Magnet Hospital Development in the Pittsburgh Region

A Status Update

Table of Contents

Table of Contents	i
Acknowledgements	
Executive Summary	
Background	
Introduction	
Methods	
History	
Benefits	
Financial	
Talent Attraction	
Care Improvement	
Competitive Advantage	
The Magnet Culture	
National Magnet Status	
The Numbers	
Consequences of Volume	
New Magnet Program Guidelines	۰ ۵
Table 1: ANCC's 14 Principles of Magnet Status	
Magnet Status in the Pittsburgh Region	
Status Check	
Table 2: Magnet Status for Hospitals in the Pittsburgh Region	
Why Local Hospitals Are Pursuing Magnet Status	
Improvement in Care	
Network Support	
Staff Attraction and Retention	
Good Fit With Current Practices	9
Reasons Facilities Are Not Pursuing Magnet Status	
Lack of Resources	
Table 3: Minimum Cost of a Two-Day Magnet Evaluation for a Small Facility	
Organizational Change	
Union Challenges	
Lack of Fit	10
Obstacles to Pursuing Magnet Status	. 11
Research Component	
Table 4: ANCC Research requirements	
Translating the Standards	. 12
The Check-Off Mentality	
Effective Steps Toward Magnet Status	
Table 5: Strategies to Facilitate Achievement of Magnet Status	14
What a Community Can Do	. 15
Conclusions and Next Steps	. 16
Creating an Information Exchange	16
Address Long-Term Care Facility Needs	
Change the Current Condition	
Build In-House Nurse Research Capacity	.17
Appendix 1: ANCC Organization Self-Assessment for Magnet Readiness	

Acknowledgements

This initiative would not have been possible without the enthusiastic support of the following participating healthcare facilities: Aliquippa Community Hospital, Allegheny General Hospital, Butler Memorial Hospital, Children's Hospital of Pittsburgh, Erie Shriners Hospital, the Faith-Based Network, Frick Hospital, Highlands Hospital, Jeannette District Memorial Hospital, Jefferson Regional Medical Center, Kane Regional Centers, Latrobe Area Hospital, Magee-Womens Hospital, Monongahela Valley Hospital, Ohio Valley General Hospital, Pittsburgh Mercy Health System, Ruby Memorial Hospital, St. Clair Hospital, Sewickley Valley Hospital, Suburban General Hospital, Uniontown Hospital, UPMC Bedford, UPMC Braddock, UPMC Horizon, UPMC McKeesport, UPMC Northwest, UPMC Passavant, UPMC Presbyterian. UPMC Shadyside, UPMC St. Margaret, UPMC Western Psychiatric Institute and Clinic. Washington Hospital and The Western Pennsylvania Hospital. We also are indebted to the staffs of Lancaster General Hospital, Hackensack University Medical Center and the American Nurses Credentialing Center for their wisdom and guidance. The advice and support of Karen Feinstein, Karen lobst, Dodie Roskies, Amanda Hunsaker and the Health Careers Futures Advisory Board were invaluable to this project. Finally, we are indebted to Renu Zaretsky, Kathleen Delaney, Sanjay Galhotra and Mackenzie Tobin for their thoughtful review of this report.

This study was conducted by Justin Kidd, the Lee Netzer Intern at the Jewish Healthcare Foundation, and was supported by a grant from Workforce Connections.

Executive Summary

Health Careers Futures, a non-profit supporting organization of the Jewish Healthcare Foundation, aims to ensure the future of Southwestern Pennsylvania's healthcare industry by working collaboratively with key stakeholders to attract, train and retain healthcare workers. Institutions that have low staff turnover and retain well-trained, highly-motivated health professionals are known to excel in the delivery of safer, high-quality care. Supporting work toward Magnet Status awarded by the American Nurses Credentialing Center (ANCC) in regional healthcare organizations is one of the main objectives of Health Careers Futures, as research shows that Magnet hospitals succeed at recruitment and retention of quality staff, leading to improved patient care outcomes.

In March of 2003, Health Careers Futures hosted a Magnet Summit entitled "Making Every Hospital a Workforce Magnet: Toward Attraction, Retention and Perfect Patient Care." The Magnet Program, developed by the ANCC in 1992, is a nursing attraction and retention program that stresses excellence in nurse administration, nurse autonomy and nurse professional development. Facilities with Magnet Status have achieved improved patient care outcomes, thanks in large part to nurse-led research on evidence-based best practices in patient care.

The purpose of the Magnet Summit was to provide an opportunity for regional healthcare facilities to learn about the Magnet Program and promote it within the region. Representatives from more than 65 healthcare organizations, including 21 hospitals, attended the event. At the time of the conference, few hospitals in the Southwestern Pennsylvania were actively pursuing Magnet Status and no Magnet hospitals were established in the region.

One year after the Summit, Health Careers Futures initiated a study to determine the status of Magnet development in the region and measure the effect of the Magnet Summit on motivating hospitals to apply for the Status. Chief Nursing Officers and Directors of Nursing Education from 34 healthcare facilities were interviewed regarding their pursuance of Magnet Status, strategies they have adopted for Magnet promotion, barriers faced and types of assistance that would be most beneficial during the application process.

The Magnet Program grew from an American Academy of Nursing (AAN) study during the 1980s of 41 hospitals that were exceptionally successful in recruiting and retaining nursing talent. The researchers identified three defining characteristics that the hospitals shared: excellence in nursing administration, excellence in nursing practice and excellence in nursing professional development. Nurses in these high-achieving hospitals, dubbed Magnet Facilities, were recognized, supported and involved in decision-making about patient care and hospital governance.

The Magnet Program has experienced a surge in popularity and is a coveted honor. Nationally, 230 facilities have applied for Magnet Status and currently over 100 healthcare organizations have received the Status. Of the facilities that have applied for Magnet Status, eight are in Pennsylvania, and one, St. Clair Hospital, is in the Pittsburgh region. Thirteen regional hospitals have begun the Magnet process, and several of these expect to submit Magnet applications within the next six months.

Research and interviews indicate five key benefits to Magnet Status: fiscal savings, nurse talent attraction and retention, improvement in patient care, marketing advantage and institution of the Magnet culture. Regional hospitals report a number of reasons for seeking Magnet Status, including improvement in patient care, support from the Magnet network, staff attraction and retention and a close fit between the Magnet philosophy and current hospital practices.

Many regional facilities chose not to seek Magnet Status at this time. Lack of resources, organizational change and union/management challenges all contributed to these facilities' decisions. Applying for Magnet Status is perceived as an arduous and expensive process and therefore requires a serious institutional commitment. Additionally, several organizations, primarily long-term care homes, cited the poor fit between the facilities' needs and the Magnet requirements.

Regional hospitals pursuing Magnet Status report several challenges. Chief among these are lack of resources, difficulties conducting sufficient research to fulfill the standards, difficulties interpreting the standards to the daily activities of floor nurses and danger of slipping into the check-off mentality (pursuing Magnet Status solely for the sake of certification, rather than for improvement in patient care). Regional hospitals also recommended several categories of tactics for effective Magnet implementation, including nurse training, nurse incentives, spirit building and networking opportunities.

