

# Differentiating nursing leadership and management competencies

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As the foundation of evaluating content for nursing leadership and administration courses, leadership and management competencies were identified from a literature review of 140 articles published between 2000–2004. Similarities and differences among the competencies were assessed. A large intersection of common competencies was discovered, indicating a lack of discrimination between leadership and management competencies. Arguably, this fusion ignores the different purposes served by leadership and management. Alternately, the convergence of leadership and management competencies might reflect that traditional distinctions have narrowed. Nevertheless, ambiguity persists regarding essential leadership and management competencies and the way they are reflected in nursing curricula. If concerns about the work environment are to be remedied for patients and staff, nurse educators are urged to act quickly to identify requisite competencies and better align course content with them. This will better prepare nurse administrators to succeed in their arduous work.

Serious concerns exist about the paucity of nurse administrators to create a work environment that is both enriching to staff and safe for patients.<sup>1–4</sup> The dearth of nurse administrators can be traced to 3 major forces. First, clinical careers are more highly valued than administrative careers.<sup>5–7</sup> Second, too few nurse administrators are educationally prepared to assume the challenges of the role.<sup>1,8–10</sup> Finally, the dramatic

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changes resulting from restructuring efforts during the 1990s diminished the appeal of nurse manager and executive positions.<sup>11–15</sup> Concurrently, however, calls are intensifying to fill a perceived leadership void in nursing and health care.<sup>16–31</sup>

These issues prompted the authors to review the content of nursing administration and nursing leadership courses at one university. As an initial step in the review, Websites were explored from schools of nursing with administration and leadership programs. Based on information from the Websites, it was not clear how coursework for nursing leadership differed from coursework for nursing administration. This raised questions about the similarities and differences in leadership and management competencies and the curriculum that would best serve students in acquiring these competencies.

The central issue is not whether both pursuits are needed but, rather, whether a common curriculum can prepare individuals for both roles. Scoble and Russell<sup>32</sup> noted that although leadership, management, and administration are used interchangeably, they are not synonymous. This view is consistent with the classic work of Bennis and Nanus<sup>33</sup> who indicated that leadership and management are both important but profoundly different. According to Kouzes and Posner,<sup>34</sup> leadership is based on relationships and helping people (and organizations) move toward achieving a vision. By contrast, management focuses on maintaining order, planning, organizing, coordinating resources, and attending to rules and details.<sup>34</sup>

If these assertions are correct, it becomes important to identify the competencies unique to leadership and management, as well as areas they share in common, to more appropriately guide educational endeavors. Competencies represent a cluster comprised of knowledge, skills, attitudes, abilities, behaviors, and other characteristics.<sup>35,36</sup> The authors were particularly interested in competencies because of the underlying assumptions that: (1) training and education can improve competencies<sup>36–39</sup> and (2) competencies can be measured to evaluate effectiveness.<sup>27,36</sup> An analysis was, therefore, undertaken to

identify similarities and differences between competencies for nurse leaders and nurse managers. That analysis is reported in this article.

## METHODS

The Cumulative Index of Nursing and Allied Health Literature (CINAHL) and MEDLINE were used to identify the literature over 5 years—from 2000–2004. In CINAHL, “administration” is a subheading within the subject heading “management”. Information in the scope note suggested using both management and administration in the search. Thus, the major search words—leadership, management, and administration—were each combined with additional subject headings—competencies, knowledge, skills, abilities, characteristics, and attributes. This strategy identified 316 citations published in the English language. Of these articles, 53 were cited in both Medline and CINAHL searches yielding 263 unique publications.

The abstracts for each citation were assessed to refine the review. For example, 80 citations from the MEDLINE search were eliminated from this analysis because they were not relevant to the topic. The term management, for instance, was combined with many adjectives such as information management, quality management, disease management, and financial management. Likewise, the administration search included articles about the administration of various drugs as well as the Health Care Financing Administration and the Food and Drug Administration. One article was published in 2 journals—with the appropriate copyright considerations addressed. Only the source where it was first published was counted for this review. Book reviews, recurring columns, letters to the editor, and unpublished dissertations were also omitted.

Although not an *a priori* decision, the authors also decided to exclude work conducted outside the US (n = 39). This choice was guided by several factors. First, questions exist regarding whether US principles of leadership and management can be extrapolated elsewhere, including to English-speaking countries.<sup>40</sup> Even when individuals from different countries speak the same language, nuanced meanings may alter understanding.<sup>41</sup> Second, leadership and management competencies may differ depending on the country’s prevailing health insurance program. For similar reasons and to ensure consistency, articles published by US authors in international journals were also eliminated from the review.

While retrieving the remaining 127 articles, the authors located and included a few pertinent articles not reflected in the electronic literature searches (n = 10). In addition, one of the articles identified in the search was the most recent in a series of 4 articles with point and counterpoint perspectives. The 3 articles published prior to 2000 were added to this review because they created the foundation for the article within the time-

frame. This analysis was, therefore, based on a critical review of 140 publications.<sup>16–21,23–32,35,37–39,42–160</sup>

All 140 articles were independently evaluated by 3 of the authors who determined: (1) which competencies were addressed, and (2) whether the competencies were identified as pertaining to leadership or management. There was no attempt to judge the correctness of the characterizations. The authors then held a series of meetings during which they discussed their individual findings and talked through the few differences of opinion. All the differences were easy to reconcile and no articles were discarded. The analysis was therefore consensus-based.

## FINDINGS

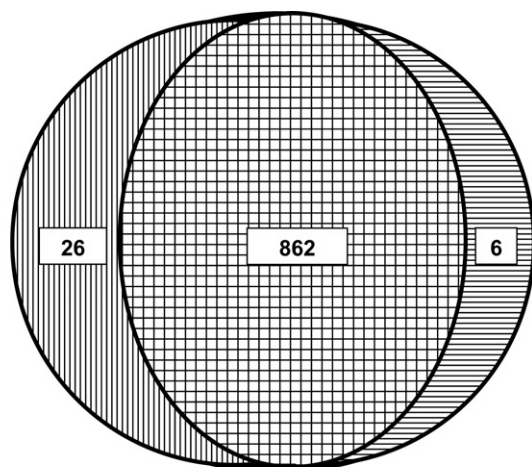
### *A General Description of the Literature*

Individuals from 16 disciplines authored these articles, reflecting a widespread interest in leadership and management. The first author was most often a nurse (n = 67), followed by individuals in business (n = 19), medicine (n = 14), and health care management (n = 8). Authors from psychology, pharmacy, physical therapy, respiratory therapy, theology, and veterinary practice (n = 1 each) also addressed competencies for leadership and management.

