

# 2009

## Nursing Turnover: Costs, Causes, & Solutions



**SuccessFactors**  
*for Healthcare*

Steven T. Hunt, Ph.D., SPHR  
Director of Business Transformation  
SuccessFactors Inc.  
([www.successfactors.com](http://www.successfactors.com))  
E-mail: [shunt@successfactors.com](mailto:shunt@successfactors.com)

## Executive Summary

Nursing turnover is a major issue impacting the performance and profitability of healthcare organizations. Healthcare organizations require a stable, highly trained and fully engaged nursing staff to provide effective levels of patient care.

The financial cost of losing a single nurse has been calculated to equal about twice the nurse's annual salary<sup>i</sup>. The average hospital is estimated to lose about \$300,000 per year for each percentage increase in annual nurse turnover<sup>ii</sup>. Losing these critical employees negatively impacts the bottom line of healthcare organizations in a variety of ways including:

- Decreased quality of patient care
- Increased contingent staff costs
- Increased staffing costs
- Loss of patients
- Increased nurse and medical staff turnover
- Increased accident and absenteeism rates

The primary causes of nurse turnover can be analyzed by I) understanding why nurses choose to work for an organization and ensuring this 'employee value proposition' is met; and II) identifying things that occur after nurses are hired that lead them to quit even though their initial job expectations were met.

- I. Primary factors that influence nurses' choice of employers are work schedules, career development opportunities, and commuting distance<sup>iii</sup>. However the relative importance of these factors varies widely across nurses. There is no "one size fits all" ideal job design and healthcare organizations that wish to maximize nurse retention must develop methods to provide nurses with flexibility to structure their job based on their own and often unique set of interests.
- II. Following are the factors that drive nurse turnover after their initial job expectation are met
  - Feeling overworked;
  - Lack of career opportunities
  - Not receiving recognition / not feeling respect for contribution
  - Lack of role clarity; low control over job performance
  - Lack of trust and collaboration with coworkers
  - Poor communication with management around critical issues

While there is no "silver bullet" solution that will create reductions in nursing turnover across the board, many solutions have been found to positively impact turnover. These solutions can be categorized in four key focus areas. Of these four areas, the one that provides the most immediate benefits at the lowest cost is improving methods used to manage nurses after they are hired.

- Increase number of nursing candidates
- Screen out candidates based on "job fit"
- Make jobs more attractive to nursing candidates
- Improve methods to manage nurses after they are hired

This paper reviews the consequences and financial costs of nursing turnover, the primary causes of nursing turnover, and methods to increase retention in these pivotal healthcare jobs. The paper focuses on research conducted with registered nursing populations, although many of the findings in this research generalize to other healthcare jobs. Healthcare organizations are strongly advised to leverage the results of this research to invest in talent management practices that will have the greatest value for ensuring a steady workforce of qualified and engaged nurses. The effective use of these talent management practices will become increasingly critical to organization survival as the nursing shortage continues to worsen over time.

## Nursing Turnover: Costs, Causes, & Solutions

Nursing turnover is a major issue impacting the performance and profitability of healthcare organizations<sup>iv</sup>. Healthcare organizations require a stable, highly trained and fully engaged nursing staff to provide effective levels of patient care. Yet a growing shortage of qualified nurses has led to a steady increase in the turnover rate among nurses<sup>v</sup>. This turnover rate is likely to become even worse over the coming years as the growth of the healthcare industry continues to outstrip the available supply of nurses. It is predicted that there will be a shortage of nearly 1 million nurses in the United States by 2020<sup>vi</sup>.

This paper reviews research examining the consequences and financial costs of nursing turnover, the primary causes of nursing turnover, and methods to increase retention in these pivotal healthcare jobs. The paper is focused on “voluntary” or “regrettable” turnover that occurs when a nurse that the organization would like to retain chooses to leave their job. Most of the research reviewed in this paper focuses on registered nursing populations, although many of the findings in this research generalize to other healthcare jobs.

As will be discussed, the problems associated with nursing turnover cannot be fully addressed through a single intervention because there are many reasons why nurses choose to quit their jobs. But while the factors that cause nursing turnover can be fairly complex, many of the solutions for reducing turnover are fairly well understood. These solutions address aspects of the entire nursing employee lifecycle from building applicant pools to effectively managing retirement of longer tenured employees. The challenge lies in prioritizing and implementing these solutions in a manner that provides the greatest return on investment.

