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## CHAPTER 3

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

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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, some managers began experimenting with the redesign of these roles. At the same time, exceptionally tight labor markets in the latter half of the 1990s made recruiting and retention of even low-skilled workers an important concern. Some managers initiated the redesign of work processes with the goal of increasing job satisfaction among these workers and reducing turnover.

The purpose of this chapter is to explore the impacts of these changes on the current jobs of workers employed in housekeeping, in food service, or in patient care as nursing assistants in U.S. hospitals. These are low-wage jobs that generally require a high school degree or less to perform adequately.<sup>1</sup> We document the changes in work organization in these low-skill, low-wage occupations and analyze how these changes affect the turnover and job satisfaction of

these workers. Despite these changes, within-hospital career mobility for workers in these low-skill occupations remains extremely limited. This chapter provides some limited evidence on what those paths look like and how they may be changing.

The research presented here was conducted in 16 U.S. community hospitals. We chose to focus on community hospitals because they make up the largest proportion of U.S. hospitals. We also chose hospitals of a similar size—between 200 and 400 beds for the most part—again, as the most representative size of community hospitals. Our research sites were chosen to provide insight into hospital practices throughout the country: we conducted fieldwork in hospitals based in the Northeast, the Midwest, the Southwest, and the South. At each hospital we met with and interviewed managers; in addition to an executive-level manager, we interviewed managers from human resources as well as the managers of food service, housekeeping, and hospital units in which nursing assistants were employed. In addition to this field research, the research presented here draws on completed telephone interviews with 746 workers employed in food service, in housekeeping, or as nursing assistants in 12 of these hospitals. Approximately 80 workers per hospital were randomly selected from employee lists supplied by the employer for the telephone interviews.

We present evidence on the changing nature of employment and careers in this sector. In interviews with hospital 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 abandoned) 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. We asked them where they had worked before, where they planned to be working in the next few years, and what they did now at work. We also asked about changes in their jobs, the skills and abilities they brought to the hospital, and the effects their jobs had on them.

We find that higher wages and staffing adequacy in departments are key management measures that reduce employees' desire to leave their current employers. However, as we discuss later in this chapter, hospitals face rising expenses and severe cost pressures that challenge their ability to raise wages and improve staffing levels. Changes in work processes for low-skilled workers, intro-

duced in an effort both to improve quality and reduce costs, have been rather modest. In contrast to the traditional organization of low-skill jobs in hospitals, workers in enhanced jobs perform a broader range of work tasks and are assigned to specific departments. We find from the worker survey that these jobs are not more likely than jobs in traditional work settings to have any of the characteristics associated with high-performance work organization, such as participation in teams, pay contingent on performance, higher levels of training, and employment security. The emphasis on cost-cutting appears to have precluded more far-reaching changes in work redesign. And where we do find enhanced jobs, we also find that workers in these jobs are no more satisfied with their jobs than are other workers. However, we do find that enhanced jobs have been effective in reducing employees' intention to quit their jobs.

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 on the career patterns of the workers interviewed in this study, both where they have come from and where they plan to go. We then describe 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 that unions are having on the choices that hospital managers make with respect to new models of work organization, and we describe the implications of these changes for these workers' careers. Finally, we analyze the empirical data on 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 leave their employer and on 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 percent of gross domestic product (GDP)—the largest pro-

portion of GDP of any other major industrialized country. The hospital industry accounted for one-third of this spending (Plunkett 2000). Over the decade 1986 to 1996, U.S. hospitals' expenses doubled, and these costs are expected to continue to grow at about 6.5 percent 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).

In its attempts to stem this rampant cost escalation, the hospital industry has undergone a transformation over the past decade. One change in the industry is consolidation: hospital mergers and closures have reduced the number of hospitals by more than 10 percent, from 6,841 in 1986 to 6,201 in 1996 (Plunkett 2000). Even though 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.

### 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 percent 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 American hospitals wrote off, it was estimated, 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 health maintenance organizations (HMOs) is to place limitations on the delivery of specific care and to reduce reimbursement to hospitals in the delivery 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, some 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 2002 and beyond.

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 percent over the past decade—from 31.1 million Americans in 1990 to 34.9 million in 2000—and this group is expected to continue to grow over the next several decades, only exacerbating the cost pressures already faced by U.S. hospitals.

### HOSPITAL RESPONSES

Hospitals are responding to these increasing financial pressures 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 acutely ill 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 the use of home care and in long-term-care facilities. There has also been notable growth over the past decade in outpatient clinics. Patients who in the past would have required hospitalization are now seen at outpatient clinics for day surgery and the treatment of chronic disease. Outpatient visits grew from 295 million in 1986 to 506 million in 1996. Not surprisingly, the average daily census of U.S. hospitals has fallen 22 percent. Over the same time period, however, hospital personnel per 100 patients has increased by 51 percent—an indication of the rising acuity of patients in U.S. hospitals. Hospital length of stay has also shortened notably over the 1980 to 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 how 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 nurses (RNs) with nursing assistants. Registered nurses have been asked to focus on care planning and more technically demanding tasks, while nursing assistants have been 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, reengineering, and the implementation of cost-cutting teams. Recently hospitals have also begun to restructure the jobs of their low-wage, low-skilled workers in attempts to cut costs as well as to improve patient care and satisfaction (and thereby potentially improve performance in the marketplace).

### LOW-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, and so forth). Nursing assistants provide nontechnical patient care. 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 (authors' analysis of the 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 an hour, for housekeepers \$8.15, and for nursing assistants \$9.00. This reflects an increase in nominal wages of 6 percent, 16 percent, and 14 percent, 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 percent 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 percent of food service workers and 18 percent of housekeeping staff). Nursing assistants are generally more educated: 86 percent have completed high school, and roughly half have also attended some college. This is probably explained by the education requirement for becoming a licensed nursing assistant.