Most articles (n = 62) were published in nursing journals (44%), 30 in health care management journals (21%), 13 in business journals (9%), and 10 in medical journals (7%). The remaining articles were scattered among a variety of journal types such as quality care, public health, social work, health promotion, medical laboratories, fitness, and religious health care organizations (n = 2 each). One article each was found in journals dedicated to infection control, military health care, dentistry, pharmacy, physical therapy, veterinary practice, and psychology.

Articles were published in 56 different journals with the *Journal of Nursing Administration* being the source of 23 articles (16%). The second most frequent places of publication were the *Harvard Business Review* and the *Journal of Health Administration Education* with 13 articles each (9%). Various clinical journals were also represented including *Ambulatory Pediatrics* and the *American Journal of Surgery* (n = 2 each) as well as the *American Journal of Critical Care*, the *American Journal of Emergency Medicine*, and *Medical Surgical Nurse* (n = 1 each). There was also one online journal in the collection.

Most of the articles were opinion-based (n=80, 57%). These ranged from more critical, scholarly commentaries to articles that were less analytical and only modestly supported by the literature. The remaining 60 articles (43%) used data in some way. Of these, 4 were reports of projects during which data were collected, 4 used data from previously conducted research such as in developing integrative reviews, and 52 were reports of actual research. It was not possible to detect mean-



Legend:

- ▨ Leadership competencies
- ▨ Management competencies
- ▩ Leadership/Management competencies intersection

**Figure 1.** The intersection of leadership and management competencies.

ingful differences between the content of the opinion-based articles and those that were data-driven. Quantitative methods dominated the data-based articles, although 13 used qualitative methods and 3 used mixed methods.

### *A Description of the Competencies*

In this review, each competency mentioned in each article was identified ( $n = 894$ ), as well as whether the competency was addressed in relation to leadership or management. Some competencies, such as collaboration and team skills, were mentioned several times ( $n = 41$ ). Other competencies, such as biostatistics, were mentioned only once. Leadership competencies ( $n = 581$ ) were addressed more often than management competencies ( $n = 313$ ), reflecting the current interest in leadership. When comparisons were made between leadership and management competencies, however, all but 32 competencies were mentioned in relation to both. Of these, 26 competencies were unique to leadership and 6 were unique to management. The large intersection ( $n = 862$ ) indicates a lack of discrimination between leadership and management competencies (see [Figure 1](#)). Despite this similarity, the tone of the literature suggested that leadership competencies were more highly valued.

### *Competency Categories*

Content analysis techniques were used to synthesize the individual competencies into categories. Each of the 894 competencies was written on a  $3 \times 5$  card. These were assessed by 2 of the authors who grouped similar competencies. Through this process, 36 categories emerged, 23 of which were common to both leadership and management.

Some competencies were easily clustered into categories (eg, statements about vision and change). Others required thoughtful discussion to identify the central theme. For instance, “personal qualities” reflected 77 different characteristics such as risk-taking, courage, confidence, and creativity. Overall, the personal qualities highlighted the importance of knowing one’s self and developing a diverse and fluid repertoire. Self-knowledge serves many purposes such as enabling individuals to understand their values, beliefs, motivations, and responses.<sup>129</sup> It also allows individuals to wisely activate their own best characteristics for grappling with an array of organizational challenges, as well as assembling teams with complementary skills.<sup>24</sup>

The category “developing people” pulled together competencies such as mentoring, coaching, and developing staff. These person-centered competencies involve reciprocal interactions that shape and prepare individuals to accomplish the organization’s mission. By comparison, the competencies in the “human resources management” category were more rule-bound and procedurally driven. They included competencies related to policies for hiring and firing, job descriptions, and labor relations.

The top 10 leadership and management categories were identified based upon the frequency counts of the competencies they represented. Most of the competencies, 746 of the 894, were accounted for in these 10 categories (85%). As shown in [Table 1](#), the frequency with which the competencies were mentioned and their rank order varied between leadership and management. For example, the top 2 categories for both were “personal qualities” and “interpersonal skills,” but their rank order was reversed. The top 10 leadership categories included “developing people” and “vision.” These categories were also mentioned in management, but they ranked lower (17th and 18th, respectively). Conversely, although “human resource management” and “information management” were among the top 10 management categories, they ranked lower in the leadership categories (11th and 17th, respectively). After the categories were finalized, it was discerned that they reflected 2 knowledge domains—some related to individual skills (eg, interpersonal, thinking) and some pertained to organizational skills (eg, management, business).

Competency categories shared by leaders and managers that had lower frequency counts (eg, high of 12, low of 1, mode of 2) included: offering incentives and rewards, developing a healthy work environment, being results-oriented, focusing on customers, sustaining organizational and environmental awareness, improving quality, assessing technology, governance, delegating tasks and responsibilities, health policy, and law. Of note, developing a healthy work environment was mentioned only 6 times as a leadership competency and only 2 times as a management competency. This reflects a poor fit between identified competencies and

**Table 1. Top 10 Competency Categories for Leadership and Management**

Rank	Category (n) <sup>a</sup>	
	Leadership	Management
1.	Personal qualities (147)	Interpersonal skills (55)
2.	Interpersonal skills (100)	Personal qualities (54)
3.	Thinking skills (55)	Thinking skills (29)
4.	Setting the vision (36)*	Management skills (eg, planning, organizing) (28)
5.	Communicating (33)	Communicating (24)
6.	Initiating change (32)	Business skills (eg, finance, marketing) (23)
7.	Developing people (25)*	Health care knowledge (clinical, technical, as a business) (22)
8.	Health care knowledge (clinical, technical, as a business) (22)	Human resources management (17)**
9.	Management skills (eg, planning, organizing) (21)	Initiating change (9)
10.	Business skills (eg, finance, marketing) (17)	Information management (9)**

<sup>a</sup>Number of times this competency was identified in the literature reviewed.

\*Unique to the top 10 Leadership Competencies.

\*\*Unique to the top 10 Management Competencies.

current needs to improve work environments as addressed by the American Association of Critical Care Nurses,<sup>1</sup> the American Hospital Association,<sup>2</sup> the Institute of Medicine,<sup>4</sup> and the Joint Commission.<sup>3</sup>

For the remaining 13 categories, 9 were unique to leaders and 4 to managers. Examples of competencies associated only with leadership included using political skills and using power. Two leadership competencies stood out because they were unusual—remaining an independent thinker rather than a team player and serving as a symbol to represent the group. Competencies mentioned only in association to management concerned economics, biostatistics, epidemiology, and evidence-based practice. It was not clear why some of these competencies were limited to either leadership or management.

