



BUILDING A WORLD-RENOWNED HEALTH SCIENCE CENTER

November, 2006

UNIVERSITY OF
Nebraska
Medical Center

NEBRASKA'S HEALTH SCIENCE CENTER

NOVEMBER, 2006

REPORT OF SELF STUDY FOR REACCREDITATION

Submitted to the Higher Learning Commission
of the North Central Association of Colleges and Schools
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To the Higher Learning Commission

This self-study report documents the University of Nebraska Medical Center's (UNMC) pursuit of its vision of being a world-renowned academic health center. The report further analyzes UNMC's strengths, challenges and opportunities in the context of the Higher Learning Commission's five criteria and twenty-one core components for accreditation. Additionally, the report contains a special chapter that describes UNMC's extensive distance education offerings, and requests Commission approval for further expansion of distance education degree programs.

UNMC is a dynamic, complex public health science center on a trajectory of purposeful growth. It educates the majority of Nebraska's healthcare providers, produces cutting-edge biomedical research, provides extraordinary care, in partnership with The Nebraska Medical Center (our primary teaching hospital), and engages in extensive outreach to its community and to underserved populations.

This self-study, produced over the past eighteen months, provides a point-in-time view of UNMC's numerous programs and activities. Self-examination has benefited our institution beyond the requirements for re-accreditation. Faculty, staff and students join me in looking forward to the opportunity to discuss this report with you and to update it, where appropriate.

In closing, I wish to recognize the over 100 dedicated individuals who participated in the self-study process.

Most Respectfully,



Harold M. Maurer, M.D.
Chancellor

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The four-person executive committee met almost weekly over 20 months and reported monthly to the steering committee. Agendas and minutes of all such meetings were promptly circulated by e-mail, and periodic articles published in UNMC's daily electronic newsletter advised the campuses. Our goal was immersion of the entire institution in the self-study and the planning for the site visit.

Chancellor Harold M. Maurer, M.D., provided strong support and keen interest in the progress of the self-study because he views accreditation as a primary responsibility, and he engaged the senior leadership in similar active participation. The coordinator met with Dr. Maurer monthly and periodically updated the Chancellor's Council of deans and unit directors.

We appreciated advice received from other North Central Association members at the Commission's Annual Meetings in 2005 and 2006. The late William Berndt, Ph.D., a former UNMC Chancellor and Commission site visitor, provided insightful consultation. All recommended that we hire a professional writer. For about 12 months, Cindy Murphy McMahon attended meetings and worked to integrate the language of multiple authors into a readable story. She was invaluable, challenging clarity and minimizing redundancy. Valerie McCormick, in coordination with UNMC's Printing Services, provided experienced and inventive graphic design to attract and inform the reader. Finally, Claudia Reinhardt polished the text with fresh editorial oversight. We are grateful for these professional consultants and colleagues.

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INTRODUCTION



The University of Nebraska Medical Center (UNMC) is Nebraska's only public academic health science center. Located in the heart of the Midwest, UNMC enrolls approximately 3,000 students and clinical residents from all over the world. Our graduates go on to serve the health care needs of people in Nebraska, the region, and states and nations far and wide.

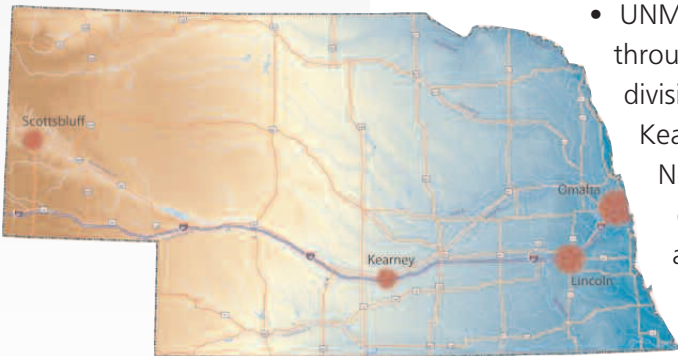
Because UNMC offers a wide variety of health science programs and has its own chancellor, Faculty Senate and budget, it may be unique among member institutions accredited by The Higher Learning Commission of the North Central Association of Colleges and Schools. Furthermore, its students, highly qualified for only a limited number of competitive positions in health care education, are more directed toward professional career goals than many students. Hence, UNMC's retention and graduation rates are above the national norm for college students, as are students' success on national standardized examinations, licensure, and placement in jobs or advanced training. Indeed, most programs have licensure/certification pass rates of nearly 100 percent.

As much as we would like to simply list the accomplishments of UNMC, the purpose of this self-study for continued accreditation by the Commission is not to be self-serving. Rather, all those involved with the accreditation process at UNMC appreciate this opportunity to focus a critical eye beyond statistics that contribute to our high standing in the community, the state, the region and beyond. We welcome this exercise in self-analysis with the hope that it will enable UNMC to verify the areas in which it is doing the best possible work of educating tomorrow's health care professionals and leaders, and to identify those programs, systems and ideas that limit or impede its goal of being a world-class institution.

Some brief background information on UNMC:

- UNMC is one of four University of Nebraska institutions. The others are located in Omaha, Lincoln and Kearney.
- Classified by the Carnegie Foundation as a "special focus institution," UNMC is a research-intensive academic health science center with four campuses: Omaha, Lincoln, Kearney and Scottsbluff.

- UNMC educates its students through the Colleges of Medicine, Nursing, Dentistry and Pharmacy, School of Allied Health Professions, the Graduate Studies Program, and now the College of Public Health. In addition to The Higher Learning Commission, UNMC's academic programs are accredited by recognized national standard-setting organizations such as the LCME, ANCC, ACGME, ACCME, CEPH, and the ADA (Appendix 1).
- UNMC employs more than 800 full-time faculty and 175 part-time faculty; 1,300 practicing professionals volunteer as preceptors for clinical training programs throughout the state and Midwest. The university also employs approximately 3,200 staff. An additional 4,000 employees work in The Nebraska Medical Center, UNMC's hospital partner.
- UNMC's rapidly expanding research capacity and productivity involve investigations in cancer, stem cell and transplantation biology, cardiovascular disease, genetics, neurosciences, biomedical technology, bioterrorism preparedness, and nanomedicine. Extramural research funding approaches \$80 million annually.
- Staffing tertiary and quaternary care referral centers, clinical faculty offer health care services through UNMC's clinical partners: The Nebraska Medical Center; the Veterans Affairs Medical Center; Children's Hospital; and UNMC Physicians, the faculty practice group that also operates outpatient clinics. The Colleges of Nursing, Dentistry and Pharmacy faculty also provide specialized clinics and hospital-based services.
- Other entities within UNMC that involve faculty, staff and students – and will be referred to in this report – are the UNMC Eppley Cancer Center, which coordinates research, patient care and educational programs; the Eppley Institute for Research in Cancer and Allied Diseases; and the Munroe-Meyer Institute for Genetics and Rehabilitation (MMI), which provides services to individuals with genetic, developmental and physical disabilities and special health care needs. All three are located on the Omaha campus.



- UNMC offers quality primary, specialty and emergency health care throughout the state and regional communities. UNMC schools and divisions reach out to the people living in and around Lincoln, Kearney, Scottsbluff, Omaha and other clinic sites across Nebraska, and in neighboring Iowa. UNMC's long-established distance learning programs have linked students, educators and practitioners across the state, creating a "500-mile-wide campus." Most of the health care professionals practicing within Nebraska received their training at UNMC.
- UNMC is developing relationships with academic health centers around the world through clinically significant research; educational assistance to faculties in China, Jordan, Afghanistan, Iraq, Tanzania and South Africa; referrals of

international patients to our clinical experts in Omaha; and doctoral and postdoctoral training programs geared to internationally collaborative research. Cultural competence is also a goal on UNMC's four campuses.

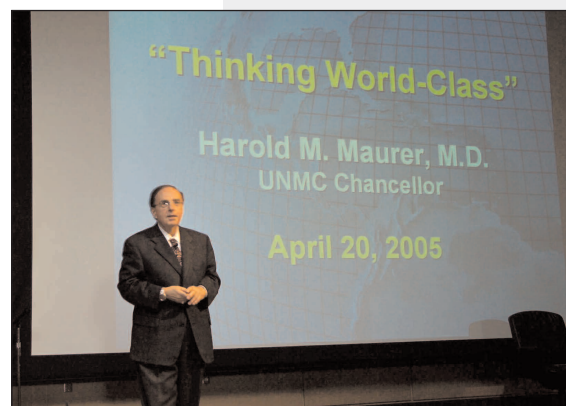
An ethos of formal strategic planning pervades UNMC's leadership. Data-driven standards, annual updating and revision, outcomes metrics and suitable rewards are taken seriously. These efforts include fostering effective relationships with other leaders and philanthropists in the community; undertaking a significant building program; increasing numbers of qualified applicants for student and faculty positions; and fiscal responsibility. UNMC anticipates local needs across the state with educational programs, and is a key part of the nation's defense as a national model for a health care response to bioterrorism. Responsibility follows such purposeful design. Indeed, the recent development and Board of Regents approval of a new UNMC College of Public Health is a clear response to self-analysis, planning and collaboration with community partners.

UNMC makes it a priority to connect with the communities and citizens it serves, beyond its primary mandate to educate health professionals and supply health care. Surveys, annual "circuit-riding" tours by Chancellor Harold M. Maurer, M.D., and senior administrators, a citizen Board of Counselors, and regular liaison with the Nebraska Legislature bond the university even more to its constituents. UNMC behaves accountably in return for the public's trust and funding.

Aware that UNMC does not yet fully reflect the diversity it aspires to, and conscious of the widespread difficulty nationally in enhancing diversity among students and faculty, UNMC has established supportive linkages with traditionally black colleges in the South and Southeast. UNMC also regularly works with and encourages underrepresented minority grade school and high school students to consider careers in science, and has numerous programs geared to Native Americans. Medical and nursing students in Omaha staff a clinic for uninsured patients, who are predominantly minorities. Bilingual directional and other signage at UNMC and the hospital recognize the growing Spanish-speaking population in the region; translators for multiple languages are available in the clinics.

In summary, the UNMC Self-Study Report will demonstrate that UNMC's forward-thinking orientation, student- and faculty-focused learning, connectedness to its communities, and distinctiveness are entirely congruent with The Higher Learning Commission's accreditation criteria and overarching themes. In addition, it will establish that Chancellor Maurer's aspiration for UNMC to be a "world-class institution" is no public relations ploy.

"An ethos of formal strategic planning pervades UNMC's leadership."



UNMC Campus 1998



UNMC Campus 2006



1. Durham Research Center
2. Parking Garage
3. Power plant
4. Hixon-Lied Center for Clinical Excellence
5. Construction site for Sorrell Center for Health Science Education

Response to the Concerns of the 1997 Site Visitors

UNMC is a very different place in 2006. The Commission's site visitors will read in this self-study report, and see, how UNMC has answered the concerns of the 1997 reviewers:

- Harold M. Maurer, M.D., former dean of the College of Medicine, became the Chancellor in 1998 and, with his administrative team, has been providing stable leadership ever since.
- New deans of the Colleges of Medicine, Dentistry and Nursing and the director of the Eppley Cancer Center were recruited nationally.
- The Durham Research Center, the Lied Transplant Center, the Munroe-Meyer Institute addition, and the Hixson-Lied Center for Clinical Excellence provide new teaching, research and clinical space, all funded principally by private dollars.
- Student bodies have become more competitively selected despite becoming slightly larger.
- Library resources, electronic medical records, interactive teaching programs, electronically distributed education across the state, and communication have benefited from sophisticated, well-funded informational technology.
- Research funding and productivity have grown three-fold in the past 10 years.

In short, as innovative educational methods attract students, and modern research space and core laboratory facilities help recruit and retain funded researchers, a progressive energy permeates this established institution.

The four concerns identified by the Commission in 1997, highlighted in bold, have been overcome:

In 1997, **assessing outcomes** was just beginning at UNMC. Now, clinical teaching and care meet national standards for evidence-based health care. The graduates of its colleges and postgraduate medical training programs now perform even better on standardized testing and licensing examinations, match at a higher rate with their first or second choices for post-graduate residencies, and become properly licensed or certified at a higher rate than the national average. Course curricula respond to ratings of faculty performance by peers and students. Faculty development programs for teaching, evaluation, and promotion abound.

The philosophy and **role of general education** in UNMC's programs has been addressed frequently over the last nine years, and the current self-study process has helped articulate UNMC's approach:

The educational mission of UNMC is to improve the health of Nebraskans through learner-centered, outcomes-focused educational programs that provide graduates with a strong general education background, professional

“A progressive energy permeates this established institution.”

knowledge, technical competencies, and lifelong learning skills. Each program's curriculum provides course content as well as mentoring and evaluation of students to assure the development and practice of critical thinking, problem-solving, ethical decision-making, cultural competency, professional behavior, teamwork, leadership, and oral and written communication skills. The curriculum builds on the general education backgrounds acquired by students through required college prerequisite courses.

All student applicants, even in UNMC baccalaureate degree programs, have met general education prerequisites in colleges before matriculation. Nonetheless, UNMC courses stress such matters as oral presentation, writing skills, biomedical ethics, professional behavior and attitudes, awareness of trends in health care, responsibility to society, and an attitude toward and capacity for lifelong learning. Slowly, a campus environment of art, music and humanities is being fostered because UNMC realizes that health care professionals must broaden their focus to be full members of society. For example, UNMC sponsors events for students, faculty and staff at area art, music and other cultural venues.

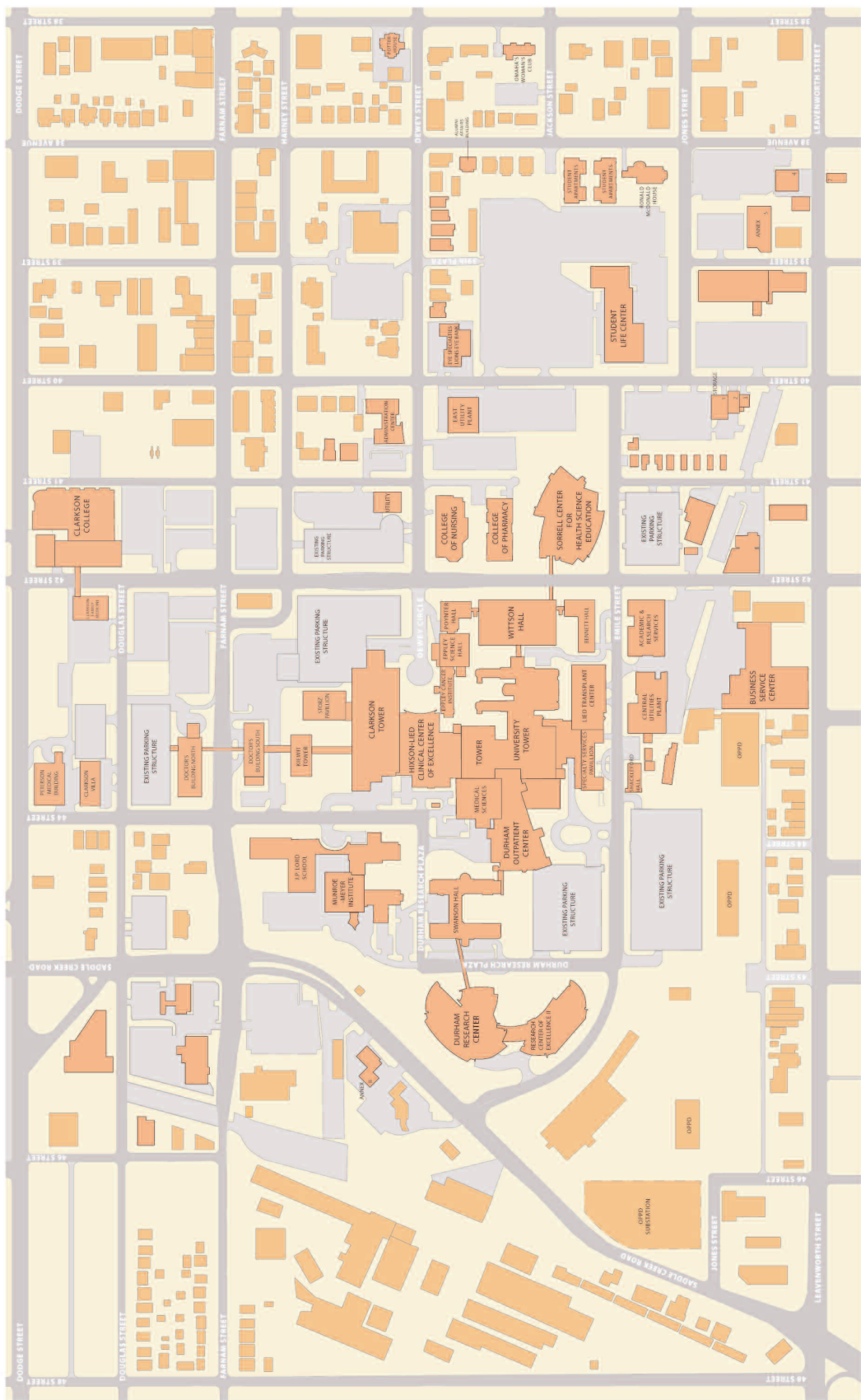
In an institution with multiple colleges and multiple specialties and practices within each college, there are many mission statements. Each of these is consistent with and subordinate to UNMC's predominant **mission statement**:

The mission of the University of Nebraska Medical Center is to improve the health of Nebraska through premier educational programs, innovative research, the highest quality patient care, and outreach to underserved populations.

This mission is intimately linked to UNMC's culture and strategic planning process; Chapters 1 and 2 address these issues in great detail. A survey conducted in 2005 of students, faculty and staff revealed overwhelming agreement that UNMC's mission is well-recognized and understood (Appendix 2).

The 1997 Commission site visitors would not recognize today's **physical plant** for education and research. The UNMC Facilities Development Plan (2006 - 2015) illustrates the many physical changes already accomplished.¹ Ideal space for expanding educational needs – added small classrooms, technologically sophisticated automated mannequins for learning procedural and treatment skills, and more comprehensive wireless communication – will be provided with the opening of the Michael F. Sorrell Center for Health Science Education in 2008.²

Current Campus



*“UNMC responsibly
and thoughtfully
reacts to the shifting
projections of
needs in health care
personnel.”*

Other advice from the Commission has been heeded:

- Rubens Pamies, M.D., an African-American internist-administrator from Case Western University and Meharry Medical College, was appointed vice chancellor for academic affairs in 2003. He has a national reputation for expertise in disparities in health care.
- Today there is much more collaboration throughout UNMC, as the self-study will demonstrate. Cancer, geriatrics, public health, and the rural health curriculum, in particular, offer opportunities for interprofessional research and health care teams.
- Information Technology Services now employs over 100 professionals that assist the whole institution with efficient, state-of-the-art communications technology. The hospital employs 60-70 more.
- Over the past nine years, the Omaha office of The University Foundation has been very effective in facilitating philanthropy; five buildings have been funded since 1997 on the Omaha campus alone, virtually all by private dollars.

Two other concerns of Commission site visitors deserve special comment. Vacillating estimates of the *health care workforce* confounded the 1997 visitors. Today, the issue has changed and there is no oversupply of health care professionals. If anything, there may be a dearth of health care workers nationally in inner-city and sparsely populated rural areas, especially in primary care, but in some cases specialty care. Today, looming workforce shortages of health care providers and educators – due to longer patient lifespans, chronic disease, population growth and diversity, and new science and technology – demand greater output from academic health centers. UNMC is expanding its physical resources and its capacity for distance learning to meet that demand in the Midlands region. UNMC responsibly and thoughtfully reacts to the shifting projections of needs in health care personnel.

Another 1997 suggestion, *according maximal operational flexibility to meet the changing marketplace*, is of concern not only to UNMC, but also to its partners in delivering health care, The Nebraska Medical Center and UNMC Physicians. In a public/private model of separate but collaborative organizations, the teaching hospital and the faculty-practice group engage the marketplace. Overlapping governing boards and policies are guided by a common vision with UNMC and facilitate competitive care; full inpatient censuses; Six Sigma (quality improvement) success in improving safe, effective care; and a suitable variety of patients for clinical education. The hospital and UNMC Physicians provide the chancellor and UNMC colleges with funds for education and research functions. Clinical care revenues are vital to the support of full-time faculty in the Colleges of Medicine, Nursing and Dentistry. Updated clinics provide the faculty with clinical facilities, ancillary services and amenities attractive to paying patients. This tripartite collaboration supports effective and fiscally responsible education in the health sciences.

UNMC's Self-Study Process and Structure

UNMC began organizing its self-study in January 2005 when the chancellor appointed a coordinator and three other members of an executive committee. In addition to the executive committee, UNMC's self-study team includes a steering committee (18), seven task forces (82), and three resource teams (20), for a total of more than 100 faculty, staff and students (see Acknowledgments). The five initial tasks that the executive committee addressed were:

- Recommending the appointment of people to these teams by Chancellor Maurer
- Establishing the two-year timeline for the self-study
- Developing an initial communications strategy to coordinate the work of the entire self-study team
- Considering ways to inform the UNMC community about the self-study
- Deciding to survey faculty, staff and students regarding The Higher Learning Commission's criteria and core components

The UNMC self-study team used one guiding principle from start to finish: UNMC will benefit from its self-study for The Higher Learning Commission of the North Central Association.

Further, the team vowed that the process would enable UNMC to:

- **Become even more learning-centered**
- **Enhance its quality indicators**
- **Strengthen strategic planning**
- **Deepen our understanding of ourselves**
- **Expand institutional data sets and analysis**
- **Achieve continued accreditation with no qualifications**

Chancellor Maurer appointed a senior, but relatively new, faculty member as the self-study coordinator and added a second faculty member and two senior administrators, each with long service to UNMC, to form the four-member executive committee. This group represents the College of Medicine, the largest college; the Chancellor's Office; Academic Affairs; and the Library of Medicine. One of the administrators is the assistant vice chancellor for budget and strategic planning, who coordinates UNMC's strategic planning process, and the other is the associate vice chancellor for academic affairs, who participates in the institution's many specialized accreditations and directs the Institutional Research Office. The other long-time faculty member participates in medical education and is a former president of the Faculty Senate.

The members of the executive committee also serve on the steering committee, with 14 others who represent all of UNMC's colleges, institutes and service units. The group includes a mix of faculty, academic administrators and staff, all with extensive knowledge of UNMC and their units' specialized accreditation processes.

The topics of mission and governance were split, with a resulting six task forces addressing the five Commission criteria; a seventh task force on distance education was added later to address UNMC's expanding activities in this area. Three of the four executive committee members chair task forces, and the other task force chairs are also members of the steering committee. Each task force includes representatives from each of UNMC's colleges, institutes and major support service units, as appropriate to the task force's responsibility. Altogether, 50 faculty, 14 academic and nonacademic administrators, 18 staff and seven students serve on the various task forces.



In addition, a data team was formed to develop the electronic database and Web site for the self-study. Two virtual teams consult on information technology (IT) and communications, respectively. The executive committee worked with the IT team to create a Blackboard™ work-area for the self-study team, with a set of evidence folders and separate work spaces for the executive committee and each task force. The committee expected the task forces to use Blackboard™ to exchange and store

documents and to collaborate through online discussions. In practice, the data team made limited use of the evidence folders, preferring to create Web links to its documents. The executive committee used Blackboard™ to post documents for the entire self-study team. Task force use varied, with moderate use of document storage and exchange and little online discussion.

Support staff was assigned, and a writing consultant hired. The committee asked the writer to begin attending task force and executive committee meetings during the data-gathering and drafting stages to familiarize herself with UNMC and with the Commission's Criteria and Core Components. The executive committee also commissioned a professional editor and a graphics designer to assist with the final report.

The executive committee usually met weekly. Minutes (available in the Resource Room) were e-mailed to committee members and the committee communicated extensively via e-mail. Fortunately, committee members had high levels of mutual trust and confidence that facilitated collective decision-making.

The steering committee met monthly, with agendas e-mailed in advance and minutes (available in the Resource Room) distributed following meetings. These meetings were generally divided into three sections: updates from the coordinator and executive committee; discussion and decision-making regarding emerging

issues; and reports from task force and data team leaders. The seven task forces and the data teams had their own meeting schedules and work styles.

In September 2005, the executive and steering committees welcomed Robert Appleson, Ph.D., Commission associate director, both for consultation concerning the timeline and the flavor of the self-study report desired by the Commission, and for what turned out to be a fruitful interaction at a campus community forum. This meeting also led to the decision to add Chapter 6 on distance education.

UNMC's executive committee submitted a proposal for an interactive presentation to the Commission's Annual Meeting on its strategies for the communication of its self-study process and progress to the larger community. The paper was accepted and the session was presented twice on April 1, 2006 at the Pre-Conference Workshop on Self-Study in Chicago.³

Looking to the Future

The UNMC self-study process has already accomplished long-term goals above and beyond its aim of continued accreditation by The Higher Learning Commission:

- Review of a score of mission statements – from the University of Nebraska system itself through UNMC colleges and departments – was accomplished.
- An electronic data resource center coordinated by the new director of institutional research established criteria for inclusion, minimized discrepancies, and provided systematic updates of important databases. Standardization and consistency were guiding principles. New search engines and indexing allowed electronic access to all intramural publications by topic. The center's work will continue to be of benefit to all of UNMC's campuses.
- Team building across colleges and units inherent in the accreditation process will undoubtedly strengthen interprofessional teaching, research and decision-making – a harbinger of improved future academic practices.

Preview of the Report of the Self-Study

The following report will detail and substantiate the ways in which UNMC meets its mission and concurrently the criteria for continued accreditation. It is arranged in chapters related to the criteria, plus one regarding the burgeoning phenomenon of distance education that includes our application for broad scope preauthorization of degree and certificate programs to be delivered largely online. The report's major themes include UNMC's dedication to excellence through ongoing careful planning; preparation of health care professionals for lifelong learning as science, technology and new practice patterns evolve; responsible contributions to knowledge and health care delivery systems; and continued connectedness to its widening community.

Throughout, the report will acknowledge ways UNMC must work harder to meet its mission in a complex and rapidly changing society. At the close of each chapter,

those challenges and opportunities are listed (in addition to strengths). Chapter text addresses most issues in detail, and UNMC leaders are assigning accountability for identified challenges/opportunities. This already has been accomplished for most of the issues, particularly those identified by recent UNMC surveys.

For the ease of the reader, we have standardized editorial style, minimized redundancy, and, through use of appendices and electronic references, tried to avoid cluttering text with distracting detail. The report is designed to be available in both printed and electronic forms; URLs given as references often also have hard-copy equivalents in the Resource Room.

Epilogue

UNMC's story is one of accelerating progress toward higher expectations and national and international recognition. Our progress is based on the solid foundation of 125 years of service to the citizens of Nebraska and to the scientific community at large. As the future unfolds, UNMC's scope of service is changing and expanding to encompass more diverse populations and an ever-widening circle of students, faculty, staff and patients.

References

¹ UNMC Facilities Development Plan (2006 - 2015); Resource Room

² Plans for Sorrell Center for Health Science Education; Resource Room

³ *In the Loop: Self-Study Team and Campus Communication Strategies*. UNMC Presentation April 1, 2006, to the Self-Study Workshop at the HLC-NCA Annual Meeting, Chicago.
http://www.unmc.edu/nca/hlc2006ppt2/hlc2006ppt2_frame.htm

CHAPTER 1

Criterion One: Mission and Integrity

The organization operates with integrity to ensure the fulfillment of its mission through structures and processes that involve the board, administration, faculty, staff, and students.

The University of Nebraska Medical Center (UNMC) recognizes and embraces its role as the only publicly assisted institution in the state of Nebraska entrusted with training health care professionals and scientists. Addressing this role with the highest level of integrity in a comprehensive spectrum of health care disciplines, while supporting its many internal and external constituencies, is central to how UNMC functions. This chapter describes how UNMC strives to fulfill its mission throughout the whole organization and analyzes how the mission has been incorporated into the educational, research and service activities of students, faculty and staff. It demonstrates how integrity is critical to achieving the mission in each of these functions, and how it is a vital part of how UNMC looks to the future.

CORE COMPONENT 1A

The organization's mission documents are clear and articulate publicly the organization's commitments.

The mission of the University of Nebraska Medical Center is to improve the health of Nebraska through premier educational programs, innovative research, the highest quality patient care, and outreach to underserved populations.

UNMC's mission statement directly addresses the roles undertaken by a comprehensive academic health science center: education, research, patient care and outreach. The phrase "outreach to underserved populations" was added in 1994. The mission statement was formally restated in 1997, and although reviewed annually, has undergone only minor revisions.



- UNMC fulfills its *educational* aspirations through its Colleges of Medicine, Nursing, Dentistry and Pharmacy, Public Health, School for Allied Health Professions, and the Graduate Studies Program, which collectively enroll approximately 3,000 students and clinical resident trainees annually. These academic programs are accredited by some 50 recognized national standard-setting organizations (Appendix 1).
- UNMC's expanding *innovative research* activities are directed at achieving excellence in cancer, stem cell and transplantation biology, cardiovascular disease, genetics, neurosciences, biomedical technology, bioterrorism preparedness, and nanomedicine.
- *The highest quality patient care* is delivered in partnership with The Nebraska Medical Center, our teaching hospital; UNMC Physicians, the faculty practice group; affiliated hospitals and clinics throughout the state; and clinics and hospital-based services under the auspices of the Colleges of Nursing, Dentistry and Pharmacy.
- UNMC *reaches out to underserved populations* through concerted recruitment of minority students, faculty and staff; through community programs; and through health care services that are provided to all, regardless of income or cultural background.

Based upon its mission, UNMC also adheres to the following vision:

The partnership of UNMC and The Nebraska Medical Center will be a world-renowned health science center that:

- *Delivers state-of-the-art health care*
- *Prepares the best-educated health professionals and scientists*
- *Ranks among the leading research centers*
- *Advances our historic commitment to community health*
- *Embraces the richness of diversity to build unity*
- *Creates economic growth in Nebraska*

Furthermore, the following values have been outlined to fulfill the mission and vision statements:

Faculty, staff and students of UNMC will:

- *Emphasize quality and have high expectations for performance*
- *Pursue excellence in an ethical manner*
- *Foster an environment of learning and communication*
- *Respect individuals for their cultures, contributions and points of view*
- *Support the mission and vision of UNMC in the best interests of our customers*
- *Promote individual accountability for organizational success*

Surveys of employees in 2002 and 2004 revealed that approximately 85 percent of respondents were aware of UNMC's mission, vision and goals, and 79 percent agreed that UNMC is following its vision and mission. Faculty, staff and student surveys conducted in 2005 showed that 90 percent or more of all respondents agreed that UNMC's mission was clear.¹

The printed mission is included with the identification badges of all students, faculty and staff. Many faculty also have the mission or vision printed on the back of their business cards. The mission statement appears prominently on the UNMC Web site and is reinforced by periodic articles in the daily electronic newsletter, *UNMC Today*. The mission and vision are included in orientation sessions for new faculty and regularly reinforced at faculty seminars and meetings. When members of the leadership team make presentations to the public and the Board of Regents, they outline the mission and vision of the institution. Also, as fully described in Chapter 2, UNMC's mission, vision and goals are instrumental to its strategic planning process.

Other Mission Statements Important to UNMC

The mission of the University of Nebraska (NU) system² is to meet the educational, economic, social and cultural needs and aspirations of the citizens of Nebraska through teaching and service/outreach, and the discovery, integration and application of knowledge. NU's mission is further detailed in the 2005 Strategic Planning Framework documents.³

This mission is carried out independently by the four institutions, in accordance with their designated roles. Because UNMC is responsible for medical, dental, nursing, pharmacy, allied health, and research units, its mission as an academic health science center reflects that role in NU's overall mission. Nearly all major units within UNMC have additional mission statements reflecting their specific roles.⁴

The Nebraska Medical Center is the private, not-for-profit hospital formed in 1997 by the merger of University and Clarkson Hospitals. Its mission is dedicated to excellence and innovation in compassionate, quality health care through teamwork, education and research. This JCAHO-accredited hospital is licensed for 689 beds. In 2005, it had an average daily census of 357 with a total of 23,899 discharges, 43,288 emergency room visits, and 437,891 outpatient visits. The average daily stay was 5.45 days. The Hixson-Lied Center of Clinical Excellence connecting the two towers of the hospital opened in 2006 and houses an advanced 34-bed emergency department, a 27-room operating suite, a radiology suite, and a 34-bed neonatal intensive care unit. Together UNMC and the hospital provide professional education, high-quality patient care, and advancement of the science of medicine.⁵



The mission of **UNMC Physicians**, the practice association of more than 400 UNMC faculty physicians and nurse practitioners and partner of The Nebraska Medical Center, is to provide accessible, affordable, and high quality medical care in an atmosphere which accommodates patients from all walks of life and respects the dignity of the individual.⁶ Similar to the physician practice group, **University Dental Associates (UDA)** is composed of faculty from the College of Dentistry (COD). The UDA mission, "...to provide a vehicle for the faculty of the COD to develop an integrated group practice approach to manage clinical practice activities," is integrated into the educational and service goals of UNMC's COD. These missions support and complement UNMC's – to improve the health of Nebraska and reach out to underserved populations.

CORE COMPONENT 1B

The organization, in its mission documents, recognizes the diversity of its learners, other constituencies, and the greater society it serves.

UNMC has long recognized the importance of diversity, both in those who carry out its mission and in those it serves. It is clear that the patients and communities



being served by UNMC's local, regional and global outreach are increasingly culturally diverse and require UNMC to be better prepared to serve them. The fourth role in the mission, "outreach to underserved populations," was specifically added to ensure this dimension of preparedness.

UNMC is guided in this effort by the Nebraska Legislature and the NU Board of Regents, which have established accountability processes to stimulate and track efforts to achieve a more diverse university system across the state.⁷

UNMC's efforts to achieve these results and those of its own mission are demonstrated in the values and critical success factors of its strategic plan, which specifically include diversity goals and accountability processes.⁸ The Chancellor's Council has adopted the 2006-2009 Strategic Plan (Appendix 3) that includes the vision statement: *Embraces the richness of diversity to build unity*; the value statement: *Respect individuals for their cultures, contributions and points of view; and related goal statements*. These are thoroughly examined in Chapters 2 and 5.

Although the most recent surveys of faculty, staff and students in 2005 show that "The UNMC mission statement recognizes the diversity of its learners, other constituencies and the greater society it serves," with 88 to 91 percent agreeing,¹ this positive response could provide false comfort. UNMC does serve the diverse needs of Omaha and the rest of the state's population, but a closer look at its internal "population" doesn't match up. UNMC is having better success in recruiting and retaining minority staff members, the numbers of minority faculty hired or promoted, and minority students recruited, simply have not improved as

much as is desired. The high positive response to the survey question likely represents awareness and support of UNMC's processes for achieving diversity goals, but efforts toward the desired results need to be intensified.

Nonetheless, proof abounds that the mission, vision and values are living documents that influence the way UNMC operates. UNMC's considerable commitment to diverse populations through ongoing programs is palpable; the many programs are explained throughout this report, and a few are mentioned here:

Youth outreach activities. Efforts to diversify the student body cover a continuum that starts in the 4th grade and culminates with targeted recruitment efforts for postdoctoral trainees and faculty. Other activities include the annual free Community Academy, which informs multi-racial Omaha-area 9th through 12th graders about health and research careers; more than 1,500 teens have attended.

Minority recruitment. UNMC and sister NU institutions have created an in-state minority and other disadvantaged student recruitment pipeline, the Nebraska University Preadmission to Health Sciences (NU-PATHS). Talented undergraduate students are selected for preadmission to UNMC programs as high school seniors or undergraduates at the sister campuses. The students receive scholarships at their undergraduate campus, and upon successful completion of their undergraduate studies, guaranteed admission to UNMC. To acquaint them with UNMC, NU-PATHS students are expected to participate in summer research experiences at UNMC. To date, nine NU-PATHS students have completed summer research experiences, eight of whom were funded by NIH Minority Supplements.

In 2000, UNMC began an innovative initiative with out-of-state minority-serving institutions to recruit students and faculty for summer research, faculty exchange and collaboration on research grants. Affiliations have been completed with Dillard University and The University of Arkansas at Pine Bluff, historically black institutions, and Fort Lewis College, which has a 17 percent Native American student body.

In fall 2004, UNMC entered into the Virginia-Nebraska Alliance with five historically black institutions in Virginia, (Hampton University, St. Paul's College, Virginia State University, Virginia Union University, Norfolk State University), Virginia Commonwealth University, and J. Sargeant Reynolds Community College. These affiliations have already resulted in 25 students doing summer research at UNMC, and in 2005, the first four Dillard University graduates matriculated to UNMC's Colleges of Dentistry, Medicine and Pharmacy.

Cultural competency. Awareness of the attitudes and customs of diverse constituents is especially important in health care. The College of Dentistry was one of only four dental schools in the U.S. to be awarded funding from the

“UNMC's considerable commitment to diverse populations through ongoing programs is palpable.”

Core Behaviors

Inclusive

Valued

Respected

Welcomed

American Medical Student Association to incorporate cultural competency education into the curriculum through the “Achieving Diversity in Medicine and Dentistry” project.

An Omaha-campus program, Training of Trainers in Cultural Competence, has graduated trainers from its intensive training workshop of more than 55 hours of cultural diversity awareness content. These “graduates” then take their knowledge back to their colleges, departments and offices and train others to be more culturally aware.

Diversity in service. UNMC’s mission leads it to reach out in service to diverse populations in a variety of ways, which are examined in Chapter 5 and mentioned elsewhere in this report. Two prime examples are the student-run SHARING (Student Health Alliance Reaching Indigent Needy Groups) Clinic, a mission-driven multidisciplinary approach to serving poor and minority clients at no cost, and the Turner Park Clinic for the underserved in midtown Omaha, which is owned, organized and operated by a board of internal medicine residents.

Core behaviors. Over the last several years, each institution in the NU system has adapted the NU Values⁸ program to its own culture. This program emphasizes creation and maintenance of a work environment that celebrates the diversity of all employees. “Inclusiveness” is a valued behavior that all UNMC employees are judged upon in annual performance reviews. This standard encompasses four criteria, including, “Encourages and promotes a work environment in which all individual differences are valued, respected and welcomed.”



A global outlook. Recently, NU President James B. Milliken called for an increased focus in international education, noting convergence of several factors: improved information technology, reductions in trade barriers, and changes in political and economic freedom, which author Thomas Friedman refers to as “leveling the playing field.” NU, like other U.S. institutions of higher learning, is being challenged to attract more foreign nationals to study in this country, encourage more U.S. students to study abroad, and ensure that graduates are knowledgeable of the world around them.

UNMC anticipated the NU mandate. Its international programs are advancing through partnerships primarily with universities in India and China, with smaller programs in Jordan and Afghanistan. Opportunities for student and faculty exchange have begun in Jordan and China and are expected to grow. Programs for specialty medicine consultation for international patients are under way, and classroom technologies connect UNMC to resources across the globe.⁹ Many of UNMC’s postdoctoral trainees come from Asia.

