

*Features*

**MORE THAN MEETS THE EYE: SOCIAL,  
ECONOMIC, AND EMOTIONAL IMPACTS OF  
WORK-RELATED INJURY AND ILLNESS**

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**ABSTRACT**

The impact of an occupational illness or injury on an injured worker can be severe. This study assessed several dimensions of the impact on a group of 50 injured workers, all patients at an Occupational Health Center. The dimensions assessed included aspects of access to health care, support from treating physicians in obtaining Workers' Compensation benefits, financial impacts, the role of attorneys and "Independent Medical Examiners," and the impact on mental health. The results showed almost two-thirds of respondents lost their health insurance after diagnosis with a work-related illness or injury, most for more than a year. Many reported that their treating physician did not want to become involved in Workers' Compensation, despite indicating a belief that the health condition was work-related. The financial impacts of a work-related diagnosis were particularly striking, with respondents reporting that they were burdened with both costs directly related to the medical care of their condition, and with coping with ongoing general expenses on a reduced income. Many respondents reported depleting savings, borrowing money, taking out retirement funds, and declaring bankruptcy in efforts to cope. Emotionally, respondents almost universally reported their diagnosis and related issues were associated with depression, anxiety, and loss of identity and self-worth. This study demonstrates how a work-related injury or illness can extend far beyond the physical impact for injured workers. Existing systems fail to adequately compensate or rehabilitate injured workers, leaving them to their own devices to deal with their losses, medical or otherwise.

Injured workers often face an array of difficulties following a diagnosis of a work-related injury or illness. Workers with acute injuries or illnesses and uncomplicated treatment and recovery may move through the experience smoothly and without much impact on their lives. Workers with chronic illnesses or injuries requiring expensive or complicated medical treatment, and resulting in long or even permanent stretches out of work, almost invariably face a very different reality.

The Central New York Occupational Health Clinical Center (CNYOHCC) is a specialty occupational health center offering diagnostic, treatment, and prevention services to workers in a 15-county area in central New York. The center is part of an 8-clinic publicly funded network in New York State. Over the last several years, the CNYOHCC has carried out several studies describing aspects of the experience of injured workers seen at the center. The first study documented the difficulties many injured workers face finding a physician who accepts Workers' Compensation insurance as payment [1]. The second study focused on the impact of "Independent Medical Examiners" (IMEs) on the worker/patient's access to Workers' Compensation benefits. In New York State, the Workers' Compensation insurance carriers have the right to have worker/patients examined by a physician of the company's choice. Our study showed that the typical result of an IME is a reduction in Workers' Compensation benefits [2]. This analysis was extended in a third paper which surveyed the IME business, concluding that, despite a rhetoric of independence and objectivity, IMEs function as a tool of Workers' Compensation insurance carriers and employers [3]. A fourth study examined trends in Workers' Compensation and disability assessment arguing that an overreliance on methods and information deemed "objective" is eliminating the worker's own history and voice, making it more difficult for occupational disease to be diagnosed and minimizing the extent of disability [4].

This work formed the backdrop for the current study of another aspect of the injured workers' experience. It is clear from our daily work with our own worker/patients as well as the observations of others that, while the physical impact of a work-related health condition may be quite severe on its own, psychological, financial, and social impacts typically amplify the short- and long-term distress [5].

The purpose of this study was to better characterize aspects of the injured worker's experience. Specifically, the study assessed:

1. The nature of barriers faced by injured workers accessing medical care for their illness/injury;
2. The financial impact of the illness/injury;
3. The use and perceived utility of legal resources in the pursuit of Workers' Compensation benefits; and
4. The overall impact of the illness/injury on workers' lives.

Clarification of the injured worker's experience has important implications for the effective treatment of occupational injuries and illnesses. From the medical standpoint, barriers to care and psychological distress impede recovery, prolong and increase disability, and prevent return to work. From a moral standpoint, workers injured or made ill as a result of workplace conditions should be fully compensated, financially and otherwise, for their injuries and illnesses, rather than expected to suffer their losses in silence and alone.

The key barriers and problems injured workers face are systemic in nature. Our previous work, along with the current study, strongly suggest that the impact of an occupational illness can be both broad and profound. While this work provides a series of snapshots, ongoing experience indicates that the problems continue and are likely worsening. A more complete understanding of the injured worker's experience provides the necessary basis for overcoming the barriers and resolving the problems [2].

## METHODS

Fifty CNYOHCC patients were selected for inclusion in this study. The clinic's focus is on occupational disease with about one-third of the patients suffering from a respiratory disorder, one-third experiencing chronic musculoskeletal problems involving the arms, neck, and/or shoulders, and a final third encompassing a wide spectrum of other problems.