Competencies were most often portrayed in a positive way, with little attention given to the shadow side of attributes. For instance, a passion for one's work may have a negative effect if it overpowers others' views.<sup>69</sup> Similarly, collaboration was addressed more often than conflict, illustrating the tendency to ignore the tough work of both leadership and management. Heifetz and Linsky<sup>92</sup> suggested that although conflict is potentially dangerous, it is necessary for change to occur. They underscored the importance of learning how to deal with people's differences by letting conflicts surface.

The way in which conquering adversity shapes leaders also received limited attention. Effective leadership and management often develop from intense, even traumatic experiences that allow individuals to

learn from failure and mistakes.<sup>20,48,76</sup> In addition, some traits were paradoxical—personal humility and professional will; timidity and ferocity; shyness and fearlessness. These paradoxical combinations were found among individuals at the pinnacle of leadership.<sup>57</sup>

### *Competencies as Reflected in Educational Programs*

Several of the articles in this review addressed educational programs designed to develop leaders and managers in a number of different health care disciplines ranging from health care administration to veterinary practice.<sup>17,31,32,38,39,43,45,63,80,83,102,110,119,121,123,127,138,140,160</sup>

Programs were also designed with the explicit purpose of developing leadership abilities among faculty members.<sup>17,118</sup> The different disciplines notwithstanding, this collection of articles illustrated differences of opinion among stakeholders regarding the optimal coursework to achieve the desired competencies.

Relevant to nursing is a debate that surfaced about whether nursing administration programs will survive in the 21st century. This debate stimulated a point-counterpoint exchange that spanned 3 years.<sup>8,60,114,115</sup> Although the authors offered different perspectives, they shared the belief that nursing administration programs, as currently structured, will not position nurses to be successful leaders and managers in today's health care environment. We, therefore, examined educational programs to develop nurse leaders and managers identified in this review. They fell into 2 clusters.

Programs in the first cluster were not conducted as part of traditional, degree-granting, educational programs. Of these, one was designed to improve beginning leadership competencies among baccalaureate nursing students.<sup>17</sup> A central thesis of this program was that “Everyone—from staff nurse to chief nurse executive—should become a ‘workleader,’ which requires individuals to learn to effectively manage themselves as well as their relationships with others.”<sup>17</sup> Another involved a research-based<sup>59</sup> interactive workshop designed to enhance charge nurse competencies.<sup>58</sup> The workshop was structured to address 54 specific competencies in 4 categories—clinical/technical, critical thinking, organizational, and human relations. At the other end of the career continuum, focusing on senior nurse leaders, was the Robert Wood Johnson Nurse Executive Program. Its curriculum comprised 5 competencies—self-knowledge, interpersonal communication effectiveness, risk-taking and creativity, inspiring and leading change, and strategic vision.<sup>24</sup>

Programs in the second cluster addressed graduate nursing curricula related to leadership and management. Of these, 2 opinion-based publications described re-vamping programs to better meet community needs by integrating leadership knowledge into various specialties, including nursing administration.<sup>121,160</sup> Details of these curricula, however, were not provided.

Research-based articles from the second cluster provided more details about a desired curriculum for nursing administration programs.<sup>32,80,140</sup> Some questions were raised, however, based upon the groups recruited to delineate the desired content. In one instance, a survey of deans and program directors informed the content for master’s degree nursing administration curricula.<sup>80</sup> Such reports must be used cautiously because the point of view of practicing nurse administrators is missing. Input from practicing nurse executives and managers is especially important given Ackoff’s assertion that faculty isolation from current practice may reduce the relevance of content in management education.<sup>70</sup> Likewise, others have noted a tendency for faculty to teach what they know and what interests them, which may not be congruent with developing competencies for current and future administrative practice.<sup>87</sup> These beliefs suggest the need to be more inclusive when identifying stakeholders who can best inform course content. They may also help to explain why nurse managers indicated they often learned necessary competencies on the job rather than through formal education.<sup>102,140</sup>

The problems of selecting content based exclusively on the faculty perspective was overcome in a pair of studies that began by soliciting opinions about curricular content and key competencies aimed at preparing successful nurse administrators for the future from a convenience sample of an eclectic group of nurse leaders.<sup>32</sup> These findings were used to create a questionnaire that was mailed to nurses in a variety admin-

istrative positions (eg, Chief Nurse Officers [CNOs], directors, nurse managers).<sup>140</sup> Results from the mailed questionnaire were organized into 9 categories: (1) the business of health, (2) healthcare delivery systems, (3) health policy, law, and ethics, (4) human capital, (5) information systems, (6) leadership and management, (7) organizational theory and design, (8) quality management, and (9) research.<sup>140</sup> While grounded in the view of those with first-hand knowledge of nurse administrators’ needs, these categories nonetheless verify the ambiguous terminology that impedes creating course content focused on developing specific competencies.<sup>35,50</sup> Of note, these categories are only modestly similar to those derived from the analysis reported here (see Table 1).

In addition, although the identification of these competencies by practicing nurse administrators allowed reality-based input, there was no attempt to identify competencies based on one’s career stage, role, or responsibilities. Competencies differ based on these considerations.<sup>27,110</sup> This dynamic may be operational among nurse managers who rated the importance of graduate education lower than did nurse executives.<sup>103</sup> Also not considered was how competencies might vary by setting. For instance, acute care facilities require a different set of competencies than those valued in long-term care.<sup>78,81,112</sup> Likewise, skills suitable to rural settings<sup>77,142</sup> may differ from those needed in urban areas. Although no curriculum can prepare individuals for all levels and all settings, educators would be wise to take these considerations into account. Educators would also be wise to consider the differences in clinical nurse leader roles<sup>72</sup> and administrative nurse leader roles that might add to curricular confusion.

### *Competencies as Reflected by Professional Nursing Organizations*

In 1997, the American Association of Colleges of Nursing and the American Organization of Nurse Executives (AONE) identified core abilities and content for educating nurse administrators.<sup>161</sup> These recommendations may now be obsolete based on 2 more contemporaneous documents, one from the American Nurses Association (ANA)<sup>162</sup> and the other from AONE.<sup>163</sup> The more recent AONE and ANA documents were compared to competencies identified in this analysis.

