Ordinal Scaling:
5=Very Satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very Dissatisfied

Figure 5: Frequency histogram, item four

Return-to-work information is communicated to you within
24 hours of the first office visit.



Ordinal scaling:
5=Very satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very dissatisfied

Figure 6: Frequency histogram, item five

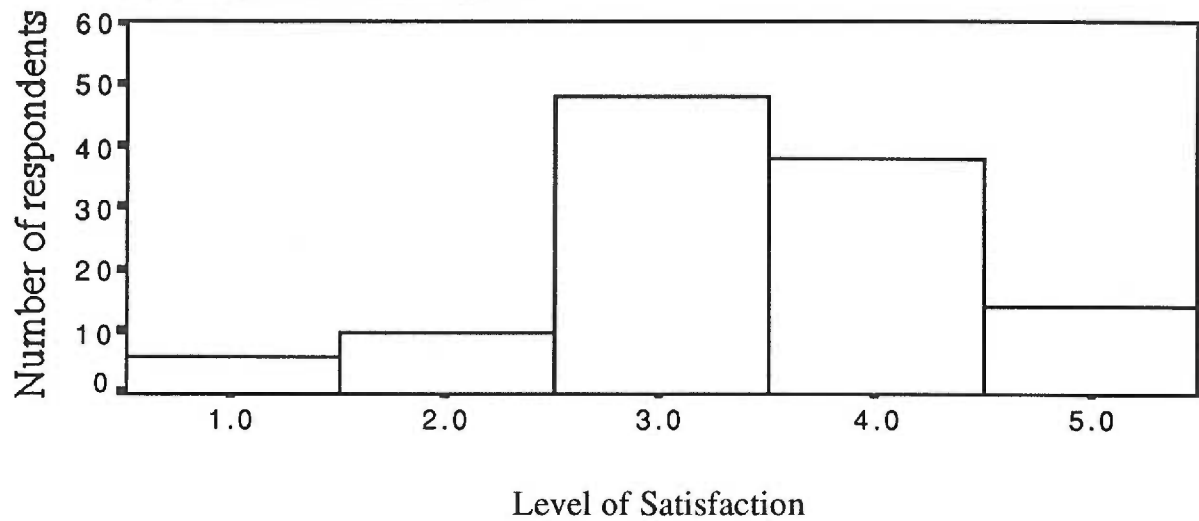
OH staff are easily reached by phone to answer your questions.



Ordinal scaling:
5=Very satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very dissatisfied

Figure 7: Frequency histogram, item six

Disputes about the injured worker's care are managed effectively
by occupational health staff.

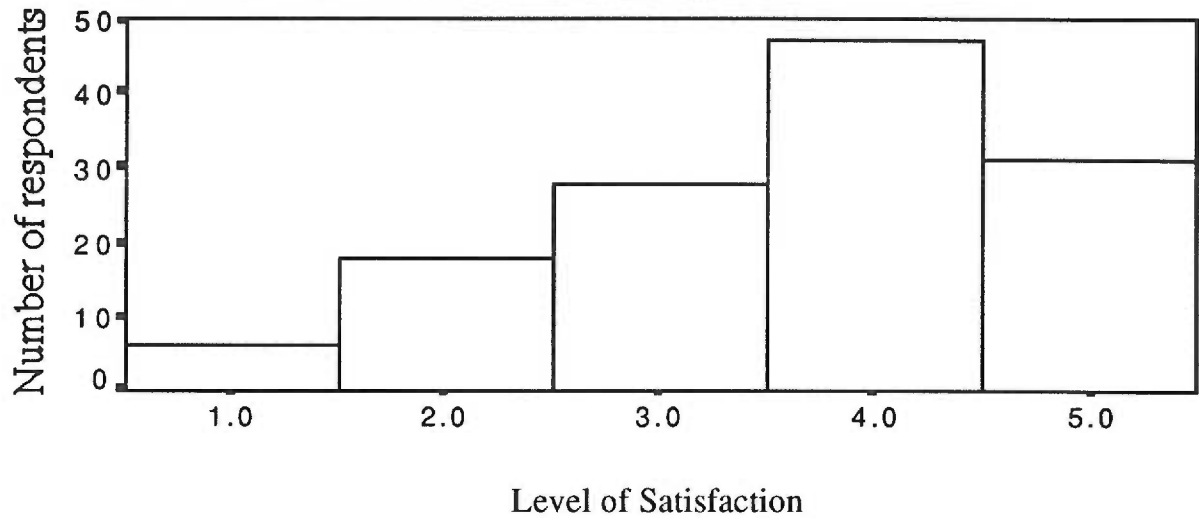


Ordinal scaling:
5=Very satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very dissatisfied