### **The consequences and costs of nursing turnover**

Nurses in most healthcare organizations have some of the highest levels of direct patient contact of any employees. As a result, they play a pivotal role in the financial performance of these companies<sup>vii</sup>. The financial cost of losing a single nurse has been calculated to equal about twice the nurse’s annual salary<sup>viii</sup>. The average hospital is estimated to lose about \$300,000 per year for each percentage increase in annual nurse turnover<sup>ix</sup>. One 9000 person healthcare organization estimated that nursing turnover was contributing to a loss of over \$15 million per year<sup>x</sup>. Losing these critical employees negatively impacts the bottom line of healthcare organizations in a variety of ways including:

***Decreased quality of patient care.*** Staff shortages caused by nursing turnover are associated with significant decreases in the general quality of patient care, increases in the length of patient stays within hospitals, and greater numbers of hospital-acquired patient illnesses and conditions that do not qualify for Medicare/Medicaid reimbursement<sup>xi</sup>.

***Loss of patients.*** Healthcare organizations have reported having to turn away patients to other healthcare facilities due to a lack of available staff resulting from high levels of nurse turnover. This is a particularly significant concern for healthcare organizations operating in states that mandate minimum nurse to patient staffing ratios<sup>xii</sup>.

**Increased contingent staff costs.** Many healthcare organizations are forced to rely on contract nurses to overcome staff shortages caused by high levels of nurse turnover. Such contract nurses can cost twice as much to employ as nurses employed directly by the company.

**Increased nurse turnover.** Nurse turnover creates staffing shortages that increase the work demands placed on the organization's remaining nurses. This heightens the risk of the remaining nurses quitting due to excess workload<sup>xiii</sup>. The result is a "vicious cycle" of constantly increasing nurse turnover within an organization.

**Increased turnover of medical support staff.** High levels of nurse turnover create a disruptive, unstable work environment that negatively impacts the retention of other medical service providers that work with the nurses<sup>xiv</sup>.

**Increased staffing costs.** Considerable resources are required to recruit, hire, and train nurses to replace nurses who quit. Healthcare organizations that suffer from high levels of nurse turnover may find it much harder to recruit new nursing candidates due to former nursing employees sharing negative stories with their professional colleagues about the company being an undesirable place to work.

**Increased accident and absenteeism rates.** The staffing shortages caused by nurse turnover can lead to an increase in accident rates and absenteeism levels among the nurses who remain<sup>xv</sup>.

The costs associated with nursing turnover are both varied and extensive. Most of these costs are associated with performance problems caused by the staffing shortages that result from high levels of nurse turnover. People have argued that the single greatest way for healthcare organizations to improve their performance is to simply increase the levels of their nursing staff. But such a strategy can never work unless organizations can effectively reduce and manage nursing turnover.

### **The causes of nursing turnover**

Two approaches have been used to diagnose the causes of nursing turnover. The first is to identify why nurses choose to work in different jobs and then determine if those needs are being met. In other words, are employers supporting the "employment value proposition" that led nurses to originally accept a job offer.<sup>xvi</sup> The second approach is to identify things that occur after nurses are hired that lead them to quit jobs even though the jobs may have met their initial job expectations. This approach focuses on identifying specific events or conditions that lead nurses to conclude that their current job no longer matches their personal career goals and/or job needs.

**Why do nurses choose to work for an organization?** Research suggests that the primary factors that influence nurses' choice of employers are work schedules, career development opportunities, and commuting distance<sup>xvii</sup>. However the relative importance of these factors varies widely across nurses. Nursing, like many other professional hourly jobs, attracts individuals with an extremely wide range of career interest and goals<sup>xviii</sup>. Some nurses place a premium on job schedules that do not interfere with their commitments outside of work. Others look for jobs that give them opportunities to develop their professional skills and capabilities. A two year study examining causes of turnover among 532 experienced registered nurses identified the following unique groups of nurses based on their job interests:

“Group 1 appeared to be BSN graduates (late 20’s) who had one prior nursing position, took some time out of their careers to have a child, then re-entered the profession with an emphasis on pay fairness and schedule flexibility. Group 2 appears to be an older cohort (late 30’s)...with more established families who were primarily concerned with scheduling flexibility...Group 3 appears to be late 20’s BSN graduates dedicated to the nursing profession, focusing on stimulating work environments that did not involve supervisory responsibilities. [the other groups were] smaller and appeared to focus primarily on income potential.”<sup>xix</sup>

The main lesson from this research is that a nursing job that matches the career goals of one nurse may fall short for a different nurse. For example, providing nurses with opportunities to work on challenging projects that require working longer shifts might increase retention for one group of nurses while decreasing retention for another. There is no “one size fits all” ideal job design that will increase retention across all types of nurses. Healthcare organizations that wish to maximize nurse retention must develop methods to provide nurses with flexibility to structure their job based on their own and often unique set of interests. This requires giving nurses a way to exert control over their schedules, access to career development opportunities for nurses who want them, and financial incentives that allow nurses to increase their compensation levels if they so desire.

**Why do nurses quit their jobs?** The factors that lead nurses to quit jobs are often considerably different from the factors that led them to accept the jobs in the first place. Table 1 lists issues that have been identified as primary factors in nurses’ decision to quit their jobs. The issue at the top of the list, “feeling overworked” is largely a result of low staffing levels which is itself primarily caused by nursing turnover (the vicious cycle of ever increasing nursing turnover discussed earlier). In fact, one study of 601 registered nurses found that 43% of nurses would actually prefer increased staffing levels over increased wages or scheduling<sup>xx</sup>.

Most of the issues in Table 1 are directly related to the behavior of nursing managers. It is often said that “employees don’t quit companies, they quit managers”, and it appears that this is the case for nursing as well. Studies have found that longer tenured nurse managers tend to have lower levels of turnover than less experienced managers<sup>xxi</sup>. This suggests that more experienced nursing managers may be more effective at creating work environments that support the unique needs of nurses. These managers are more likely to have developed effective techniques for clearly defining nurses’ job expectations, managing their workloads, and recognizing and rewarding nurses for their accomplishments. Experienced nursing managers may also have developed unique skills to help nurses cope with the highly stressful and emotionally exhausting aspects of their work<sup>xxii</sup>.

**Table 1. Factors Driving Nursing Turnover**

- |   |
|---|
| <ul style="list-style-type: none"> <li>• Feeling overworked; not being able to manage workload</li> <li>• Lack of role clarity and low sense of control over job performance</li> <li>• Not feeling respected and valued for contributions and capabilities</li> <li>• Poor communication with management around critical issues affecting work</li> <li>• Not receiving recognition or rewards for accomplishments</li> <li>• Lack of career opportunities and support for career development</li> <li>• Lack of trust and effective collaboration with coworkers</li> <li>• Work schedule does not match job needs or expectations</li> <li>• Work is too physically demanding</li> </ul> |
|---|

**Solutions for reducing nursing turnover**

Nurses join and quit organizations for a variety of reasons. There is no single “silver bullet” solution that will create reductions in nursing turnover across the board. But many solutions have been found to positively impact nursing turnover in various ways. These solutions range from deploying highly specific technology to support shift scheduling to implementing widespread social and policy changes in the US educational system to increase the number of qualified nursing candidates. Table 2 lists several of the practices that have been used successfully to reduce the financial impact of nursing turnover. The practices in table 2 are grouped into four categories based on their primary focus: increasing the number of qualified nursing candidates available in the labor force, making jobs more attractive to qualified nursing candidates, screening out nursing candidates based on job fit, and improving how nurses are managed after they are hired. Each of these categories reflects a different approach toward reducing nursing turnover, and each has its own advantages and disadvantages.

