THE 1996 HELENE HUDSON MEMORIAL LECTURE

Work redesign and re-engineering: A challenge for professional nursing practice

The 1996 Helene Hudson Memorial Lecture, sponsored by Amgen Canada, was delivered at the Eighth Annual Conference of the Canadian Association of Nurses in Oncology in Calgary, Alberta, October 1996.

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Abstract

Work redesign and re-engineering have become the buzzwords of the 1990s as all sectors of the health care arena struggle to meet the demands of patient care while coping with increasing fiscal constraint. Redesign and re-engineering are terms that describe a wide range of strategies in health care and radically different models of care delivery. These new approaches to care are shifting the way we view care delivery and how it is structured. This paper describes the principles of redesign and re-engineering, common applications in health care organizations, outcomes and evaluation. Multiskilling and use of generic health care workers are addressed. The potential impact on the practice of oncology nurses is explored as well as strategies to meet the challenges of today's health care environment.

Work redesign and re-engineering have become the buzzwords of the 1990s as all sectors of the health care arena struggle to meet the

demands of patient care while coping with increasing fiscal constraint. Nurses across Canada have been living in a whirlwind of downsizing and restructuring. The constant companions of nurses in administration have become financial operating statements and calculators.

We have all been touched by the myriad of changes in health care: hospital closures; mergers; layoffs. We have experienced or have witnessed the uncertainty, vulnerability, fear, avoidance, loss, sadness, shock, anger, resignation and hopelessness that so often have resulted from these transformations. These emotional reactions mirror the experiences of our patients with cancer. Perhaps this metaphor can help us to examine how we are dealing with the impact of changes in health care. As health care restructuring continues to challenge the value of nurses and nursing, what direction do we take? Restructuring: we can ignore it, deny it, embrace it or fight it. Or perhaps, we can begin by understanding the forces around us and seek to influence the process and decision-making.

Work redesign and re-engineering - what is it?

Work redesign and work re-engineering are terms that serve to describe a wide range of strategies and initiatives in health care. Work redesign, re-engineering, patient-focused care, organizational restructuring, process innovation, business process redesign and seamless care systems are terms often used interchangeably. However, they may refer to radically different models of care delivery. These types of initiatives have two common goals: to shift the way we view care delivery and change how it is structured.

The utilization of work redesign and re-engineering in health care has occurred in response to decreased resources, the push to cost containment, and the desire to improve the quality of care in health care environments. There has been widespread recognition that the structures and patterns of work in hospitals have often been designed around the needs of the worker, not the patient. As a result, care delivery has been fragmented, overly specialized, bureaucratic, inefficient and delay-prone. The proposed benefits of redesigning health care delivery in organizations include improvement in the quality of care, decrease in costs, improvement in service, increased customer-oriented care, increased satisfaction of patients and employees, increased efficiency, decreased downtime, increased direct care time and improved flexibility (Jirsch, 1993; Moffitt et al, 1993). While the literature has been replete with anecdotal descriptions of re-engineering initiatives, there has been a dearth of critical analysis and evaluation.

Principles of redesign

The basic principles of design efforts are simplification of work, improvement of efficiency, simplification of management structures, broadening staff skills and multiskilling, increasing the use of technology and informatics, decentralization, moving services to patients, and grouping like patients together (Moffitt et al, 1993).

The simplification of work and improvement of efficiency have focused on the process of work. This has been accomplished through eliminating steps in the work process; removing unnecessary, cumbersome, needless or redundant work, and reducing downtime. It has also meant decreasing the number of workers contributing to the process. Applications of this principle include efforts to reduce the amount of documentation, or walking patients to the operating room

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rather than taking them by stretcher and combining several jobs into one.

The simplification of management structures has been aimed at decreasing the number of layers in an organization between the top and the bottom. This is also known as flattening the management structure. This usually has resulted in increasing the span of control of individual managers and decreasing the amount of supervision available.

Broadening staff skills or multiskilling has been basic in redesign efforts in order to more effectively utilize staff. Positions have been redesigned to include a broader range of functions so that the organization relies less on specialized workers. For example, nurses have learned to do 12-lead EKGs, thereby eliminating the need for EKG technicians. Many institutions have implemented redesigned service workers at the patient unit level, eliminating the former individual roles of housekeeper, nutrition aide and porter. Cross-training amongst different professional health care workers has also been implemented. For example, nurses and respiratory technologists are cross-trained in providing aerosol treatments.

Use of technology and informatics has been implemented with increased use of computerization, utilization of increasingly sophisticated monitoring equipment and surrounding patients with infusion pumps and other technology.

