

**The Effects of Work Restructuring on Low-Wage, Low-Skill Workers in U.S. Hospitals**

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## **Introduction**

Although commonly thought of as an employer of highly educated and technically skilled medical staff, the U.S. hospital industry also provides large numbers of low skill, low wage jobs. Food service, housekeeping, and nursing assistant jobs make up the largely invisible backbone of any U.S. hospital. These jobs have traditionally provided employment with benefits to some of the most economically disadvantaged participants in the U.S. labor force including recent immigrants and residents of the inner city.

Over the past fifteen years, the U.S. hospital industry has come under considerable pressure to reduce costs and streamline services, while continuing to provide high quality medical care to an increasingly demanding public. Recently, hospitals have begun experimenting with alternative approaches to structuring low skill, low wage jobs. As hospitals exhausted other routes to cost cutting and service improvement, they turned to experimenting with the redesign of these roles. The purpose of this chapter is to explore the impacts of these changes on the current jobs of low skill, low wage workers in U.S. hospitals. Within-hospital career mobility for workers in these low skill occupations is extremely limited. This chapter provides some evidence on what those paths look like and how they may be changing. In addition, we document changes in work organization in these low skill, low wage occupations and analyze how changes in work organization affect the turnover and job satisfaction of these workers.

Based on field research in 12 U.S. hospitals and telephone interviews with 679 workers employed in food service, housekeeping, and as nursing assistants, we present evidence on the changing nature of employment and careers in this sector. In interviews with hospital management – from executive members to unit managers – we gathered information on the

pressures facing their hospitals. In addition, we heard from managers about strategies they had implemented (and that some had later retracted) to cope with the need to continue to drive down costs while providing high quality health care. We also heard from the employees about their careers to date and about their current jobs; where they had worked before, where they planned to be working in the next few years, and what they did now at work: how their jobs had changed, about the skills and abilities they brought to the hospital, and the effects their jobs had on them.

The evidence presented in this chapter is based on a combination of qualitative and quantitative data. The chapter begins with an overview of the U.S. hospital industry, the pressures facing the industry, and a description of the occupational groups that are the focus of this study. We also present data concerning the career patterns of the workers interviewed in this study – both where they have come from and where they plan to go. We then turn to describing their current jobs and the primary models of work organization – traditional, enhanced, and contracted out – that employers appear to be adopting in their efforts to restructure low-skill, low-wage jobs in U.S. hospitals. In the next section, we explore the impact unions are having in shaping the choices hospital managers make with respect to new models of work organization and describe any implications these changes have on these workers' careers. Finally, we turn to the analysis of the empirical data regarding the impact of various models of work organization on the work lives of low-wage workers in the U.S. hospital industry. Using the worker survey data we analyze work organization effects on employees' intention to turnover, employee satisfaction. The chapter concludes with a discussion of our findings.

### **The U.S. Hospital Industry**

In 1998, health care spending in the United States accounted for over 13% of GDP – the

largest proportion of GDP of any other major industrialized country – with the hospital industry accounting for approximately one third of this spending (Plunkett 2000). Over the decade 1986-1996, U.S. hospitals' expenses doubled and these costs are expected to continue to grow at about 6.5 % annually. In 2000, inpatient and outpatient hospital services accounted for 47 percent of the total increase in health care spending (Strunk, Ginsburg, and Gabel, 2001).

Faced with increased expenses, hospitals are attempting to stem this rampant cost escalation. The hospital industry is undergoing a transformation that has now been underway for more than a decade. Part of the changes in the industry include consolidation, with hospital mergers and closures that have reduced the number of hospitals by more than 10% from 6,841 in 1986 to 6,201 in 1996 (Plunkett 2000). While the number of hospitals has declined, employment in the industry continues to grow. In 1996, the U.S. hospital industry employed 4.28 million people, an increase of more than 500,000 over the prior decade. Community hospitals, the subject of our study, make up the bulk of the U.S. hospital sector, and represent roughly 83% of all U.S. hospitals over this period (Plunkett 2000). Most (59%) U.S. community hospitals are private, not for profit operations, again a figure that has held constant over the 1986-1996 period.

### **Pressures on the U.S. Hospital Industry**

The U.S. hospital industry is facing a number of pressures that are leading to the current consolidation as well as cost-cutting and changes in service delivery. Among the most important are those coming from the insurance industry, from continued shrinking of government funding, and from demographic changes.

The insurance industry poses several challenges for U.S. hospitals. The growing number of uninsured and the cost of their care are having significant financial impacts on many hospitals.

In 2000, fully 18% of Americans (43.3 million people) had no health insurance at some point during the year (Plunkett 2000). When requiring hospital based care, such patients are billed directly for services they receive. In many cases, such patients are unable to pay, with the result that in 2000, it was estimated that American hospitals would write off nearly \$20 billion in bad debt.

Those patients with insurance also pose problems. Managed care plans have taken over the insurance of the majority of insured Americans. A common strategy adopted by managed care plans is to place limitations on the delivery of specific care and to reduce reimbursement to hospitals in the deliver of specific procedures. As a result, many hospitals have found that they cannot deliver some services for the amount of reimbursement they receive from insurance companies (and so take a loss on the provision of certain services). In addition, many HMOs give bonuses to doctors not to use supplementary, specialty, and hospital services. Further, publicly funded health insurance has reduced hospital reimbursement particularly following the Balanced Budget Act, which sought to slow the growth in Medicare and Medicaid expenditures. The forecast is for these programs to remain in tight financial circumstances through at least 2002.

A final pressure on hospitals comes from the aging of the U.S. population. The over-65 age group accounts for a disproportionate amount of hospital expenditures. In 1996, Americans over-65 accounted for 4,679 days of care per 1,000 persons. In comparison, Americans aged 25 to 34 accounted for 360 days of care per 1,000 people. Not only does the over-65 demographic group use a disproportionate share of hospital resources, but it has also increased by 12% over the past decade, going from 31.1 million Americans in 1990 to 34.9 million in 2000 and it is expected to continue to grow over the next several decades only exacerbating the cost pressures

already faced by U.S. hospitals.

## **Hospital Responses**

As hospitals face these increasing financial pressures, they are responding in a broad array of ways. Hospitals are high cost operations. Therefore, measures have been taken to decrease overall hospital usage – both by sending less acute patients to alternative sites for care and by shortening the stays of those who do require hospital admission. The last decade has seen dramatic growth in home care and in long-term care facilities. As well, over the past decade there has been notable growth in outpatient clinics. Patients that in the past would have required hospitalization are now seen at outpatient clinics for day surgeries and for the treatment of chronic diseases. Outpatient visits have grown from 295 million in 1986 to 506 million in 1996. Not surprisingly, the average daily census of U.S. hospitals has fallen 22%. However, at the same time, hospital personnel per 100 patients has increased by 51% over the same time period – an indication of the rising acuity of patients in U.S. hospitals. Hospital length of stay has also shortened notably over the 1980-1996 period. In 1980 the average length of stay was just over a week (7.3 days); by 1996, that figure had fallen to 5.2 days.