Requests for assistance varied. Those facilities farther along in the process requested mentoring and networking opportunities. Health Careers Futures is investigating opportunities to match regional facilities with Magnet hospitals in other parts of the state for mentoring. Mentorship partners could be matched by type, size and patient mix for an optimal exchange of best practices toward Magnet Status. Those facilities starting on the road toward Magnet Status requested conferences similar to the 2003 Summit.

When asked what an organization like Health Careers Futures could do to aid progress toward Magnet certification, more facilities requested help with the Magnet research requirements than any other certification component. Small and mid-size community hospitals with fewer research resources than larger system hospitals could fulfill the Magnet research requirements by adopting one of two strategies: partnering with local academic institutions, or conducting in-house research. Health Careers Futures is planning a second summit that would explore how to build research capacity within healthcare facilities, particularly community hospitals. Several regional and out-of-state facilities have offered to provide speakers who would outline approaches to each strategy as well as provide expert interpretations of Magnet research guidelines.

Magnet Status remains a proven tool to improve the retention of experienced nursing staff that is essential to quality care and patient safety. Regional organizations interested in promoting this should consider facilitating that transition. Making progress to meet Magnet guidelines requires substantial institutional commitment to and nurse leadership in quality. This same commitment and leadership parallels the philosophy and strategies in the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care™ system, another tool in use by regional hospitals. The Southwestern Pennsylvania region is, as a result, exceptionally well positioned to be home to a growing number of Magnet facilities in the future.

Background

Introduction

Health Careers Futures, a non-profit supporting organization of the Jewish Healthcare Foundation, was formed in 2002 as a result of the Pittsburgh Region Health Workforce Summit. The Summit called for a targeted initiative to tackle the shortage of healthcare workers in the region. The Jewish Healthcare Foundation responded by creating Health Careers Futures, whose mission is to ensure the future of the region's healthcare industry, working collaboratively with key stakeholders to attract, train and retain healthcare workers. Supporting work toward Magnet Status, awarded by the American Nurses Credentialing Center (ANCC), in regional healthcare organizations is one of the main objectives of Health Careers Futures, as research shows that Magnet hospitals succeed at recruitment and retention of quality staff, leading to improved patient care outcomes.

The need for Magnet principles in healthcare facilities has never been documented. Repeated observations at hospitals in the region show that two-thirds of a nurse's time is spent nursing the system while only one-third is spent nursing the patient – the value-added clinical care that nurses are trained to provide. Too often, nurses are forced to work in an environment of constant "workarounds" that generate numerous preventable opportunities to harm nurses and patients. But when nurses are empowered to make decisions to develop and refine evidence-based practices, delivery of care is safer and job satisfaction is higher. The pursuit of Magnet Status promotes both. In order to pursue Magnet Status, many regional healthcare facilities need support, additional information and opportunities for networking. Health Careers Futures is fulfilling that need.

In March of 2003, Health Careers Futures hosted a Magnet Summit entitled "Making Every Hospital a Workforce Magnet: Toward Attraction, Retention and Perfect Patient Care." Representatives from more than 65 healthcare-related organizations, including 21 hospitals, attended the event, which showcased Lancaster General Hospital and Hackensack University Medical Center, two highly successful Magnet hospitals. The conference highlighted the benefits of the Magnet Program, the road to Magnet Status, and how local hospitals could move the region toward perfect patient care by adopting Magnet principles or pursuing Magnet Status.

One year after the Summit, Health Careers Futures initiated a study to determine the status of Magnet development in the region and measure the effect of the Magnet Summit on motivating hospitals to apply for the Status. The results of the study follow, as well as a discussion of the national Magnet movement, regional movement toward Magnet Status and steps the Southwestern Pennsylvania community can take to advance Magnet progress.

Methods

The research team began with a comprehensive overview of Magnet literature, from which they developed a nine-point questionnaire. Key questions included:

- What components of the Magnet Program, if any, are your facility implementing?
- When do you foresee submitting the Magnet application (if applicable)?
- What were the key factors influencing your decision to pursue or not to pursue Magnet Status?
- If other competing hospitals achieved Magnet Status, would that affect your decision to pursue or not to pursue Magnet Status?
- Who is the driving force behind the Magnet Program in your institution?
- What are your biggest barriers to success?

- What strategies and tactics have been successful during your Magnet journey?
- What are the floor nurses saying about the Magnet Program?
- What can outside entities (like healthcare-centered foundations) do to facilitate your progress?

Staff familiar with the Magnet Program and the 2003 Magnet Summit conducted an internal review of the survey. Following approval, the research team telephoned representatives, usually the Chief Nursing Officer or the Director of Nursing Education, from the 21 healthcare facilities present at the conference and 17 other hospitals in the region. Between May 1 and May 28, 2004, researchers successfully contacted 34 facilities of the 38 target organizations, conducting interviews 10 to 25 minutes in duration.

History

Facing an intense nursing shortage in the 1980s, the American Academy of Nursing (AAN) studied 41 hospitals that were exceptionally successful in recruiting and retaining nursing talent. Researchers identified three defining characteristics that the hospitals shared: excellence in nursing administration, excellence in nursing practice and excellence in nursing professional development. Nurses in these high-achieving hospitals, dubbed Magnet Facilities, were recognized, supported and involved in decision-making about patient care and hospital governance. 2

Hospitals with these attributes usually possessed an experienced nurse executive who was an active participant in the executive administration of the facility. This nurse leader was a proponent of open communication among nurses and an organizational framework that encouraged nurses to be involved in decision-making. These hospitals also operated using a system of self-directed, self-managed, self-governed unit operation. The clinical nurses managed issues such as patient flow among departments and equipment expenses. Clinical nurses received support from hospital administration regarding their decision-making and implementation.³

In 1992, the American Nurses Credentialing Center (ANCC) developed a formal recognition program for facilities enabling nurses to provide exceptional patient care in a manner consistent with professional standards. To qualify for the award, facilities must meet strict qualitative and quantitative standards that define excellence in nursing practice and patient care. To achieve Magnet Status, the facility must demonstrate excellence in 65 standards developed by the ANCC through both written documentation and a site visit.

Since the Program's inception in 1992, interest in Magnet Status has gained steam. By June of 1998, only 13 organizations had achieved Magnet Status. ⁴ The period between October 2002 and October 2003 saw 26 new Magnet hospitals, ⁵ and since the time of the conference in March 2003, 34 hospitals have achieved Magnet Status. ⁶ Of these, five facilities are located in Pennsylvania: Abington Memorial Hospital (Abington), Lehigh Valley Hospital (Allentown), Lancaster General Hospital (Lancaster), The Children's Hospital of Philadelphia and Fox Chase Cancer Center (Philadelphia). ⁷ No hospitals in Western Pennsylvania have achieved Magnet Status.

Benefits

Health Careers Futures appreciates the importance of Magnet Status, because overall, Magnet Status hospitals produce a stronger healthcare workforce and better patient outcomes for the region.