Figure 8: Frequency histogram, item seven

Physicians emphasize returning the worker to the workplace

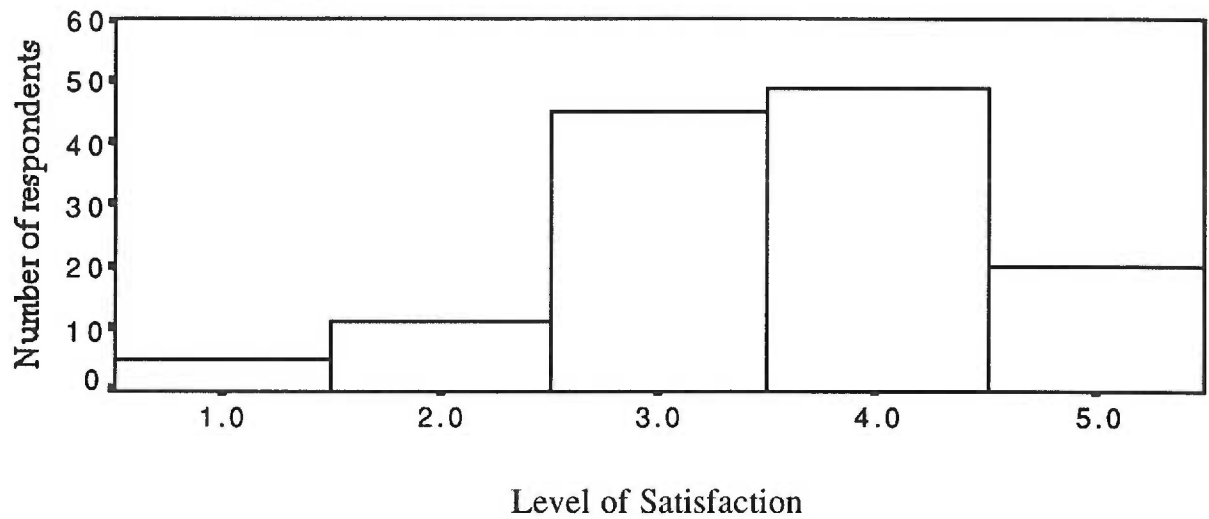
as soon as it is medically safe and appropriate.



Ordinal scaling:
5=Very satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very dissatisfied

Figure 9: Frequency histogram, item eight

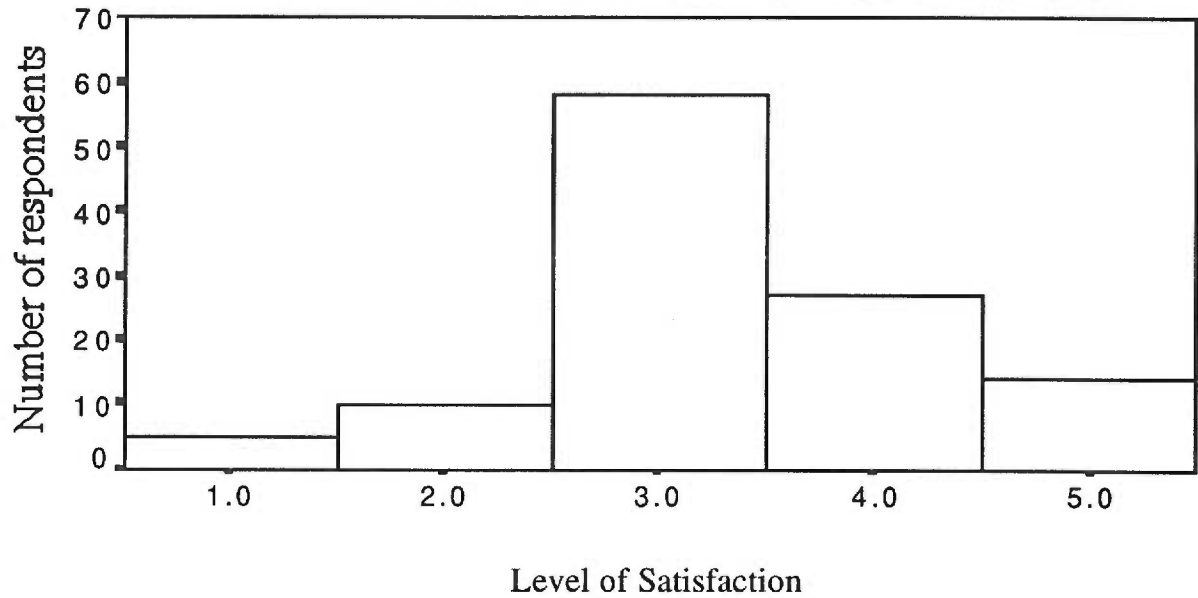
The amount of medical care provided is appropriate for the worker's injury.