The ANA standards for nurse administrative practice<sup>162</sup> group essential knowledge into 27 categories. These categories pertain to 2 levels of nurse administrators, the executive level—CNOs, directors, deans, and associate deans—and the nurse manager level. Although leadership was mentioned as a responsibility of nurse administrators, it was not among the categories of essential knowledge. Interpersonal skills were also missing, although negotiation and conflict resolution are specified. The absence of a category specific to

communication was conspicuous because the ANA standards are predicated on a belief that vertical and horizontal communication is critical to success.

According to AONE, nursing leadership/management is a specialty that requires proficiency. In support of this belief, AONE organized competencies specific to nurse executives into a model comprising 5 categories: (1) communication and relationship management, (2) knowledge of the health care environment, (3) professionalism, (4) business skills and principles, and (5) leadership.<sup>163</sup> It is noteworthy that the AONE model resulted from collaboration among an interdisciplinary group of stakeholders interested in health care leadership (eg, American College of Healthcare Executives [ACHE], Healthcare Information and Management Systems Society [HIMSS], Medical Group Management Association [MGMA]). Each category is elaborated with sufficient detail so that it could be used to guide curriculum-development, although the numerous elements within each category pose a challenge to educators and students alike. It would be most useful if a similar effort could be conducted to identify competencies for first-line managers. It would also be helpful if a cadre of practicing nurse administrators could verify the fit between the stated competencies and their actual needs.

## DISCUSSION

Both educational programs and professional nursing organizations address numerous leadership and management competencies, either directly or indirectly, in their curricular recommendations and standards statements. Questions arise, however, about the adequacy of these responses given the pace of change in today's health care systems. In this analysis, leadership competencies were addressed almost twice as often as management competencies. Although this underscores the popularity of leadership, it belies the similarity between leadership and management competencies (see Figure 1). Of the 894 competencies found in the 140 articles reviewed, 862 were common to both leadership and management. This sizable intersection provides evidence to question whether previous distinctions between leadership and management remain relevant.

Some may argue that the fusion of leadership and management competencies tends to ignore the different purposes served by each. Conversely, the convergence of leadership and management competencies might reflect a different dynamic. The dramatic changes that have altered the social context of health care may have influenced this evolution. Based on evidence from this review, the message for curriculum-development reflects the need for an evolving educational paradigm, one that currently reflects the strong commonalities among leadership and management competencies.

Additionally, the educational paradigm needs to ensure that students are prepared with skills appropriate to the care delivery setting, societal demands, and their career stage. Practicing nurse executives are challenged

as well to design mechanisms to support individuals as they transition to first-line, midlevel, and executive administrative roles. An approach used by one university medical center to support 3 levels of leadership-training for nurses—emerging, operational, strategic—was described in a recent publication.<sup>164</sup>

To keep pace with the dynamic nature of health care, faculty must ensure that curricula adapt to changing conditions so nurse administrators are positioned for success in their challenging roles. To provide ongoing vision for thoughtful yet timely responses to these influences, it would be beneficial to hold formal and frequent forums involving professional organizations, nurse educators, nurse administrators, and students. High preference must be given to key competencies identified by the end-users—students and employers.

Educators are also challenged to sustain their own learning to keep pace with change. Lifelong learning is as important to nursing administration faculty members as it is to nurse leaders and managers in the clinical setting. However, consistent with concerns expressed by Ackoff,<sup>70</sup> a nurse leader recently wrote “. . .many [faculty] have experienced an erosion in the relevancy of their knowledge and skills and, most importantly, their ability to imagine what could be—not what should be based on tradition.”<sup>165</sup>

Moreover, the vast array of competencies identified in this review verifies assertions that leaders and managers are expected to be all things to all people.<sup>19</sup> It also corroborates the view that “the role of the nursing administrator is expanding and the skill-set required is immense.”<sup>80</sup> The complexity of the nurse administrator's role is also evident in the competencies proposed by ANA<sup>162</sup> and AONE.<sup>163</sup> In addition, it has become too common for courses to be added to already heavy requirements without eliminating or consolidating existing classes.

Ensuring a good fit between curricula and actual competencies needed for administrative practice has been difficult.<sup>37</sup> Enthusiasm for leadership development must also build on coursework, such as financial and human resource management, that is essential to nurses who choose to become managers and nurse executives. Given concerns about the paucity of nurse administrators to create healthy work environments, it is essential for faculty to ensure that nursing administration curricula are commensurate with essential organizational and individuals competencies. Meeting this goal will require regular conversations among representatives from all key stakeholder groups.

## CONCLUSION

Based on this analysis, the boundaries between nursing leadership and management competencies have narrowed. This narrowing blurs the differences traditionally noted between the 2, requiring new approaches to conceptualizing curricula. The challenge for educators

becomes one of examining and revising curricula to ensure that course content will help students acquire the competencies they need to succeed in contemporary administrative positions.

There must be thoughtful, deliberate consideration of these requisite competencies. Nurse educators, nurse administrators, employers, graduates and other stakeholders must unite to provide thoughtful direction for ongoing curricular discussions and decisions. The AONE<sup>163</sup> and ANA<sup>162</sup> have provided beginning frameworks in this regard. Further curricular decisions could benefit from “state-of-the-art” meetings designed to identify the implications on the curriculum from changing social, financial, and health care policies. To maximize their productivity, such meetings need to attend to leadership and management competencies by settings, level of role responsibility, career stage, and changing social demands. Dialogues such as these will be futile if concrete or linear thinkers expect an exhaustive and complete curriculum as an outcome. However, these conversations could stimulate leading thinkers to understand critical points and content that will develop essential leadership and managerial skills, including critical thinking.

For almost 30 years, leaders in the field of nursing administration have repeatedly called for the development of curricula suitable to prepare nurse administrators for their arduous tasks.<sup>8–10,13,60,115,116</sup> Perhaps the widespread concern about work conditions could have been avoided had these calls been heeded sooner. Although the past cannot be altered, its lessons can be used to build a future that better prepares nurse administrators to deal with the complex challenges that abound.

## REFERENCES

\*References included in analysis. References 28 to 165 are available at <http://www.nursingoutlook.org>.