Patients were recruited to the study in two ways. Recent patients were invited via letter and an announcement at clinic-run patient support groups to attend an informational meeting at which the study was discussed. Meeting attendees were asked if they were interested in participating in the study. Additional patients were selected by clinic staff from a list of recent patients. Staff attempted to choose patients with a variety of health conditions. In addition, an attempt was made to recruit an equal number of men and women.

CNYOHCC staff initially conceived the study to focus on the issue of access to health care for injured workers after a diagnosis of occupational disease. Patients who attended the initial meeting, however, raised a number of other issues that they felt were also important to document. Consequently, the study was broadened to include financial impacts, the patients' assessment of their legal representation in Workers' Compensation, and questions regarding some social and emotional impacts.

A survey tool and accompanying script were developed by clinic staff. It was pilot-tested on several patient volunteers and modified based on their responses. Clinic staff, including a Social Worker, a Social Work intern, and a Nurse Case Manager, were trained to administer the questionnaire. The questionnaire was administered via telephone. Calls were made in July and August 2005. Data from the surveys was entered into a Microsoft Access database and analyzed.

## RESULTS

### General

All 50 patients called agreed to participate; 26 were women and 24 were men.

Thirty-five (70%) of the patients surveyed reported work in an occupation requiring primarily manual labor. The remaining 15 patients were evenly split between those reporting work in clerical, professional/technical, and managerial/administrative occupations.

The primary work-related diagnoses for each patient are illustrated in Table 1. The diagnoses were self-reported by the respondents and the primary one or two were recorded. Respiratory and musculoskeletal diagnoses dominated, with slightly more patients (21) suffering from musculoskeletal conditions than respiratory (18). A total of 81 diagnoses were made among the 50 study participants. Among the respiratory patients, asthma and sinus-related illness were the most common diagnoses, making up 18 of the 27 diagnoses (67%). Only three patients were diagnosed with inorganic dust-related conditions. Carpal tunnel syndrome, low back pain, and rotator cuff-related pathologies were the most common musculoskeletal ailments, making up 15 of the 34 diagnoses (44%).

Among the 11 patients with other diagnoses, 8 reported diagnoses of Multiple Chemical Sensitivities (MCS), and 2 reported latex allergy.

### Work and Workers' Compensation Status

Forty-one of the patients were not working at the time of the survey. Six were working full time and three were working part time. Thirty-eight were receiving Workers' Compensation benefits; the majority (22) both medical and weekly wage replacement benefits. A little more than one-third of those receiving Workers' Compensation benefits reported negotiating a settlement or receiving a permanent award.

### Health Insurance, Billing for Work-Related Disease, and Access to Medical Care

Forty-six patients had health insurance when they were diagnosed with a work-related injury or illness. Of the 46, 29 (63%) lost their health insurance after they were diagnosed with a work-related injury or illness. Almost three-quarters of those who lost their insurance were without for more than 6 months and nearly 60% were without for at least a year. Almost all of those who lost their health insurance reported the loss was due to losing their job and being unable to afford insurance on their own.

Close to 60% of the patients reported using their health insurance to cover expenses for their work-related health condition. Half reported being denied coverage by their health insurer for expenses related to their work-related condition.

Table 1. Primary Work-Related Diagnoses for Each Patient

	Diagnosis 1	Diagnosis 2	Total
<b>Respiratory</b>			
Asthma	6	6	12
Rhinosinusitis	4	1	5
Pleural plaques	2		2
COPD	1		1
Smoke inhalation	1		1
Chemical injury	1		1
Hard metals disease	1		1
Sinus infections	1		1
Breathing		1	1
Lungs	1	1	2
Totals	18	9	27
<b>Musculoskeletal</b>			
Carpall tunnel syndrome	6	2	8
Low back pain	4		4
Impingement/rotator cuff tear	2	1	3
Shoulders	1	1	2
Shoulders, arms, low back	1		1
Cervico thoracic strain	1	1	2
Cervical disc disease		3	3
Neck, back injury		2	2
Plantar fasciitis	1		1
Torn cartilage	1		1
Knee tendinitis		1	1
Arthritis knee, back	1		1
Fracture coccyx	1		1
Wrist strain		1	1
Chronic pain	1		1
Myofascial pain syndrome		1	1
Fibromyalgia		1	1
Totals	20	14	34
<b>Other</b>			
Latex allergy	2		2
Contact dermatitis	1		1
Multiple chemical sensitivities	7	1	8
Depression		1	1
Bladder cancer		1	1
Toxic encephalopathy		5	5
Leg edema		1	1
Phlebitis		1	1
Totals	10	10	20

Twenty-seven patients (54%) felt their physician may have thought they had a work-related condition but avoided talking about it or diagnosing it. Seventeen (34%) were told they had a work-related diagnosis by their doctor who then did not bill Workers' Compensation. Twelve (24%) of these patients were personally billed for these expenses. Six patients (12%) were told by their physician that their condition was not work-related, only to discover later that the physician's notes reflected an opinion that there was a connection between work and the diagnosis.