Ordinal scaling:
5=Very satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very dissatisfied

Figure 10: Frequency histogram, item nine

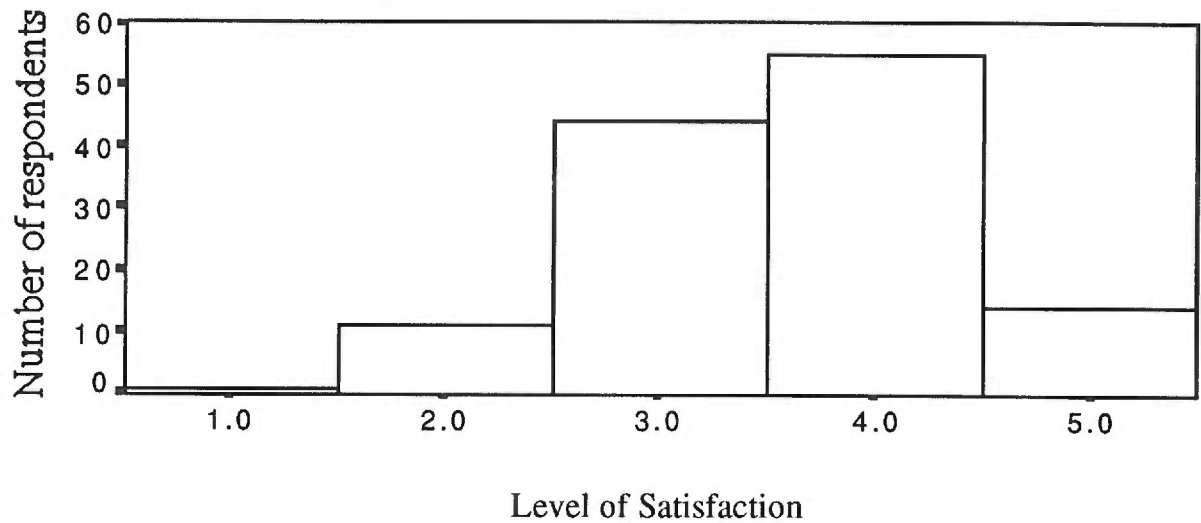
Medical providers are committed to improving safety in the workplace.



Ordinal scaling:
5=Very satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very dissatisfied

Figure 11: Frequency histogram, item 10

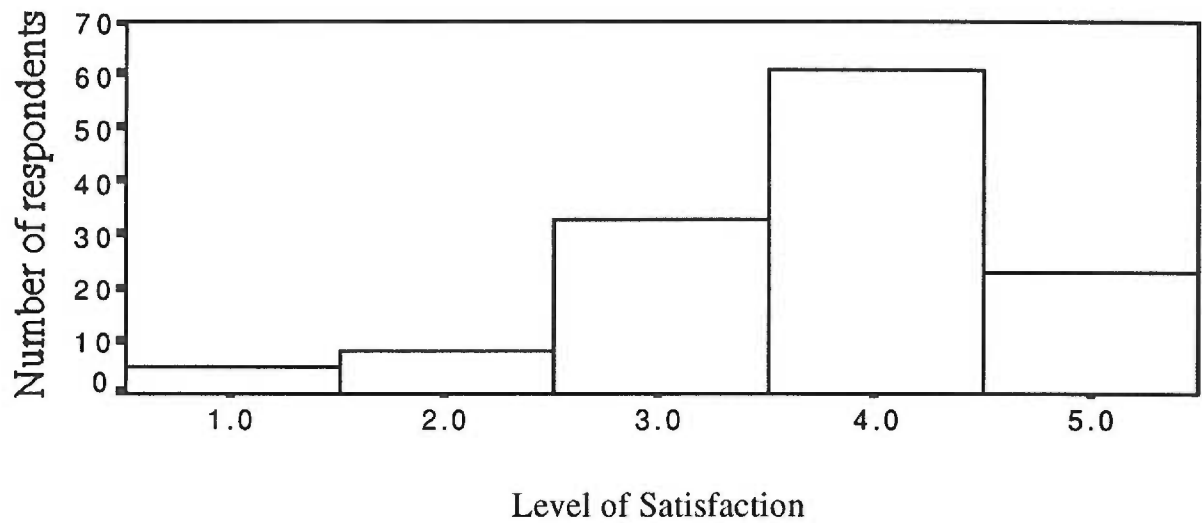
The worker is satisfied with the care they receive for their work-related injury.



Ordinal scaling:
5=Very satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very dissatisfied

Figure 12: Frequency histogram, item 11

In the past two months, what is your overall level of satisfaction
with KOTJ's services?