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

The vast majority (more than 90 percent) of food service workers and housekeepers work full-time (more than thirty-five hours per week). Only a slightly lower percentage (about 80 percent) of nursing assistants work full-time. Thirteen percent of nursing assistants work twenty-one to thirty-five hours per week, while only about 4 percent of food service workers and housekeepers work twenty-one to thirty-five hours per week.

Data from our own survey of housekeepers, food service workers, and nursing assistants provide 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 (26 percent), other low-end services tasks (25 percent), or working in manufacturing (15 percent). Most food service workers in our sample previously worked in low-end service jobs (32 percent), in retail (14 percent), or in restaurants (17 percent). The majority of nursing assistants, on the other hand, previously worked as nursing assistants in nursing homes (37 percent) or in other medical services jobs in hospitals, firms, or clinics (19 percent).

As part of our survey, we asked workers: In what type of job do you see yourself working in three years? Most housekeepers saw themselves working in the same job (40 percent), in another low-end service job somewhere else (18 percent), or in other slightly more high-paying jobs in health care (16 percent)—for example, as

a dietary technician. Similarly, most food service workers saw themselves working in the same job (44 percent), in another low-end service job somewhere else (17 percent), or in other slightly higher-paying jobs in health care (15 percent)—again, as a dietary technician or nutrition specialist. Most nursing assistants, on the other hand, saw themselves working as registered nurses in three years (45 percent) or as continuing on as nursing assistants (30 percent).

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, are very different. Nursing assistants move within a labor market in medical services. Most are recruited to hospitals from other health care organizations, and many hope to move into higher-paying nursing jobs with additional formal education. 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 workers 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-skilled employees were the unusually low unemployment rates of the late 1990s. Beginning in about 1996, unemployment rates began to fall below the 4 to 5 percent range associated with full employment. In October 2000 the unemployment rate for the United States as a whole had fallen to a low of 3.9 percent. Many cities found themselves with still lower unemployment rates during this time. For example, Phoenix, Arizona, one of the cities in which hospitals in this study are located, saw its unemployment rate drop to 2.7 percent.

Thus, the higher levels of turnover experienced by hospitals dur-

ing this period of extreme labor market tightness only served to exacerbate hospitals' worsening cost pressures. Annual turnover rates among these occupational groups at some hospitals approached 100 percent. Rates greater than 50 percent 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 raise wages to any substantive degree so as to alleviate some of this labor market pressure.

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 ongoing 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 has been driven by these two pressures.

### EXPERIMENTS IN THE ORGANIZATION OF WORK

In response to increasing pressure from the labor market and to control costs and improve quality, 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, because food service and housekeeping are not typically seen as distinct sources of hospital success or expertise, 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 all have direct contact with patients, and those contacts can affect patients' experiences in the hospital and satisfaction with care. 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.

This latter strategy stresses quality improvement more than cost control, but all hospital administrators are faced with both pressures as they adopt innovative work practices for low-skill workers. Moreover, the capacity to maintain a work strategy that integrated

both of these objectives may have been 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 hospital managers, we observed two strategies for low-skilled workers in addition to the historical model traditionally observed in hospitals: multi-skilling–cross-training and outsourcing. Prior to our formal analysis of these work practices, we 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. We discuss separately the strategies adopted by hospitals for housekeeping and food service workers and 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 that they cover on a regular basis, whether 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, a job in which they are responsible for emptying garbage cans and cleaning patient rooms, to Housekeeper II, which 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 work in both the tray-line area and in salad preparation. In a few instances, housekeepers and food service workers are promoted to first-line managers.

Although these jobs have rarely been “enriched,” hospitals have successfully recruited and maintained employees in these positions in the past because of the pay and benefits available in hospitals. With competitive wages and 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 or even exceed those available in hospitals. Moreover, hospitals faced increasing pressure to reduce the benefits they gave 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 that did not require, for example, cleaning up after patients or dealing with blood. As a result, hospitals found it increasingly difficult to fill vacant positions.

One response of several of the hospitals we visited was to reduce job requirements for those being hired. Some hospitals that had required a high school diploma or its equivalent dropped this requirement. Some hospital administrators began to consider people with minor police records for employment. In one instance, we were told that the specific crime would be taken into consideration and people assigned appropriately; 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

One initiative taken by a few hospitals in our sample to reduce turnover and improve the patient experience was to adopt 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. Underlying such an assignment were several expectations: that the employee would be more satisfied by having broader and more varied job responsibilities; that patients would be more satisfied if they interacted with fewer employees during their stay; and that the hospital could both improve quality and reduce costs through increased

employee flexibility. Although it is unclear how many hospitals adopted this enhanced model, several national consulting firms promoted this approach as a response to the cost and quality pressures faced by hospitals.

In our interviews, managers raised several potential problems with the implementation of the enhanced model for housekeeping and food services. First, because employees in the new multi-tasked jobs frequently received minimal training in the other job responsibilities, they tended, we were often told, to continue working in the tasks they felt most comfortable with rather than in the new areas of responsibility. Second, the new enhanced jobs increased patient contact dramatically. Housekeeping employees who may have seen patients only when they entered the room to empty garbage cans now also brought food to patients, transported them to Radiology, and performed other tasks as requested by the nursing staff. Managers reported that employees who did not want significant patient contact resisted these changes. Patients themselves also raised concerns about certain tasks being performed by the same person. Managers told us that some patients did not like having their food brought to them by the same person who cleaned their garbage cans.