Financial

The challenge of attracting and retaining well-trained nurses has significant ramifications for local healthcare providers. In purely monetary terms, the cost of replacing a medical-surgical nurse is \$42,000 and replacing a specialty nurse is yet more, \$64,000. The cost of lost productivity alone is nearly 80 percent of the total turnover cost. Nurses report that their perceived autonomy is the most important determinant of their job satisfaction and decision to stay or leave a hospital. More than 40 percent of nurses in Pennsylvania report being dissatisfied with their jobs. 10

Talent Attraction

Magnet Status has proven to be an effective tool in nurse workforce attraction and retention; Magnet hospitals empirically out-perform the average U.S. hospital on job satisfaction measures. Magnet facilities also report lower turnover and vacancy rates than non-Magnet facilities. ¹¹ ¹² ¹³ These "nurse friendly" organizations benefit from reduced costs due to low turnover and greater institutional stability.

Care Improvement

Magnet facilities also demonstrate improved ratings in patient care. Attracting and retaining experienced, well-qualified and well-educated nurses has a direct impact on quality of care. ¹⁴ In one clinical study, published by the *Journal of Advanced Nursing*, researchers found that 72 percent of medical errors were by novice nurses, while experienced nurses accounted for only 28 percent. ¹⁵ Nurse education, another component of the Magnet Program, has been empirically proven to enhance patient outcomes. According to research published in *The Journal of the American Medical Association*, hospitals with higher percentages of Registered Nurses (RN) educated at the baccalaureate level experienced lower mortality and failure-to-rescue rates. Additionally, researchers found that a one percent increase in the proportion of nurses holding a bachelor's degree was associated with a five percent decrease in likelihood of patients dying within 30 days of admission. ¹⁶

Improvements in the hospital working environment, another of the Magnet Program's central themes, directly impact hospital safety. In one study, risk from needle stick injuries increased by more than 50 percent among nurses in hospitals with poor staffing and working climate. ¹⁷ Finally, researchers have found a positive and direct correlation between employee satisfaction (a result of the Magnet Program) and patient satisfaction. ¹⁸

Competitive Advantage

Magnet hospitals report that the designation offers them a significant competitive advantage in the tight nursing labor market.

"We asked a visitor from Mayo (Mayo-Rochester Hospitals) how he was able to attract nurses in the middle of Minnesota. He said, 'We have Magnet Status, that is the important thing.' I then had the great pleasure of showing him our award for Magnet Status." – Dr. Stephen Hall, medical director, North Shore University Hospital, Manhasset, New York, a Magnet facility. 19

The competitive advantage of Magnet Status extends to the healthcare consumer market as well. When queried in a 1999 national survey, 93 percent of the public would have more confidence in the overall quality of a hospital if that hospital had passed the nursing standards required of the Magnet Program.²⁰

"The public won't necessarily know what, exactly, Magnet Status means, but they will know that it's something my hospital has that the facility across the county doesn't, and

that will make a difference (in consumer healthcare choices)." – Pittsburgh Region Hospital Administrator.

The Magnet Culture

The Magnet culture creates a dynamic, positive environment for nurses. "It's a culture where people want to work," remarked one hospital administrator. Magnet hospital nurses report significant gains in areas of empowerment, pride, mentoring, nurturing, respect, integrity and teamwork. The Journal of Nursing Administration reports, "Thus, these hospitals have been cited as cultures of excellence, the measure of goodness and the 'gold standard' in nursing."

National Magnet Status

The Numbers

The Magnet application process consists of four phases: (1) The Application Phase, (2) The Submission of Written Documentation and Evaluation Phase, (3) The Site Visit Phase and (4) The Magnet Program Office's Internal Operations Phase, during which the final decision regarding the granting of Magnet Status is made. (For more specific information, please visit www.nursecredentialing.org). According to the ANCC, approximately 230 facilities have applied for Magnet Status and currently await review. Eight of these are Pennsylvania Institutions. St. Clair Hospital is the only regional facility to have submitted an application; the hospital expects its final site visit in early 2005.²³

Over 100 healthcare facilities have received Magnet Status. Facility size of Magnet hospitals ranges from 50 to 1500 beds with acute care facilities predominating. The ANCC reports an increasing number of community hospital, long-term care facility and home health unit applicants.²⁴

Consequences of Volume

Several hospital administrators expressed frustration with a lengthening delay in processing Magnet applications. Some hypothesized that the Magnet Program's rapid growth, popularity and escalation of new applications was causing the backlog. But, according to Cyndy Hagstrom, outcomes analyst for ANCC, increased process efficiencies and a growing staff have kept pace with the increase in application volume.²⁵ ANCC is currently beta testing a Web-based application procedure, and has posted two positions in the Magnet evaluation department.

New Magnet Program Guidelines

Local administrators also expressed apprehension about revised Magnet program guidelines to be published in the winter of 2004. In fact, one local facility has put its Magnet preparation plans on hold, pending the new guidelines. Other administrators expressed frustration that they had applied under the current guidelines, but would be judged against the yet-unpublished revised guidelines. According to the ANCC, however, most changes to the new guidelines will be format changes rather than content. The current guidelines are organized according to the *Scope and Standards of Practice and Performance for Nurse Administrators*. The new standards use the same content but organize it according to the *Forces of Magnetism*, the ANCC's 14 principles of Magnet Status.

Table 1: ANCC's 14 Principles of Magnet Status

Forces of Magnetism

Standards of Care

- Assessment
- Diagnosis
- Identification of Outcomes
- Planning
- Implementation
- Evaluation

Standards of Professional Performance

- Quality of Care and Administrative Practice
- Performance Appraisal
- Education
- Collegiality
- Ethics
- Collaboration
- Research
- Resource Utilization

Magnet Status in the Pittsburgh Region

Status Check

Of the 34 local care-giving facilities interviewed for this report, almost half (15 of the 38) either have submitted the Magnet application or are on the road to Magnet Status (Table 2). Additionally, eight hospitals are considering Magnet Status while 11 facilities are not. Interviewers could not reach four of the 38 facilities in the study sample.

Table 2: Magnet Status for Hospitals in the Pittsburgh Region

Have Submitted	Road to Submission	Considering Submission	Not Currently Pursuing Magnet Status
 Ruby Memorial Hospital* St. Clair Hospital* 	 Allegheny General Hospital* Children's Hospital of Pittsburgh* Magee-Womens Hospital of UPMC* Pittsburgh Mercy Health System* Sewickley Valley Hospital* UPMC Horizon* UPMC Northwest UPMC Passavant* UPMC Presbyterian* UPMC St. Margaret* UPMC Western Psychiatric Institute and Clinic The Western Pennsylvania Hospital* 	 Butler Memorial Hospital Suburban General Hospital Uniontown Hospital UPMC Bedford UPMC Braddock* UPMC McKeesport* The Washington Hospital*** Westmoreland Regional Hospital 	 Aliquippa Community Hospital Erie Shriners Hospital Faith-Based Network* Frick Hospital Highlands Hospital Jeannette District Memorial Hospital Jefferson Regional Medical Center Kane Regional Centers* Latrobe Area Hospital* Monongahela Valley Hospital* Ohio Valley General Hospital

^{*}Indicates attendance at the 2003 Magnet Summit.

