
Development of an Interprofessional Competency Model for Healthcare Leadership

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EXECUTIVE SUMMARY

During the past decade, there has been a growing interest in competency-based performance systems for enhancing both individual and organizational performance in health professions education and the varied healthcare industry sectors. In 2003, the Institute of Medicine's report *Health Professions Education: A Bridge to Quality* called for a core set of competencies across the professions to ultimately improve the quality of healthcare in the United States. This article reviews the processes and outcomes associated with the development of the Health Leadership Competency Model (HLCM), an evidence-based and behaviorally focused approach for evaluating leadership skills across the professions, including health management, medicine, and nursing, and across career stages.

The HLCM was developed from extensive academic research and widespread application outside healthcare. Early development included behavioral event interviewing, psychometric analysis, and cross-industry sector benchmarking. Application to healthcare was supported by additional literature review, practice analysis, expert panel inputs, and pilot-testing surveys. The model addresses three overarching domains subsuming 26 behavioral and technical competencies. Each competency is composed of prescriptive behavioral indicators, or levels, for development and assessment as individuals progress through their careers from entry-level to mid-level and advanced stages of lifelong development. The model supports identification of opportunities for leadership improvement in both academic and practice settings.

For more information on the concepts in this article, please contact Dr. Calhoun at jgcal@umich.edu.

The need for major improvement in American healthcare was documented in the first two Institute of Medicine (IOM 1999, 2001) watershed reports. Subsequent work has supported and expanded the identified shortcomings (Amalberti et al. 2005; Asch et al. 2005; 2006; Jha et al. 2005; Mularski et al. 2006; Pham, Coughlan, and O'Malley 2006; Shrank et al. 2006; Williams et al. 2005; IOM Board on Health Care Services 2007; Warden 2001). The third IOM report, *Health Professions Education: A Bridge to Quality* (2003), specifically argued that the ultimate goal of enhancing the quality of care in the United States cannot be achieved without reforming education and professional development across the health professions. As addressed in a 2005 Joint Commission white paper, *Health Care at the Crossroads*, competency or outcome-based education has been increasingly examined and endorsed by the many educational accreditation and professional certification bodies across the health professions.

During the past three decades, many companies in other industries have used core competency models to guide strategic improvement programs addressing management practices and the effectiveness of organizational culture (Boyatzis 2006; Intagliata, Ulrich, and Smallwood 2000; Ulrich, Zenger, and Smallwood 2000). In addition, a large number of job-related or role-specific competencies have been created to assist with management development at many *Fortune* 500 organizations (Boyatzis et al. 1996; Lucia and Lepsinger 1999; Calhoun et al. 2008). In the field of healthcare, the pharmaceutical, health insurance, and

biotechnology sectors—in addition to larger integrated delivery systems such as the Catholic Health Association (O'Toole et al. 2007) and Ascension Health (Giganti 2002)—have pursued corporate-level competency modeling initiatives. Competency models have been subsequently developed across a number of industry sectors for specific jobs within the health professions, including medicine, nursing, pharmacy, and public health (Calhoun et al. 2002; Carraccio et al. 2004; Garman and Johnson 2006; Little and Milliken 2007). To date, most of these initiatives have been based on long-established and researched expert panel opinion and consensus-building methods.

In response to the call for a common set of competencies across the professions (IOM 2003), the National Center for Healthcare Leadership (NCHL) committed to the development of an empirically derived model specifically focusing on leadership acumen in healthcare. NCHL's intent was to provide a method of measuring the skills necessary for effective performance in all types and levels of management, including first-line clinical managers and the senior management team. The model was developed to provide a common language and framework to guide future health management leadership, conceptual discussions, research regarding essential characteristics and potential determinants for success, planning for improved performance for individuals and organizations, and educational and professional development in the field.

This article reviews the processes and outcomes associated with the

development of the Health Leadership Competency Model (HLCM), now in use at a number of healthcare organizations and graduate programs in healthcare management. Specifically outlined are the competency identification, specification, and validation processes for the model.

HEALTH LEADERSHIP COMPETENCY MODEL, VERSION 2.0

The current version of HLCM, version 2.0, is graphically displayed in the Venn diagram in Figure 1. The model is based on the definition of “competency” as those behavioral and technical characteristics (competencies) that discriminate outstanding leadership performance from typical performance across the health professions (Spencer, McClelland, and Spencer 1994). The model includes three domains—transformation, execution, and people—and 18 behavioral competency categories or constructs and eight technical competencies (noted by asterisks in Figure 1). The specific definitions for each of the three domains and the “concept” names for each of the 26 competencies are also shown in Figure 2. At any given time, an organization or an individual may emphasize selected domains. However, the other areas are still important and should continue to be considered during all individual and organizational performance assessment activities.

Competencies in the HLCM are “scaled” to describe how the competency is demonstrated as positions/roles increase in scope, complexity, or sophistication. The scales are termed “levels of competency.” Each HLCM competency

is defined using three to six levels of performance. For example, the scaled levels for both a behavioral competency (Accountability) and a technical competency (Financial Skills) are listed here. More behavioral-based explanations for both of these competencies are provided in Figure 2.