Third, nurse managers frequently lacked the skills and knowledge to supervise the new employees in their units. In particular, though the service support associates were placed on the units under their supervision, nurse managers knew very little about housekeeping and 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 accompanying a patient going out for a cigarette or sitting in a patient's room to make sure the patient did not try to get out of bed. Although such tasks reduced the time available to employees to conduct their other tasks, they were still expected to complete them.

### 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 the efficiency of these functions. In a recent survey con-

ducted for the *Hospitals and Health Networks Journal*, nearly 25 percent of the respondents reported that they outsourced food services, and 15 percent reported that they outsourced housekeeping and janitorial services (*Hospitals and Health Networks* 2001). In our study, we found only one instance of the employees themselves being outsourced. In this case, hospital management was seeking to reduce food service costs. By outsourcing the employees, workers no longer received the benefits available to them from the hospital but rather the benefits that are more typical of food service workers (much higher health insurance copays, fewer vacation days, and so on).

More frequently outsourced in hospitals, however, was management. Several hospitals brought in managers from companies such as Sodexo or Servicemaster to direct food services or housekeeping. These companies have 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 have been available through direct employment. Employment by Servicemaster would provide a housekeeping manager, for example, with a career ladder as he or she moved from a small hospital to a larger hospital, and then to managing 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 that our interviews revealed no clear differences in work organization for employees when management was outsourced. In fact, when management was outsourced, jobs often remained traditionally organized. The primary difference may have been in better departmental management, including training material and task allocation.

### 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. Owing to the limited range of tasks over which they were responsible, nursing assistants worked with a wide set of patients on a unit.

While a registered nurse may have had primary responsibility for five to six patients, a nursing assistant worked with twenty patients in helping various nurses with their work.

The education and skills required to be a nursing assistant are typically higher than those for food service workers and housekeepers. Hospitals usually require at least a high school diploma or equivalent, and most request a certification that requires several months of additional training. Within hospitals, however, nursing assistants typically receive very limited training upon employment, ranging from one to four weeks.

#### ENHANCED NURSING ASSISTANT WORK ORGANIZATION

To improve outcomes and reduce costs, hospitals frequently re-defined nursing assistant (and registered nurse) job responsibilities and sought to integrate nursing assistants more fully into the patient care team. Due to the wage and education differences between nursing assistants and registered nurses (registered nurses typically earn more than \$20 an hour), many hospitals shifted routine tasks from registered nurses to nursing assistants, including taking vital signs, drawing blood, and conducting basic sterile procedures. The next change was integrating 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 goal in enhancing these jobs was to broaden task responsibilities and make them more interesting for employees, thus reducing turnover and costs, improving quality, and increasing employee satisfaction.

#### UNION REPRESENTATION AND OUTCOMES FOR LOW-SKILLED WORKERS

Workers at six of the sixteen hospitals in our study were represented by a union. In two cases (and in two different cities), the unionized hospitals were virtually alone. The other four unionized hospitals were located in a city where the norm was to be unionized and union density in the hospital sector was extremely high.

Union representation of housekeepers, food service workers, and nursing assistants can bring important changes to the outcomes experienced 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 organization can be developed. On the other hand, hospitals are under strong market pressure to reduce care delivery costs. In addition, there are few clear models 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.

At the hospitals in the two low-union-density cities, the union has had very little impact on outcomes for employees or for the hospital.<sup>2</sup> In neither case has the union been able to raise wages substantially; pay has remained virtually the same as at non-union hospitals in the local area. Moreover, the union has had no substantive involvement in the workplace other than to negotiate a collective bargaining agreement every few years and process members' grievances as they arose.

In contrast, the union in the high-union-density city has had a significant impact on low-skill work in the city's unionized hospitals, owing partly to the extremely high levels of union density and partly to the politically savvy leadership of this union. Through its lobbying at the state level, this union has procured substantial additional funding for health care in the state, money that has translated into significant wage increases for its members. As a result, food service workers, housekeepers, and nursing assistants in these unionized hospitals earn significantly more than comparable non-union workers in the rest of our sample. Starting wages range between \$11 and \$12 an hour compared to \$7 to \$8 an hour in the other (largely non-union) cities we visited. Even controlling for the high cost of living in this large city, unionized hospital workers here are better off. Second, the union has also had an impact at the level of the individual hospital through the negotiation of labor-management cooperation committees. Through this joint process, the union was able to influence the pay and security benefits for housekeeping and food service workers whose jobs were redesigned into service support associate roles. As mentioned earlier, the service support associate role has been tried in many hospitals around the country, with mixed success. Despite its checkered record, manage-

ment has remained keen to implement this model. The union in this city ensured, however, that workers had access to adequate training to acquire the necessary skills, and it also worked to protect their job security. In addition, the union negotiated higher wages for the support associate job.

The union also had an impact on shaping the nursing assistant job. Through the joint labor-management cooperation committee, the union played a significant role in redesigning nursing assistant jobs across the unionized hospitals in the city. By promoting skill upgrading and providing the funds for extensive training, the union ensured that existing nursing assistants were equipped to move into redesigned, expanded, and cross-functional jobs. Over the course of six to eight weeks, nursing assistants were trained in phlebotomy and equipped with the necessary skills to perform electrocardiograms. These changes in job content were accompanied by changes in overall work organization and 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. The work organization model adopted by the hospitals in this high-union-density city did not appear to differ dramatically from the model adopted elsewhere, but the union was able to promote broader skill development, greater wage increases, and a process that represented the interests of employees in the newly defined jobs.

