

# **Propositions for investigating adoption and diffusion of the magnet hospital concept through the lenses of organization theory**

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## **ABSTRACT**

The U.S. health system continues to experience a persistent shortage of Registered Nurses. A promising innovation to address this problem is the “magnet hospital concept” which comprises a set of organizational practices to enhance recruitment and retention of nurses. This concept has received limited theoretical development concerning its adoption and diffusion as an organizational innovation. Eight major organization theories are used in this paper to analyze the magnet concept and develop a series of propositions for empirical investigation related to its adoption and diffusion. This paper contributes to furthering theoretical development of the magnet concept as a basis for empirical research and thereby contributes to its future propagation to the degree it is a beneficial innovation.

Key words: Innovation, Magnet Hospital, Nursing Shortage, Organization Theory, Propositions, Recruitment, Registered Nurse, Retention

## INRODUCTION

The health care delivery system in the United States continues to be challenged by recurring and persistent shortages of Registered Nurses (RNs) (Buerhaus, 2008). Responses have emerged at both the systemic and institutional levels to address these shortages. At the systemic level, various interest groups representing nursing practice, education, employers, payers, and other stakeholders have advocated and pursued public policy and private sector initiatives (Feldstein, 2004). At the institutional level, hospitals, who are the primary employers of RNs, have undertaken various initiatives to address shortages in their local labor markets and specific to their organizations (AHA, 2002). Out of this diversity of initiatives, a number of novel approaches have arisen that have achieved varying levels of acceptance and success (Kimball & O'Neil, 2002; Buerhaus, 2008).

Over the last twenty-five years the “magnet hospital concept” has emerged as a potent intervention for addressing nursing shortages at both the systemic and institutional levels. The magnet concept is a specific set of organizational practices implemented by a health care organization in order to enhance recruitment and retention of RNs (ANCC, 2002). The magnet concept has been widely advocated by the nursing profession, adopted by leading health care institutions, and demonstrated impressive results supporting its effectiveness (McClure & Hinshaw, 2002). Beyond workforce advantages, a number of additional benefits have been identified as flowing from the magnet concept (McClure & Hinshaw, 2002). The magnet concept can legitimately be classified as an administrative innovation that represents a significant departure from the state-of-the-art with profound consequences for the delivery of health services (Zinn, Weech & Brannon, 1998).

To date, the evolution and growth of the magnet concept has had limited theoretical development from an organizational standpoint, particularly regarding factors related to its adoption and diffusion as an innovation. However, theory is important for understanding relationships, making predictions, and overall sense-making (Weick, 1995), as it provides the basis for empirical analysis. In the particular case of the magnet concept, sound theoretical grounding is needed to refine and extend the concept; increase its utility as a tool for addressing nursing shortages; and facilitate empirical research concerning its beneficial adoption and diffusion. In a larger sense, sound theory in this area is needed to aid redefinition of the fundamental relationship between nurses and health care organizations to provide a long-term solution to the persistent problem of RN shortages in the U.S. This paper provides the beginnings of a theoretical framework for understanding factors influencing the adoption and diffusion of the magnet concept and thereby aides both future conceptual and empirical development.

The purpose of this paper is to examine the magnet hospital concept as it has evolved to date from the standpoint of major organizational theories in order to develop propositions that will facilitate empirical research relating its adoption and diffusion in the U.S. health care system. The approach taken in the balance of this paper is to provide a brief overview of the U.S. nursing shortage and the evolution and status of the magnet concept to date. Next, major organization theories are reviewed relative to the magnet concept as a basis for developing propositions related to studying its adoption and diffusion.

## **NURSING SHORTAGE AND MAGNET HOSPITAL CONCEPT**

The U.S. health care system once again faces a significant shortage of RNs (Buerhaus, 2008). The current shortage started in 2008 (Buerhaus, Staiger & Auerbach, 2003) and is projected to intensify over the next decade. The U.S. Health Resources and Services Administration has projected this shortage to grow from an estimated deficit of 219,000 in 2005 to approximately one million nurses by 2020, with only 64 percent of projected demand met (HRSA, 2006). While nursing shortages have recurred regularly since World War II (Feldstein, 2004), the current shortage is considered particularly pernicious due to a number of social, demographic, technological, and cultural drivers that have not been seen in prior shortages (Herman, Olivio & Gioia, 2003).

During a major nursing shortage in the early 1980's, a coalition of nursing leaders sought to identify U.S. hospitals that were able to avoid staffing shortages in spite of labor market conditions (McClure, Poulin, Sovie & Wandelt, 1983). A task force of the Academy of Nursing identified forty-one such hospitals and investigated the organizational practices that seemed to be linked to their superior ability to recruit and retain RNs. The task force's milestone report, *Magnet Hospitals: Attraction and Retention of Professional Nurses* (McClure et al., 1983), documented the fourteen practices summarized in Table 1 that were common to these hospitals. These practices were labeled as the "Forces of Magnetism" as they were believed to be the basis of attraction and retention of nursing staff. Hospitals that enacted these practices were referred to as "magnet hospitals". Over the ensuing decades a substantial amount of empirical research has been conducted verifying the superior ability of magnet hospitals to attract and recruit nurses, lower turnover, decrease vacancy rates, increase retention of existing staff, increase the quality of patient care and satisfaction, and enhance productivity, among other positive outcomes (McClure & Hinshaw, 2002). In order to promote adoption of magnet practices, the American Nurses Credentialing Center (ANCC), an affiliate of the American Nurses Association, established a formal program in the early 1990's to recognize and designate hospitals that implemented the magnet concept (ANCC, 2002). The number of formally designated magnet hospitals has increased dramatically, from only 25 in 2000 to over 350 in early 2009 (ANCC, 2009). This impressive growth has led to widespread recognition of the benefits of magnet practices by governmental agencies, accrediting organizations, and various health professional associations.