Ordinal scaling:
5=Very satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very dissatisfied

Figure 13: Cattell's Scree Plot

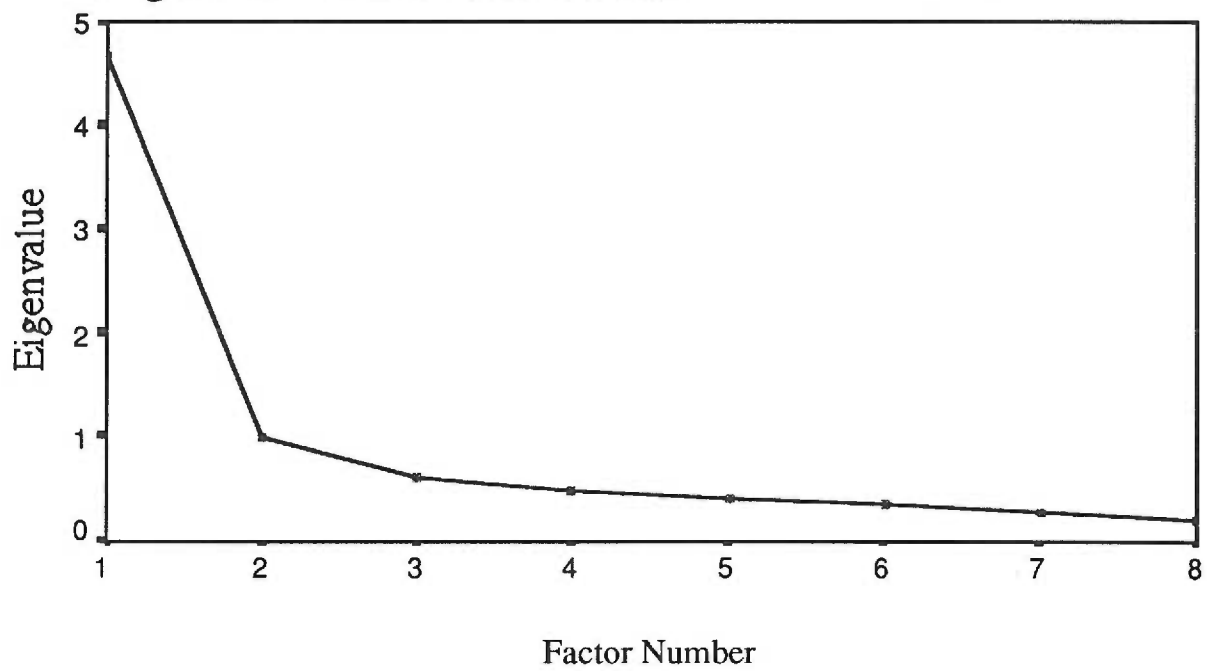


Figure 14:

Frequency histogram, Factor Scores

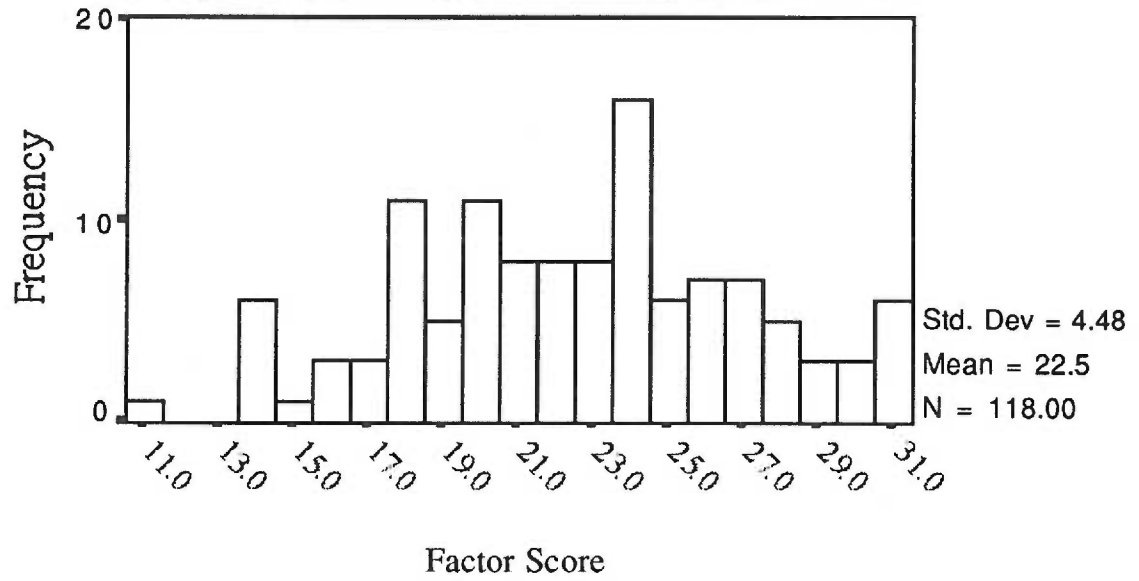
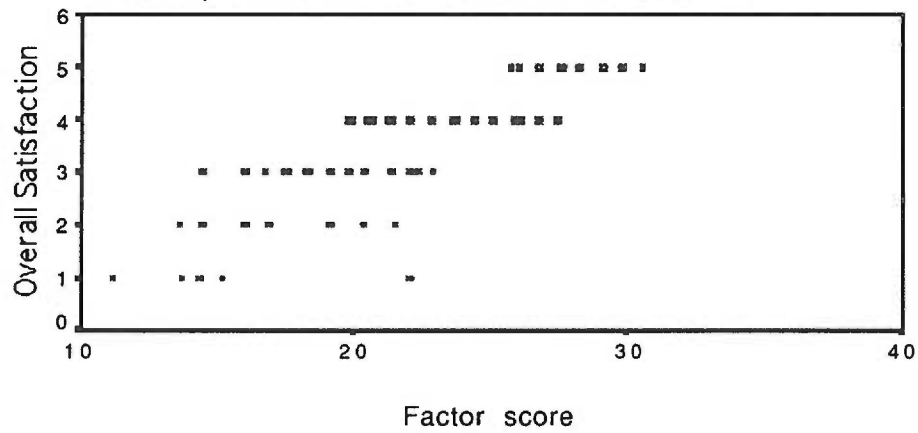