Certain key characteristics of the union and the relationship between labor and management seemed to be important in work organization models that were successfully redesigned. First, the union maintained a very strong position in the region with high levels of union density and broad representation of employees across different occupational groups. Second, the union made significant funds available for use in the training initiatives. These funds were specifically used to train employees as jobs evolved from traditional to enhanced. Employees also used these funds for ongoing educational upgrading (for example, to complete a GED or to attend nursing school). In addition, the availability of union training funds placed unions in a position to promote broader training for employees. In contrast, in other hospitals where all training funds had to come from the hospital, the capacity to promote extensive training would have been limited. Third, labor-management relations in these hos-

pitals have historically been cooperative, resulting in an openness to address work reorganization through an ongoing dialogue between the union and hospital leaders. All of these factors played an important role in changing work organization models with significant and supportive union involvement.

### ENHANCED JOBS FOR LOW-SKILLED WORKERS? EFFECTS ON TURNOVER AND JOB SATISFACTION

By implementing different forms of work organization, such as enhanced jobs, hospital managers expected to increase the satisfaction of employees and reduce their 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 low-skill jobs to examine the impact 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 QUIT

The literature on voluntary turnover suggests that two types of practices are available to organizations to reduce turnover rates: inducements such as pay and benefits and employer-employee relationships (Shaw, Delery, and Jenkins 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 changed in situations where employers 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 (for a discussion of transactions costs, see, for example, Williamson 1979).

It is generally assumed that workers in the low-skill food service, housekeeping, and nursing assistant occupations are easily replaced and that the costs of turnover for these workers are low. In traditional work organization settings, hospitals make little investment 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 support a stable employment relationship. However, as tight labor markets from 1996 to 2001 increased the choice of jobs available to these workers, leading to high rates of turnover, some hospital managers began 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 their 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, and Cosgrove 1994; Shaw, Delery, and Jenkins 1998). 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, and Bobko 1989; Shaw, Delery, and Jenkins 1998).

High-involvement workplace practices are also expected to reduce employees' intention to quit, while those associated with a low-commitment environment are more likely to lead workers to quit (Arthur 1994; Huselid 1995). High-involvement practices, which build employees' firm-specific skills, 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 also 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 not only important to workers but 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 nar-

row, 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, too many demands on time, and low levels of trust have all been shown to increase turnover rates or intentions to quit (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 quit.

Finally, fair treatment of workers has been posited to reduce voluntary turnover by increasing the attractiveness of the workplace. "Voice" mechanisms, such as the grievance procedures associated with unions, should reduce employees' intention to quit, as should employees' satisfaction with the fairness of their pay (Shaw, Delery, and Jenkins 1998).

## JOB SATISFACTION

Job satisfaction, which represents a worker's overall evaluation of his or her job, 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 nonwork aspects of life (for a review, see Kalleberg 1977). 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, and Jackson 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, 1976, 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 associated with high-performance or high-commitment workplaces, such as training and employment security, are likely to be valued by workers. As a result, work settings in which these practices are present should also see higher levels of job satisfaction.

Recent research on job satisfaction has found that job satisfaction is increased in high-trust workplaces where jobs are intrinsically rewarding and stressors such as conflict with coworkers, too many demands on one's 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 LOW-SKILL HOSPITAL JOBS

The collection of data for this study is still under way. The analysis reported here is based on a survey of 746 workers in 12 hospitals. The sample includes 164 food service workers, 305 nursing assistants, 219 housekeeper or environmental services workers, and 58 workers in miscellaneous low-skill jobs.

Fewer than 10 percent of the housekeepers in our sample are in enhanced jobs thus far, 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 food service workers and nursing assistants.

The sample we analyze includes a total of 164 food service workers, of whom 42 (26 percent) are in enhanced jobs, and 305 nursing assistants, of whom 182 (60 percent) are in enhanced jobs. Among food service workers, our sample is 59 percent white, 28 percent black, 10 percent Hispanic, and 3 percent other. For nursing assistants, the distribution is 66 percent white, 27 percent black, 3 percent Hispanic, and 4 percent other. Nursing assistants tend to be younger and better educated than food service workers. The average age of food service workers is 42.6 years, while for nursing assistants it is 36.3 years. About 30 percent of nursing assistants have a high school degree or less—fewer than 3 percent lack a high school degree—while 55 percent have some education beyond high school, and 14 percent have a college degree. Among food service workers, 12 percent have less than a high school degree, 52 percent

are high school graduates, 31 percent have some education beyond high school, and 5.5 percent have a college degree. Food service workers in our sample earn on average \$9.59 an hour, while nursing assistants earn \$10.28. Working full-time, year-round, these employees earn less than \$21,000 a year.

#### ENHANCED VERSUS TRADITIONAL JOBS

If enhanced jobs are to increase workers' job satisfaction or reduce the likelihood that they will leave their job in the near future, they 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: Did they use their skills and creativity on the job? Did they find their jobs challenging? They were asked how difficult it was to learn to do their jobs, what amount and types of training they received, whether they were certified or had technical degrees, and whether there were opportunities for promotion to higher-paying jobs. The survey 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: Were they treated fairly? Did they trust management? Did conflict or work demands 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 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 the jobs that managers characterize as enhanced.

Enhanced jobs as described by managers are characterized by broader job tasks and assignments of employees to specific units. Surprisingly perhaps, the worker survey reveals that enhanced jobs done by food service workers and nursing assistants exhibit very few of the characteristics associated in the literature with high-performance jobs or high-commitment workplaces. Indeed, among food

service workers, traditional jobs sometimes scored higher on the few indicators of high-performance practices where the jobs differed. Appendix 3.1 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 food service workers and nursing assistants. Mean differences are significant at the 5 percent level unless otherwise indicated.