Accountability

- Level 1: Communicates requirements and expectations
- Level 2: Sets limits
- Level 3: Demands high performance
- Level 4: Confronts performance problems
- Level 5: Creates a culture of responsibility

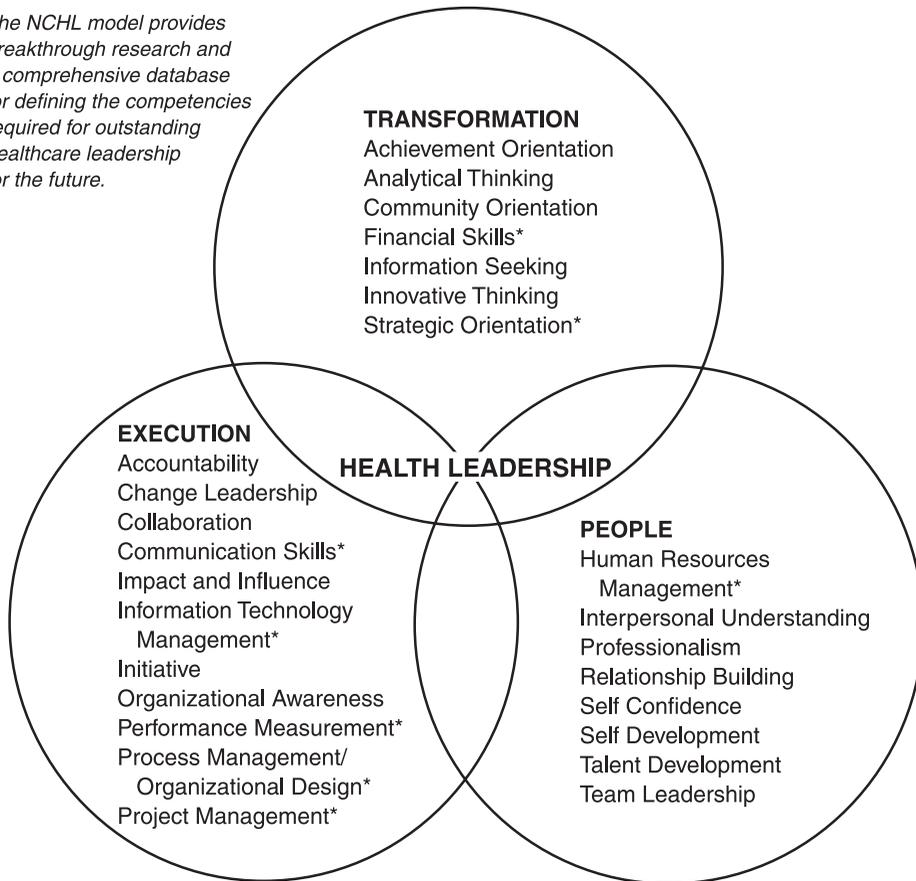
Financial Skills

- Level 1: Explains financial metrics and reports
- Level 2: Manages budgets and assets
- Level 3: Understands impact of reimbursement models
- Level 4: Evaluates financial analyses and investments
- Level 5: Develops long-term financial plans

As noted earlier and for further illustration, five levels of specified behavior are incorporated in the Accountability competency. Data obtained for the development of the model (see Table 1, Phase II, Section 2.2c) reveal that outstanding early careerists, in contrast to typical early career performers, function at a Level 3 in relation to this competency. Outstanding mid-level and advanced-level careerists perform at Level 4 and Level 5, respectively. If upon assessment, employees at specific career stages are not functioning at the

FIGURE 1
NCHL Health Leadership Competency Model

The NCHL model provides breakthrough research and a comprehensive database for defining the competencies required for outstanding healthcare leadership for the future.



*Indicates a technical competency

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appropriate level for outstanding performance, then additional education or training opportunities may be identified to facilitate specific skill enhancement. In relation to the technically based Financial Skills competency, performance for each career stage was at similar levels: early career, Level 3; mid-career, Level 4; and advanced career, Level 5. Again, if an employee working in a specific financial functional role is not functioning at the prescribed Level 3,

additional development opportunities could be designed or engaged to elevate the individual's skill to that preferred level for continued assessment and development as needed.

MODEL DEVELOPMENT METHODS

The HLCM is based on behavioral observation and multimethod state-of-the-art competency research and modeling methods (Boyatzis, Cowen,

FIGURE 2**NCHL Leadership Competency Model, Version 2.0: Domains and Competencies**

Transformation—Visioning, energizing, and stimulating a change process that coalesces communities, patients, and professionals around new models of healthcare and wellness.

Transformation competencies include the following:

Achievement Orientation: A concern for surpassing a standard of excellence. The standard may be one's own past performance (striving for improvement), an objective measure (results orientation), outperforming others (competitiveness), challenging goals, or something that has been done previously (innovation).