## **OVERVIEW OF ORGANIZATION THEORY**

Organization theory seeks to understand, explain, and subsequently inform prediction of the impact of factors that influence the structure, behavior and performance of organizations (Dressler, 1992). Theory has been compared to mental maps that people construct to understand how and why things occur and organization theory has been described as the examination of these mental maps relative to organizations (Morgan, 2006; Shortell & Kaluzny, 2006). This comparison is particularly important as organization theory is not a single ubiquitous theory, but a kaleidoscope of different theories, perspectives, or schools of thought that each focus on

**TABLE 1 - Forces of Magnetism: Organizational Practices of Magnet Hospitals**

1. **Quality of nursing leadership** – Knowledgeable, strong risk-takers who followed an articulated philosophy in day-to-day operations and were strong advocates for nursing staff.
2. **Organization structure** – Flat, decentralized, unit-based decision-making with nursing represented on key committees and nursing leader at executive level reporting to CEO.
3. **Management style** – Participative management style in hospital and nursing, feedback from staff at all levels valued and nursing leadership visible, accessible, and communicative.
4. **Personnel policies and programs** – Salaries/benefits competitive; creative/flexible staffing models used; staff aided in developing personnel policies; major clinical and administrative promotional opportunities available.
5. **Professional models of care** - Models of care used that gave nurses responsibility, authority, and accountability for their practice and for coordination of patient care.
6. **Quality of care** – Nurses perceived they were providing high-quality care and that this was an organizational priority with nursing providing leadership for creating this environment.
7. **Quality improvement** – Quality improvement activities viewed as educational, effective in improving quality of care delivered, and included active involvement by staff nurses.
8. **Consultation and resources** – Knowledgeable experts, particularly advanced practice nurses, available and used. Peer support given within and outside nursing.
9. **Autonomy** – Nurses permitted and expected to practice autonomously, consistent with professional standards, using independent judgment within multidisciplinary team approach.
10. **Community and the hospital** – Hospitals maintained a strong community presence involving a variety of ongoing, long-term outreach programs so seen as exemplary corporate citizen.
11. **Nurses as teachers** – Nurses permitted and expected to incorporate teaching in all aspects of their practice and thereby contributing to high levels of satisfaction.
12. **Image of nursing** – Nurses viewed as integral to the hospital’s ability to provide patient care services and as essential resources by other members of the health care team.
13. **Interdisciplinary relationships** - Interdisciplinary relationships characterized as positive with a sense of mutual respect exhibited among all disciplines.
14. **Professional development** – Significant emphasis and value placed on orientation, continuing and formal education, and career development and resources provided for them.

(Adapted from Urden & Monarch, 2002; Sanders, 2009)

organizations from different perspectives (Astley & Van de Ven, 1983) and have been analogized as different “lenses” for viewing organizations (Allison, 1971). While there is not unanimity on all of these “theoretical lenses”, particularly some newer prescriptions, consensus has coalesced around a number of key theoretical perspectives (Kaluzny, 1987; McKinley, Mone & Moon, 1999) that are used for the purposes of this paper to develop propositions for better understanding adoption and diffusion of the magnet concept. The organization theory perspectives that will be use are: classical (bureaucratic) theory, contingency theory, resource dependence theory, strategic choice theory, population (organizational) ecology, institutional theory, organizational (transactional) economics theory, and network theory.

## **CLASSICAL (BUREAUCRATIC) THEORY**

Classical organization theory was the earliest theoretical perspective used to examine organizations and still serves as a baseline for modern approaches (Dressler, 1992). Bureaucratic theory was developed early in the twentieth century by the sociologist Max Weber who espoused the following principles (Shortell & Kaluzny, 2006): a) explicit definition of work activities; b) clear assignment of tasks to organizational positions (office- holders); c) hierarchical arrangement of positions or office-holders; d) selection of office-holders on the basis of competence; e) impersonal performance of responsibilities. This theory provided the basis for subsequent elaboration and modification of its core concepts by a number of “administrative organization theorists” who emphasized span of control, unity of command, appropriate delegation of authority, departmentalization, use of work methods to improve efficiency, among other modifications (Wren & Bedeian, 2008). Centralization of authority and control through a rigid hierarchical structure facilitated technical superiority in performance of organizational tasks, at least in a stable external operating environment (Shortell & Kaluzny, 2006). However, it has been found that the rigidity inherent in highly bureaucratic organizations greatly restricts individual and organizational creativity and flexibility, which consequently limits adaptation to change and thereby impairs potential survival capabilities (Wren & Bedeian, 2008).