Figure 15

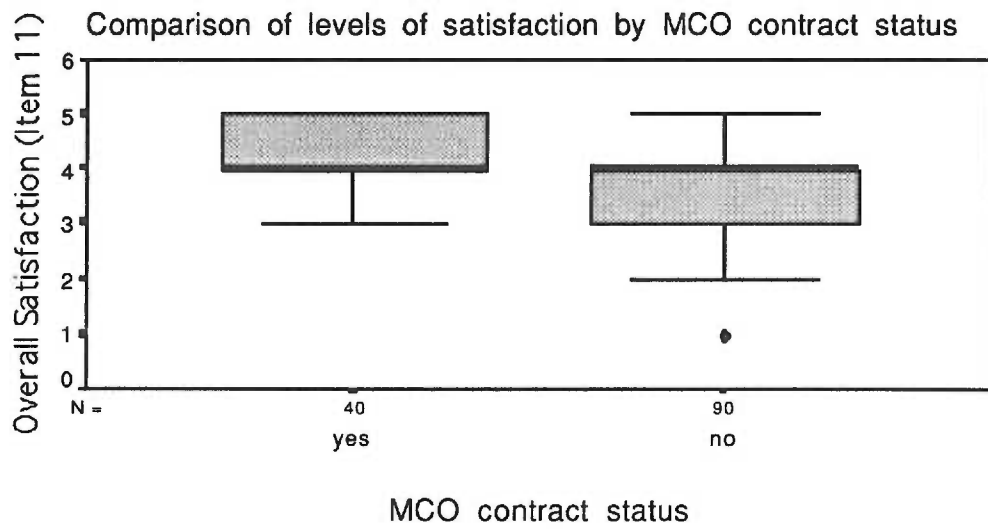
Scatterplot of factor scores versus item 11



Ordinal Scaling:

5=Very Satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very Dissatisfied

Figure 16:

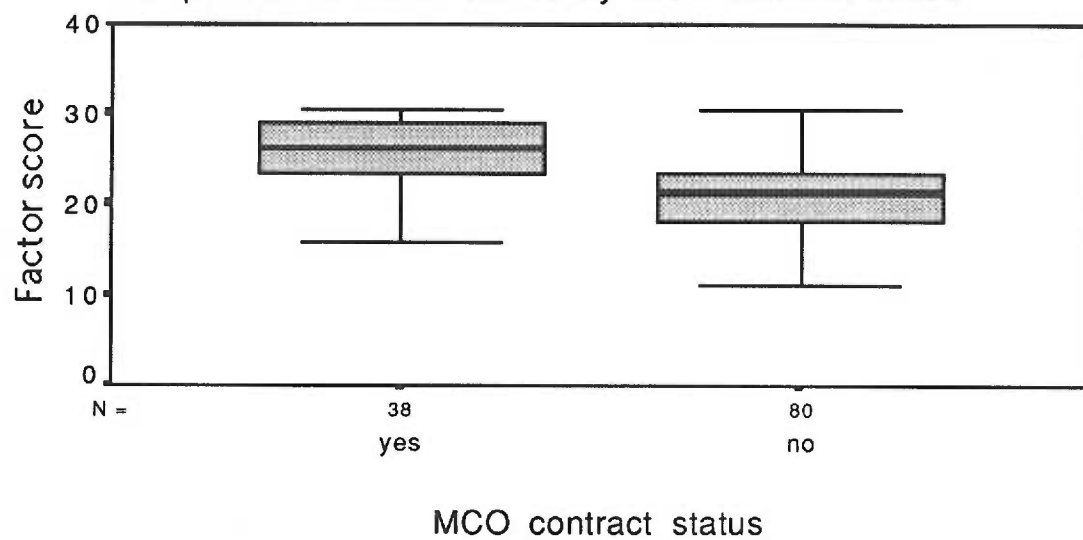


Ordinal scaling:

5=Very Satisfied
4=Satisfied
3=Neutral
2=Dissatisfied
1=Very Dissatisfied

Figure 17:

Comparison of factor scores by MCO contract status



Appendix A: Employer satisfaction survey

Please mark the best answer. If any of the categories do not apply, please mark "Does Not Apply."