**Table 2. Methods for Reducing the Level and Cost of Nursing Turnover**

|   |
|---|
| <p>Increasing the number of nursing candidates</p> <ul style="list-style-type: none"> <li>• Educational and community outreach programs to increase awareness of nursing as a possible profession</li> <li>• Sponsoring nursing students through scholarships</li> <li>• Providing educational re-imburement to help existing employees obtain nursing degrees</li> <li>• Recruiting nurses candidates from foreign countries</li> <li>• Lobbying the government to support creation of more nursing schools</li> </ul>   |
| <p>Making jobs more attractive to nursing candidates</p> <ul style="list-style-type: none"> <li>• Increasing compensation and benefits</li> <li>• Supporting flexible scheduling and job sharing</li> <li>• Building career development activities into the design of nursing jobs</li> <li>• Improving the organizations’ employment brand</li> </ul>  |
| <p>Screening out nursing candidates based on “job fit”</p> <ul style="list-style-type: none"> <li>• Using structured assessment tools to evaluate candidate job interests and motivation</li> <li>• Providing candidates with “realistic job previews”</li> </ul>   |
| <p>Improving methods used to manage nurses after they are hired</p> <ul style="list-style-type: none"> <li>• Clearly communicating work expectations and performance against objectives</li> <li>• Soliciting input from nurses on critical work issues</li> <li>• Recognizing and rewarding superior performance</li> <li>• Actively supporting career development</li> <li>• Building teamwork and coworker support</li> <li>• Helping nurses cope with work stress</li> <li>• Optimizing methods used to set work schedules</li> <li>• Addressing underperformance issues that impact others on the nursing team</li> <li>• Minimizing administrative time spent on non-patient care activities</li> </ul> |

**Increasing the number of qualified nursing candidates.** The primary reason nursing turnover is so prevalent and costly is because there is a scarcity of qualified nursing candidates in the labor market<sup>xxiii</sup>. This scarcity increases the job opportunities available to nurses, which makes them more likely to quit

existing jobs because they are confident they can find other employment opportunities. It also increases the costs of turnover as companies find it increasingly difficult to fill position after nurses quit.

Many health care organizations actively support activities to increase the number of qualified nursing candidates available in the labor market. These include conducting community outreach programs with students to encourage them to pursue nursing careers, providing educational scholarships to nursing students that are often contingent on the students working for the organization for some minimum amount of time after they graduate, and providing educational support to non-nursing employees to help them acquire nursing degrees. These efforts may also involve lobbying the government to invest in the creation of new nursing schools or providing more support for recruiting foreign nurses to work in the United States.

The primary advantage of increasing the number of nursing candidates in the labor market is it addresses the fundamental issues that make nursing turnover so costly. The disadvantage is these efforts require considerable time and resources over and above those required to simply run a healthcare organization. Entire programs and funding structures need to be developed to support community outreach programs, educational scholarships, or government lobbying. Furthermore, while these efforts provide major advantages over the long-term, they have little to no near-term impact on the financial costs of nursing turnover. But these programs are likely to become increasingly critical for the continued growth of both healthcare organizations and the healthcare industry in general.

***Making jobs more attractive to nursing candidates.*** In the current scarce labor market healthcare companies must do everything they can to attract qualified nursing candidates to apply for positions within their organization. The primary questions nursing candidates ask when evaluating a job opportunity can be summarized as “where is it located?”, “when will I have to work?”, “how much does it pay?”, and “what will I learn?” Given the hands-on nature of most nursing jobs, there is little companies can do make jobs more attractive based on changing their location. But companies can successfully attract candidates by changing the pay structure, schedule design, and developmental opportunities associated with nursing positions. The creative use of scheduling and job sharing appears to be particularly relevant for nursing candidates who are looking for part-time jobs to supplement non-work related activities and commitments. Such candidates represent a growing percentage of the applicant pool as the nursing workforce becomes older and more focused on retirement related activities.

A fourth method used to attract candidates is to develop and communicate an effective employment brand to potential applicants. This requires investing resources into defining and marketing the unique cultural characteristics and career opportunities that make the organization a particularly attractive place to work<sup>xxiv</sup>. But the success of employment branding efforts is predicated on the assumption that an organization truly is a great place to work. Employment branding efforts that promote inaccurate images of a company can actually lead to increased turnover. There is no value in attracting candidates only to have them subsequently quit when they discover that the realities of working at the company are markedly different from what was communicated to them by the recruiting department.