Analytical Thinking: The ability to understand a situation, issue, or problem by breaking it into smaller pieces or tracing its implications in a step-by-step way. It includes organizing the parts of a situation, issue, or problem systematically; making systematic comparisons of different features or aspects; setting priorities on a rational basis; and identifying time sequences, causal relationships, or if-then relationships.

Community Orientation: The ability to align one's own and the organization's priorities with the needs and values of the community, including its cultural and ethnocentric values, and to move health forward in line with population-based wellness needs and the national health agenda.

Financial Skills: The ability to understand and explain financial and accounting information, prepare and manage budgets, and make sound long-term investment decisions.

Information Seeking: An underlying curiosity and desire to know more about things, people, or issues, including the desire for knowledge and staying current with health, organizational, industry, and professional trends and developments.

Innovative Thinking: The ability to use creative and conceptual thinking or inductive reasoning to identify patterns or connections between situations that are not obviously related, as well as key or underlying issues in complex situations.

Strategic Orientation: The ability to draw implications and conclusions in light of the business, economic, demographic, ethnocultural, political, and regulatory trends and developments and to use these insights to develop an evolving vision for the organization and the health industry that results in long-term success and viability.

Execution—Translating vision and strategy into optimal organizational performance. Execution competencies include the following:

Accountability: The ability to hold people accountable to standards of performance or ensure compliance using the power of one's position or force of personality appropriately and effectively, keeping the long-term good of the organization in mind.

Change Leadership: The ability to energize stakeholders and sustain their commitment to changes in approaches, processes, and strategies.

Collaboration: The ability to work cooperatively with others as part of a team or group, including demonstrating positive attitudes about the team, its members, and its ability to get its mission accomplished.

Communication: The ability to speak and write in a clear, logical, and grammatical manner in formal and informal situations; to prepare cogent business presentations; and to facilitate a group.

Impact and Influence: The ability to persuade and convince others (individuals or groups) to support a point of view, position, or recommendation.

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FIGURE 2 continued

Information Technology Management: The ability to see the potential in, understand, and use administrative and clinical information and decision-support tools, including the potential of the World Wide Web.

Initiative: The ability to anticipate obstacles, developments, and problems by looking ahead several months or more than a year.

Organizational Awareness: The ability to understand the formal and informal decision-making structures in an organization or industry (e.g., stakeholders, suppliers), including identifying who the real decision makers are and the individuals or processes that influence them.

Performance Measurement: The ability to understand and use statistical and financial methods and metrics to set goals and to measure clinical and organizational performance as well as a commitment to and use of evidence-based techniques.

Process Management and Organizational Design: The ability to analyze and design or improve an organizational process, including incorporating the principles of quality management as well as customer satisfaction.

Project Management: The ability to plan and execute a multiyear, multimillion dollar project with significant scope and impact as well as manage a team. Examples include constructing a major building, implementing an enterprise-wide system (patient tracking, SAP), or development of a new service line.

People—Creating an organizational climate that values employees from all backgrounds and provides an energizing environment for them. Also includes the leader's responsibility to understand his or her impact on others and to improve his or her capabilities, as well as the capabilities of others. People competencies include the following:

Human Resources Management: The ability to implement employment practices that comply with legal and regulatory requirements and to represent contemporary approaches to human resources policies.

Interpersonal Understanding: The ability to accurately hear and understand the unspoken or partly expressed thoughts, feelings, and concerns of others.

Professionalism: The demonstration of ethics and professional practices as well as stimulating social accountability and community stewardship. The desire to act in a way that is consistent with one's values and what one says is important.

Relationship Building: The ability to establish, build, and sustain professional contacts for the purpose of building networks of people with similar goals and that support similar interests.

Self-Confidence: A belief and conviction in one's own ability, success, and decisions or opinions when executing plans and addressing challenges.

Self-Development: The ability to see an accurate view of one's own strengths and development needs, including one's impact on others. A willingness to address needs through self-directed learning and trying new leadership approaches.

Talent Development: The drive to build the breadth and depth of the organization's human capability, including supporting top-performing people and taking a personal interest in coaching and mentoring high-potential leaders.

Team Leadership: The ability to see oneself as a leader of others, from forming a top team that possesses balanced capabilities to setting the mission, values, and norms and holding team members accountable for results individually and as a group.

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TABLE 1
Summary of NCHL Competency Model Development Research Methods

Phase I: Baseline Model Development (Version 1.1)

Goal: Identify specific core leadership constructs and related knowledge skills and other behaviors.

Methods	Process Description
1.1. Advisory committee/expert panel oversight	Calhoun et al. (2004)
1.2. Literature document review	
1.3. Practitioner interviews	
1.4. Draft + pilot field test surveying	
1.5. Field/practice analysis surveying	
1.6. Analysis of survey data	

Phase II: Career Stage and Interprofessional Model Development (Version 2.0)

Goal: Refine the model and validate for individual and organizational development.