Figure 1 reflects reported difficulties accessing medical care. Slightly fewer than one-third of the patients reported difficulties accessing a physician, and slightly more than one-third reported trouble finding a physician who accepts Workers' Compensation as payment. More than half reported problems obtaining prescribed medications, and two-thirds reported delays in accessing recommended medical testing or treatment. Almost all reported that the difficulties were due to the Workers' Compensation insurance carrier denying authorization or payment. While almost 80% denied difficulty getting time off or transportation accessing medical care, more than two-thirds were not paid for the time they had to take off.

## Costs

Forty-two patients reported expenses for their work-related condition that they paid themselves. Figure 2 shows the nature of some of the out-of-pocket expenses. Payments for transportation and medications were quite common, expenses related to medical evaluation and other treatment less so; 70% said they were not reimbursed for these expenses.

Just over two-thirds of the patients used accrued and other available time (for example, sick days, vacation days, personal days, family medical leave) to cover them while off work. Though not specifically asked, 9 of the 16 patients not reporting the use of accrued or other available time spontaneously reported they either did not have or were not aware of these benefits. Consequently, of those with available time, at least 83% used at least one type. Figure 3 details the type of time benefits used; 40% used at least three of the four types of time available, and almost 60% used at least two types.

Some of the financial impacts of a work-related health condition are described in Figure 4. More than two-thirds of the patients were without pay after they were diagnosed, about 30% for more than a year and about half for at least 6 months. All except three respondents reported the necessity of tapping financial resources to help them through difficult times. Almost three-quarters of participants took money out of their savings or asked friends or family for money to help pay for expenses during their illnesses. Over a quarter took funds out of their retirement pension or took out a loan. For some patients, financial needs were enough to drive them to more extreme measures as 6 (12%) took out a second mortgage on