In summary, UNMC’s commitment to its mission, values and goals to further diversify its students, faculty and staff is bearing fruit, though there is still work to

be done. Efforts to satisfy the goals of these documents by achieving a more diverse student body cover a continuum from grade-school through postdoctoral trainees and several minority undergraduate and professional student recruitment programs are seeing results or are in the pipeline. UNMC's progressive culture encourages students and faculty to reach out through service to local and regional minority clients, and institution-wide core behaviors reflect a commitment to respect for diversity. In addition, international educational programs in partnership with other countries, especially in the Mid East and Far East, are flourishing.

CORE COMPONENT 1C

Understanding of and support for the mission pervade the organization.

The institution-wide 2002 and 2004 employee satisfaction surveys demonstrated considerable awareness of UNMC's mission. Both surveys' average response to the statement, "I am aware of UNMC's vision, mission and goals" was 4.1 on a scale of 1 to 5, with 5 representing "strongly agree." Results of the surveys conducted in 2005 again show UNMC faculty, staff and students are well-aware of the mission.

That this awareness translates into understanding and support can be seen in two primary illustrations: UNMC leaders actively promote mission awareness; and faculty, staff and students are prominently engaged in mission-relevant work. These efforts include:

- Campus-wide distribution of UNMC's mission-driven strategic plan, including Intranet posting
- Employee forums hosted by the chancellor to explain mission-driven initiatives or leadership decisions
- Orientation of new faculty, staff and students highlighting mission, vision and strategic direction
- The chancellor's annual "State of the Campus" speech, which focuses on mission-centered progress and is delivered to faculty and staff, published in *UNMC Today*, which is available on UNMC's web site¹⁰
- The campus-wide annual listing of "Plan Achievements" in *UNMC*¹¹
- Prominent in-house publicity on UNMC employees who receive "Gold U" and "Silver U" awards for mission-relevant achievement in the workplace
- Mission-relevant articles published in *UNMC Today* and UNMC's annual magazine *Discover*¹²

Hundreds of faculty, students and staff participate in mission-relevant strategic planning activities at the campus-wide and unit levels. Others individually and collectively render strategic and financial decisions based on mission-critical criteria. Still others design, implement and participate in ceremonies and rituals that

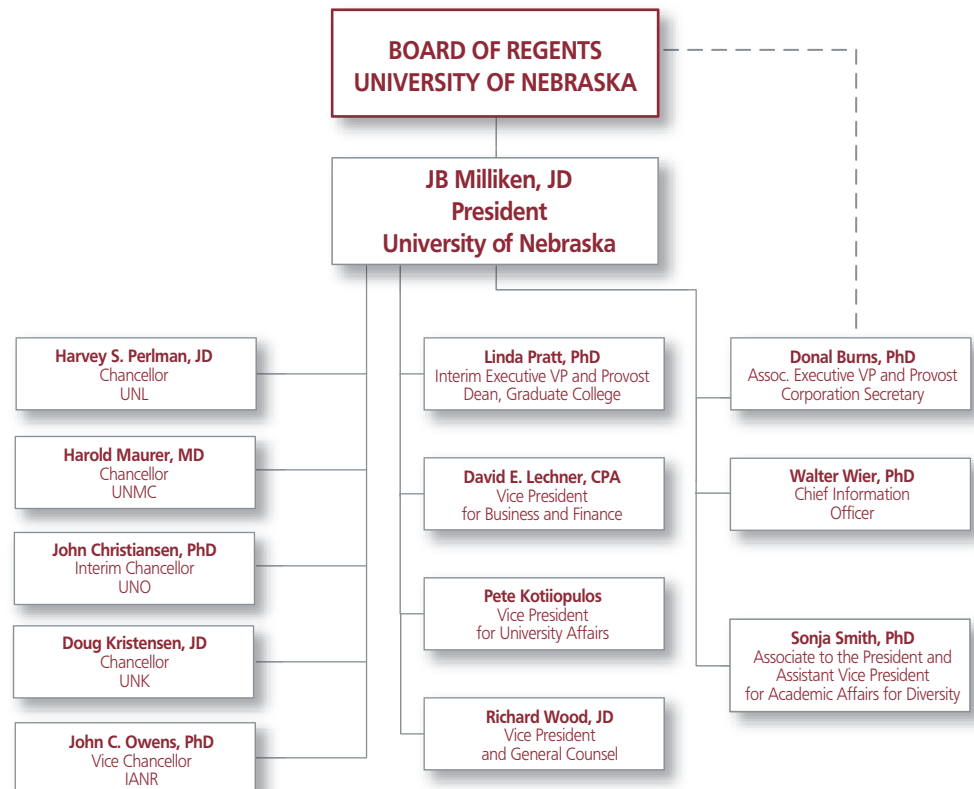
reinforce UNMC's mission-centered culture, demonstrated by two examples: "white coat" and induction ceremonies formally welcome students into their professions and involve commitments to UNMC's values (also see Chapter 3, Core Component 3a) and alumni volunteer their time to sponsor professionalism programs for students that continue the emphasis on integrity and respect for others, among other values.

The following chapters in this self-study will clearly demonstrate that UNMC's mission, vision and values do indeed permeate its culture.

CORE COMPONENT 1D

The organization's governance and administrative structures promote effective leadership and support collaborative processes that enable the organization to fulfill its mission.

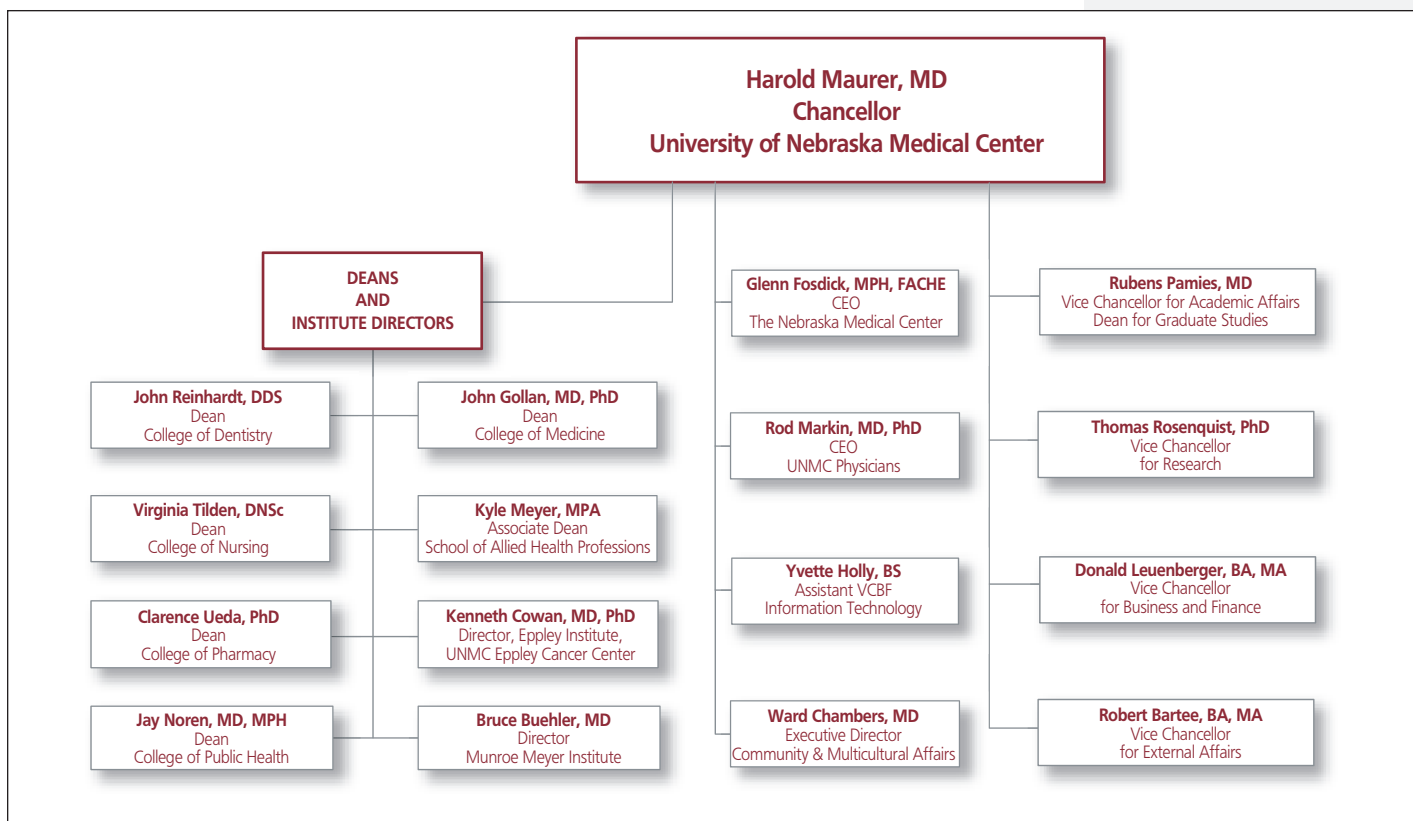
The structure of UNMC's governance at its highest level begins with the University of Nebraska. The NU system is governed by a single Board of Regents (BOR) with eight voting members elected by eight districts for six-year terms,¹³ and four nonvoting student regents, one from each institution, who also serve as their respective student body presidents. The BOR sets NU policy, approves the annual operating budget and biennial budget request, and monitors university operations. The president of NU is an appointed chief executive officer responsible to the BOR for the effective functioning of the NU system. Certain programs and operational functions are assigned to the president's office.



As a state agency, NU is accountable to the governor and the legislature. In addition, the Coordinating Commission for Postsecondary Education (CCPE)¹⁴ provides direction for the future of higher education in Nebraska. It identifies goals that will lead to an educationally and economically sound, vigorous, progressive and coordinated higher education network throughout the state. When considering new instructional programs, research directions and public service activities, the CCPE assesses the need and the appropriateness of the institution that is best able to meet the need. Geographic access; financial, human, and physical resources; and institutional expertise are all taken into account.

The chief operating officer for each of the four NU institutions is its chancellor. Each chancellor is responsible for the conduct of the affairs of that institution, consistent with policies established by the BOR and administered through the office of the NU president. Each chancellor is also a university vice president and a member of the NU president's council.

All UNMC unit heads – deans of the colleges; vice chancellors; directors of institutes, research, community and multicultural affairs, and information technology, plus UNMC Physicians and The Nebraska Medical Center presidents – comprise the UNMC Chancellor's Council.



This body meets monthly to discuss issues affecting the whole institution as well as each respective area. In addition, as described in Chapter 2, council members are responsible for monitoring achievement of specific goals of the strategic plan. The

chancellor and the chancellor's staff meet weekly. Organizational charts for all units are available in Appendix 4.

External advisory relationships supplement UNMC's internal organizational structure and adherence to its mission. UNMC's Board of Counselors is composed of 56 Nebraskans who are selected by a nominating committee and serve no longer than two consecutive four-year terms. The counselors represent communities across the state and ensure that UNMC programs are relevant to the needs of Nebraska. They meet three times a year and provide insight into the public's perception of UNMC and advice to UNMC leaders on the impact of UNMC programs and initiatives. The counselors also help schedule speaking engagements in their communities for UNMC leaders and contact state legislators on behalf of UNMC.

The chancellor and his staff also work with a group of community leaders to review important UNMC issues. This group serves as a "kitchen cabinet," advising on mission, vision and strategic direction, as well as resource acquisition strategies.

UNMC's clinical education programs also require strong relationships with certain constituencies. For example, the practice plans for UNMC clinician faculty are overseen by UNMC Physicians. This ensures that clinical programs are in compliance with state and federal guidelines for documentation, clinical care, and educational activities involving students. UNMC students utilize multiple clinical sites including The Nebraska Medical Center, the Veterans Affairs Medical Center in Omaha, and offices and hospitals throughout Omaha and the state for preceptorships, family medicine residency rotations, and dental/dental hygiene rotations. (The Nebraska Medical Center is on the main UNMC campus, the Omaha VA hospital is approximately one mile away, and the Lincoln VA Hospital is approximately three miles from the Colleges of Dentistry and Nursing in Lincoln.) Each clinical program evaluates whether student rotations are conducted properly, and sites are added or removed based on the quality of the learning environment they provide.

Shared Governance

Shared governance is important at both the institutional and system levels. A culture of delegated authority permeates administrative practices at UNMC, as faculty and other leaders share responsibility for the coherence of curricula, the integrity of academic processes in each professional program, and faithfulness to UNMC's mission.

Each college or school has a standard curriculum program and academic performance standards for each degree/certificate awarded. The standard curriculum also establishes time allowed to complete each increment of the curriculum. For example, in the College of Medicine, the Faculty Council oversees the standing medical student curriculum committee, which recommends curriculum policies and plans, develops and implements a system for curriculum evaluation, and recommends curriculum changes consonant with the mission.

“A culture of delegated authority permeates administrative practices at UNMC.”

UNMC faculty and other academic leaders recognize the importance of shared governance processes. The Faculty Senate, through its standing committees and the collaborative efforts of its members, interacts and coordinates with the chancellor and other administrators. For example, the Faculty Senate president meets monthly with the chancellor and the chancellor's staff in preparation for NU Board of Regents meetings. Another collaborative body is the faculty recruitment and retention committee, a standing committee of the Faculty Senate, which routinely collects data from those who resign voluntarily and from those who interview at UNMC but do not accept positions. Reports of the aggregated data are provided annually to the Faculty Senate as well as to the chancellor. On occasion, special committees have been appointed by the Faculty Senate to resolve issues (e.g., gender equity, sexual harassment, bias related to age) in specific colleges or departments. Also, the UNMC Faculty Senate president and the Faculty Senate presidents of the other three state universities meet semiannually with the NU president to discuss faculty issues and concerns.



UNMC's governance processes and activities are transmitted to the faculty and community via a variety of mechanisms including open faculty forums, the UNMC Web site and communication from the deans of the colleges. Chapter 2, Criterion 2d explains more about UNMC's communication of governance.

In recent years, a biennial UNMC Administrative Colloquium¹⁵ has focused on developing leadership and administrative skills among faculty and staff in collaboration with the public health community. In 2005, UNMC initiated a Public Health Leadership program¹⁶ for the state, with several UNMC faculty and staff as its first participants. In addition, the College of Nursing has recently implemented a Student Leadership Academy¹⁷ that sponsors and promotes leadership experience through student activities, and the dean conducts an ongoing faculty seminar on leadership.

Despite these positive programs, much work remains to be done. The 2005 surveys of faculty and staff found relatively less agreement with the statements, "UNMC's internal decision-making processes promote participation and support collaboration that enables my unit to fulfill its mission" (about 65 percent,) and "UNMC's administrative structures promote effective leadership" (about 62 percent), than with nearly all other questions.¹ This lower agreement level suggests the need to be doing more to improve communication at UNMC and to involve all levels of the organization.

These concerns will be addressed because accountability and self-evaluation are part of UNMC's culture. It evaluates its structures and processes regularly and strengthens them as needed. For example, Chancellor Maurer holds an annual strategic planning retreat with the Chancellor's Council and selected other leaders

to assess and make recommendations on a wide variety of concerns including education, health care, research, community engagement, image, cultural competency, employee loyalty and entrepreneurship. More on these efforts are described in Chapter 2, Core Component 2c.

CORE COMPONENT 1E

The organization upholds and protects its integrity.

Integrity is important at all levels, from the NU Board of Regents (BOR) on down to the smallest UNMC subcommittee. The BOR exercises its responsibility to the public by ensuring that UNMC and the other three institutions operate legally, responsibly, and with fiscal honesty. One of the BOR's nine standing committees is an audit committee that is responsible for advising each NU institution on all aspects of internal and external auditing and the adequacy of accounting procedures, systems, controls, and financial reporting, in accordance with laws and regulations applicable to the BOR. The BOR operates pursuant to a written code of ethics.¹⁸

In the 2005 survey, which was designed to probe knowledge and engender support of the accreditation process, the great majority of UNMC faculty, staff and students (88.5 percent, 89.4 percent, and 94.8 percent, respectively) supported Core Component 1e's simple statement by agreeing that UNMC recognizes the importance of integrity. Indeed, with only one exception – "valuing research" – the statement on integrity received the highest positive response rate from the overall UNMC population.¹

It is fitting that integrity and research were correlated by the respondents because it is vital that integrity be manifest in medical research. UNMC is deeply committed to bioethics in order to maintain the public's trust. For example, some of UNMC's research activities related to use of fetal tissue and embryonic stem cells have been challenged over the years. The university responded by implementing a system of research oversight processes that go well beyond federal or state requirements.¹⁹ Surveys of the public have shown considerable support for research efforts in these areas.²⁰

Structures in Place to Address Integrity

UNMC is committed to conducting education, research and patient care honestly and ethically, placing the public's welfare ahead of self-interests. For example, UNMC created a conflict of interest (COI) committee in 2004 to review staff members' potential conflicts and develop management plans to address them. The committee is composed of senior personnel from each of the colleges and support areas, Institutional Review Board (IRB) members, and two community representatives. The COI committee has proposed major revisions to UNMC's COI policy,²¹ and plans to conduct a base-line survey of all faculty and staff managerial employees to ensure that all potential conflicts have been reported and addressed.

*“UNMC recognizes
the importance
of integrity.”*

Likewise, the UNMC Center for Continuing Education (CCE) is accredited by the national Accreditation Council for Continuing Medical Education and adheres to stringent conflict of interest guidelines. The CCE queries all education presenters for potential conflicts, and attendees are notified whether or not the presenter has any personal financial relationship with the subject matter he or she is presenting.

UNMC complies with federal HIPAA (Health Insurance Portability and Accountability Act) guidelines, which involve safeguarding the integrity of medical records and other patients' rights. All UNMC faculty, staff and students receive HIPAA training and renew their competency annually.

The UNMC compliance program, which includes a full-time compliance officer, encourages employees to report concerns regarding compliance with policies and regulations, and to ask questions so that potential problems can be corrected as soon as possible. UNMC publicizes a variety of channels that employees can utilize to report concerns, including a 3rd party compliance reporting hotline. Employees may report concerns to the hotline anonymously if they wish.

Further evidence of a climate at UNMC that fosters integrity is demonstrated by the fact that UNMC experts hold leadership positions on key national human research subjects protections committees. Ernest Prentice, Ph.D., associate vice chancellor for academic affairs (regulatory compliance), chairs the Secretary of Health and Human Services Advisory Committee on Human Research Protections. Bruce Gordon, M.D., UNMC IRB co-chair, is the chair of the Pediatric Central IRB.

Internal Safeguards

Of course UNMC's integrity benefits internal associates – students, faculty and staff – as well. The university strives to consistently implement clear and fair policies regarding the rights and responsibilities of each of these groups. The NU BOR Bylaws, Section 4.1, "Academic Responsibility," impose obligations for membership in the academic community and Section 4.2 provides teachers and researchers with academic freedom without discrimination. The UNMC Faculty Handbook contains additional information on academic freedom and responsibility, and the Student Handbook provides guidance on academic performance, defines academic integrity, and contains informal and formal appeal procedures. Both the Student Senate and Faculty Senate provide their constituencies with due process to address disputes.

When complaints are made, UNMC policies dictate a timely response, especially to students. Each UNMC college has its own faculty/student appeals committee that investigates and/or hears appeals from students involving grades and other academic evaluations. UNMC Policy 1020, "Employee Grievance Process" provides employees with the right to file a grievance in response to employment actions. The UNMC Ombuds Team provides faculty, staff and students with informal and impartial dispute resolution and serves as a neutral mediator, striving for fairness, equitable solutions and adherence to UNMC policies.²²

“Both the Student Senate and Faculty Senate provide their constituencies with due process to address disputes.”

Last but not least, UNMC's emphasis on its own institutional performance is critical to its integrity. UNMC holds itself accountable through its strategic planning process that defines mission goals and establishes quality indicators to align activities with those goals. These topics form the core of the discussion in Chapter 2.

External Relations

UNMC's efforts to be an organization with integrity extend outside its campuses to many constituents. It shows its desire to involve the larger community in its decision-making by seeking community feedback via multiple vehicles, including the Board of Counselors, Community Care Councils and community liaisons that develop into collaborative partnerships, which are discussed in Chapter 5 primarily. Representatives from across the state comprise the COD Dean's Advisory Council and provide advice on educational matters that may have implications for the curriculum. Members of the public also serve as community representatives on UNMC regulatory committees, including the previously mentioned Institutional Review Board that oversees human subjects research; the Institutional Care and Use Committee that oversees animal subjects research; the Institutional Biosafety Committee that oversees recombinant DNA research; and the aforementioned Conflict of Interest Committee.

Straightforward communication with the public is key for any organization that seeks to exemplify trustworthiness. To that end, UNMC takes steps to present itself accurately and honestly. It sponsors Mini-Medical School twice a year for faculty presentation of research findings to the public, allowing for comment and questions. The UNMC Department of Public Affairs communicates honestly and consistently in a variety of ways, including press releases, facilitation of media interviews, community relations and marketing.

SUMMARY OF CRITERION ONE FINDINGS

As a result of this self-study's analysis for Criterion One, strengths, challenges and opportunities have emerged that pertain to how UNMC operates with integrity to ensure fulfillment of its mission.

Strengths:

- UNMC has well-developed and widely understood mission documents.
- UNMC students, faculty and staff recognize that its mission applies to a diverse society.
- The governance and administrative structures of NU and UNMC are well-defined and support UNMC's mission.
- Faculty, staff and students embrace shared governance.
- UNMC acknowledges that integrity is critical to the core mission of an academic health science center and responds to concerns expressed by constituents.

Challenges and Opportunities:

- Recruitment and retention of a more diverse student body and faculty requires more effort and different approaches.
- Internal perception of a communication gap between leadership and the units requires study and subsequent improvement.
- Despite widespread understanding of the importance of integrity at UNMC, we must continue to be vigilant to assure that all research, educational and service activities meet the highest standards of integrity in order to maintain the trust of the constituencies UNMC serves.

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- ³ University of Nebraska Strategic Planning Framework Document: <http://www.nebraska.edu/news/strategicframework2005.pdf>; Resource Room
- ⁴ All UNMC Unit Mission statements; Resource Room
- ⁵ UNMC – TNMC Partnership, merger facts and timeline: http://www.nebraskamed.com/media_center/about.shtml; Resource Room
- ⁶ UNMC Physicians Mission Statement: <http://www.unmcphysicians.com/ttg-uma/public/index.htm>; Resource Room
- ⁷ University of Nebraska statement on diversity [1997]: <http://www.nebraska.edu/news/diversitystatement.pdf>; University of Nebraska 5 year Plan for Diversity [1998]: <http://www.nebraska.edu/news/5yearplan.pdf>; Resource Room
- ⁸ UNMC NU Values Program: www.unmc.edu/dept/nuvalues/; Resource Room
- ⁹ UNMC International Studies and Programs: <http://www.unmc.edu/isp/>
- ¹⁰ UNMC Today article (April 2006); Resource Room
- ¹¹ UNMC Today Plan Achievements article; Resource Room
- ¹² UNMC Today and UNMC Discover Mission-relevant articles; Resource Room
- ¹³ Board of Regents membership: <http://www.nebraska.edu/board/>
- ¹⁴ Nebraska Coordinating Commission for Postsecondary Education [CCPE]: <http://www.ccpe.state.ne.us/PublicDoc/CCPE/>
- ¹⁵ Administrative Colloquium: http://app1.unmc.edu/PublicAffairs/TodaySite/sitefiles/today_full.cfm?match=1456
- ¹⁶ Public Health Leadership Program: http://app1.unmc.edu/PublicAffairs/TodaySite/sitefiles/today_full.cfm?match=2509
- ¹⁷ Student Leadership Academy: http://app1.unmc.edu/PublicAffairs/TodaySite/sitefiles/today_full.cfm?match=2144
- ¹⁸ Board of Regents, Code of Ethics: <http://www.nebraska.edu/board>
- ¹⁹ University of Nebraska Bioethics Committee Report: <http://www.nebraska.edu/about/bioethicsreport2001.pdf>; Resource Room
- ²⁰ Coalition for the Advancement of Medical Research (CAMR) website: <http://www.stemcellfunding.org/polls.aspx>; International Society for Stem Cell Research (ISSCR) website: <http://www.isscr.org/public/polls.htm>

²¹ UNMC Compliance Program: <http://www.unmc.edu/dept/compliance/index.cfm>

²² UNMC Ombuds Team: <http://www.unmc.edu/stucouns/Docs/ombudsmain.htm>

CHAPTER 2

Criterion Two: Preparing for the Future

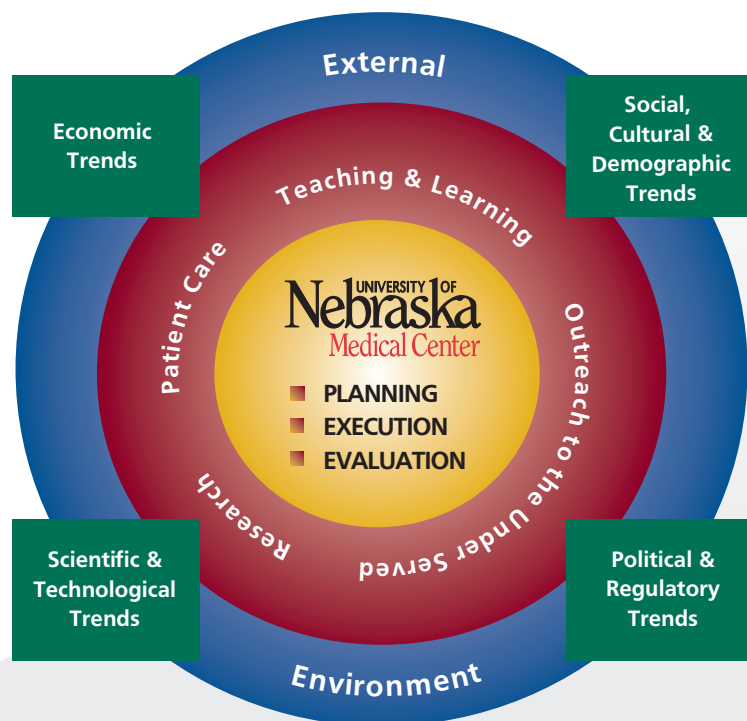
The organization's allocation of resources and its processes for evaluation and planning demonstrate its capacity to fulfill its mission, improve the quality of its education, and respond to future challenges and opportunities.

As a dynamic academic health science center, UNMC is committed to becoming world-class in partnership with its teaching hospital, The Nebraska Medical Center. UNMC's current resources appropriately support its educational, research, patient care and outreach mission, even while it actively develops additional human, physical, technological and financial resources to expand activities and continuously enhance quality. UNMC aligns its planning with its mission through a decentralized organizational structure that enhances communication, accountability and evaluation.

UNMC students, faculty, administration and staff expect – and contribute to – rapid advances in biomedical science and technology and patient care. They appreciate the complex local, regional, national and global environment within which they operate, as they shape UNMC's future and the future of health care.

UNMC continues to expand and improve the resource base that supports its mission through its investments in people, facilities and technology. Investment decisions and resource acquisition strategies are guided by UNMC's mission, vision and values (Appendix 3). UNMC capitalizes on its external partnerships through integrated planning activities, advancing its unique mission within the context of the broader University of Nebraska (NU) mission.

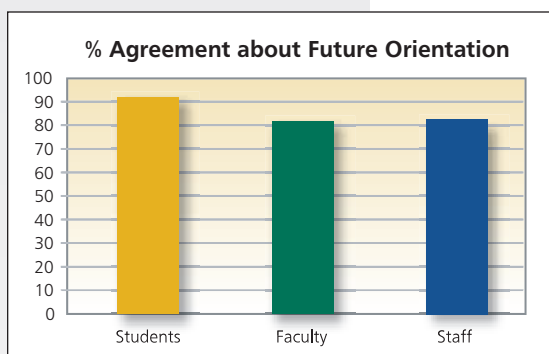
UNMC Creates the Future through Planning, Execution & Evaluation



Its framework of planning, evaluation, resource allocation and partnering allows UNMC to continually improve the quality of education, capitalize on opportunities, and respond to challenges.

CORE COMPONENT 2A

The organization realistically prepares for a future shaped by multiple societal and economic trends.



UNMC earns high marks from students, faculty and staff concerning its planning for the future. Question 6 on the three surveys conducted in late 2005 asked for an evaluation of UNMC's preparation for a future shaped by multiple societal and economic trends. The very high levels of agreement (students, 91.2 percent; faculty, 81.1 percent; and staff, 82.8 percent)¹ demonstrate that UNMC faculty, staff and students are confident that UNMC is anticipating and acting upon rapidly changing external global conditions.

Armed with the knowledge that there are many possible futures, UNMC strives to create the one reflected in its vision statement. The realistic framework for planning for this future is based upon:

- Capacity – continually analyzing UNMC's current status in relation to its mission and vision, critical success factors and goals
- Possibilities – recognizing academic, research, technology, business partnership, and/or demographic opportunities
- Obstacles – acknowledging potential threats, whether financial, demographic, competitive, political, economic or otherwise

In examining its capacity, UNMC focuses on people (faculty, administrators, staff and students), facilities, technology, funding and relationships (community, donor and political support). Capitalizing on possibilities and minimizing or eliminating potential obstacles are more challenging. Possibilities and obstacles may include the following: new programs and services; facilities requirements; variations in revenues and costs; changing demographics; global competition; natural or human disasters; gains or losses of key faculty or administrative leaders; emerging technologies and markets; local, state and federal election results; and the effectiveness of planning activities.

Institutional, unit and strategic partnership planning rests on sound understanding of this framework, as demonstrated by UNMC Planning Information and Quality Indicators² and on similar assessments by the hospital, colleges, institutes and support units. These institutional assessments consider students and employees; buildings; utility systems; academic and administrative information technology services; finances; community partnerships; and relationships with the hospital, NU,

and state and federal elected and appointed officials. Core Component 2b details an evaluation of this resource base.

Environmental Scanning

UNMC completes a formal environmental scan during its annual strategic planning process,³ examining internal initiatives and challenges as well as factors in the external environment. The 2005-06 scan identified the following critical opportunities:

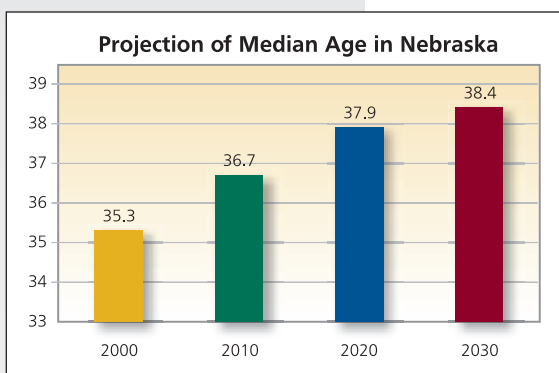
- Building a secure electronic medical record of Nebraskans
- Initiating creative educational approaches, especially interprofessional education
- Identifying and capitalizing upon intellectual property for commercialization
- Advancing discoveries in biomedical science and biomedical technology
- Affecting health awareness and disease prevention through SimplyWell® (an employee health risk assessment and prevention partnership)
- Aligning with business organizations and governmental entities to promote economic growth in Nebraska

UNMC personnel participate in national organizations that engage in environmental scanning, educational and health care planning, and policy development, and faculty and staff continually “scan” the external environment by reading scientific, educational and industry publications, attending meetings and conferences, and conferring with colleagues. Individual units also do environmental scans as part of their planning. Two examples include the School of Allied Health Professions’ attention to diabetes in the Native American population and its focus, along with the College of Nursing, on shortages of health care educators and providers. Faculty, administrators, staff and students consider this information in developing unit strategies and plans.

Emerging Factors and Recurrent Uncertainties

Whether in the areas of academic excellence, technology transfer or medical research, UNMC strives for a competitive leadership position. UNMC teachers, researchers and health care professionals collaborate and compete with colleagues around the world to discover, develop and apply new knowledge and technology. UNMC continually enhances knowledge and improves health care through basic and clinical research in such areas as cancer vaccines, robotic surgery, nanomedicine, and cellular signaling.

In all of these endeavors, the following considerations are taken into account as UNMC plans for its multifaceted future:



Demographics. Over the next 20+ years, Nebraska’s white population is projected to become older with moderate growth, balanced against a growing younger Latino population, necessitating adjustments to curriculum and class size to meet the state’s shifting health workforce needs. National demographic projections are similar, albeit coupled with faster population growth. International forecasts show slowing global population growth and aging, with possible population declines in Europe, Japan and Russia, and continued population growth in India, China and Africa. UNMC planners consider all of these trends in creating and annually evaluating the institution’s long-range plans.

Global competition. Over the past several years, UNMC has expanded its international educational, patient care and outreach activities, and has continued to develop international collaborations. As explained in the following chapters, UNMC students participate in a variety of international education and service learning projects, and UNMC enrolls significant numbers of foreign graduate students. In addition, UNMC is expanding its international research and technology development partnerships, and the hospital actively recruits international patients. Looking forward, UNMC planning recognizes both continuing global opportunities and increasing international competition, especially from China, as well as competition from U.S. academic health centers for international liaisons.

Emergency preparedness, bioterrorism and war. Preparedness is key in responding to bioterrorism and other emergencies. UNMC has aggressively established itself as an early planning and response partner with both the National and Nebraska Incident Management Systems. UNMC participates in exercises and prepares to respond on its campuses and in communities across the state in case of natural, biological or terror emergencies. UNMC and the hospital are currently identifying and preparing for the complex challenge of maintaining operational continuity in the face of an influenza pandemic.

Science, religion and politics. UNMC recognizes differing religious and political views regarding the acceptable boundaries of biomedical science, but as a leading research and educational institution it is committed to scientific inquiry. Thus, UNMC and NU have withstood attempts in the Nebraska Legislature to impose restrictions on research that may lead to significant therapeutic advances, in particular stem cell research.⁴

An Increasingly Multicultural and Global Society

UNMC recognizes differences in language, culture and ethnicity as critical aspects of its planning for educational, research, patient care and outreach programs, and is committed to creating an environment in which “all people feel good about being here.”⁵

Cultural competence is incorporated into all educational programs. The strides UNMC is making in integrating cultural competence into the curricula are outlined in Chapter 3. In addition, UNMC is heavily involved in outreach to underserved populations, evidenced in Chapter 5.

UNMC offers programs and services in numerous Nebraska cities and towns, as well as in other areas, that are increasingly diverse and multicultural. UNMC also emphasizes minority health issues in its research⁶ and in culturally appropriate patient care based on the federal standards for Culturally and Linguistically Appropriate Services (CLAS).

In 2003, UNMC surveyed all employees regarding the institution's cultural competence.⁷ With a 75.2 percent response rate, the survey identified several strengths and opportunities. These results were used in planning and have led to several cultural competence initiatives, including educational sessions for departments, retreats for units, lectures for students, mini-workshops for house officers, and related employee and student activities.

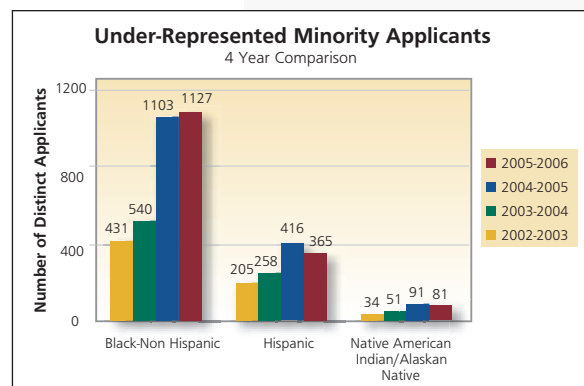
UNMC keeps abreast of the concerns of Omaha's minority communities in many ways, including through its partnerships with the North and South Omaha Community Care Councils, various nonprofit organizations, community health fair screenings, and TV and radio health issue programs. These programs and more are outlined in Chapter 5.

Multicultural initiatives in staff recruiting. As a result of planning and assessment processes directed at staff recruiting, UNMC has targeted initiatives to increase minority access to job openings and improve recruiting and selection of qualified minority talent. A few examples:

- The Human Resources/Strategic Staffing and Compensation Division (SS&C) actively participates in Latino (Cinco de Mayo Celebration; Latino Conference), Native American (Fort Omaha Intertribal PowWow), and African-American (Black Family Health & Wellness Fair; Urban League functions; Omaha South High School Career Fair) community activities.
- SS&C also provides training to regional vocational rehabilitation counselors regarding UNMC career ladders, opportunities and application processes targeting qualified candidates with disabilities.
- Applications for staff positions from underrepresented groups have been greatly increased through UNMC's use of the "Jobs@" posting site.⁸

These efforts and others significantly increased the rate at which underrepresented minorities apply – and are hired – for staff jobs,

*Cultural competence
is incorporated
into all educational
programs.*





as explained in more depth in Core Component 2b. UNMC has succeeded in significantly increasing the number of under-represented minority applicants.

Underrepresented minority students and faculty. UNMC's greatest challenge continues to be the recruitment and retention of underrepresented minority students and faculty, discussed further in Core Component 2b. UNMC is building upon earlier successes and refocusing its efforts by continuing to emphasize "pipeline" activities introduced in Chapter 1, such as partnerships with minority-serving institutions, the Virginia-Nebraska Alliance, and the \$1.2 million, four-year Robert Wood Johnson Foundation Summer Medical and Dental Education Program grant.⁹ New procedures for awarding faculty diversity funding, approved by the Chancellor's Council in November 2005, provide larger start-up packages for newly hired (or competitively retained) women and underrepresented minority faculty.¹⁰ These procedures will be evaluated early in 2007-08.

Innovation as Preparedness for Change

UNMC is committed to a future based upon innovation that adapts to change in education, research, patient care and outreach. Examples of these commitments include:

- **Executive leadership development.** In 2004, 2005 and 2006, Chancellor Harold Maurer, M.D., sponsored leadership development seminars for UNMC's senior leaders and staff at Gallup University, which is located in Omaha. The seminars focused on excellence in organizational innovation and leadership.
- **Addition of bioterrorism preparedness as an Area of Excellence.** Shortly after September 11, 2001, UNMC began expanding on the strength of its public health laboratory, which is under contract with the State of Nebraska; its Health Professions Tracking Center;¹¹ and its expertise in infectious disease to create an Area of Excellence in bioterrorism preparedness. At present, activities under this umbrella include: Nebraska Public Health Lab-BioSecurity Preparedness Laboratory at UNMC;¹² The Nebraska Medical Center's unique 10-bed biosecurity containment unit; UNMC's Center for Biosecurity, part of the NU Center for Biosecurity;¹³ and the Nebraska Center for Bioterrorism Education, jointly sponsored with Creighton University.¹⁴
- **New information technology center.** Generating, accessing, analyzing and protecting information has become increasingly critical to strategic and operational planning. UNMC's management of its knowledge base directly affects the achievement of its planning goals and mission. Increased state and federal privacy requirements and protection and accuracy of our information "capital" are prime motivators. In 2005, UNMC constructed a new, secure state-of-the-art management information data center and renovated 26,000 square feet of contiguous office space at a cost of approximately \$8 million.
- **Technology commercialization.** In order to attract investment in UNMC technologies, improve technology marketing and better protect intellectual property, UNMC created the Science Research Fund in 2005, a not-for-profit



corporation that provides funds to further biomedical, biotech and bioinformatics research. Both the Intellectual Property Office and UNeMed,¹⁵ UNMC's for-profit technology commercialization corporation, have been reorganized. All of these efforts are addressed in Core Component 2b.