While all organizations are bureaucratic to some degree (Mintzberg, 1979), magnet facilities tend to exhibit key differences. The original magnet hospitals that were studied demonstrated decentralized department structures (McClure et al., 1983). Decentralization was operationalized as a sense of control over the immediate work environment at the unit level involving staffing and scheduling, budget preparation and management, and operations. Organizational structures were found to be relatively flat with fewer hierarchical layers. Significant lateral linkages were used to share resources and innovations without the need for hierarchical approval processes. Unit level managers reported feeling empowered to operate their units and collaborate horizontally with colleagues on issues of mutual concern or opportunity due to a participative management culture and hierarchical sanction of cooperative endeavors. Indeed, innovations to meet patient and staff needs were encouraged and tended to diffuse rapidly due to de-emphasis of hierarchy and reliance on lateral mechanisms. The researchers also noted that ad hoc committees were frequently utilized as a means of promoting change as further evidence of de-emphasis of hierarchical controls and use of collateral mechanisms. Empirical research validated many of these findings over the past two decades (McClure & Hinshaw, 2002).

Another key factor noted in classical theory is clear specification of organizational roles and incumbent qualifications. There was significant evidence of superior educational

qualifications of nursing leadership in magnet hospitals (McClure et al., 1983). Virtually all chief nurse executives were prepared at least at the master's degree level or above (> 90%). Most of the middle management level were prepared at the master's level (>50%) and most supervisory level nurses were prepared at least at the bachelors level (>50%) which was noted by the researchers as being well beyond the national average for comparable organizations then.

It is noteworthy that certain hierarchical organizational characteristics were of importance in magnet hospitals (McClure et al., 1983). Almost uniformly, the chief nursing officer was a member of the executive team that reported to the chief executive officer and titles were reflective of executive rank (e.g., vice president, chief nursing executive). Titles for managers within the nursing organization were commensurate with other hospital managers with similar responsibility (e.g., directors, managers) contrary to common practice in non-magnet hospitals. Also, nursing leadership had access to medical staff leadership and board deliberations as a valued participant and frequently as a voting member. Nursing involvement in decision-making has been identified as an important variable in explaining job satisfaction (Gleason-Scott, 1999).

With regard to classical organization theory, magnet hospitals tended to show a clear contrast. While comporting with hierarchical predictions involving delegation of power and authority at the executive level and with regard to incumbent qualifications, magnet hospitals were more decentralized in authority, responsibility, and operations through horizontal linkages versus vertical structure, compared to classical bureaucracy. These phenomena might be explained by the emphasis placed on participative management and two-way communication in magnet hospitals contributing to a perception of voice by nurses at both the operational and strategic levels of these organizations. In addition, autonomy was a differentiator of magnet hospital's structure. Indeed, one study found that decentralizing and flattening the organizational structure was a key factor in promoting autonomy, satisfaction, and reducing turnover (Kramer & Hafner, 1989). In a later study a link between autonomy and empowerment (Kramer & Schmalenberg, 1993) was found. Thus, organizational structure seems linked to magnet principles of empowerment and autonomy that are linked to increased satisfaction and decreased turnover. It was noted that magnet hospitals have, "a system of autonomous, self-managed operations at the unit level as well as involvement by unit staff-nurses in nursing department-wide governance issues" (Upenieks, 2003, p.10).

Classical theory leads to a focus on the implications of the principles of bureaucracy in the magnet context. Centralization of decision-making, authority, and consequent vertical layering of an organization do not align well with the magnet concept. Decentralization, lean vertical structure, and broad lateral linkages that facilitate flexibility, autonomy, and participative decision-making appear to characterize magnet organizations. The classical principle of filling positions with well-qualified, competent incumbents co-aligns well with magnet principles in facilitating empowerment that can flow from decentralization. Overall, the less bureaucratic and more decentralized an organization, the greater would be its expected success in adopting the magnet concept. On the basis of classical theory, three propositions are offered with regard to successful adoption and diffusion of the magnet concept.

*Proposition 1: The greater the degree of decentralization in a health care organization, the more likely adoption of the magnet concept.*

*Proposition 2: The higher and more pervasive the educational preparation of nursing leadership (office-holders) in a health care organization, the more likely adoption of the magnet concept.*

*Propositions 3: The greater the degree of autonomy/empowerment in a health care organization, the more likely adoption of the magnet concept.*

## **CONTINGENCY THEORY**

Contingency theory supplements and modifies classical theory by recognizing other important factors that influence how an organization differentiates and coordinates organizational activities determining its structure and processes (Dressler, 1992). The 1950's and 1960's saw scholarship emphasizing contingency factors such as, dynamism of the organization's external environment, complexity of the organization's tasks and technology, size of the organization, and professionalization of the organization's workforce (Mintzberg, 1979; Shortell & Kaluzny, 2006). The greater the degree of environmental dynamism, technological complexity, and professionalization, and the larger the organization's size, the less effective the bureaucratic model in general and the greater the need for more flexible and adaptive organizational forms (Katz & Kahn, 1978; Dressler, 1992). Using the lens of contingency theory to examine the magnet concept yields a significant improvement in insight. Hospitals generally rate very high on environmental dynamism, technological complexity, and professionalization, with more variability on size (Alexander & Morrisey, 1989; Mick, 1990; Shortell & Kaluzny, 2006). The role of a hospital's environment and technology relative to the magnet concept will be addressed in subsequent sections. The contingency variables of professionalization and size are addressed in this section.