Methods	Process Description
2.1 Prior NCHL competency research	2.1a. Review and incorporation of prior model development outcomes
2.2 Behavioral event interview (BEI)	2.2a. Interviews with 84 high-performing healthcare leaders
	2.2b. Transcribed interviews - 100–150 pages/interview - 6,000 transcript pages - 10,000 coded competency variables (unit of analysis)
	2.2c. Independent coding by six trained, accredited BEI analysts—85% level of correct coding for sample training (referent) cases and 90% inter-rater agreement across interviews - Competency comparison with: <ul style="list-style-type: none"> • Phase I NCHL Competency Dictionary • Hay Competency Dictionary derived from N = 100,000 competencies across industries - Analyst identification of outstanding group of performers <ul style="list-style-type: none"> • Differentiation of competencies required for highest levels of performance

TABLE 1 continued

Methods	Process Description
2.3 One-to-one interviews - Futurists and industry opinion leaders (N = 7) - Graduate program chairs and professors (N = 11) - Diversity reference groups (N = 6)	2.3a. Expert panel interviewee identification by NCHL: - Board of directors members (N = 21) - Research council members (N = 7) - Diversity council members (N = 7) - Competency council members (N = 10)
2.4 Database benchmarking	2.4a. Multi-industry healthcare and Hay healthcare database comparisons: - Insurance - Pharmaceuticals - Medical device - Biotechnology - Other general healthcare
2.5 Formation of the final concept and model specification - Expert panel (N=15): practitioners, academicians, and competency modeling developers and researchers	2.5a. Review and vetting of: - BEI integrated transcription and coding analyses - Outstanding vs. typical performance statistical data analysis outcomes and reports (total sample, health management officers, medical officers, and nursing officers) - Individual reference group distinguishing data (entry, mid, and advanced careerists) - Baseline competencies for early careerists - Benchmarking results with other health industry sectors - Recommended concept and domain formulation - Performance scaling levels - Final model definition and formulation

and Kolb 1995; Boyatzis 1998; Spencer 1991; Spencer, McClelland, and Spencer 1994). The model was developed in two phases: (1) Phase I, identification and specification of the core leadership constructs, including essential knowledge,

skills, and other behaviors exemplifying high levels of performance in health management and policy, and (2) Phase II, further refinement and expansion on the baseline framework for career stage and interprofessional education and

development as well as organizational deployment, assessment, and development. The methods for each of these phases are outlined briefly in the following sections and are summarized collectively in Table 1.

Phase I: Initial Competency Identification and Specification, Version 1.1

HCLM version 1.1 was developed in collaboration with ACT, Inc.—formerly known as American College Testing (Table 1). The initial model consisted of (1) six competency domains derived from a comprehensive search and analysis of the literature and existing health competency models and (2) a large number ($N = 133$) of subcompetencies that had been identified and specified for each of the six domains by expert panels and through modified Delphi research surveys to the field at large (Calhoun et al. 2004). This benchmark model was further tested by researchers at ACT, Inc. and NCHL via a variety of surveys and expert panels with health leaders to judge its relevance. This version of the model also served as the basis for Phase II.

Phase II: Career Stage and Interprofessional Competency Modeling, Version 2.0

The Phase II research protocol was based on the foundational work regarding motivation and achievement by David McClelland and colleagues at Harvard University and the Massachusetts Institute of Technology (McClelland, Clark, and Lowell 1976; McClelland 1961, 1973, 1988, 1998; Boyatzis 1982; Boyatzis et al. 1996); Daniel

Goleman (1998, 2000); and the prior research and experience in the field of competency modeling by the Hay Group (Spencer, McClelland, and Spencer 1994). The protocol was reviewed, modified, and subsequently finalized in November 2003 by four separate expert panels, including NCHL's board of directors, Advisory Council on Research and Evaluation, and Advisory Council on Core Competencies as well as the project's Senior Advisory Group. More than 60 recognized leaders across all sectors of the industry—with diverse professional, demographic, and cultural backgrounds—served on these expert panels.

Behavioral event interviewing and analysis. Central to Phase II model development was the behavioral event interview (BEI) process—a modification of the critical-incident method originally developed by Flanagan (1954), further elaborated by Dailey (1971), and codified by McClelland (McClelland, Clark, and Lowell 1976; McClelland 1998; Spencer, McClelland, and Spencer 1994). The BEI process was developed as a means for identifying characteristics that distinguished “outstanding” performers in a role or job from their more “typical” counterparts (Boyatzis 2006; 2007).

The Phase II BEI process consisted of an approximately two-hour interview conducted by an interviewer with a behavioral science background trained and accredited in the use of the McClelland (1998) methodology. Respondents were asked to focus on specific events across the entire span of their careers. In addition, the interviewer guided the inter-

viewee to describe events that occurred over the past 18 months that were particularly successful or frustrating. With advance recorded permission from the prospective interviewees per Institutional Review Board standards, the interviews were tape recorded and subsequently transcribed for coding and analysis by Hay specialists (see Table 1, 2.2c.).