- American Association of Critical-Care Nurses [AACN]. *AACN Standards for Establishing and Sustaining Healthy Work Environments. A Journey to Excellence*. 2005. [www.aacn.org](http://www.aacn.org). Retrieved August 12, 2005.
- American Hospital Association [AHA] Commission on Workforce for Hospitals and Health Systems. *In Our Hands. How Hospital Leaders Can Build a Thriving Workforce*. 2002; Chicago, IL: American Hospital Association.
- Joint Commission on Accreditation of Healthcare Organizations [JCAHO]. *Health Care at the Crossroads. Strategies for Addressing the Evolving Nursing Crisis*. 2002; Oakbrook Terrace, IL: JCAHO.
- Page A. (Ed.). *Keeping Patients Safe. Transforming the Work Environment of Nurses*. 2003; Washington, DC: National Academies Press.
- Jennings, BM. Nursing research. A time for redirection. *J Nurs Adm* 1995;25(4):9-11.
- Jennings BM, Meleis AI. Nursing theory and administrative practice: Agenda for the 1990s. *Adv Nurse Sci* 1988; 10(3):56-69.
- Stevens BJ. Education in nursing administration. *Supervisor Nurse* 1977;8(3):19-23.
- Haynor PM, Wells RW. Will nursing administration programs survive in the 21<sup>st</sup> century? *J Nurs Adm* 1998;28(1): 15-24.\*
- Poulin MA. Education for nurse administrators: An epilogue. *Nurs Adm Q* 1979;3(4):45-51.
- Stevens BJ. Improving nurses' managerial skills. *Nurs Outlook* 1979; 27(12): 774-777.
- Clifford J. *Restructuring: The Impact of Hospital Organization on Nursing Leadership*. 1998; Chicago, IL: AHA Press-American Hospital Publishing, Inc. and the American Organization of Nurse Executives.
- Gelinas LS, Manthey M. The impact of organizational redesign on nurse executive leadership. *J Nurs Adm* 1997; 27(10):35-42.
- Ingersoll GL. Organizational redesign. Changing educational needs of midlevel nurse administrators. *J Nurs Adm* 1998;28(4):13-16.
- Norrish B, Rundall T. Hospital restructuring and the work of registered nurses. *Milbank Q* 2001;79(1):55-79.
- Sovie M, Jaward A. Hospital restructuring and its impact on outcomes. *J Nurs Adm* 2001;31(12):588-600.
- Batalden PB, Nelson EC, Mohr JJ, Godfrey MM, Huber TP, Kosnik L, Ashling K. Microsystems in health care: Part 5. How leaders are leading. *Jt Comm J Qual Saf* 2003; 29(6):297-308.\*
- Bellack JP, Morjikian R, Barger S, Strachota E, Fitzmaurice J., Lee A, Kluzik T, Lynch E., Tsao J, O'Neil EH. Developing BSN leaders for the future: The Fuld leadership initiative for nursing education (LINE). *J Prof Nurs* 2001; 17(1):23-32.\*
- Chaffee MW, Mills MEC. Navy medicine: A health care leadership blueprint for the future. *Mil Med* 2001;166:240-247.\*
- Corning SP. Profiling and developing nursing leaders. *J Nurs Adm* 2002;32(7/8):373-375.\*
- Fitzpatrick JJ. Perspectives on leadership. A bold leadership style: Nothing will ever be accomplished if all obstacles must first be overcome! *Policy, Politics, & Nurs Prac* 2004;5(4):233-236.\*
- Goonan KJ, Stoltz PK. Leadership and management principles for outcomes-oriented organizations. *Med Care* 2004;42(4 suppl): III-31-III-38.\*
- Horton-Deutsch SL, Mohr WK. The fading of nursing leadership. *Nurs Outlook* 2001;49(3):121-126.
- Kowalski K, Yoder-Wise PS. Five Cs of leadership. *Nurs Leader* 2003;1(5):26-31.\*
- O'Neil E, Morjikian R. Nursing leadership: Challenges and opportunities. *Policy, Politics, & Nurs Prac* 2003;4(3):173-179.\*
- Porter-O'Grady T. A different age for leadership, part 1. New context, new content. *J Nurs Adm* 2003;33(2):105-110.\*
- Porter-O'Grady T. A different age for leadership, part 2. New rules, new roles. *J Nurs Adm* 2003;33(3):173-178.\*
- Robbins CJ, Bradley EH, Spicer M, Mecklenburg GA. Developing leadership in healthcare administration: A competency assessment tool. *J Healthc Manag* 2001;46(3): 188-202.\*