Why Local Hospitals Are Pursuing Magnet Status

Improvement in Care

The driving force behind the push for Magnet Status is defined as improvement in the quality of care. Magnet Facilities report that the improvements in patient satisfaction more than justify the expenses associated with employee education and inclusion efforts.²⁶ In a study where 39 of the original Magnet hospitals were matched to 195 non-Magnet hospitals for a comparison of Medicare mortality rates, the Magnet hospitals had a 4.6 percent lower mortality rate than the non-Magnet hospitals, even after adjusting for patient composition.²⁷

Network Support

Some local facilities credit their Magnet progress to a network of supporting affiliated hospitals. Mercy Hospital, a member of the Catholic Health East network, receives mentoring, how-to knowledge and encouragement from Catholic Health East facilities that already have achieved Magnet Status. "It's our turn now," said Sister Carolyn Schallenberger, Vice-President of Patient Care Services at Mercy Hospital.²⁸

Several University of Pittsburgh Medical Center (UPMC) institutions credited support from the UPMC network in moving toward Magnet Status. The UPMC network allows member facilities to learn from each other by trading information and evaluating best practices. The UPMC network also interprets the guidelines for attaining Magnet Status, which have been published in the *Forces of Magnetism* handbook, for managers and staff of individual hospitals. Although no

^{**}Hospitals not interviewed include: Alle-Kiski Medical Center, Forbes Regional Hospital, Greene County Memorial Hospital and UPMC Southside.

^{***}Officials at Washington Hospital indicated they were investigating Magnet Certification, but were not currently moving toward Magnet Status.

formal Magnet structure has been established, Magnet strategies usually are shared at Vice President meetings or professional practice meetings. In these meetings, nurses present to other nurses, colleague-to-colleague. In addition, UPMC occasionally hosts focused education and focused work groups. ²⁹

Reliance on networks within a hospital system and with mentor or partner facilities was a recurring theme among hospital personnel interviewed. The UPMC system has established a substantial support system to advance progress toward Magnet Status.

Staff Attraction and Retention

"It [staff attraction and retention] is one big competitive race," remarked Marcia Ferrero, RN Director at Allegheny General Hospital, "and working toward Magnet Status will help us to remain competitive." Several local facilities listed attraction and retention of quality nursing staff as a primary motivator of Magnet pursuit.

Good Fit With Current Practices

Several local hospitals cited the good fit between the Magnet ideals and the existing practices of their home institutions. Many of the structures and practices required for the award already were in place before many hospitals began the journey toward Magnet Status.³¹ Managers at Mercy Hospital report that they had implemented several of the initiatives in the *Forces of Magnetism* handbook in the early 1990s.³² Many local facilities expressed that the biggest value in achieving Magnet Status was drawing together, formalizing and documenting several of the quality improvement projects they were pursuing before Magnet Status.

Reasons Facilities Are Not Pursuing Magnet Status

Magnet Status is not a good fit for all facilities, and a number of regional healthcare providers have chosen not to pursue Magnet Status at this time. Although each facility is unique, care providers express similar reasons for not seeking Magnet Status: lack of resources, union challenges, organizational change and lack of fit with the organization.

Lack of Resources

Several facilities cited a lack of resources to support their Magnet pursuit. Although Magnet hospitals report substantial long-term net savings after achieving the award, obtaining Magnet Status is a costly endeavor. Many administrators, particularly those working in medically underserved and under-funded communities, report that the application fee alone (\$2,500) can be a discouragement. Estimating the cost of two appraisers and a two-day site visit (the minimum possible combination), application for Magnet Status could easily require \$16,000 or more in application fees, honoraria and associated costs (Table 3).

Table 3: Minimum Cost of a Two-Day Magnet Evaluation for a Small Facility

Product	Fee	Cost
Application	\$2,500	\$2,500
Appraisal	\$3,700-\$10,000	\$3,700
Honorarium	\$1,000 per day per appraiser (usually 2)	\$4,000
Site Visit Fee	\$1,500 per day per appraiser (usually 2)	\$6,000
Total		\$16,200

In addition to these expenses, facilities pursuing Magnet Status are faced with training costs, appraiser travel costs and other supply expenses. (Each copy of the *Forces of Magnetism* handbook costs more than \$80.)³³ The largest expense in pursuing Magnet Status is the staff time dedicated to the Magnet process. In addition to the additional staff training expenses, most facilities hire a Magnet Coordinator who is dedicated almost exclusively to aligning the facility with the principles in the *Forces of Magnetism* handbook. "It's a job and a half," joked one Magnet Coordinator. The substantial front-end investment required for Magnet application remains a substantial barrier to many regional healthcare providers.

Organizational Change

Several hospitals cited organizational change as a significant barrier to implementation of the Magnet Program. One facility reported that ongoing organizational merger talks and rapid changes in hospital administration had delayed the Magnet Program, as well as most other patient care improvement programs. Several facilities cited other pressing concerns, like upcoming visits by the Joint Commission on Accreditation of Healthcare Organizations, as distractions. For a lot of hospitals, Magnet Status is on the organizational *radar*, but it's not the organizational *target*.

Union Challenges

Several organizations cited union presence as a distraction to implementing the Magnet process. At some facilities, nurse compensation and other human resources matters are handled through a collective bargaining process. Some human resources representatives reported that they often became so occupied with negotiating agreements that they have not had the time to seriously consider pursuing Magnet Status. Another facility reported the union as the biggest hindrance to adoption of the Magnet Program, because under the union agreement, incentives are awarded on the basis of seniority and not on merit.

In other facilities the union has been a great proponent of Magnet Status. During contract negotiations, one union campaigned to include working toward Magnet Status in the collective bargaining agreement. The facility administration also held Magnet pursuit as a priority, and now that hospital has included Magnet Status in the contract, and is making progress toward certification.³⁴

Lack of Fit

Magnet Status is not perceived as a good fit for all organizations. This is the case particularly for long-term care facilities. Although long-term care providers are eligible to apply for Magnet Status, achieving the Status is extremely difficult. All of these organizations are interested in patient care, but none interviewed thought that achieving Magnet Status would be a viable vehicle for their facilities. For many long-term care facilities, the process is too cost-prohibitive and too centered on hospital needs. Long-term care facilities interviewed deemed the Magnet process as a poor fit for their organizations.

Several hospitals cited low staff vacancy rates as the primary reason for not pursuing Magnet Status. Some facilities reported vacancy rates of less than two percent. These facilities tended to focus their efforts on other fronts for the time being. Hospitals in rural markets also feel less pressure to achieve Magnet Status. "If I were competing with another hospital across town or across the street, Magnet Status might be a bigger priority for me," said one nurse administrator.

Obstacles to Pursuing Magnet Status

While the reasons for hospitals to pursue Magnet Status far outweigh those not to pursue the Status, there are certain obstacles that hospitals report facing. This section outlines some common challenges that hospitals applying for Magnet Status may face.

Research Component

Several facilities, principally those outside of a corporate health system, cited the research requirements of the Magnet Program as a major challenge. In particular, community hospitals expressed difficulty with this requirement, because they have less available infrastructure. The table below summarizes the specific research requirements of the Magnet guidelines.