Professionalization is an important issue since viewing RNs as professionals is integral to the magnet concept (McClure & Hinshaw, 2002). Significant autonomy due to this role definition has been demonstrated empirically (Kramer & Schmalenberg, 1993) and argued theoretically (Aiken, 2002) as integral to influencing nurse satisfaction and, in turn, attraction and retention outcomes. In addition, magnet hospitals tend to utilize a higher mix of professional nurses (RNs) compared to technical nurses (LPNs) and support staff, with RNs exercising significant autonomy in directing nursing care regardless of the particular model of nursing practice in place (Aiken, 2002). Professionalization is also important from the standpoint of physician-nurse relationships (Scott & Beckman, 1990). Collaborative practice in the provision of patient care is integral to the magnet concept (Aiken, 2002). Collaboration involves shared decision-making and policy formulation, up to and including shared governance, related to patient care, along with professional interpersonal relationships with the medical staff. This is consistent with strategic contingency theory which argues that power differences between internal groups influences organizational structure and performance as these groups seek to control organizational uncertainty which provides the basis of their power (Kaluzny, 1987). Finally, magnet principles emphasize the importance of educational credentials and continuing education to professional practice and development. As knowledge workers, RN's depend on assimilation and deployment of new knowledge in practice as a basis for maintaining and advancing their status and attaining their professional aspirations.

The contingency variable of size is more difficult to analyze in terms of the magnet concept. Larger organizations tend to be more hierarchical and thus more bureaucratic, leading

to structural inertia that serves as an impediment to change (Mintzberg, 1979; Hannan & Freeman, 1984). However, larger organizations tend to have more slack resources which provide them with the material means to experiment with more innovative strategies (Zinn, Weech & Brannon, 1998), such as the magnet concept. In the original magnet research, it was noted that the practices of magnetism that emerged in the study were similar regardless of size, where hospitals ranged from 99 to 1,050 beds (McClure et al., 1983). Currently, the bulk of ANCC magnet designated hospitals tend to be larger, but there is notable variation (ANCC, 2009). While size is a significant factor, particularly as regards slack resources, it appears factors other than size alone tend to affect the decision to pursue magnet designation.

The contingency theory lens is useful in increasing the specificity of classical theory to better understand the magnet concept. The contingency variables of professionalization and size are of particular interest. Hospitals are by and large professional bureaucracies (Mintzberg, 1979). The greater the degree to which the professional role of RNs is recognized by a hospital, through its staffing and practice models, and by physicians, through collaborative practice/shared governance and professional respect, the greater the co-alignment with the magnet concept. The role of size as a contingency variable is more complex, but theory and some descriptive findings suggest that it is not singularly determinative in adoption of the magnet concept in and of itself. However, absent other contingency variables, larger organizations, due to greater slack resources, might be expected to more readily adopt the magnet concept. On the basis of contingency theory, four propositions are offered related to successful adoption and diffusion of the magnet concept.

*Proposition 4: The greater a health care organization's mix of Registered Nurses versus other nurses, the more likely adoption of the magnet concept.*

*Proposition 5: The more collaborative physician-nurse practice in a health care organization, the more likely adoption of the magnet concept.*

*Proposition 6: The greater the level of support for nursing education in a health care organization, the more likely adoption of the magnet concept.*

*Proposition 7: Aside from other contingency factors, the larger a health care organization, the more likely adoption of the magnet concept.*

## **RESOURCE DEPENDENCE THEORY**

The resource dependence lens of organization theory focuses on an organization's ability to secure needed resources from its environment in order to survive (Pfeffer & Salancik, 1978). Resource acquisition needs create dependency on an organization's environment while the organization simultaneously seeks to remain independent resulting in a dependence-independence tension that influences an organization's form and functions (Shortell & Kaluzny, 2006). For example, internally organizational units that facilitate key resource acquisition tend to hold greater power and influence, and externally alliances may be formed with other organizations to secure resources or reduce dependence. This perspective assumes that an organization can influence its ability to procure resources and/or reduce dependence and thereby increase the organization's chances of survival (Alexander & Morrisey, 1989).

The magnet hospital concept is specifically intended to facilitate procurement of the key organizational resource of nursing staff from a hospital's environment. Hospitals are dependent on the supply of nurses in their labor market, their competitive positioning with regard to other employers of nursing workforce, their relative attractiveness as an employer, in addition to other factors that determine their ability to acquire this critical resource for their core operations. In order to enhance their capacity for survival, hospitals want to protect their operating core (Thompson, 1967) from disruption and avoid increased transaction costs (Williamson, 1981). The "dependence – independence" tension of resource dependence theory provides the impetus for hospitals to seek strategies that can advantage them in gaining preferential access to key resources like nurses (recruitment) and/or decreasing their dependence (retention) to protect their operating core. Empirical research to date has demonstrated magnet hospital's increased ability to attract and recruit new nurses, lower turnover and vacancy rates, and increase retention (McClure & Hinshaw, 2002). Adoption of the magnet concept provides a means of achieving a resource dependence position that enhances a hospital's survivability. This implies that a hospital will take such actions as necessary to adjust its structure and processes in order to achieve this positioning.

Patient acquisition is also an important resource dependence consideration. Given empirical support for the impact of magnet status on the quality of patient care, hospitals in markets with payers and/or customers that are very demanding in terms of quality might be expected to see the magnet concept as a mechanism to improve their positioning with regard to patient acquisition. Quality of care studies have indicated that patients experience lower mortality rates, shorter lengths of stay, and increased satisfaction in magnet facilities (McClure & Hinshaw, 2002).