Among food service workers, those in traditional settings were much more likely to participate in problem-solving teams—65 percent of workers in traditional jobs versus 47 percent of those in enhanced jobs. Consistent with managers' view that enhanced jobs are jobs in which workers perform a larger number of work tasks, classroom training was significantly higher for workers in enhanced jobs. 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—who performed a broader range of tasks—were more likely to report that they were often asked to do more work than they could handle. Traditional jobs in 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 percent level) and that they find their jobs challenging. These workers also report having more opportunities to move to higher-paying jobs (significant at the 10 percent level). Hourly pay was higher in enhanced work settings: these workers earned \$10.03 an hour compared to \$9.41 an hour on average for workers in traditionally organized food service jobs. Finally, workers in traditional work settings reported that managers treated them in a consistent and predictable manner and that management was open with them.

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, were more likely to receive one-on-one training, and were less likely to receive training in quality improvement techniques. Consistent with being given responsibility for a broader array of work tasks, they also reported that their jobs were more complex and would take a new hire longer to learn (significant at the 10

percent level). Nursing assistants in traditional jobs were more likely to report that they found their jobs challenging (significant at the 10 percent level), but they also were more likely to report that they found their jobs stressful, too many different demands were made on their time, they were asked to do more work than they could handle, and there were not enough workers to carry out the work.

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. 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 (significant at the 10 percent level) and less likely to be a member of a labor union.<sup>3</sup>

#### 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 percent of both food service workers and nursing assistants reported that they were highly likely to quit. In response to the question "Overall, how satisfied would you say you are with your job—highly satisfied, somewhat satisfied, somewhat dissatisfied, or highly dissatisfied?" 31 percent of food service workers and 39 percent 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. Cronbach's  $\alpha$  for this index is 0.79. In this section, we examine the effect of being in an enhanced job on the likelihood that a worker will try hard to find another job and on the index of job satisfaction. The mean values for key variables in our analysis are reported in appendix 3.2.

The 469 nursing assistants and food service workers in this analysis work in 58 departments in 12 hospitals. The workplace practices of interest—those related to enhanced jobs, training, and par-

participation in teams—vary by department. Employees' observations of these practices are not independent, and workers employed in a department may vary systematically in some important but unobserved characteristics. We take this into account in the empirical analysis, clustering on department to adjust the standard errors. Sample size considerations led us to pool data for the 2 occupations and use a dummy variable for nursing assistants to examine differences between them.

In all of the models reported in tables 3.1 to 3.4, we control for basic demographic variables (not reported in the tables)—gender, race-ethnicity, education, and age<sup>4</sup>—and include a dummy for nursing assistants. We find that women are less likely to quit than men, workers with some college are more likely to quit than other workers, older workers are less likely to quit than younger workers, and black workers are more likely to quit than other workers. With respect to the effect of these basic variables on job satisfaction, we find that black workers are less satisfied with their jobs, while those whose race-ethnicity is "other" (not black, white, or Hispanic) are more satisfied with their jobs. Nursing assistants are consistently more satisfied with their jobs than food service workers.

Model 1 in table 3.1 examines the effect of having an enhanced job on the intention to quit, controlling for gender, race, age, education, and occupation. Model 2 adds the effects of hourly pay, and model 3 also adds union membership. Models 4 through 7 examine the effects of human resource practices that may reduce turnover—employment security, adequate staffing, formal training, and informal training.<sup>5</sup> Being in an enhanced job significantly decreased workers' intention to quit in each of these models (models 2 through 7), as did earning higher wages (models 2 through 7). Union membership has no effect on turnover in this analysis. The perception of employment security and the perception of adequate staffing both reduce employees' intention to quit. Both formal and informal training have no effect on the intention to quit.

In table 3.2, we find that enhanced jobs have no effect on workers' job satisfaction in each of the models (1 through 7). In model 2, we find that earning higher wages has a statistically significant positive effect on satisfaction for food service workers and nursing assistants. Union membership (model 3) has no effect on satisfaction for nursing assistants and food service workers. In model 5, however, the union variable becomes statistically significant and is

negative. Lower reported job satisfaction of union members is a common finding and is usually attributed to the greater freedom that unionized workers have to voice their discontent without fear of being fired (Freeman 1978; Freeman and Medoff 1984; Meng 1990; Miller 1990). Employment security and staffing adequacy (models 4 and 5) both have a strong positive effect on job satisfaction. Both formal and informal training increase job satisfaction significantly.

The findings of tables 3.1 and 3.2 pose somewhat of an empirical puzzle in that workers in enhanced jobs report a lower intention to quit while at the same time not reporting any greater levels of job satisfaction. Although they provide no definitive answers, several other findings suggest some explanations. First, food service workers do earn more when they work in enhanced jobs. Despite being no more satisfied on the job, they may report being less likely to quit because they earn higher wages. Second, nursing assistants working in enhanced jobs report lower levels of stress on the job than their counterparts working in traditionally organized jobs. Nursing assistants in enhanced jobs also report having better relations with management. Thus, even though they do not find the jobs more satisfying, the lower levels of stress and better working relations with management may explain why nursing assistants in enhanced jobs report that they are less likely to quit.

Table 3.3 examines the relationship between high-performance workplace practices and enhanced jobs. In an analysis not reported here, we find that high-performance work practices as reported by workers are for the most part not associated with enhanced jobs as reported by managers. With the exception of perceptions of employment security, we find no association between enhanced jobs and participation in a problem-solving team, pay contingent on performance, training (either formal or informal), or perceptions of staff adequacy. Broadening jobs and assigning employees to specific departments, as managers do in enhanced work settings, have not led to the introduction of high-performance work practices.

In models 1 and 2 in table 3.3, we examine the effects on turnover and job satisfaction, respectively, of enhanced jobs, higher wages, and high-performance work practices. As before, we find that enhanced jobs reduce employee intentions to quit but do not affect job satisfaction. Higher wages and perceptions of employment security also reduce turnover for both groups of workers. Higher

(Text continues on p. 107.)