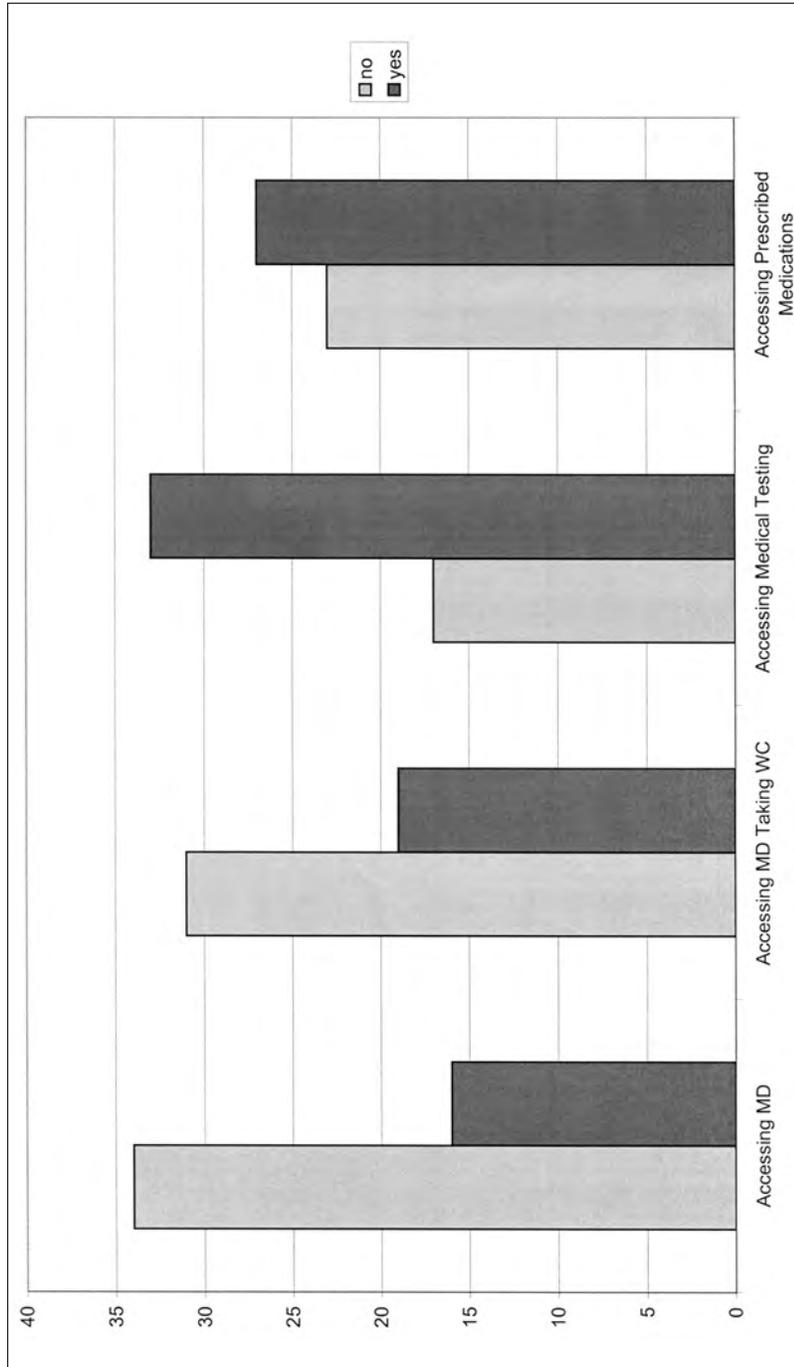


Figure 1. Accessing medical care.

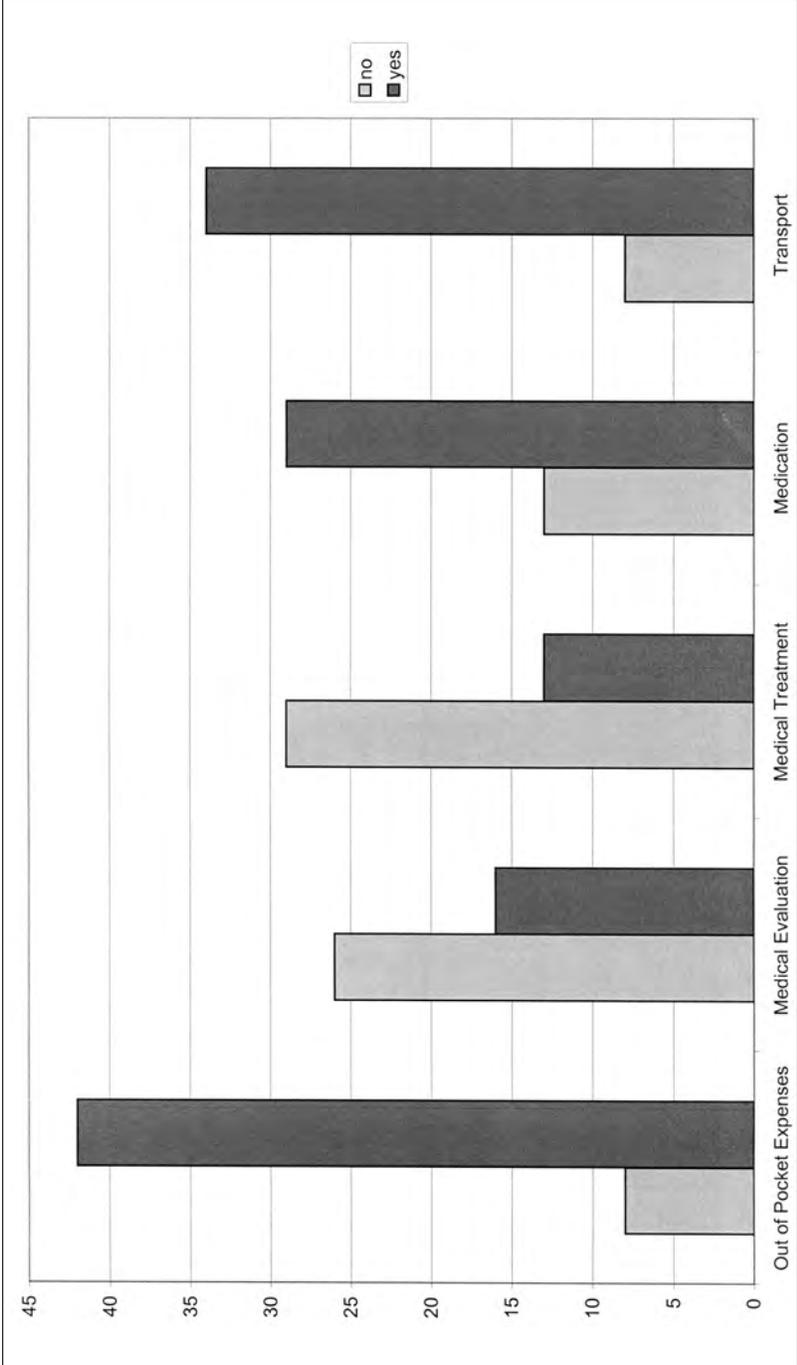


Figure 2. Out of pocket expenses.