Population sampling. Based on prior research (Boyatzis 1982; McClelland 1998; Spencer, McClelland, and Spencer 1994), it was determined that a sample of 75–80 interviews would be required for subsequent BEI interpretive analyses conducted by similarly accredited human resource consultants, event coders, analysts, and statisticians. In the BEI methodology, the unit of analysis is not the individual but the unique events outlined by the interviewees that reveal their specific behaviors—what they did, felt, said, or thought—in relation to the exhaustive number of important on-the-job situations probed during the interview (McClelland 1998; Spencer and Spencer 1993). Typically, hundreds of behaviors are identified during each interview providing thousands of observations. Therefore, with a selected sample of 70–80 representatives across the field, 7,000 to 8,000 or more behaviors would be generated for qualitative and quantitative analyses.

Initially, 105 interviewees were targeted to allow for the logistical complexities associated with scheduling the interviews during the prescribed research period. Ultimately, 84 (80 percent) of the targeted sample interviews were conducted across roles (executive

and operational management, medicine, nursing), career stages (early, mid, and advanced), and varying types of organizations as summarized in the final sample profile (Tables 2 and 3). Interviewees were randomly selected from the target population. The predominant reasons for nonparticipation during the interview process (12 percent of the advanced and mid-careerists and 40 percent of the early careerists) were scheduling conflicts—that is, maternity leave, sabbatical, and “organization policy not to participate in survey research.”

To ensure a sample that would include outstanding health leaders across the health spectrum, a dual approach was taken. First, in line with nomination methods used for and by expert panels as outlined by Kane (1987) and Boyatzis (2006), members of the NCHL board and Competency Council were asked to identify 120 mid- and late-career leaders deemed outstanding in the field. Members could not nominate themselves. These potential interviewees were then cross-referenced to seven national rankings: *US News and World Report* Honor Roll (top 15), *Modern Healthcare* Integrated Health Systems (top 15), National Committee for Quality Assurance Listing of Top Performing Healthcare Plans (top 6), Solucient Award (top 15 performers—consecutive winners in the prior three years), Public Hospitals Recognition Awards (top 5), McGaw Prize (winners within the past five years), and Malcolm Baldrige Award (current year). The merged listing of highly successful organizations from these national rankings was purged of duplicates and cross-referenced to the list of 120 outstanding leaders. As a result, 75 persons across

TABLE 2
Behavioral Event Interviews: Final Sample Profile^a

Organizational Affiliation	Number of Respondents ^b
Major provider systems	40
Acute care/academic medical centers	26
Clinics/group practices/HMOs	12
Long-term care facilities/hospices	4
Outpatient clinics	3
Psychiatric facility	1

^aThe sample includes 39 (46%) women and 45 (54%) men.

^bThe total is more than 84 because two interviewees identified more than one type to characterize their workplaces.

TABLE 3
Behavioral Event Interviews: Final Sample Profile by Career Stage (N = 84)^a

Career Stage ^b	Chief Executive/ Operations	Chief Medical	Chief Nursing	Total
Late Career	26	4	9	39
Mid-Career	18	3	6	27
Early Career	17	1	–	18
Total	61	8	15	84

^aThe sample includes 39 (46%) women and 45 (54%) men.

^bLate career = individuals who hold the rank of chief executive officer or chief operations officer, chief marketing officer, chief financial officer, or chief networking officer and who are in their last health career position; mid career = individuals who have been employed at least six years and hold a title of at least manager or director; and early career = individuals who have been employed 1–5 years in an entry-level managerial position or a management track position

late and mid-career levels of administration, medicine, and nursing became the target population for the interviews.

To select the early careerists, the top ten graduate programs in the *U.S. News and World Report* ranking were asked to identify a list of high-performing graduates within the past three years. The nominees were also cross-referenced to the list of outstanding organizations with 30 matches for potential interview-

ing. Given the emphasis on early career leadership development, all 30 of the persons on this final nomination listing became the targeted interview group for the early careerist population.

Competency identification and coding.

In all, more than 10,000 competency variables were identified by trained behavioral science coders from more than 6,000 pages of BEI transcripts from

the total sample (see the summary of methods in Table 1); the typical transcript was 100–150 pages long. Critical incident techniques (Flanagan 1954), thematic apperception testing (Boyatzis 1998; McClelland 1985), and content analysis of verbal expression (Zullow et al. 1988) were used by the accredited and highly consistent coders (see 2.2c. Table 1) to identify and categorize the competencies (both unique and previously identified competencies). To form the final model concept, the coding outcomes were then compared with a specially constructed modification of the proprietary Hay Group dictionary of competencies (see www.haygroup.com), which was derived from a sample of more than 100,000 competencies across various industries. This dictionary was constructed to codify elements identified in the interviews, reinforcing the content and construct evidence for forming the model (Kane 1987; AERA et al. 1999).