28. Schwartz RW, Pogge C. Physician leadership: Essential skills in a changing environment. *Am J Surg* 2000;180:187-192.\*
29. Schwartz RW, Pogge C. Physician leadership is essential to the survival of teaching hospitals. *Am J Surg* 2000;179:462-468.\*
30. Schwartz PW, Pogge CR, Gillis SA, Holsinger JW. Programs for the development of physician leaders: A curricular process in its infancy. *Acad Med* 2000;75(2):133-140.\*
31. Williams SJ. Training needs for physician leaders. *J Health Adm Educ* 2001; 19(2):195-202.\*
32. Scoble KB, Russell G. Vision 2020, Part I. Profile of the future nurse leader. *J Nurs Adm* 2003;33(6):324-330.\*
33. Bennis WG, Nanus, B. *Leaders: The Strategies of Taking Charge*. 1985; NY: Harper & Row.
34. Kouzes JM, Posner BZ. *The Leadership Challenge. How to Keep Getting Extraordinary Things Done in Organizations*. 1995; San Francisco: Jossey-Bass.
35. Calhoun JG, Davidson PL, Sinioris ME, Vincent ET, Griffith JR. Toward an understanding of competency identification and assessment in health care management. *Qual Manag Health Care* 2002;11(1):14-38.\*
36. Lucia, AD, Lepsinger, R. *The art and science of competency models: Pinpointing critical success factors in organizations*. 1999; San Francisco: Jossey-Bass.
37. Counte MA, Newman JF. Competency-based health services management education: Contemporary issues and emerging challenges. *J Health Adm Educ* 2002;20(2):113-122.\*
38. Korevaar WC, Pearson RW. Reports & Statistics. Carnegie Mellon University's MMM program: Management education for 21<sup>st</sup>-century physicians. *J Health Adm Educ* 2000;19(4):475-496.\*
39. Wright K, Rowitz L, Merkle A, Reid WM, Robinson G, Herzog B, Weber D, Carmichael D, Balderson TR, Baker E. Competency development in public health leadership. *Am J Public Health* 2000;90(8):1202-1207.\*
40. McAreavey, MJ, Alimo-Metcalfe, B, Connelly, J. *J Manag Med* 2001;15(6):446-462.
41. Pyatt, RA. Correspondence from abroad. An internship in Ireland. *Am J Nurs* 1999;99(7):18-19.
42. Alldredge ME, Nilan KJ. 3Ms leadership competency model: An internally developed solution. *Hum Resour Manage* 2000;39:133-145.\*
43. Andersen RM, Davidson PL, Hilberman DW, Nakazono TT. Program directors' recommendations for transforming health services management education. *J Health Adm Educ* 2000;18:153-173.\*
44. Anderson P, Pulich M. Managerial competencies necessary in today's dynamic health care environment. *Health Care Manag* 2002;21(2):1-11.\*
45. Aroian, J. Leader as visionary. *Leadership education model. Nurs Leadersh Forum* 2002;7(2):53-56.\*
46. Bakerman, M. The 7 habits of highly effective medical directors. *Physician Exec* 2001;May-June:40-44.\*
47. Barter M. Follow the team leader. *Nurs Manage* 2002; 33(10):55-57.\*
48. Bennis WG, Thomas RJ. Crucibles of leadership. *Harv Bus Rev* 2002;80(9):39-45.\*
49. Boardman K, Kelpe M, Straub D, VanFleet R. Shining through a merger. *Nurs Manage* 2003;34(5):45-48.\*
50. Bradley EH. Use of evidence in implementing competency-based healthcare management teaching. *J Health Adm Educ* 2003;20(4):287-304.\*
51. Bratt MM, Broome M, Kelber S, Lostocco L. Influence of stress and nursing leadership on job satisfaction of pediatric intensive care unit nurses. *Am J Crit Care* 2000;9(5):307-317.\*
52. Bunker KA, Kram KE, Ting S. The young and the clueless. *Harv Bus Rev* 2002; 80(12):80-87.\*
53. Byers JF. Knowledge, skills, and attributes needed for nurse and non-nurse executives. *J Nurs Adm* 2000;30(7/8): 354-356.\*
54. Chernesky RH. Examining the glass ceiling: Gender influences on promotion decisions. *Adm Soc Work* 2003;27(2): 13-18.\*
55. Chmar JE, Weaver RW, Rannery RR, Haden NK, Valachovic RW. A profile of dental school deans, 2002. *J Dent Educ* 2004;68(4):475-487.\*
56. Clancy TR. Courage and today's nurse leader. *Nurs Adm Q* 2003;27(2):128-132.\*
57. Collins J. Level 5 leadership. The triumph of humility and fierce resolve. *Harv Bus Rev* 2001;79(1):67-76.\*
58. Connelly LM, Nabarrete SR, Smith KK. A charge nurse workshop based on research. *J Nurs Staff Dev* 2003;19(4): 203-208.\*
59. Connelly LM, Yoder LH, Miner-Williams D. A qualitative study of charge nurse competencies. *Medsurg Nurs* 2003; 12(5):298-305.\*
60. Cook MC, DeLeskey K, Forgacs E, Milane DC, Szpila A, Taylor MP, & George EU. Graduate nursing administration programs are alive and well. *J Nurs Adm* 1999;29(4):9-10.\*
61. Cordeniz JA. Recruitment, retention, and management of generation X: A focus on nursing professionals. *J Health Manag* 2002;47(4):237-249.\*
62. Corso JA. Measuring leadership: Measuring what counts for succession planning. *Semin Nurse Manag* 2002;10(4): 265-268.\*
63. Counte MA, Newman JF. Essential competencies in human resource management. *J Health Adm Educ* 2001;20(2):167-171.\*
64. Cuny FC. Principles of disaster management. Lesson 7: Management leadership styles and methods. *Prehospital and Disaster Med* 2000;15(1):70-73.\*
65. Davenport TH, Prusak L, Wilson HJ. Who's bringing you hot ideas and how are you responding? *Harv Bus Rev* 2003;81(2):58-65.\*
66. Davidhizar R, Cramer C. Gender differences in leadership in the health professions. *Health Care Manag* 2000;18(3): 18-24.\*
67. Davidhizar R, Cathon D. Understanding the members of your health care "gang." Seekers and cruisers. *Health Care Manag* 2002;20(4):40-45.\*
68. Davidson PL, Calhoun JG, Sinioris ME, Griffith JR. A framework for evaluating and continuously improving the NCHL transformational leadership initiative. *Qual Manag Health Care* 2002;11(1):3-13.\*
69. DeMarco R, Judy JA. Virginia Cleland: An oral history by her colleagues and mentorees. *Nurs Outlook* 2002;50(6): 253-260.\*
70. Detrick G, Russell L. Ackoff. *Acad Manage Learn and Educ* 2002;1(1):56-63.\*