There have also been significant changes in the way in which patient care in hospitals is delivered. Most notable has been the reorganization of the work of nurses, which has occurred in several waves since the mid-1980s. The last and most recent wave of restructuring occurred in response to the cost pressures faced by U.S. hospitals in the mid-1990s. The result has been the replacement of registered nursing (RN) staff with nursing assistants. Registered nurses were asked to focus on care planning and more technically demanding tasks while nursing assistants were given greater responsibility over routine tasks, such as bathing and feeding patients, taking

vital signs, and conducting basic sterile procedures. In addition, hospitals have engaged in numerous cost cutting activities such as supplier consolidation, re-engineering, and the implementation of cost cutting teams. Recently, hospitals have also turned to the restructuring of the jobs of their low wage, low skill workers in attempts to cut costs as well as to improve patient care and satisfaction (and thereby potentially improve performance in the marketplace).

### **Less-skilled Workers in Hospitals**

Food service workers, housekeepers, and nursing assistants are the occupational groups that are the focus of this study. Food service workers are employed in all facets of food preparation, cafeteria operation, and food delivery in the hospital. Housekeeping staff clean and maintain patient rooms as well as hospital common areas and work areas (operating rooms, the emergency department, etc.). Nursing assistants provide non-technical patient care. U.S. hospitals employ large numbers of these people. In 2000, 48,334 people were employed in hospital food service occupations; 169,625 were employed in hospital housekeeping, and 375,939 were employed as nursing assistants (Current Population Survey, March 2001).

Wages for these groups tend to be at the bottom of the wage distribution. Food service workers and housekeepers, in particular, often earn close to the minimum wage. Nursing assistants earn slightly more. In 2000, the median wage for food service workers was \$8.25, for housekeepers, \$8.15, and for nursing aids, \$9.00. This reflects an increase in nominal wages of 6%, 16%, and 14%, respectively, for the three groups over their 1995 wages.

For the most part, these employee groups have relatively low levels of formal education. Thirty-three percent of food service workers and 28% of housekeepers have less than a high school education. The balance have at least a high school diploma, with a relatively small

percentage of people in these occupational groups having attended at least some college (14% of food service workers and 18% of housekeeping staff). Nursing assistants are generally more highly educated with 86% having completed high school, with roughly half having also attended some college. This is likely explained by the education required to become a licensed nursing assistant.

Union coverage in these hospital-based occupations is higher than in the U.S. economy as a whole – hovering around 20%: in 2000, 18% of hospital food service workers were covered by a union contract, as were nearly 24% of housekeepers, and just over 21% of nursing assistants (Current Population Survey March 2001). However, all of these rates had declined slightly over the 1995-2000 period.

The vast majority (more than 90%) of food service workers and housekeepers work full-time (more than 35 hours per week). Only a slightly lower percentage (about 80%) of nursing assistants work full-time. Thirteen percent of nursing assistants work 21-35 hours per week while only about 4% of food service workers and housekeepers work 21–35 hours per week.

Data from our own survey of housekeepers, food service workers, and nursing assistants provides additional insight into the labor market experiences and career patterns of these workers. Prior to working at the hospital, most housekeepers held jobs doing housekeeping (27%), other low-end services tasks (25%), or working in manufacturing (15%). Most Food service workers in our sample previously worked in low-end service jobs (34%), in retail (15%), or in restaurants (13%). The majority of nursing assistants, on the other hand, previously worked as nursing assistants in nursing homes (35%) or in other medical services jobs in hospitals, firms, or clinics (20%).

As part of our survey we asked workers, in what type of job do they see themselves

working in three years? Most housekeepers saw themselves working in the same job (38%), in another low-end service job somewhere else (19%), or in other slightly more high paying jobs in health care (16%), for example as a dietary technician. Similarly, most food service workers saw themselves working in the same job (42%), in another low-end service job somewhere else (19%), or in other slightly higher paying jobs in health care (15%), again as a dietary technician or nutrition specialist. Most nursing assistants, on the other hand, saw themselves working as registered nurses in three years (46%) or as continuing on as nursing assistants (23%).

These data from our survey reveal that the labor market and career patterns for nursing assistants, on the one hand, and housekeepers and food service workers, on the other, is very different. Nursing assistants move within a labor market in medical services. Most are recruited to hospitals from other health care organizations, and many have aspirations of moving into higher paying nursing jobs with additional training. The jobs of nursing assistants are occupationally linked to the health care sector and its mission of care for the sick. Housekeepers and food service workers move within a labor market of low-end service jobs in retail, restaurants, and hotels. Hospitals recruit these workers out of this market and they return to these low-end service jobs when they leave the hospital. With few opportunities to move into higher paying jobs within the hospital and with limited patient contact, housekeepers and food service workers are far less connected to the health care mission than nursing assistants. Thus, when compared to nursing assistants, housekeepers and food service workers are less likely to be committed to the hospital as a long-term career choice.

### **External Constraint of Extremely Tight Labor Markets**

Complicating hospital employers' plans for restructuring the jobs of their low wage, low

skill employees were the unusually low unemployment rates of the late 1990s. Beginning in about 1996, unemployment rates began to fall from their usual levels of 4 to 5 percent. By 1998, the average annual unemployment rate had fallen to 3.3%; in 1999, 3.1 %; and in 2000 it hit 3.0%. Many cities found themselves with still lower unemployment rates during this time. For example, Phoenix, AZ, one of the cities in which hospitals in this study are located, saw unemployment rates drop to 2.7%.

Thus, the higher levels of turnover experienced by hospitals during this period of extremely labor market tightness only served to exacerbate hospitals' worsening cost pressures. Turnover rates among these occupational groups at some hospitals approached 100% on an annual basis. Rates greater than 50% were common for many hospitals across all occupational groups examined in our study. The direct costs of recruiting and training became burdensome as did the indirect costs associated with inexperienced job holders delivering substandard levels of customer service. Moreover, most hospitals were financially constrained in their ability to alleviate any of this labor market pressure by raising wages to any substantive degree.

Thus, at the time of this study, hospitals found themselves faced by the twofold problem of untenable levels of turnover in their low wage, low skill occupations and the on-going need to cut costs while continuing to deliver high quality patient care. The subsequent restructuring of low wage, low skill jobs in U.S. hospitals that we document in this chapter, has been driven by these two pressures.

### **Experiments in the Organization of Work**

In response to the increasing pressure the labor market and for cost control and quality improvement, hospitals have been searching for ways to reorganize traditionally, low-skill, low

wage jobs. Overall, the pressure felt by hospital administrators has resulted in two distinct responses. On the one hand, food service and housekeeping are not typically seen as distinct sources of hospital success or expertise. As such, some hospital administrators have outsourced these functions or their management to external firms that specialize in these areas. On the other hand, food service workers, housekeepers, and nursing assistants are all employees with direct patient contact that can affect the patient experience and satisfaction. In response, other hospital administrators have sought to improve employee skills within these jobs and ensure a more stable workforce through more careful selection, cross training, and work reorganization.

While this latter strategy stresses quality improvement compared to a focus on cost control, all hospital administrators are faced with both pressures as they adopt innovative work practices for low skilled workers. In fact, even though 88% of hospital CEOs stated that one objective in adopting alternative service delivery systems was better patient care, 55% of the hospital CEOs desired lower patient costs (Hospitals, 1993). Moreover, the capacity to maintain a work strategy that integrates both of these objectives may be limited by the increasing cost and labor market pressures faced by hospitals during the late 1990s as they were adopting alternative work practices.