The resource dependence lens of organization theory focuses on the central role of a hospital's environment in understanding adoption of the magnet concept. The need for a key resource like RNs could be expected to increase the attractiveness of the magnet concept to hospitals in tight labor markets and/or a very competitive product/service markets. In addition, organizations in markets where key resource stakeholders are demanding higher quality might also be expected to find the magnet concept particularly attractive. On the basis of resource dependence theory, three adoption and diffusion related propositions are suggested.

*Proposition 8: The tighter (i.e., less resource munificent) a health care organization's labor market for RNs, the more likely adoption of the magnet concept.*

*Proposition 9: The more competitive a health care organization's product/service market, the more likely adoption of the magnet concept.*

*Proposition 10: The more quality sensitive a health care organization's product/service market, the more likely adoption of the magnet concept.*

## **STRATEGIC CHOICE THEORY**

The strategic choice lens of organization theory focuses on the ability of an organization to make strategic decisions about how it will position itself relative to its environment or seek to change its environment in order to accomplish its goals given its internal capabilities, competencies, and resources (Child, 1972; Shortell & Kaluzny, 2006). The strategic choice

perspective has a number of significant similarities to resource dependence theory; however, it primarily focuses on those volunteeristic actions that an organization takes to achieve resource transactions with its environment given its internal capabilities (Miles, 1980; Astley & Van de Ven, 1983). Defining these actions requires that an organization understand its external environment in terms relevant to the organization and has the cognitive ability to convert this external reality into internal reality (Barnard, 1938; Miles, 1980). With an assessment of external threats and opportunities and knowledge of internal strengths and weaknesses, specific strategies can be formulated to achieve objectives that are supportive of the organization's mission in accord with its values (Swayne, Duncan & Ginter, 2009). Strategic planning is a systematic process for strategy formulation. The strategic choices organizations make through this process lead to adjustment and evolution of organizational structure and processes in response to perceived environmental factors (Child, 1972).

The strategic choice perspective is particularly relevant to the magnet concept. The decision to pursue the magnet concept in general and to attain ANCC magnet designation in particular, is an explicit strategic choice by a hospital. This decision inevitably relies on some assessment of a hospital's resource dependence positioning regarding RN staffing relative to its environment, as posited by resource dependence theory. The internal status of the hospital in terms of decentralization, autonomy, and empowerment, in accord with classical theory, and professionalization and size, in accord with contingency theory, inevitably impacts a hospital's decision to pursue a magnet strategy and its success in this pursuit. Also, hospitals have to make internal adjustments in terms of organizational structure and processes to implement magnet principles. The ability of a hospital to successfully implement a magnet strategy is dependent upon transformation of its internal structure and processes; the actions and reactions of its competitors; and the evolving dynamics of its environment.

Supporting evidence for the applicability of strategic choice theory to the magnet concept is available to a limited degree. For example, the observation in the original research that, in some cases, magnet principles had been implemented in a relatively short period prior to the time of the study provides evidence of purposive intent. It was further noted in the original study that such actions tended to follow changes in key leadership (McClure et al., 1983). Additional support is provided by growth of interest in the ANCC designation program. As recently as the year 2000 there were only some 25 designated magnet hospitals (exclusive of the original study group), but this had grown to over 350 hospitals by early 2009 (Costello, 2002; ANCC, 2009).

The strategic choice lens of organization theory builds on resource dependence theory to explain how hospitals might decide to undertake innovative initiatives such as implementing the magnet concept. This theory is grounded in the presumption that a hospital can proactively undertake actions to achieve a desired resource dependence relationship with its environment. However, accomplishing this goal requires a cognitive process that systematically analyzes the hospital's current positioning and then leads to explicit strategies to make required internal adjustments. Those hospitals that engage in an ongoing strategic planning process might reasonably be expected to be more likely to pursue the magnet concept as they would be better positioned to recognize it as an advantageous strategic alternative. In addition, the greater the degree to which these hospitals have in place internal practices that co-align with magnet principles, the easier for them to select and implement a magnet strategy. Two additional hypotheses are suggested by strategic choice theory related to adoption and diffusion of the magnet concept.

*Proposition 11: Health care organizations actively involved in an ongoing strategic planning process will be more likely to adopt the magnet concept.*

*Proposition 12: Health care organizations that have in place more magnet attributes (i.e., capabilities) will be more likely to adopt the magnet concept.*

## **POPULATION (ORGANIZATIONAL) ECOLOGY THEORY**

Population ecology is an organization theory which argues that the environment plays a deterministic role in organizational survival and that organizations have limited adaptive capacity to influence their own survival (Hurley & Kaluzny, 1987). Population ecology theory draws many analogies to the biological model of natural selection whereby the environment selects those species that best fit its demands and deselects to the point of extinction those species that are poor fits (Hannan & Freeman, 1977). By analogy, those organizations whose form and functions best matched the environment's demands at a given time would be favored and those that did not would be deselected, unless they were able to quickly adapt and achieve environmental alignment. However, achieving such adaptation is usually very difficult for organizations due the difficulty of learning and implementing new skill sets, processes, and behavioral routines, and re-deploying material and financial resources to support such changes (Hannan & Freeman, 1984). The limited capacity of organizations to change in the face of environmentally induced selection pressures is known as structural inertia (Hurley & Kaluzny, 1987). The concept of structural inertia is a key concept in population ecology theory as it provides a rationale as to why some organizations are unable to successfully adopt and/or implement adaptive strategies and are consequently deselected (Kaluzny, 1987).