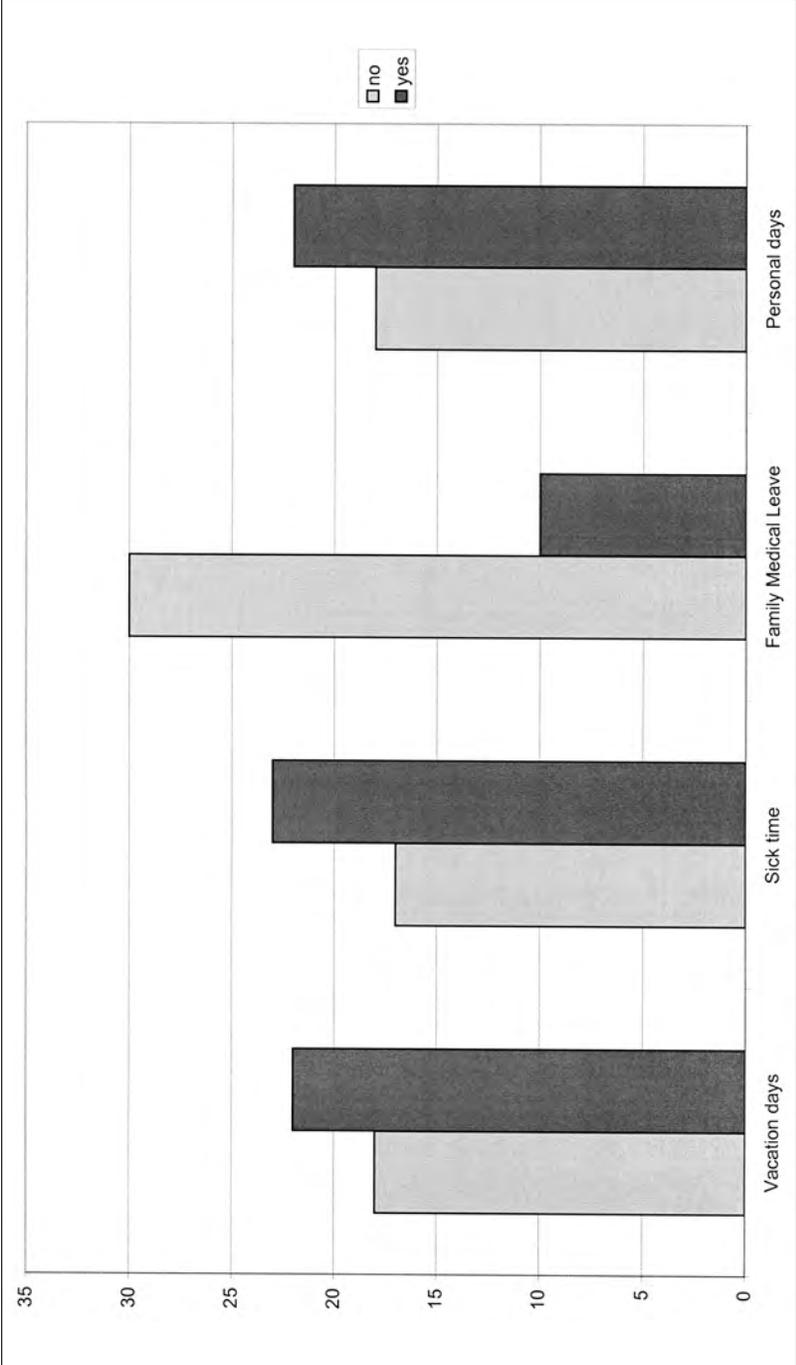


Figure 3. Off work time used.