- **Laboratory animal quarantine facility.** The problem of infected laboratory research animals led UNMC to build this facility in 2003 at a cost of \$2.3 million. Chapter 4 will detail this innovation.
- **College of Public Health.** Building on existing programs developed with the University of Nebraska at Omaha, UNMC has secured Regents approval for a new college to train public health professionals and researchers to meet the needs of Nebraska and the surrounding region. This initiative is discussed further in Chapters 3 and 5.

These are but a few noteworthy examples of UNMC's commitment to innovation as it prepares for the future. Many more examples are presented in the following chapters.

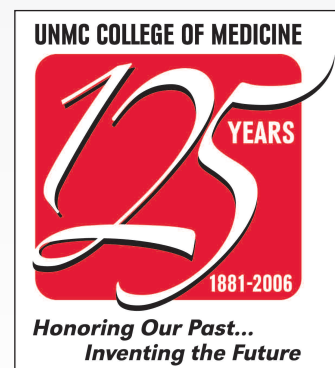
Preserving History and Heritage

UNMC planners are cognizant that the institutions comprising today's University of Nebraska Medical Center have a long history and heritage. UNMC traces its roots to Omaha's first medical college, which was established in 1880. Dental education dates to 1899, pharmacy to 1915, and nursing to 1917. UNMC has educated allied health professionals since the early '30s with classes in medical technology and radiologic technology, and The School of Allied Health Professions was officially organized within the College of Medicine (COM) in 1972. The histories of UNMC academic units are well-preserved through departmental publications such as student, faculty and alumni handbooks, in departmental display cases, and at their respective Web sites.

The Colleges of Dentistry and Nursing maintain attractive, professionally designed museums. The McGoogan Library of Medicine, in addition to maintaining extensive print and artifact collections on the history of health care, is the official institutional archive. It employs a professional curator with extensive experience in historical collections and consultation.

A number of faculty members begin each academic year with lectures on the histories of their respective academic units. The COM's associate dean for Graduate Medical Education, Robert Wigton, M.D., is considered the informal historian for all of UNMC; his entertaining, and accurate, historical perspective is in demand by colleagues and students. Celebrations marking academic unit milestones, such as 25th, 50th, 75th, 100th, and this year the 125th, anniversaries, are always marked by public events that showcase past and present accomplishments.

“UNMC traces its roots to Omaha's first medical college.”





*“UNMC’s culture
continues to evolve.”*

UNMC’s history is linked to the personal accomplishments of faculty, students, staff and alumni, who are recognized via named professorships and lectureships, building and room names, and public displays of portraits, photographs and plaques. Whenever possible and appropriate, UNMC preserves historical details and facades, incorporating them into renovated structures. For example, research buildings Bennett and Poynter Halls, which were constructed in the 1920’s and are under renovation for educational and administrative functions, will maintain exteriors consistent with the historical character of the campus. Other architectural artifacts are incorporated into interiors, as in the covered walkway connecting Wittson Hall to the University Tower of the hospital. UNMC Facilities Management and Planning also works with surrounding neighborhood and business associations to preserve and enhance the area. For example, as detailed in Chapter 5, UNMC is heavily involved in “Destination Midtown,” an effort to revitalize areas east of the campus and to improve the urban quality of life.

Evolving Culture

UNMC’s culture continues to evolve as the institution expands and as Omaha and Nebraska change around it. The institutional culture is complex and combines a significant number of subcultures that are based on discipline (colleges, departments, specialties), academic preparation (clinician-clinical researchers, basic scientists, administrators), occupational category (faculty members, office workers, skilled tradesmen, students), and campus location (Omaha, Lincoln, Kearney, Scottsbluff).

Nonetheless, UNMC’s core culture is strong, as expressed in its mission, vision and values. This culture is embracing new scientific and clinical developments such as transplantation and stem cell research, and responding to societal and demographic shifts. The direction and extent of this evolution are partially determined by UNMC leaders and faculty, and are influenced by social, political, economic and religious tensions in the state, nation and world.

UNMC is confidently fulfilling its mission and realizing its vision through planning and evaluation that examines its purpose and performance in light of emerging societal and economic trends. As the rest of this chapter will indicate, resources are allocated, and reallocated, toward strategic objectives, and accomplishments are evaluated and reported to the internal community and to external constituents. Through its planning activities, UNMC demonstrates a successful track record with most initiatives, while learning, adapting and growing from shortfalls.

CORE COMPONENT 2B

The organization’s resource base supports its educational programs and its plans for maintaining their quality in the future.

In the institution-wide survey conducted in 2005, students, faculty and staff were asked about the sufficiency of UNMC’s resources to strengthen quality educational

programs.¹ The overwhelmingly positive response across the board is gratifying because UNMC assesses, plans and acts on the belief that the quality of its educational programs is a direct result of the quality of its resource base – both today and tomorrow.

UNMC's human, physical, technological, financial, intellectual property and relationship resources support its educational programs, and the institution is working to maintain and expand those resources. UNMC evaluates its resources against what is required to fulfill its educational mission and to improve its quality despite fluctuations in state appropriations and NU budget allocations.

Resource Development and Allocation

Primary revenue streams include state appropriations, patient care revenues, external research funding, tuition, endowment earnings and gifts. UNMC works through NU to increase its general fund appropriations and directly with elected and appointed officials to secure specialized funding. UNMC is actively expanding its patient care activities by growing its clinician faculty and through its partnership with The Nebraska Medical Center. UNMC has benefited from both NU tuition rate increases and a growing endowment.

UNMC employs a four-part approach to budget allocation. First, the annual operating budget is allocated to the units on a continuation basis, with unit leaders having discretion to reallocate funds for new initiatives. Second, annual operating budget allocations are subject to periodic budget reductions and reallocations to fund new priorities. Third, units are encouraged to secure additional funds through new research, education and service grants and contracts, and through expanded patient services. Finally, Chancellor Maurer and NU President James B. Milliken lead efforts to attract new donor support and targeted state support (see Core Component 2d for a more detailed explanation).

In developing, allocating and deploying resources, UNMC appreciates that its mission includes education, research, patient care and outreach – all of which ultimately benefit its students. UNMC is committed to research as the foundation of future-oriented health science education, and to expanding patient care, a source of greater revenues and enhanced clinical experiences for students and residents. Likewise, outreach activities are fundamental to the educational experience and to our goal of improving the health of Nebraska.

Human Resources

UNMC's human resources include its senior leadership, faculty, staff and, of course, its students. Since being appointed in December 1998, Chancellor Maurer has strengthened the leadership team by recruiting deans for the Colleges of Medicine, Nursing and Dentistry, two vice chancellors, and the director of the Eppley Institute for Research in Cancer and Allied Disease and the Eppley Cancer Center. Consequently, UNMC is led by energetic senior leaders who are committed to

rapidly advancing the institution. The potential for disruptions due to turnover of executive leaders, deans, directors, department chairs, and faculty and staff is always present, but the stable leadership has managed these situations effectively. For example, the new dean of medicine recently successfully concluded a 15-month search for a chair of internal medicine.

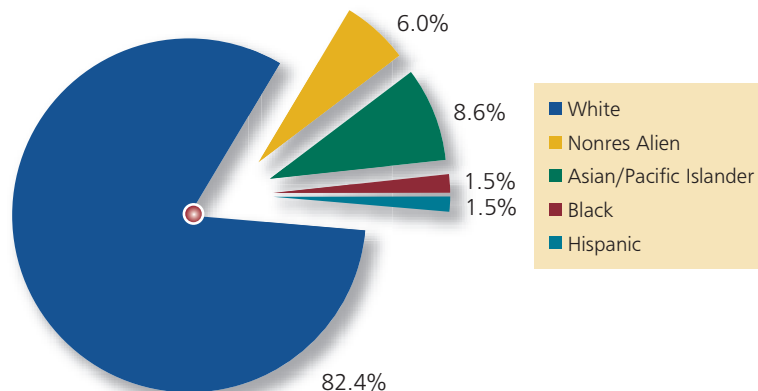
The qualifications of UNMC applicants continue to climb, as Chapter 3 outlines, and students consistently score well on their national boards and licensure exams.

Our major human resource challenge is recruitment of underrepresented minority faculty and students. Currently, 3.3 percent of UNMC's full-time faculty and 4.3 percent of its students are underrepresented minorities. Although progress has been made over the past five years, UNMC remains committed to attracting and retaining higher number of black, Latino and Native American faculty and students.

On the other hand, UNMC has been more successful in recruiting staff; underrepresented minorities now comprise 6.3 percent of regular employees. Indeed, between FY03-04 and FY04-05, applications received from underrepresented minority candidates for staff openings increased from between 133 percent and 225 percent, depending on category; and hiring underrepresented minorities to fill those positions increased from between 33 percent and 55 percent during the same time period. This success can be attributed to the assessment, planning, development and implementation of more effective and efficient recruitment strategies and tools.

In evaluating its progress in recruiting and retaining underrepresented minority faculty and staff, UNMC compares itself with its Regents-selected peer group that includes several institutions located in major cities with significantly larger percentages of underrepresented minorities (Appendix 5).

Race/Ethnicity of Full Time Faculty, 2005



With regard to gender, UNMC's full-time faculty is 37.5 percent female; its student body is 65.3 percent female; and women comprise 61.8 percent of regular employees. From 1991 to 2001 UNMC's percentage of women at the professor level increased from 8.1 percent to 16.2 percent, and the percentage of women at the associate professor level increased from 20.6 percent to 32.2 percent – increases comparable to those at the peer institutions.

The 2004 report of the Regents Ad Hoc Gender Equity Committee,¹⁶ focused on accountability, NU-wide salary studies, discipline-specific analyses, family-friendly policies, faculty development, and climate assessment. UNMC's initiatives include: a director of gender equity in the Chancellor's Office, annual reporting and climate evaluations; efforts to attract and retain women faculty in strategically significant areas; the Health Professions Faculty Track that removes the time clock to attain tenure; an excellent daycare center; and mentoring and targeted faculty development for women. For more on these initiatives, see Chapter 3.

Developing UNMC's Human Resources

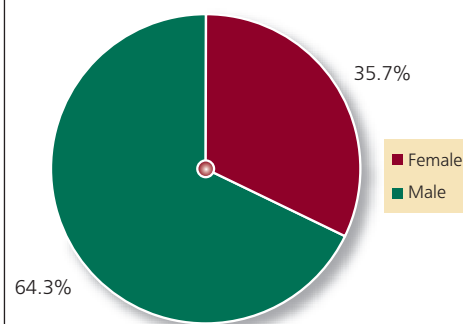
Faculty. UNMC's faculty development activities begin with fall workshops for the newly hired that focus on mission, vision, values, policies and services, and include career and leadership development programs and continuing education requirements that are detailed in Chapter 3.

Students, residents, postdoctoral fellows and research associates. UNMC has a strong Student Senate, as well as college class officers who interact with campus and college administrators. The Student Senate president is a nonvoting member of the NU Board of Regents (BOR) and attends the chancellor's pre-BOR staff meetings and participates in BOR planning activities. Student Senate officers participate in the Chancellor's Annual Strategic Planning Retreat, and students serve on many campus and college committees. For example, eight students are participating on task forces for this self-study. UNMC has recently established a Postdoctoral Association¹⁷ to facilitate better communication with a diverse group of trainees.

UNMC encourages the professional and leadership development of its residents and post-doctoral fellows through many programs, including symposia, workshops, short courses and others outlined in Chapter 3.

Staff. UNMC's major campus-wide staff development initiatives include the Management Series for all managers and supervisors; Foundations for Success for clerical/service staff; and the Managerial/Professional Administrative Colloquium. Colleges and institutes also emphasize staff development through activities such as the College of Pharmacy's staff development policy and individual development plans and the College of Nursing Dean's Leadership Seminar for faculty. Examples

Gender of Full Time Faculty, 2005



of additional training opportunities include an extensive set of information technology classes, targeted compliance training, and communications skills classes. Despite its wide-ranging training opportunities, UNMC remains challenged by its lack of centralized, dedicated training resources.



Senior leaders. UNMC employs an eclectic approach to leadership and management development that includes mentoring and formal programs. Chancellor Maurer is the chief mentor for senior leaders, and deans, directors, department chairs and other leaders are expected to develop mentoring relationships besides their formal reporting relationships. They are encouraged to seek mentors beyond their supervisors and to mentor others beyond their subordinates.¹⁸

As one aspect of its leadership development efforts, UNMC has worked with Gallup University to enhance administrative, faculty and managerial leadership skills. Chancellor Maurer sponsored three senior leadership workshops at Gallup, and Gallup provided “strengths-based” training for faculty and professional staff leaders. In addition, Gallup provided in-depth leadership development support for the College of Dentistry.

Beyond formal programs, all faculty and staff are responsible for their own continued professional development. UNMC supports them through a host of campus seminars and events,¹⁹ through funding for sabbatical leaves, off-site training, and professional travel, and through the NU tuition remission program.²⁰ Between 2001 and 2005, UNMC employees earned 7,582 credit hours of undergraduate and graduate credit through this program.

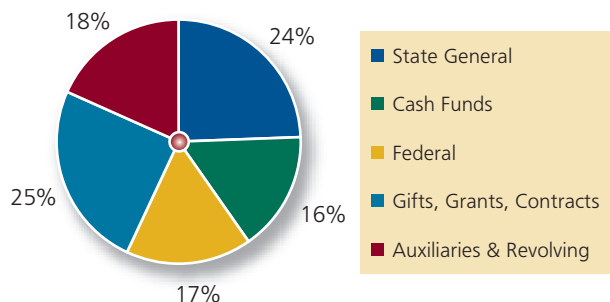
Reward and recognition program. UNMC recognizes employee contributions and builds employee loyalty through its reward and recognition program.²¹ Two key elements of this program are UNMC’s Silver and Gold ‘U’ awards. Silver ‘U’ awards are administered at the unit level, with each unit being assigned a number of awards that it may make during the year. For example, Information Technology Services gives five Silver ‘U’ awards each year. The Chancellor’s Commendation Gold ‘U’ Award recognizes office-service and managerial professional staff employees who consistently deliver outstanding performance and service to UNMC. Nominations are considered by the Recognition Council, and one award is given each month. Gold ‘U’ award recipients are also recognized by the Board of Regents during the “Kudos” portion of their meetings.

Financial Resources

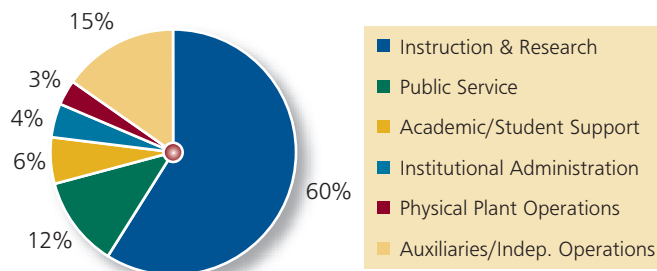
UNMC’s FY2007 operating budget was \$445 million. Its primary funding sources are State of Nebraska general fund appropriations (24.3 percent); net tuition and fees (4.4 percent); state research support (6.1 percent); federal grants and contracts (16.6 percent); other grants, contracts and gifts (25.8 percent); and auxiliary income and other sources (25.8 percent).

*“UNMC’s FY2007
operating budget was
\$445 million.”*

Revenue Budget FY 2006-07



Expense Budget FY 2006-07



Clinical revenues from the hospital and UNMC Physicians are an important revenue source, especially for the COM. The hospital makes lease payments to UNMC for patient care and clinic space; supports education and research through an academic affiliation agreement; and makes discretionary annual distributions to its two parent organizations, the University of Nebraska and Clarkson Regional Health Services, under the joint operating agreement. UNMC Physicians provides 34 percent of the funding for COM clinical departments, and the Veterans Affairs Medical Center provides 28 percent of the funding for these departments. This is similar to the funding patterns of many academic health centers.

NU's credit is rated AA2 Stable by Moody's and AA- by Standard and Poors (UNMC is not separately rated). UNMC's average monthly operating cash balance during FY2005 was approximately \$74 million, and UNMC had approximately \$62 million in outstanding long-term debt for the Durham Research Center of Excellence (DRC), student apartments and dental chairs and equipment.

UNMC's major financial challenges include:

- Raising private funds for the Research Center of Excellence II (RCE II) and future facilities construction
- Sustaining its growth in externally funded research, as described in Chapter 4
- Adequately funding faculty and staff salaries and benefits in order to remain competitive and in light of potentially limited growth in state resources
- Working with NU administration to address wellness and health insurance design, coverage and cost



Facilities Resources

UNMC is proud of its new Durham Research Center, Durham parking structure, east power plant and data center, the hospital's new Hixson-Lied Center for Clinical Excellence (partially financed by UNMC and the NU Foundation); its previously

completed Durham Outpatient Care Center, Lied Transplant Center, Hattie B. Munroe Research addition, and Student Life Center; and its many recently renovated facilities, including McGoogan Library, College of Dentistry clinical areas and preclinical and research laboratories, and the College of Pharmacy research laboratories. These additions and renovations will serve to meet and enhance UNMC's educational and research programs well into the future.

On the other hand, UNMC faces continuing demands for more educational, research and office space. In response to these needs, UNMC is building the Sorrell Center, which will open its doors in 2008, and is raising private funds to build the RCE II. It is also participating in an NU initiative to secure state funding for deferred maintenance and building renewal.²²

UNMC's facilities planning process also responds to unit concerns, such as those expressed by faculty and students on the Lincoln campus of the College of Nursing. In this instance, UNMC leased and renovated space adjacent to the campus to create a modern, effective learning-teaching environment that opened in fall 2005. UNMC takes these factors into consideration to ensure that facilities support the learning environment:

- Ample campus space for study and interaction
- Adequate residential housing, including 60 new student apartments on the Omaha campus
- Adequate student parking
- Effective campus security, including patrols, lighting and emergency intercoms
- Space for student fitness, evidenced by the well-equipped, and heavily utilized, Student Life Center in Omaha, and similar facilities in Lincoln and Kearney.

Information and Educational Technology

UNMC has significantly expanded its investment in information and educational technology over the past 10 years. This investment includes: technical staff support; 11 student computer clusters; a robust, secure campus network; the aforementioned recently completed data center; a multi-campus, statewide video network; and a flexible approach to meeting the information technology support needs of the various units through centralized support and service-level agreements.

UNMC is actively planning for the next stage of information and education technology with an emphasis on the following, as identified in the ITS strategic plan.²³

Intellectual Property and Technology Commercialization. UNMC holds an extensive portfolio of intellectual property (IP) and has had moderate success in commercialization through licensing and the formation of start-up companies. UNMC's current and developing strengths in this area include the Intellectual

Infrastructure Statistics....

Network

- Powerful/redundant network infrastructure
- 8,000 campus connections
- Wide area network to 36 remote locations

Wireless Infrastructure

- 9 UNMC campus locations
- 7 hospital locations
- 9 UNMC physicians locations

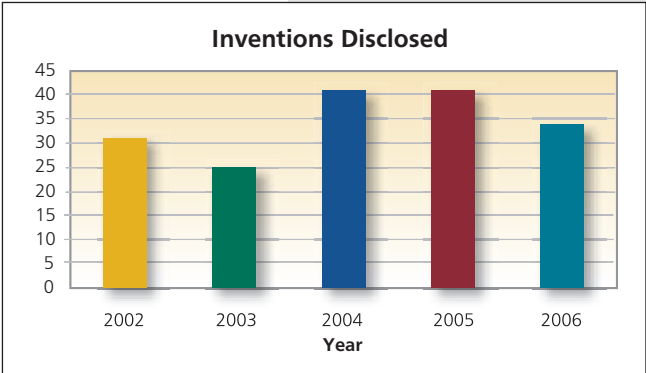
Video Resources

- 29 classrooms equipped for two-way video conferencing
- Portable IP-based video carts

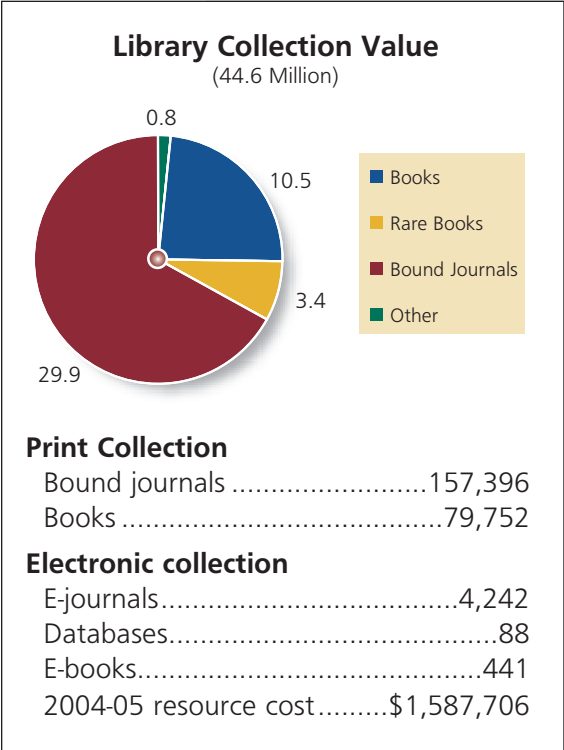
Voice Services

- 13,300 phones - 5,800 voice mail boxes

Property Office (IPO); UNeMed, incorporated in 1991; the Science Research Fund, incorporated in 2005; and recently adopted policies and procedures for Federal Small Business Innovation Research and Small Business Technology Transfer Program grants, and faculty-owned businesses. A 2005 evaluation of UNMC’s IP portfolio by John T. Preston, assistant director of MIT’s Entrepreneurship Center, identified areas of strength,²⁴ and UNMC reoriented its technology commercialization strategy in 2006 by placing greater emphasis on marketing, and this new strategy appears to be effective. Although UNMC has not yet secured major financial returns from its IP, its success compares favorably with its peer institutions.²



Investment in Educational Quality. UNMC has also invested in resources such as its library, student government and activities, and specialized services for graduate students, foreign and minority students, residents, and students with learning and physical disabilities, which are addressed in Chapter 3. But the investment in the McGoogan Library of Medicine deserves a special notation here. UNMC administration has supported the library by cushioning the impact of state budget reductions through reallocating of campus funds. Investments in the collection, building, and staff are continuous. The library’s print collection is currently worth approximately \$40 million. It receives \$800,000 in state funds for subscriptions and licenses, while annual expenditures for these resources exceed \$1,200,000. The balance of funding is provided by UNMC administration, revolving income, individual campus departments, and the library endowment, which has increased from \$400,000 in 1987 to a current investment of \$3 million, producing over \$250,000 in income annually.



More than 4,200 electronic journals are now available to students and faculty with UNMC Lotus Notes™ IDs and passwords, and users express high satisfaction with these and other electronic library resources. Students and faculty also give the library building high scores for accessibility, functionality, and comfort. Two floors were renovated in 2000, and the latest effort includes renovation of the rare book rooms which protect and conserve an irreplaceable – and frequently used – collection. At the same time, the library’s greatest challenge is maintaining the breadth of its journal subscriptions in light of continually increasing material costs.

Donors, Alumni and Philanthropic Support

UNMC enjoys widespread support from donors who include community leaders, alumni and former patients. For example, private philanthropic support provided the majority of funds used to construct priority buildings on the UNMC facilities master plan. Chancellor Maurer has taken community support to new levels, having

*“UNMC enjoys
widespread support
from donors.”*

raised \$84 million for DRC and its associated parking garage, and \$52.7 million for the Sorrell Center.

UNMC raises funds through the University of Nebraska Foundation. The NU Foundation works in conjunction with UNMC's four college alumni associations and the Physical Therapy Alumni Association, formed in 2005. These associations contribute to UNMC's success with financial support for scholarships and new buildings, and with community and political support.

Flexibility

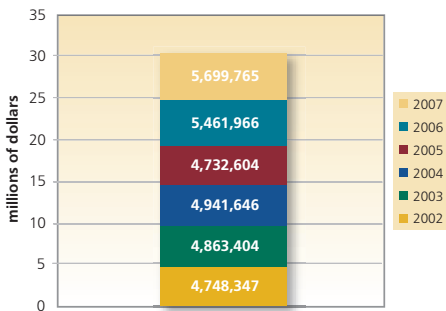
From 2002 to 2005, UNMC dealt with five reductions in state funding, an NU budget reduction and an NU revenue shortfall. These cutbacks and shortfalls – though bothersome – did not deter UNMC's overall growth and development. Although state funding grew from \$87.4 for 2000-01 to \$101.4 million for 2005-06, UNMC sustained an \$11.2 million reduction in its base budget. The new appropriations paid for new programs and unavoidable cost increases such as utilities and health insurance, while UNMC managed the base reductions through targeted eliminations of programs and staff, internal resource reallocations, and by substituting indirect cost and clinical revenues for state funding. At the same time, deans and directors have reallocated funds within their unit budgets to advance strategic priorities.

While managing these financial "disturbances," UNMC has been proactive in securing new resources from the state and NU; increasing clinical revenues and gifts; and reallocating funds to support strategic initiatives. Since the passage of the initial legislation in 2001, UNMC has received \$24.7 million from Nebraska's Tobacco Settlement Fund, which is described in Core Component 4a. During the past five years, UNMC has been awarded \$2.2 million of ongoing support for an NU Programs of Excellence initiative (again, more in Chapter 4) and \$1.1 million for faculty diversity.

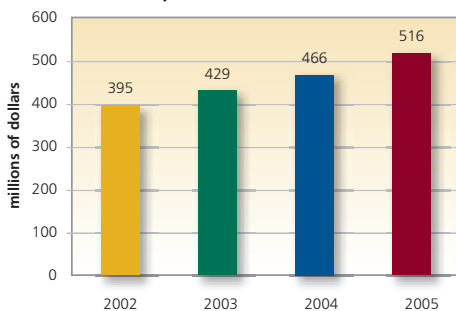
UNMC Physicians' net patient service revenue grew from \$72.1 million for FY2000 to \$112.1 million for FY2004, an increase of 55.5 percent, and the hospital's net patient service revenue grew from \$376.3 million for FY2001 to \$515.6 million for FY2005, an increase of 37 percent.

In summary, UNMC's resource base under the leadership of the chancellor supports its educational programs and its plans for enhancement. UNMC has abandoned or modified goals that no longer make sense as conditions change. Challenges it faces include expanding diversity and adequate funding for salaries and benefits; its opportunities include continued growth in externally funded research and further investment in facilities renovation and construction.

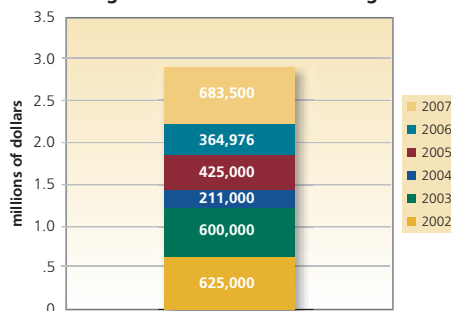
Tobacco Settlement Funding



Hospital Net Patient Revenue



Programs of Excellence Funding



CORE COMPONENT 2C

The organization's ongoing evaluation and assessment processes provide reliable evidence of institutional effectiveness that clearly informs strategies for continuous improvement.

UNMC employs a variety of techniques to evaluate its effectiveness at institutional and unit levels. Systems are in place for collecting, sharing and evaluating data that address all aspects of UNMC's mission. In particular, UNMC regularly assesses its educational programs through internal reviews and multiple external specialized accreditations. As noted previously, UNMC conducted an extensive survey of students, faculty and staff as part of this self-study. In short, UNMC wholeheartedly supports educational and institutional evaluations through its mission-driven culture and its budget.

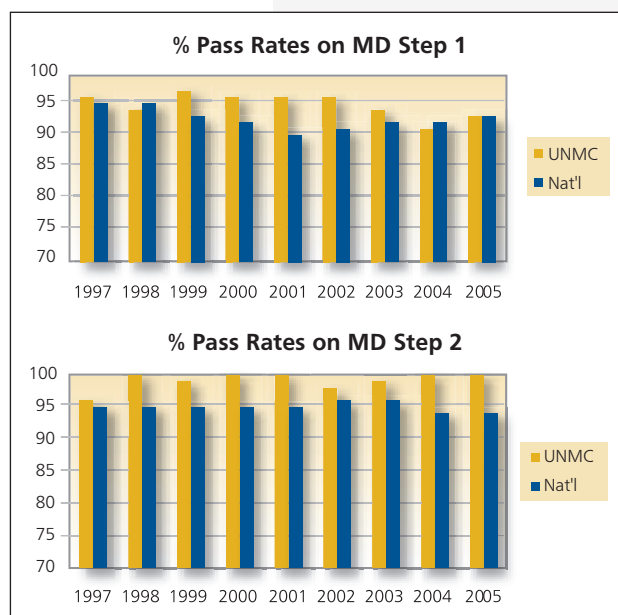
Vision and Culture

UNMC's commitment to being a world-class academic health science center means being excellent in all areas and outstanding in selected others. World-class status implies that UNMC will be internationally recognized in targeted aspects of its educational, research, patient care and outreach mission. UNMC owes its success in working toward this goal to its administrative and faculty leadership, and to its culture. When he became chancellor in December 1998, Dr. Maurer stressed raising the educational bar, expanding externally funded research, improving diversity, and meeting the institution's historic commitment to the underserved. He has led the formation of a culture of high expectations and clear accountabilities.

Institutional Performance and Quality Indicators

Over the past eight years, UNMC has created a set of 12 evolving institutional quality and effectiveness indicators. These indicators are published annually as part of UNMC Planning Information and Quality Indicators.² This document is distributed in hard copy to those attending the annual Chancellor's Strategic Planning Retreat, and is posted on the Intranet for the entire UNMC community. The indicators and their supporting data are refined each year. For example, national rankings were added as the 12th indicator in 2004, and in 2006, additional emphasis was placed on economic development.

Prior to 2005, UNMC followed the decentralized approach to institutional research. Increasing internal and external data requirements led UNMC to create an Institutional Research Office in 2005.²⁵ The director of that office chaired the data resource team for this self-study and works closely with the Budget and Strategic Planning Office in assembling and reporting UNMC's annual institutional performance indicators.



University of Nebraska (NU) Strategic Framework

During 2005-06, the NU President's Council and Board of Regents adopted performance metrics for the university system's strategic framework.²⁶ Metrics of particular interest to UNMC included growth in externally funded research, faculty salaries, and faculty, student and staff diversity. These metrics were consistent with existing UNMC performance measures.

Institutional Data Systems

UNMC collects, evaluates and reports educational, research, patient care, outreach and operational data. Major central institutional data systems include: student information; human resources; financial; sponsored projects; compliance; and facilities. In addition, the hospital, UNMC Physicians, the colleges, institutes and support units maintain specialized databases related to their educational, research, patient care, and outreach activities. Centralized data are reported in institution-wide and unit-specific formats to campus and unit leaders, and unit-level data are reported to deans, directors, department chairs, faculty and staff within each unit. Internal data collection and reporting are designed to support decision-making. This requires maintenance of consistent core data sets and ongoing evaluation of the usefulness of what is being collected and how it is being reported. It also requires careful attention to data definitions in light of new programs and services, new delivery methods and new technologies. Recent examples of improvements in data collection and reporting include:

- Expansion of the health professions tracking database to respond to bioterrorism threats
- A new comparative medicine (laboratory animals) cost accounting and pricing system
- Improved data definitions and reporting for technology-enhanced educational delivery

Compliance Structure

Recognizing the increasing complexity, scope and risks associated with external regulations, UNMC significantly increased its budget for compliance. UNMC appointed an institutional compliance officer and formed a Compliance Committee in 2004 to coordinate the work of various offices and committees that oversee human and animal research, safety and privacy requirements. Among other responsibilities, the committee monitors a set of campus-wide compliance indicators that identify areas of strength and areas in need of further attention.

Academic Reviews and Specialized Accreditations

As mentioned previously, UNMC undergoes numerous specialized academic and nonacademic accreditations (Appendix 1). Likewise, the hospital, clinics and labs are accredited by the Joint Commission on Accreditation of Healthcare Organizations and by specialized accrediting organizations such as the American

Society for Clinical Pathology, the American Association of Blood Banks, and the Clinical Laboratory Improvements Program of the Centers for Medicare and Medicaid Services.

Most of the approximately 50 specialized academic accreditations or certifications require self-studies, and UNMC combines these periodic self-studies and external evaluations with its ongoing approach to quality monitoring and improvement. UNMC is proud of its recurring accreditation by these accrediting bodies and the improvements in educational programs that result, which are documented in Chapter 3.

Additional Evaluations and Advisory Panels

UNMC relies on a variety of additional data, reviews and advisory panels for information about its quality and the changing needs of its internal and external constituencies. These are enumerated in Chapter 3, but some examples follow:

School of Allied Health Professions (SAHP). SAHP collects information from graduates and employers. (See Chapter 3, Core Component 3a.)

College of Dentistry (COD). The COD annually collects data from faculty, staff, students, alumni, employers, postgraduate program directors, and external mentors. These data are analyzed in an annual outcomes assessment report by the COD Quality Council.

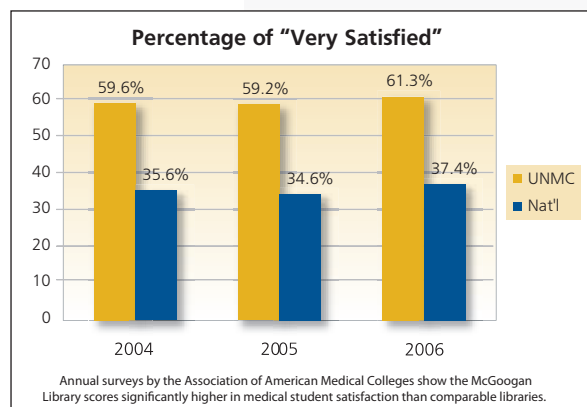
College of Nursing (CON). CON uses both qualitative and quantitative methods to obtain evaluation data from graduates and employers.

Eppley Institute. Eppley's External Advisory Board provides direction and focus for the cancer research programs.

Munroe-Meyer Institute (MMI). MMI has partnered with the Association of University Centers on Disabilities to develop outcomes measures for the Leadership Education and Neurodevelopmental Disabilities grant.

Administrative and Support Unit Reviews. Rather than conducting formal periodic reviews of administrative and support units, UNMC engages in ongoing unit and work process-based quality monitoring and improvement. The library, purchasing, and information technology services are three examples, from very different perspectives, of how UNMC monitors and improves its administrative and support unit services:

- **McGoogan Library** uses a number of methods to evaluate its services: findings of accreditation self-studies; benchmarking against peers, and point-of-service evaluations conducted by library staff. This combination of methods provides a usable estimate of customer satisfaction. Based on self-study findings, the McGoogan Library is seen as one of UNMC's strengths.



- **Information Technology Services (ITS)** identifies and implements best industry practices regarding network design, monitoring and security to ensure high reliability and performance of UNMC's network infrastructure. ITS follows a customer-focused approach in developing custom software applications. Software designers/developers work with faculty and administrators to design documents and prototypes, and to test, train, implement and improve software applications. ITS provides a full range of services to faculty that includes instructional design, course management system and classroom technology support, research support and related services.
- **Purchasing** continuously evaluates processes and procedures, compares present practices to "best practices" and aligns its priorities to those of UNMC as a whole. Recent process improvements include: Web-based ordering for research, laboratory and office products; purchasing card and reconciliations; and electronic expense reimbursements for employees with direct deposit.

Core Research Facilities. In an August 2004 faculty satisfaction survey regarding research core facilities, funded by the Nebraska Research Initiative (see Core Component 4a), 90 percent of facilities users were happy with the services and their cost. However, 29 percent of respondents were unfamiliar with the facilities and the services provided. In order to address this weakness, "Core Facility Day" was developed and a comprehensive listing of shared resources is maintained by the Office of Research Resources.

Student, faculty and staff surveys. Question 8 on each of the 2005 surveys asked about evaluation and assessment in relation to improvement within individual units or educational programs.¹ The wording of the faculty and staff questions was slightly different and there may have been some confusion regarding campus-wide versus unit-based evaluation and improvement. The level of agreement on both surveys was lower (faculty, 58.1 percent; staff, 54.6 percent) than for any other survey question. Campus and unit leaders are paying increased attention to integrating evaluation, assessment and quality improvement activities throughout UNMC, and follow-up in this case will include reviewing what can be learned from those units with more favorable responses. The student question pertained to course evaluations and assessments, and the response is discussed in the Chapter 3.

"UNMC relies on ongoing evaluation and assessment to monitor and direct its progress."

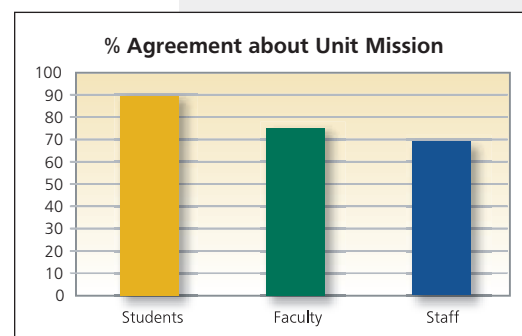
To summarize, in pursuing its ambitious objectives, UNMC relies on ongoing evaluation and assessment to monitor and direct its progress. Becoming world-class necessitates attaining and maintaining recognition for selected educational, research, patient care and outreach endeavors. UNMC's culture incorporates a positive orientation to risk-taking that encourages "stretch" goals, an expectation of excellence and improvement, and an emphasis on measurement and accountability. Continued improvement efforts have resulted in more effective compliance, successful reaccreditation of all units, even better library facilities and services, more secure information technology, and more responsive core research facilities.

CORE COMPONENT 2D

All levels of planning align with the organization's mission, thereby enhancing its capacity to fulfill the mission.

UNMC plans on multiple, interconnecting levels. The central planning level concerns UNMC as a whole, but planning activities extend above and below this level. UNMC also plans as part of NU; the dean of the College of Medicine oversees planning by UNMC Physicians; the dean of the College of Dentistry oversees planning by University Dental Associates; and the chancellor and vice chancellors coordinate planning by UNeMed Corp. and the Science Research Fund. Likewise, UNMC coordinates its planning with The Nebraska Medical Center and with the NU Foundation. UNMC also plans with its numerous partners throughout Omaha, the state, the U.S. and the world.

All levels of planning involve faculty, staff and students, as appropriate to each activity. When asked in question 9 on the 2005 survey¹ about the alignment of unit planning to fulfill the mission, faculty and staff responded favorably (faculty, 74.9 percent; staff, 68.9 percent levels of agreement). Students responded even more favorably to their related question regarding faculty and administrator responses to future challenges and opportunities, with 89.4 per cent agreement.



UNMC's planning is guided by its mission, vision and values, and its strategic objectives determine resource allocations. Planning is action-oriented, and implementation is monitored and evaluated, allowing for plans to be adjusted for new information and opportunities. The formal strategic plan is based on six relatively constant critical success factors and includes rolling three-year goals with annual targets and action plans. This plan is influenced by longer range strategic thinking and is consistent with the UNMC Campus Master Plan and other longer-range plans.

“Planning is action-oriented, and implementation is monitored and evaluated.”