Very Satisfied
Satisfied
Neutral
Dissatisfied
Very Dissatisfied
Does Not Apply

- [illegible]

Very Satisfied
Satisfied
Neutral
Dissatisfied
Very Dissatisfied
Does Not Apply

11. Given your experience in the past two months, what is your overall level of satisfaction with Kaiser Permanente's occupational health services?.....

☐ ☐ ☐ ☐ ☐ ☐

12. In general, when choosing a provider of occupational health services, which of the areas of service listed below is most important to you as an employer?
(Please mark an "X" by your top three choices)

- ☐ Medical care is provided within 24 hours of the worker's injury.
- ☐ Follow-up appointments are promptly scheduled.
- ☐ Specialty care is provided in a timely manner.
- ☐ Return to work status is clearly communicated to you within 24 hours of the first office visit.
- ☐ Occupational health staff are easily reached to answer your questions.
- ☐ Disputes about the injured worker's care are managed effectively.
- ☐ Physicians emphasize returning the worker to the workplace as soon as it is medically safe and appropriate.
- ☐ The amount of medical care provided is appropriate for the worker's injury.
- ☐ Medical care providers are committed to improving safety in your workplace.
- ☐ The worker is satisfied with the care they receive for their work-related injury.

13. In general, which area of service listed above is Kaiser Permanente in strongest need of improvement?
(Please mark an "O" by the single best choice from the list above)

14. In general, which of the following Kaiser Permanente medical offices or facilities is used most often by your employees for work-related injuries?
(Please choose the single best answer)

- | | |
|---|--|
| <input type="checkbox"/> Central Interstate Medical Offices | <input type="checkbox"/> Cascade Park Offices |
| <input type="checkbox"/> Beaverton Medical Offices | <input type="checkbox"/> Vancouver Offices |
| <input type="checkbox"/> Sunset Medical Offices | <input type="checkbox"/> Bess Kaiser Emergicenter |
| <input type="checkbox"/> Rockwood Medical Offices | <input type="checkbox"/> Kaiser Sunnyside Emergency |
| <input type="checkbox"/> Longview-Kelso Medical Offices | <input type="checkbox"/> Uncertain |
| <input type="checkbox"/> North Lancaster Medical Offices | <input type="checkbox"/> Non-Kaiser facility or office |
| <input type="checkbox"/> Mount Talbert Medical Offices | |

Very Satisfied
Satisfied
Neutral
Dissatisfied
Very Dissatisfied
Does Not Apply

15. Given your experience with the facility most often used by employees for work-related injuries, what is your overall level of satisfaction with occupational health services at that facility?.....

☐ ☐ ☐ ☐ ☐ ☐

16. What is the approximate size of your workforce?

☐ <50 workers
☐ 50-500 workers
☐ >500 workers

Your comments or suggestions to help continue to improve the quality of Kaiser Permanente's occupational health services are highly valued. Please use the space below. Thank you very much for your participation.

Appendix B: Cover letter submitted with employer satisfaction survey



February 18, 1998

Dear Employer,

Kaiser Permanente recognizes the importance of employer satisfaction with occupational health services. In an effort to improve our understanding of our customers' needs and satisfaction, we would like to ask for your voluntary participation in a short survey to measure satisfaction with Kaiser Permanente's occupational health services from an employer's perspective.

We have identified you as representing an employer with a worker who was treated at Kaiser Permanente's medical offices for a work-related injury in the past 60 days. We would appreciate if you would take 5-10 minutes to complete the enclosed questionnaire, and base the responses on your experience with Kaiser Permanente's occupational health services in the past two months. The survey is confidential, and the results will be presented to Kaiser Permanente's Occupational Health Quality Assurance Committee. The survey should be completed by the risk manager or human resources personnel who has had interaction with Kaiser Permanente's medical offices. A pre-addressed, postage-paid envelope is enclosed for your convenience.

It is our hope that the results of this survey will allow us to continue to improve the quality of care to all of our customers. Your honest assessment is greatly appreciated in this effort. Kaiser Permanente looks forward to continuing to serve you for all of your occupational health needs. If you have any questions about the survey or need an additional copy, please contact the project coordinator at (503) 249-3531.

Sincerely,

Vic Breen, M.D., M.P.H.
Medical Director, Kaiser on the Job

Dan Sudakin, M.D.
Employer Satisfaction Project Coordinator
Resident, Public Health and General Preventive Medicine
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Appendix C: Written comments from respondents to the employer satisfaction survey

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Recently had a tour of _____ with Dr. _____. Very good partnership.

Occupational health staff have visited our facility and offered suggestions for improvement when appropriate. I appreciate the contact and service we have received as a result of this. We have had some complaints with the level of service, quality of care, and personal attention. Generally, though, these are workers with questionable claims for work-relatedness. The most recent occurrence came at a claims hearing where the claimant contended that three Kaiser doctors “ignored me,” and “treated me like a number.” I found this questionable, but these statements did not help our position at the hearing. I would be happy to discuss this issue at length. In general, I have been very pleased with the level of care for employees and the attention to our business needs shown by occupational health. It has been a real pleasure working with these folks and I hope that we can continue the relationship.