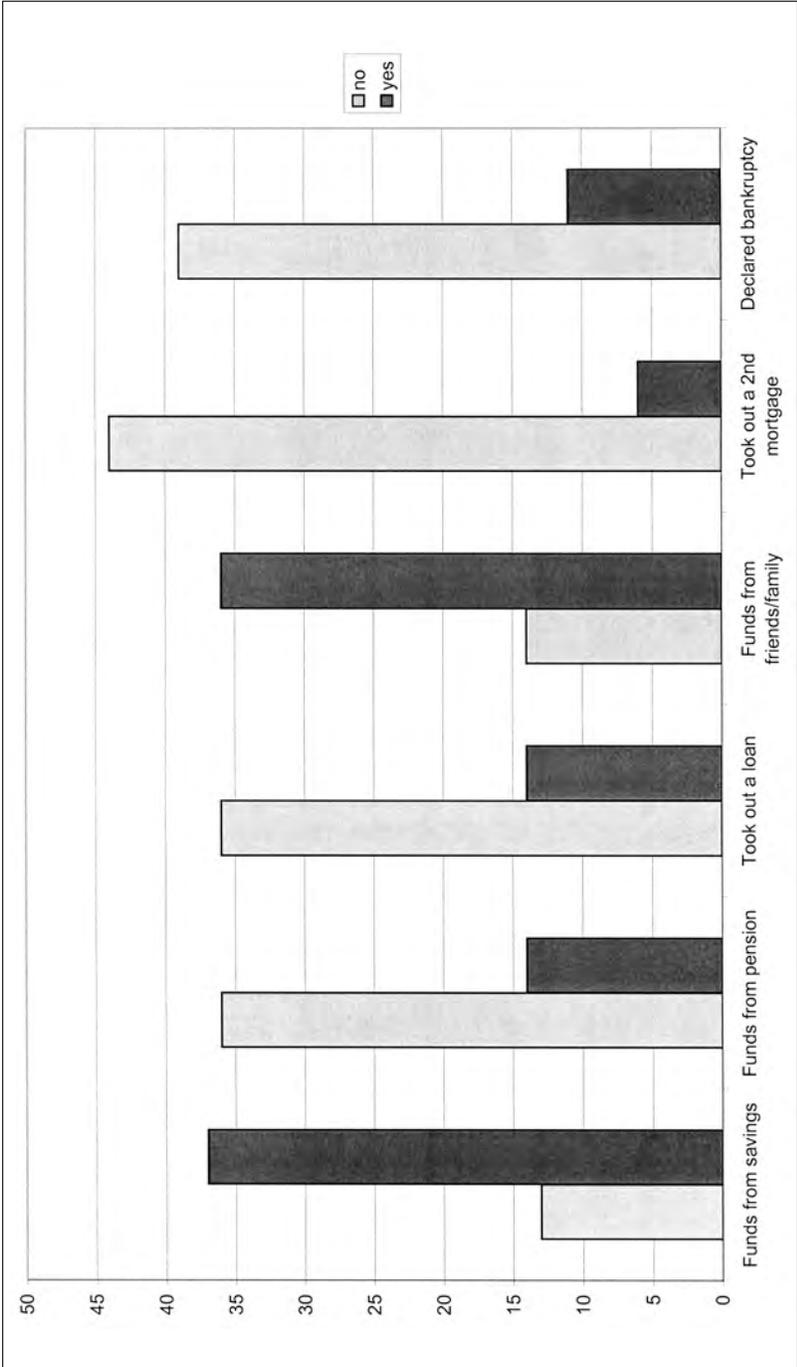


Figure 4. Financial impact.

their homes and 11 (22%) declared bankruptcy. As a measure of the severity of financial need, participants were asked if they had to tap multiple financial resources. Almost three-quarters tapped two or more resources; almost half, three or more; and about a quarter, four or more.

As additional measures of the financial impact of a work-related diagnosis, participants were asked:

1. If they sacrificed selected necessities to pay for their medical expenses; and
2. If they sacrificed medical care to pay for selected necessities.

Just under half the participants reported sacrificing at least one necessity among food, housing, utilities, and transportation. Just over one-third of patients reported sacrificing at least two necessities and just under one-third said they gave up at least three of the four possibilities. Sacrifices among food, housing, and transportation were fairly evenly divided, while utilities were given up slightly more frequently.

A smaller, though still substantial number of patients reported sacrificing medical care to pay for necessities. About one-third of the patients reported sacrificing to pay for at least one necessity and just under one-fifth reported sacrificing to pay for at least four necessities. Participants were fairly evenly divided in what they sacrificed medical care for between housing, transportation, and food, with utilities slightly higher. Fewer patients reported sacrificing medical care for their work-related condition for medical care for non-work-related health issues.

### **Attorneys and Insurance Carrier Medical Examinations**

The overwhelming majority of patients (96%) obtained legal representation for their Workers' Compensation claim. Thirty percent reported difficulty locating an attorney to take their case. Just over half felt their attorney was helpful in improving their access to medical testing and treatment. A third changed attorneys.

Ninety percent of the patients were required to undergo an "Independent Medical Examination" by the Workers' Compensation insurance carrier. About half reported the impact of the "IME" was a cut in Workers' Compensation benefits; 13% felt the "IME" helped their case; while a quarter reported no impact.

### **Personal Losses**

Significant personal losses as a result of their work-related health condition were described by the overwhelming majority (88%) of patients. More than 80% of the patients lost their job and workplace friendships. Nine participants reported the loss of their house and four reported the break-up of their marriage.

Ninety-six percent said that the difficulties they had experienced following a diagnosis of a work-related injury or illness had adversely impacted their health. Overwhelmingly they described these impacts as a loss of important aspects of identity and self-worth such as dignity and self-esteem, and as contributing to significant anxiety and depression. Some of their comments are described in Table 2.