Table 3.1 The Effect of Enhanced Jobs on Turnover

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Nursing assistant	-0.427** (.209)	-1.407 (1.22)	-0.262 (0.218)	-0.209 (-0.413)	-0.505 (0.653)	-0.188 (0.211)	-0.172 (0.221)
Enhanced	-0.277 (0.180)	-0.314** (0.158)	-0.366** (0.177)	-0.350* (0.188)	-0.572*** (-0.207)	-0.320* (0.173)	-0.298* (0.175)
Wage	—	-0.245** (0.112)	-0.170** (0.067)	—* (0.067)	-0.165** (-0.077)	-0.172** (0.069)	-0.185** (0.077)
Nursing assistant × wage	—	0.120 (0.127)	—	—	—	—	—
Union member	—	—	-0.086 (0.276)	-0.225 (0.278)	0.005 (0.307)	—	—
Staff adequacy	—	—	—	-0.350*** (0.130)	—	—	—
Nursing assistant × staff adequacy	—	—	—	-0.003 (0.156)	—	—	—
Employment security	—	—	—	—	-0.492*** (0.162)	—	—
Nursing assistant × employment security	—	—	—	—	0.102 (0.208)	—	—
Formal training	—	—	—	—	—	-0.089 (0.277)	—
Informal training	—	—	—	—	—	—	-0.441 (0.283)
N	447	401	397	394	372	400	400
Prob > Chi 2	0.0000	0.0000	0.000	0.000	0.000	0.000	0.000
Pseudo R-squared	.0419	.0538	.0540	.0712	.0811	0.053	0.058

Source: Authors' compilation.

Note: Control variables include gender, race-ethnicity, education, and age. Robust standard errors are in parentheses. Intention to quit job uses an ordered logit regression.

\* .05 < p < .10.

\*\* .01 < p < .05.

\*\*\* p < .01.

Table 3.2 The Effect of Enhanced Jobs on Job Satisfaction

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Nursing assistant	0.563** (0.238)	1.883** (0.817)	0.559** (0.228)	0.850* (0.466)	1.263** (0.581)	0.378* (0.212)	0.490** (0.199)
Enhanced	0.124 (0.187)	0.075 (0.196)	0.076 (0.185)	0.076 (0.170)	0.231 (0.175)	0.069 (0.200)	0.056 (0.181)
Wage	—	0.249*** (0.058)	0.173*** (0.060)	0.121** (0.057)	0.127** (0.055)	0.158** (0.061)	0.178*** (0.058)
Nursing assistant × wage	—	-0.132 (0.082)	—	—	—	—	—
Union member	—	—	-0.413 (0.338)	-0.227 (0.324)	-0.540* (0.285)	—	—
Staff adequacy	—	—	—	0.885*** (0.098)	—	—	—
Nursing assistant × staff adequacy	—	—	—	-0.184 (0.129)	—	—	—
Employment security	—	—	—	—	0.745*** (0.140)	—	—
Nursing assistant × employment security	—	—	—	—	-0.289 (0.180)	—	—
Formal training	—	—	—	—	—	0.546** (0.240)	—
Informal training	—	—	—	—	—	—	0.861*** (0.159)
N	446	400	396	393	371	399	399
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000
R-squared	0.050	0.071	0.074	0.259	0.168	0.082	0.114

Source: Authors' compilation.

Note: Control variables include gender, race-ethnicity, education, and age. Robust standard errors are in parentheses. Job satisfaction uses an OLS regression.

\* .05 < p < .10.

\*\* .01 < p < .05.

\*\*\* p < .01.

**Table 3.3 The Effect of Enhanced Jobs and Other Human Resource Variables on Turnover and Job Satisfaction**

	Model 1: Turnover	Model 2: Job Satisfaction	Model 3: Turnover
Nursing assistant	-2.05 (1.475)	2.73** (1.04)	-0.301 (1.70)
Enhanced	-0.511** (0.214)	0.166 (0.159)	-0.483** (0.226)
Wage	-0.282** (0.131)	0.250*** (0.071)	-0.121 (0.150)
Nursing assistant × wage	0.181 (0.149)	-0.246** (0.091)	0.022 (0.171)
Union member	0.111 (0.294)	-0.339 (0.320)	-0.099 (0.370)
Staff adequacy	-0.168 (0.126)	0.586*** (0.091)	0.130 (0.147)
Employment security	-0.345*** (0.118)	0.240** (0.100)	-0.250** (0.119)
Problem-solving team	0.104 (0.247)	0.376* (0.208)	0.314 (0.232)
Pay for performance	-0.049 (0.198)	0.215 (0.172)	-0.010 (0.208)
Formal training	0.009 (0.273)	0.168 (0.234)	0.105 (0.236)
Informal training	-0.398 (0.285)	0.404** (0.177)	-0.228 (0.288)
Job satisfaction	—	—	-0.535*** (0.082)
N	345	343	342
Prob > F	—	0.000	—
R-squared	—	0.306	—
Prob > Chi 2	0.000	—	0.000
Pseudo R-squared	0.099	—	0.170

Source: Authors' compilation.

Note: Control variables include gender, race-ethnicity, education, and age. Robust standard errors are in parentheses. Intention to quit job uses an ordered logit regression. Job satisfaction uses an OLS regression.

\* .05 < p < .10.

\*\* .01 < p < .05.