Based on our interviews with managers at participating hospitals, we observed two strategies for low-skilled workers, in addition to the historical model traditionally observed in hospitals. These strategies are multi-skilling / cross training and outsourcing. Prior to our formal analysis of these work practices, we will first discuss the broad outlines, rationale, and tensions evident within each of the following sets of practices, traditional functional, multi-skilling / cross – training, and outsourcing. Because of the distinct strategies adopted by hospitals, we separate out the discussion of housekeeping/dietary workers from nursing assistants.

### ***Traditional Work Organization in Hospitals – Housekeeping and Food Service***

Housekeeping and food service work in hospitals has traditionally been organized along narrow functional task responsibilities. Housekeepers work within environmental services and are typically assigned to a particular job or area and conduct that job on a regular basis. This may include a unit of the hospital or a task such as mopping floors. Moreover, few promotion and training opportunities exist as employees move from “Housekeeper I” responsible for emptying garbage cans and cleaning patient rooms to “Housekeeper II” that requires the use of some equipment, such as floor cleaners and buffers. Similar dynamics exist for food service workers, though some more horizontal movement is available. For example, cashiers might also work in the tray-line area or in salad preparation. In a few instances, housekeepers and food service workers were promoted to first line managers.

While these jobs were rarely “enriched,” hospitals successfully recruited and maintained employees in these positions in the past due to the pay and benefits available in hospitals. With competitive wages and with benefits that more closely resembled those of professional employees, hospital work was desirable compared to housekeeping or food service work in other settings. As the labor market tightened, however, other competitors increased wages to closely match those available in hospitals. Moreover, hospitals faced increasing pressure to reduce the benefits given to low-wage workers. As a result, the relative benefit of housekeeping or food service employment in hospitals disappeared. Hospitals began losing employees to fast food restaurants, casinos, and stores such as Wal-Mart or Home Depot, as these employers paid competitive wages and benefits and offered work where employees, for example, did not have to

clean up after patients or deal with blood. The result was increased hospital difficulty to fill vacant positions.

One response adopted by several hospitals that we visited was a reduction in job requirements for those being hired. At some hospitals that had required a high school diploma or its equivalent, this requirement was dropped. At other hospitals, administrators began to consider people with minimal police records for employment. In one instance, we were told that the specific crime would be examined with people assigned appropriately, so that, for example, someone convicted of theft would not be given access to patient rooms but could work in the laundry. Alternatively, hospital managers sought to adopt work practices that would result in more enriched jobs for employees, thus making the jobs more desirable.

### ***Enhanced Housekeeping and Food Service Jobs***

As part of hospital initiatives to reduce turnover and improve the patient experience, a few hospitals in our sample adopted multi-skilled or enhanced positions for housekeeping and food service workers. The assumption underlying these enhanced jobs was that by broadening jobs and assigning employees to a specific unit, employees, patients, and the hospital would all gain.

In contrast to the traditional functional job, these new enhanced jobs included task responsibilities that had previously been held by employees in several functional areas including housekeeping, food service, and transport. For example, a new Service Support Associate (one commonly used title) would be responsible for housekeeping on the unit, delivering food to patients and assisting with their feeding, and transporting patients to radiology for x-rays. The expectation was that 1) the employee would be more satisfied through broader and more varied

job responsibilities, 2) the patients would be more satisfied as they interacted with fewer employees during the course of their stay, and that 3) the hospital would be able to both improve quality and reduce costs through the increased employee flexibility. While it is unclear how many hospitals eventually adopted this enhanced model, several national consulting firms promoted the adoption of this approach in response to the cost and quality pressures faced by hospitals.

#### Potential Problems with the Enhanced Model

Throughout our interviews with managers several potential problems with the adoption and implementation of the enhanced model for housekeeping and food services were raised. First of all, employees in the new multi-tasked jobs frequently received minimal training in the other job responsibilities. As such, we frequently heard that employees tended to continue working in the tasks that they felt most comfortable with rather than include the new areas of responsibility.

Second, the amount of patient contact in the new, enhanced job, increased dramatically from that present within the traditional work organization model. Housekeeping, who may have only seen patients when they entered the room to empty garbage cans, now also brought patients food, transported them to radiology, and provided other tasks as requested by the nursing staff. For those employees who did not want significant patient contact, these changes were resisted. Along with this, patients also raised concerns on the tasks that were brought together. In several instances, we were told that patients did not like that the person cleaning their garbage cans also brought them food.

Third, nurse managers frequently lacked the skills and knowledge to supervise the new employees. In particular, while the support associates were placed on the unit under the nurse manager's supervision, the supervisors knew very little about housekeeping. As such, they could not effectively supervise the work and ensure its accomplishment. Finally, since the new employees were also the lowest wage workers on the unit, they were frequently asked to do additional tasks, such as accompany a patient while they went out for a cigarette or sit in a patient room to make sure that they did not try to get out of bed. In each instance, the time available to employees in the conduct of their other tasks was reduced.

### ***Outsourcing Housekeeping and Food Service***

Outsourcing of housekeeping and food services is an important strategy adopted by some hospitals as they seek to reduce costs and improve efficiency of these functions within hospitals. In a recent survey conducted for the Hospital and Health Networks Journal, nearly 25 percent of the respondents reported that they outsource food services with 15 percent reporting that they outsource housekeeping / janitorial services (Hospital and Health Network, 2001). In our study, we found only one instance where the employees themselves were outsourced. In this case, hospital management sought to reduce food service costs. By outsourcing the employees, workers no longer received the benefits available to them from the hospitals but rather the benefits that are more typical of food service workers (much higher health insurance co-pays, fewer vacation days, etc.).

More frequently, however, outsourcing in hospitals meant the outsourcing of management. In several instances, hospitals brought in managers from companies such as Sodexo or Servicemaster to direct food services or housekeeping. These companies developed

specific work routines including training material, methods to determine worker efficiency, and other management tools. Moreover, hospitals were frequently able to bring in higher caliber managers than would be available through direct employment of managers. For a housekeeping manager, employment by Servicemaster would provide them a career ladder as they move from a small hospital to a larger hospital and then to manager of several hospitals in a region. In contrast, managers employed directly by a hospital would have much more restricted promotion opportunities.

It is important to note, however, that on the basis of our interviews there were no clear differences in work organization for employees when management was outsourced. In fact, management outsourcing most often meant that the jobs would remain traditionally organized. The primary difference may be in better departmental management including training material and task allocation. This may result in improved employee and hospital outcomes.

### ***Traditional Nursing Assistant Work Organization***

Nursing assistants in hospitals have traditionally been responsible for a relatively narrow set of task responsibilities including bathing and feeding patients and assisting registered nurses, as needed. Due to the limited range of tasks over which they were responsible, nursing assistants conducted these tasks across a wide set of patients on a unit. While a registered nurse may have primary responsibility for 5-6 patients, a nursing assistant might work with 20 patients in helping various nurses with their work. Overall, the education and skills required for the job are typically higher than those of food service workers or housekeepers, with hospitals requiring at least a high school diploma or equivalent and with most requesting a certification that requires

several months of additional training. Within hospitals, however, nursing assistants typically receive very limited training upon employment, ranging from 1-4 weeks.