UNMC-Wide Strategic and Long-Range Planning

UNMC updates its rolling, three-year strategic plan annually at the Chancellor's Strategic Planning Retreat; faculty, staff, students, administrators, NU Foundation officers, and others are invited to the retreat.²⁷

The UNMC strategic plan is built upon six critical success factors (CSF) that emanate from its mission:

- Learning-centered education
- Research growth
- Community partnerships
- Cultural competence
- Economic development and technology commercialization
- Employee loyalty and satisfaction

Goals for each CSF are reviewed annually, and updated or replaced, in light of accomplishments and new opportunities. A senior leader is accountable for each CSF and related goals, and annual targets and detailed action plans are prepared for each goal (Appendix 3). The plan is generally adopted in May; leaders usually submit actions plans in June, and progress is documented and reviewed in October, February and July.

Although this planning process has been highly effective, there has been unevenness in the specificity of the annual targets and in the completeness of the action plans that support the goals. Action plan reports sometimes have been late and/or incomplete. These weaknesses have been remedied by increasing the responsibility of the CSF leaders to collect and summarize the reports. In addition, the CSF leaders now meet as a group with Chancellor Maurer and the strategic planning officer to review progress and identify mid-year challenges and opportunities.

In order to improve accountability and strategic thinking even more, Chancellor Maurer instituted a fall Chancellor's Council strategic thinking retreat in 2005. This meeting accomplished several objectives: updating the environmental scan, identifying five possible initiatives, focusing on leadership and risk-taking, and preparing for the spring Chancellor's Strategic Planning Retreat. A similar senior leadership retreat is planned for fall 2006.

In addition to the rolling three-year strategic plan, UNMC prepares a variety of long-range plans. The Campus Facilities Master Plan²⁸ guides the physical development of the campus over 5-, 10- and 15-year planning horizons. This plan and the Long Range Information Technology Plan guide the development of campus infrastructure. The University Six-Year Capital Plan²⁹ includes UNMC's construction priorities. UNMC-wide long-range programmatic planning is addressed in conjunction with planning for the NU Foundation Capital Campaign. These planning processes are accomplishing their objectives, but coordinating their development, implementation and review is an ongoing challenge.

Strategic Planning With NU

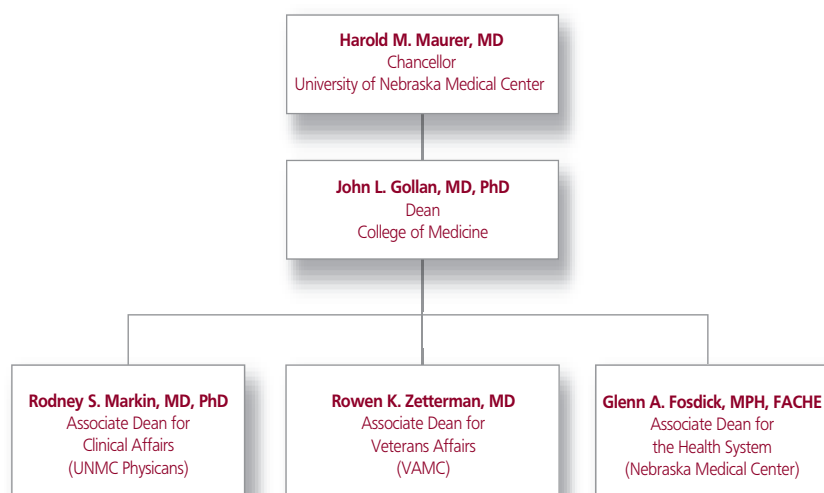
As a member of the NU President's Council, UNMC's chancellor participates in the development of the NU strategic framework based on input from the Chancellor's Council and senior staff. UNMC's Student Senate president reviews and comments on the strategic framework as a nonvoting member of the Board of Regents. This framework summarizes the strategic initiatives of the four University of Nebraska institutions, provides overall direction and communicates priorities to state government and to Nebraska citizens. Typical of successful, dynamic institutions that are parts of larger universities or university systems, UNMC actively promotes its unique identity and mission within the broader NU planning framework.

UNMC leaders actively participate in NU planning as members of the Councils of Academic and Business Officers as well as numerous functional groups by specialty,

such as research, information technology, human resources, and budgeting. These groups undertake planning, coordinate implementation among the four institutions and present institution-specific viewpoints to NU central administration. The effectiveness of these coordinating groups depends on the quality of their leadership and the degree to which campus representatives are willing to collaborate.

Clinical Enterprise Planning

The presidents of UNMC's practice groups – UNMC Physicians and UDA – report to the deans of their respective colleges, and both organizations plan strategically and operationally for the development of their clinical activities. Given its size and financial resources, UNMC Physicians plans and operates as a semi-autonomous subunit of the College of Medicine, within the context of the COM and UNMC strategic plans. The COM dean and the leadership of UNMC Physicians meet twice monthly to coordinate planning and implementation. Clinical faculty in the Colleges of Nursing and Pharmacy, School of Allied Health Professions and Munroe-Meyer Institute do not have separate practice plans, and clinical planning within those units is incorporated in overall unit planning.



The Nebraska Medical Center is an independent not-for-profit corporation with two parents: the University of Nebraska and Clarkson Regional Health Services. Each of these organizations appoints one-half of the members of the hospital's Board of Directors, which also includes UNMC's chancellor and the dean of the COM. The hospital CEO leads the hospital's strategic and capital planning processes, with major hospital plans approved by the hospital's Board of Directors.³⁰ The president of UNMC Physicians, department chairs and senior COM leaders participate in the hospital's strategic planning process, and the Academic Clinical Enterprise Committee coordinates alignment between the hospital, UNMC Physicians, the College of Medicine and UNMC strategies. The COM dean and the leadership of UNMC Physicians meet twice monthly to collaborate on hospital issues.

The president of UNMC Physicians and six UNMC physicians are members of the hospital operations council and the strategic planning committee. Strategic alignment of UNMC and the hospital is achieved through frequent regular meetings between the dean of the COM and the hospital CEO and their senior staffs, and through ad hoc meetings between UNMC's chancellor and the hospital CEO and UNMC vice chancellors and hospital vice presidents. There is also a weekly meeting of the chancellor, the dean of the COM, and the CEO of the hospital. Frequently discussed issues include development of the shared campus and off-campus facilities, finances, program development and major physician recruitments. Because the two organizations are distinct, effective collaboration requires continual attention. As might be expected, finances and institutional identity/autonomy are the most challenging areas.

Joint planning between Omaha Veterans Affairs Medical Center (VA), another important training location for UNMC students and residents, and UNMC takes place via a traditional VA Dean's Committee. This planning process has enhanced communications and resulted in increased patient care efficiency, information technology advances, superior education and excellent research collaboration.

Research Enterprise Planning

UNMC-wide research planning is coordinated through the Office of the Vice Chancellor for Research and Research Resources Board. Associate or assistant deans for research in each college coordinate research planning in their units.

UNeMed and the Science Research Fund Planning

UNeMed Corp. and the Science Research Fund advance UNMC's economic development and technology commercialization activities. UNeMed's president reports to the vice chancellor of business and finance. UNeMed's planning focuses on immediate and long-term commercialization of existing and emerging UNMC intellectual property. The Science Research Fund provides funds to further biomedical, biotech and bioinformatics research at UNMC. These two quasi-independent organizations coordinate their activities with UNMC's Intellectual Property Office. More details are provided in Chapter 4.

UNMC and NU Foundation Planning

The NU Foundation³¹ advances "Nebraska's statewide university system by matching supportive people and corporations with rewarding giving opportunities on all four campuses." The foundation operates independently from NU, but UNMC coordinates its facilities fundraising and programmatic capital planning with the foundation. The chancellor, vice chancellors, deans, directors and senior faculty work closely with the foundation to cultivate and maintain effective donor relationships.

Likewise, UNMC's several alumni associations coordinate with the foundation through the UNMC Alumni Affairs Office.³² Each alumni association prepares its

own annual plan and budget, and the Alumni Affairs director and staff provide expertise and support for planning and implementation.

As this self-study was being prepared, the COM Alumni Association, Alumni Affairs and the NU Foundation were working closely together to garner alumni financial support for construction of the Sorrell Center. During this period, UNMC representatives also were developing proposals for a possible major development campaign that will benefit all four NU institutions.

College, Institute and Support Service Planning

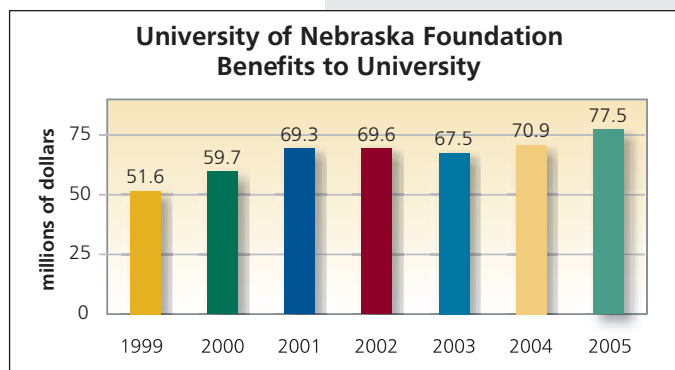
Colleges, institutes and support services plan within the context of UNMC mission, vision and critical success factors. Each unit updates its plan annually, and unit plans are reviewed and approved by the chancellor prior to being sent to the Chancellor's Council. Deans and directors lead their units' planning and implementation activities and are accountable to the chancellor for meeting or modifying their strategic objectives. Getting complete unit plans on time has been problematic. Some units lag in developing and submitting their unit plan, and efforts are underway to improve the process.

Units also engage in specialized planning activities, such as the CON Long-Range Plan, and the Eppley Institute and UNMC-Eppley Cancer Center plan for achieving NIH designation as a comprehensive cancer center.

Inter-unit cooperation is integral to such important institution-wide objectives as achieving the aforementioned comprehensive cancer center status; minority student recruitment and retention; enhancing educational technology; and collaborative research in keeping with the NIH Roadmap initiative.

Student and Faculty Senates

The Student and Faculty Senates are key components to planning across UNMC's colleges, institutes and academic programs. Although the Student Senate is primarily concerned with student activities, its president and vice president attend the Chancellor's Annual Strategic Planning Retreat, and Student Senate leaders are encouraged to learn about, and comment upon, UNMC's plans and progress. Via its committees, the Faculty Senate makes numerous contributions to planning endeavors. For example, recently the Faculty Senate has had input on diversity and minority faculty issues, faculty and staff salaries, intercampus research, and recruitment and retention. It also revised the Faculty Senate By-Laws and the Faculty Handbook.



Local, National and Global Partners

UNMC cannot accomplish its mission without its numerous affiliations, partnerships and joint ventures. Consequently, UNMC engages in joint planning activities with its partner organizations in the following areas:

- Academic affiliation
- Community service alliances
- Economic development partnerships
- International student and faculty exchanges
- Global partnerships for distance education, research and patient care

All of these affiliations, partnerships and joint ventures require extensive initial and ongoing planning and evaluation. For example, the development stages of the Virginia-Nebraska Alliance, a program to expand minority student recruitment, required considerable negotiations to forge an effective partnership.

Biennial Budget Requests and Annual Operating Budgets

The State of Nebraska operates on a biennial budget cycle, and UNMC prepares both biennial budget requests and annual operating budgets. Planning for the

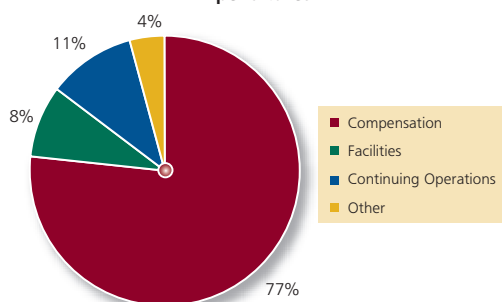
biennial budget request begins 12 months prior to the submission of the request to the state and focuses on major UNMC needs. Budget request categories include: salaries, utilities, library acquisitions, operating expenses, and initiatives such as diversity, Programs of Excellence, need-based student financial aid, and building renewal/renovation. The NU President's Council establishes the budget request priorities, and the Board of Regents approves the priorities and the summary request.

In developing its past two budget requests, UNMC has emphasized faculty and staff salaries and priorities such as redesigning the approach to employee health insurance and more assertively seeking state support for facilities restoration. Chancellor Maurer has consistently consulted the Chancellor's Council and senior staff in developing UNMC's budget request priorities.

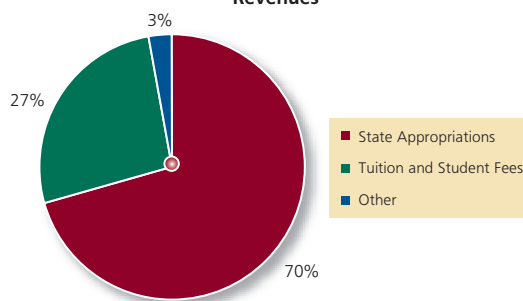
The annual operating budget³³ includes four major sections: a) state aid (state appropriations, tuition, investment income and indirect cost reimbursements); b) patient revenues (UNMC Physicians, dental clinic and hospital clinical income); c) restricted (grants, contracts, gifts and endowment income); and d) revolving and auxiliary (internal and external sales and services, such as the print shop and book store).

UNMC's budgetary approach for the state-aided portion, which supports its educational mission and its core administrative and support function, is best

FY 2007-08 State Budget Request Expenditures



FY 2007-08 State Budget Request Revenues



described as continuation budgeting that includes periodic reallocations. Although the units generally receive equal percentage increases to the prior years' budgets, the Chancellor occasionally reallocates funds from all the units to fund new priorities. (In practice, campus-wide reallocations have occurred every five years or so.) At the unit level, deans and directors are expected to examine their priorities annually and, if appropriate, to reprioritize their budgets each year. UNMC's two-level budgetary process is sound. UNMC's education programs and enrollments are fairly stable, and UNMC operates as a decentralized organization with effective leadership accountability.

Despite the emphasis on continuation budgeting, which perpetuates resource allocation, UNMC and its colleges and institutes have accomplished numerous innovations. Recent examples include:

- Expansion of B.S.N. enrollment, including the creation of an accelerated B.S.N. track, and establishment of a fast-track Ph.D. program by the CON to address practitioner and faculty shortages
- Expansion of the COM's Department of Anatomy and Cell Biology into the Department of Genetics, Anatomy and Cell Biology
- Addition of 24 credit hours to the physical therapy program in the SAHP to create one of the first the Doctor of Physical Therapy degree programs in the United States
- Expansion of the dental hygiene program to serve students located in western Nebraska
- Expansion of the COM's Department of Pharmacology to include neurosciences in 2004
- Increased class size by up to 40 percent and developed distance learning options to respond to workforce shortages in the radiation sciences

At the institutional level, UNMC has used state appropriations from the Tobacco Settlement Fund and state funding for Programs of Excellence to complete numerous strategic recruitments, research infrastructure projects and minority health research projects, and to initiate several new program initiatives. UNMC is proud of the fact that it enhanced its educational programs and expanded its internally and externally funded research while managing five state budget reductions and/or NU reallocations.

SUMMARY OF CRITERION TWO FINDINGS

UNMC is a complex, decentralized academic health science center that aligns planning with mission and accomplishes its mission, vision and critical success factors through numerous partnerships and alliances. UNMC's planning activities are multidimensional and multi-level. Horizontally, UNMC leaders share information

“UNMC's planning activities are multidimensional and multi-level.”

and coordinate goal-setting, implementation and evaluation for their units across the four principal aspects of the mission: education, research, patient care and outreach to the community, including the underserved. Vertically, UNMC aligns planning, execution and organizational learning from the office and section levels up through academic and support units, to the entire institution and beyond to NU and the State of Nebraska. Diagonally, UNMC works to coordinate its organizational planning with that of its many partners and affiliates, especially The Nebraska Medical Center and the VA.

This analysis of UNMC's allocation of resources and its processes for evaluation and planning has led to recognition of the following strengths, challenges and opportunities:

Strengths

- There is widespread faculty, staff and student agreement that UNMC realistically prepares for a future shaped by multiple trends.
- UNMC enjoys strong financial and political support throughout Nebraska.
- UNMC employs effective strategic planning and institutional performance evaluation.
- Recently completed, approved and pending facility additions and improvements will support future program development.
- The hospital and faculty practice plan are financially strong.
- Overall regulatory compliance is well-coordinated, and financial compliance is effective.
- State support for research through the Nebraska Research Initiative and the Tobacco Settlement Biomedical Research Development Program is invaluable.
- UNMC is nationally and internationally recognized for excellence in education, research and clinical care.

Challenges and Opportunities

- Sustaining rapid growth in externally funded research despite slower growth in federal funding for biomedical research requires diligent effort.
- Maintaining financial success of the hospital and faculty practice plan requires continued strong leadership.
- Improving financial returns from technology development and commercialization activities is key to UNMC's future growth in these areas.
- Recruiting and retaining underrepresented minority students, faculty and staff are critical UNMC goals.
- Achieving comprehensive cancer center status from the National Cancer Institute is vital to our goal of achieving world-class status.

- Developing the College of Public Health is critical to UNMC's future role in the state and region.
- UNMC must meet the ever-changing health and workforce needs of Nebraska's aging, rural and increasingly diverse population through education, research, care and outreach.
- UNMC must continue its leadership in initiating a statewide electronic health record and promoting statewide health and disease prevention.

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Chapter 3

Criterion Three:

Student Learning and Effective Teaching

The organization provides evidence of student learning and teaching effectiveness that demonstrates it is fulfilling its educational mission.

UNMC's educational mission and its vision to be a world-class health science center mean that it is dedicated to preparing outstanding health care practitioners and scientists. In educating these professionals for Nebraska, the nation and beyond, UNMC offers a breadth of undergraduate and professional programs aimed at providing a student's first professional health credential and/or appropriate research training.

Lee S. Shulman, Ph.D., president of The Carnegie Foundation for the Advancement of Teaching, described such professional education programs as "signature pedagogies" in the keynote address during the 2004 HLC-NCA meeting in Chicago (April 10, 2004). In that stimulating presentation, he described much professional education as the "metaphor for all education" and that such programs promoted engagement, accountability and responsibility as hallmark features.¹ All of our health professional programs take pride in translating knowledge into action for the benefit of society.

UNMC educational programs that produce entry level generalists in relatively high volume include: dentistry, medicine, pharmacy, physical therapy, physician assistant studies, clinical laboratory science, and nursing. Several other educational programs meet critical needs in Nebraska but often produce smaller numbers of graduates – for example, dental hygiene, cytotechnology, clinical perfusion, medical nutrition, and programs in the radiation sciences.

In all, UNMC has 16 degree-granting programs, including five certificate programs and 39 medical, dental or pharmacy residency programs. UNMC also offers advanced and graduate education – 10 doctorate and 11 master's degree programs. In addition, the Center for Continuing Education offers lifelong learning opportunities for health care professionals. There are also continuing education offices in the College of Nursing (CON) and the College of Dentistry (COD), which create issues of coordination and raise questions about the need for a unified continuing education center in the future.

“...much professional education as the ‘metaphor for all education’ and that such programs promoted engagement, accountability and responsibility as hallmark features.”

Recently, five UNMC programs were ranked among the top programs in the country by *U.S. News and World Report*: the masters program in the College of Nursing; the physical therapy and physician assistant programs in the School of Allied Health Professions (SAHP); and the primary care and rural health programs in the College of Medicine (COM).²

Faculty members design, approve, evaluate and refine all curricula within specific majors, and all health professional programs at UNMC are accredited by discipline-specific national and/or state accrediting bodies (Appendix 1). When appropriate, input from students and the community is encouraged and acted upon.

One of the greatest pieces of evidence that UNMC is fulfilling its educational mission to the state of Nebraska is the fact that most graduates stay to practice here. For example, 85 percent of CON graduates stay in Nebraska, and the majority of Nebraska's rural practitioners were educated at UNMC.

CORE COMPONENT 3A

The organization's goals for student learning outcomes are clearly stated for each educational program and make effective assessment possible.

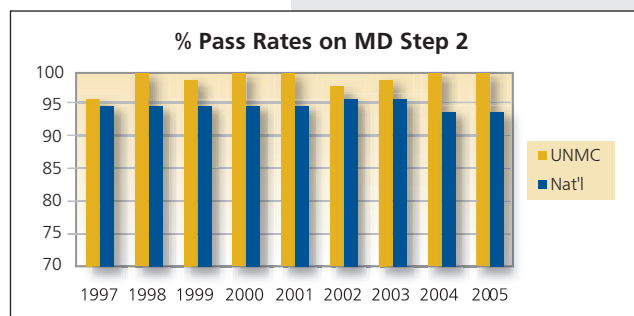
Admission standards for all programs assure that competitively selected students are attending UNMC to prepare for their careers in health care, health care education, or research. Once students enroll at UNMC, our goal is seeing that they gain knowledge, reasoning, skills and professionalism consistent with world-class institutions. Student learning outcomes are specifically defined at several levels. For example, in the COM, learning objectives are cited at the core, course, year and graduation levels.

Knowledge Outcomes

The essential knowledge outcomes for all UNMC programs requiring licenses or certifications are delineated in criteria set by various licensing boards and accreditation councils. Undergraduate and professional degree programs have established competencies students must attain prior to graduation. These documents are posted online in the UNMC Blackboard™ course management system and are listed in bulletins for each program. They include: U.S. Medical Licensing Examination (USMLE) competencies; College of Pharmacy (COP) Professional Program Abilities and Outcomes Guide; CON outcomes and competencies for the B.S.N., M.S.N., and Ph.D. programs; COD competencies and requirements; and School of Allied Health Professions (SAHP) outcomes and competencies.³

Upon satisfactory completion of their educational programs, graduates of UNMC's undergraduate and health professions programs are required to pass licensing or certifying examinations before they may practice in their chosen fields. (For medical

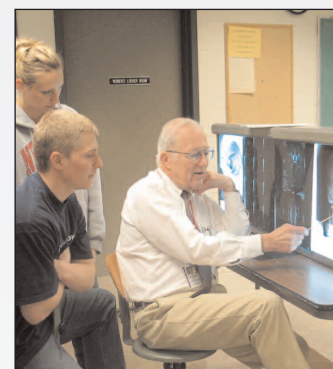
students, these national exams occur twice during medical school and are required for graduation. Medical students take Step 1 at the end of their second year; Step 2 is composed of both a clinical knowledge exam and a new clinical skills exam with simulated patients.) Graduates do better on these exams than the national average in all disciplines, with some programs repeatedly attaining 100 percent pass rates.



UNMC has set a goal of a 100 percent pass rate on all certification and licensure exams. To reach this goal, programs have implemented various strategies to ensure first-time success. Student knowledge is routinely measured at a variety of points between matriculation, graduation and successful completion of a licensing examination. Generally, measures of student progress are conducted and feedback given at traditional academic points – midterm and end of course. Widespread use of Blackboard™ course management software and online grading allows feedback to occur quickly after testing.

Nursing master's degree recipients' high pass rates on their tests for certification have likely been a factor in the national ranking of the M.S.N. program. COM residents take specialty and subspecialty certification tests. The internal medicine residency program has had a 100 percent pass rate for first-takers the past eight years. In fact, the UNMC pass rates for all 17 national standardized tests taken yearly by professional graduate and undergraduate students are consistently above national pass rates with UNMC mean scores usually above national mean scores (Appendix 6).

Measurement of outcomes includes both internal data, such as classroom and practical examinations, and external data, such as licensing exams. Correlations between the internal and external measurements are used for curricular quality improvement. For example, changes in the National Council Licensing Exam for registered nurses (NCLEX) have resulted in CON curricular modifications to enhance graduates' readiness to take this national exam. Competency requirements for medication math and ample opportunities to test on computers have helped students prepare for the NCLEX. The same was true in the COD following changes in national and regional board examinations. Likewise, analyses by the COM curriculum committee of students' performance on national exams, along with results from the Association of American Medical Colleges (AAMC) graduating senior questionnaire and surveys of residency directors, have recently led to revision in didactic content and the integrated clinical experience (ICE) curriculum. In the SAHP, changes were made in 2001 in both the curriculum and the directorship of a particular program in response to national board scores and student feedback.



Clinical Reasoning Outcomes

Problem-based learning (PBL) and integrated clinical experiences (ICE) early in the curriculum of health science students allow them to sense the relevance of basic

ACGME Core Competencies

- Patient Care
- Medical Knowledge
- Interpersonal and Communication Skills
- Practice-based Learning and Improvement
- Professionalism
- Systems-based Practice

“The new Michael F. Sorrell Center for Health Science Education, opening in fall 2008, will increase the space and advanced technical resources available for interprofessional clinical skills training.”

science knowledge more readily. At the undergraduate level, UNMC programs are using learning strategies that augment, or in some cases eliminate, the traditional lecture approach, and emphasize development of critical thinking and clinical decision-making skills. This type of course work is important given the increasing volume of material in health sciences and the AAMC report on core competencies for health professionals in the 21st century.⁴ For example:

- The COM uses the ICE and PBL small group approaches in the first two years of the curriculum to add student-directed use of resources, thereby creating and modeling habits of lifelong learning.
- The CON requires two undergraduate courses, one in chronic illness and the other in acute complex illness, entirely taught using a PBL approach.
- The COD conducts much of its laboratory and clinical experiences in PBL format.
- The SAHP curriculum uses case study approaches to develop critical reasoning skills.
- COP has an Early Practice Experience Program that begins during the student’s first year. This involves introductory clerkship experiences in community practice, institutional practice, and drug information. Clerkships allow pharmacy students to develop clinical reasoning skills; preceptors evaluate and grade the student’s abilities.

Skills Outcomes

Recent national trends in health care emphasize students’ clinical skills as well as knowledge measures. UNMC offers early and advanced programs designed to assure competence in clinical skills that develop and evaluate a student’s clinical performance throughout his or her educational program. Curricula give opportunities to apply newly learned skills through observation and practical experience via standardized (objective structured clinical evaluations or OSCE), simulated (human patient simulators or HPS), virtual (computerized simulations), and real patient evaluations in the clinical setting. The new Michael F. Sorrell Center for Health Science Education, opening in fall 2008, will increase the space and advanced technical resources available for interprofessional clinical skills training. A challenge to such training will be designing compatible academic schedules among UNMC programs to make sure students and faculty from the COM, CON, COP and SAHP are able to make full use of the building.⁴

Clinical experiences begin in the first year for students in nursing, medicine, pharmacy, dental hygiene and most of the allied health programs, and in the second year in dentistry. Numerous contracts and affiliation agreements with agencies and preceptors provide scheduled opportunities for students to interact with patients and be evaluated on their clinical skills. The pedagogy of health science education at UNMC allows ample opportunity for direct observation of students caring for patients. In addition to required courses, elective clinical opportunities are offered during breaks and over the summer.

As described in detail in Chapter 5, UNMC also encourages students to be involved with volunteer health care programs such as the Mobile Nursing Center; the SHARING (Student Health Alliance Reaching Indigent Needy Groups), RESPECT (Responsible Early STD Prevention Education and Community Testing) and GOODLIFE (Greater Omaha Outreach for Diabetes Lifestyles Impacting Fitness and Education) Clinics; Red Cross Community Services; Children's Dental Days; Healthy HEARTland (Health Education Across Rural Towns) health screenings conducted by pharmacy students in conjunction with local pharmacist preceptors; and community health fairs. These opportunities solidify clinical skills, enhance professionalism and build communication skills. Programs provide capstone experiences in the form of transition courses, preceptorships, clerkships, and subinternships. A final evaluation summary on overall skills and abilities is completed on nursing, pharmacy, dental and medical students, and many allied health students.



In order to become licensed, medical school graduates are now required to pass an external, nationally normed clinical skills examination. COM students achieved a 99 percent pass rate on this augmented USMLE Step 2, newly implemented in 2005. Ninety-five percent of UNMC dental students pass the Central Region Dental Testing Service, the regional practical exam, on their first try. Virtually 100 percent pass on their second attempt. All dental hygiene students pass their national and regional board exams, and all graduate dentists become licensed health care professionals.

Graduate Studies Outcomes

Graduate student performance evaluation typically focuses on coursework, progressive evaluation of research competence, a comprehensive examination, and defense of a thesis or dissertation. During their graduate education at UNMC, each student develops a comprehensive curriculum vitae (CV) with advice from his or her mentor(s) and graduate committee. Each student is expected to meet at least twice a year with his/her full supervisory committee to assure progress and provide additional mentoring. Advisors and program graduate committees provide feedback to students not only through the required annual process, but also in regular contacts such as journal clubs, research meetings, seminars, and other routine or special lab activities. As students progress in their research, they participate in regional, national and international scientific meetings, where they are encouraged to present and defend their research findings. In all basic science disciplines, progression to Ph.D. candidacy requires the development of a written grant proposal, usually in the NIH format, followed by an oral defense of the proposal. The comprehensive examination assesses the student's broad understanding of the chosen discipline. Each graduate student is required to develop a portfolio (contained largely in the CV) that is reviewed annually by his/her supervisory committee or program graduate committee. The portfolio includes the student's expectations for learning, anticipated career goals, experiences and accomplishments in teaching, research and service, and a personal statement concerning high ethical standards in his/her



Principles of Professionalism

- Primacy of Patient Welfare
- Patient Autonomy
- Social Justice

[Internal Medicine Charter, 2002]

chosen profession. A student's yearly progress toward learning aims are chronicled, evaluated and modified with the supervisory committee or major advisor. An updated copy of the portfolio is requested by the Graduate Studies Office annually, although, in some programs, compliance with this expectation has been less than desired.

Professionalism Outcomes

Health care fields are stressing the need for more instruction and improvement in the assessment of professionalism among students. Correspondingly, UNMC faculty devote an increasing amount of time teaching about student and career professionalism, and implement remedial procedures for those students who need them. Demonstration of satisfactory professional behavior is required for progression and graduation in all UNMC health professions programs.

UNMC has long fostered professionalism and integrity as essential components of clinical competency, through both institution-wide efforts and individual school or college programs. A few examples:

- In 2006 UNMC conducted its 7th annual all-campus program designed to emphasize these essential values for all new students.
- The schools and colleges hold annual "white coat ceremonies" in which students pledge to maintain academic integrity and to follow their chosen discipline's code of ethics.
- The Student Handbook clearly articulates UNMC's code of ethics, which sets the standard for student behavior.
- Professionalism is a requirement for accreditation of all medical clinical training programs by the Accreditation Council for Graduate Medical Education (ACGME).
- An interdisciplinary professionalism interest group has been organized to advocate for the enhancement of professionalism within the UNMC curriculum.
- In the COM, quarterly multidisciplinary Schwartz Center Grand Rounds on clinical case issues of behaviors among professionals were instituted in 2006.

In addition, all faculty, students, and staff participate in several universal aspects of health care activities that address professionalism and integrity:

- **HIPAA.** Everyone at UNMC must complete Health Insurance Portability and Accountability Act training concerning respect for the privacy of individuals' health information. HIPAA training components are developed at UNMC and administered online. The institution-wide process was established in 2002 to ensure that all meet national regulatory requirements.
- **Confidentiality agreement.** All academic units annually require students and employees to pledge confidentiality and adherence to other integrity requirements.⁵

- **Ethics in research.** Graduate students participate in a variety of additional activities designed to promote responsible and ethical conduct in research. Each doctoral graduate student must participate in a workshop on Responsible Conduct in Research that has both an online case-based component and small group problem-solving sessions.⁶

Unprofessional behavior results in appropriate remediation and/or discipline when needed, including dismissal if indicated.

Professional Accreditation and Licensing

As mentioned in the previous chapters, all UNMC health professional programs are accredited nationally by some 50 respective national accreditation councils. The College of Nursing also maintains approval by the Nebraska State Board of Nursing for its undergraduate program. Each of these accreditation processes involve developing self-studies and preparing for site visits by appointed accreditation teams, and all UNMC health profession degree-granting programs have achieved accreditation. Two COM residencies are emerging from probationary approval by the ACGME. The latest self-studies and accreditation reports are available for the Commission to review.⁷

“All UNMC health professional programs are accredited nationally by some 50 respective national accreditation councils.”

Employer Surveys and Focus Groups

UNMC’s programs all have assessment plans that include evaluations of graduates by employers or focus groups. For example:

- The CON uses employer focus groups and Performance Based Development System data for feedback in evaluating how well programs prepare graduates for employment.
- The SAHP surveys employers and uses focus groups to evaluate its performance. From 2000 to 2003, 100 percent of the employers surveyed agreed that the SAHP graduate hired possessed the knowledge and skills necessary for entry level practice; in 2004 and 2005 only one employer disagreed. SAHP also uses focus groups to gain assessment data.
- The COM recently surveyed residency directors about the performance of its 2002-2004 graduates. Graduates were reported as above average and comparable or better than graduates from other programs. In 2005, the COM curriculum committee met with residency program directors to discuss mutual concerns.
- The COP administers employer surveys annually. Unfortunately, the return has been poor so data are lacking, but the responses received have been excellent.
- The COD surveys employers of dental hygiene graduates and postgraduate program directors for dental graduates. Both sets of graduates consistently receive very high ratings.

*“UNMC prides itself
on being
learner-focused.”*

Student Self-Assessments

UNMC prides itself on being learner-focused. Numerous methods are used to gain student feedback and assessment of what they have learned:

- The COM utilizes core course and clerkship evaluations, student focus groups and the AAMC Graduation Questionnaire. The overwhelming majority (91 to 100 percent) of COM graduates over the past three years expressed satisfaction with their medical education.
- The CON conducts student exit surveys that include students’ assessments of competencies achieved, as well as data about the program and learning strategies used. Results indicate overall program satisfaction is high. It also conducts periodic student focus groups to assess specific learning strategies.
- The COP employs Annual Student Self-Assessments of Abilities and Competencies at the end of each of the four professional years. This self-assessment is based on the abilities and competencies addressed by the courses students take each year. The results are reviewed by the educational outcomes and curriculum committees as part of the COP’s continuous quality improvement. To date, results have been very positive, with no major curricular problems.
- The SAHP conducts student exit surveys and focus groups. Based on feedback, curricular modifications have been made, such as revised syllabi and additional laboratories. Based on surveys, 98 to 100 percent of graduates report that their professional education provided them with the knowledge and skills they needed for entry into their profession.
- The COD conducts an Annual Outcomes Assessment and collects data through student expectation/satisfaction surveys and student recommendations for improvement. Since 2003, 92 percent of the graduates have been well-satisfied or very well-satisfied with their competency to provide patient care.
- The Graduate Studies Office requires Ph.D. students to maintain a “portfolio” of their academic and research accomplishments. This material is to be updated each year. At the end of the first year of their program, students are asked to provide a brief statement explaining their choice of graduate field, the expectations for learning in that field, their expectations of outcomes, and anticipated career goals. They also must provide a statement of what high ethical standards mean in their chosen profession. In their terminal year, they review and restate their view of high ethical standards, as well as provide a brief narrative addressing how their career goals and employment expectations have changed or been refined.

UNMC institution-wide student survey results in 2005 indicate that greater than 90 percent of all students believe that UNMC does a good job of promoting and assessing student learning and providing an adequate level of resources for the educational programs in the health disciplines.⁸

Faculty Assessments of Courses

UNMC requires faculty to assess the courses they teach and make recommendations for changes to curriculum committees. The COP does this on a semiannual basis; the CON does an annual review. The COM works through a system of Core Leader Reports and annual Year Directors Meetings, and periodically conducts curricular retreats, the last in 2004. The SAHP accomplishes this through annual or semiannual retreats of program faculty. The COD requires all course directors to evaluate their courses annually and report to the curriculum committee approximately biennially. Graduate Studies Programs require all faculty to conduct student evaluations of courses and to review and respond, when appropriate, to student observations. Institution-wide, all programs' course and faculty evaluations invite student comments.

Although students were remarkably complimentary about their overall educational experience at UNMC on the 2005 survey, the use of results from course evaluations to guide strategies for improvement (Question 8) received the lowest ratings of agreement. Only 72 percent of the students agreed that their comments are used to improve teaching. This may be due to the lag in bringing about suggested changes – students are usually no longer on campus or in the same course to witness the action that their comments prompted. Nevertheless, Chancellor Maurer has challenged the deans to indicate their plans to overcome this unacceptable response rate. UNMC accepts the challenge this presents to give timely feedback to students that their assessments resulted in improvement to programs.



Alumni Surveys

UNMC colleges and schools solicit alumni evaluations through surveys. For example, one year after graduation, and again in five years, the CON asks nursing alumni to evaluate their preparation for practice. Respondents are typically quite positive. The AAMC graduating senior questionnaire and a recent two-year post-graduate survey indicate that COM students feel they receive adequate feedback and are well-prepared for residency training. COD surveys graduates three years after graduation on their preparation for practice relative to competencies.

Survey return rates vary by program from poor to excellent, and programs are making efforts to improve this. The CON, for example, has recently shortened its survey form to improve the response rate, and SAHP programs discuss the importance of the surveys with graduates before they leave.

Other Recurring Reviews of Programs

Program review processes within UNMC colleges vary. The CON conducts a formal program review every five years, or more often if needed, while annual review reports must be prepared on the B.S.N. program for the State Board of Nursing. The COM curriculum committee works through task forces. The COP educational outcomes committee and/or the curriculum committee conduct reviews as

indicated by the assessment data. COD department chairs conduct annual reviews, and its curriculum committee conducts a major review between accreditation visits, which occur every seven years. Individual programs in the SAHP conduct retreats once or twice a year and self-studies for programmatic accrediting agencies every four to five years.

Because most UNMC M.S. and Ph.D. programs do not undergo review by a certification or licensure process (nursing and public health are exceptions), a more rigorous internal process is applied. Graduate programs undergo an extensive program review every five to seven years, following the Guidelines for Material Required from Graduate Programs Under Review.⁹ A subcommittee of the UNMC Graduate Council reviews the information provided, which includes: evidence of success in training; graduating and placing students with Ph.D.s or master's degrees; a vibrant research and teaching environment; adequate funding; and activity of the department's graduate committee. The subcommittee reports to the UNMC Graduate Council, which reviews the report and can recommend changes to an individual program. The Graduate Council sends its recommendations to the Board of Regents and then to the Nebraska Coordinating Commission for Postsecondary Education (CCPE) for ultimate review and approval.

Indeed, all UNMC academic programs must be periodically reviewed with recommendations made to the Nebraska CCPE on a five- to seven-year cycle. In the case of accredited clinical programs (M.D., D.D.S., Pharm.D., etc.), reviews are generally linked to regular specialized accreditations, so reports consist largely of productivity and outcomes overviews.

In summary, all academic units have effective mechanisms for feedback of assessment data. The respective curriculum committees, educational outcomes committees, and/or assessment committees review data and make curricular or programmatic adjustments as needed. Communication loops between students, faculty, department chairs and relevant committees are in place and function effectively, although feedback loops to the students should be strengthened so that students are fully cognizant that their comments are heard. As indicated at various points in this chapter, the UNMC 2005 surveys of faculty and students score well in the "Agree" to "Strongly Agree" range for items related to learning environment, learning objectives and assessment. Since return rates of surveys from both alumni and employers of graduates are uneven across units, UNMC colleges and schools need to address these survey mechanisms and make improvements where needed in these valuable outcomes measurements.

CORE COMPONENT 3B

The organization values and supports effective teaching.

The education of health professionals is based on an implied social contract of trust. Schools are expected to educate students to become care providers and researchers who are dedicated to improving the public's health.

Faculty are at the heart of this expectation. Students who matriculate to UNMC are academically talented and already committed to their chosen fields. Through their interaction with faculty, they move from learning about health care disciplines to becoming health professionals. Teaching in an academic health science center is more than knowledge transfer – it is active role modeling and mentorship, enabling of skills and professionalism, and setting habits for lifelong learning.