The advantage of programs that make jobs more attractive to nursing candidates is their ability to immediately increase the number of applicants applying for open positions. Companies that design jobs with applicant attraction in mind are also more likely to structure positions in a way that lessens turnover due to poor scheduling, inadequate pay, or lack of development opportunities. The shortcoming of programs focused on increasing applicant flow is the fact that there are considerable

limitations in the changes that can be made to make jobs more attractive. Companies have hard constraints related to the amount of compensation that can be provided for a job, the shifts that employees need to work, and the time that can be devoted to development activities versus core job tasks. Similarly, companies are limited in their ability to create an effective employment brand until they first put in the effort required to truly become a great place to work.

**Screening out job candidate with poor “job fit”.** One factor that leads to increased turnover is hiring candidates who have unclear or unrealistic expectations about the duties, requirements, and benefits of the job. For example, hiring a candidate for a job that requires working weekends and then discovering the candidate is unwilling to work Sundays. Realistic job previews give candidates exposure to the requirements, benefits and work duties of a job either by providing them with clear descriptions of the job or through exposing them to the actual work environment. These previews have proven to be effective for reducing turnover associated with poor fit related to job characteristics such as schedules, pay rates, and job tasks<sup>xxv</sup>. Statistically validated selection tools that assess candidate work preferences and goals can also be used to reduce turnover caused by poor fit associated with less tangible concepts such as “organizational culture” or “career ambition”.<sup>xxvi</sup> Incorporating these methods into the nurse selection process can reduce the chances of hiring candidates only to have them quit because their job does not meet their basic job expectations or career goals.

Screening out job candidates based on job fit provides a relatively inexpensive means to reduce avoidable turnover. The main problem with this approach is the limited numbers of qualified nursing candidates available for jobs to begin with. Selection measures are never perfectly accurate. There is always a risk of screening out candidates who would have been successful employees had they been hired. While the loss of such candidates is acceptable when companies have several qualified applicants to choose from, it can be devastating for companies that struggle to hire enough qualified candidates to simply maintain minimum staffing levels. Another limitation of methods that focus on screening out job candidates is they only impact turnover of nurses who have not yet been hired. They have no impact on the turnover rates of nurses who are already employed by the organization.

**Improving methods used to manage nurses after they are hired.** The single biggest factor impacting employee turnover is the behavior of the employee’s manager. Improving managerial performance should be at the forefront of any initiative focused on decreasing nursing turnover. This requires providing managers with the knowledge, tools, and time needed to engage nurses around critical workplace issues that drive turnover.

Table 2 lists managerial behaviors that address factors that often cause nurses to quit jobs.

- Clearly communicating work expectations to nurses, providing information showing nurses’ performance relative to their work goals, and giving nurses the opportunity to engage in conversations with leaders on ways to improve performance all serve to increase nurses’ sense of autonomy and control over their work. These managerial practices also reduce stress-related turnover caused by role ambiguity.
- Recognizing and rewarding performance and actively supporting career development increases nurses’ sense of being valued, recognized and supported for contributions they bring to the organization.
- Building teamwork, helping nurses manage work stress, and swiftly addressing individual performance problems are critical to creating a supportive work environment where nurses feel they can rely on those around them to maintain high levels of patient care, overcome difficult challenges and cope with the emotionally exhausting nature of their jobs.

- Putting effort into optimizing work schedules in an attempt to accommodate nurse preferences lessens the chance of nurses quitting due to scheduling issues and increases nurses' feelings of being valued and having control over their jobs.
- Minimizing or eliminating time spent on administrative activities allows nurses to focus on the aspect of their jobs that provides them with the greatest sense of achievement and accomplishment: caring for patients.

Improving the methods used to manage nurses has several positive effects on nursing turnover. First, the methods directly address the single biggest factor that drives employee turnover: the behavior of nurse managers. Second, the methods have an immediate impact on the organization's current nursing workforce. These methods provide an immediate return on investment when they are implemented. This value is then maintained as long as the methods are continued. Third, the methods do not require creating entirely new programs or processes. Healthcare organizations are already managing nurses, but in many cases they are not effectively managing nurses. These methods are not about doing new things that the company has never done before, but doing things the company is already doing in a more valuable manner.