### ***Enhanced Nursing Assistant Work Organization***

To improve outcomes and reduce costs, hospitals frequently redefined nursing assistant (and registered nurse) job responsibilities and sought to integrate nursing assistants more fully into the care team. Due to the wage and education differences between nursing assistants and registered nurses, with registered nurses typically earning over \$20 per hour, many hospitals shifted routine tasks from registered nurses to nursing assistants. These tasks include such things as: taking vital signs, phlebotomy, and conducting basic sterile procedures. The next change in nursing assistant work was to integrate nursing assistants more fully into a specific team of care providers. As such, in contrast to the previous work organization model, nursing assistants may now work with a single registered nurse (or two) and conduct a broader set of tasks for these nurses' patients.

As with housekeeping and food services, the overall effort in enhancing these jobs was to broaden task responsibilities and to make them more interesting for employees. As a result, hospital managers expected to reduce turnover and costs, improve quality, and increase employee satisfaction.

### **Union representation and outcomes for low-skilled workers**

Union representation of housekeepers, food service workers and nursing assistants can potentially result in important changes to the outcomes experiences by employees. On the one hand, unionization provides the opportunity for employee representatives to participate in the

design and implementation of any work organization change initiative. Through this process better models of work organizations can potentially be developed. On the other hand, hospitals are under strong market pressure to reduce care delivery costs. In addition, few clear models exist in the environment that have been shown to improve outcomes for the hospital and employees. As such, union leaders may face a difficult time in pursuing specific workplace strategies.

On the basis of interviews with union leaders, this latter constraint appears to pose an important challenge for unions and hospitals. In the current health care environment, it appears that all parties, including union and hospital leaders, are searching for a new way to organize work for low-skilled jobs. Within this context, the most successful union strategies appear to focus on training and wages for employees as these jobs evolve. In one case the union promoted extensive training for employees to ensure that existing workers were able to successfully move into enhanced, cross functional jobs in the hospital. Over the course of 6-8 weeks, nursing assistants were trained in skills including phlebotomy and Electrocardiograms. Changes in work organization that included these new skills were then matched with a pay increase of over 20 percent. In addition, the union focused on the process through which employees were moved from the traditional work model to the enhanced model to ensure that those interested in pursuing skill development and a cross functional job were given that opportunity. As such, while the work organization model adopted by the hospital did not appear to differ dramatically from that adopted elsewhere, the union was able to promote broader skill development, greater wage increases, and a process that represented employee interest to participate in the newly defined jobs.

Certain key characteristics of the union and the relationship between labor-management seem to be important in a successful redesign project. First, the union maintains a very strong position in the region with broad representation of employees. Second, the union has significant available funds for use in the training initiatives. These funds are specifically used to train employees as the jobs evolve from traditional to enhanced. In addition, the availability of union training funds place them in a position to promote broader training for employees. In contrast, in a context where all training funds would need to come from the hospital, the capacity to successfully promote extensive training may be limited. Third, labor-management relations in these hospitals has historically been cooperative resulting in an openness to address work reorganization through an ongoing dialogue between union and hospital leaders. All of these factors play an important role in enabling union involvement and in supporting change.

### **Enhanced Jobs for Low-Skill Workers? Effects on Turnover and Job Satisfaction**

By implementing different forms of work organization, such as enhanced jobs, hospital managers expected to increase employee satisfaction and reduce employees' intention to quit. Whether managers' expectations were realized remains an open empirical question. In this section, we utilize the results of our survey of hospital workers in less skilled jobs to examine the effects of hospitals' efforts to enhance jobs on turnover and job satisfaction. We begin with a brief review of the literature on turnover and satisfaction.

#### ***Intention to Turnover***

The literature on voluntary turnover suggests that organizations have two broad types of practices available that they can use to affect employees' intention to turn over and quit rates –

inducements such as pay and benefits and employer-employee relationships (Shaw, Delery et al. 1998). Organizational dynamics such as the organization of work, job design, and human resource practices can be shaped to reduce turnover (Arthur 1994). Such practices are more likely to be adopted in situations where employers may find it difficult to find workers with the necessary skills and attitudes to replace those who have left the organization. When the costs of replacing workers are low – that is, when the job is easily learned and does not require much in the way of firm-specific skills and employee behavior is easily monitored, organizations lack incentives to invest in retaining workers (see discussions of transactions costs, e.g., Williamson 1979).

It is generally assumed that less skilled hospital workers in dietary, housekeeping and nursing assistant occupations are easily replaced, and that the costs of turnover for these workers are low. In traditional work organization settings, there is little investment by hospitals in training these employees, and managers rely on close supervision and monitoring to get the work done. In the past, management did not adopt workplace practices for these occupational groups that would build employees' organizational commitment and would support a stable employment relationship. However, as we have discussed, tight labor markets from 1996 to 2001 have increased the choice of jobs available to less skilled workers. This labor market environment led hospital managers to deplore the high rates of turnover in less skilled occupations and, in some instances, to adopt workplace practices intended to reduce turnover rates.

Previous research suggests that higher pay and benefits and greater employment security are practices that reduce workers' incentives to find another job and motivate a long-term commitment to the firm (Osterman 1987). Employees are less likely to leave a job with good pay and benefits because other jobs with these characteristics are more difficult to find (Zenger 1992;

Powell, Montgomery et al. 1994; Shaw, Delery et al. 1998). Superior alternative employment opportunities are more difficult for workers to identify than when compensation on the job is low. Employment security is also expected to reduce turnover, since a lack of job stability may reduce employees' commitment and attachment to the organization (Cotton and Tuttle 1986; Ashford, Lee et al. 1989; Shaw, Delery et al. 1998).

High involvement workplace practices are also expected to reduce employees' intention to turn over, while those associated with a low commitment environment are more likely to lead workers to quit (Arthur 1994; Huselid 1995). High involvement practices build employees' firm-specific skills. These include selecting better educated workers and investing in training; designing enhanced jobs that provide opportunities for challenge, creativity, and participation in decisions; and incentives such as high relative pay, greater job security, and trust. High involvement practices may be important in "interactive service work" (Leidner 1993) in health care, where the quality of the patient's hospital experience is shaped by employee behavior.

Employees value high levels of trust in the establishment in which they work, and the intrinsic rewards they get from their jobs. These characteristics, which are usually associated with high performance workplace practices and enhanced jobs, are important to workers and increase job satisfaction (Appelbaum et al. 2000). They also reduce turnover (Batt 2000) since, like high pay, these job characteristics are inducements for long-term commitment.

In contrast, low involvement workplace practices follow the logic of traditional mass production manufacturing. Jobs are narrow and workers learn routinized tasks through repetition. Labor costs are minimized through low investment in selection of workers and training, monitoring of workers, and low relative pay. Low involvement workplaces tend to have higher rates of voluntary turnover. Close supervision may increase job demands and is associated with

lower levels of worker autonomy and trust. Too much work to do and too many demands on time and low levels of trust and have all been shown to increase quit rates or intention to turn over (Leonard 1987; Batt 2000). Other characteristics of the organizational environment, such as conflict with coworkers or frequent overtime requirements, may also make work unpleasant and lead workers to turn over.