The move to decentralize services has taken several forms. The elimination of specialized teams of nurses for specific functions such as intravenous insertion decentralizes a service to the patient unit level. The function of intravenous insertion is absorbed into the role of every nurse. Another decentralization approach is moving service workers such as porters and housekeepers to the unit level. This type of redesign has aimed to eliminate much of the "going to" and "coming from" time that is inherent in some centralized functions. Some hospitals have also relocated x-ray machines or small laboratories to nursing units with known high utilization patterns.

Moving services to patients is an effort to be more customer- and patient-focused and to establish care delivery that is somewhat akin to "one-stop shopping". Establishing a pre-admission unit for elective surgery patients, for example, can provide comprehensive care and prevent the patient from going to several areas for diagnostic tests, consults and education.

Grouping like patients together means the establishment of nursing units with patients who have comparable nursing requirements, thereby matching the skill and expertise of staff with the needs of the patients. Other expected outcomes have included establishing units of optimum size (usually large) and creating a stable census on the unit with predictable workloads (Moffitt et al, 1993).

All of these principles of redesign have the potential to improve the environment in which we work and the quality of patient care that is delivered. The questions remain how to use these strategies most effectively and appropriately for patient care and how to enhance the delivery of nursing care and professional practice.

Outcomes

A paradox lies within the outcomes of redesign and re-engineering efforts. The goals of redesign and re-engineering have been improvement in quality of care, decreased cost, improved service, increased customer orientation, increased satisfaction of patients and employees, and flexibility. It is clear that these goals will best be achieved by having employees who can function autonomously, are self-directed, skilled, knowledgeable, flexible, empowered and require little or no supervision. Yet, in many organizations there has been a steady decrease in professional staff and increase in non-professional staff in order to balance ever-decreasing budgets. The use of non-professional staff increases the need for traditional forms of supervision in order to ensure safety and meet requirements for delegation and accountability. As well, the move to simplify management structures has led to the dissolving of professional departments and substituting programmatic management and more generic administrative models. These changes have served to decrease the power of nurses by

removing them from positions of authority and control. Nurses may be in leadership positions within program management models, but their ability to advocate for nursing may be limited.

Multiskilling

Multiskilling has been one of the most commonly used tools in redesign and deserves further discussion. A multiskilled worker is defined as a person who can perform tasks or functions in more than one job or discipline. Multiskilling is not inherently a negative concept and has the potential to enhance the delivery of nursing care and professional practice. The question is how to use this strategy most effectively and appropriately for patient care.

When applied to nursing, multiskilling has the potential to be a reductionistic and mechanistic view of nursing and of the patient. It serves to reduce nursing to a series of tasks that in no way demonstrate the knowledge and judgment embedded in the activity nor acknowledge the relevance to the patient's overall plan of care.

Multiskilling and cross-training are strategies that have provoked tremendous concern in the nursing profession. The replacement of nurses with unregulated health care workers is the hallmark of multiskilling. Ironically, the original impetus to the use of unregulated workers or assistive personnel was to compensate for a nursing shortage, not as a cost-cutting initiative to economize by replacing nurses with less expensive workers (Neidlinger et al, 1993).

The current fashion has been to select elements of professional nursing practice to be handed over to support or technical personnel. Of 7,560 nurses surveyed in the United States through the American Journal of Nursing Survey, 41.9% reported that their hospital was utilizing unlicensed assistive personnel (UAP), technicians or aides to provide direct patient care previously provided by nurses; and 35.8% reported that there was an increase in the amount of time RNs spend supervising UAPs, technicians or aides (Shindul-Rothschild et al, 1996). This is an essential paradigm shift where we see the use of unlicensed/unregulated nonprofessional workers to substitute for nurse-provided care, rather than to complement nursing care.

The change from RN to UAP as care providers has occurred despite the lack of research and evidence to evaluate the effectiveness and outcomes related to the use of unlicensed assistive personnel (Krapohl & Larson, 1996). Proposed outcomes related to the use of unlicensed/unregulated personnel that should be evaluated include nurse satisfaction, the outcomes and quality of care, productivity, costs and patient satisfaction (Krapohl & Larson, 1996). Krapohl and Larson (1993) in their article on the impact of unlicensed assistive personnel on nursing care delivery stated that evaluative studies have often been anecdotal, lacked a comparison group, utilized measures that were not tested for reliability and validity and had small sample sizes. Other outcomes that have not been evaluated include evaluating the need for increased supervisory personnel, patient re-admission rates, length of hospital stay and UAP training costs (Krapohl & Larson, 1996). Key expected outcomes of redesign efforts including decreased fragmentation of care and reduction in the number of workers contributing to the care of patients must also be examined. Nursing should also examine the impact of the increased accountability and delegation assumed by the registered nurse who usually is responsible for the direct day-to-day work provided by unregulated workers.