If the doctor doesn’t believe an injury is work-related, they should state this on the 827 and not a vague statement that says they’re not sure.

We are very pleased with the report you provide to employees to give to their employer.

Faster in scheduling appointments for serious conditions. Also, listening to patients instead of just telling them not to worry, there’s nothing wrong, or not giving them the care they need so that they can cut costs.

Our employee surveys indicate that sometimes your facilities are not conveniently located and the hours need to be expanded. Once they get into the office for treatment, they are generally happy with the treatment they receive. Kaiser is a great partner and we appreciate the fine care you provide. Your people are well-trained and easy to work with.

We need better return-to-work slips that show treatment, physical therapy and how they’re doing, the claim number, and where physical therapy takes place so I can contact them and provide a job analysis.

I have not been receiving phone calls with updates on an injured worker on a regular basis. Kaiser used to be real good about this, but lately I’ve been dissatisfied. Also there is one gentleman that calls and leaves messages if I’m not available. All he says is that the employee was seen in clinic—no other details, like return-to-work information, restrictions, date of injury, next appointment date.

We need return-to-work information immediately. When employees go to Portland clinics we don’t get call-backs promptly. We get voice mail too much. Follow-up and availability used to be great! But it has been going down hill.

Once a worker has been treated, his/her follow-up appointment should be with the same provider.

Scheduling specialty physicians is a problem. The wait on hold and the seemingly uninformed scheduler is a problem. Our employees feel the scheduler doesn't know what's going on.

Physicians readily take employees off work or prescribe medication based on the employee's word and not thoroughly examining them. We offer many non-traditional work assignments and will be more than happy to adapt a job around the employee's restrictions. Also, non-prescription medication will often suffice in place of the prescribed one. I feel that the physician should know the work environment of these employees. It is non-strenuous, but repetitive. More often than not, there is an ulterior motive for this employee asking to go to the doctor. You are assisting and accommodating them by not knowing all the facts and considering only their word, not the employer's.

The occupational health department should be better informed about non-traditional or modified work available at the employer's facility. They should not take the worker off for the balance of the day unless it is medically necessary. The restrictions/capacities could often times be met by the employer in a non-traditional setting—still respecting the injured worker's capacities. Occupational health should have a better communication with the employers to familiarize themselves of what is available at the work site and not always take the employee's definition.

Return-to-work information varies a lot from facility to facility. The automated attendant phone system is miserable to use. Please contact me at _____ for clarification. Physical therapy and chiropractic treatment is excessive.

We require clear, concise return-to-work status immediately upon the employee leaving Kaiser. This way we can properly place an employee in a job if restrictions are given. I am dissatisfied with Kaiser's ability to return workers to work with minor and in many cases fictitious injuries. Care givers seem very reluctant to tell patients you can go back to work, and that this "may not" be work related.

Kaiser does a very good job of reporting the basic, essential information I need to return workers to their job. Responsiveness and communication on more complex claims could be improved. As with any large organization, "hold" times and getting/finding the person who has the information I need can be very frustrating. This is also the underlying problem with specialty care and follow-up appointments. In the past, we've had problems with returning workers, but this has improved over the last 2 years. Some facilities seem to treat more and longer than other Kaiser facilities. I'm sure that you'd agree that such treatment should not be affected by Worker's Compensation laws. Thanks for the survey.

Until recently, I received a telephone call from the OHS nurse advising me that a worker was injured, the diagnosis, and most importantly, if time loss was authorized. This no longer occurs, and the delay in getting this information has caused problems for us. Is there any way the phone calls could occur as in the past?

For the most part, I am satisfied with the clinic's quality of service. I am fairly concerned about a recent incident where an employee recovering from a laminectomy (the second in less than a year) was referred for physical therapy at a particular clinic. This claim was recently denied by the WA State Department of L&I. When our claims office was contacted regarding coverage, the provider declined treatment supposedly because Kaiser wouldn't pay for it, possibly because a contract doesn't exist. I believe the employee also stated that he was referred a second time with the same result. At this point, I'm extremely disappointed in a managed care program that refers patients for treatment at the cost of another carrier (WC in this case) but denies treatment when it's their own responsibility. The carrier/managed care provider should not recommend treatment they aren't willing to support themselves, nor should treatment be denied if warranted by the injury/illness for the same reason.

It's a tough job and you folks do a pretty good job of it. I have a very high opinion of Dr. _____ and his staff, they do a very good job.

We do not get any follow-up calls. When an employee goes in after an injury, we would appreciate a phone call to advise of their return-to-work status. Any questions please call _____.