Finally, fair treatment of workers has been posited to reduce voluntary turnover by increasing the attractiveness of the current workplace. “Voice” mechanisms such as grievance procedures associated with unions should reduce employees’ intention to turn over, as should employees’ satisfaction with the fairness of their pay (Shaw, Delery et al. 1998).

### ***Job Satisfaction***

Job satisfaction represents a worker’s overall evaluation of his or her job, and is widely used as an overall measure of the work experience. Job satisfaction is assumed to be related to a host of positive consequences in both the work and non-work aspects of life (see (Kalleberg 1977)) for a review. It is a subjective measure of individual well being, but it is a particularly powerful measure since it exhibits strong correlations, in the expected direction, with mental health, life expectancy, heart disease, absenteeism and turnover (Palmore 1969; Sales and House 1971; Freeman 1978; Wall, Clegg et al. 1978; Clegg 1983).

The job design literature has emphasized redesigning work as a means to motivate workers trapped in routinized and alienating jobs (Hackman and Lawler 1971; Hackman and Oldham 1975; Hackman and Oldham 1976; Hackman and Oldham 1980). By expanding job tasks, organizing work into teams, or giving employees some discretion within their jobs, workers become more satisfied with their jobs and more motivated to put forth effort on the job.

Thus, workplace practices that enhance jobs, require greater skill, and provide opportunities for challenge and creativity should increase job satisfaction.

Human resource practices such as training and employment security associated with high performance or high commitment work places are likely to be valued by workers. As a result, work settings in which these practices are present should also increase job satisfaction.

Recent research on job satisfaction has found that job satisfaction is increased in high trust workplaces, and when jobs are intrinsically rewarding and stressors such as conflict with co-workers, too many demands on workers' time, and more work than workers can handle are reduced (Appelbaum et al. 2000).

Thus, practices adopted by hospital managers to reduce turnover should also be effective in improving job satisfaction for workers.

### ***Survey of Workers in Less-Skilled Hospital Jobs***

Collection of data for this study is still underway. The analysis reported here is based on a survey of 679 workers in 11 hospitals. The sample includes 139 dietary or food service workers, 288 nursing assistants, 194 housekeeper or environmental services workers, and 58 workers in miscellaneous low-skill jobs.

Less than 10% of housekeepers in our sample thus far are in enhanced jobs, and the overall numbers of other low skill workers are too small to analyze. Thus, the focus of our empirical analyses of the effects of enhanced jobs on worker turnover and job satisfaction is on dietary workers and nursing assistants.

The sample we analyze includes a total of 139 dietary workers, of which 42 (30%) are in enhanced jobs, and 288 nursing assistants, of which 181 (63%) are in enhanced jobs. Among

dietary workers, our sample is 56% white, 31% black, 11% Hispanic and 2% other. For nursing assistants, the distribution is 65% white, 20% black, 3% Hispanic and 12% other. Nursing assistants tend to be older and better educated than dietary workers. The average age of dietary workers is 35.8 years, while for nursing assistants it is 42.4 years. About 30% of nursing assistants have a high school degree or less – less than 3% lack a high school degree – while 55% have some education beyond high school and 15% have a college degree. Among dietary workers, 14% have less than a high school degree, 48.5% are high school graduates, 31% have some education beyond high school, and 6.5% have a college degree. Dietary and food service workers in our sample earn on average \$9.57 an hour, while nursing assistants earn \$10.27. Working full-time, year-round, these employees earn less than \$21,000 a year.

### ***Enhanced vs. Traditional Jobs***

In order for enhanced jobs to increase workers' job satisfaction or reduce the likelihood that they will leave their current jobs in the near future, these jobs must differ in significant ways from traditional food service and nursing assistant jobs. The worker survey provides an extraordinary level of detail that enables us to examine whether this is, indeed, the case. Workers were asked about the characteristics of their jobs, their participation in problem-solving teams, and the extent to which they participated in decisions and communicated with other employees. They were asked about job characteristics that increase intrinsic rewards – using their skills and creativity on the job and finding their jobs challenging. They were asked about the difficulty of learning to do their jobs, the amount and types of training they received, about whether they were certified or had technical degrees, and whether there were opportunities for promotion to higher paying jobs. The survey also asked about workers' perceptions that management provided

adequate staff to get the work done and their perceptions of employment security. Workers were also asked questions about the work environment – about being treated fairly, trust in management, and conflict and work demands that create stress. Workers were asked whether they belonged to a union or were covered by a union contract. Finally, workers were asked about pay rates, hours, and overtime; about contingent pay based on meeting goals; and about their satisfaction with the fairness of their pay and benefits. Thus, the richness of the data gathered in the worker survey enables us to examine the nature of jobs that managers characterize as enhanced.

In contrast to managers' claims about enhanced vs. traditional jobs, the worker survey reveals remarkably few differences between the jobs done by dietary/food service workers and nursing assistants in these two settings. Enhanced jobs exhibit very few of the characteristics associated with high performance jobs or high commitment workplaces. And, among dietary workers, traditional jobs sometimes scored higher on the few indicators where the jobs differed. Appendix Table 1 provides a full list of job and work environment characteristics and human resource practices. Here we report only the characteristics and practices that differed significantly between enhanced and traditional work settings. We report these separately for dietary/food service workers, and for nursing assistants. Mean differences are significant at the 5% level unless otherwise indicated

Among dietary/food service workers, those in traditional settings were somewhat more likely to work closely with others and to be in jobs that require cooperation with others (both significant at the 10% level). They were also more likely to experience conflict with other workers. In addition, workers in traditional jobs were much more likely to participate in problem-solving teams – 68% of workers in traditional jobs vs. 47% of those in enhanced jobs.

Classroom training was significantly higher for workers in enhanced jobs, while workers in traditional jobs received significantly more one-on-one training. Workers in traditional jobs were significantly more likely to report that management provided adequate staff to carry out the work at their hospital and that management would take steps to avoid layoffs if there were budget cuts. Conversely, workers in enhanced jobs were more likely to report that they were often asked to do more work than they could handle. Traditional jobs in dietary and food service appear to be more intrinsically rewarding as well. Workers in traditional jobs are more likely to report that their jobs require them to learn new things (significant at the 10% level) and that they find their jobs challenging. These workers also report having more opportunities to move to higher paying jobs. Hourly pay was higher in enhanced work settings, with these workers earning \$10.03 an hour compared to \$9.33 an hour on average for workers in traditional jobs. However, contingent pay was more prevalent in traditional jobs. 38% of workers in traditional jobs reported that some of their pay depended on the performance of the hospital and 45% reported that it depended on the performance of their work group or unit, compared to 22% of workers in enhanced jobs reporting each of these types of pay arrangements. Finally, workers in traditional work settings reported that managers treated them in a consistent and predictable manner and that management was open with them. They were also more likely to report good relations between management and employees (significant at the 10% level).