Table 4: ANCC Research requirements

ANCC Standard XIII. RESEARCH			
The nurse administrator supports research	and integrates it into the delivery of nursing care		
and nursing administration.			
Requirement	Interpretive Evidence		
Magnet Measur	ement Criterion 13.1		
Fosters the identification of areas suitable for	Demonstrate that quality assessment and		
nursing research.	improvement efforts are data-based and lend		
	themselves to the identification of suitable		
	research areas. Nurses involved in direct patient		
	care help identify suitable research problems.		
Core Measure	ment Criterion 13.2		
Supports procedures for review of proposed	Adequate review of proposed and ongoing		
research studies, including protection of the	research studies; nursing staff training in the		
rights of human subjects.	protection of human rights.		
Magnet Measur	ement Criterion 13.3		
Facilitates the conduct and utilization of	Nurse researchers are encouraged and enabled		
research and other scholarly activities.	to conduct studies; policies and procedures for		
	clinical care based on current literature, which is		
	easily accessible via library and/or online.		
Magnet Measurement Criterion 13.4			
Advocates for resources to support research.	Research consultation and assistance are		
	available; adequate, appropriate and current		
	literature is available to practicing nurses.		
Magnet Measurement Criterion 13.5			
Promotes research based on knowledge-	List of on-going research studies; other sources		
driven research practice.	of clinical nursing data and information.		

Source: American Nurses Credentialing Center (ANCC) Magnet Nursing Services Recognition Program Guidelines 2002-2004.

To fulfill the Magnet research requirements, healthcare facilities, need to demonstrate that practicing nurses are involved in inter-disciplinary team approaches to research, are engaged in making data-driven, evidence-based improvements in patient care, and have access to adequate, appropriate and current literature. The absence of resources to assist staff nurses in developing data-based nursing research protocols, make these requirements difficult to fulfill. In addition, making progress in meeting these guidelines requires substantial institutional commitment and nursing leadership in quality.

The Pittsburgh Regional Healthcare Initiative – a regional collaborative of hundreds of partnering physicians, 42 hospitals, four major insurers, dozens of major and small-business healthcare purchasers, corporate and civic leaders and elected officials – uses the Perfecting Patient Care™ (PPC) system to move the region collectively toward safer, higher-quality, efficient health care. The PPC framework empowers frontline workers to do their own research via observations and problem-solving at the point of care. This approach has gone a long way in fostering an environment of teamwork and in promoting nurses to assume the leadership role in improving quality of patient care in the Southwestern Pennsylvania region, and complements the pursuit of Magnet Status. The parallels between magnet research requirements and PPC philosophy and techniques were examined at the Magnet Summit in March 2003.

After the summit, though several hospitals cited the research component as a challenge, no facility was detoured from pursuing Magnet Status due to the research requirements.

Translating the Standards

One of the biggest challenges facilities face in adopting the Magnet Program is translating the 14 *Forces of Magnetism* into action on the clinical level. According to one nurse administrator,

"The biggest challenge is being able to translate what Magnet Standards say to a basic staff nurse. What do those standards really mean? What happens to me, and what does my life look like? We need real nurses who have been through the program to tell our nurses, 'My life has changed in these specific ways."

Another challenge hospitals face is helping nurses to articulate how they practice *Forces of Magnetism* in daily life. For example, when they're asked how the facility is sensitive to cultural diversity, the nurse may not immediately know how to respond and say, "I don't know," or say nothing. But when a nurse is asked what he or she does when a patient speaks little English, he or she can respond with all the protocols that demonstrate cultural competency. Many administrators report that the pressing challenge is helping the clinical nursing staff to see the everyday applications of the *Forces of Magnetism*.

Hackensack University Medical Center, the first facility to gain Magnet recognition and a three-time Magnet Certified institution has adopted a comprehensive strategy for integrating the *Forces of Magnetism* into the Hackensack culture. Hackensack administrators use Magnet terminology in all hospital communications from the newsletter to staff notes. Because nurses are constantly exposed to the culture and the terminology, Magnet standards are familiar to them. The Magnet Coordinator never says, "This is what autonomy means..." Instead, she concentrates on instituting the structures and dialogue that promote nurse autonomy. In addition, the hospital nurse recruiter spends hours detailing the Magnet philosophy to each potential candidate, explaining what Magnet Status means, and what he or she should expect. Hackensack officials report that many new recruits come here because they already are familiar with the Magnet culture. ³⁵

The Check-Off Mentality

Another challenge hospitals face in the pursuit of Magnet Status is the danger of simply going through the motions and checking off the boxes for certification.

"You can really tell which organizations take Magnet to heart. Some organizations achieve the award one day and then return to business as usual, but the real Magnet hospitals are out there improving care all the time, regardless of the award. I once had a nurse transfer from another Magnet hospital. I asked her why she left the other facility, and she said, 'There, I was a Magnet nurse for just the survey day. I want to be a Magnet nurse every day, and I feel that here."³⁶

One local hospital reported an initial resistance when Magnet Status was introduced, because staff feared the program was less about fostering a quality nursing environment and more about marketing the institution. The facility changed the communication strategy, stressing the Magnet process rather than Magnet Status, to reassure the staff that improvement in work environment and patient care were the goals of the program, not certification itself.

Many hospital administrators stressed the concept of achieving Magnet Status as a journey, rather than a destination. As Deborah Kaczynski, Director of Patient Care Business Operations at UPMC Shadyside said, "The philosophy here is that Magnet is not the end in itself. By creating an environment of empowerment for our nurses, we will become a quality institution, and that's what it's all about." 37

Effective Steps Toward Magnet Status

Implementation of the Magnet Program is a difficult and complex process; facilities pursuing Magnet Status in the Pittsburgh Region and across the nation have developed a number of effective strategies and tactics to facilitate achievement of Magnet Status. Table 5 gives examples of some of the most effective strategies.