Expert interviews. To augment the findings from the BEI methodology, NCHL's board, research council, and other advisory committees nominated individuals from the following three groups in line with expert judgment nomination protocols (McClelland 1998; Schippman et al. 2000; Spencer and Spencer 1993). Interviews were conducted with the following people to provide additional contextual review, analysis, and evidence of validity (Kane 1987):

- Seven futurists and health opinion leaders from the Institute for Alternative Futures, Wharton Center for Health Management and Economics,

American Board of Internal Medicine, Health Futures, Institute for the Future, Institute for Alternative Futures, and SG-2

- Six leaders from varied ethnic and cultural backgrounds or with recognized track records promoting diversity in their organizations (These interviews were conducted to gain additional perspective on increasing diversity among health leadership.)
- Eleven representatives from accredited graduate programs in health management and business

Analyses of benchmark data. The model was also benchmarked against existing competencies in research models developed for other health, pharmaceutical, and insurance sectors as well as for complex organizations across industry sectors. These analyses enabled the NCHL model and the results of the BEI analyses to be compared to healthcare in its broadest sense as well as to top-performing organizations regardless of industry.

Concept formation and model development.

The final review for version 2.0 was conducted by a 15-member work group including academicians, practitioners, educational psychologists, learning consultants, data analysts, and competency modeling researchers. The panel reviewed all qualitative and quantitative data analyses. The BEI data were reviewed further for additional evidence of specific and/or unique health industry knowledge and skill competencies to use in building the behavioral constructs and levels that make up each competency. The primary goal for this

step in the process was to develop a behaviorally focused competency framework that realistically reflected strategic, operational, and cultural forces in the current environment. Key steps in this final analysis and design process are summarized in Table 1.

As previously discussed, the final 26 competencies were scaled to three to six levels of performance. Each level contains the specific explanatory behaviors that are included in the competency and can be used for observable assessment.

DISCUSSION

Version 2.0 of the HLCM provides a useful resource for persons seeking a successful career in health management, the educational programs assisting them, and organizations identifying and developing an effective cadre of managers and leaders in the field. The model has been developed with careful attention to psychometric principles, and it is based on a long history of prior work and precedents that have been used effectively in other industries. Substantial efforts have gone into translating competencies for the healthcare industry. Because of its rigor and behavioral focus, the model offers an important additional dimension to education, guidance, and development of future leaders in the field.

Version 2.0 is "current" rather than "final." At this stage of development, additional research and hypotheses testing are needed to further validate the model for application in identifying, developing, credentialing, and promoting healthcare leaders.

NCHL is currently sponsoring a number of national demonstration

projects in graduate education, nurse-team leadership, diversity, and total leadership system development using the HLCM. The research associated with these initiatives will be used to further develop and refine the model to assess the impact of competency-based development and assessment in the field of healthcare. NCHL is seeking additional opportunities to expand the use of the model and welcomes discussion of collaborative research. The HLCM can also serve as a catalyst for initiating continuous dialogue and reflection regarding essential behaviorally based attributes and skills for leadership in the industry across career progression stages and across the professions in the decades ahead.

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REFERENCES

- Amalberti, R., Y. Auroy, D. Berwick, and P. Barach. 2005. "Five System Barriers to