Comparing nursing assistants in our sample in enhanced and traditional jobs also reveals few differences. Nursing assistants in enhanced jobs spent significantly less of their time interacting with patients and were more likely to receive one-on-one training and training in quality improvement techniques. They also reported that their jobs were more complex and would take a new hire longer to learn (significant at the 10% level). Nursing assistants in

traditional jobs were more likely to report that they found their jobs challenging, but also that they found them stressful and often had too many different demands on their time and were often asked to do more work than they could handle. There were no significant differences in pay – nursing assistants in enhanced jobs earned on average \$10.20 an hour, slightly less than the \$10.40 earned by those in traditional jobs. There were also no significant differences in contingent pay arrangements, with 36% of both groups of workers reporting that some of their pay depended on the performance of the hospital, and 41% of both groups reporting that it depended on the performance of their work group or unit. Nevertheless, nursing assistants in enhanced settings were more likely to report that they were satisfied with the fairness of their pay. Finally, nursing assistants in enhanced jobs were more likely to report good relations between management and employees.

### ***Do Enhanced Jobs Reduce Turnover or Increase Satisfaction?***

Hospital workers in this study were asked, “All in all, how likely is it that you will try hard to find a job with another employer within the next year – very likely, somewhat likely, or not likely at all?” About 18% of both dietary/food service workers and nursing assistants reported that they were highly likely to turnover. In response to the question, “Overall, how satisfied would you say you are with your job – highly satisfied, somewhat satisfied, somewhat dissatisfied, highly dissatisfied,” 31% of dietary/food service workers and 39% of nursing assistants reported that they were highly satisfied with their jobs. We created a job satisfaction index that includes, in addition to this overall measure of satisfaction, employees’ satisfaction with opportunities for personal growth and satisfaction with the resources they have to do their jobs. Chronbach’s  $\alpha$  for this index is 0.79. In this section, we examine the effect of being in an

enhanced job on whether a worker is highly likely to try hard to find another job and on the index of job satisfaction.

Model I in Table 1 examines the effect of having an enhanced job on the intention to turn over, controlling for gender, race, age and education. Model II adds the effects of hourly pay and union membership. Models III and IV examine the effects of human resource practices that are often associated with enhanced jobs – employment security and adequate staffing, participation in a problem-solving team, pay for performance, and formal and informal training – on workers' intention to turnover.

We find that enhanced jobs are not significant in reducing turnover for dietary/food service workers or for nursing assistants in any of the models.\* In view of the very few differences between enhanced and traditional jobs, this is not surprising. Union membership has no effect on turnover for either food service workers or nursing assistants in our sample. Higher wages do lead to significantly lower turnover for dietary/food service workers, but have no effect on nursing assistants' intention to turn over. In Model III(a) adequate staffing has a strong effect on workers' intention to turn over, reducing it significantly for both dietary/food service workers and nursing assistants. In Model III(b), we find that among nursing assistants, intention to turn over is reduced by employment security. On the other hand, employment security does not significantly reduce the intention to turn over of dietary/food service workers. In Model IV, which includes all of the human resource practices, we find that informal training reduces nursing assistants' intention to turnover. Formal training, pay for performance, and participation in a problem-solving team all have insignificant effects on both groups of hospital employees.

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\* We also examined whether part-time workers differed from full-time workers in their intention to turnover or in job satisfaction, and found that work schedules did not have a significant effect. These results are not shown in the tables.

Employment security reduces the intention to turn over for both dietary/food service workers and nursing assistants, while adequate staffing no longer has a significant effect on turnover.

Similarly, in Table 2 we find that enhanced jobs do not increase workers' job satisfaction. In Model II, we find that earning higher wages increases satisfaction for dietary/food service workers but not for nursing assistants. Union membership does not affect satisfaction for nursing assistants, but unionized dietary/food service workers report lower levels of job satisfaction. Lower reported job satisfaction of union members is a common finding, and is usually attributed to the greater freedom unionized workers have to voice their discontent without fear of being fired (Freeman 1978; Freeman and Medoff 1984; Meng 1990; Miller 1990). In Model III(a) we find that adequate staffing has a very strong and positive effect on job satisfaction for both groups of employees. And in Model III(b) we observe that employment security has an even larger effect on job satisfaction for both groups of workers. Adding the other human resource practices, we find in Model IV that higher wages, greater employment security and adequate staffing continue to increase job satisfaction for dietary/food service workers. However, participation in problem-solving teams, formal and informal training, or having pay contingent on performance do have significant effects for these workers. For nursing assistants, employment security, participation in a problem-solving team, and more informal training all raise job satisfaction, while adequate staffing no longer has a significant effect.

Despite the fact that some variables are significant, we find that enhanced jobs and this set of high performance human resource practices do not explain very much of the variance among hospital employees in either intention to turnover or job satisfaction. Other factors, not included in Model IV, are at work. Prior research on high performance workplace practices shows that a high trust environment, less stressful work settings, and jobs that are intrinsically

rewarding can increase job satisfaction and reduce turnover (Appelbaum et al. 2000; Batt 2000). We measure trust as an index of four items: supervisors treat workers fairly, management is open and upfront with workers, good relationship between managers and employees, and extent to which respondent trusts management (Chronbach's  $\alpha = 0.84$ ). We measure stress as an index of four items: extent to which respondent experiences conflict with co-workers, how often the respondent has too many demands on his or her time, how often the respondent is asked to do more work than he or she can handle, and how often respondent feels depressed about work (Chronbach's  $\alpha = 0.72$ ). Finally, intrinsic rewards is measured by the following four items: job makes good use of my skills and knowledge, job requires that I learn new things, job requires me to be creative, job is challenging (Chronbach's  $\alpha = 0.80$ ).

The results of this analysis are shown in Table 3. Adding trust, stress and intrinsic rewards to the model substantially increases our ability to explain workers' intention to turn over and job satisfaction. We examine turnover first. For nursing assistants we find that a high trust environment reduces turnover, while a stressful job increases it. Intrinsic rewards have no effect on turnover of these workers. Surprisingly, employment security and formal training significantly increase turnover once we control for a high trust environment. We suspect multicollinearity is responsible for this strange result. For dietary/food service workers, only stress and pay significantly affect turnover, with higher stress increasing and higher hourly pay decreasing it.

Finally, in Table 3 we examine the effects of trust, stress and intrinsic rewards on job satisfaction. For both nursing assistants and dietary/food service workers, we find that trust and intrinsic rewards substantially increase job satisfaction while stress reduces it. Once we control for the levels of trust and stress in the work environment, none of the human resource practices

included in the model – employment security, adequate staffing, participation in a problem-solving team, pay contingent on performance, or formal or informal training – increase job satisfaction for dietary/food service workers. For nursing assistants, however, many of these practices – specifically, employment security, participation in a problem-solving team, and pay contingent on work group or unit performance – continue to increase satisfaction. Formal training, however, decreases it.