## DISCUSSION

CNYOHCC's work with injured workers on a daily basis provided the impetus for this study. It is clear from this clinical work that the effects of an occupational illness are often both broad and deep. As pointed out by Dembe, relatively little work has been done to elucidate the social, economic, and psychological impacts of an occupational illness. The work that has been done has been primarily focused on a rather narrow spectrum of economic issues. Injured workers participating in previous studies are often limited to those with musculoskeletal injuries [5-15]. Our work is an attempt to contribute to the broader picture by identifying some of the significant consequences of an occupational illness for injured workers. While including some economic impacts, the study also included the issues of access to health care, the role of physicians and attorneys in Workers' Compensation, and psychological impacts. And while including a number of worker/patients with musculoskeletal disorders, the majority suffered from a range of respiratory and other conditions. The underlying interest in identifying such consequences is to contribute to efforts that would ameliorate them.

### Access to Health Care

A major impact of a work-related illness was on access to health care. A significant proportion of injured workers lost their health insurance as a consequence of

Table 2. Impact on Health: Examples of Comments

Depressed, Stressful	Set back mental and physical health
Emotional and mental impact, more physical symptoms	Destroyed whole life
Severely depressed, can't focus on work	Anxiety, Depression, Stress
Nerves shot to hell, stress is bad	Made me a nervous wreck
Depressed, strained marriage, health worse	Frustrating

losing their job. This could have consequences not only for the injured worker, but for others in the family covered by the same policy. Some injured workers lost their health coverage permanently, while others were able to find other sources of coverage. For some, coverage was regained through a working spouse, while others were able to access government programs such as Medicare, Medicaid, Veterans' Administration, or a New York State program. Though coverage was regained, health care was often interrupted and the new coverage may require severing relationships with providers not participating in the new plan. In addition, the regained coverage may not provide care for family members (Medicare, VA), may not provide access to many providers (Medicaid), and may not provide the same level or spectrum of services. Finally, some programs (New York State) require monthly payments that add to the burden of an injured worker and family already under increased financial stress.

### **Workers' Compensation**

The challenges of the Workers' Compensation system added another significant level of stress to injured workers' lives in this study. Other studies have documented the slowness of the system, the lack of adequate benefits, and the difficulties injured workers face finding a doctor to advocate for them in the Workers' Compensation system [1, 6, 7, 16, 17]. In this study, other aspects were illuminated. Many injured workers reported that Workers' Compensation insurance carriers denied claims for treatment. The result is medical care that is disrupted, delayed, or permanently denied, depending on the speed the issue is decided upon by a Workers' Compensation judge, and the content of the judge's decision. In addition, insurance carriers often deny more than one treatment modality at a time, eliminating the possible beneficial effects of a multi-modal approach.

### **Physicians and Workers' Compensation**

Physicians posed other problems for injured workers with regard to Workers' Compensation. Many injured workers reported their doctors were reluctant to consider the possibility their ailment might be work-related, while others acknowledged work-relatedness but failed to report to or bill Workers' Compensation. A number of patients reported that they or their health insurance was billed instead of Workers' Compensation. This behavior by the treating physician is consistent with other studies and anecdotal experience that a significant proportion of physicians are reluctant to get involved with Workers' Compensation and are opting out of dealing with the Workers' Compensation system [1]. The consequences for injured workers are potentially catastrophic, as Workers' Compensation benefits are essential to financial survival and access to at least some health care, and are entirely dependent on support from a treating physician. More generally, this behavior shifts the costs of workplace

illness where they do not belong: to health insurance carriers, taxpayers, and injured workers.

### **Attorneys and Workers' Compensation**

The overwhelming majority of injured workers in this study used an attorney to help them access Workers' Compensation benefits. Opinion was almost evenly split among study participants as to the effectiveness of the lawyer. Slightly more than half thought their attorney had not had a significant impact on the outcome of their case, and a notable proportion reached a point where they switched attorneys. It is not clear from this study whether the dissatisfaction expressed by injured workers was in fact due to their attorney's ineffectiveness or to the failings of the Workers' Compensation system itself in which even a competent attorney lacks impact.

### **Economic Impacts**

As in other studies, the financial impact of an occupational illness was a striking finding. A large part of the financial impact was caused by job loss and the resulting income reduction. Adding to the financial burden for many injured workers was the loss of health insurance and the difficulty of the Workers' Compensation system [6]. The medical costs previously covered by health insurance, and costs that should have been covered by Workers' Compensation but were not, were shouldered by the injured worker and his or her family.

Many of the injured workers in our study had to resort to significant, and often desperate, measures to keep themselves afloat financially. More than one-fifth had to declare bankruptcy [8, 18]. Pensions and savings were routinely raided, and family and friends were asked for loans to cover immediate needs. While not addressed directly by the study, the long-term consequences of these measures are likely to be very serious. The financial hole injured workers find themselves in may be very difficult to emerge from, and could destroy long-term plans to send children to college or to retire at more than a subsistence level of existence.