Strategic Goals

UNMC continuously undertakes efforts to enhance students' educational experiences as part of its core teaching mission. The 2006 - 2009 Strategic Plan (Appendix 3) specifically calls for "UNMC to be learning-centered in education," and to this end, UNMC's goals are to:

- Evaluate and expand integrated, outcomes-focused, learning-centered experience for each program
- Develop faculty education programs to enhance understanding and skills related to learning-centered education
- Improve reward and recognition mechanisms for outstanding teachers who foster learning-centered education

Promotion and Tenure

UNMC's commitment to effective teaching is demonstrated in its promotion and tenure (P&T) guidelines. In 1989, UNMC revised promotion and tenure guidelines for all colleges and schools to reflect the expanded definition of scholarship as proposed by Ernest Boyer¹⁰ to include scholarly activities associated with teaching. Individual college guidelines were then revised to reflect this change.¹¹ The guidelines are reviewed annually by the vice chancellor for academic affairs and the several P&T committees.

Unlike many institutions, UNMC views P&T as two distinct processes. While specific criteria for assessing P&T recommendations are determined by departments and colleges, all UNMC criteria are based on performance in three areas: teaching, scholarly activity (including scholarship and research on teaching), and professional service. For promotion to assistant professor, a candidate must show promise in each of the three areas. For promotion to either associate or full professor, a candidate must show a sustained record of accomplishments in at least two of the three, with at least competency in the third.

UNMC has a mechanism for post-tenure review that can lead to a variety of responses up to and including dismissal after appropriate opportunity for remediation. UNMC does not have a mandatory tenure review date for faculty holding a Health Professions Appointment.¹² Individual faculty members are free to request a tenure review at any time or to never request such a review. As with promotion, sustained accomplishments in teaching and scholarly activity related to

“UNMC continuously undertakes efforts to enhance students' educational experiences.”

“Learning how to be a teacher is not commonly a formal part of a health professional’s training, so building faculty teaching skills through formal programs is essential.”



education may serve as the two key competencies, with demonstrated competency in the third. Although there is no mandatory time for tenure review, all units are required to do annual reviews of their faculty, including renewal of contracts of health professionals.

The relative importance of teaching in the final promotion or tenure decisions varies within academic department and college. Almost always, teaching excellence is one of the two areas required in the health professions, but it seldom is the sole basis for promotion beyond assistant professor. For example, in the CON, teaching has been one of the two supporting areas for 93 percent of the faculty who achieved promotion and/or tenure since 2000. In the COM and COD, 100 percent of faculty must provide evidence of teaching competency and involvement, and for promotion to associate or full professor must demonstrate teaching excellence. In SAHP, all promotions in the last five years had teaching as the primary area of emphasis.

Faculty Development

Learning how to be a teacher is not commonly a formal part of a health professional’s training, so building faculty teaching skills through formal programs is essential. UNMC sponsors a variety of professional development opportunities – institution-wide and at the college level—that focus on teaching skills. Its colleges also facilitate faculty attendance at national meetings devoted to clinical teaching skills.

Faculty Development Program. Sponsored by the Chancellor’s Office and administered through the Center for Continuing Education, the Faculty Development Program¹³ focuses on progressive educational experiences related to strengthening skills in teaching, educational research and organizational administration. Programs are designed to facilitate mentoring, especially with new faculty. Ongoing programs include the Education Scholars Program, Administrative Colloquium, Noontime Lecture Series, Information Technology Series, New Faculty Orientation and the Educational Development Institute. These programs are widely available to all faculty, including volunteer faculty/preceptors. The COD has a strong faculty development program that often parallels the programs at the UNMC Omaha campus.

While programs such as the Education Scholars Program target a cohort of faculty who participate in multiple events, the Noontime Lecture Series is open to all faculty. In 2004-05, 177 faculty and staff attended one or more of these mid-day seminars. Variable one-day and half-day programs are planned based on the assessment of ongoing faculty needs. The funding for these institution-wide faculty development programs has remained level for several years. Their effectiveness should be evaluated to ensure that faculty needs are being met and to determine if expanded funding is warranted.

Qualified faculty may request sabbatical leave to enhance their professional development, which is discussed further in Core Component 4a.

Resident training. Medical residents (house officers), though not faculty, play a significant role in the training of medical students during the clinical years. The Departments of Internal Medicine and Psychiatry have developed workshops/courses on “Teaching Residents to Teach.” Residents in all of the ACGME-approved programs are required to complete an online “House Officer Teaching Skills” tutorial. Unfortunately, the tutorial may be completed at any time during their residency training, even up until the very end. Senior residents and subspecialty fellows in the COM provide assigned formal lectures which senior faculty critique.

Teaching assistant programs in the CON. The CON offers graduate T.A.s an orientation and a training manual, and teaching assistants are paired with master nursing faculty for mentoring. Community preceptors receive online instruction that guides their development as preceptors and delineates their role and responsibilities as distinct from supervising faculty.

SAHP workshops. The SAHP has offered a nationally recognized program for over 20 years consisting of two workshops: “Effective Teaching in the Clinical Setting” and “Strengthening Classroom Teaching Techniques.” Both are specifically designed for health science educators and draw a national audience. Between 2000 and 2005, there were 147 participants in these workshops, 51 of them UNMC faculty. These programs are part of the Teaching Improvement Project System (TIPS), a product of a Robert Wood Johnson Foundation grant awarded to the University of Kentucky in the 1980s. Similar TIPS workshops have been given at universities offering health care programs throughout the United States and internationally.

Continuing Education Units. Health care professionals are required to earn C.E.U.s to maintain licensure. UNMC is accredited by numerous professional organizations to offer such credit for attendance at education programs and for Grand Rounds, conference participation, and independent learning offerings.

Issues in Health Science Education Series. UNMC is sponsoring a series of mini-symposia focusing on contemporary issues in health science education, especially in relationship to the anticipated opening of the Sorrell Center. The symposia are open to students, faculty and staff.

Information Technology

UNMC’s infrastructure and networking have seen significant enhancements, including the installation of a Gigabit campus backbone, system-wide redundant technologies, and enhanced security systems, including campus firewalls and network monitoring. In preparation for the new Sorrell Center building, Information Technology Services (ITS) has moved its infrastructure, including a new data center, to a state-of-the-art support facility. More effective and uniform teaching is a result.



“All colleges and schools continually evaluate the teaching and learning at UNMC.”

UNMC provides faculty with technical support and assistance through the ITS Learning Environment/Internet Services (LEIS) program.¹⁴ LEIS offers faculty and staff consultation and a variety of classes on the use of technology in the classroom, including Blackboard™ courseware and online self-study opportunities.

LEIS maintains a center with workstation hardware and software designed to help faculty develop educational materials. In addition, the CON and COD dedicate personnel to assist their faculty with instructional technology, whereas the COM and COP use assigned ITS personnel. UNMC's aggressive agenda to reach all learners using IT has stretched the available information technology support, however.

Evaluating Teaching and Teaching Effectiveness

All colleges and schools continually evaluate the teaching and learning at UNMC. Depending on the specific college, department or course, this takes place after individual content presentations or as final course evaluations. The Colleges of Nursing, Pharmacy, Dentistry and Medicine, and some programs in the SAHP, all utilize UNMC Eval, a Web-based course evaluation tool. The system is capable of supporting the evaluation of students, faculty and courses, and produces easy-to-read reports that are automatically generated and can be saved in PDF format. Basic scientist COM faculty audit lectures by their peers, critique faculty performance, and reshape content annually to keep pace with the progress of science. The most comprehensive program of evaluating faculty teaching resides in the SAHP. It includes: self, student, peer, professional colleague (content expert), and program director or associate dean evaluations.

Perhaps the best measures of teaching at UNMC are the competitively selected students and medical residents who graduate, become licensed in their professions, enjoy prompt employment, and earn certification as health care providers by national standard-setting bodies. UNMC is proud of its students' rankings on national standardized testing.

- The COD 2007 dental class ranked 5th in the nation on the National Dental Board Examination, Part 1. The 2005 class ranked 6th on Part 2, the 10th time in the past 12 years COD seniors ranked in the top 10 nationally. The 2006 class also ranked 5th in the U.S. with a 100 percent pass rate on the initial test.
- The COD 2005 dental hygiene class ranked 8th of 254 programs on its National Board Examination.
- The 2005 COP class ranked 11th of 86 schools taking the North American Pharmacist Licensure Examination (NAPLEX).
- In SAHP, the radiography, diagnostic medical sonography, radiation therapy and clinical perfusion programs have had a 100 percent first-time pass rate on national exams for over 10 years. In all allied health programs for the last 10 years, with the exception of only one year, the mean UNMC score has been greater than the national mean by 1 to 26 percent.



- Department of Internal Medicine residents achieved a 100 percent pass rate on American Board of Internal Medicine certifying exams for the 8th consecutive year in 2005.

Another metric is the rankings* by *U.S. News & World Report* achieved by UNMC programs:²

- The 2007 “America’s Best Graduate Schools” guidebook ranked COM’s primary care program 11th out of approximately 140 medical schools.
- COM’s rural health medicine program ranked 9th out of 125 schools in 2007.
- COP ranked 27th out of 57 programs in the nation for 2007.
- Physical therapy ranked 31st out of 189 programs in 2004.
- Physician assistant program ranked 14th out of 80 in 2004.
- CON’s master’s degree program ranked 36th out of 260 programs in the nation in 2003.

* *U.S. News & World Report* does not provide national rankings of dental schools.

Finally, on the AAMC graduating seniors questionnaire, COM students rated the quality of their clinical training in family medicine, internal medicine, and psychiatry to be “excellent or good,” a higher rating than other medical schools’ seniors gave.

Rewarding Outstanding Teachers

Faculty awards for outstanding teaching—both individuals and departments – are given at the university-wide level, by the UNMC Faculty Senate, and within each UNMC college. Some departments also recognize individual teachers. Many campus and college awards carry monetary rewards as well as recognition of teaching excellence.

University of Nebraska system-level recognition. Four UNMC units have received NU’s University-wide Departmental Teaching Award¹⁵ within the last 10 years. The COM Department of Genetics, Cell Biology and Anatomy (1998); SAHP Division of Medical Technology (2001); College of Nursing (2004); and SAHP Division of Physical Therapy Education (2006) were honored with this prestigious award, which recognizes one department or unit that “has made a unique and significant contribution to the teaching efforts of the University and which has outstanding esprit de corps in its dedication to the education of students at the undergraduate, graduate, or professional levels.” One specific criterion for this award is the number of presentations and publications related to teaching in the discipline being recognized. The award carries a \$25,000 cash prize, which the winning department or unit may use as it sees fit. For example, the CON reinvested its award by sponsoring educational speakers and faculty attendance at education conferences.

“Four UNMC units have received NU’s University-wide Departmental Teaching Award within the last 10 years.”

UNMC-wide recognition. Each year, the UNMC Faculty Senate solicits nominations and selects up to four faculty to receive Outstanding Teacher Awards. Individuals are nominated by their primary academic unit, with selection based on support letters from faculty, students, former students and others. Beginning in the spring of 2005, the UNMC Faculty Senate inaugurated the Outstanding Faculty Mentor of Graduate Students Award. All of these awards are presented at the UNMC Annual Faculty Meeting. These awards are funded and presented by the chancellor, and following presentation, celebrations take place at each of UNMC's campuses.

Examples of UNMC college-level awards:

- The COM Golden Apple Award is presented annually by the local American Medical Student Association chapter to M1 and M2 faculty members. Graduating seniors present Hirschmann Golden Apple Awards to both a clinical and basic scientist during the Honors Convocation; each Hirschmann prize includes a monetary award. COM volunteer faculty and community preceptors, nominated by their sponsoring academic units, also are recognized with awards. Awardees are invited to the Omaha campus for lunch with the COM dean and sponsoring department chair.
- The SAHP recognizes an individual faculty member as Outstanding Teacher of the Year and another with the annual Outstanding Service to the Allied Health Professions Award. The teacher of the year must demonstrate excellence in one of the following areas: influencing students toward professional achievement, development of innovative methods and materials, or excellence in classroom or clinical instruction. The service award honors significant contributions to the advancement of allied health professions. Most of the 10 academic programs within the SAHP also each honor an outstanding teacher of the year.
- The CON's Rosalie C. Yeaworth Teaching Award is bestowed annually to the faculty member who demonstrates teaching excellence and receives broad support from nursing students. Typically, the award has been won by an undergraduate teacher. In 2006, the CON began sponsoring an additional award, the Dean's Award for Teaching Excellence, and in 2006 honored two graduate-level teachers. The CON Department of Adult Health & Illness also awards a teaching excellence certificate.
- COD teaching awards are given each spring during its Professionals' Day and Student Scientific Program. These include faculty recognition awards for a full-time and a part-time faculty member as recommended by each class of dental and dental hygiene students, for a total of 12 awards. In addition, the Omicron Kappa Upsilon National Honor Dental Society Teaching Award is presented to a faculty member upon recommendation of its Nebraska chapter. A Peer Recognition of Teaching Award is presented upon recommendation of the teaching and faculty development committee of the COD.

- The COP Distinguished Teaching award is determined by the students through the Dean's Student Advisory Council. All four classes participate and the award is presented at the fall honors convocation.
- Volunteer faculty and preceptors are an important part of the teaching mission. Examples of recognition and rewards for these individuals include the Koefoot Outstanding Preceptor in Rural Family Medicine Award, first awarded in 2006 in the COM, and recognition certificates awarded by the CON that are redeemable for attendance fees at nursing continuing education conferences.

NU Program of Excellence Awards

Program of Excellence competitive initiatives awarded and funded by the NU president and chosen by each NU institution demonstrate the value placed on educational endeavors by UNMC and its parent institution. Examples of these programs are described in Core Component 3c, as well as in Chapter 4.

CORE COMPONENT 3C

The organization creates effective learning environments.

UNMC's students and residents learn in classrooms, laboratories and clinical settings. The large number of clinical sites available to UNMC students is a testament to its role in supplying health care professionals to Nebraska and beyond. But learning environments are also virtual, and motivation to learn should be lifelong, so UNMC is dedicated to developing and enhancing innovative learning environments and habits for its students.

Clinical Practicum Opportunities

A high percentage of the clinical training for residents and medical, nursing, pharmacy, clinical laboratory, radiation science technology, cytotechnology, clinical perfusion, physician assistant, physical therapy, and medical nutritionist students occurs at The Nebraska Medical Center on the Omaha campus. UNMC's teaching hospital is especially known for excellence in patient care and innovation in solid organ transplantation, cardiology, radiation oncology, bone marrow transplantation, neurology, burn care, and oncology. The hospital's history dates back to 1880; today, its 950 physicians practice in all specialties across five states. In FY2005, The Nebraska Medical Center treated more than 23,800 inpatients and more than 437,800 outpatients and trained more than 3,000 students. It is one of only two certified trauma centers in Nebraska and western Iowa, and is also certified for stroke care.

Some UNMC students and residents receive training in two outstanding facilities on the Omaha campus – the Lied Transplant Center and the UNMC/Eppley Cancer Center. The Lied Transplant Center's innovative patient care model, "cooperative

"The large number of clinical sites available to UNMC students is a testament to its role in supplying health care professionals to Nebraska and beyond."



“Exposure to international health care issues and experience in other countries help make UNMC students well-rounded and give them a valuable global perspective.”

care,” helps patients transition from hospital to home. It involves a “patient care partner” (a friend or family member) being taught to administer medications and watch for signs of trouble. The Eppler Cancer Center teams UNMC researchers with physicians and nurses for optimal treatment of cancer. Both centers treat patients from around the world and give UNMC students and residents invaluable experience.

There is a wide array of additional clinical practice opportunities for students and residents in hospitals, clinics and private practices across the state and region, including the Veterans Affairs Medical Center in Omaha and Lincoln, the private practice clinic in west Omaha, and The Nebraska Medical Center’s projected hospital in suburban Bellevue, expected to open in 2008. Students hone their clinical skills in interdisciplinary teams as they run the SHARING and RESPECT clinics for low income patients and serve through the Rural Health Education Network and the Area Health Education Centers, which provide rural clinical experiences in many communities throughout Nebraska. (More on these four initiatives is provided in Chapter 5.) Almost all disciplines have a required rural rotation prior to graduation. UNMC offers hundreds of clinical sites, mostly in Nebraska but some elsewhere in the U.S., with one SAHP clinical rotation in London, England. The CON alone has over 600 contracts for student placement each year, only 200 of which are in the Omaha/Lincoln metro areas. Medical Spanish/international health courses are offered through the Office of International Studies.

Dental and dental hygiene students and residents in endodontics, orthodontics and periodontics perform most of their clinical work in Lincoln. Residency programs in general practice and pediatric dentistry are also conducted in Omaha in the Durham Outpatient Clinic and the Munroe-Meyer Institute, respectively. The COD also has affiliation agreements with about 30 dentists and clinics across the state, and as part of a required extramural/service learning rotation, students may train in any of five federally qualified health clinics in Nebraska, several state institutions, and/or private dental offices.

UNMC benefits from volunteer faculty (preceptors) eager to offer practicum opportunities to students. This occurs despite preceptors’ busy lives and increased competition from other institutions, including private institutions that often provide compensation UNMC is not able to offer. The COM primary care preceptorship was one of the first in the nation and has provided students with a two-month primary care experience in rural Nebraska for more than 35 years.

International Opportunities

Exposure to international health care issues and experience in other countries help make UNMC students well-rounded and give them a valuable global perspective. During the 2004/2005 academic year, 155 UNMC students took advantage of several international programs, each lasting from one to four weeks, through the Office of International Studies and Programs.¹⁶ In 2005/2006, 169 students studied

abroad, primarily in Jamaica, Nicaragua, Costa Rica and Guatemala. These were primarily medical students, but also physician assistant, nursing, physical therapy and pharmacy students.

UNMC's Student Alliance for Global Health¹⁷ offers educational and personal benefits for students interested in global health initiatives. The organization collaborates with many countries outside the United States to extend students' educational experiences through skills practice and foreign language medical terminology. Students and faculty interact with local providers and populations to gain appreciation of their health care issues, resources and challenges, as well as the role of health care providers in those cultures.

UNMC faculty and administration belief in the importance of a global understanding of health has led individual colleges to enter into agreements for education and research exchanges in Jordan, China, Afghanistan and India. For example, the CON affiliated with the Al-Zaytoonah Private University of Jordan to advance nursing education there and in the region, and UNMC faculty have traveled to Kabul Medical University in Afghanistan to offer faculty development training.

Campus Learning Centers

Campus learning centers give students the opportunity to learn, practice and remediate their clinical skills in a safe laboratory setting before and during their clinical experiences. These learning centers include: the CON Learning Resource Center; the COM anatomy laboratory; the Specialty Services Pavilion patient room for medical students to practice clinical skills; the model pharmacy laboratory in the COP; the orthopedic and rehabilitation laboratories in the SAHP physical therapy program; the student laboratory in the clinical laboratory science program; and the COD laboratory and simulation clinic in Lincoln. Students access simulations of real-life situations and a variety of professional-skills enhancement resources via 11 computer clusters (more than 100 computers and 10 laser printers for student and faculty use) scattered throughout UNMC's campuses and at McGoogan's Learning Resource Center.

The Sorrell Center will include a sophisticated clinical skills laboratory designed to accommodate interprofessional team training. The laboratory and resources will allow advanced simulations for high fidelity training experiences and competency assessment.

Distance/Distributive Technologies and Programs

Distributive learning technologies are used for both on-campus courses and distance education. As mentioned previously, the Blackboard™ Course Management System delivers materials online to students. The courses are password protected and accessible only to students and instructors, or others involved in the technology to create and update the course. Courses are supported by the



“Campus learning centers give students the opportunity to learn, practice and remediate their clinical skills in a safe laboratory setting before and during their clinical experiences.”



LEIS/ITS, which currently delivers more than 623 courses, both credit and noncredit, through Blackboard™, with 566 faculty creating content for more than 2,500 students.

In 2000, Chancellor Maurer created and appointed representatives to the UNMC Distance Education Council. This group examines issues related to distributed education and develops strategies to address common issues across the colleges and schools. In 2005, a written report of concerns regarding the quality of instructional video delivery was presented to the director of ITS. Resources were allocated in the summer of 2005 to address the problem.

In 2001, the NU Distance Education Coordinating Council (NUDECC) was created by the NU president to examine issues across the NU campuses; UNMC has two representatives on this council. The council submitted reports to the Board of Regents in 2003 and 2004 that resulted in passage of a resolution allowing colleges and schools to retain the tuition generated from their distance education programs offered out of state.

A 2005 report by the NUDECC resulted in a policy amendment to allow distance education course terms to be altered with the approval of chief academic officers. This allows programs to be more flexible and better meet the needs of nontraditional students. Recommendations have been made to the four NU institutions' chief academic officers to institute procedures to increase distance education enrollment and to ensure quality distance education experiences for students. UNMC is considering implementing those recommendations relevant to it. Some of the recommendations include tuition for multi-campus programs, an NU distance education Web page, and criteria for awards and P&T for faculty who teach distance education courses.¹⁸

Durham Research Center



Built in 2004, the Durham Research Center (DRC) offers small-group teaching rooms, core labs, three mid-size class rooms and an auditorium, as well as space for basic science departments, greatly relieving the classroom shortage noted at the last Commission site visit. DRC was part of UNMC's strategic plan to add more educational space; additional long-range plans include remodeling of Bennett, Wittson and Poynter Halls. Educational space needs for the future factor prominently into UNMC's plans to expand its capacity in order to help alleviate projected health professional shortages. The Michael F. Sorrell Center for Health Science Education is an example of such forward-thinking accountability,

Graduate Student Technical Experience

The objective of UNMC's graduate programs is to assure that students acquire the necessary skills and experience to function as "independent investigators" with strong communication skills (verbal and written), work in complex team projects,

and serve as ethically-based mentors for another generation of scientists and faculty. After a relatively small number of core curricular courses, typically using active learning strategies such as seminars, these students spend most of their time in an active research group gaining necessary technical experience and learning from more than 100 faculty mentors. All students are expected to publish in peer-reviewed literature prior to completing their program, and most continue their training as postdoctoral researchers at universities or in government or industry.

Lifelong Learning

Lifelong learning habits are deliberately inculcated in UNMC students and trainees. Opportunities for faculty, staff and citizens are also offered through conferences, workshops and distance technologies. Continuing education is offered by the various colleges and schools and through the Center for Continuing Education.¹⁹ UNMC offers content-specific programs to keep faculty and students informed about new developments in the health care field, including:

- A short course on cancer biology coordinated by the Eppley Institute for Research in Cancer & Allied Diseases²⁰
- Grand Rounds, lectures open to faculty and students that cover cutting-edge research and practical clinical applications, are conducted by various departments within the COM and listed in UNMC Today. Several departments archive their Grand Rounds on the Internet (medicine, family medicine, pathology and pediatrics), making the programs available to preceptors, volunteer faculty and health professionals regardless of their location or schedule. The CCE is currently working with each COM clinical department to make Grand Rounds presentations available to hospitals throughout the state.
- Mini-Medical School, primarily geared for the community at large and coordinated by UNMC Public Affairs, takes place twice per year. Topics are current, such as avian flu, bioterrorism and stem cells. Videos of previous Mini-Medical Schools are available at the program's Web site,²¹ and more information is available in Chapter 5.

Teaching/Program Innovations

UNMC strongly emphasizes the pursuit of extramural funding to support and expand innovative educational programs from federal, state and other resources.

Federal grants. Over the past several years, UNMC has received a number of grants from the U.S. Department of Health and Human Services for learning innovations, including:

- The CON has a Health Resources and Service Administration (HRSA) grant that allows applicants who already have a bachelor's degree in another field to complete accelerated nursing courses toward a B.S.N. in one year, using virtual and simulation instruction to complement classroom activities.

“UNMC strongly emphasizes the pursuit of extramural funding to support and expand innovative educational programs from federal, state and other resources.”

- The SAHP and CON received funding to develop distance learning programs to expand access to education for allied health and nursing, cultural competency, and management training.
- SAHP also received 10-year funding to create interdisciplinary opportunities at the Tribal Diabetes Centers and Tribal Colleges in Nebraska's Native American communities in Macy and Winnebago.
- Through the efforts of the SAHP, UNMC received HRSA funding to train a variety of health professionals in the basics of preparedness for chemical, biologic, and radiation bioterrorism exposures and public health emergencies.
- The Munroe-Meyer Institute was awarded funding to expand an inventive pediatric behavioral health psychology internship training program. This funding has increased learning opportunities for trainees in psychology, social work, and marriage and family therapy, as well as improved access to mental health services in rural underserved areas.
- The Rural Health Education Network receives funding for five Area Health Education Centers throughout Nebraska. More details are provided in Chapter 5.
- NIH Training Grants (T32) have become a significant and valuable resource for graduate and postdoctoral training over the past 10 years. In 1996, there was one T32 grant at UNMC; since then four more grants have been added. Awarding of these peer-reviewed competitive grants demonstrates the advance of UNMC's graduate programs and the increased visibility of its research programs.

Other examples of federal educational awards include those for telemedicine; distance education infrastructure; and creation of more flexible opportunities for CON graduate students in administration and gerontological and psychiatric specialties.

Federal funds from HRSA and other departments are essential to developing ways to provide practitioners for rural Nebraska and to improve service to the state's underserved populations. To prepare for possible reductions of these federal dollars, UNMC faculty continually search for alternative funding for curriculum innovation through foundations and other sources.

Programs of Excellence and other State resources. Through a competitive process, NU provides new and continuing state dollars annually for Program of Excellence (POE) awards for creative projects. For example, one award gave funding to increase nursing enrollment in order to alleviate a nursing shortage in Nebraska, and another funded interdisciplinary collaboration on bioterrorism simulations. The COD received a POE award to improve its diagnostic and patient evaluation area, which led to the hiring of a new pathologist and a dental radiologist – the COD's first full-time radiologist in more than 15 years.

These examples demonstrate how the addition of both university and state dollars are used to benefit the development of new programs and the expansion of existing ones, especially in health professions shortage areas.

UNMC is constantly evaluating the health care workforce needs and responding with innovation to meet those needs. For example, early in the 21st century, several health professions suffered severe national and state workforce shortages, especially nursing and allied health. Our response included:

- The CON increased class size, obtained grant funding for a fast-track Ph.D. program to help repair nursing faculty shortages, and instituted an accelerated nursing program.
- The SAHP increased class size in the radiation sciences and physical therapy, and obtained grant funding to expand distance education programs in clinical laboratory science, cytotechnology and radiography.
- The COD obtained tobacco settlement funding in 2000 to establish an alternative site for its dental hygiene program in an underserved area at a federally qualified health clinic in Gering. This center in far western Nebraska, now in its fourth year, trains dental hygienists who have mostly remained in that underserved area.
- COM is evaluating its potential to increase its class size by 30 percent.

Currently, the Nebraska shortage in nursing, radiation science, cytotechnology and clinical laboratory science is not so severe. But despite increased enrollments in Nebraska and nationally, by 2020 the nursing shortage nationwide is expected to be dire. The shortage of physical therapists has worsened. Now at capacity, the physical therapy program anticipates expansion when new teaching space becomes available in the Sorrell Center and in Bennett Hall.

Advising and Retention

UNMC has several initiatives dedicated to giving students advice and helping them finish out their educational programs. Some examples:

- Facilitators of each small ICE group are assigned as academic advisors to medical students throughout the first two years.
- The Office of Student Services provides applicants with basic information about student admissions to each program, including information about program content and financial aid.
- The Office of Student Equity and Multicultural Affairs recruits and retains academically qualified students. Special effort is directed toward recruiting and retaining Nebraska residents, particularly from rural areas, members of underrepresented racial and ethnic minority groups, and students from nontraditional backgrounds.

“UNMC is constantly evaluating the health care workforce needs and responding with innovation to meet those needs.”

*“Student retention
in most UNMC
educational programs
is greater than
95 percent.”*

- The UNMC Counseling and Student Development Center’s services help students have a productive, enjoyable learning experience at UNMC. The center serves as a referral source for students with personal or academic problems or learning difficulties. Their academic success is the rule.
- Student Services offices in most of the colleges and schools also provide professional testing and academic advising.
- UNMC offers students summer research experiences (approximately 100 positions), elective clinical rotations, and special international medical outreach programs. Despite usually heavy course loads, students are encouraged by advisors to broaden and deepen their education whenever possible.
- The Student Life Center offers a gymnasium, weight and exercise room, book store, and social center for healthy breaks from studying.
- UNMC offers a limited number of student apartments on campus to ease the living transition for rural and international students. UNMC students who participate in rural rotations are provided housing by the local communities.
- A variety of student organizations exist on campus to enhance the student experience through campus involvement. All colleges have student representatives to the Student Senate.

Student retention in most UNMC educational programs is greater than 95 percent.²² Those programs with rates lower than 95 percent seek ways to improve retention. For example, the Nuclear Medicine Technology Education Program wanted to improve its 86 percent retention rate. Data showed that students left for personal reasons or found they were not suited to the clinical experience. Program administrators therefore decided to require shadowing experiences by applicants before acceptance, beginning in fall 2006, to determine whether or not this increases retention. All colleges and the SAHP do personal interviews with prospective students prior to admission, assessing matriculants’ motivations to enter a health career, and their experience dealing with illness.

CORE COMPONENT 3D

The organization’s learning resources support student learning and effective teaching.

UNMC resources that support effective teaching encompass technology, teaching space and faculty training. The goal is to free the faculty to concentrate on teaching, rather than having to be concerned with securing the materials and space they need.

Teaching Spaces

Since the 1997 Commission visit, teaching space has been greatly enhanced on UNMC’s Omaha and Lincoln campuses. All educational spaces have been

networked and computers and projection systems have been added to major classrooms. The Durham Research Center, completed and occupied in March 2004, contains 16 small-group meeting rooms, three mid-sized classrooms, and a 319-seat auditorium, all furnished with the technology to project digital images, online materials and video resources. The small-group rooms are used extensively by the COM, enabling much student interaction with each other and faculty facilitators. Three have two-way interactive video capability.

The Sorrell Center will be a new home for the COM and will provide interprofessional learning opportunities with the SAHP and the CON. The \$52.7 million, 134,000-square-foot building expected to open in the fall of 2008 will include an 18-room clinical teaching facility, with computerized mannequins and lifelike models for teaching procedural skills, one 60-seat classroom, four 80-seat classrooms, 22 small-group rooms, 72-seat and 160-seat computer laboratories, two large auditoriums, and wireless access to educational resources.

New CON space in Lincoln filled the need for a modern facility for today's nursing students, rescuing them in 2005 from an antiquated, crowded building. That space boasts similar online, computer and video resources.

COD has remodeled its undergraduate clinics, undergraduate classrooms, undergraduate labs, built an updated sterilization facility and remodeled its student lounge to include improved computer access to the McGoogan Library of Medicine. As mentioned, the COD established a dental hygiene clinic in Gering, with courses provided by blended distributed learning.

The McGoogan Library of Medicine

The McGoogan Library of Medicine provides a full range of information services, serving all UNMC students, faculty and staff, as well as licensed Nebraska health professionals and residents of the state. It occupies the top three floors of Wittson Hall, encompassing 520 study seats, 16 group-study rooms, three computer labs, and 69 public workstations. Hardwired and wireless connections are available throughout the 60,000-square-foot facility, which was renovated in 2000 at a cost of \$2,350,000. Currently, there are 12 faculty FTE and 20 management and support staff FTE in the library. The library houses approximately 240,000 volumes and provides access to more than 4,300 full-text electronic journals and several hundred electronic books and databases.

The library provides electronic services that can be used onsite or accessed remotely with password protection from homes, offices and rural teaching sites. All are accessible from the library home page²³ and generate an electronic "gate count" of close to 1 million hits per year. Like other academic libraries, the McGoogan Library has seen a slight decrease in its physical gate count, attributable to increased use of electronic resources by research investigators, although students continue to use the library facility as much as ever.



“Professional librarians, who hold faculty appointment, are highly engaged in the educational process.”

Professional librarians, who hold faculty appointment, are highly engaged in the educational process. Each academic unit and the hospital have an assigned liaison librarian, who works to leverage library resources for that unit and educate users as to how to take advantage of the resources. All library faculty serve as problem-based learning facilitators at the start of the College of Medicine academic year; during a typical year, librarians present or engage in up to 200 class sessions spanning the enterprise and including credit-bearing courses in the College of Pharmacy. Their goal is to develop skills for lifelong learning through classes, tutorials, and individual sessions that teach users how to find and manage information. To serve health care providers, the library licenses a number of high quality point-of-care products to deliver evidence-based information to outpatient settings and the bedside. Training for use of these products focuses on the application of evidence to clinical problem solving.

The library's resources are extensive and well-developed, but there are times when students and faculty need information not available in its collections. The Interlibrary Loan Department is part of an extensive, world-wide network that obtains the information they need. Funding from the Chancellor's Office ensures all UNMC students can receive up to 50 free documents or interlibrary loans per academic year. To provide focused support for students enrolled in distance courses, the library employs a Distance Education Librarian. This position coordinates all services to distance learners and trouble-shoots problems these students encounter with network connections, access and document delivery. The library's ability to provide electronic resources has been a significant boon to support UNMC programs no matter where the programs may be offered.

Technology and Information Support

Today's students require a vast amount of easily accessible technology support for the best education. Using secure passwords, on-campus and off-campus students are able to access full-text biomedical information resources, tutorials, and databases at the McGoogan Library's homepage. Faculty on staff at the library, including the distance education/outreach librarian and the digital resources librarian, work to ensure that resources and tutorials are available to all registered students, faculty and staff through electronic or traditional connections, including Blackboard™ and alternative file types, such as those required by PDAs (personal digital assistants). In addition, the faculty librarians serve as information literacy experts and college liaisons, providing curricular support to faculty and classroom teaching to students. The library maintains computer training rooms, study rooms, SmartBoards and a wireless network to optimize its learning environment.

As noted in Core Component 3b, the ITS LEIS program manages the Blackboard™ online class environment (more than 600 active courses) and maintains seven computing clusters across the campus in Omaha. Students and faculty with technical problems can contact the ITS Help Desk for assistance with their computer issues. Because UNMC's distance education mission is growing – and

reaches the state's western border in the Mountain Time zone – many learning opportunities are available outside of regular business hours. It would be beneficial, therefore, to have expanded evening hours for the Help Desk.

Individual colleges and schools also have created technology-rich environments for students. CON has a support mechanism that creates and develops learning objects (Individual Skills Modules-ISMs) and simulations that help students acquire and/or remediate patient care skills. COM, along with ITS and the library, has developed eDoc,²⁴ a searchable repository of simulations and learning objects created by faculty and catalogued for easy retrieval. Faculty can search the collection for resources, saving time by not “reinventing the wheel” whenever a learning object is needed. COM and ITS also developed virtual and microscopy tools that assist medical and allied health students with their laboratory and diagnostic skills. Faculty in the Clinical Laboratory Science (CLS) Program in SAHP have been coinvestigators with ITS educational consultants in a Fund for the Improvement of Post Secondary Education, developing over 280 learning units for the clinical laboratory sciences. The didactic portion of the CLS program is now online through Blackboard™. These resource collections are being evaluated for effectiveness as teaching tools.

Teaching Resources

The UNMC Teaching, Learning & Technology Roundtable (TLTR) has conducted workshops to educate faculty on the use of technology for teaching and learning. For example, a campus-wide poster-sharing session focused on technology innovations in education was sponsored by TLTR and held at the McGoogan Library in Spring 2005. TLTR noon seminars each year highlight faculty success stories in the use of technology, and TLTR has sponsored the showing of national teleconferences on teaching and technology.

The library has developed an annual schedule of database and resource classes for faculty and staff. Individual colleges sponsor regular updates on new products and technology resources available for the teaching mission. The PBL Teaching Circle meets throughout the year to discuss issues surrounding this curriculum for the College of Medicine. The CON periodically allows faculty from all of its campuses to participate in hands-on learning experiences with the latest software and technologies at annual retreats, the latest in spring 2006.

The LEIS unit regularly offers training on the use of online educational resources and educational technologies to faculty and students, in basic introductory sessions, online sessions, and extended series and summer institutes.

Education Scholars Program

Since 2001, Faculty Development has sponsored an Education Scholars Program, which encourages faculty to conduct research on innovative teaching and learning methods for an academic health care setting. The program is designed to expose the scholars to good research methodology as they prepare their own research

*“TLTR noon seminars
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technology.”*

projects for possible publication in peer-reviewed literature. The program is co-directed by two UNMC faculty members and consulted by Dr. William Anderson, professor and director of the Office of Medical Education Research and Development at Michigan State.

Student Services

To enhance students' learning, the distractions of academic records and financial issues must be minimized. The Division of Student Services provides a variety of services for both students and academic offices at UNMC. The division consists of five departments:

- **Academic Records.** This office includes the areas of admissions, registration and records. It provides services to the admissions committees for the CON, COP and Graduate Studies, and to the divisions of the SAHP. Academic Records processes all student registrations, grades, and transcripts, and licensure and enrollment verifications. The office maintains the permanent record for each student. It also plans and coordinates all commencement activities.
- **Student Loan Accounting.** This office provides servicing needs to all students with campus-based loans. It coordinates the delivery of campus-based loan funds to students and the collection of these loans in repayment.
- **Financial Aid.** UNMC offers institutional, private, state and federal student financial aid opportunities to assist students in the financing of their health professions education. The office administers four basic types of aid: academic scholarships, grants, loans and student employment.
- **Student Financial Services.** This office is responsible for coordinating the billing and collection of tuition/fee payments, and the collection of rent payments and all other service charges. It also handles deposits, distribution of financial aid checks, and maintenance of all required tuition/fee records.
- **The Office of Student Equity and Multicultural Affairs.** This office is charged with recruiting and retaining academically qualified students, with an emphasis on Nebraska residents, members of racial and ethnic minority groups, and students from nontraditional backgrounds.

Transfer Policies for Advanced Placement

All UNMC programs are transfer programs – no students begin their academic program at UNMC. But transfers of advanced students from other professional colleges to UNMC are rare. The policies of three of UNMC's colleges vary, but each requires legitimate and compelling reasons, an available space in the class sought, academic records of satisfactory performance in equivalent levels of coursework, and continuity compatible with the transfer student's previous professional education.

- The COD expects that most transfers will be obliged to look at extending their education at least one year. It requires an explanatory letter from the dean at the current school.

- The COM accepts transfers only from LCME-accredited medical schools, may require examinations in any/all subjects in which credit is requested, and also asks for a letter of recommendation from the dean of the medical school last attended.
- The CON requires the availability of a space in the class.

The COP does not accept transfer students because of the significant variability in the sequence of education among colleges of pharmacy; the School of Allied Health Professions has a similar policy.

Graduate programs may accept applications from transfer students who meet minimum admission requirements. Acceptance of credits from previous institutions is determined on an individual basis.

Academic Success Center

Currently enrolled students can receive free counseling and study skills training through the Academic Success Program.²⁵ Available to all students, including those with disabilities, the program offers professional assessments and screening services to identify and help solve learning issues students may have. These services include: test taking and study skills; learning styles assessment; stress and time management skills; and individual tutoring.