### ***Implication of the Analysis***

The foregoing analysis suggests that hospital managers are correct in their view that changes in the work environment can reduce turnover while increasing the job satisfaction of workers. However, the changes managers have made to date to enhance jobs have been relatively minor, and do not really distinguish enhanced jobs from more traditional ways of working. Indeed, for dietary/food service workers, traditional jobs are more likely to have some of the characteristics associated with high performance workplace practices. As a result, for the most part, enhanced jobs have not had the intended effects on workers' intention to turn over or on job satisfaction. For dietary and food service workers, wages is the key variable for reducing turnover. This is consistent with the labor market experience of these workers. Human resource practices that improve staffing and employment security are also important in reducing turnover. Adequate staffing reduces stress by reducing the frequency with which hospital workers have too many demands on their time, are asked to do more than they can accomplish, and experience conflicts with co-workers. Reductions in these types of stress decrease the intention to turn over for both dietary/food service workers and nursing assistants. Greater attention to these issues can reduce turnover and, at the same time, improve the work and life experiences of employees.

## **Conclusion**

Overall, we believe that work organization restructuring for low-skilled workers initially started as an effort both to improve quality and reduce costs. Given financial pressures facing hospitals, however, we find few significant differences in jobs characterized as traditional versus enhanced. Given the limited sample size for employees who have been outsourced, we were unable to examine the effect of outsourcing on these workers.

Our results indicate that the way managers have enhanced jobs has had no effect on employees' intention to turn over or their job satisfaction. Rather, other factors that relate to the workplace such as the degree of stress, a high trust environment, and the extent to which jobs are intrinsically rewarding play a more important role in determining turnover and job satisfaction. In addition to creating a high trust workplace, managers must make the jobs of less skilled hospital workers more intrinsically rewarding while being mindful of the stress levels these workers are under if they want to positively affect turnover and satisfaction.

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## Appendix Table 1

Variables used to compare traditional vs. enhanced work organization

- Measures of job autonomy
- Measures of task variety
- Measures of task interdependence
- Participation in problem solving teams
- Formal and informal training
- Quality improvement, interpersonal skills, and technical training
- How long it would take to train a person to do your job
- Education
- The extent of communication with coworkers and supervisor
- Employment security
- Adequate staffing
- Intrinsic rewards from the job
- Stress
- Participation in decisions
- Union membership and coverage
- Hourly wage
- Performance based pay
- Measures of trust in management and supervisor fairness
- Promotion opportunities
- Relations with coworkers
- Relations with management
- Measures of organizational commitment
- Hours of overtime
- Satisfaction with pay and benefits



**Table 1: The Effect of Enhanced Jobs on Turnover**

	Model I		Model II		Model III(a)		Model III(b)		Model IV	
	D/FS	NA	D/FS	NA	D/FS	NA	D/FS	NA	D/FS	NA
Enhanced	-0.230 (0.405)	-0.285 (0.272)	-0.220 (0.475)	-0.278 (0.291)	-0.340 (0.507)	-0.490 (0.305)	-0.314 (0.484)	-0.207 (0.295)	-0.001 (0.561)	-0.430 (0.332)
Wage			-0.425 *** (0.140)	-0.092 (0.092)	-0.417 *** (0.149)	-0.081 (0.097)	-0.378 *** (0.144)	-0.065 (0.093)	-0.359 ** (0.158)	-0.079 (0.109)
Union Member			0.718 (0.986)	0.393 (0.536)	0.373 (1.024)	0.327 (0.547)	0.631 (0.998)	0.369 (0.545)	0.549 (1.101)	0.240 (0.631)
Employment Security							-0.291 (0.188)	-0.317 ** (0.134)	0.101 (0.245)	-0.101 (0.172)
Staff Adequacy					-0.512 ** (0.211)	-0.336 ** (0.141)			-0.582 ** (0.251)	-0.284 * (0.171)
Problem Solving Team									0.095 (0.473)	0.104 (0.313)
Pay for Performance									0.420 (0.450)	-0.300 (0.334)
Formal Training									-0.589 (0.455)	0.395 (0.389)
Informal Training									0.068 (0.452)	-0.712 ** (0.328)
Female	0.169 (0.494)	-1.098 *** (0.336)	0.506 (0.668)	-1.159 *** (0.351)	0.223 (0.566)	-1.227 *** (0.374)	0.469 (0.556)	-1.163 *** (0.354)	0.297 (0.588)	-1.214 *** (0.401)
Hispanic	0.288 (0.602)	-1.019 (0.885)	0.549 (0.668)	-0.944 (0.878)	0.951 (0.733)	-0.734 (0.926)	0.429 (0.703)	-0.815 (0.869)	0.583 (0.785)	-1.549 (1.210)
Black	0.344 (0.387)	0.397 (0.306)	0.697 (0.470)	0.450 (0.336)	0.738 (0.493)	0.444 (0.353)	0.683 (0.472)	0.455 (0.339)	0.622 (0.509)	0.675 * (0.383)
Other Race	0.242 (1.436)	-1.737 (0.966) *	1.266 (2.094)	-1.701 (1.037)	1.911 (2.126)	-1.403 (1.003)	1.741 (2.207)	-1.606 (1.107)	1.625 (1.994)	-1.097 (1.064)
Less than HS	-0.243 (0.544)	1.858 ** (0.764)	-0.411 (0.591)	1.791 ** (0.818)	-0.544 (0.642)	1.259 (0.890)	-0.317 (0.593)	1.854 ** (0.841)	-0.063 (0.707)	1.766 * (0.943)
More than HS	0.349 (0.391)	0.453 (0.332)	0.901 ** (0.453)	0.226 (0.358)	0.745 (0.468)	0.331 (0.371)	0.792 * (0.459)	0.204 (0.361)	0.732 (0.482)	0.693 (0.426)
College Educated	-0.071 (0.715)	-0.322 (0.456)	0.355 (0.803)	-0.242 (0.473)	0.271 (0.894)	-0.182 (0.484)	0.071 (0.819)	-0.088 (0.481)	-0.056 (1.039)	0.301 (0.557)
Age	-0.029 ** (0.013)	-0.033 *** (0.012)	-0.025 (0.016)	-0.028 ** (0.013)	-0.031 * (0.018)	-0.022 * (0.014)	-0.035 ** (0.017)	-0.030 ** (0.013)	-0.031 (0.019)	-0.027 * (0.015)
N	133	272	118	243	111	227	115	243	100	214
Prob>Chi 2	0.4976	0.0001	0.0129	0.0007	0.0037	0.0005	0.0241	0.0002	0.0786	0.0001
Pseudo R2	0.031	0.070	0.101	0.071	0.131	0.0825	0.102	0.083	0.127	0.123

\* Intention to Turnover uses an ordered logit regression; standard errors in parentheses;  $p < .01 = ***$ ,  $.01 < p < .05 = **$ ,  $.05 < p < .10 = *$