- Achieving Ultrasafe Health Care." *Annals of Internal Medicine* 142 (9): 756-64.
- American Educational Research Association (AERA), American Psychological Association, and National Council on Measurement in Education. 1999. *Standards for Educational and Psychological Testing*. Washington, DC: AERA.
- Asch, S. M., E. A. Kerr, J. Keesey, J. L. Adams, C. M. Setodji, S. Malik, and E. A. McGlynn. 2006. "Who Is at Greatest Risk for Receiving Poor-Quality Health Care?" *New England Journal of Medicine* 354 (11): 1147-56.
- Asch, S. M., E. A. McGlynn, L. Hiatt, J. Adams, J. Hicks, A. DeCristofaro, R. Chen, P. LaPuerta, and E. A. Kerr. 2005. "Quality of Care for Hypertension in the United States." *BMC Cardiovascular Disorders* 5 (1): 1-9.
- Boyatzis, R. E. 1982. *The Competent Manager: A Model for Effective Performance*. New York: Wiley.
- . 1998. *Transforming Qualitative Information: Thematic Analyses and Code Development*. Thousand Oaks, CA: Sage Publications.
- . 2006. "Using Tipping Points of Emotional Intelligence and Cognitive Competencies to Predict Financial Performance of Leaders." *Psicothemia* 18 (suppl): 124-32.
- . 2007. "Review of Literature on Competency Model Development." In *The Indian CEO: A Portrait of Excellence*, edited by S. M. Spencer, T. Rahah, S. A. Narayan, S. Mohan, and G. Lahiri. Thousand Oaks, CA: Sage Publications.
- Boyatzis, R. E., S. S. Cowen, and D. A. Kolb. 1995. *Innovation in Professional Education: Steps on a Journey from Teaching to Learning: The Story of Change and Invention at the Weatherhead School of Management*. San Francisco: Jossey-Bass Publishers.
- Boyatzis, R. E., D. Leonard, K. Rhee, and J. V. Wheeler. 1996. "Competencies Can Be Developed: But Not in the Way We Thought." *Capability* 2 (2): 25-41.
- Calhoun, J. G., P. L. Davidson, M. E. Sinioris, E. T. Vincent, and J. R. Griffith, Jr. 2002. "Toward an Understanding of Competency Identification and Assessment in Health Care Management." *Quality Management in Health Care* 11 (1): 14-38.
- Calhoun, J. G., E. T. Vincent, G. L. Calhoun, and L. E. Brandsen. 2008. "Why 'Competencies' in Graduate Health Management and Policy Education?" *Journal of Health Administration Education* 1 (1): 17-36.
- Calhoun, J. G., E. T. Vincent, G. R. Baker, P. W. Butler, and M. E. Sinioris. 2004. "Competency Identification and Modeling in Healthcare Leadership." *Journal of Health Administration Education* 21 (4): 419-40.
- Carraccio, C., R. Englander, S. Wolfsthal, C. Martin, and K. Ferentz. 2004. "Educating the Pediatrician of the 21st Century: Defining and Implementing a Competency-based System." *Pediatrics* 113 (2): 252-58.
- Dailey, C. A. 1971. *Assessment of Lives*. San Francisco: Jossey-Bass.
- Flanagan, J. C. 1954. "The Critical Incident Technique." *Psychological Bulletin* 51: 327-58.
- Garman, A. N., and M. P. Johnson. 2006. "Leadership Competencies: An Introduction." *Journal of Healthcare Management* 51 (1): 13-17.
- Giganti, E. 2002. "Comparing Systems' Competency Models: An Analysis of Individual System Competencies Reveals Remarkable Consistency Throughout the Ministry." *Health Progress* 83 (3): 40-43.
- Goleman, D. 1998. *Working with Emotional Intelligence*. New York: Bantam Books.
- . 2000. "Leadership That Gets Results." *Harvard Business Review* 78 (2): 78-90.
- Institute of Medicine (IOM). 1999. *To Err Is Human: Building a Safer Health System*. Washington, DC: National Academies Press.
- . 2001. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academies Press.
- . 2003. *Health Professions Education: A Bridge to Quality*. Washington, DC: National Academies Press.
- Institute of Medicine Board on Health Care Services. 2007. *Advancing Quality Improvement Research Challenges and Opportunities Workshop Summary*. Washington, DC: National Academies Press.
- Intagliata, J., D. Ulrich, and N. Smallwood. 2000. "Leveraging Leadership Competencies to Produce Leadership Brand: Creating Distinctiveness by Focusing on Strategy and Results." *Human Resources Planning* 23 (3): 12-23.