“Students can receive free counseling and study skills training through the Academic Success Program.”

SUMMARY OF CRITERION THREE FINDINGS

While clearly much exists at UNMC to support students’ learning and teachers’ effectiveness, there is room for improvement. The fall 2005 survey of the faculty indicates that 73 to 80 percent believe that UNMC supports learning and education of students and others on campus.⁸

The results of this survey, specifically questions 10 through 14, are being studied and probed further to see where improvements in communication can be made. These results have been distributed to individual colleges and units, and quality improvement initiatives have begun. Students’ responses in this area were better, as shown in Core Component 3a.

The success of UNMC students (demonstrated by pass rates on national exams and employer and alumni surveys) and the satisfaction of these students (demonstrated by graduate surveys and the 2005 UNMC student surveys) show UNMC is fulfilling its educational mission and the first critical success factor in its strategic plan: “UNMC will be a learner-centered institution.” Enhancements to teaching space and information technology further demonstrate this commitment.

This analysis of the evidence that UNMC students are learning and teachers are effective has led to identification of the following strengths, opportunities and challenges:

Strengths

- Graduates of most UNMC health science programs exceed national averages on standardized tests for licensure and certification.
- UNMC meets its mission of educating health care professionals for the state; the majority of UNMC graduates practice in Nebraska.
- More than 90 percent of students agree that UNMC promotes student learning and the creation of an effective learning environment and effective teaching.
- As a campus, significant resources have been dedicated to the teaching mission.
- Resources and opportunities exist to help students connect to their local communities through clinical outreach and to global communities through international experiences.
- UNMC has dedicated faculty committed to the teaching mission. A UNMC unit has won the prestigious NU-wide Departmental Teaching Award four of the last 10 years.

Challenges and Opportunities

- UNMC needs to increase interprofessional training of health care team members.
- UNMC's aggressive agenda to reach all learners has stretched the capacity of available information technology support, especially distance education delivery.
- Continuing to seek valid outcome data on the effectiveness of teaching and the learning environment is crucial.
- Improvement of the feedback loop from faculty to students, demonstrating that changes were made to programs based on their comments and evaluations, must be undertaken.
- The institution needs to develop metrics for evaluation of faculty development, continuing professional education, and lifelong learning behavior.
- Further expansion of programs to meet regional and national health science shortages is an important objective.

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CHAPTER 4

Criterion Four: Acquisition, Discovery, and Application of Knowledge

The organization promotes a life of learning for its faculty, administration, staff and students by fostering and supporting inquiry, creativity, practice, and social responsibility in ways consistent with its mission.

The acquisition and application of knowledge is the base upon which progressive academic institutions thrive and serve their constituencies. Scholarship is a complex characteristic that must be at the core of all aspects of campus life. Historically, the traditional domains of higher education were teaching and learning, soon joined by the concept of service. Years passed before research joined the other pillars of higher education. Gradually, research came to be an important (some would say dominating) component. Today, research is the engine that powers UNMC, enabling the institution to grow its financial and human resources and to fulfill its mission.

In a classic work, "Scholarship Reconsidered: Priorities of the Professoriate," Ernest Boyer enlarged the traditional "laboratory orientation" of research to include a more varied set of activities involved in learning and scholarship.¹ These include: the scholarship of discovery ("traditional" research); the scholarship of integration (new ideas from crossroads of disciplines); the scholarship of application (translation into practice); and the scholarship of teaching (transforming and extending transmission of knowledge).

UNMC appreciates that these aspects of scholarship work together. UNMC recognizes these important perspectives on scholarly work in recruiting faculty, in stimulating students, and in its Promotion and Tenure standards, and UNMC promotes a life of learning for all members of its academic community through discovery, integration, application and teaching.



“UNMC promotes a life of learning for all members of its academic community through discovery, integration, application and teaching.”

CORE COMPONENT 4A

The organization demonstrates, through the actions of its board, administrators, students, faculty and staff, that it values a life of learning.

An institutional commitment to a life of learning is explicit in the UNMC mission statement, which is outlined in Chapter 1. Moreover, a key value within the UNMC strategic plan is to “foster an environment of learning and communication.”

The written policies of the NU Board of Regents state: “The traditions of free exchange of ideas and prompt dissemination of knowledge are fundamental to the University's mission and should govern all research, teaching, and service activities conducted by University personnel. The University is committed to an open teaching and research environment, which ensures free faculty and student exchange of ideas, thereby contributing to the advancement of knowledge in all disciplines.”

The institution-wide survey conducted in the fall of 2005 indicates UNMC is fulfilling its mission, the policies of the Regents, and its strategic plan. Eighty-one percent of faculty, 82 percent of staff and 92 percent of students agreed that UNMC promotes learning across the institution. Moreover, 91 percent of faculty, 93 percent of staff and 97 percent of students agree that UNMC values research.

The breadth of academic programs and degrees offered by UNMC faculty is an extension of the value placed by UNMC to a life of learning by its students. Examples follow:

Dentistry. The COD is the primary educator of dentists and dental hygienists in the State of Nebraska. It offers a D.D.S. program, a B.S. in dental hygiene program, and postgraduate programs leading to certificates of specialization in endodontics, orthodontics, pediatric dentistry and periodontics. In addition, the COD offers a certificate of completion for general practice residency. Current student enrollment includes 178 D.D.S. students, 47 dental hygiene students, 30 postgraduate students (residents). In addition, 10 M.S. students, eight Ph.D. students and two postdoctoral trainees are working with COD faculty. Faculty members are responsible for the didactic, preclinical and clinical teaching in the college, as well as the mentoring of graduate students in the laboratories.

Educational outcomes for COD dental students and dental hygiene students are outstanding. The dental class of 2007 ranked 5th on National Dental Boards Part I, the COD's highest rank on Part 1 in the past 15 years. The college has been ranked in the top 10 in the nation for 10 of the past 12 years on Part 2 of the National Dental Boards. The dental hygiene class of 2005 ranked 8th on its National Board Examination out of 254 programs, placing it in the nation's upper 3 percent. Maintaining this high level of outcomes performance is both a challenge and an expectation.

“The breadth of academic programs and degrees offered by UNMC faculty is an extension of the value placed by UNMC to a life of learning by its students.”

Nursing. The CON educates professional nurses at the baccalaureate, master's, and doctoral levels within a multidisciplinary environment. Current student enrollment includes approximately 550 baccalaureate and 300 graduate students (266 master's and post-master's; 34 doctoral students). The M.S.N. program, rated in the top 13 percent² of graduate nursing programs by *U.S. News & World Report*, prepares nurse practitioners and clinical nurse specialists in 11 nursing specialties. UNMC's statewide campus system plus multiple nurse-managed clinics provide educational, research, and service opportunities in both urban and rural areas and with culturally diverse people. In addition to providing services through UNMC-sponsored programs, faculty also collaborate with state agencies for health care delivery, as described in Chapter 5.

The CON is a pioneer in the development of distance education and continues as a leader in the use and refinement of distance learning strategies. Presently, all CON programs contain both face-to-face and distance teaching at 33 sites in Nebraska, eight in South Dakota, nine in Iowa, and eight in other, including international, locations. To support these programs, the CON faculty has been successful in a competitive grant-funding environment and has been awarded almost \$9 million in federal training grants.

With this grant support, the faculty has developed numerous teaching innovations. In addition to the clinical simulations mentioned in Chapter 3, they have developed a dual-major nurse practitioner program that combines primary care as a family nurse practitioner (FNP) with an advanced psychiatric/mental health nursing program. To address the serious nursing faculty shortage in this country, the CON also developed a Fast Track Ph.D. program to move academically oriented B.S.N. students more efficiently to the doctorate.

In the past 10 to 20 years, the CON has augmented its "bricks and mortar" divisions with "virtual" classrooms using technology for distance delivery. The R.N. to B.S.N. program and the M.S.N. and Ph.D. programs contain major portions offered via distance technology. Within the next year, the entire nonclinical components of the B.S.N. program will be offered via distance technology and Web-based education with opportunities for local clinical placement. Nursing students across Nebraska and beyond are being helped to achieve their educational goals without having to relocate.

Medicine. Substantial evidence indicates the achievement of institutional objectives by COM students. Internal core and end-of-year M1 comprehensive examinations demonstrate consistent knowledge-based performance over the past five years, as do the NBME shelf exams used in the clinical clerkships. Pass rates and mean scores on USMLE Step 1 rose steadily from 1996 until 2002. The first-time pass rate and average score fell slightly in 2003 and 2004, a situation that was somewhat predictable based on a larger than average cadre of students with lower grade point averages upon entry into the COM. The Class of 2008 had a 94.5 percent

“Nursing students across Nebraska and beyond are being helped to achieve their educational goals without having to relocate.”

first-taker pass rate when they took the USMLE Step 1 in June, 2006; the Class of 2006 had a 96.6 percent first-taker pass rate on the USMLE Step 2. Ninety-eight to 100 percent of COM students pass USMLE Step 2 on their first attempt, with mean scores substantially above the national average. Student skills are evaluated by objective structured clinical exams (OSCEs) in each of the four years of the curriculum, as well as by a student checklist of completed, observed procedures. All students must pass a senior OSCE and document accomplishment of a proscribed set of procedural skills before graduation and students' attitudes are continually assessed through a professionalism checklist for all cores and clerkships.

In the fall of 2006, 121 out of 192 full-time Ph.D. graduate students were being trained in the research laboratories of COM faculty. The mentoring and career development of these new scientists is important in the creation of a scientific and technical workforce to maintain the preeminence of our nation in the life science fields. These students also provide fresh intellectual capacity and are critical contributors to the ongoing research programs of their mentors. Ph.D. students in the other colleges and in the Eppley Institute also are important participants in the acquisition, discovery and application of knowledge.

Pharmacy. The UNMC COP is one of two pharmacy schools in Nebraska. At a time when there were two pharmacy degree programs in the nation, the Bachelor of Science (B.S.) in pharmacy and Doctor of Pharmacy (Pharm.D.), the COP was the third pharmacy school in the U.S. to implement and offer in 1976 the Pharm.D. as the sole professional degree program. Today, the Pharm.D. is the only professional pharmacy degree offered by the nation's nearly 100 colleges and schools of pharmacy. Annually, approximately 250 students are enrolled, and the college graduates approximately 60 students per year. More than two-thirds of the pharmacists practicing in Nebraska are COP graduates.

On the national board of pharmacy examination, the North American Pharmacist Licensure Examination (NAPLEX), COP graduates have performed exceedingly well. Annually, they score above, and often well above (7 to 13 percent) both the national and state average NAPLEX scores. For example, in 2005, the COP and national average NAPLEX scores were 115.28 and 104.85, respectively. The annual COP pass rate on the NAPLEX examination is greater than 96 percent (i.e., two or fewer failures per year).

Based on average mean score, the UNMC COP ranked 11th of the nation's 86 colleges/schools of pharmacy whose students took the 2005 NAPLEX examination – the highest ranking to date. In 2004 and 2003, our graduates ranked 12th (of 85 colleges/schools) and 15th (of 83 colleges/schools), respectively.

In addition to the Pharm.D. program, basic science faculty are actively engaged in the college's Pharmaceutical Sciences Graduate Program (PSGP), one of the largest basic sciences graduate programs on the UNMC Omaha campus. The majority of

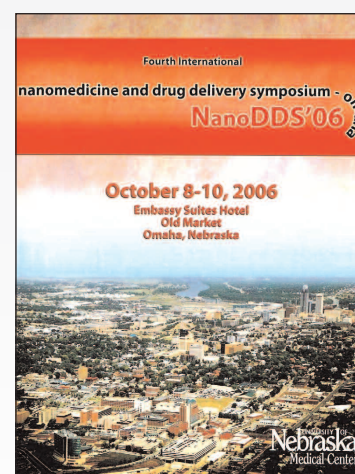
the graduates of the PSGP take positions in the pharmaceutical industry directly from the program (i.e., without additional postdoctoral training), indicative of the high demand for PSGP graduates by private industry.

School of Allied Health Professions. The 10 programs in the SAHP prepare practitioners through innovative and traditional academic and clinical education. The school strives to meet the workforce needs of the state and to provide professional education in health-related sciences for Nebraska citizens. First-time pass rates on national licensure, certification or registration examinations are excellent, averaging above 96 percent of the total 150 students (national first-time pass rates range from 68 to 88 percent). Four allied health programs have had a 100 percent first-time pass rate for more than 10 years. More than 98 percent of SAHP graduates and their employers agree that SAHP-prepared graduates meet entry-level competencies; more than 98 percent of graduates would recommend their program to others; and more than 98 percent would hire another graduate of UNMC's SAHP program.

In an attempt to improve access to education in the allied health careers, SAHP has developed distance learning options in five of its programs. These distance learning options have increased the number of practitioners in rural Nebraska. For example, the Clinical Laboratory Science Program has educated more than 120 students via distance and more than 90 percent of these graduates have remained in the rural areas to practice. SAHP has developed several innovative partnerships with community colleges, local hospitals and other academic health centers to educate via distance. As state and hospital resources for allied health education shrink, these partnerships will enable the SAHP programs to thrive, and also to provide practitioners to other states to help with their workforce needs.

Scholarly supplements. UNMC hosts numerous invited speakers, conferences, and special events. Academic units within the COM and COP offer seminar programs delivered primarily by external speakers (for example, UNMC hosted the 4th annual International Nanomedicine and Drug Delivery Symposium in October 2006, and the Society for the Study of Reproduction in August 2006,). The COD supports two seminar series annually. Each fall, a seminar is open to all students, faculty and staff to inform them about academic careers in dentistry. The CON also supports regular research seminars provided by faculty, visiting scholars and interdisciplinary colleagues. In addition to a weekly seminar series, the Eppley Institute also holds an annual Short Course in Cancer Biology, which provides students, staff and faculty an opportunity to meet and learn from invited experts about significant and current topics in cancer research. All of these lecture series and services are open to students, faculty and staff from all programs, and many are Web-streamed or delivered real-time to remote locations.

Course evaluations. In all academic units, students complete individual course and faculty evaluations. These are compiled and used to determine students' overall



perceptions of course offerings and faculty performance. The results are used for the continued refinement and reorganization of courses, and evaluations of individual teachers are routinely part of the evaluation of faculty members for annual merit increases and promotion and tenure. UNMC's philosophy on and execution of course evaluations are thoroughly discussed in Core Component 3a.

Balancing Teaching and Research

Balancing teaching and research is an ongoing and important pursuit at UNMC:

- The COD has set a goal of allocating 25 percent of faculty FTEs to research-intensive lines by 2009. Approximately two-thirds of these research-intensive faculty members will have the Department of Oral Biology as their department home, while approximately one-third will have one of the three dental clinical departments or the Department of Dental Hygiene. The research-intensive faculty members will have at least 50 percent release time to pursue extramurally funded research programs and are expected to receive substantial extramural research support annually.
- In 2004-05, the CON implemented a process of faculty role differentiation that grew out of the new dean's faculty focus groups. Faculty indicated they had limited means to modify their teaching or grow into new areas across departments or disciplines. They said they felt the weight of institutional expectations for significant contributions to research, teaching and service. Using the new process, CON faculty collectively assume the responsibility for fulfilling the teaching, research, service and practice missions of the college in concert with the college's strategic and long-range plan. Within this broad mandate, the relative proportion of effort devoted to each of the missions by any single faculty member varies. While all faculty members are expected to teach and participate in service, the relative weight of these and other activities varies according to the needs of the CON and the individual strengths and training of each faculty member. It allows faculty members choice over whether they want their primary role to be teaching-intensive, research-intensive, or practice-intensive.

An internal evaluation performed in May 2005 showed the majority of CON faculty favor the new process; it also provided suggestions for improving the process, which were taken into account for the 2005-06 academic year. In addition, the CON is also actively recruiting research-intensive faculty to advance UNMC's research mission.

- The COM is evaluating the possible scheduling of PBL in afternoon sessions to resolve some of the conflict between clinical and teaching responsibilities. Supporting this concern, a 2006 survey of UNMC faculty specifically on research found that barely half of investigators were satisfied with the time they had available for research, let alone teaching in PBL. This universal complaint coincides with the current tension between requirements for clinical productivity and the demand for more translational research, particularly in large teaching-intensive departments such as internal medicine.

Career Development

Professional development. UNMC provides numerous opportunities for professional development, which are discussed in Chapter 3. Most opportunities are organized through the UNMC Center for Continuing Education (CCE). Several others worth noting here are the Administrative Colloquium, the Education Scholars Program, the Clinical Research Symposium, and grant-writing workshops.

- In the eight-month-long Administrative Colloquium, principles important to successful leadership are presented in didactic sessions, practiced in small group exercises, and then applied in projects selected by each of the participants.
- The Education Scholars Program is a one-year commitment to developing improved teaching or learning methods, developing curriculum, or academic administration.
- The Clinical Research Symposium is an annual campus-wide professional development program for research in the clinical setting. It provides information to junior clinical faculty and fellows about grant writing and establishing research programs. In its eighth year, it has provided training for 277 participants to date.
- The COM offers an intense two-day grant-writing workshop with an outside professional facilitator. The COM subsidizes half the cost of the workshop and the department of the participant or the faculty participant pays the other half.
- The Postdoctoral Association offers a very similar grant-writing workshop for postdoctoral fellows and research associates. Nearly 100 postdocs have participated in the past two years.

Sabbatical leaves. UNMC supports “sabbaticals” via faculty development fellowships for faculty members who have held full-time appointments within NU for six years or more at the rank of assistant, associate or full professor, or equivalent rank. Faculty development fellowships are available on a competitive basis from the Board of Regents, rather than as an automatic reward for years of service. Such a fellowship provides the faculty member with full pay for one-half of his or her normal appointment period, or 50 percent of regular pay for all of his or her normal appointment period, in order to engage in scholarly research, or study of teaching or professional innovations. Each award recipient is required to spend at least one year in the employment of the NU after completing the fellowship. Despite the existence of this program, few faculty members have taken advantage of it in recent years. Faculty anecdotal comments express concerns for maintaining ongoing research programs and supporting clinical activities.

The COD has a unique, mini-sabbatical opportunity named the D.H. Reinhardt Scholar Program. Its purpose is to enable faculty to visit laboratories/clinics where leading science is performed and learn new techniques to enhance their prospects



“Faculty development fellowships are available on a competitive basis from the Board of Regents, rather than as an automatic reward for years of service.”

“UNMC continues to strive to increase the amount of interprofessional research projects.”

for extramural grant support. Monies are available every two years for this program and faculty have used the resources to spend one month visiting renowned outside laboratories. These short-term visits do not preclude regular faculty development and leave opportunities; it is even hoped that they will stimulate more faculty participation in sabbaticals.

Mentoring. Mentoring of junior faculty is recognized campus-wide as an important component of faculty development and one that is critical to the long-term success of the research enterprise at UNMC. Although UNMC has offered mentoring workshops and Lunch-'n'-Learn sessions, these opportunities reach only a small number of junior faculty. For that reason, most faculty mentoring is not a formal process and is handled primarily by individual departments, if at all. Indeed, the 2006 survey of the UNMC faculty revealed concern for the research career development offered to junior faculty members. Of those investigator respondents who found it relevant to their situation, 35 percent indicated dissatisfaction over the mentoring of junior faculty members. About 35 percent of respondents also believed that UNMC was a collection of individuals with little in the way of team or joint efforts taking place between colleges and departments. To address this, UNMC continues to strive to increase the amount of interprofessional research projects. For example, in 2005 the Eppley Cancer Center offered a small grants program that required applicants to form interprofessional research teams.

Mentoring junior faculty in specific research areas is supported by a number of grants intended to develop the biomedical workforce. UNMC holds two large Centers of Biomedical Research Excellence (COBRE) grants that each support the development of projects by currently unfunded investigators with strong research potential. These programs have extensive and formal mentoring processes developed by the senior researchers who serve as principal investigators on the grants. Several of the formerly unfunded junior investigators working on these projects have gone on to obtain major national funding and have “graduated” from the program. They are then “replaced” by new junior faculty with similar potential. NIH mentoring grants (K08, K01, etc.) are also held by our junior faculty and support formal relationships with senior investigators at UNMC and elsewhere.

Outreach programs. UNMC also encourages outreach programs that promote professional development both for those inside and outside our institution. During 2004-2005, the CON Continuing Nursing Education office offered 85 programs, reaching 6,803 nurses from across the U.S. and generating 21,336 earned contact hours. Twenty-seven percent of the programs were sponsored solely by the CON, and 73 percent had one or more co-sponsors from either within UNMC or the Omaha community. Of 62 co-sponsored programs, 21 percent were put on with support from the Center for Continuing Education (CCE); 28 percent with other units within UNMC; and 24 percent with community organizations. All were open to UNMC faculty and most were offered to them free of charge, reflecting strong support of the CON’s strategic plan to create an environment that fosters creativity, productivity and development of expertise.

To maintain active dental licensure in the state of Nebraska, dentists must receive 30 continuing education units (CEU) every two years. The COD offers continuing education programs that well exceed state licensure requirements in a wide range of topics of interest to both general dentists and specialists. During calendar year 2005, the COD offered 52 CEUs for dentists and another 32 CEUs for dental auxiliaries. Speakers include COD faculty and prominent lecturers from other dental colleges.

Of course, UNMC's principal professional development vehicle is the CCE, which provides continuing education and professional development to UNMC faculty and professionals, but also to health care practitioners in the state, region and beyond. The CCE's wide scope of services is addressed in Chapter 3.

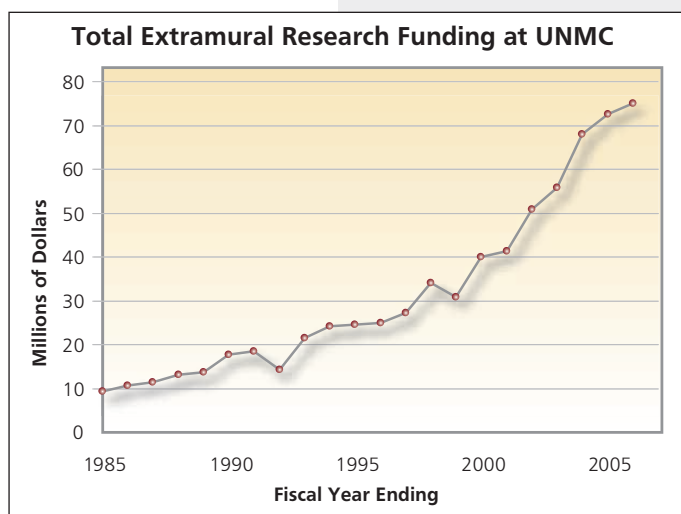
Resources for Research

Research is vital to the mission of UNMC and its desire to foster a lifetime of learning and inquiry by its students, faculty and staff. Indeed, 70 percent of all faculty members are involved in a program of research. Therefore, the COM, COD, CON, COP and SAHP allocate some of their FTEs to hire faculty members whose primary responsibility is conducting research. These faculty members, along with all faculty in the Eppley Institute, are expected to develop independently funded research programs. Such faculty members are offered start-up packages and research space that facilitate development of successful research programs, as evidenced by the growth in research funding to UNMC over the last decade. In that period, UNMC has increased its funding at an annual rate of 12.7 percent compared to 8.1 percent for federal R&D funding to all U.S. institutions.

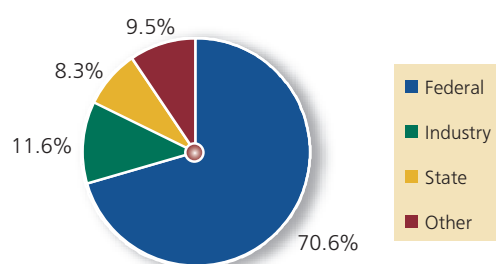
Concurrent with this increase in overall funding, more UNMC investigators are participating in NIH and other major federal study sections for peer review of grants and contracts.

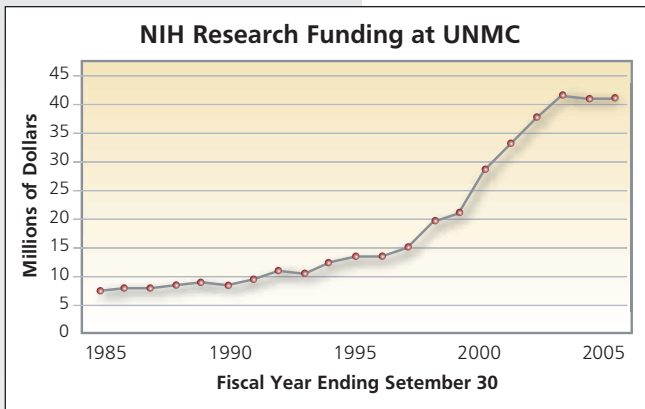
UNMC research grants and contracts come from a variety of federal and nonfederal sources, but the overall relative distribution has shown a gradual increase in the percentage of research support from federal sources, so that currently about 71 percent is federal with 12 percent from industry, 8 percent from state and nine percent from other sources (foundations, charitable organizations, etc.)

In spite of this increase in funding and success with the federal competition, the relative position (rank) of UNMC among its peer academic health centers remains relatively constant.



Sources of Extramural Research Funding: 2005





It remains a challenge for UNMC to enhance its relative funding position among its peers, even in the face of a perceived increase in reputation.

By internal policy, between 19 to 25 percent of UNMC's facilities and administrative costs (indirect costs) from grants and contracts are to be returned from the Chancellor's Office to the generating college dean or institute director. Each dean or director decides how best to use these funds in the support of research or other strategic priorities within the unit. The chancellor, based on utilization and effectiveness reports submitted by the deans and directors, periodically reviews this policy.

Nebraska Research Initiative (NRI). NRI funds received from the state are used to fund competitive research projects, competitive equipment proposals, and competitive new research core facility proposals. NRI funds also provide annual support for established research core facilities. During FY05, UNMC received \$2.9M from NRI.

A faculty survey regarding the use of and user satisfaction with Nebraska Research Initiative-funded (NRI) research core facilities was conducted in August 2004. In September 2005, funded investigators were surveyed again and asked to prioritize infrastructure items that support research activities and give their attitudes on allocation of resources toward their support.³

Tobacco settlement. The Nebraska Tobacco Settlement Biomedical Research Development Fund (NTSBRDF), established in FY02 in the Master Settlement Agreement, totals \$10M annually, increasing to \$14M in FY06. NTSBRDF is divided between UNMC, UNL, Creighton University, and Boys Town National Research Hospital on the basis of institutional federal funding. UNMC uses these funds for strategic recruitment and retention, research programs, infrastructure development and minority health research grants. UNMC receives about \$5M annually, and the return on investment has been excellent.

Cancer program. The Nebraska Cancer and Smoking Related Disease Research Program is funded via cigarette taxes. It is a competitive program administered by the state's Health and Human Services System (HHSS) and funds projects in scientific biomedical and behavior research on cancer and heart diseases related to smoking. Awards are \$40,000 maximum per project for one year. A similar peer-reviewed program, administered by the HHSS, funds infrastructure related to cancer research. In this case, funds are allocated to the Eppley Cancer Center and Creighton University based on extramural funding. Eppley receives about \$1M annually; awards are made for five years.

Infrastructure. UNMC also demonstrates its support of learning by students, faculty and staff through its extensive support of research infrastructure. UNMC

houses 40 research-related core facilities or shared resources.⁴ Ten of these shared resources receive NRI support based on an annual evaluation of use and productivity.

Collaboration. Periodically, UNMC and UNL together promote intercampus research collaboration by sponsoring interdisciplinary workshops through the vice chancellor intercampus research initiative. For example, the now well-established Center for Advanced Surgical Technology (CAST), which developed from an intercampus retreat, is a joint effort between UNMC surgeons, UNL engineers and UNO computer scientists. All are interested in remote, micro-robotic surgical applications.

Clinical Research Center (CRC). The hospital-sponsored CRC⁵ provides support for investigator-initiated clinical trials. Staff include a medical director, nurse manager, research coordinator, research technologist, secretary specialist, and a billing specialist. Services include help in conducting investigator-initiated research protocols, education in research, development of lab assays, research billing issues, and acceptance of research support fund applications. The emphasis of the CRC is facilitating and supporting NIH-supported clinical research. The CRC has a clinical advisory committee whose members are appointed by the dean of the COM on a limited term basis. This committee meets every other month and reviews and approves protocols seeking CRC support based on scientific merit, relevance and feasibility. Currently, 51 active protocols are supported by the CRC. For FY05-06, more than \$400,000 was allocated.

Clinical Trials Office (CTO). The CTO⁶ is a joint venture between UNMC and the hospital that supports investigators working on industry-sponsored trials. The staff consists of one nurse manager, two clinical research coordinators, one research assistant, one staff assistant and one medical director. Services include contract negotiation, Institutional Review Board (IRB) assistance, clinical trial placement at UNMC, education, and clinical trial recruitment.

Eppley Cancer Center Clinical Trials Office (ECCCTO). The ECCCTO⁷ provides central management and oversight for all cancer clinical trials conducted at the cancer center. Operations of this office are monitored by a clinical trials oversight committee that meets quarterly with the Cancer Center Senior Leadership Council to discuss the ECCCTO and clinical research activities. The office staff consists of 29 FTEs comprised of research nurses, data managers and coordinators, plus one medical director, one administrator and one computer programmer.

Comparative medicine. The comparative medicine (CM)⁸ program provides professional veterinary medical, husbandry and proposal review services to support animals used in biomedical research. The UNMC animal care and use program has been accredited by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International since 1966. Currently, CM staff consists of

“UNMC also demonstrates its support of learning by students, faculty and staff through its extensive support of research infrastructure.”

33 FTEs comprised of three veterinarians, six administrative personnel, two facility management personnel, support staff and 22 animal husbandry technicians. The average daily animal census for FY2004 exceeded 16,000. The average daily animal census for FY2006 is projected to be more than 21,000.

Vice chancellor for research (VCR). The office of the VCR⁹ was created in 2002. Before then, the position of vice chancellor for academic affairs also served as dean for graduate studies and research. The VCR position separated the research responsibility from the graduate studies responsibility to better promote and manage the increasing activities in research. The current VCR, who reports to the chancellor, is a former department chair of cell biology: a funded investigator who holds a Ph.D. The VCR has responsibility for oversight and promotion of basic and clinical research. He has administrative oversight of: Clinical Trials Office; Sponsored Programs Administration; Intellectual Property Office; Office of Government Relations; Comparative Medicine; Office of Research Resources; Nebraska Research Initiatives; Research Resources Board; the NTSBRDF; all research space (space is not allocated by individual departments); and the office of the director of minority health research. The VCR assists in recruitment of research personnel and is involved in strategic planning.

As a result of a clinical research retreat, the position of associate vice chancellor for clinical research was created in 2005 as a 0.5 FTE position. This officer reports to the VCR and is responsible for promoting the growth of all forms of clinical research among all UNMC colleges and promoting growth of biotechnology research.

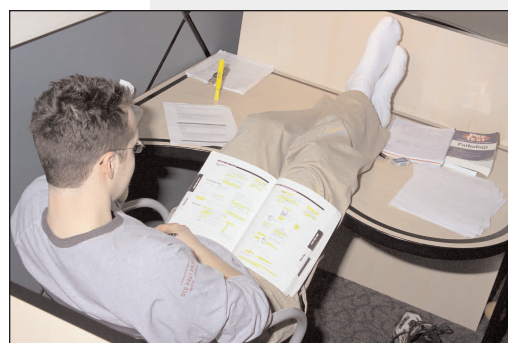
The director of research resources is a full-time position created in March 2005 and reports to the VCR. The holder of this position develops and monitors a research space database to facilitate assignment of research space. This person monitors the use and productivity of campus research core facilities, especially those that receive support from the NRI, and interfaces with the Office of Government Relations, Sponsored Programs and the Intellectual Property Office on identifying and targeting competitive and noncompetitive research funding opportunities. The director also assists in educating UNMC employees on compliance with research conduct regulations.

Government relations. The Office of Government Relations¹⁰ was created in December of 2004 and consists of a full-time director and full-time associate. This office reports to both the VCR and vice chancellor for external affairs and is responsible for advancing UNMC's relationship with state and federal delegates and federal funding agencies; communicating UNMC's research successes to various public interests; strengthening UNMC's presence on panels and policy boards at the state and national level; and identifying, tracking and analyzing federal issues and interest in proposals for research.

Research Resources Board. The Research Resources Board participates in the oversight of all research programs; those faculty and administrators on the board represent all UNMC colleges, schools and institutes.

Intellectual Property Office (IPO). The IPO¹¹ consists of a director, tech transfer associate, faculty liaison and staff secretary and serves to stimulate high technology development by encouraging the use of innovative biomedical technologies derived from UNMC research. This is achieved primarily by preserving UNMC intellectual property rights as an incentive for further improvement and commercialization. The IPO assists UNMC's process of technology development and commercialization by working with UNMC faculty, the Science and Technology Advisory Committee (STAC), UNeMed, and the Technology Advancement Group (TAG). All of these activities and groups serve to move "discovery" to "application."

McGoogan Library. The McGoogan Library of Medicine is a dynamic resource for scholarly learning which provides access to a growing collection of information in print and nonprint formats, both visual and electronic. With access to more than 4,300 electronic full-text journals, online books and bibliographic databases, the library is able to facilitate the research productivity of UNMC faculty, students and staff. See Chapter 3, Core Component 3d for a complete description of the library.



Faculty research resource concerns. In 2006, UNMC contracted an outside consultant¹² to analyze institutional strengths, weaknesses, opportunities and threats. In that report, the consultant deemed the IPO to be a weakness of the institution. The consultant felt that, for the level of research occurring at UNMC, the IPO would be expected to be developing more revenue through commercial products and patents. UNMC leadership is addressing this issue with strategies for identifying and advancing commercialization and licensing of UNMC technologies, as detailed in the 2005-2008 Strategic Plan. In addition, most of the personnel in the IPO have recently turned over and significant operational changes are under way.

A 2006 survey of the UNMC faculty found that while 64 percent of the 431 responding investigators provided positive or neutral responses concerning the adequacy of information sources for locating colleagues with whom they could conduct research, 33 percent disagreed. Furthermore, 33 percent also felt they did not have access to the workforce (postdoctoral fellows, students, technicians) necessary to do research. The survey also identified support by comparative medicine for animal research in relationship to cost of that support as a potential area of concern. Nevertheless, of those faculty members (189 respondents) who felt the services of the comparative medicine program were important to their research, only 27 percent were either "dissatisfied" or "very dissatisfied."

"The McGoogan Library of Medicine is a dynamic resource for scholarly learning."

“To foster learning and inquiry, UNMC has created numerous mechanisms that acknowledge scholarly accomplishments.”

Reward and Recognition

To foster learning and inquiry, UNMC has created numerous mechanisms that acknowledge scholarly accomplishments, many of which are discussed in Chapter 3. Recognition of achievements by students, faculty and staff in research/scholarship comes generally from individual colleges. For example:

- The COD recognizes outstanding student research with the Quintessence Book Award for Dental Research to one or two senior dental students at graduation. In addition, COD dental students compete and win national research awards. For example, COD students won national research awards at the Hinman Student Research meeting, finishing first in 2000 and tying for first in 2001. In 2004, at the same meeting, a COD student won the prestigious President’s Award for Excellence in Dental Research from the National Students’ Research Group of the American Association for Dental Research. Many U.S. dental schools participate at the Hinman and up to 100 presentations are given annually. In 2006, a COD student was one of three national winners of the prestigious Hatton Award competition at the American Association for Dental Research annual meeting.
- The CON has several research awards for faculty and students. Every semester in the CON, graduate students present their research projects to a wide audience of faculty and students at all levels. Three of the outstanding projects each semester win awards from the Nursing Alumni Association, Sigma Theta Tau International, or the Dean’s Award. Annually, the Pennie Z. Davis Faculty Research Award is given to a CON faculty member who has made a significant contribution to research at UNMC. It is given on a rotating basis to either an established researcher or a new researcher. Twice a year, CON graduate students receive research awards from the following sources for presenting their research: Dean’s Award (for Best Poster); Dean’s Award (for Best Oral Presentation); Gamma Pi Chapter of Sigma Theta Tau; and the Alumni Association.
- Recognition and reward programs for excellence are provided for faculty, students and staff in the COM. There is an annual selection of the “Outstanding Young Investigator,” and departments also provide awards for research excellence under the “outstanding researcher” award category. The SAHP recognizes scholarship with its outstanding Researcher of the Year Award.
- The COP does not have separate awards and/or reward and recognition programs for excellence by faculty in research. Rather, it utilizes existing university and campus recognition programs, such as the UNMC Outstanding Performance Stipend Program, Supplemental Compensation Program, salary increases based on annual performance evaluations, Silver U Award, appointment to endowed/named chairs, and nominations for university-wide award programs; for example, the Outstanding Research and Creative Achievement Award.

Students from all academic programs have participated in the annual Midwest Student Research Forum. Many of the UNMC students have won regional awards and also succeed in annual national competitions.

The Faculty Senate recognizes the Outstanding Mentor of Graduate Students annually, as well as Outstanding Teaching Awards for all academic units. Despite the recognition awards processes available, 34 percent of the faculty responding to a recent survey (426 respondents, mostly investigators) felt that in the more tangible area of salary, they were not compensated fairly for their roles and responsibilities. Although variable throughout the institution, research grants generally do not provide as attractive salary funding as does compensation for clinical work. Furthermore, nonclinical scientists and clinical scientists may perceive this issue quite differently.

Emeritus status. Faculty members may be granted emeritus status upon retirement at the request of his or her dean or director. Currently there are more than 100 faculty who have emeritus status. Some of these still participate in teaching and research activities and have office space on campus. A committee with representatives from all the colleges is presently investigating how UNMC can more uniformly and critically recognize faculty with emeritus status and how departments and colleges can more effectively engage these experienced members of our academic community.

In summary, UNMC's commitment to lifelong learning is embodied in its commitment to research. In preparing future health care practitioners and scientists whose whole lives are dedicated to learning, service and improvement of their professions, UNMC has a responsibility to demonstrate that research is the fountainhead for the evidence they will need in their practices. Its use of financial and human resources to foster and support inquiry, while needing improvement in a few areas, is consistent with its mission and encourages lifelong learning on the part of students, faculty and staff.

CORE COMPONENT 4B

The organization demonstrates that acquisition of a breadth of knowledge and skills and the exercise of intellectual inquiry are integral to its educational programs.

UNMC offers a spectrum of educational programs, addressed thoroughly in Chapter 3, that allows the acquisition of knowledge and skills in diverse areas and provides opportunities to exercise intellectual inquiry. A good example of this is the major focus the past five years within the graduate training programs on the enhancement of interdepartmental training. This emphasis has resulted in:

“Since 2000, UNMC graduate training programs have undergone dramatic transformation.”