\*\*\* p < .01.

wages increase job satisfaction for food service workers, but in this model they have no effect on nursing assistants' satisfaction. Perceptions of employment security and staff adequacy increase job satisfaction. In addition, those participating on a problem-solving team and receiving informal training are more satisfied. Finally, in model 3 we find that more satisfied workers are less likely to quit. Enhanced jobs still significantly reduce employee intentions to quit when job satisfaction is added to the model. Higher wages no longer have a direct effect on employees' intention to leave their jobs but rather reduce turnover indirectly through their effect on job satisfaction.

Table 3.4 examines the effects of variables that measure whether the workplace can be characterized as a high-commitment workplace—employees' trust in managers, stress, and intrinsic rewards of the job—on intention to quit and job satisfaction. Prior research 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 treating workers fairly; management being open and up front with workers; good relationships between managers and employees; and the extent to which respondents trust management (Chronbach's  $\alpha = 0.84$ ). We measure stress as an index of four items: the extent to which respondents experience conflict with coworkers; how often respondents experience too many demands on their time; how often respondents are asked to do more work than they can handle; and how often respondents feel depressed about work (Chronbach's  $\alpha = 0.72$ ). Finally, intrinsic rewards are measured by the following four items: "The job makes good use of my skills and knowledge"; "The job requires that I learn new things"; "The job requires me to be creative"; and "The job is challenging" (Chronbach's  $\alpha = 0.80$ ).

Individual perceptions of trust have sometimes been criticized as inadequate since it may be difficult to distinguish between more trusting individuals and individuals who work in a high-trust environment. We address this issue by first calculating an average trust variable for each department, then constructing the deviation of each employee's perception of trust from the average value of trust for the employee's department. The deviations are positive for individuals whose perceptions of trust are above the average for their department, and negative for those for whom they are lower. In

Table 3.4 The Effect of Trust, Stress, and Intrinsic Rewards on Turnover and Job Satisfaction

	Model 1: Turnover	Model 2: Job Satisfaction
Nursing assistant	-0.280 (0.264)	0.133 (0.160)
Enhanced	-0.238 (0.217)	0.117 (0.129)
Wage	-0.148* (0.088)	0.005 (0.046)
Union member	0.125 (0.321)	-0.109 (0.232)
Staff adequacy	0.325** (0.147)	0.108 (0.092)
Employment security	-0.077 (0.123)	-0.066 (0.058)
Problem-solving team	-0.038 (0.260)	0.489*** (0.133)
Pay for performance	-0.139 (0.178)	0.194* (0.109)
Formal training	0.272 (0.297)	-0.199 (0.160)
Informal training	-0.102 (0.279)	0.069 (0.130)
Trust	-0.187*** (0.052)	0.135*** (0.035)
Stress	0.209*** (0.040)	-0.162*** (0.026)
Intrinsic reward	-0.054 (0.056)	0.232*** (0.039)
N	336	335
Prob > F	—	0.000
R-squared	—	0.554
Prob > Chi 2	0.000	—
Pseudo R-squared	0.181	—

Source: Authors' compilation.

Note: Robust standard errors are in parentheses. Intention to quit job uses an ordered logit regression. Job satisfaction uses an OLS regression.

\* .05 < p < .10.

\*\* .01 < p < .05.

\*\*\* p < .01.

empirical work not reported here, we examine whether personal characteristics or workplace characteristics predict these deviations. We find that personal characteristics, such as gender and race-ethnicity, do not explain differences in perceptions of trust. Workers with less than a high school diploma and older workers are more trusting than other employees. Importantly, as in other research (Appelbaum et al. 2000), high-performance workplace practices are important predictors of workers' trust in management. Participation in a team and receiving formal training lead to greater trust, as does the employee's perception that he or she has employment security and there is adequate staffing. Working in an enhanced job also increases trust. Notably, higher wages do not predict trust. It is not simply the case that better-paid workers like their managers better. As expected, trust and job satisfaction are highly correlated. Overall, the evidence suggests that it is not simply the case that more trusting people express greater trust in their managers, but that the trust variable captures objective conditions of individuals' jobs.

Models 1 and 2 in table 3.4 examine the effects of employees' trust in management (measured as the deviation from average value of trust in the employees' department), stress, and intrinsic rewards of the job on turnover and satisfaction. We find that higher trust reduces employees' intention to quit while greater stress increases it. Intrinsic job rewards do not affect turnover. Higher wages and adequate staffing reduce turnover, but neither enhanced jobs nor high-performance practices (participation in a team, pay contingent on performance, formal or informal training) affect turnover. Both higher trust and intrinsic rewards increase job satisfaction, while greater stress reduces it. As before, enhanced jobs do not affect employee job satisfaction. However, participation in a problem-solving team and pay contingent on performance increase satisfaction.

It is important to note that while many employees responded that their pay is contingent on unit or hospital performance, there is no evidence of a direct contingent pay system. Rather, the observed response arises from employees perceiving that they will earn more money, probably through better pay increases, if the hospital performance is better.

## CONCLUSION

The analysis in this chapter suggests that hospital managers are correct in their view that changes in the work environment can

reduce turnover and increase workers' job satisfaction. In particular, the enhanced jobs introduced by managers to reduce turnover are effective in accomplishing this goal. Broadening jobs and assigning employees to specific units reduces their intention to quit. Enhanced jobs do not, however, have an effect on job satisfaction. High-performance workplace practices, with the possible exception of perceptions of employment security, do not have a direct effect on turnover. However, participation in a problem-solving team, pay contingent on performance, and formal and informal training all have a positive effect on job satisfaction. Since employee satisfaction reduces turnover, high-performance workplace practices do have an indirect effect and lead to lower turnover. Finally, high-commitment workplaces—where workers report higher levels of trust and lower levels of stress—both reduce employees' intention to quit and raise satisfaction. Levels of stress are lower where staffing is adequate.