Table 5: Strategies to Facilitate Achievement of Magnet Status

Nurse Training	Education Campaigns: Children's Hospital of Philadelphia conducted an		
Nuise maining	Education Campaigns: Children's Hospital of Philadelphia conducted an exhaustive campaign to ensure that each staff nurse understood the significance		
	and goals of Magnet Status. The chief nurse and her nurse educators		
	encouraged the nursing staff to pursue certification in their specialties. To assist		
	the nurses, the nurse educators provided on-site training and testing for some		
	certifications. Those who received certification received a monetary bonus.		
	Non-Traditional Education: Lancaster General Hospital posted a Magnet		
	Intranet page, held a Magnet fair and established a section of the library		
	dedicated to educational materials about Magnet Status.		
Nurse Incentives	Advancement Ladders: St. Clair Hospital implemented a five-tiered		
Nurse incentives	Professional Advancement Ladder. Each year, nurses apply to retain their		
	positions on the ladder or to advance to the next level. The system evaluates		
	nurses by specific criteria in three categories: provision of exemplary patient		
	care, professional advancement and continuing education. Nurse incentives		
	include pay raises, a paid day off and contributions to a professional advancement account.		
	Monetary Strategies: Humility of Mary Health Partners (Youngstown, Ohio)		
	implemented several strategies, including: "Grow a Nurse" (tuition		
	reimbursement), an \$8 million employee compensation program and an		
	employee suggestion cost-cutting program. (If an employee's suggestion was		
	taken, he or she received 10 percent of the cost savings, up to \$10,000.)		
	Other Perks: Hackensack University Medical Center awarded five-star "free		
	drink" coupons at participating restaurants to nurses who were observed		
	performing exceptionally.		
Building the Buzz	Creating Champions: Lancaster General Hospital in Pennsylvania instituted a		
Ballaling the Buzz	"Magnet Champion Program," consisting of nursing representatives from each		
	ward. These nurses acted as conduits of information, Magnet resources to staff		
	and chaperones for appraisers during the site survey. The team kickoff		
	celebration was called the "Breakfast of Champions," and each Magnet		
	Champion received a box of Wheaties© cereal.		
	Building the Spirit: Lancaster General Hospital also held spirit/preparation		
	days, and ordered flowers for the evaluation day.		
Networking	Conferences: Several nursing administrators cited Magnet conferences and		
	seminars as excellent opportunities for Magnet growth. Nurses interviewed listed		
	development of mentorship relationships, knowledge exchange, networking time		
	and boosts in morale as the primary motivators for attending such conferences.		
	Mentoring: Lancaster General Hospital developed a mentor-mentee relationship		
	with New Jersey's Hackensack Medical Center. The cross-pollination of ideas		
	helped to smooth the transition and build excitement about becoming a Magnet		
	facility. The UPMC hospital system is well equipped to encourage inter-hospital		
	mentoring. Many UPMC facilities that are not currently pursuing Magnet Status		
	report that they plan to use other UPMC hospitals as mentors and guides when		
	the time is right for them to begin the Magnet process.		
	List Serves/Working Groups: Several nursing administrators cited list serves		
	and working groups as effective strategies for sharing information among		
	facilities. Although several facilities reported hesitance to share some information		
	(due to competition concerns), all agreed that doing so would be a good idea.		
	Currently, nursing administrators in the UPMC system frequently share ideas		
	and best practices via a list serve within the system. Several praised this		
	information-sharing strategy, and some credited the inter-agency support within		
	the UPMC system for their facility's Magnet progress.		
	Mock Interviews: Lancaster General Hospital coordinated mock interviews to		
	ease floor-nurses' site-visit anxiety.		

What a Community Can Do

During telephone interviews, hospital administrators were asked what, ideally, outside agencies could do to facilitate their pursuit of Magnet Status. Responses varied depending on the facility's stage in the Magnet Process.

Facilities beginning the process requested informational seminars with content similar to the Magnet Summit of 2003. In fact, several facilities had high praise for the Jewish Healthcare Foundation's Magnet Summit:

- Conference presenter Mary Del Guidice said, "Our experience in Pittsburgh was the highlight for my team and me. We were impressed by the commitment to patient care from [the] entire staff [of Health Careers Futures and the Jewish Healthcare Foundation]. You're doing great things in Pittsburgh."
- One hospital administrator reported, "Last year's Summit really got us excited about Magnet Status. It wasn't the only factor [leading us to pursue Magnet Status], but it did move us forward in our decision."
- A presenter at the conference said, "It was really helpful. We have traveled to a lot of places, and presented at a lot of conferences."

Several facilities cited the importance of involving hospital administration in conferences on Magnet Status. One facility requested a conference showcasing the monetary value of Magnet Status, geared toward the hospital non-nursing administration. A nursing administrator at a different facility said, "Convincing the nurses is easy; it's convincing the administration to dedicate the resources that's difficult."

Hospitals further along in the process requested mentoring opportunities with Magnet facilities and a continuing forum to exchange ideas on the nuts-and-bolts of the Magnet Process. No UPMC hospital requested mentoring or a forum, as most of these needs are met by the network collaboration. Similarly, Mercy Hospital is relying on its network (Catholic Health East) to meet these needs.

Inter-facility mentoring appears to be the most effective strategy to spur hospitals to apply for Magnet Status. Some Magnet facilities are quite eager to mentor other hospitals. Hackensack Medical Center of New Jersey has mentored over 25 hospitals, and truly has taken mentoring to the next level. The facility sponsored a Magnet conference in June 2004, showcasing the Magnet Model and sharing lessons staff learned during the Center's Magnet journey.

"We've done a lot of mentoring with other hospitals. Mentoring is really part of the Magnet Program. When we host visitors, there's a lot of sharing going on. We're sharing our best practices with them, but we also have a lot to learn – because under Magnet, you're always striving to improve. It's really about mutual learning, so it becomes a win-win for everyone. Lines of competition really break down when you're all in the same room. \Our chief nurse fosters the philosophy that our job is really helping patients throughout the state and country. Of course, we're proud to say we were the first Magnet Facility, and that helps." – Mary Del Guidice³⁸

Other hospitals, however, expressed concern about promoting Magnet Status to their potential competitors. One Magnet facility reported extensive mentoring with out-of-state and out-of-market facilities, but reluctance to assist other hospitals sharing the same pool of potential employees and customers. "Sometimes, it's easier to mentor someone who's farther away," said one administrator.

Although a mentoring system or a Magnet information exchange collaborative was the most-requested aid strategy, implementing such a system would pose a number of serious challenges. Generally, collaborating across regional facilities runs counter to the realities of a competitive environment. First, obtaining buy-in from hospitals already involved in a system collaborative would be a difficult proposition. Because they already support many of these structures internally, they would likely not join the collaborative. Second, convincing the hospitals to share information with their competitors may be an impossible task. Some professionals in the medical field view Magnet techniques as trade secrets, while others are leery of sharing internal weaknesses with the competition. While compiling this report, the Jewish Healthcare Foundation encountered some resistance collecting data, even from participants in its 2003 Magnet Summit. It is unclear how freely collaborative participants would exchange information. However, we hope that, over time, a collaborative will unite to share its data freely, thereby learning from each other and taking a crucial step toward improving overall patient care, healthcare work environments and the larger healthcare system.

Conclusions and Next Steps

Research suggests that Magnet Status is highly successful in improving nurse attraction and retention and in improving patient care outcomes. The Magnet Status movement is accelerating nationally and regionally. While healthcare organizations in Southwestern Pennsylvania have been somewhat slower in achieving Magnet Status, many hospitals are now intent on pursuing the Status, and one hospital already has submitted an application. Twelve of the 15 hospitals currently pursuing Magnet Status attended the Magnet Summit in 2003.

Create an Information Exchange

To further facilitate progress toward Magnet Status, several facilities have requested an information exchange collaborative and a Magnet mentorship program. While concerns about competition and data-sharing render these options difficult to implement across regional hospitals, partnering among hospitals that do not share the same patient pool is a possibility. Hospitals interested in mentorships could look beyond the region and create relationships with facilities outside of Southwestern Pennsylvania that already have Magnet Status.

Address Long-Term Care Facility Needs

Magnet Status has been particularly difficult for long-term care facilities to achieve as they have neither the staff nor the funding to devote to Magnet pursuance. With high nursing turnover rates that can significantly increase the cost of operations, long-term care facilities should consider methods, including Magnet, to increase their retention rates. A 2002 survey of nursing homes by the American Health Care Association reported that annual turnover rates for nursing staff ranged from 26 percent to 45 percent in Pennsylvania, while the statewide nursing turnover in hospitals is just 9 percent.

The ANCC has reported that the number of long-term care facilities with Magnet Status is slowly increasing. No stand-alone long term care facilities have Magnet Status yet, while some have achieved Magnet Status when affiliated with a health system. Currently, the ANCC has several applications under review from independent long term care facilities. However, Magnet Status may be most accessible to long term care facilities affiliated with health systems or long-term care chains – those with the most potential to have the resources available to pursue Magnet Status.