- An increase in the number of established interdepartmental training programs
- Creation of integrated first-year basic sciences core courses taught by faculty in all colleges
- An increase in the number of applicants from a wide geographic location
- An increase in the number of students matriculating into these programs
- An increase in competitive applications for UNMC graduate fellowships and assistantships

Interdisciplinary Graduate Programs

Prior to 2000, UNMC had only four interdepartmental or interprofessional graduate training programs, including the M.D./Ph.D. Scholar Program, Medical Sciences Interdepartmental Area (MSIA), Pharmaceutical Sciences Graduate Program (PSGP), and Environmental Toxicology Program. The majority of the recruited graduate students entered individual department-based graduate programs. Since 2000, UNMC graduate training programs have undergone dramatic transformation. The most noticeable change includes the establishment of the Biomedical Research Training Program, an interdepartmental graduate student recruitment program, and the creation of other interdepartmental training programs:

- **Biomedical Research Training Program (B RTP):** To provide incoming graduate students with a broader knowledge base in biomedical sciences during the initial phase of training, a unified first-year curriculum in the B RTP includes four integrated basic sciences courses. These courses emphasize problem-solving skills to prepare students for scientific research. The support of B RTP was initially provided by the chancellor and is now sustained by UNMC's five basic science departments and the Eppley Institute. With concerted effort from many academic departments and units, UNMC has tried to maximize graduate training by utilizing the expertise of not only its own faculty, but also that of UNO and UNL. The initial effort has shown some signs of success, which hopefully will translate into generations of highly trained researchers to benefit not only UNMC but also research programs elsewhere.
- **Medical Sciences Interdepartmental Area (MSIA).** The MSIA program provides a vehicle for students to pursue graduate programs that are often interdisciplinary, and an opportunity for researchers with primary appointments in clinical departments to participate in graduate education. The MSIA also has been important to departments or divisions that are developing independent graduate programs – evidenced by its role in the development of the College of Nursing doctorate program. During 1998 through 2004, there were 19 academic units participating in the MSIA program. At the beginning of the 2005 spring semester, 40 students were enrolled in the MSIA Graduate Program, 20 at the master's level and 20 at the doctoral level.
- **Master of Public Health (MPH).** The MPH program was created as a collaboration between UNMC and UNO and was approved by the Board of Regents and the Nebraska Coordinating Commission for Postsecondary

Education in 2001. The program began admitting students January 2002; in May 2004, the program received five-year national accreditation from the Council on Education for Public Health. The MPH program continued its rapid growth and UNMC developed a College of Public Health in July 2006. The new college will offer additional M.P.H. specializations and eventually a doctorate in public health. A combined M.D./M.P.H. track, as well as other dual degrees, is under development.

- **Bioinformatics track.** The bioinformatics track in the Pathology and Microbiology Program uses faculty with a wide range of expertise in biological sciences and informational technology from UNMC and its sister institutions UNO and UNL. The bioinformatics track offers students the opportunity to integrate two of the most rapidly advancing areas in science and technology.
- **Cancer Research Graduate Program (CRGP).** The CRGP, based in the Eppley Cancer Center, also has many actively funded faculty members with research emphases in cancer biology from the three institutions. This rapidly growing program arose from faculty and student interest to develop an integrated program focusing on one of the most complex areas of the life sciences, cancer biology.

As a result of the emphasis on interdepartmental training programs, the number of graduate students who enter these programs has outnumbered those who join department-based graduate programs.

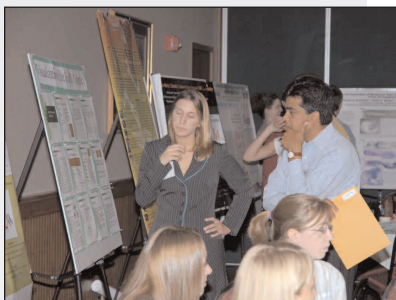
The Graduate Studies Office administered 46 fellowships, research assistantships and supplement scholarships amounting to \$991,200 for the 2005-2006 academic year. Additionally, 25 students received external funding from federal and private sources. Although an additional large number are supported by stipends from research grants, not all full-time Ph.D. students have stipend support. Total resources for Graduate Studies Office stipends have not increased significantly in the past seven years. UNMC actually had to reduce the number of stipends in order to offer larger awards – not a desirable change in a highly competitive market.

M.D./Ph.D. Program

The UNMC M.D./Ph.D. program has had a salutary effect on medical student education, not only by providing students research experience but by demonstrating physician/scientist role models. The philosophy underlying recruitment of students to this program has changed in recent years. Currently, a greater emphasis is being placed on identifying applicants with research experience and a demonstrated desire to become physician scientists. As a result, acceptance to the program has become much more selective. In the past three years, only 20 percent of the applicants were interviewed and 80 percent of those interviewed (16 applicants) were offered admission. Unfortunately, only four of the 16 have matriculated at UNMC. Nevertheless, many of those who declined were lost to outstanding institutions (e.g., Rockefeller University, Stanford University, University of California-San Francisco.)

“Acceptance to the program has become much more selective.”

While students in the M.D./Ph.D. program have unlimited opportunities to pursue their research interests, medical students not involved in that program also have opportunities to participate in research. Summer research opportunities are available to 15 first-year medical students. Medical students are allowed to take a leave of absence to pursue a research career, although few take advantage of this opportunity. Some senior-year students choose the one-month basic science selective to pursue research interests. Twenty-five percent of UNMC medical students responding to the AAMC Graduating Senior Questionnaire report having worked with a faculty member on a research project.



“UNMC promotes a life of learning beyond its walls by introducing undergraduate students from other Nebraska colleges and universities to research.”

Undergraduate Research

UNMC promotes a life of learning beyond its walls by introducing undergraduate students from other Nebraska colleges and universities to research, and by encouraging them to pursue careers in biomedical fields. In 2001, UNMC received nearly \$8 million in funding from the NIH to create the Institutional Development Award/Networks of Biomedical Research Excellence (INBRE), and in 2005, the award was renewed for more than \$13 million. The goal of the INBRE is to develop human resources that will strengthen an organization's infrastructure and increase its capacity to conduct cutting-edge biomedical and behavioral research. There are now 13 Nebraska colleges and universities involved, and a total of 90 undergraduate Nebraska students have participated as INBRE Scholars. Scholars spend two summers in an intense biomedical research experience on a Nebraska Ph.D.-granting campus (UNMC, UNL or Creighton). Currently, 52 first- and second-year Scholars from our 13 network-affiliated undergraduate campuses are in the program. At this time, nine INBRE Scholars are pursuing Ph.D.s at Nebraska institutions.

The INBRE grant supports the mentoring of primary teaching faculty at the same undergraduate institutions to give them additional research experiences and to help them extend their campuses' climate of scientific intellectual inquiry.

In addition to the INBRE program, a variety of basic science and clinical departments provide summer research programs for undergraduate students. UNMC also offers a summer undergraduate enrichment program to promote diversity in health-related research that focuses on minority students from across the country.

UNMC has been very successful in the past year in obtaining other research and educational training grants:

Science Educational Partnership Award (SEPA). SEPA brings elementary science teachers from Nebraska and South Dakota Native American reservations to UNMC. The goal is to enhance the teachers' ability to use hands-on science lessons in their curricula and, for UNMC, to forge relationships with the students in those locations.

Summer Medical and Dental Educational Program (SMDEP). In a similar fashion, but with a different audience, UNMC holds the SMDEP, sponsored by The Robert Wood Johnson Foundation. It brings 80 underrepresented undergraduate students from all over the U.S. to UNMC for a six-week program focused on helping the students elevate their confidence and competitiveness to enter medical or dental school.

Graduate Assistance in Areas of National Need (GAANN). A grant from the U.S. Department of Education supports training of graduate students in structural biology, which has been identified as an area of focus for GAANN. In this case, highly talented students, particularly those underrepresented in the sciences, are supported for the first three years of their doctoral studies. UNMC then supports the completion of their studies.

All of these initiatives promote intellectual inquiry and expand UNMC's opportunities to offer a variety of educational programs.

Meeting Standards

To provide quality assurance for research programs and their related educational programs, several UNMC programs have external advisory boards and participate in certifying programs offered nationally. For example, the Eppley Cancer Center maintains an external advisory board that provides annual scientific expertise and advice regarding the use of the Cancer Center Support Grant from the National Cancer Institute. Similarly, the INBRE program and the two COBRE grants have external advisory boards to help provide guidance and oversight for their large and complex training programs. The UNMC Center for Drug Delivery and Nanomedicine, established in 2004, has reached the stage of forming an external advisory board and will be doing so. Furthermore, UNMC research infrastructure components such as the animal care facility are accredited by national agencies designed to enhance continuous quality improvement.¹³

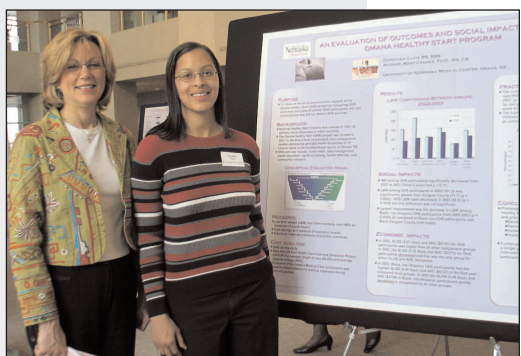
Internally, UNMC's use of research evidence in providing health care to hospital and clinic patients recently was validated. In the fall 2005 survey, 81 percent of faculty, 78 percent of staff and 94 percent of students said they believe that UNMC demonstrates use of valid current evidence for best patient care.

In summary, UNMC's educational programs benefit from its willingness to innovate and to foster intellectual inquiry and acquisition of skills through research. Results from the 2005 survey demonstrate that faculty, staff and, most importantly, students perceive the connection at UNMC between research evidence and providing patients the best health care possible.

“UNMC's educational programs benefit from its willingness to innovate and to foster intellectual inquiry and acquisition of skills through research.”

CORE COMPONENT 4C

The organization assesses the usefulness of its curricula to students who will live and work in a global, diverse, and technological society.



UNMC uses a variety of tools to assess the usefulness of its curricula to its students. First, as mentioned frequently in this report, professional accreditation is required for all professional health science programs at UNMC. The process of professional accreditation provides an independent assessment of the relevance of the curricula as influenced by current evidence, national trends and external forces. UNMC has a longstanding history of successfully meeting these specialized accreditation reviews which emphasize the importance of training health care providers to practice within a global, diverse and technological society (Appendix 1).

Curricular Updating

Curricular content in all programs is regularly reviewed and updated by faculty in all of the various units. Though many core areas of curricula remain relatively constant from year to year, syllabi and content for specific topics are updated and revised as driven by the most recent research findings and clinical reports. For example, in Graduate Studies, a new course in stem cell biology has been developed to address the complex scientific and ethical issues this area of research has engendered. Likewise, several new courses in the CON have been developed to address issues related to information technology, leadership and management training.

Outcomes Strategies

Follow-up strategies such as graduate and employer surveys and feedback from advisory boards and alumni focus groups, as detailed in Core Component 3a, are used by various UNMC programs to evaluate the outcomes of their curricula. There is direct evidence¹⁴ that curricular improvements have been made in UNMC professional programs based upon feedback from the various constituents who are in positions to comment about current practice needs within the fields of study.

For example, within the COM, the curriculum network – consisting of instructors, lecturers, core and clerkship directors, Year 1 and Year 2 directors, and the curriculum committee – reviews curriculum content on a regular basis. Each group meets monthly to discuss active issues and report relevant matters to the curriculum committee. Core directors look carefully for planned (or unplanned) redundancies and/or gaps in content. In 2004, the clerkship directors reviewed and refined their clerkship objectives to standardize their scope and language. This facilitated the identification of gaps and redundancies in the content of the M3 year. Formal written reports, with detailed content and evaluation information, are reviewed annually by the curriculum committee. USMLE Step 1 and 2 results are also reviewed in detail, with an analysis of the results in all content areas. The AAMC graduating senior questionnaire results are also studied to review trends in all content areas. The student curriculum committee meets monthly with the associate dean for curriculum. In the other UNMC colleges, similar attention is paid to curricular content and students are active members of curricular committees.

The Role of Research in Preparing to Work in Society

All students in professional programs at UNMC have the opportunity to participate in research. Participation is central in assisting students in all disciplines to understand the vital role research plays in shaping their future practices and expanding their discipline's knowledge base. For example, the School of Allied Health Professions (SAHP) has had an annual research forum for the past 18 years at which students share their research from the past year (103 students presented work in 77 posters in 2005). The role of research in continuous updating of best practices in clinical settings within the many allied health professions is stressed.

In 1997, the UNMC Student Research Forum (SRF) and the Midwest Student Biomedical Research Forum (MSBRF) merged. The awards that had been established for the UNMC SRF were retained and have been distributed annually to qualifying and participating UNMC students. Approximately half of the medical and graduate students that present at each MSBRF are from UNMC.

Curricula That Address Rural Needs

UNMC has developed and refined educational programs that address needs unique to the state of Nebraska and other rural areas. Typical of many Midwestern states, Nebraska is large (76,864 square miles) with a relatively small population (1,747,214) and low population density in rural areas; the majority of the population is concentrated in the Omaha and Lincoln areas on the eastern edge of the state. Forty-three of Nebraska's 93 rural counties are designated Medically Underserved Areas, with workforce shortages in medicine, dentistry, nursing, pharmacy and allied health. UNMC's mission leads it to place a high priority on serving the needs of rural Nebraska through a variety of programs that expand our students' educational experiences. These programs, many of which come under the umbrella of the Rural Health Education Network (RHEN), are mentioned in other chapters and explained fully in Chapter 5. The goals of RHEN are to increase the availability of health professionals in underserved areas, stimulate student interest in rural health care, and link community health care providers with UNMC faculty and students to promote cooperation.

Out of the 126 allopathic medical schools in the U.S., UNMC is one of 24 with mandatory rural rotations at all levels of training. UNMC is in the top 10 of allopathic medical schools in producing rural physicians. More than 50 percent of Nebraska practitioners (physicians, dentists, pharmacists, clinical laboratory scientists, nuclear medicine technologists, cytotechnologists, radiation therapists and physician assistants) were trained at UNMC.

Curricular and Co-Curricular Activities Beyond Campus

UNMC's and its students' connectedness to communities beyond the four campuses – in both curricular and co-curricular activities – is well-documented in Chapters 3 and 5 and in the resource room. Still, special mention is again

“UNMC's mission leads it to place a high priority on serving the needs of rural Nebraska through a variety of programs that expand our students' educational experiences.”

Percent of Nebraska Practitioners Who are UNMC Graduates

• Physicians	51%
• Pharmacists	57%
• Dental Professionals	58%
• Allied Health Professionals	51%

“UNMC makes significant efforts to ensure that curricula are timely, relevant and useful to students heading out into an ever-changing global society.”

warranted of the student-initiated and student-run SHARING CLINICS, which are a significant outreach to the Omaha underserved community, providing free health care to about 1,400 patients annually. UNMC is very proud of its three interdisciplinary clinics that, with faculty oversight, are proof of students putting their education into action.

UNMC was one of 10 institutions to receive the Program of Excellence (PoE) Award in 2005 during the American Academy of Family Physicians National Conference of Family Practice Residents and Medical Students in Kansas City. This is the second year UNMC has won the award. The PoE award is presented to Family Medicine Interest Groups that exhibit exemplary efforts in infrastructure, student involvement/student retention, family practice advocacy and community outreach/patient advocacy. This award signifies just one example of UNMCs commitment to developing curricula that emphasize social responsibility and community outreach.

In summary, UNMC makes significant efforts to ensure that curricula are timely, relevant and useful to students heading out into an ever-changing global society. Yet, challenges remain. The 2005 survey revealed that 73 percent of faculty and 76 percent of staff believe that UNMC assesses the usefulness of curricula to students. While this is not an unacceptable response, there is room for improvement. Importantly, 89 percent of students felt their curriculum was useful. These results possibly indicate the high level of critical concern for education that educators at UNMC have for their teaching efforts.

CORE COMPONENT 4D

The organization provides support to ensure that faculty, students, and staff acquire, discover and apply knowledge responsibly.

Citing again the 2005 survey, 84 percent of faculty, 83 percent of staff and 96 percent of UNMC students agree that they are supported by UNMC to acquire, discover and apply knowledge responsibly. This is gratifying, and indicates the institution is on the right track. UNMC has support and many safeguards in place to ensure that responsible and ethical behavior is modeled by faculty and staff and acquired by students. Many of these have already been introduced in Chapter 1.

Codes of Conduct

The University of Nebraska Medical Center Code of Conduct,¹⁵ which focuses on professional relationships among faculty, students and staff, is included in both the Student Handbook¹⁶ and the Faculty Handbook.¹⁷ The code emphasizes developing the interpersonal and discipline-specific skills through which professionalism is displayed.

UNMC maintains an Ombuds Team to help students, residents, faculty, and staff resolve problems and to promote fair and equitable treatment for all members of

the UNMC community.¹⁸ The team is composed of representatives of all units, with attention paid to diverse representation. Team members assist the parties in a dispute in gathering accurate information and seeking nonadversarial solutions; Ombuds Team members are not officers of notice. The latest statistics available show that the Ombuds Team served in one year 45 individuals: 22 students, 8 staff and 15 faculty members. These numbers are a representative sample of the yearly patronage of the service.

Additionally, UNMC has a Research Integrity Policy¹⁹ in an effort to maintain an academic environment based on honesty, integrity and ethical conduct. The policy was based on the Office of Science and Technology requirements, after which the NIH patterned its final guidelines, and the UNMC policy has been approved by the federal Office of Research Integrity (ORI). UNMC promotes an environment of productivity, creativity and academic freedom, while establishing firm expectations that individuals will not knowingly, intentionally or recklessly commit scientific misconduct. The Research Integrity Policy establishes a procedure for reporting misconduct to the Research Integrity Officer, initiating the inquiry and investigative processes, and deciding on corrective action. Prior to the establishment of this policy, written allegations were required to begin proceedings. With this policy, verbal allegations are sufficient to begin the inquiry.

Since the last accreditation by the Commission, concerns about research misconduct have been rare, and most have been resolved by internal mediation. In that time, (as of September 2006) we have reported only two matters to the ORI.

All Ph.D. graduate students (regardless of the source of support) and postdoctoral fellows supported by National Institutes of Health/Training Grants are required to attend "Ethics Day."²⁰ This program has a didactic component and features small group, student-centered ethics case studies. The latter is highly valued by the students, but challenging to present effectively to large groups. In addition, graduate students are required to write a statement of what high ethical standards mean to them for their portfolios, which document an assessment of their progress. Master's students and some fellows are not included in these programs, although it is recommended that they seek training through one of these ethics programs. All professional students, M.S.N students, and special groups, such as the Virginia Alliance students, receive content-appropriate ethics training as an integral component of their didactic studies.

Clinical, and some postdoctoral, fellows receive ethics training as an integral component of the Clinical Research Symposium. It would be valuable for formal ethics training to be required of all students and fellows. However, innovative instructional approaches, such as Web-based training, should continue to be developed in such a way that they do not detract from, or dilute, the value of the small group ethics case studies.

“All professional students, receive content-appropriate ethics training as an integral component of their didactic studies.”

Compliance Program Structure

- UNMC Compliance Committee
- UNMC Conflict of Interest Committee
- Institutional Review Board (IRB)
- Institutional Animal Care and Use Committee (IACUC)
- Safety Committees
 - Safety Committee
 - Institutional Biosafety Committee
 - Radiation Safety Committee
 - Chemical Safety Committee
- Eppley Cancer Center Scientific Review Committee

Compliance

To ensure that all research is carried out in accordance with state and federal regulations, UNMC has a Compliance Program,¹⁹ which consists of a compliance officer and a Compliance Committee. The compliance officer is responsible for overseeing the development and coordination of implementation of policies, procedures and practices necessary to comply with federal, state, and local laws and regulations. The Compliance Committee supports the compliance officer and consists of representatives from all of UNMC's colleges, institutes and departments. The committee's role is to analyze UNMC's risk areas and oversee monitoring of internal audits and external investigations, as well as to assist the compliance officer with

communicating policies and procedures to their respective areas. UNMC also has several channels for reporting compliance concerns, including a Compliance Hotline to provide individuals with an additional, confidential vehicle. New employees are introduced to the compliance reporting channels at orientation.

Specific areas of compliance include:

- **Sponsored Programs Administration and Sponsored Programs Accounting.**

These offices are responsible for ensuring UNMC is in compliance with the federal regulations of the Office of Management and Budget and to maintain the integrity of accounting and administrative information related to research.

- **The Institutional Review Board.** The IRB reviews and approves of all human subject research conducted by faculty, students, staff or other representatives of UNMC, UNO, and The Nebraska Medical Center, or any human subject research conducted by anyone on the premises of UNMC, UNO, and The Nebraska Medical Center, including its community-based clinics. All UNMC personnel planning to conduct research involving human subjects must complete the Human Subjects Educational Module that is part of the Collaborative IRB Training Initiative.

- **The Human Embryonic Stem Cell Committee-Scientific Review Committee (HESC-SRC).** The HESC-SRC was established in response to a recommendation to create scientific review committees in the Nebraska Bioethics Advisory Committee's report entitled "Recommendations for Human Stem Cell Research" dated May 24, 2001.²¹ The committee, established in March 2000, consists of five UNMC faculty members and one unaffiliated external expert. Additional experts are consulted as needed. Plans are in place to augment the standing membership in response to recently issued guidelines of the National Research Council Institute of Medicine of the National Academy of Science (NAS). The HESC-SRC is housed administratively in the Office of Regulatory Affairs under the direction of the associate vice-chancellor for academic affairs, regulatory compliance. The committee is charged with reviewing research involving the derivation and/or use of human embryonic germ cells and human embryonic

stem cells. The HESC-SRC is currently being reconfigured as an Embryonic Stem Cell Research Oversight Committee (ESCRO), in accordance with NAS guidelines.

- **The Institutional Animal Care and Use Committee (IACUC).** The IACUC reviews and approves all animal subject research conducted by faculty, students, staff or other representatives of UNMC and UNO when the research is part of their institutional responsibilities, as well as all animal subject research conducted by anyone on the premises of UNMC or UNO.
- **Health Insurance Portability and Accountability Act (HIPAA).** HIPAA requires investigators to specify how protected health information (PHI) will be used and safeguarded during the process of research.
- **Institutional Biosafety Committee (IBC).** Investigators whose projects involve the use of biohazards must receive the approval of the IBC. NIH policy requires that universities receiving federal dollars establish IBCs to oversee research performed using recombinant DNA technologies and microbiological agents. Research involving recombinant DNA must meet or exceed NIH Guidelines for Research Involving Recombinant DNA Molecules. Written approval from the UNMC IBC must be obtained prior to the start of any research involving recombinant DNA. If exempt, a copy of the written exemption notification must be obtained. Research involving Biosafety Level 3 and/or 4 material is done in accordance with 32 CFR 626.18 and the UNMC IBC must approve the work.
- **Radiation and Chemical Safety Committees.** Operating under a Broad-Scope License, the Radiation Safety Committee establishes criteria by which it authorizes the use of radioactive materials. These criteria are the basis for the information contained in the license application. Once all criteria are met, the committee issues a UNMC Radioactive Material License to the investigator. In a very similar way, UNMC's Chemical Safety Committee monitors regulated chemical use on campus.

Mandatory compliance training has been established to educate all UNMC faculty, staff and students and meet regulatory requirements. This training is accomplished through several Web-based programs that are both internal (for example, HIPAA and confidentiality training) and external (for example, IRB training (Collaborative IRB Training Initiative (CITI)) sponsored by the University of Miami for all researchers using human subjects and members of the IRB).²²

Safety Practices

Achieving UNMC's mission can only be realized in a safe working environment. UNMC promotes occupational safety and health practices and strives to reduce work-related accidents and injuries through a formal injury and illness prevention plan.

Safety Operations provides support to administrators and staff in protecting UNMC property and ensuring a safe environment for patients, visitors, students and staff.

“Mandatory compliance training has been established to educate all UNMC faculty, staff and students and meet regulatory requirements.”

“In accordance with the Student Right to Know and Campus Security Act of 1990, crime statistics are maintained and publicized.”

The Safety Committee works to establish and maintain a safe and healthful environment. It is comprised of administration and employee representatives and selected ex-officio members. An annual report details UNMC safety activities and includes summaries on: worker injuries and work-related illness; safety audits, including those conducted in-house and by outside organizations; emergency management activities; training activities; and significant safety accomplishments. This report is available in the Accreditation Resource Room.

Emergency procedures and standard operating procedures have been developed for identified safety risks. An incident command system is activated when necessary to manage incidents. The objective is to minimize risk to students, staff and the public, as well as mitigate damage. All members of the incident command structure (40 individuals) have completed FEMA Course IS100 and IS700. UNMC participated in the statewide Terex 2004 and 2005 exercises and will be participating in the Terex 2006 exercise.

Campus Security is responsible for the physical security of the UNMC students, faculty, staff and assets. In accordance with the Student Right to Know and Campus Security Act of 1990, crime statistics are maintained and publicized. During calendar year 2004, 163 on-campus property crimes were reported. During calendar year 2003, there were no campus arrests for three categories of Part II Uniform Reporting Offenses, and no disciplinary referrals for three categories of Part II UCR Offenses.²³

Conflict of Interest Management

In April 2004, UNMC instituted a Conflict of Interest (COI) Committee to formally identify, review and manage conflicts of interest. In response to emerging national trends, UNMC is further revising its COI policy. Approval of UNMC's revised policy has been delayed by the efforts of NU Central Administration to produce a revised university-wide policy. NU considered several COI policy drafts, but faculty found them to be overly broad and complex. At this time, NU policy revisions are pending. Within the last six months, UNMC received approval to move ahead with its policy revisions.

UNMC's Sponsored Programs Administration (SPA) requires that principal investigators submit signed "disclosure of potential conflicts of interest" forms for each grant and contract greater than \$5,000. Federal regulations and NU Board of Regents policy require such disclosure.

While SPA's procedures ensure that conflicts relevant to each sponsored project have been reported, the Office of Academic Affairs has assumed the responsibility of tracking a faculty member's total outside commitments. In 2005, with the goal of enhancing current procedures, the Office of Academic Affairs received permission from NU Central Administration to include additional questions on the NU Disclosure of Interest form. In addition, Academic Affairs will be investigating the feasibility of an electronic tracking system to monitor the potential conflicts identified in these disclosures.

Use and Development of Intellectual Property

Material Transfer Agreements (MTA) are drafted, negotiated, and signed by an authorized signatory of the Board of Regents. These agreements define ownership, publication rights and confidentiality terms that are attached to research materials either coming into UNMC or leaving UNMC. For outgoing materials, the Intellectual Property Office (IPO) makes certain the agreement is consistent with the NIH Principles and Guidelines on Obtaining and Disseminating Biomedical Research Resources and the Bayh-Dole Act. For materials coming in, the IPO negotiates the agreement to ensure UNMC retains ownership in its own inventions and the ability to publish and disseminate experimental results in a timely manner. Participation from the general faculty on the application of intellectual property (IP) policies is encouraged by UNMC administration through the Faculty Senate standing IP committee. This committee is charged to review UNMC's policies for the orderly and fair handling of IP issues in light of system-wide policies.

In October 2003, the Board of Regents approved a new Patent and Technology Transfer Policy,²⁴ drafted and endorsed by the general counsel. This policy states "each invention by a member or members of the faculty or staff of the University resulting from performance of duties within the scope of University employment, or resulting from the use of University personnel, property, facilities, or other University resources, except where such use is minimal, shall be solely owned by the University." In return, NU allows inventors to share in the net proceeds derived from the licensing and commercialization of their university-sponsored inventions. NU also provides core facilities such as the IPO and UNeMED to allow for the evaluation, government reporting, protection, and commercialization of university inventions. As a result, the IPO and UNeMED make university technology available to the public through licensing in compliance with the Bayh-Dole Act. Appropriate milestones are used to ensure licensing leads to timely commercial development of inventions. As a result, in the past three years, UNMC has received 107 invention disclosures, filed 47 patent applications, executed 13 licenses, generated \$2.1 million in royalty income, and helped start three companies that utilize UNMC technology.²⁵

“NU allows inventors to share in the net proceeds derived from the licensing and commercialization of their university-sponsored inventions.”

SUMMARY OF CRITERION FOUR FINDINGS

Gathering the information for Criterion Four brought into sharp focus how interwoven acquisition, discovery and application of knowledge are at UNMC. The institution's leadership and resources support inquiry, balanced with social responsibility, as foundational to UNMC's commitment to fostering a lifetime of learning for its students, faculty and staff. The following strengths, challenges and opportunities became apparent:

Strengths:

- An overwhelming percentage of students, faculty and staff believe that UNMC values research.

- Large increases in research funding in the past seven years are significant.
- Increased numbers of complex, multi-investigator research grants facilitate achievement of research goals.
- Growth in the number of educational and training grants from a variety of agencies enhances UNMC's research reputation.
- Addition of new major core facilities supports UNMC's research endeavors.
- UNMC emphasizes interdepartmental training for graduate students.
- Tobacco Settlement dollars from the state provide funds for new research programs.

Challenges and Opportunities:

- UNMC aspires to attain \$200 million in extramural research funding within the next several years.
- The institution needs to recruit scientists with federal grants into its new and projected facilities.
- UNMC needs to do a better job of mentoring and providing research time for junior clinical investigators.
- The numbers of NIH-funded specialty training programs must be increased.
- Increases in the cost of information resources pose an ongoing challenge for the library.
- Loss of previously available federal resources impacts innovative projects in all units.

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- ¹² SWAT analysis by TIG; Resource Room
- ¹³ Association for Assessment and Accreditation of Laboratory Animal Care, and the Association for the Accreditation of Human Research Protection Programs (accreditation in process); Resource Room

- ¹⁴ LCME Accreditation Report; Resource Room
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- ¹⁶ Student Handbook; <http://net.unmc.edu/care/docs/handbook.pdf>; Resource Room
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- ²² CITI IRB Training; www.miami.edu/citireg
- ²³ Campus Crime Statistics; Resource Room
- ²⁴ Board of Regents Policy 4.42; <http://www.nebraska.edu/board/RegentPolicies.pdf> and Resource Room
- ²⁵ Intellectual Property Office Materials; Resource Room

CHAPTER 5

Criterion Five: Engagement and Service

As called for by its mission, the organization identifies its constituencies and serves them in ways both value.

UNMC's commitment to engagement and service is evident from its top leadership through every college and unit. Under the direction of Chancellor Harold M. Maurer, M.D., the outreach to UNMC's constituencies charged by its mission has flourished. As identified by its mission documents¹ – and those of its colleges, schools, institutes and teaching hospital – UNMC's constituencies are students, faculty and staff; patients in the state, region, nation and world; the people of Nebraska; and alumni and donors. This chapter will highlight some of UNMC's major efforts to engage and serve its constituencies.

*“UNMC Constituents
are world-wide.”*

CORE COMPONENT 5A

The organization learns from the constituencies it serves and analyzes its capacity to serve their needs and expectations.

UNMC and its leaders regularly analyze the needs of the constituencies we serve and plan programs, facilities and personnel to meet the changing requirements of these groups. The information gathered from interactions with constituency groups is used to determine policy, programming, instruction and outreach strategies. As described in Chapter 2, UNMC's planning processes involve a good deal of analysis of how best to fulfill its mission by serving its constituencies with integrity. This multi-faceted approach touches upon every aspect of the institution, from top leadership through each college and school, the hospital, the library, continuing education and more.

The Nebraska Medical Center/UNMC Physicians

Highly visible opportunities for engagement with, and service to, a variety of constituencies occur through UNMC's partners The Nebraska Medical Center, its 689-bed teaching hospital, and UNMC Physicians, the faculty practice group. Through the network of clinics and inpatient facilities, UNMC students and medical residents have the opportunity to assist in serving more than 130,000 patients per year from the state, region, nation and other countries. This service also annually includes more than \$12 million in uncompensated charity care to patients in need. The effectiveness of The Nebraska Medical Center's service to its constituencies was

recently recognized with a 2005 J.D. Power and Associates award for Quality Patient Experience.² As the primary site for clinical rotations for health professions students and residents, The Nebraska Medical Center is a key component of their education – in fact, the hospital provides about \$30 million annually in academic support for UNMC.

The hospital regularly surveys its constituents – patients, staff physicians, and nursing, clerical and administrative staff – and modifies operations based on this input. Formal clinical hospital affiliations with over 80 other hospitals in Nebraska, Iowa and Missouri via the Mid America Hospital Alliance gives our teaching hospital input from the administrators of those institutions regularly, and clinical care is modified accordingly. Documents detailing the hospital/UNMC affiliation agreement, clinical care, actual survey results, and other relevant information are available in the Accreditation Resource Room.



Center for Continuing Education

Another sign of UNMC's attention and response to an important constituency is the Center for Continuing Education (CCE). The CCE's mission is to provide ongoing education and updates to the physicians, nurses, pharmacists, dentists and other health care providers primarily in the state and region.

Educational programming. In academic year 2005-2006, the CCE sponsored 66 "live" or traditional continuing medical education (CME) activities, reaching nearly 2,000 physicians and 2,500 nonphysicians, 50 regularly scheduled conferences, more than 6,400 Internet activities, and 33 journal-based CME activities. CME course programming can range from a brief afternoon program to the two-week Family Medicine Review, a program begun in 1971. Based on feedback from constituents, the CCE is steadily adding new educational programs. In addition to the continuing education activities sponsored by UNMC units, the CCE also works with The Nebraska Medical Center to coordinate and accredit its educational activities for physicians and other health care providers.

Outreach. As part of the center's efforts to carry out UNMC's mission to the underserved, a fulltime professional develops activities that target rural hospitals, physician groups and other health care providers throughout Nebraska, western Iowa, and northwestern Missouri. During 2005-2006, 28 programs were held throughout Nebraska and Iowa; of the 318 participants, 114 were physicians. These programs are developed in response to requests from community hospitals and providers.

Emergency Medical Training. The UNMC CCE is recognized as a training agency by the American Heart Association for its Basic Life Support (BLS), Pediatric Advanced Life Support (PALS) and Advanced Cardiac Life Support (ACLS) courses. In the 2005-2006 academic year, 84 activities were offered to nearly 1,000 participants.

Collaborative multidisciplinary activities. A group of eight hospital systems and health care organizations have initiated a stroke symposium to promote stroke awareness, education and treatment in Nebraska. Other organizations such as the American Heart Association are invited to be members of the planning committee, which organizes, plans and manages the symposium each year for Nebraska health care professionals.

Joint sponsorship, Internet, enduring materials and journal CME. The CCE accredits a variety of jointly sponsored educational activities, such as those with the Association of Academic Health Centers (a partnership developed in early 2005); the National Association of Medical Directors of Respiratory Care, CityMatCH; and the Network for Medical Communication and Research. Since 2001, the center has accredited over 18,000 CME activities on the eMedicine Web site; it also accredits printed materials and journal CME activities.

Chancellor's Office and Other Engagement and Service Initiatives

Visits to Nebraska communities. Chancellor Maurer, his leadership team and UNMC deans regularly visit communities across Nebraska, meeting with local health care providers and community groups. Over the past five years, they have visited more than 25 communities that vary in size from populations of 1,500 to 47,000 and include all areas of the state. These visits allow for community feedback and interaction, and have helped UNMC leaders better set priorities for meeting citizens' needs as well as the state's health care workforce needs.

The COD annually provides a four-day caravan across Nebraska in which the dean, director of alumni affairs and two faculty members make four stops in rural communities to interact with dental constituents. The dean and faculty provide an update on the COD and invite input into COD programs, as well as provide free continuing education to the attendees. In 2006, more than 400 persons attended the sessions.

Rural Health Education Network. The Rural Health Education Network (RHEN) was started in the early 1990s with support from the Nebraska Legislature in response to the shortage of health professionals in rural Nebraska. RHEN has continued to expand and now serves as the umbrella under which most UNMC rural health education initiatives are housed.

This network entails UNMC partnering with rural communities, primary health care providers, health care institutions and other higher education institutions. Partnerships involve mutual representation on governing and advisory boards, sharing of funding resources, and community support for student pipeline activities. All programs affiliated with RHEN undergo periodic evaluation and modification based on feedback from high school educators and health care providers and administrators.

“Community feedback and interaction are valuable to UNMC.”



Examples of RHEN partnerships, many of which are detailed in Core Component 5c, include:

- 14 years of co-sponsoring regional and state science meets for 8th graders
- Teachers Connections: Nebraska science teachers come to UNMC to learn the latest scientific applications from UNMC faculty; a partnership with the Nebraska Academy of Teachers of Science
- Teachers Retreat: A summer program for science teachers to learn new teaching techniques and applications of science
- 2005 NIH grant-funded program focusing on elementary school teachers and families from Native American reservations in South Dakota and Nebraska



- Rural Health Opportunities Program (RHOP): This 15-year partnership with two Nebraska colleges, Wayne State and Chadron State, offers students early admission to selected slots in nine UNMC health profession programs. The RHOP has a very high success rate in returning these graduates to practice in rural communities.
- Weeklong workshops: Workshops at UNMC for undergraduates from any public or private Nebraska institution of higher learning

“Community synergy improves the quality of life in Nebraska.”

The future focus of the RHEN Office will be to continue current activities and expand to include a behavioral health fields pipeline, youth drug education, child abuse prevention and other activities that involve local community synergy and resources to improve the quality of life and economic status of rural and underserved Nebraska communities.

Area Health Education Centers (AHEC). UNMC received its first AHEC funding in 2001 to complement the activities of the RHEN in providing more health professionals for underserved areas of the state. The 2005-06 budget of \$1.96 million funds five area centers: Grand Island (central); Norfolk (northern); Scottsbluff (western); Beatrice (southeast); and Omaha (urban). These AHECs focus on the health profession pipeline, telecommunications, medical interpreting for Latino populations, and interprofessional education. Local AHEC governing boards have representation from public health districts, hospitals, mental health agencies, K-12 schools, undergraduate programs, health care providers, and legislative and state education and health care officials. In September 2005, the Urban AHEC was established in Omaha, expanding the focus of the program to include urban underserved populations.³

Bioterrorism Preparedness

As introduced earlier, and fully explained in Core Component 5c, UNMC has taken the lead in this region regarding federal and state initiatives to establish and improve the public health system’s reaction to biological threats and events. As

stated in Core Component 2a, shortly after September 11, 2001, UNMC leaders saw the need to begin building upon expertise in this area of public service. These efforts include: the Nebraska Public Health Lab-BioSecurity Preparedness Laboratory at UNMC;⁴ The Nebraska Medical Center's unique 10-bed biosecurity containment unit; UNMC's Center for Biosecurity, part of the NU Center for Biosecurity;⁵ and the Nebraska Center for Bioterrorism Education, located at UNMC and jointly sponsored with Creighton University.



Community and International Rotations and Preceptor Networks

More than 1,000 preceptors make up an important constituency. These volunteer faculty members in a variety of health professions train students on clinical rotations in the state, region, nation and other countries. In each of the past several years, health professions students have served rotations in almost every community in Nebraska, in several neighboring and more distant states, and on six continents. Each semester, more than 400 students participate in rotations that are from three weeks to two months long.

All health professions students participate in rotations beyond their UNMC campuses. Students rank these external rotations as among the best educational experiences they receive, and preceptors say they appreciate the opportunity to work with students because it provides an intellectual challenge and improves their clinical care.

UNMC prizes its relationships with its preceptors because they are valuable to our students' education. Preceptors are regularly surveyed and rotations are modified whenever possible to meet the needs of the preceptors and their communities. For example, the College of Medicine (COM) governs its community rotations via a standing preceptorship committee. The members of this committee, appointed by the dean of the college, include practicing preceptors and COM students. All of UNMC's academic units, with assistance from the AHEC staff, continually work with Nebraska rural communities to increase the number of community preceptors and clinical rotations in rural areas of need.