The primary utility of population ecology theory in analyzing adoption and diffusion of the magnet concept is through the insight of structural inertia and its implications for strategic choice and resource dependence approaches. Structural inertia helps explain why some hospitals that face a critical resource shortage, such as RNs, might have difficulty in making a strategic choice to undertake a magnet strategy and/or fail in attempting to implement such a strategy if initiated. Hospitals in favored environmental niches (e.g., munificent supply of RNs) have less need to undertake a magnet strategy due to their favorable resource dependence situation, however there could be other reasons they would pursue a magnet strategy such as quality issues, peer/professional pressures, and competitive considerations, among others. If hospitals in favored niches did make the strategic choice to undertake a magnet strategy, it might be expected that their success would depend on their level of structural inertia. Hospitals in disfavored niches might have fewer resources, including RNs, and thus face more difficulty in pursuing a magnet strategy. Structural inertia is a relevant consideration in their situation also, but the exigency of their situation might provide a powerful countervailing force in overcoming inertia (Hannan & Freeman, 1984).

Population ecology theory is useful in understanding why some hospitals that might benefit from the magnet concept are incapable of selecting this strategy and/or successfully implementing it. The difficulty of changing organizational routines, stakeholder expectations, and existing asset deployments all serve as powerful anchors to perpetuate the status quo even in the face of evidence that the organization is no longer in a favored environmental niche. Thus, it is expected that hospitals in favored niches would feel little impetus to change unlike hospitals in less favored niches. However, it might be expected that hospitals with relatively low levels of

structural inertia would be more likely to pursue the magnet concept and would be more successful in implementing it if in a disfavored niche. Population ecology theory suggests three additional propositions related to adoption and diffusion of the magnet concept.

*Proposition 13: Health care organizations operating in disfavored environmental niches (e.g., less munificent supply of RNs) will be more likely to adopt the magnet concept.*

*Proposition 14: Health care organizations with low levels of structural inertia (i.e., high levels of flexibility) will be more likely to adopt the magnet concept.*

*Proposition 15: Health care organizations with low levels of structural inertia (i.e., high levels of flexibility) will be more successful in implementing the magnet concept.*

## **INSTITUTIONAL THEORY**

Institutional theory focuses on the linkage of an organization to its larger social system and the influence of the rules, norms and expectations of this system on patterning the structure and processes of the organization in order for it to be recognized as legitimate and worthy of external support (Meyer & Rowan, 1977; DiMaggio & Powell, 1983). Rather than focusing inward on maximizing technical efficiency or focusing outward to optimize exchange transactions with its environment, the organization seeks recognition and support from relevant external entities (Kraatz & Zajac, 1996). For hospitals, an example of patterning in order to conform to the “rules, beliefs, and norms” of external entities is illustrated by conformance to professional standards, laws, licensure and accreditation requirements (Shortell & Kaluzny, 2006). Similarity in conformance is referred to as isomorphism (DiMaggio & Powell, 1983), which helps to explain why organizations that are confronted with similar environmental forces tend to resemble each other in form and function. Over time, conformance leads organizations to become embedded in their institutional environments which protects them from uncertainty and other threats to their survival (Baum & Oliver, 1992).

Institutional theory is useful in providing additional insight into why hospitals might seek to implement the magnet concept and in anticipating the process that they might follow in undertaking such a strategy. Institutional theory suggests that seeking ANCC designation might be attractive to hospitals that desire the benefits (e.g., legitimization) that this recognition conveys. In accord with this theory, the benefits of such recognition are a function of the degree of acceptance and support of magnet status conveyed by relevant entities in their environment. To date there appears to be growing institutional endorsement for the magnet concept from a number of prestigious external organizations relevant to legitimization and support of hospitals. Nursing professional organizations, professional trade associations, accrediting bodies (JCAHO, 2002), and government (Nurse Reinvestment Act, 2002) are all examples of influential entities that have endorsed the magnet concept related to nurse attraction and quality enhancement. In addition, growth from 25 to over 350 ANCC designated Magnet Hospitals since 2000 illustrates growth in acceptance of this approach as does the prestige of the hospitals that have sought this designation (Costello, 2002; ANCC, 2009). While the number of designated hospitals is still small relative to the total number of U.S. hospitals, this can serve to underscore a perception of exclusivity that further enhances the prestige of such designation and increases its attraction.

The mechanism by which hospitals learn about the magnet concept has important implications for adoption of this strategy. Linkages between organizations that endorse and support magnet principles and leaders of these hospitals inevitably facilitates knowledge of this concept and can thereby exert influence to promote its adoption. The original magnet research indicated that nursing leaders at hospitals exhibiting magnet principles were extensively engaged in professional organizations and other external associations beyond the bounds of their hospital (McClure et al., 1983). As a result they were knowledgeable about ideas in the larger nursing world and attempted to apply that knowledge in their own organizations. There was evidence that support was provided to attend professional conferences and that exposure to new ideas was very beneficial. In addition, support of nursing managers and staff in attending seminars and continuing education was extensive. Magnet hospital nursing leaders were professionally engaged and sought to identify best practice innovations to seed into their organizations. These practices are indicative of linkages with external organizations as a means of transferring information, norms, goals, and expectations. The original magnet hospitals clearly saw themselves as having a reputation for professional practice above the norm (McClure et al., 1983). This was in part validated, since the initial criterion for identification of hospitals for the study focused on a hospital's reputation within its region for attracting and retaining nurses.