Change the Current Condition

To achieve Magnet Status, institutions need to demonstrate either full compliance or excellence in dozens of measurement criteria, many of which are quite stringent. In the absence of changes

to the current healthcare practice environment, many of the Magnet requirements could prove to be very difficult. Repeated analyses of the current condition during hospital observations in the region have revealed that on average nurses spend far more time "nursing the system" than on providing value-added clinical care for which they are trained.

Hospitals often try to solve these problems with traditional quality improvement programs that further reinforce hierarchy among healthcare professionals. The approach of the Perfecting Patient Care™ system is different. It empowers frontline workers – teams with nurses as vital members – to do their own research via observations and problem-solving at the point of care. Such a framework encourages mutual respect, collaboration and a scientific method to make evidence-based improvements in patient care delivery. Healthcare facilities using PPC have made many gains in moving the region collectively toward safer, higher-quality and efficient health care by promoting nurse leadership in quality and research on best clinical practices. The framework complements Magnet requirements and is already a tool in use by healthcare facilities in the region. The Southwestern Pennsylvania region is, as a result, exceptionally well positioned to be home to a growing number of Magnet facilities in the future.

Build In-House Nurse Research Capacity

The Magnet program is designed to make evidence-based improvements in patient care by involving practicing nurses in data collection and research. For Magnet recognition, healthcare facilities must collect a variety of data including data that pertain to nursing practice, nursing-sensitive quality indicators and patient care outcomes. Nurses, either as administrators or as staff nurses, must work independently or collaboratively to develop research protocols based on quality improvement data.

The Magnet program research requirements are cited by many hospitals, especially small and mid-size community hospitals, as an obstacle to pursuing Magnet Status. However, with the wealth of healthcare research talent at the region's universities and colleges, meeting the research requirements for Magnet Status should be achievable.

Community hospitals lacking the infrastructure to pursue research can partner with academic-based researchers for collaboration on research projects or build in-house, point-of-care research capacity. The research criteria for Magnet Status are adaptable. Rigorous, large-scale research projects could be balanced by in-house research directed on hospital units by teams that provide care. Magnet hospitals, including community hospitals, have achieved the Status by leading such internal research. For example, one hospital seeking Magnet Status is supporting its nurses' development of best practices on integrating research utilization into critical patient care.

Health Careers Futures is planning a second Magnet Summit in June 2005 that would present strategies to fulfill the Magnet research requirements as a means to improving care in community hospitals. Health Careers Futures' staff conferred with Debra Thompson, a Perfecting Patient Care Team Leader at the Pittsburgh Regional Healthcare Initiative, to outline the summit concept. The team agreed that the follow-up summit's key strategies will be partnering with local academic institutions and completing the research in-house. Several regional and out-of-state facilities have offered to provide summit speakers who would outline approaches to each strategy as well as provide expert interpretations of Magnet research guidelines.

The most vital outcome of developing Magnet hospitals in the Pittsburgh region will be improved patient care in the region. Working to make health care safer, more efficient and reliable is the ultimate objective for all healthcare facilities in the region, and Magnet Status is a way to achieve it. Health Careers Futures looks forward to facilitating the region's future efforts to pursue Magnet principles and Status.

Appendices

The information in the Magnet Report is supplemented by the attached appendices.

Appendix I is the American Nurses Credentialing Center (ANCC) Organization Self-Assessment for Magnet Readiness. This is a powerful screening tool to measure the organizational readiness in applying for Magnet Status. If an organization is already performing elements mentioned in the checklist, the organization might proceed to request application materials from ANCC. However, some organizations will fail the screening test and will first need to lay down the foundational ground work, in order to move on to the application stage of the Magnet process.

Appendix II is a presentation about the "Role of Research in a Magnet Hospital". The presentation was made by Dr. Christine Mueller from the University of Minnesota, during the March 2003 Magnet Summit hosted by the Health Careers Futures in Pittsburgh. Dr. Mueller talks in detail about the research requirements hospitals need to fulfill, in order to obtain Magnet Status. Research forms the basis of professional nursing practice in a Magnet Hospital. Nurses, not only need to conduct their own research, but also utilize it in daily patient care. Dr. Mueller points out a number of barriers to nurse research utilization which hospitals can potentially overcome by pursuing educational programs and promoting nurse-led in-house research capacity.

Appendix III is a research paper by two nurse leaders at the West Virginia University Hospitals that came out early this year. It describes how a research utilization program was successfully implemented to transform the nursing work environment in a critical care unit into one of research-based practice.



American Nurses Credentialing Center Organization Self-Assessment for Magnet Readiness

Is your organization interested in applying for the Magnet Recognition Program? The best source would be to consult the American Nurses Association's Scope and Standards for Nurse Administrators (ANA, 1996). The following checklist highlights for you some of the most important questions that are the key to beginning the application process.

D. I			
Does the organization collect data regarding:	YES	NO	
- patient outcomes?	YES	NO	
- nursing practice?			
- the unique health care needs of the major patient population served?	YES	NO	
- nursing sensitive quality indicators?	YES	NO	
Does the nurse responsible for the health care organization's nursing			
services hold a position at the executive level of the organization?	YES	NO	
services hold a position at the executive level of the organization.	120		
Does the nurse at the executive level of the organization regularly attend			
executive meetings of the Medical Board of the organization?	YES	NO	
Is there nursing representation on organization decision-making bodies			
(established or ad hoc) such as:			
- Quality Improvement?	YES	NO	N/A
- Human Resources?	YES	NO	N/A
- Ethics?	YES	NO	N/A
and others such as:			
- Finance/Budget, if applicable	YES	NO	N/A
- Utilization Review, if applicable	YES	NO	N/A
- Information Systems, if applicable	YES	NO	N/A
- Information Systems, it apprecion			
Are decisions regarding staffing, patient care standards/policies/guidelines, data			
collection systems and data items to be collected made with nursing input?	YES	NO	
Are the above decisions made based on data collected and on established norms?	YES	NO	
Is the nurse at the executive level of the organization professionally active			
outside the health care organization?	YES	NO	

(Over please)

	Are nurses active and voting members on committees/boards whose activities impact nursing?	YES	NO
•	Are nurses who provide direct patient care encouraged to advance their knowledge and skills base?	YES	NO
•	Does the organization utilize the appropriate number and level of nursing personnel to assure excellent quality outcomes?	YES	NO
•	Has your nurse vacancy rate remained low over the past two (2) years?	YES	NO
	Are nurses involved in the evaluation of nursing care and in the development/revision of processes, systems that impact nursing care and that establish desired outcomes?	YES	NO
٠	Are nurses held accountable for their own practice?	YES	NO
•	Are nurses assigned the responsibility and the authority to care for a group of patients?	YES	NO
٠	Is communication (horizontal and vertical) open, multi-disciplinary, encouraged, sought, and supported by nurses in leadership positions?	YES	NO
٠	Is it true that in the five years preceding application, the organization has not committed an unfair labor practice?	YES	NO
•	Is it true that in the five years preceding submission of the application to the Magnet Recognition Program the organization has not been cited by authorities for a situation which is considered life threatening to patients?	YES	NO

If your answers to the questions were "YES", you may be interested in contacting the AmericanNurses Credentialing Center (ANCC) at (202) 651-7262 to request application materials. The Institute for Research, Education and Consultation (IREC) at ANCC provides Magnet consultation services to assist your organization during the application preparation process. For more information about the consultation services through IREC ANCC, call (202) 651-7258.