### **Emotional Impacts**

A final finding of note was the near universal report by study participants of the psychological and emotional impact of their illness. Feelings of decreased self-worth, loss of dignity, and loss of identity were emphasized by injured workers as consequences of getting ill or injured, losing a job, and the subsequent process of accessing benefits and health care. It is easy to imagine a downward spiral for an injured worker as the stresses of illness, job loss, and accessing benefits lead to anxiety, anger, frustration, and depression, which in turn magnify the stresses which amplify the emotional impacts in a reinforcing cycle [9].

### **Study Limitations**

The major limitation of this study is the extent to which the findings can be generalized. Study participants were non-randomly chosen from patients of an occupational medicine clinic specializing in the diagnosis and treatment of occupational disease. Consequently, they likely represent an extreme end of the spectrum. Individuals with uncomplicated injuries or illnesses likely seek care from their primary providers or the company's doctor and are treated and return to work without experiencing many of the difficulties described by this study's participants. Consequently, the prevalence of the problems faced by study participants cannot be determined by the study. However, this limitation does not negate the serious problems faced by the study participants. In addition, it should not be assumed that workers with injuries or less severe illnesses pass through their experience without sharing at least some of the problems identified by this study's participants, albeit with less severity and consequent negative impact.

A second limitation was the lack of a comparison group. One useful comparison would be with non-injured workers to determine the extent of the difficulties identified in this study. Workers' Compensation-related issues would not play a role among non-injured workers, but the prevalence of access to health care, emotional difficulties, and financial problems would all be of potential interest. Another comparison group would be individuals with chronic non-work-related health problems to help delineate effects specific to work-related illness from chronic illness generally.

In addition, the data obtained from the patients did not allow quantification of certain, particularly financial, impacts. This information would be of use in further assessing the severity of some of the impacts.

### **CONCLUSION**

For the injured workers in this study, as in others, the consequences of occupational illness were severe. As Dembe notes, these consequences are the result of a complex interaction between the individual worker/patient and an array of people and organizations at the workplace, in the community, and in government [5]. However, all of these elements are not equal in their role. Employers play a major role, their workplace decisions determine workplace health and safety risks, and their attitudes and policies determine how workers are treated after they are injured, both in Workers' Compensation and in the workplace. Workers' Compensation insurance carriers also play a major part in shaping the injured workers' experience, as their actions greatly influence the course of a claim in the sole system created to provide benefits to workers injured or made ill on the job. Physicians and attorneys also play key roles in Workers' Compensation, each with the ability to greatly impact the outcome for an injured worker in the system.

Within this context, our study, consistent with the work of others, reinforces the notion that every effort should be made to keep the injured worker at work, preserving income, benefits, and mental health. The idea of stay at work/return to work (SAW/RTW) is quite popular among insurers, employers, and the professionals (physicians, vocational rehabilitation specialists, case managers) who serve them [19]. However, this group fails to recognize the central role employers play in these efforts. Until employers are seriously committed to keeping injured workers at work by accommodating disabilities and modifying workplace conditions to make work safe, these efforts are bound to fail. Why employers do not accommodate and modify is a key question that needs to be answered in order to determine what measures might stimulate a more serious commitment.

The experiences of the injured workers in this study also illustrate some of the ways the Workers' Compensation system is part of the problem. The system itself is slow and benefits are inadequate, hampering or blocking medical treatment and relegating injured workers to income levels far below what they were earning while working. These issues are amenable, theoretically at least, to political solutions.

An additional problem associated with Workers' Compensation identified in this study is the increasing reluctance of physicians to participate in the system. This problem could be addressed punitively with more scrutiny of physicians filing claims they think are work-related with health insurers instead of Workers' Compensation insurance carriers. In addition, the ability of physicians engaged in false billing to ever bill Workers' Compensation could be denied. However, these measures are likely to drive more physicians out of the system. Instead, effective resolution of these issues would require action by the Workers' Compensation Board to make participation by physicians less burdensome.

The mental health issues identified in this study were severe and require attention. Depression, anxiety, anger, and frustration associated with issues of loss of identity, dignity, and self-worth were nearly universal themes among study participants. Consequently, any physician treating injured workers should routinely look for these problems. Mental health resources to address these problems need to be routinely available. It is important that these issues be recognized and compensated as an inseparable part of the illness or injury.

The problems faced by injured workers identified in this study are serious and solutions would require significant change. Many have pointed out that injured workers bear much of the costs of a work-related injury or illness [20]. The full extent of the "costs" go far beyond the financial to include the health costs of decreased access to health care generally, and, due to the significant barriers, to care for work-related ailments. "Costs" also include the adverse impact on fundamental aspects of personality and emotional life. Reform in a way that benefits injured workers will need to address all of these issues and shift the burden of these costs where they belong: onto employers who are

responsible for maintaining a safe workplace and insurance carriers who are responsible for compensating injured workers and who could play a role in motivating employers to reduce or eliminate workplace hazards.

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