The institutional theory lens is particularly useful in understanding how dynamics other than technical efficiency are useful in explaining and potentially anticipating a hospital's adoption of an innovation like the magnet concept. A hospital's interaction with other actors in its environment leads to transmission of norms, standards, and expectations that the hospital seeks to meet in order to attain legitimization and support from these entities. The hospital adjusts its internal structure and processes to conform to external expectations by mimicking other hospital's responses (i.e., isomorphism) that appear to have been successful. In accord with institutional theory, it might be expected that hospitals that particularly desire external validation of their nursing workforce development efforts and/or quality of care would be more inclined to adopt the magnet concept, particularly if the hospital had extensive linkages with its external role set. Insights from institutional theory suggest two additional propositions related to adoption and diffusion of the magnet concept.

*Proposition 16: Health care organizations that desire external validation of nursing and/or quality (i.e., increased reputational capital) will be more likely to adopt the magnet concept.*

*Proposition 17: Health care organizations whose leaders have extensive linkages with influential external entities will be more likely to adopt the magnet concept.*

## **ORGANIZATIONAL (TRANSACTIONAL) ECONOMICS THEORY**

The organizational economics lens focuses on how organizations can most cost-effectively accomplish resource transactions with their environment (Williamson, 1981). In this theory organizations engage in market transactions to procure resources (or dispose of production) and thereby incur transaction costs (e.g., information-gathering, negotiation, contracting, monitoring, and enforcement costs) related to exchanges with other parties (Perrow, 1986). Organizations seek to minimize these costs through various strategies. The primary strategies are those that seek to increase control over resources either by internal production (or

disposition), acquiring resource producers (or distributors), or other mechanisms (e.g., merger, lease, consortium). This essentially becomes a “make vs. buy” decision by the organization that determines the degree of vertical integration it pursues (i.e., forward into product disposition or backward into input procurement), sometimes called “economies of scope” (Williamson, 1981). Organizations may also pursue horizontal integration in order to increase volume to generate economies of scale. To the degree that control over resources is absorbed into the organization, the market transactions (markets) that controlled the resources and their related transaction costs are translated into internal organizational infrastructure (hierarchies) that generates their own set of transaction costs. Transaction costs theory posits that the relative costs of market-based versus organization-based transactions are compared and the most cost efficient alternative selected (Shortell & Kaluzny, 2006). Thus, whether markets or organizational hierarchies are used for controlling these transactions significantly influences organizational structure and processes. Market versus hierarchy trade-offs have to be made and remade in a dynamic environment for all of the various resources and products of an organization. As a result, organizational structure and processes reflect a composite of these various decisions and change constantly as new decisions are made and old ones remade.

The organizational economics lens is useful in examining why a hospital might adopt the magnet concept. Using transaction costs reasoning, a hospital should consider the transaction costs of undertaking a magnet strategy relative to the transaction costs of other alternatives, such as simply paying higher rates to hire from the labor market. There are a number of potential approaches to defining the costs of magnet status versus those of other strategies. The perpetual empirical problems are how to measure transaction costs and how to distinguish them from production costs (Mick, 1990). Transaction costs studies are not available related to magnet status. There have been a few studies examining the operating cost of magnet initiatives. These have shown significant costs savings in the range of 20-25% when the cost of magnet related initiatives were compared to turnover related costs (Upenieks, 2003). This analysis did not look at the value of any indirect savings related to qualitative improvements such as decreased patient mortality, complications, and length of stay or other savings. While the relationship between production costs and transaction costs in this case is not clear, it is possible that direct transaction costs related to turnover and indirect related to other cost/benefit considerations, if in parallel, could generate savings sufficient to induce adoption.

Organizational (transactional) cost economics theory anticipates that hospitals act so as to reduce transaction costs and reduce uncertainty related to procuring critical resources such as RNs. In theory, a hospital would consider both direct operating/production costs and transaction costs (i.e., cost of planning, negotiating, and monitoring resource relationships). If the hospital could reduce these costs in procuring RN's then this would be an inducement to adopt the magnet concept and make such organizational changes as necessary to facilitate its implementation. Depending on how broadly the concept of cost is defined, cost reductions (both operating and transaction costs) related to improved quality outcomes and other benefits for patients and staff might also be considered and provide a compelling rationale for adopting the magnet concept. On the basis of organizational economics theory, two additional propositions are suggested related to adoption and diffusion of the magnet concept.