**Table 2: The Effect of Enhanced Jobs on Job Satisfaction**

	Model I		Model II		Model III(a)		Model III(b)		Model IV	
	D/FS	NA	D/FS	NA	D/FS	NA	D/FS	NA	D/FS	NA
Enhanced	-0.278 (0.429)	0.219 (0.225)	0.274 (0.467)	0.123 (0.242)	0.367 (0.455)	0.189 (0.248)	0.693 (0.421)	-0.031 (0.221)	0.740 (0.478)	-0.065 (0.233)
Wage			0.430 *** (0.136)	0.093 (0.072)	0.283 ** (0.133)	0.070 (0.073)	0.365 *** (0.127)	0.044 (0.066)	0.287 ** (0.133)	-0.011 (0.068)
Union Member			-1.617 * (0.911)	-0.485 (0.454)	-0.875 (0.871)	-0.373 (0.452)	-1.814 ** (0.834)	-0.533 (0.412)	-0.979 (0.895)	-0.601 (0.420)
Employment Security							1.003 *** (0.169)	0.715 *** (0.101)	0.586 *** (0.211)	0.695 *** (0.121)
Staff Adequacy					0.678 *** (0.199)	0.444 *** (0.117)			0.383 * (0.209)	0.071 (0.119)
Problem Solving Team									0.223 (0.404)	0.523 ** (0.220)
Pay for Performance									0.133 (0.387)	0.278 (0.227)
Formal Training									0.260 (0.398)	-0.022 (0.261)
Informal Training									0.613 (0.389)	0.471 ** (0.235)
Female	-0.154 (0.530)	0.155 (0.297)	-0.250 (0.555)	0.115 (0.310)	0.145 (0.532)	0.315 (0.320)	-0.293 (0.489)	0.083 (0.282)	-0.114 (0.505)	0.142 (0.302)
Hispanic	0.251 (0.688)	0.128 (0.634)	0.629 (0.717)	0.098 (0.636)	1.002 (0.718)	-0.202 (0.666)	0.384 (0.662)	-0.251 (0.580)	0.556 (0.714)	-0.751 (0.716)
Black	-0.299 (0.431)	-0.448 * (0.255)	-0.327 (0.504)	-0.174 (0.277)	-0.349 (0.481)	-0.216 (0.284)	-0.225 (0.449)	-0.234 (0.252)	-0.363 (0.455)	-0.424 (0.266)
Other Race	0.912 (1.298)	1.061 * (0.549)	0.450 (1.546)	0.991 (0.605)	-0.282 (1.467)	1.074 * (0.633)	-1.113 (1.376)	0.443 (0.555)	-1.676 (1.381)	0.042 (0.587)
Less than HS	0.022 (0.582)	-0.157 (0.707)	0.102 (0.595)	-0.108 (0.763)	-0.246 (0.586)	-0.005 (0.826)	-0.093 (0.521)	-0.377 (0.695)	0.448 (0.613)	0.030 (0.831)
More than HS	0.137 (0.431)	-0.207 (0.260)	-0.286 (0.461)	-0.140 (0.280)	-0.229 (0.440)	-0.166 (0.285)	-0.029 (0.409)	-0.196 (0.255)	-0.009 (0.414)	-0.403 (0.268)
College Educated	-1.391 (0.864)	-0.027 (0.359)	-2.042 ** (0.911)	-0.064 (0.381)	-1.031 (0.945)	-0.123 (0.381)	-1.189 (0.809)	-0.490 (0.352)	0.565 (0.961)	-0.782 ** (0.370)
Age	-0.014 (0.014)	0.003 (0.010)	-0.035 ** (0.016)	0.001 (0.868)	-0.019 (0.016)	-0.003 (0.010)	-0.010 (0.015)	0.005 (0.009)	-0.000 (0.016)	0.008 (0.010)
Constant	9.938 *** (0.789)	9.507 *** (0.536)	6.796 *** (1.304)	8.702 *** (0.866)	5.250 *** (1.369)	7.583 *** (0.928)	3.642 *** (1.313)	7.326 *** (0.813)	3.120 ** (1.509)	7.206 *** (0.895)
N	130	274	115	245	108	229	112	245	97	215
Prob>F	0.7144	0.3014	0.0813	0.7432	0.0083	0.0273	0.0000	0.0000	0.0025	0.0000
R-squared	0.049	0.039	0.154	0.032	0.235	0.099	0.376	0.203	0.357	0.299
Adjusted R-squared	-0.022	0.0062	0.064	-0.014	0.139	0.049	0.300	0.162	0.218	0.239

\* Job satisfaction uses an OLS regression; standard errors in parentheses;  $p < .01 = ***$ ,  $.01 < p < .05 = **$ ,  $.05 < p < .10 = *$

**Table 3: The Effect of Trust, Stress, and Intrinsic Rewards on Turnover and Job Satisfaction**

	Turnover		Job Satisfaction	
	D/FS	NA	D/FS	NA
Enhanced	0.145 (0.616)	-0.204 (0.361)	0.279 (0.390)	-0.054 (0.195)
Wage	-0.341 * (0.182)	-0.089 (0.121)	0.014 (0.114)	-0.057 (0.057)
Union Member	0.738 (1.194)	-0.049 (0.764)	0.148 (0.761)	-0.220 (0.362)
Employment Security	0.341 (0.303)	0.552 ** (0.217)	0.034 (0.191)	0.208 * (0.115)
Staff Adequacy	-0.264 (0.305)	-0.119 (0.189)	-0.192 (0.186)	-0.057 (0.103)
Problem Solving Team	-0.174 (0.517)	0.108 (0.345)	0.427 (0.328)	0.523 *** (0.186)
Pay for Performance	0.392 (0.483)	-0.381 (0.364)	0.051 (0.315)	0.340 * (0.194)
Formal Training	-0.628 (0.483)	0.786 ** (0.419)	-0.076 (0.323)	-0.389 * (0.219)
Informal Training	0.348 (0.488)	-0.286 (0.366)	0.468 (0.314)	0.036 (0.205)
Trust	-0.001 (0.118)	-0.232 *** (0.080)	0.210 *** (0.072)	0.093 ** (0.042)
Stress	0.249 *** (0.085)	0.215 *** (0.068)	-0.161 *** (0.051)	-0.149 *** (0.035)
Intrinsic Reward	-0.101 (0.090)	-0.066 (0.079)	0.207 *** (0.058)	0.252 *** (0.043)
Female	-0.014 (0.622)	-1.776 *** (0.454)	0.131 (0.410)	0.138 (0.257)
Hispanic	1.104 (0.842)	-1.369 (1.344)	0.030 (0.567)	-0.887 (0.597)
Black	0.883 (0.575)	0.791 * (0.434)	-0.266 (0.367)	-0.407 * (0.226)
Other Race	2.502 (2.297)	-0.372 (1.035)	-2.612 ** (1.100)	-0.260 (0.519)
Less than HS	-0.130 (0.781)	1.959 * (1.090)	0.273 (0.497)	-0.071 (0.690)
More than HS	0.564 (0.524)	0.568 (0.457)	0.161 (0.329)	-0.305 (0.228)
College Educated	0.620 (1.079)	-0.032 (0.593)	0.096 (0.791)	-0.384 (0.314)
Age	-0.033 (0.021)	-0.029 * (0.017)	0.005 (0.013)	0.005 (0.008)
Constant			5.510 *** (1.612)	7.011 *** (1.034)
N	97	208	95	209
Prob>Chi 2	0.0060	0.0000		
Prob>F			0.0000	0.0000
Pseudo R2	0.199	0.222		
Adjusted R2			0.521	0.473

\* Intention to Turnover uses a logit regression; job satisfaction uses an OLS regression  
*standard errors in parentheses; p<.01 = \*\*\*, .01<p<.05 = \*\*, .05<p<.10 = \**