- Jha, A. K., Z. Li, E. J. Orav, and A. M. Epstein. 2005. "Care in U.S. Hospitals—The Hospital Quality Alliance Program." *New England Journal of Medicine* 353 (3): 265–74.
- The Joint Commission. 2005. *Health Care at the Crossroads: Strategies for Improving Health Care Profession Education*. Oakbrook Terrace, IL: The Joint Commission.
- Kane, M. T. 1987. "Is Predictive Validity the Gold Standard or Is it the Holy Grail of Examinations in the Professions, Invited Address to Division I—Education in the Professions, American Educational Research Association, Washington DC, April 1987." *Professions Education Research News* 9 (1): 9–13, 17.
- Little, M. A., and P. J. Milliken. 2007. "Practicing What We Preach: Balancing Teaching and Clinical Practice Competencies." *International Journal of Nursing Education Scholarship* 4 (1): Article 6.
- Lucia, A. D., and R. Lepsinger. 1999. *The Art and Science of Competency Models: Pinpointing Critical Success Factors in Organizations*. San Francisco: Jossey-Bass/Pfeiffer.
- McClelland, D. C. 1961. *The Achieving Society*. Princeton, NJ: D. Van Nostrand.
- . 1973. "Testing for Competence Rather than for Intelligence." *American Psychologist* 28: 1–14.
- . 1985. *Human Motivation*. Glenview, IL: Scott Foresman and Company.
- . 1988. *Human Motivation*, 2nd ed. New York: Cambridge University Press.
- . 1998. "Identifying Competencies with Behavioral-Event Interviews." *Psychological Science* 9 (5): 331–39.
- McClelland, D. C., R. A. Clark, and E. I. Lowell. 1976. *The Achievement Motive*, 2nd rev. ed. New York: John Wiley and Sons.
- Mularski, R. A., S. M. Asch, W. H. Shrank, E. A. Kerr, C. M. Setodji, J. L. Adams, J. Keesey, and E. A. McGlynn. 2006. "The Quality of Obstructive Lung Disease Care for Adults in the United States as Measured by Adherence to Recommended Processes." *Chest* 130 (6): 1844–50.
- O'Toole, B., M. Rocklage, L. Ballard, and K. Pingleton. 2007. "Selecting and Forming Leaders for Health Care Ministry." Presentation (A1) at the Innovation Forum, Catholic Health Association, Catholic Health Assembly Annual Meeting, Chicago, June 18.
- Pham, H. H., J. Coughlan, and A. S. O'Malley. 2006. "The Impact of Quality-Reporting Programs on Hospital Operations." *Health Affairs* 25 (5): 1412–22.
- Schippman, J. S., R. A. Ash, M. Battista, L. Car, L. D. Eyde, B. Hesketh, J. Kehoe, K. Pearlman, E. P. Prien, and J. Sanchez. 2000. "The Practice of Competency Modeling." *Personnel Psychology* 53 (3): 703–40.
- Shrank, W. H., S. M. Asch, J. Adams, C. Setodji, E. A. Kerr, J. Keesey, S. Malik, and E. A. McGlynn. 2006. "The Quality of Pharmacologic Care for Adults in the United States." *Medical Care* 44 (10): 936–45.
- Spencer, L. M. 1991. "Job Competency Assessment." In *Handbook of Business Strategy*, edited by H. Glass, 28–1–28–20. Boston: Warren Gorham and Lamont.
- Spencer, L. M., D. C. McClelland, and S. M. Spencer. 1994. *Competency Assessment Methods: History and State of Art*, 3–44. London: Hay/McBer Research Press.
- Spencer, L. M., and S. M. Spencer. 1993. *Competence at Work: Models for Superior Performance*. New York: Wiley.
- Ulrich, D., J. Zenger, and N. Smallwood. 2000. "Building Your Leadership Brand." *Leader to Leader* (Winter): 40–46.
- Warden, G. L., and J. R. Griffith. 2001. "Ensuring Management Excellence in the Health Care System." *Journal of the Health Administration Education* (Supplement) Fall: 19–32.
- Williams, S. C., S. P. Schmaltz, D. J. Morton, R. G. Koss, and J. M. Loeb. 2005. "Quality of Care in U.S. Hospitals as Reflected by Standardized Measures, 2002–2004." *New England Journal of Medicine* 353 (3): 255–64.
- Zullo, H. M., G. Oettingen, C. Peterson, and M. E. Seligman. 1988. "Pessimistic Explanatory Style in the Historical Record." *American Psychologist* 43 (9): 673–82.

PRACTITIONER APPLICATION

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The National Center for Healthcare Leadership (NCHL) is attempting to define a core set of competencies required to be a healthcare leader in the twenty-first century. This article describes the reasons and the process by which the current version of the NCHL Leadership Competency Model, Version 2, has been developed. Those of us in the field of healthcare delivery may look at this research and its model and either acknowledge it as an ambitious academic endeavor or compare our current and past experiences in leadership practices with those described in the competency model. I prefer to do the latter and to contrast the past and current performance of my organization to the best practices proposed by NCHL.

Across our profession we have been trained in various programs and have had various experiences, which have helped us to develop the skills to perform our current roles. However, I believe we have not been held to rigorous standards of training requirements and skill development, which would help us to lead our organization in an exemplary fashion. Five years ago at Moses Cone Health System (MCHS), we acknowledged this deficit and first enrolled eight senior leaders in the NCHL Advanced Leadership Development Program. At that time, the NCHL was only beginning its exploration of leadership models, but it teamed with respected entities such as the University of Michigan Business School to provide executive teams with a high-level learning experience. Through that shared experience, the senior leadership of MCHS started to develop an increased passion for leadership training and development. This led to a renewed emphasis on internal leadership programming for supervisors, managers, department heads, and vice presidents—all levels of leadership across the system. Participation in this curriculum was required and became part of our annual evaluations and incentive compensation systems. Each year senior management worked with our organizational development department to design curricula, which would help to advance a particular set of skills and competencies for the aforementioned group of leaders.

Interestingly, much of the impetus for this effort came by being aware of what organizations outside healthcare were doing to use leadership development to reach a strategic end. It is only recently that we have become more aware of the NCHL competency model and have judged our performance against that model. Specifically, we have used this model to indicate current gaps in our leadership training and to consider where we will focus our training efforts over the next two years. Compared with the model, we believe we have spent a great deal of time in the areas of transformation and people and less work in the area of execution, particularly around the competency of accountability.

What evidence do we have that improved leadership competency adds value? We attribute this effort to many of our successes in the past couple of years. For example, we have seen more than 350 leaders embrace quality improvement tools with an enthusiasm that has resulted in a 10 percent year-to-year decrease in our mortality rate. We have also seen a dramatic increase in employee satisfaction with their department leadership, as measured consistently over the past five years. The former effort has resulted from our teams working on analytical thinking, financial skills, and information seeking, and the latter from their work on people skills, particularly in the areas of team leadership and talent development.

We believe a focus on leadership competencies is one key way MCHS will be successful in achieving its strategic goals. The proposed NCHL Leadership Competency Model and its related leadership programming have provided helpful assistance in guiding our leadership team's efforts toward this end.