*Proposition 18: Health care organizations that anticipate significantly reduced transaction costs will be more likely to adopt the magnet concept.*

*Propositions 19: Health care organizations that anticipate a significantly favorable cost-benefit ratio based on total value (e.g., quality-related benefits) will be more likely to adopt the magnet concept.*

## **INTER-ORGANIZATIONAL NETWORK THEORY**

The final organization theory lens focuses on an organization's relationship with other organizations and the implication of these relationships for its structure and processes. Network theory describes a number of different inter-organizational relationships that combine the core competencies, capacities, and capabilities of different firms to achieve reduced transaction costs, enhanced economies of scope, shared learning, and flexibility (Jaffee, 2001). Inter-organizational cooperation, collaboration, and sharing of information are key characteristics of networks that create value in terms of flexibility and synergy (Pettigrew & Fenton, 2000). It is argued that networks represent a "distinct form of coordinating activity" (Powell, 1990) between market and hierarchy based models of coordination described previously. Networks combine the flexibility of independent, non-vertically integrated firms in a market, with the tighter connections found in hierarchies (Jaffee, 2001). Successful networks are characterized by "connectness" in terms of communication, coordination, and consistency in shared goals and objectives (Casstells, 1996). Networked organizations share information (migratory knowledge) and form knowledge links to share complex knowledge that cannot be easily captured in written documentation (Badaracco, 1991). All of these mechanisms serve to create value through shared learning and flexibility for the networked organizations.

Inter-organizational networks are a significant factor in adoption of innovations in the health services industry. It has been noted that, "organizational innovation can be enhanced through inter-organizational networks rather than through a process embedded within a single organization" (Mick, 1990, p.13). While technology adoption has been a primary focus of research in this area, it has been argued that research on other innovations should be conducted at the inter-organizational level. Models of the diffusion of innovations rely on the role of key organizational actors and stakeholders as central to adoption and diffusion of innovations garnered from external linkages. Inter-organizational relationships are foundational to adoption and diffusion of innovations (Mick, 1990; Pettigrew & Fenton, 2000).

While the application of network theory to the magnet concept may not be immediately apparent, it is relevant to current magnet initiatives and through these initiatives may lead to wider applications in the future. With regard to the magnet concept, network theory would contemplate inter-organizational relationships between a hospital and external entities useful in achieving implementation of the magnet concept. Examples of other entities could include organizations that have unique knowledge and capabilities in helping hospitals evaluate magnet status as an organizational option and/or assist with its implementation. The ANCC is an example of such an entity in that it provides assessment and consultation to hospitals contemplating magnet adoption (ANCC, 2009). The Voluntary Hospitals of America (VHA) has had a national initiative underway to encourage the over 2000 health care organizations in its alliance to become "Employers of Choice" as a competitive strategy to distinguish themselves in terms of quality of care and staffing (Gelinas & Bohlen, 2002; Herman, Olivio & Gioia, 2003). While the VHA initiative had a broader focus than magnet designation, members were encouraged to pursue magnet status and assistance has been provided between members. In addition, a review of currently designated magnet facilities indicates a number of multi-hospital

systems where many to all member hospitals have attained designation (ANCC, 2009). It is reasonable to anticipate that other groups of hospitals in the future might band together through various inter-organizational linkages to promote shared learning and/or reduce transaction costs associated with attaining magnet designation.

Network theory holds significant potential for future study of magnet adoption and diffusion. Network theory suggests that groups of hospitals might collaborate through strategic alliances or other inter-organizational mechanisms to achieve a shared purpose such as workforce development. These inter-organizational arrangements would then influence a hospital's decision to participate in a particular shared initiative and this participation would influence the hospital to change its structure and processes to the degree necessary to conform to the expectations of other participants in the joint effort, in accord with institutional theory. There is evidence that at least informal initiatives are underway for this purpose. However, if nursing shortages intensify as projected, it is not unreasonable to expect that hospitals with existing inter-organizational relationships might pursue joint efforts related to magnet activities to the degree that such efforts would reduce time and costs involved and/or create other competitive advantages. On the basis of network theory, one additional proposition is suggested.

*Proposition 20: Health care organizations that are part of inter-organizational networks will be more likely to adopt the magnet concept.*

## **CONCLUSIONS AND RECOMMENDATIONS**

This paper has examined the magnet hospital concept as an organizational innovation from the standpoint of organization theory to better understand its potential for adoption and diffusion in the U.S. health care delivery system as a strategy to address a persistent shortage of nurses. Each of the lenses of organization theory contributed unique propositions to facilitate understanding how and why hospitals might pursue adoption of the magnet concept. Some propositions primarily focus on organizational factors that are internal to hospitals (e.g., Propositions: 1-7, 12, 18, 19), while other propositions focus on factors in a hospital's external environment (e.g., Propositions: 8, 9, 10, 13), and some propositions focus on bridging these two environments (e.g., Propositions: 11, 14, 15, 16, 17, 20). This composite of propositions that juxtaposes internal and external factors suggests a strategic management framework might be useful to guide future research on adoption and diffusion of the magnet concept.

Ascertaining whether theoretical insights are valid is the role of empirical research. It has been noted that, while propositions and hypotheses are not theory, they do serve as important bridges between theory and data, in that they make explicit how variables and relationships that follow from a logical argument might be operationalized (Sutton & Staw, 1995). While operationalization of these propositions is beyond the scope of this paper, it is apparent that reasonable measures can be developed. Collection of data to analytically examine the proposed relationships will then serve to inform practice and further extend theory. For example, extension of this line of research could lead to findings that facilitate adoption of the magnet concept by identifying models to predict the differential success of adoption efforts by different health care organizations in the future. Since theory must be empirically grounded to be of practical value, testing of these propositions is the next pragmatic step in understanding factors influencing the adoption and diffusion of the magnet hospital concept. These propositions provide a platform for initiating this empirical research.

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