Nurses have increasingly identified their concerns regarding their accountability, legal and professional responsibility for unregulated health care workers. There are a legion of documents, guidelines and position statements on the use of unlicensed or nonprofessional staff, produced by professional nursing organizations and regulatory bodies. The focus of these documents has been to provide direction for nurses and health care organizations regarding the use of unregulated health care personnel in order to ensure competence, adequate knowledge and skill, safety, accountability, adequate supervision and monitoring and evaluation of outcomes. Grant and

Ashman (1996) in a discussion paper regarding nursing liability concerns about working with unregulated care providers made several suggestions. Nurses reduce their risk of liability by clarifying the role and function of unregulated workers in their setting, by lobbying for institutional policies and procedures, by reporting unsafe client practice and documenting unsafe situations, and by complying with professional standards of documentation (Grant & Ashman, 1996).

Examples of the appropriate use of nonprofessional staff in the patient care environment do exist. These models have sought to complement professional nursing practice and improve the environment in which professionals work and patients receive care. An example is the development of multiskilled service workers at the patient unit level. Rather than having a porter, a janitor, a housekeeping aide and a nutritional aide, many organizations have developed a multiskilled service role that has combined these and other job functions. Benefits include the ready availability and accessibility of the worker, less coordination of resources to come to the unit to provide work (i.e. porters), enhancement of teamwork at the unit level by having consistent personnel work on the unit, and elimination of some of the gaps that occur when work is highly fragmented. Patient satisfaction related to non-nursing care issues may also be improved. Commonly, the nursing manager of the unit has taken on the direct responsibility for the management of unit-based service workers. This has resulted in nursing managers having more control and influence over all work processes at the unit level, but also having the burden of managing and directing a larger and more diverse work force while still having to balance the challenges of ensuring quality patient care.

The reality and the challenge for oncology nursing practice

The reality of restructuring, redesign and re-engineering in health care has provided a great challenge for nursing practice. What actions do we take in the future to promote our vision of oncology nursing practice and holistic patient care and to challenge the more mechanistic and task-oriented views of nursing? Our challenge is to ensure that value is seen in having professional nurses provide care and leadership; to be acknowledged for our knowledge, skill and ability to teach and counsel; to be autonomous; and to be respected colleagues amongst other health professionals. Additionally, our challenge is to utilize the principles and strategies of redesign to our advantage and to improve the outcomes of nursing care.

Multiskilling and nursing

Multiskilling in nursing is most often applied in a task-oriented manner - selecting which tasks can be delegated from the nurse to a less-qualified worker. Considerably less attention is paid to what further activities nurses can do. The challenge is to utilize multiskilling advantageously in nursing. Arguments to promote the addition of further skills to the functions of nursing include higher productivity, full utilization of knowledgeable, skilful and flexible professionals, integrating activity into patient care requirements and reducing fragmentation. At the same time, we need to shift our collective perspective from the technical definition of multiskilling and acknowledge the cognitive aspect of any skill. We need to reaffirm and embrace the integration of clinical knowledge and decision-making with activity. For example, we can view phlebotomy at the simplest level which is the task of obtaining a blood sample. When integrating cognitive skills, we see that the act of phlebotomy also includes the question of the necessity of the test, the timing and ability to integrate the test with other patient care requirements.

Technical and environmental redesign

Technical and environmental redesign efforts have often been overlooked in the rush to meet yet another financial target. Krapohl

(1996) suggests that nurses will be used optimally in settings with emphasis on technical and organizational support systems. This type of redesign can include such areas as medication systems, supply management, documentation systems, physical unit design, communication systems and clerical support systems. Work sampling studies have frequently demonstrated that nurses spend considerable time in nondirect patient care functions, in coordinating care and so forth (Hendrickson et al, 1990; Minyard, et al, 1986; Misener et al, 1987; Quist 1992). Yet little effort has been expended in redesigning nursing care units, work processes and support systems in order to reduce indirect functions.

Cost and economics

All of us need to become more expert in understanding and analyzing the cost of health care and the cost of nursing. It is commonly assumed that nurses are expensive - too expensive. Are they? In a report by the American Hospital Association, it was stated that total labour as a percentage of total hospital costs in the United States had decreased from 66% in 1962 to 54% in 1990 (AHA, 1991-1992 in Shamian & Chalmers, 1996). The percentage of costs consumed by nursing labour in 1990 was 23%. While total hospital costs have increased astronomically over this time period, the percentage cost of nursing has not. Many other forces have contributed to the increase in general health care costs: drugs, laboratory testing, supplies, and other types of labour. Do you know how much of the total budget in your institution is spent for nursing care, compared to other costs? Are you aware of the difference in wages between different types of workers? How much actual money is being saved by substituting nonprofessional workers for nurses? Are these savings being realized? Are there increased costs in other areas such as supervision and management to compensate for less skilled and less knowledgeable staff?