71. Dreachslin, JL, Agho, A. Domains and core competencies for effective evidence-based practice in diversity leadership. *J Health Adm Educ* 2001;Special Issue: 131-147.\*
72. Drenkard K, Cohen E. Clinical nurse leader: Moving toward the future. *J Nurs Adm* 2004;34(6):257-260.\*
73. Drucker PF. What makes an effective executive. *Harv Bus Rev* 2004;82(6):58-63.\*
74. Dumpe ML, Ulreich S. Moving from parallel play to team play. *Semin Nurse Manag* 2001;9(2):85-89.\*
75. Dunham-Taylor J. Nurse executive transformational leadership found in participative organizations. *J Nurs Adm* 2000;30(5):241-250.\*
76. Ehrat KS. Executive nurse career progression: Skills, wisdom and realities. *Nurs Adm Q* 2001;25(4):36-42.\*
77. Eldridge, CR, Judkins, S. Rural nurse administrators: Essentials for practice. *Online J Rural Nurs and Health Care* 2002;\*3(2). Available at <http://www.rno.org/journal/issues/Vol-3/issue-2/eldridge.htm>.
78. Evashwick C. Management training in long-term care. *J Health Adm Educ* 2002;20(1):13-37.\*
79. Fertman CI. Health educators are leaders: Meeting the leadership challenge. *Health Promo Prac* 2003;4(3):336-339.\*
80. Frank B, Aroian J, Tashea P. Nursing administration graduate programs. Current status and future plans. *J Nurs Adm* 2003;33(5):300-306.\*
81. Friedman, LH, McCaughrin, WC. Outcome competencies for organizational behavior and theory. *J Health Adm Educ* 2001;Special Issue: 173-176.\*
82. Gianelli P, Morrison M, Spivack LB. Nurse manager exemplar: A journey out of the glass house. *Semin Nurse Manag* 2001;9(2):126-131.\*
83. Giganti, E. Comparing systems' competency models. *Health Prog* 2002;May-June:40-43.\*
84. Goleman D. Leadership that gets results. *Harv Bus Rev* 2000;78(2):78-88.\*
85. Goleman D, Boyatzis R, McKee A. Primal leadership. The hidden driver of great performance. *Harv Bus Rev* 2001;79(11):42-51.\*
86. Goodman GR. The occupation of healthcare management: Relating core competencies to growth as a distinct profession. *J Health Adm Educ* 2003;20(3):147-165.\*
87. Griffith JR. The impact of evidence on teaching health-care management. *J Health Adm Educ* 2003;20(4):225-234.\*
88. Griffith JR, Warden GL, Neighbors K, Shim B. A new approach to assessing skill needs of senior managers. *J Health Adm Educ* 2002;20(1):75-98.\*
89. Gullo SR, Gerstle DS. Transformational leadership and hospital restructuring: A descriptive study. *Policy, Politics, & Nurs Prac* 2004;5(4):259-266.\*
90. Hagenow NR. Care executives: Organizational intelligence for these times. *Nurs Admin Q* 2001;25(4):30-35\*
91. Havens DS. Comparing nursing infrastructure and outcomes: ANCC magnet and nonmagnet CNEs report. *Nurs Econ* 2001;19(6): 258-266.\*
92. Heifetz RA, Linsky M. A survival guide for leaders. *Harv Bus Rev* 2002;80(6):65-74.\*
93. Heifetz, RA, Laurie, DL. Learning to lead: Real leaders say, "I don't have the answer". *Ivey Business J* 2003;Jan/Feb: 1-7.\*
94. Hill KS. Development of leadership competencies as a team. *J Nurs Adm* 2003;33(12):639-642.\*
95. Holmboe ES, Bradley EH, Mattera JA, Roumanis SA, Radford MJ, Krumholz HM. Performance improvement. Characteristics of physician leaders working to improve the quality of care in acute myocardial infarction. *Jt Comm J Qual Saf* 2003;29(6):289-296.\*
96. Huber DL, Maas M, McCloskey J, Scherb CA, Goode CJ, Watson C. Evaluating nursing administration instruments. *J Nurs Adm* 2000;30(5):251-272.\*
97. Hudak RP, Brooke PP, Finstuen K. Identifying management competencies for health care executives: Review of a series of Delphi studies. *J Health Adm Educ* 2000;18(2): 213-243.\*
98. Jaskyte K. Assessing changes in employees' perceptions of leadership behavior, job design, and organizational arrangements and their job satisfaction and commitment. *Adm Soc Work* 2003;27(4):25-39.\*
99. Judge TA, Illies R, Bono JE, Gerhardt MW. Personality and leadership: A qualitative and quantitative review. *J Appl Psychol* 2002;87(4):765-780.\*
100. Keating SB, Rutledge DN, Sargent A, Walker P. A test of the California competency-based differentiated role model. *Manag Care Q* 2003;11(1):40-46.\*
101. Kerfoot KM. Leadership in systems: The role of the corporate nurse. *Semin Nurse Manag* 2001;9(1):31-35.\*
102. Kleinman CS. Leadership roles, competencies, and education. How prepared are our nurse managers? *J Nurs Adm* 2003;33(9):451-455.\*
103. Krairiksh M, Anthony MK. Benefits and outcomes of staff nurses' participation in decision making. *J Nurs Adm* 2001;31(1):16-23.\*
104. Krugman M, Smith V. Charge nurse leadership development and evaluation. *J Nurs Adm* 2003;33(5):284-292.\*
105. Kupperschmidt BR. Multigeneration employees: Strategies for effective management. *Health Care Manager* 2000; 19(1):65-76.\*
106. Lazarus A. Cultivate your core competencies. *Physician Exec* 2002;May-June:34-38.\*
107. Leach DC. Changing education to improve patient care. *Qual in Health Care* 2001;10(Suppl 2):ii54-ii58.\*
108. Lockwood-Rayermann S. Preceptor leadership style and the nursing practicum. *J Prof Nurs* 2003;19(1):32-37.\*
109. Lombardo MM, Eichinger RW. High potentials as high learners. *Hum Resour Manage* 2000;39(4):321-329.\*
110. Lopopolo RB, Schafer DS, Nosse LJ. Leadership, administration, management, and professionalism (LAMP) in physical therapy: A Delphi study. *PhysTher* 2004;84(2): 137-150.\*
111. Lyons MF. Career management. Leadership and followership. *Physician Exec* 2002;Jan/Feb:91-93.\*
112. Maas ML, Specht JP, Buckwalter KC. Long-term health care policy for elders: Now is the time for nursing leadership. *Nurs and Health Policy Rev* 2002;1(2):81-92.\*
113. Mahn-DiNicola VA. Changing competencies in health care professions: Will your nurses be ready? *Nurs Leader* 2004;2(1):38-43.\*
114. Malloch K. The demise of nursing administration graduate programs. *J Nurs Adm* 1998;28(7/8):14-15.\*
115. Malloch K. The demise of nursing administration graduate programs. Reaction to the reaction! *J Nurs Adm* 2000; 30(4):166-168.\*