We had an employee treating for a work-related injury, who told me that due to traffic, he was 10 minutes late for his appointment and was told he'd have to come back another time. That is not acceptable especially in the _____ area that suffers from a tremendous traffic problem. Flexibility is important. We generally don't send injured workers to a Kaiser facility. If they have opted to select Kaiser as their private medical provider under our benefits plan, they usually seek occupational care through Kaiser.

More recently we have had difficulty getting through phone lines and getting questions answered. Was better in the past. Would like return-to-work information by next business day to better facilitate light duty options and prevent time loss claims. Would like to see a database link on the computer to list employer's requirements (drug screen, light duty programs, including sedentary work available to all employees).

Workers are feeling like when they're asked to come back time after time that Kaiser is over-utilizing the WC program. Doctors outside of Kaiser have a quicker return to work release.

In response to the questionnaire on the occupational health services, I would like to inform you of my recent experience with Kaiser. One of our employees injured his back while working for us. As a result of the injury the person had to have surgery. When they returned to work, they were on so much pain medication that they could not think clearly and perform the simplest aspects of their job. Eventually the person had to get treatment to break their addiction to the pain pills. I do not recall ever getting calls or updates on the employee, or their readiness to return-to-work unless I initiated the phone call. When I did manage to talk to someone the information was so vague that it was almost useless. My evaluation of the system is that it has provided me, as an employer, almost nothing. My suggestion for improvement is to communicate much more clearly with information that is definitive. It would be nice if the employer did not have to initiate the flow of information.

We would like to improve communication between us and the physicians. Also, we would appreciate more detailed work restrictions—approximately 50% come in fully completed, the other 50% are too vague. When we have disputes some of the physicians do not, or will not respond to our concerns. We often have to send a 2nd request. Or if we do get a response it only addresses part of our concerns. Although there are a few physicians who respond timely and completely, going all the way in customer service is something we really appreciate. Often the nurse will call us after the employee's appointment with an update. Good work! Thank you!

I suggest putting the medical facility's name, address, and phone number on all medical paperwork.

Kaiser physicians are very good, the nurse practitioners have a hard time deeming what is work-related and what is not.

Often it is very frustrating to get through the phone lines and voice mail to get someone who will help with a case. Often, it is next to impossible to talk to a physician without hours of "phone tag."

The only times we have experienced problems recently were when workers have gone into non-industrial clinics and not reported their on the job injury. Many clinic doctors are not responsive or helpful with return-to-work.

_____ and _____ are very good about communicating with the employers for work-related job injury treatment. That is not the case with _____ and in the past we have found it difficult to find the Dr. and location. I really like the new worker's compensation form which has recently been used. Thank you, information is really complete including phone numbers.

If you had given me this survey in 1996, I would have rated Kaiser as "very dissatisfied" on all measures. Kaiser caused us an extreme amount of difficulty due to one physician's total lack of objectivity. Fortunately for all, the situation has been remedied. Dr. _____ has turned the occupational department around, although I still harbor extreme doubt in the ability of Kaiser's management to be objective. Past errors and mismanagement of cases has cost us tens of thousands of dollars.

We would prefer return-to-work information notice within 4 hours. We usually get recordings at the occupational health clinics, but calls are returned.

We would like the opportunity to meet with the health care group for occupational health services so we can communicate our return to work program.

I am happy with the responses we have received from the providers at Kaiser. They answer any questions I have promptly and courteously.

We currently have an employee receiving occupational health treatments. He sat in my office yesterday frustrated beyond words. He does not feel the MD has given him any direct answers, and his claim (paperwork) has been mishandled by Kaiser from the onset. He is now facing a major financial crisis because of the paperwork delays cause by Kaiser. He has told me about appointments he showed up for that had never been properly scheduled. He does not feel the treatments have had any beneficial effect and feels totally uninformed of a prognosis for improvement. I personally spoke 2 or 3 times with the claims department to try to unsnarl the paperwork. I think both employer and employee can honestly check "very dissatisfied" with regard to this instance.

One of the biggest problems I face in working with Kaiser's occupational health services is the need for someone to understand federal employees OWCP. Rules are very different than the state, and what I find is that no one has really ever understood the process, thus we seem to go round and round. When Kaiser doctors are submitting their chart notes, I continually see where the doctor notes straight down the line where the employee is okay and there are no medical reasons why the employee is not returned to duty, however, they put the employee on work restrictions with no medical evidence to substantiate it. This causes one of the biggest problems with our OWCP in _____. We need to know the medical findings, and the impressions/diagnosis to explain why the employee is to stay off work. I personally feel that Kaiser lets the employee ride the system for way too long and then after either months or years of the employee arguing will take a stand. We have no desire to bring employees back before they should be at work, but way too many times it looks like they are just being let off of work because they hurt, with no medical findings to support that. If I can be of any further help in regards to OWCP processes, please feel free to give me a call at _____.

We really appreciate the phone calls advising employees are in for treatment and faxing the work restrictions.