The message for managers is clear. Workplace practices—even the modest changes that enhanced jobs entail—can be effective in reducing turnover. Enhanced jobs have no effect, however, on employee satisfaction. High-performance workplace practices such as teamwork and training raise job satisfaction and indirectly reduce turnover. Bolder changes in the work organization of low-skill jobs and greater investment in the skills of the workers who fill them are effective in reducing turnover. Practices that increase employees' trust in managers also raise satisfaction and reduce turnover.

Other types of managerial practices are also important for reducing turnover. The analysis clearly demonstrates that higher wages and adequate staffing reduce turnover. Employees in low-skill jobs have less desire to quit when pay is higher and hospitals provide adequate staff. Adequate staffing reduces stress by enabling hospital workers to avoid having too many demands made on their time, being asked to do more than they can accomplish, and experiencing conflicts with coworkers.

It is probably not news to managers that higher wages and lower patient-to-staff ratios reduce turnover. But financial pressures on hospitals from the insurance industry, continued shrinking of government funding, and the aging of the population make it difficult for hospitals to act on this knowledge.

Hospitals and workers are caught in a kind of catch-22, and the quality of patient care is likely to suffer unless funding of the medi-

cal system is increased and a direct effort is made to raise pay and increase staffing levels. As the U.S. population ages, this will become an ever more acute public policy issue. Moreover, most hospitals probably would not direct any greater reimbursements they might receive toward increasing wages for low-skilled workers but rather toward addressing other pressures they face, including: labor shortages of nurses and pharmacists, investments in new technologies, and the development of better physician services. Although hospital managers might recognize that the enhancement of jobs for low-wage, low-skill occupations would improve outcomes, they might not be willing to invest the resources necessary to change the jobs. This investment would include raising wage rates for employees and providing sufficient staff. We saw a clear instance of widespread changes in enhanced jobs, including broad task responsibilities, extensive training, and higher wages, in the presence of a strong union in a city with high union density. With its willingness to devote independent resources to improving jobs, this union was able to work with hospital managers to design jobs that addressed both hospital and employee needs.

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### APPENDIX 3.1: VARIABLES USED TO COMPARE TRADITIONAL AND 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
- Length of time it would take to train a person to do the respondent's 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 3.A1 Mean Values for Key Variables (Nursing Assistants and Food Service Workers Only)

	Observations	Mean	Standard Deviation	Minimum	Maximum
Nursing assistant	469	0.65	0.477	0	1
Food service worker	469	0.35	0.477	0	1
Gender	469	0.84	0.367	0	1
White	456	0.64	0.482	0	1
Black	456	0.27	0.447	0	1
Hispanic	456	0.05	0.228	0	1
Other race	456	0.04	0.184	0	1
Less than high school	467	0.06	0.238	0	1
High school graduate	467	0.36	0.482	0	1
Some college	467	0.46	0.499	0	1
College graduate	467	0.11	0.318	0	1
Age	465	38.52	12.838	17	81
Enhanced	469	0.48	0.500	0	1
Wage	418	10.04	1.660	6.55	18.97
Union member	463	0.17	0.375	0	1
Employment security	429	3.01	0.995	1	4
Staff adequacy	464	2.73	1.092	1	4
Problem-solving team	461	0.58	0.495	0	1
Pay for performance	435	0.39	0.487	0	1
Formal training	467	0.66	0.473	0	1
Informal training	468	0.57	0.496	0	1
Trust index	456	12.44	3.359	4	17
"Supervisors treat workers fairly."	463	3.21	0.938	1	4
"Management is open and up front with me."	465	2.86	0.872	1	4
Management-employee relationship	464	3.21	1.170	1	5
How much do you trust management?	465	3.11	1.036	1	4

Table 3.A1 *Continued*

	Observations	Mean	Standard Deviation	Minimum	Maximum
Stress index	463	11.44	3.313	4	20
How often do you experience conflict?	468	2.41	1.024	1	5
How often do you have too many demands?	467	3.57	1.107	1	5
How often are you asked to do more than you can handle?	468	3.30	1.206	1	5
How often do you feel de- pressed at work?	467	2.15	1.112	1	5
Intrinsic reward index	461	12.94	2.741	4	16
"My job makes good use of my knowledge/ skills."	468	3.27	0.800	1	4
"My job requires that I learn new things."	467	3.29	0.869	1	4
"My job requires me to be creative."	467	3.06	0.938	1	4
"My job is chal- lenging."	466	3.30	0.894	1	4
Intention to quit job	466	1.57	0.763	1	3
Job satisfaction index	465	9.45	1.859	3	12
How satisfied are you with your personal growth and develop- ment?	468	3.15	0.721	1	4
How satisfied are you with the re- sources to do your job?	467	3.08	0.765	1	4
Overall, how sat- isfied are you with your job?	468	3.21	0.743	1	4

Source: Authors' compilation.

## NOTES

1. Housekeeping and food service jobs require no formal education; these jobs often do not even require the ability to read and write English. Nursing assistant jobs do require additional formal training. However, because such training often consists of little more than six weeks of community college or in-hospital training, we have put nursing assistants in our category of low-skilled workers.
2. The overall union density of these two cities was not particularly low; unionization in the hospital sector in both cities, however, was low.
3. This finding will likely change when we add to the study our analysis of the worker responses from the four unionized hospitals. All nursing assistants in those hospitals worked in enhanced jobs and were paid significantly more than their non-union counterparts in other cities.
4. Gender = male or female; race-ethnicity = white, black, Hispanic, or other; education = less than a high school degree, high school degree, some college, or college graduate.
5. We also examined whether part-time workers differed from full-time workers in their intention to quit or in job satisfaction. We found that work schedules did not have a significant effect. These results are not shown in the tables.

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