Nurses have consistently demonstrated their creativity in establishing models of nursing care which enhance continuity and quality of care: primary nursing, care management, outreach models, integration of hospital/home care. Shukla (1983) compared three nursing models: all RN primary nursing, team nursing with RNs and RPNs and a modular model with RNs, RPNs and nursing aides. There was no appreciable difference between the three models in terms of quality, but the actual costs of the modular model were higher than the all RN primary nursing or team models. This study exemplifies the type of evaluative work that is necessary and valuable in providing empirical evidence of the value of nursing.

Promoting the positive effects of nursing

We can provide evidence of the positive effects of nursing interventions, especially in the realm of oncology nursing. Considerable research exists that demonstrates the effectiveness of oncology nurses. A recent meta-analysis of nursing research on intervention effectiveness for symptom management found that selected nursing interventions such as teaching, music therapy, relaxation, massage, dressings and oral care were effective in producing improvement in patient outcomes (Smith et al, 1994).

Nurses must become consumers of nursing research and implement changes in practice, demonstrating and documenting the effectiveness of the changes. In 1996, a survey of 1,100 oncology nurses examined their knowledge and use of eight research-based practices (Rutledge et al, 1996). Awareness of the eight practices varied from 53-96%. This study demonstrated that when nurses are aware of specific research-based practices, they will integrate them into their practice.

Increased emphasis on research utilization will give nurses a tool they can apply in their practice to improve quality of care and demonstrate their own quality and cost-effectiveness. A Canadian example of this is the study that evaluated flushing policies for central venous catheters at the Cross Cancer Institute. Subsequent research-based practice changes generated a cost efficiency of 700% and also

reduced infection rates (Armann et al, 1996). These are research utilization outcomes that impact both quality of care and cost of care. Dissemination of research findings and their adoption in practice are essential.

Conclusion

There remains opportunity to utilize redesign/re-engineering more effectively for the improvement of nursing practice and patient care, to gain expertise in economic and cost analysis, and to utilize knowledge and research in nursing practice. The challenge is to continue to convince others of the value of professional nursing care to patients in terms of effectiveness and outcomes of care and to protect the essential elements of a caring, holistic approach to patient and family care. We need to be proactive in promoting what nursing does and can offer, and in putting it in language that everyone can understand. We are challenged to provide excellence in nursing care, for it is visible to the patient.

Final reflections

For each of us there are both professional and personal challenges that we face in a rapidly evolving health care system and in oncology nursing. Jessica Corner (1996) has reflected that the language of oncology is powerfully dominated by the discussion of prognosis and survival rates and levels of toxicity resulting from treatment. The attribution of success of treatment is usually given to the selection of the chemotherapy regimen or the skilled hands of the surgeon. The labour that nurses provide with a focus on caring gets little attention (Corner, 1996). Corner's (1996) insightful and thought-provoking paper on cancer nursing as therapy highlights the value and meaning of oncology nursing, our actual and potential contribution to health care. As well, we know that patients with cancer have been outspoken in their need for effective therapeutic relationships with their health care providers. The consumer expects and deserves knowledgeable, skilled and caring health care providers. There is an increased demand for skill and knowledge in all health care settings. Nursing is well-

positioned to respond to these challenges.

For each of us there are also personal challenges. We need to reflect on why we became oncology nurses and what keeps us in oncology nursing. As I reflected on these two issues, I reread a personal letter. I was reminded of the value of nursing and what keeps me in oncology nursing and working to develop the profession of nursing. This excerpt is from that letter:

"You have walked with me, never pushing too hard, but gently, with humour and caring, persuaded me to persevere."

In Dr. Beth Perry's study of exemplary oncology nurses, her poetic interpretations of the nurses' stories and her observations are moving reflections on the spirit and power of oncology nursing. The poem "Reflective Silence" powerfully demonstrates the power of silence and how it can speak volumes.

Reflective silence

Meet my silence with silence

Reflect my ways with your own

See the me that I am

not the me that you want me to be

Sit with me

*and let the silent notes of the birds' songs
sing to us (Perry, 1996)*

The challenge for every nurse is to care, to question, to read, to listen, to use and to articulate knowledge and to provide leadership in clinical practice.

The challenge for all of us is to be the best practitioners we can be. We need to reflect occasionally on why we became nurses, what it means for each of us, to reflect on why we chose oncology nursing as our special focus. Why am I a nurse? We need to approach our professional challenges with the spirit and resolve that we witness every day in our patients; with resilience, humour, determination, hope, competence, knowledge and confidence. ♥

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