116. Mathena KA. Nursing manager leadership skills. *J Nurs Adm* 2002;32(3):136-142.\*
117. McConnell CR. The changing face of health care management. *Health Care Manager* 2000;18(3):1-17.\*
118. McCurdy FA, Beck G, Maroon A, Gomes H, Lane PH. The administrative colloquium: Developing management and leadership skills for faculty. *Ambul Pediatr* 2004;4(1 suppl):124-128.\*
119. McDougal JA, Lapidus J, Albanese M, Redding G. MCH Professional development. Interdisciplinary leadership training outcomes of maternal and child health-funded pediatric pulmonary centers. *Matern Child Health J* 2003;7(4):253-260.\*
120. Meadows AB, Finstuen K, Hudak RP, Carrillo JD, Lawrence JB, Wright K. Perception of managerial and administrative competencies of professional pharmacists in the U.S. Department of Defense. *J Am Pharm Assoc (Wash DC)* 2003;43(4): 488-496.\*
121. Meeker PB, Byers JF. Data-driven graduate curriculum redesign: A case study. *J Nurs Educ* 2003;42(4):186-188.\*
122. Meyer, LSP. Leadership characteristics as significant predictors of clinical- teaching effectiveness. *Athletic Therapy Today* 2002;September:34-39.\*
123. Moore DA, Klingborg DJ. Development and evaluation of a leadership program for veterinary students. *J Vet Med Educ* 2001;28(1):10-15.\*
124. O'Connor M, Walker JK. The dynamics of curriculum design, evaluation, and revision. *Quality improvement in leadership development. Nurs Adm Q* 2003; 27(4):290-296.\*
125. O'Reilly CA, Tushman ML. The ambidextrous organization. *Harv Bus Rev* 2004;82(4):74-81.\*
126. Osborn LM, DeWitt T. The HRSA-APA faculty development scholars program: Executive leadership track. *Ambul Pediatr* 2004;4(1 suppl):98-102.\*
127. Palm ME, Nelson MA. Leadership development course for creating a learning environment. *J Contin Educ Nurs* 2000;31(4):163-168.\*
128. Parsons ML, Stonestreet J. Factors that contribute to nurse manager retention. *Nurs Econ* 2003;21(3):120-126,119.\*
129. Perra BM. Leadership: The key to quality outcomes. *Nurs Adm Q* 2000;24(2): 56-61. [also published in *J Nurs Care Qual* 2001;15(2):68-73.]\*
130. Peterson JA. 10 essential leadership attributes for fitness professionals. *ACSM's Health & Fitness J* 2003;7(3): 44.\*
131. Pontius CA. Management competencies for the POL, Part 1: self-assessment. *MLO. Med Lab Obs* 2000;32(7):28, 30.\*
132. Pontius CA. Management competencies for the POL, Part 2: Interpersonal skills. *MLO. Med Lab Obs* 2000;32(9): 25.\*
133. Propp DA, Glickman S, Uehara DT. ED leadership competency matrix: An administrative management tool. *Am J Emerg Med* 2003;21(6):483-486.\*
134. Ready DA. How to grow great leaders. *Harv Bus Rev* 2004;82(12):92-100.\*
135. Redman BK. The Dean of nursing as arbiter, antagonist, and advocate. *Nurs Admin Q* 2001;25(4):57-63.\*
136. Ritter-Teitel J. Nursing administrative research. The underpinning of decisive leadership. *J Nurs Adm* 2003;33(5): 257-259.\*
137. Romano M. Ready-or-not; Talented, high-achieving physicians often come up short in the skills and other attributes needed to excel as CEO. *Mod Healthc* 2004; 34(17):26-28.\*
138. Rossiter AM, Greene BR, Kralewski JE. The American College of Medical Practice Executives' competency study. *J Ambul Care Manage* 2000;23(4):1-8.\*
139. Runy LA. Executive dialogue series: The excellent manager. *Hosp Health Netw* 2003;77(9):85-99.\*
140. Russell G, Scoble K. Vision 2020, Part 2. Educational preparation for the future nurse manager. *J Nurse Adm* 2003;33(7/8):404-409.\*
141. Schultz FC, Pal S. Who should lead a healthcare organization: MDs or MBAs? *J Healthc Manag* 2004;49(2): 103-117.\*
142. Scott J. A nursing leadership challenge: Managing the chronically ill in rural settings. *Nurs Adm Q* 2000;24(3): 21-32.\*
143. Sengin KK. Work-related attributes of RN job satisfaction in acute care hospitals. *J Nurs Adm* 2003;33(6):317-320.\*
144. Shea J. Challenges and competencies. The theological and spiritual aspects of Catholic healthcare leadership. *Health Prog* 2000;81(1):20-23,30.\*
145. Sorcher M, Brant J. Are you picking the right leaders? *Harv Bus Rev* 2002; 80(2):78-85.\*
146. Soule BM. From vision to reality: Strategic agility in complex times. *Am J Infect Control* 2002;30(2):107-119.\*
147. Sull DN. Managing by commitments. *Harv Bus Rev* 2003;81(6):82-91.\*
148. Sullivan DT. Charting a career in health care management: Boxing the compass. *Nurs Adm Q* 2001;25(4):64-73.\*
149. Swanson JW. Zen leadership: Balancing energy for mind, body, and spirit harmony. *Nurs Adm Q* 2000; 24(2):29-33.\*
150. Terry PE. Leadership and achieving a vision—How does a profession lead a nation? *Am J Health Promot* 2003;18(2): 162-167.\*
151. Tornabeni J. The competency game: My take on what it really takes to lead. *Nurs Adm Q* 2001;25(4):1-13.\*
152. Trent BA. Leadership myths. *Reflect Nurs Leadersh* 2003; 29(3):8-9,36.\*
153. Tyler JL. Core competencies: A simplified look at a complicated issue. *Healthc Financ Manage* 2003;57(5):90, 92, 94.\*
154. Upenicks VV. The interrelationship of organizational characteristics of magnet hospitals, nursing leadership, and nursing job satisfaction. *Health Care Manag* 2003; 22(2):83-98.\*
155. Upenicks VV. Nurse leaders' perceptions of what compromises successful leadership in today's acute inpatient environment. *Nurs Adm Q* 2003;27(2):140-152.\*
156. Upenicks VV. What constitutes effective leadership? Perceptions of magnet and nonmagnet nurse leaders. *J Nurs Adm* 2003;33(9):456-467.\*
157. Upenicks VV. What constitutes successful nurse leadership? A qualitative approach utilizing Kanter's theory of

- organizational behavior. *J Nurs Adm* 2002;32(12):622-632.\*
158. Vance C, Larson E. Leadership research in business and health care. *J Nurs Scholarsh* 2002;34(2):165-171.\*
159. Weaver D. Transdisciplinary teams: Very important leadership stuff. *Semin Nurse Manag* 2001;9(2):79-84.\*
160. Westmoreland D, Hays BJ. The health systems nurse specialist curriculum. Collaborating across specialties to prepare nurse leaders. *Nurs Educ Perspect* 2002;23(4):172-177.
161. American Association of Colleges of Nursing and American Organization of Nurse Executives. Education for nurses in administrative roles (Supplement to The Essentials of Master's Education for Advanced Practice Nursing). *J Prof Nurs* 1998; 14(2):127-129.
162. American Nurses Association. Scope and Standards for Nurse Administrators (2<sup>nd</sup> Ed.). 2004; Washington, DC: [nursesbooks.org](http://nursesbooks.org)
163. AONE nurse executive competencies. *Nurse Leader* 2005; 3(1):50-56.
164. Wolf GA, Bradle J, Greenhouse P. Investment in the future. A 3-level approach for developing the healthcare leaders of tomorrow. *J Nurs Adm* 2006;36(6):331-336.
165. Broome ME. From the Editor. Academe under siege. *Nurs Outlook* 2006;54:117-118.