The main challenge to improving how nurses are managed is getting managers to actually change their behavior. Changing behavior is hard<sup>xxvii</sup>. But it can be done. The key is to provide managers with clear guidance on what behaviors to change, methods to help them implement these changes, and incentives to reward their efforts to change. Talent management technology can play a major role in creating these changes by providing managers with tools to more effectively manage nurses. This technology can also be used to measure and reward managers based on their demonstration of behaviors that serve to decrease nursing turnover. Talent management technology also automates many of the administrative tasks that prevent managers and nurses from spending more time actively collaborating with one another to provide patients with high levels of care.

It should also be noted that the behavior of managers is both supported and constrained by the policies and resources provided by the organization. For example, a manager's ability to provide nurses with meaningful recognition will depend on the leeway they have to pay or otherwise compensate nurses for superior performance. Similarly, managers' ability to provide nurses with meaningful development opportunities depends in part on the support the organization provides for employee career development in general. In sum, while nurse managers may be responsible for developing an environment that encourages retention of nurses, healthcare organizations are responsible for providing managers with the tools and resources they need to create this environment.

### **Conclusions**

Nursing turnover and the broader nursing shortage that underlies it represent one of top financial crises facing healthcare organizations in the United States. Nurses play a pivotal role in the financial viability of most healthcare organizations, yet these organizations are increasingly challenged in their ability to attract and retain enough qualified nurses required to meet minimum staffing levels.

Considerable amounts of research have been invested in studying nursing turnover. The findings of this research are relatively consistent in terms of identifying common factors that influence nurses' decisions to pursue certain jobs and remain in those jobs after they are hired. Healthcare organizations are strongly advised to leverage the results of this research and invest in talent management practices that will have the greatest value for ensuring a steady workforce of qualified and engaged nurses. The

effective use of these talent management practices will become increasingly critical to organization survival as the nursing shortage continues to worsen over time. Many of the solutions to the nursing shortage are well known and available to organizations. But it is up to organizational leaders to embrace these methods to ensure the success of their companies and the care of their patients.

### **About the Author**

Dr. Steven Hunt is Director of Business Transformation Services at SuccessFactors. He has over 15 years experience designing talent management solutions supporting performance management, staffing, employee development, culture change, workforce transformation, and succession planning. An active author and speaker, Dr. Hunt has written articles for dozens of trade and academic journals ranging from the Wall Street Journal to the International Journal of Selection & Assessment. He is also author of a book on the applied use of staffing assessment methods entitled "Hiring Success" (2007, Pfeiffer). Dr. Hunt holds a Ph.D. in industrial-organizational psychology from The Ohio State University, a B.A. in applied mathematics and psychology from the University of California, San Diego, and professional certification as a Strategic Professional of Human Resources (SPHR) from the Society of Human Resource Management. He is a member of the Society of Industrial and Organizational Psychology, the Academy of Management, the Society of Human Resource Management Special Expertise Panel on Human Capital Metrics, and the Workforce Institute.