¹ Upenieks, V. "Assessing differences in Job Satisfaction of Nurses in Magnet and Non-Magnet Hospitals." *Journal of Advanced Nursing* 32(2002):564-576.

² Berman, H, Ford-Gilboe, M, Campbell, JC. "Combining stories and numbers: a methodological approach for critical nursing science." *Advance Nursing Science* 2(1998):1-15.

³ Upenieks, V. "Assessing differences in Job Satisfaction of Nurses in Magnet and Non-Magnet Hospitals." *Journal of Advanced Nursing* 32(2002):564-576.

⁴ Sullivan Havens, D, Aiken, L. "Shaping Systems to Promote Desired Outcomes." *Journal of Nursing Administration* 2(1999):14-20.

⁵ Bensig, Kay. "Nursing achievements showcased at national Magnet Recognition Program," *Advance for Nurses*, October 27, 2003.

⁶ Saint Barnabas Health Care System, "Community Medical Center Attains Prestigious Magnet Status for Nursing Excellence," www.sbhcs.com/news/cmcMagnet.html (accessed May 24, 2004).

⁷ American Nurses Credentialing Center, "The benefits of becoming a Magnet Facility," http://www.nursingworld.org/ancc/Magnet/benes.html

⁸ Nurse Executive Center, "Reversing the flight of talent" Executive Briefing. 1(2000):14.

⁹ Pierce, LL, Hazel CM, Mion LC. "Effect of a Professional Practice Model on Autonomy, Job Satisfaction, and Turnover." *Nursing Management* 27(1996)48M, 48P, 48R-T.

¹⁰ Aiken LH, Clark SP, Sloane DM, et al. Nurses' Reports on Hospital Care in Five Countries. *Health Affairs*. 2001;20(1):43-52.

¹¹ Buchan, J. "Lessons from America: US Magnet Hospitals and Their Implications for UK Nursing." *Journal of Advanced Nursing*. 19(1994):373-384.

¹² Gleason-Scott, J, Sochalski, J, Aiken, L. "Review of Magnet Hospital Research." *Journal of Nursing Administration* 29(1999);9-19.

¹³ Upenieks, V. "Assessing differences in Job Satisfaction of Nurses in Magnet and Non-Magnet Hospitals." *Journal of Advanced Nursing* 32(2002):564-576.

¹⁴ Persson, L, Hallberg, IR, Athlin, E. "Nurse Turnover with Special Reference to Factors Relating to Nursing Itself." *Scandinavian Journal of Caring Sciences*. 7(1993):29-36.

¹⁵ Reishmann, RR, Yarandi, HN. "Critical Care Cardiovascular Nurse Expert and Novice Diagnostic Cue Utilization: Issues and Innovation in Nursing Practice." *Journal of Advanced Nursing* 39(2002):24-34.

¹⁶ Aiken, LH, Clarke, SP, Cheung, RB, Sloane, DM, Silber, JH. "Educational Levels of Hospital Nurses and Surgical Patient Mortality." *The Journal of the American Medical Association*. 290(2003)1617-1623.

¹⁷ Clark, SP, Rockett, JL, Sloane, DM, Aiken, LH. "Organizational Climate, Staffing, and Safety Equipment as Predecessors of Needlesick Injuries and Near-Misses in Hospital Nurses. *American Journal of Infection Control* 30(2002):207-216.

¹⁸ Kaldernberg, DO. "Do Satisfied Patients Depend on Satisfied Employees or Do Satisfied Employees Depend on Satisfied Patients?" *The Satisfaction Report.* Vol. 3. South Bend, Ind: Press, Ganey Associates, Inc.: 1999.

¹⁹ American Nurses Credentialing Center, "The benefits of becoming a Magnet Facility," http://www.nursingworld.org/ancc/Magnet/benes.html

²⁰ American Nurses Credentialing Center, "The benefits of becoming a Magnet Facility," http://www.nursingworld.org/ancc/Magnet/benes.html

²¹ American Nurses Credentialing Center, "The benefits of becoming a Magnet Facility," http://www.nursingworld.org/ancc/Magnet/benes.html

²² Havens, DS. "Shaping Systems to Promote Desired Outcomes: The Magnet Hospital Model." *The Journal of Nursing Administration*. 29(1999):14.

²³ Cyndy Hagstrom (Senior Magnet Program Specialist/Outcomes Analyst at the ANCC), E-mail message to author, April 11, 2004

²⁴ Cyndy Hagstrom (Senior Magnet Program Specialist/Outcomes Analyst at the ANCC), E-mail message to Amanda Hunsaker, August 18, 2004

²⁵ Cyndy Hagstrom (Senior Magnet Program Specialist/Outcomes Analyst at the ANCC), E-mail message to author, April 11, 2004

²⁷ Aiken LH, Smith HL, Lake ET. "Lower Medicare mortality among a set of hospitals known for good nursing care." Medical Care 32(1994):771-787.

Sister Carolyn Schallenberger (Vice president, patient services, Pittsburgh Mercy Health System), in telephone discussion with the author, March 2004

Andrea Schmid (Vice President, Patient Care Services, UPMC Presbyterian), in telephone discussion with the author. May 2004

³⁰ Marcia Ferrero (RN Manager, Allegheny General Hospital), in telephone discussion with the author, May 2004 author, May 2004 The Services, UPMC Presbyterian), in telephone

discussion with the author, May 2004 ³² Sister Carolyn Schallenberger (Vice president, patient services, Pittsburgh Mercy Health

System), in telephone discussion with the author, March 2004
³³ Sister Carolyn Schallenberger (Vice president, patient services, Pittsburgh Mercy Health System), in telephone discussion with the author, March 2004

Marcia Ferrero (RN Manager, Allegheny General Hospital), in telephone discussion with the author, May 2004

³⁵ Mary Del Guidice (Administrative Director of Nursing, Hackensack University Medical Center), in telephone discussion with the author, May 2004

³⁶ Mary Del Guidice (Administrative Director of Nursing, Hackensack University Medical Center), in telephone discussion with the author, May 2004

³⁷ Deborah Kaczynski (Director of Patient Care Business Operations at UPMC Shadyside), in telephone discussion with the author, May 2004

³⁸ Mary Del Guidice (Administrative Director of Nursing, Hackensack University Medical Center), in telephone discussion with the author, May 2004

³⁹ American Health Care Association, "Results of the 2002 AHCA Survey of Nursing Staff Vacancy and Turnover in Nursing Home," http://www.ahca.org/research/rpt_vts2002_final.pdf ⁴⁰ The Hospital and Healthsystem Association of Pennsylvania, "Pennsylvania Nurses: Meeting the Demand for Nursing Care in the 21st Century."

http://www.haponline.org/downloads/PANurses2001update.pdf

²⁶ Mary Del Guidice (Administrative Director of Nursing, Hackensack University Medical Center), in telephone discussion with the author, May 2004