- 
- <sup>i</sup> Atencio, B., Cohen, J., Gorenberg, B. (2007). Nurse retention: is it worth it? *Nursing Economics*, 21.
- <sup>ii</sup> PriceWaterhouseCoopers (2007). What works: healing the healthcare staffing shortage. PriceWaterhouseCoopers, LLP.
- <sup>iii</sup> Hodes (2005). Nursing's pulse: Bernard Hodes Group/Nursing spectrum RN survey.
- <sup>iv</sup> Alexander, J. A., Bloom, J. R., & Nuchols, B. A. 1994. Nursing turnover and hospital efficiency: An organizational-level analysis. *Industrial Relations*, 33, 505-520.
- <sup>v</sup> PriceWaterhouseCoopers (2007). What works: healing the healthcare staffing shortage. PriceWaterhouseCoopers, LLP.
- <sup>vi</sup> Health Resources & Services Administration (2006). What is Behind HRSA's Projected Supply, Demand, and Shortage of Registered Nurses? United States Government Department of Health and Human Services.
- <sup>vii</sup> Boudreau, J.W., & Ramstad, P.M. (2007). *Beyond HR: the new science of human capital*. Harvard Business School Press, Cambridge, MA.
- <sup>viii</sup> Atencio, B., Cohen, J., Gorenberg, B. (2007). Nurse retention: is it worth it? *Nursing Economics*, 21.
- <sup>ix</sup> PriceWaterhouseCoopers (2007). What works: healing the healthcare staffing shortage. PriceWaterhouseCoopers, LLP.
- <sup>x</sup> Zimmerman, E. (2004). Strong medicine at Agilent Health. *Workforce Management*, March, 40-42.
- <sup>xi</sup> Dana, B. (2005). Taking the measure of quality in LTC. *Provider*, February, 41-44.
- Hart, P. (2003). Patient to nurse staffing ratios: perspective from hospital nurses. *AFT Healthcare*.
- <sup>xii</sup> PriceWaterhouseCoopers (2007). What works: healing the healthcare staffing shortage. PriceWaterhouseCoopers, LLP.
- <sup>xiii</sup> Anderson, R.A., Corazzini, K.N., & McDaniel, R.R. (2004). Complexity science and the dynamics of climate and communication: reducing nursing home turnover. *Gerontologist*, 44, 378-388.
- Hart, P. (2003). Patient to nurse staffing ratios: perspective from hospital nurses. *AFT Healthcare*.
- <sup>xiv</sup> Anderson, R.A., Corazzini, K.N., & McDaniel, R.R. (2004). Complexity science and the dynamics of climate and communication: reducing nursing home turnover. *Gerontologist*, 44, 378-388.
- <sup>xv</sup> Glass, D.C., McKnight, J.D., & Valdimarsdottir, H. (1993). Depression, burnout, and perceptions of control in hospital nurses. *Journal of Consulting and Clinical Psychology*, 61, 147-155.
- <sup>xvi</sup> Taris, T.W., Feij, J.A., & Capel, S. (2006). Great expectations and what comes of it: the effect of unmet expectations on work motivation and outcomes among newcomers. *International Journal of Selection and Assessment*, 14, 256-268.
- <sup>xvii</sup> Hodes (2005). Nursing's pulse: Bernard Hodes Group/Nursing spectrum RN survey.
- <sup>xviii</sup> Hunt, S.T. (2008). Different types of hourly work, different types of hourly workers. Workforce Institute ([www.workforceinstitute.org](http://www.workforceinstitute.org)).
- <sup>xix</sup> Russell, C.J., & Van Sell, M. (2007). Simulating and validating models of voluntary turnover decisions. Conference of the Society for Industrial and Organizational Psychology, New York, NY. Page 25.
- <sup>xx</sup> Hart, P. (2003). Patient to nurse staffing ratios: perspective from hospital nurses. *AFT Healthcare*.
- <sup>xxi</sup> Hemingway, M.A., & Smith, C.S. (1999). Organizational climate and occupational stressors as predictors of withdrawal behaviours and injuries in nurses. *Journal of Occupational and Organizational Psychology*, 72, 285-299.

---

<sup>xxii</sup> Ashforth, B.E., Kreiner, G.E., Clark, M.A., & Fugate, M. (2007). Normalizing dirty work: managerial tactics for countering occupational taint. *Academy of Management Journal*, 50, 149-174.

Glass, D.C., McKnight, J.D., & Valdimarsdottir, H. (1993). Depression, burnout, and perceptions of control in hospital nurses. *Journal of Consulting and Clinical Psychology*, 61, 147-155.

<sup>xxiii</sup> Blegen, M.A., Vaughn, T., & Vojir, C.P. (2008). Nurse staffing levels: impact of organizational characteristics and registered nurse supply. *Health Services Research*, 43, 154-173.

<sup>xxiv</sup> Collins, C.J., & Han, J. (2004). Exploring the applicant pool quantity and quality: the effects of early recruitment practice strategies, corporate advertising, and firm reputation. *Personnel Psychology*, 57, 685-717.

<sup>xxv</sup> Buckley, M.R., Fedor, D.B., Verse, J.G., Wiese, D.S., & Carraher, S.M. (1998). Investigating newcomer expectations and job-related outcomes. *Journal of Applied Psychology*, 83, 452-461.

<sup>xxvi</sup> Hunt, S.T. (2007). *Hiring Success: the art and science of staffing assessment and employee selection*. Wiley: San Francisco, CA.

<sup>xxvii</sup> Hunt, S.T. (2008). *Common sense talent management: twelve fundamental principles for increasing workforce productivity*. SuccessFactors, Inc. ([www.successfactors.com](http://www.successfactors.com)).