Responding to the Needs of Diverse Populations

As mentioned in the Introduction and earlier chapters, UNMC is keenly aware of its need to reach out to diverse populations, whether they are potential students or people in need of health care. UNMC leaders are constantly learning from these constituencies what their needs are and designing strategies to meet them. A few good examples include:

Urban AHEC. As just mentioned, UNMC has a history of working to provide more health professionals in the underserved rural parts of the state. That effort was expanded in 2005 through the Urban AHEC, a partnership with Creighton University Medical Center. The Urban AHEC in Omaha broadens the focus of the

*“UNMC thinks
outside the box.”*

AHEC program to include urban underserved populations and recruit more ethnic minorities into the health professions.

Minority Health Education Research Office. Minorities are often underrepresented in medical research data that would benefit their communities. In an effort to improve the health of underrepresented minorities and improve their access to health information, UNMC partners with the Omaha community through the Minority Health Education Research Office. This effort includes a variety of community outreach activities, such as health fairs, health screening clinics, monthly meetings with church groups, cable TV shows, and health advocacy classes for adults and teens. The programs strive to be innovative, “thinking outside the box” to reach the most number of minorities possible. For example, one activity trains inner city barbers about the signs of prostate cancer, so they can pass the information along to their customers.

Academic Affairs/Graduate Studies Community Outreach. This department co-sponsors many activities that reach out to minorities or other underserved groups, including:

- **Bridge to Success.** UNMC partners with Omaha Public Schools and Metro Community College to support minority high school students taking college courses through Metro Community College, with the goal of their eventual attendance at UNMC.
- **Summer Medical and Dental Education Program (SMDEP).** Launched in May, 2006, this intensive 6-week-long residential program targets minority college freshmen and sophomores and community college students from disadvantaged, low income backgrounds. SMDEP is a partnership with all the undergraduate colleges in Nebraska, UNMC’s COD, and UNMC COM Departments of Family Medicine, Internal Medicine, Surgery, Pediatrics, and Emergency Medicine. This program received a \$1.6 million federal grant.
- **Project LEAD (Legal Enrichment and Decision Making).** Project LEAD helps middle school students recognize and analyze potential consequences of the difficult decisions they face during adolescence and beyond. The focus is on peer pressure, self-esteem, proper health and leadership. Project LEAD is a partnership with the Douglas County Attorney’s Office and the Omaha Medical Community.
- **Educare.** Dedicated to helping families raise strong and healthy children, Educare is a state-of-the-art early childhood center that provides all-day, year-round care and education to economically disadvantaged children from birth through age five. UNMC provides health screenings for children and health education programs for parents. Educare is a partnership with Nebraska’s Departments of Education and Health and Human Services and Omaha Public Schools.



Outreach to Native Americans. Nebraska is home to thousands of Native Americans, many tribes and several reservations. UNMC is committed to using its resources to engage the state's Native Americans through lifelong learning and wellness education to improve their health. Over 4,000 tribal members have taken part in several ongoing initiatives sponsored by the School of Allied Health Professions (SAHP), the Colleges of Medicine, Dentistry and Nursing, and the Chancellor's Office.

Diabetes Focus. Death due to diabetes in the Native American population is four times the rate for white Nebraskans. The SAHP developed and teaches three classes at two tribal colleges that prepare rural tribal members to be paraprofessional, certificate-level diabetes education assistants; the interdisciplinary SAHP team also collaborates with the Interdisciplinary Tribal Diabetes Programs at Macy and Winnebago, NE. SAHP's Clinical Nutrition Program provides services by dietetic interns at Winnebago and Macy that include group teaching on diabetes prevention/management; home visits and cooking classes; identification of educational needs and development of teaching materials; and occasional assistance with a school-based after-school program for children. SAHP also has worked with tribal members in sponsoring fitness walks and healthy food stands at summer powwows.

The COM Department of Internal Medicine also works with the Winnebago and Omaha tribes on diabetes education, as well as with the Santee Sioux on risks of obesity in youth; with the Ponca tribe evaluating the prevalence of hepatitis C and its relationship to risk of glucose intolerance or diabetes; with the Rosebud Sioux to identify prevalence of impaired glucose tolerance, insulin resistance and diabetes in youth, and to identify the best risk predictors. The COM also sponsors a tribal project involving subclinical hypothyroidism.

Other endeavors with Native Americans include: the CON's evaluation of asthma prevalence in Native American children and work on diabetes, obesity and asthma prevention with the Northern Plains Tribal Epidemiology Center; the Chancellor's Office work with tribes to develop Institutional Review Boards; SAHP assistance in obtaining an Indian Health Services special diabetes program for Indians competitive grant proposal entitled "The Ho-Chunk Hope: A Diabetes Free Future;" and COD rotations with the Macy, Winnebago and Santee tribes, and a specialty care rotation in endodontics with the Ponca tribe.

One of UNMC's motives for this work in Native American communities is to recruit students with the eventual goal of providing professionals to serve their fellow tribal members. The SAHP and COM work with Little Priest Tribal College in Winnebago to facilitate research education and science promotion in its college classes. UNMC has plans to partner with the Aberdeen Area Tribal Chairmen's Health Board to work with tribal schools in Nebraska and South Dakota to develop, implement and evaluate the health science curricula for Native American youth.

UNMC also is involved in introducing research and health professions to Native American students through the Biomedical Research Infrastructure Network, a part of the INBRE award described in Chapter 4, and an affiliation with Fort Lewis College in Colorado, which has a high percentage of Native American students. Many academic units at UNMC offer job shadowing, on-campus workshops and visits, health fairs and career fairs for Native American students. Also, UNMC's Office of Student Equity and Minority Affairs is involved with the Omaha Public Schools for recruitment of Native Americans into the health professions.

The SAHP collaborates with the Interdisciplinary Tribal Diabetes Programs at Macy and Winnebago to plan and implement interdisciplinary clinical experiences for UNMC students during rotations in the rural tribal communities; nutrition, physical therapy, clinical laboratory science, physician assistant and nursing students participate.

The COM has provided free continuing education credits for health professionals from Nebraska tribes to the annual Diabetes Symposium. The SAHP sponsored a "War on Diabetes" Symposium in partnership with the Winnebago Tribe, Nebraska Health and Human Services, The Intertribal Bison Cooperative and the SEVA Foundation. This successful three-day symposium attracted participants from the Indian Health Services and tribal members from more than 10 states.

UNMC is proud of its comprehensive, multidimensional efforts to reach out to Native Americans, improve their health, and bring more of them into health professions.

Community Care Councils. As detailed in Core Component 5c, UNMC engages two diverse populations in the city of Omaha through the North Omaha Community Care Council and the South Omaha Community Care Council. These community partnerships provide programs and services to areas inhabited by largely low-income and minority people.



Alumni Associations

UNMC is supported by many active alumni associations. Each association maintains communication with its alumni through various means and offers educational and social events as dictated by feedback from the alumni. A central administrative office supports the various alumni associations, which collectively have a current membership of 31,501.⁶

Legislative Interaction

In order to assess the needs of UNMC's constituencies via their elected state officials, the Chancellor's Office maintains liaison with the Nebraska Legislature. This legislative liaison aids communication between UNMC and the Legislature by testifying before committees and through written exchanges with legislators. UNMC uses input from these interactions to alter its programs to meet the needs of the people of Nebraska.

There also is a legislative team that represents a cross-section of interests and units from UNMC and The Nebraska Medical Center, including a student representative. It coordinates a timely review of the potential impact of proposed state legislation on UNMC and the hospital, advises leaders on institutional positions pertaining to legislative measures, and recommends faculty, staff, students or other experts who could provide input on legislation to state senators.

In summary, UNMC is constantly learning from its multiple constituencies and analyzing its capacity to meet those needs. Many of those efforts have resulted in the programs, changes and innovations mentioned here and in numerous other locations in this report. However, the fall 2005 survey revealed that there is an apparent disconnect among some UNMC faculty in how they perceive learning from their constituents. The survey showed that only 65.8 percent of the faculty think the organization does a good job in determining needs, although 72.6 percent think UNMC does a good job of analyzing its ability to meet those needs. The survey showed that staff (71.3 percent) and students (82.2 percent) do believe UNMC does a good job in learning about constituents' needs, and at 75.1 percent and 85.7 percent respectively, the staff and students think UNMC does a fine job in analyzing those needs.

CORE COMPONENT 5B

The organization has the capacity to engage with its identified constituencies and communities.

UNMC's mission-driven capacity to engage with its identified constituencies and communities is largely explained in Chapter 2. UNMC's human, financial and technological resources, facilities and external relationships are all considered in its structures and processes, enabling it to go beyond the status quo in engaging with those it serves.

This view is borne out by the 2005 survey. All surveyed groups gave high marks to UNMC's commitment to engage with its constituents and communities. The survey showed that 78.4 percent of the faculty, 80.6 percent of the staff, and 86.8 percent of the students agreed or strongly agreed that UNMC is engaged with these identified groups.

Many of the examples of UNMC's service to internal and external constituencies are discussed in Core Component 5c and throughout the report, but this section highlights some that expressly show our exceptional capacity to engage with our identified constituencies and communities.

Engaging Via Mass Media

In support of the advancement of UNMC's programs and faculty, the Department of Public Affairs pursues an aggressive media relations program, which

complements efforts in internal communications and publications, Internet communications, marketing and community relations.

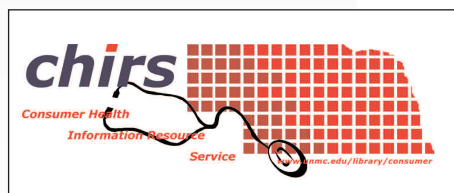
Each day, the media team receives an average of five media inquiries from local, national and international media seeking interviews with UNMC health experts. The media team also proactively seeks placements of its news stories in local and national media. A variety of messages about UNMC are seen or heard daily through the radio, television, newspapers and other media.

On average, UNMC Public Affairs holds one news conference a month announcing research breakthroughs and other important developments. Each year, Public Affairs is responsible for more than 4,000 media placements about UNMC. Public Affairs' media relations efforts are supported by a daily online employee newsletter and Web site, which feature stories about the latest research, education and patient care initiatives. The employee newsletter, *UNMC Today*, also provides links to media stories about UNMC. Because the Internet is such a vital link to constituents, Public Affairs has completed a redesign of the Web site, which received 3.97 million visits in FY 2004-2005, a 71 percent increase over the previous year. Visits to the student home page grew to 246,228, a 56 percent increase.

Each Wednesday, from 10:30 to 11 a.m., guests from around the UNMC campus are interviewed by two faculty members on the "Community Health Line" radio program on KIOS-FM (91.5). Another faculty member hosts a television show called, "Valda's Place," that runs regularly on a local cable television station. The 30-minute health information television show focuses on health disparities and other aspects of health of particular interest to people of color and underrepresented groups. It features local and national health care experts, providers and organizations, and serves as a showcase for special projects of UNMC and the hospital.

Providing Health Information: McGoogan Library of Medicine

Consumer health information services. The McGoogan Library of Medicine serves not only the students, residents, faculty and staff of UNMC, but all Nebraska residents through its Consumer Health Information Resource Service (CHIRS). Initiated in 1985, CHIRS was a pioneer program and became a model for other U.S. libraries. In 2004, CHIRS was recognized for excellence by the National Commission on Libraries and Information Science.



Through CHIRS, the library provides information that allows patients to have well-informed discussions with their health care providers and to make informed decisions about care for themselves and their families. The library does not diagnose, prescribe or advise, nor does it ever intrude in the provider-patient relationship. CHIRS' primary objective is to facilitate communication between patients and health care providers. The program also provides education and support for Nebraska's public librarians, empowering them to answer basic

health questions at the local level. The McGoogan Library serves as a backup by dealing with highly technical or complex questions that require expertise in searching medical and/or scientific databases. The library maintains a strong collection of health-related materials for the nonscientist that can be borrowed by any individual with a Nebraska driver's license. The collection also gives public libraries a head start in deciding what to purchase for their own shelves. The service is available online or via a toll-free telephone number. CHIRS has served more than 10,000 Nebraskans and patients from other states and countries being treated at The Nebraska Medical Center since 1985. UNMC does not charge for literature searches or articles delivered by U.S. mail or e-mail.

Following the Clues: A Visit to the Doctor and the Library. Because international cultures exist in all library audiences, the McGoogan Library of Medicine initiated a special outreach effort. With a grant from UNMC, five medical librarians took on a project to create and distribute information to an increasingly diverse and non-English speaking population base in Nebraska. The project promotes access to the medical system and finding consumer health information. The project was filmed as a silent movie and has been produced in multiple versions with narrated translation in English, Spanish and Sudanese-Neur. Topics covered include making a doctor's appointment, checking in at the reception desk, undergoing a physical exam and visiting a public library for further health information. More than 600 DVDs and videos have been distributed to date free of charge throughout the country.

Other health information services. Over the years, the library has employed a number of public outreach strategies. These include pocket cards, posters, brochures, the library's Web site, and a consumer portal from the hospital Web site. In fall 2004, the library initiated paid advertising in the Omaha-World Herald (daily circulation over 200,000) in an effort to reach more potential users. The monthly World-Herald "Health Matters" supplement, which is distributed statewide, features our quarter-page ad highlighting either CHIRS or healthHQ,⁷ a Web-based list of Nebraska support groups maintained by the library. The request rate has doubled as a result of the ads.

Fontenelle School. The library's relationship with Fontenelle Elementary School evolved out of UNMC's Adopt-A-School Partnership and a program that matches UNMC departments with families needing holiday assistance. Throughout the year, McGoogan staff conduct voluntary fundraising activities to benefit the library of this Omaha public elementary school. These activities typically raise \$1,000 to \$1,500 annually, which comprises 35 to 40 percent of Fontenelle's library book budget. With the school's librarian, McGoogan staff select books, purchase and deliver them to the school. During National Library Week 2005, the library hosted a visit of the Fontenelle School Student Council, introducing them to medical libraries and their services. A highlight of this visit included a tour of the library's special collections and archives, which are rich in artifacts related to the history



of science. The ultimate goal of the visit was to encourage students from a disadvantaged inner-city school to consider a college education and possibly a career in the health professions.

Engaging Students With the World Around Them

UNMC's colleges and schools do not keep students and residents in an ivory tower. An important part of their education and training involves engaging with the communities that surround UNMC's campuses and other regions and countries. All of UNMC's colleges, schools and institutes have programs that link students to communities and many of these programs are examined in Core Component 5c, but several also deserve mention here.

Medicine outreach programs. These major outreach activities were initiated by the COM and now involve student volunteers from the other academic programs as well:



*“Reaching out within
the community to meet
healthcare needs.”*

- **SHARING Clinic.** In 1997, UNMC students identified a need for health services for vulnerable populations in Omaha. The first Students' Health Alliance Reaching Indigent and Needy Groups (SHARING) Clinic began operation on Sept. 9, 1997, with the mission of establishing a student-run, faculty-supported health care resource to provide quality care to uninsured and underinsured low-income people. Originally developed by medical and nurse practitioner students, other health professions programs have become involved over the years, including students from clinical laboratory science, pharmacy, physician assistant, medical nutrition, and physical therapy. Volunteer and paid interpreters also assist in the delivery of care to the culturally diverse population served at the clinic.

The SHARING Clinic has a collaborative relationship with Hope Medical Outreach Coalition, the coordinator of pro bono specialty care in the Omaha area, and the UNMC Family Health Care Center (FHCC), a CON nurse-managed primary care practice located in the same building. Laboratory and radiology services are provided free to patients. Prescriptions are provided for a \$3 co-payment, and many patients receive free medications as samples or through pharmacy assistance programs. Patients are asked to pay \$10 for office visits, but this fee is waived if a patient demonstrates need.

- **GOODLIFE Clinic.** The success of the SHARING Clinic, its contribution to the community of underserved patients, and its importance to students' educational experience led to the opening of the GOODLIFE (Greater Omaha Outreach for Diabetes Lifestyles Impacting Fitness and Education) Clinic in 2001. The focus of this clinic is treatment of patients with type 2 diabetes mellitus.
- **RESPECT Clinic.** Students also saw a need in the community for sexually transmitted disease testing and treatment, including HIV testing and counseling. The RESPECT (Responsible Early STD Prevention Education and Community Testing) Clinic opened in late 2001, working closely with the Douglas County Health Department and the Nebraska AIDS Project.

Currently these three clinics have over 1,400 patient encounters a year, providing high-quality primary care to uninsured or underinsured individuals, while allowing students of many disciplines to participate and interact with patients. Students learn about social, cultural and economic factors that affect the health of a community. More than 1,000 learning and service experiences are completed each year by students who volunteer at the three clinics. In addition, more than 30 volunteer faculty and resident providers/practitioners supervise the care given by the students.

Nursing outreach programs. In addition to a variety of informal outreach activities, the CON has four formal outreach programs: the Lincoln Senior Health Promotion Center; the Mobile Nursing Center; the Ambulatory Care/Community Health Nursing Project; and the Family Health Care Center.

- **The Lincoln Senior Health Promotion Center.** The center was established in 1999 as a partnership with the Lincoln Area Agency on Aging and Lifetime Health. Other partners include 11 ActivAge Centers, Faces of the Middle East, the NAF Multi-cultural Human Development Corporation, the Hispanic Downtown Center and the Lincoln mayor's office. Services are offered to people 65 and older who are primarily low-income; 25 percent are members of minority groups. Services include health screenings, teaching, referral and advocacy. In 2003, services expanded to provide mental health group sessions and home-visits.
- **The Family Health Care Center (FHCC).** The FHCC was established in 1993 as a community-based, nurse-managed health facility in south Omaha. Nurse practitioners and clinical nurse specialists at the clinic see over 360 patient visits each month. Over 60 percent of FHCC patients are minority, and 68 percent are uninsured and living in poverty. They are primarily working poor and nonworking impoverished people who do not qualify for Medicare or Medicaid, do not have insurance and/or cannot afford the costs of an office visit to a full-fee health provider. Many patients are new immigrants or undocumented residents and/or suffer from chronic mental illnesses.
- **Ambulatory Care/Community Health Nursing Project (ACCHNP).** This is a collaborative educational service program between the CON and UNMC Physicians primary care clinics. The ACCHNP began in 1988 to provide quality community/public health nursing education and improve outcomes for patients through a collaborative and innovative nursing delivery model. Approximately 120 individuals and/or families are served for a total of over 1,600 hours of undergraduate student time each year; the primary modality is the nursing home visit. All referred patients are considered regardless of age, race/ethnicity, gender, socioeconomic status, or diversity of any other kind; however, priority is given to vulnerable clients who need care but do not qualify for other community/public health nursing services.





- **Cosmopolitan-UNMC Mobile Nursing Center (MNC).** The MNC provides prevention and health promotion services to diverse populations via a 35-foot mobile unit that travels throughout Nebraska and western Iowa. Those targeted are uninsured and underinsured rural and urban people who have multiple barriers to health care, including limited resources, complex health problems, health literacy and educational deficits, language barriers, and cultural beliefs and practices. Students and professionals provide services that include screenings for diabetes, blood pressure and cholesterol monitoring, foot and breast screening, health teaching and health provider referral, mostly free of charge. Suspicious findings are referred to a primary care practitioner, and up to five follow-up telephone contacts are made to assure that the health issue is addressed. During the 2004-2005 academic year, the MNC visited 83 sites (52 urban, 31 rural) and served 2,681 clients. The MNC has a community advisory board that it relies on for input.

Dentistry outreach. Three of many COD programs are highlighted here to demonstrate the college's emphasis on engagement and service. These programs serve the western Panhandle of Nebraska, Lincoln and surrounding communities, and Omaha.

- **Panhandle program.** Dental hygienists historically have provided community service in schools and other settings, but for many years there has been a shortage of dental hygienists in western Nebraska. To meet this need, the COD opened the West Division of the dental hygiene program in 2003, graduating the first class in 2005. There are four students per class and each class spends two years at the Panhandle Community Health Center, serving the western one-third of Nebraska and the Pine Ridge Native American Reservation area of South Dakota. The four 2005 graduates all are practicing in western Nebraska and continuing outreach and service through their offices.
- **Children's Dental Days.** Over the years, it became apparent to COD administration, faculty and students that quite a few children were "falling through the cracks" regarding dental care in certain areas of Nebraska. To provide care for some of these children and to involve dental students in community service, the COD initiated Children's Dental Days. Once a year, over two days, the entire college focuses on seeing and treating these children at no cost: first-year dental students provide preventive dentistry information and coordinate educational games and activities; second-year students serve as dental assistants; third- and fourth-year dental and dental hygiene students (along with faculty) provide dental care. Initially, children from Lincoln, Omaha, Beatrice, Norfolk, Columbus, Madison, Grand Island, Hastings, Lexington, and Harvard were bused to the COD in Lincoln. The past two years, one Children's Dental Day has taken place at the college in Lincoln and the other in western Nebraska (Alliance and Sidney). Over the past five years, nearly \$800,000 in dental services have been provided.

- **Omaha Preventive Care.** Research indicates that dental decay can be reduced 17 percent to 54 percent by applying sealants to the surfaces of posterior teeth. Topical fluoride treatments are also very important. For the past four years, COD dental hygiene students have gone to Omaha to provide preventive dentistry instruction, fluoride treatments, and dental sealants for children from 15 Omaha Public Schools identified as being in need. To date, 2,058 children have received preventive dentistry instruction, 1,537 received sealants, and 1,536 received fluoride treatments.
- **Sonrisa.** The COD has participated in the Sonrisa Project in Hastings, Nebraska, for several years. This joint project also involves the Central Community College (CCC) dental hygiene program and the South Heartland District Health Department, and provides comprehensive oral health services to children who have no access to dental care. Dental students rotate to Hastings for four to six days during the fall to provide comprehensive restorative care at the CCC clinic. Each year this project sees about 100 children and provides about \$100,000 in free oral health care services.

Pharmacy outreach. The commitment of the College of Pharmacy (COP) to its constituencies takes many forms through clinical and public health services, professional and public education, recruiting of underrepresented minority students, and support for community pharmacists. Interaction with the COP's network of practicing community pharmacist preceptors is another important link. Many of these activities are described in Core Component 5c, but a few programs are noted here:



- **Operation Immunization.** The COP's Academy of Student Pharmacists holds Operation Immunization annually in partnership with a local supermarket chain. The main goals of the campaign are to educate and train student pharmacists to administer vaccinations while providing valuable immunizations to the community. In 2005, 3,230 people were immunized and became more educated about vaccines by interacting with the student pharmacists and asking them questions.
- **Pinky the Elephant.** Pharmacy students volunteer to do "Pinky the Elephant" poison prevention presentations for children in prekindergarten through first grade in the Omaha Public Schools in conjunction with the Nebraska Regional Poison Center. Over the past three years, 69 pharmacy students made 35 presentations to 2,808 students.
- **SHARING Clinic participation.** Three third-year pharmacy students serve as board members to help in decision-making and implementation of policies for the clinic. Students are responsible for maintaining an inventory of free medication to be used to fill many of the patient's prescriptions. Pharmacy students are paired up with students from other disciplines and assist in development of appropriate treatment plans for patients. They also are involved

in the education and counseling patients regarding pharmacotherapy. In the 2005 – 2006 school year, more than 325 student pharmacists visits were recorded at the SHARING Clinic.

- **Preceptor Education Program (PEP).** This continuing education program for COP preceptors is offered in three regions of Nebraska each fall. Designed and presented by COP faculty, PEP provides preceptors and other local pharmacists with current information on clinical topics such as drug therapies for specific diseases.

Munroe-Meyer Institute outreach. UNMC's Munroe-Meyer Institute for Genetics and Rehabilitation (MMI) provides education, service, research and rehabilitation programs for children and adults with genetic, developmental and physical disabilities. A sampling of MMI's many engagement efforts include:

- **Neonatal follow-up.** MMI provides follow-up care through clinics at eight Nebraska hospitals to infants who received care in a neonatal intensive care unit. Since premature infants or infants with serious medical problems are at risk for developmental delays, this program was formed to assess these children at regular intervals and refer them for services if delays in development occur. Early identification is important because early intervention has proven effective in reducing children's developmental lags.
- **Rural Behavioral Health Care Program.** Shortages of behavioral health professionals for Nebraska children, especially in rural communities, led MMI to respond by placing behavioral health personnel in local pediatrician offices. Those participating are either postdoctoral psychologists completing internships at MMI or those who have completed internships and wish to stay on in the Nebraska community where they have been providing behavioral health services. The program presently operates in clinics in Hastings, Columbus, Fremont, Chadron, Nebraska City and Plattsmouth.
- **Genetic services.** MMI genetic staff travel to multiple clinics in Nebraska and South Dakota several times a year to provide genetic services and coordinate services with local medical staff. Currently, genetic clinics are provided in: Scottsbluff; the Indian Reservation at Winnebago; Kearney; North Platte; the Boys Town National Research Hospital in Omaha; and Rapid City and Pierre, South Dakota.
- **Consumer board.** MMI has a Consumer Advisory Board that meets quarterly to review programming and consumer satisfaction. The board consists of people with disabilities, family members of people with disabilities, and representatives of schools and agencies in Nebraska that support those with disabilities. MMI also has two family consumer coordinators who provide constituents a monthly opportunity to meet and discuss issues, advocate for persons with disabilities at the state level, and coordinate with state agencies in the provision of services for individuals with disabilities. In addition, MMI conducts a yearly statewide review of its services related to developmental disabilities.

Investing in Future Health Science Students

Chapter 3 details all the ways UNMC supports its students and residents. Still, being a future-focused organization, UNMC is innovatively reaching out to younger students – undergraduate, high school- and elementary school-age – to interest them in careers in health science.

Summer research programs. UNMC has provided summer research opportunities for undergraduate students for a number of years. Prior to the summer of 2005, each department implemented its own programs, but under the direction of the vice chancellor of academic affairs, a more coordinated effort began.

In the fall of 2004, a committee was formed to develop a common application form, processes for application and the summer enrichment seminar program. A Web site was also developed and the new application went online in December 2005. The summer enrichment seminar program is a series of seminars, on topics relevant to research, ethics, study skills, etc. Students who attend the seminars receive a certificate of attendance.

UNMC has received about 500 applications for each summer program. Departments/colleges have seen an increase in the number of applicants each year. The students who have applied were from 44 different states, with the highest numbers being from Nebraska, Colorado, Iowa, Minnesota, New York and Texas; approximately 200 applicants have identified themselves as being an ethnic minority. Each year approximately 125 students are accepted for the program; five students have been from outside the U.S. and 40 have been minority students.

Health career awareness programs. In response to the expected increased need for health care workers in the United States and our own state, UNMC has instituted several efforts to engage with precollege students, in addition to its outreach to minority students mentioned elsewhere.

- **Science meets for eighth graders.** The science meets were started in 1993 as a way to bring Nebraska eighth graders to UNMC for a fun, educational experience that would inspire them to consider careers in science and health care. Each year, more than 350 eighth graders participate in the regional science meets across Nebraska in seven communities. Students work on science experiments, create displays to feature their work, and explain their research to judges at the regional meets. The top projects in each region qualify for the state science meet in June. During the state meet, students participate in many hands-on activities with UNMC faculty, staff and students.
- **High school career days.** UNMC hosts an annual rural health careers day that has attendance from more the 60 high schools and 250 students. In addition, UNMC faculty participate in the Chadron State College Career Day in western Nebraska.

“UNMC reaches out to younger students.”



- **Undergraduate prehealth profession programs.** In 1994, UNMC developed a week-long agro-medicine course for undergraduate students interested in pursuing a health profession. The course enrolls up to 25 students each year; students receive one credit through their undergraduate institution. The students spend a week at UNMC preparing and presenting a group research project on an agro-medicine topic, shadow health professionals and learn about UNMC. An additional course on cultural competency, requested by students, was developed following the same format; a new course was offered in summer 2006 on geriatrics and gerontology. More than 400 students have participated in these programs; more than half of the students have gone on to enroll at UNMC.
- **Teachers Connections.** UNMC's RHEN Office plans this workshop in conjunction with the Nebraska Academy of Teachers of Science (NATS) fall conference to provide rural secondary science teachers the opportunity to spend a day at the Omaha campus with researchers and faculty. The purpose is to promote the health sciences to rural high school science teachers, help them learn more about what UNMC does, and teach them simple activities to take back to their rural classrooms. The event also gives several researchers and faculty the opportunity to share their work and participate in an interactive/learning activity with the teachers.
- **Science Teachers Retreat.** For the past five years, the RHEN Office has provided a summer science teacher retreat for rural teachers to learn about UNMC resources and to develop a network of resources among themselves. These retreats began as two-day programs, expanded to five days in 2005, and grew to seven days in 2006. Currently 19 teachers are participating in the program from 14 school districts.

More on UNMC's outreach efforts to interest specifically minority children, teens and young adults in careers in health science are explained in Core Component 5c.

In summary, UNMC's capacity for engagement with its identified constituencies is one of its greatest strengths. From the library through the deans' offices and outreach programs in every college, connectedness with community permeates each campus. Leadership's openness to new ideas and commitment to respond to constituent needs ensure this practice will continue.

CORE COMPONENT 5C: **The organization demonstrates its responsiveness to those constituencies that depend on it for service.**

As the only public academic health science center in the state of Nebraska, UNMC takes its mission seriously and uses every means possible – including ongoing surveys with constituents and interactions with community leaders, preceptors and patients – to maximize its responsiveness. One of its most efficient

approaches involves working with other institutions and community groups to build bridges to underserved populations and reach mutual goals. Many of these collaborative efforts have been woven throughout this self-study report; more are introduced here.

UNMC/The Nebraska Medical Center Community Partnership

The goal of UNMC/The Nebraska Medical Center's Community Partnership is to improve the health and well-being of Nebraskans, especially the underserved. Effective collaborations with communities, as well as between UNMC and the hospital, are pivotal to the success of this mission. The Community Partnership effort involves patients/consumers, health care providers, outreach workers, UNMC students, faculty and staff, community leaders, and organizations working together to assess, measure, promote, educate, and facilitate action to improve health. Building bridges with communities creates healthier individuals and families, who in turn then contribute to the economic vitality of the community.

UNMC was a driving force in seeking to improve the health of Omaha's traditionally underserved African-American population in 1996. In an effort to partner with the north Omaha community, UNMC and University Medical Associates (now called UNMC Physicians) created the UNMC/UMA Community Partnership in September of that year. The North Omaha Community Care Council was born, and under the advisement and active participation of this 22-member advisory group, continues to collaborate on a series of programs, projects and activities.

The council's success led the Community Partnership to expand to include the predominantly Latino population of south Omaha through the South Omaha Community Care Council, and eventually spread to other areas of metropolitan Omaha. As the face of Nebraska changes, the Community Partnership also responds to the needs of newly arriving immigrants and refugees.

The Community Partnership works collaboratively with more than 50 agencies and organizations to provide programs and services where there are heavy concentrations of low-income and minority people. It provides information and services with an approach that ensures people are treated with respect and assured equal access to health care services. The "climate" of each program strives to be welcoming to every patient, student, staff and faculty member, as well as visitors and vendors so that UNMC is a place where all people feel good about being here.

Educational Partnerships

UNMC has developed educational partnerships with health care providers in virtually all incorporated communities in the state. UNMC also has partnerships with community colleges and every undergraduate college in Nebraska, and has recently forged partnerships with historically black colleges and universities in

*“Building bridges creates
healthy individuals
and families.”*



Virginia and other states to increase the number of underrepresented minority students in UNMC's colleges. UNMC has established international educational partnerships for students and residents and to provide support and education for health care providers and future health care providers in countries such as Australia, South Africa, Jordan, Guatemala, Nicaragua, Jamaica, China, and Afghanistan, among others. UNMC continues to seek mutually beneficial educational relationships with institutions, faculty and students in foreign countries.

The UNMC/UNO Master of Public Health Program Community Advisory Council. The cooperative UNMC/UNO (University of Nebraska at Omaha) Master of Public Health (MPH) program was a response to Nebraska's need for public health education. The MPH Community Advisory Council (CAC) is composed of 11 people who represent broad perspectives, including community practice professionals, local and state government officials, representatives of other educational institutions, business and industry, the Minority Public Health Association and/or other public health associations, alumni, and students from each area of concentration.

The CAC provides input/advice into curriculum, operations and future direction of the MPH program by focusing on: community and student outreach; access, responsiveness and student services; diversity and cultural competency; program evaluation and quality improvement; and efficiency, effectiveness and participant and community satisfaction. The CAC also monitors and tracks the progress of the major goals of the program.

Creighton University/UNMC resident affiliation agreement. The COM has a resident affiliation agreement with Creighton Saint Joseph Regional Health Care System, L.L.C. to provide clinical teaching for UNMC house officers and medical students and clinical services at Creighton University Medical Center in Omaha. There are presently three UNMC departments participating: neurological sciences, orthopaedic surgery and rehabilitation, and pediatrics. This affiliation expands clinical teaching opportunities for residents.

Rural residency partnerships. Like many states with an agriculture-related economy, Nebraska has a need for well-trained family physicians in rural areas. In 1990, the COM received approval from the Family Medicine Residency Review Committee to develop rural residency training in two rural sites. St. Francis Hospital in Grand Island and Good Samaritan Hospital in Kearney were chosen based on their long-standing history of educational collaboration in the training of UNMC medical students and their interest in developing a rural training model at the graduate level.

The initial programs were highly successful in recruiting and retaining quality physicians. Based on this success, Regional West Hospital in Scottsbluff and Great Plains Hospital in North Platte were approved as training sites in 1996. In 2000,

Faith Regional Hospital in Norfolk became the fifth rural training site to receive approval to provide graduate medical education. Each site is approved for a maximum of two residents at each level of training. By June 2005, 57 residents had completed their rural training with over 85 percent practicing in nonmetro Nebraska or contiguous states. The program boasts a 100 percent certifying specialty board pass rate and national recognition in rural health education.

The COM's Department of Family Medicine and the Lincoln Medical Education Partners have collaborated in providing a rural residency experience for all 2nd- and 3rd-year family medicine residents since 1982. This program sends residents to a rural Nebraska community for a two-month block of training under the guidance of practicing family physicians. Training sites are chosen based on local physician shortages and participate for three provisional years. Since the program began, more than 400 residents have participated in 24 separate communities. Twenty of the 24 sites have recruited residents to practice in the community after graduation.

Rural Health Opportunities Program. The Rural Health Opportunities Program (RHOP) began in the fall of 1989, when representatives of the UNMC College of Medicine and Chadron State College met to develop the plan. Wayne State College joined the program a year later. Under RHOP, programs at UNMC accept students from the participating state colleges upon enrollment in their undergraduate studies. The students must complete preprofessional requirements and meet all other qualifications for admission to UNMC's health professions programs. The nine professions that preadmit students include: medicine, dentistry, dental hygiene, pharmacy, radiation sciences, physical therapy, physician assistant, medical technology, and nursing. As of January 2006, there were 187 in the pipeline and 247 graduates who have completed their residencies. Of the RHOP graduates who have completed their education and residency requirements, 60 to 74 percent return to rural communities to provide health care services.

Programs to increase student diversity. Chapter 2 detailed UNMC'S strategic goal of better diversifying its students, faculty and staff. Changing state demographics demonstrate an increase in the diversity of the population, but these changes are not seen in the number of minorities seeking undergraduate or advanced degrees in science. To increase the number of underrepresented/ disadvantaged students in health care and research careers, UNMC has a recruitment continuum that relies on educational partnerships. Our efforts begin with 4th graders, bringing African-American boys from the Jesuit Middle School and Latino and African-American girls from Girl's Inc. on campus in Omaha for monthly learning activities. The continuum culminates in recruitment efforts for postdoctoral trainees, faculty and adult learners:

- **Community Academy.** In 2000, a year-round cost-free Community Academy was initiated. A multi-racial group of students come to UNMC's Omaha campus Saturday mornings once a month in the academic year and four days per week

for three weeks in the summer to learn about health care and research careers. Community Academy has served over 1,500 area students and is now seeing alumni become UNMC students.

- **NU-PATHS.** Engagement with minority/disadvantaged in-state undergraduate students continues with a pipeline recruitment initiative: Nebraska University-PreAdmission To Health Sciences (NU-PATHS). Talented underrepresented/disadvantaged students are selected for preadmission to UNMC as high school seniors or as undergraduates at the NU sister campuses. The students receive scholarships at their undergraduate campuses and guaranteed admission to the UNMC program. All programs at UNMC participate in NU-PATHS and 15 students per campus can be selected each year. Since 2001, 49 students have been selected—of this number, 29 are still in their undergraduate programs, four have transitioned to UNMC, and two have graduated from UNMC.
- **Affiliations with minority-serving institutions.** To recruit out-of-state students, UNMC developed formal affiliation agreements with the following minority-serving institutions: Dillard University (2000); The University of Arkansas at Pine Bluff (2001); and Fort Lewis College, which has a 17 percent Native American student body (2002). The formal affiliations are focused on recruiting students and faculty for summer research experiences, faculty exchange, and collaboration on research grants. In the fall of 2004, UNMC entered into The Virginia-Nebraska Alliance with five “historically black colleges or universities” in Virginia, (Hampton University, St. Paul’s College, Virginia State University, Virginia Union University, Norfolk State University), Virginia Commonwealth University, and J. Sargeant Reynolds Community College with the same goals in mind. Since 2000, these affiliations have resulted in 25 students spending summers in research activities at UNMC – and four Dillard graduates matriculating to UNMC in 2005.

Other Higher-Education Partnerships

The SAHP has partnered with the University of Missouri to provide education in clinical laboratory science. MU had inactivated its program in medical technology/clinical laboratory science in the 1990s. In response to an acute shortage of laboratory professionals in Missouri, MU contracts with UNMC to educate its students for those professions.

The SAHP Division of Radiation Sciences Technology Education partners with the University of Arkansas for didactic courses for nuclear medicine students. It also partners with Central Community College and St. Francis Medical Center in Grand Island to provide radiography education in Grand Island.

The Universities of Arkansas, Kansas, Oklahoma and Nebraska have a partnership that offers a M.S. degree in genetic counseling via distance. The clinical component is done at UNMC’s Munroe-Meyer Institute.

Academic Affiliation Agreements

UNMC has educational agreements with health care facilities in Nebraska. These arrangements benefit both UNMC and the affiliated institutions. Our students and residents receive educational opportunities and the participating health care centers gain recruiting opportunities. Many of these arrangements date back several decades, indicating the mutually beneficial relationships supported by these agreements.

Library Affiliations

healthHQ.⁸ This database of health-related support groups in the state of Nebraska developed in response to the many requests local medical libraries receive for this type of information. The 900-entry database was conceived by Omaha medical librarians and is now maintained by UNMC's McGoogan Library of Medicine, which played a major role in its development. In the 10-month period from July 2005 through April 2006, healthHQ recorded 14,093 hits. healthHQ provides a starting point for Nebraskans who think of state agencies as their first source for health information.

Go Local Nebraska. This database comes at information access from the opposite direction, referring Nebraskans who begin with federal information sites back to agencies and resources in their local area. Go Local is a national initiative that originated with the National Library of Medicine (NLM) to link its acclaimed MedlinePlus database with state and local health resources. It is one of the nation's most frequently searched Web sites, logging over 21 million hits per quarter. With funding from NLM, the McGoogan Library is building upon the healthHQ database to create a comprehensive list of Nebraska health service providers by inputting several thousand provider records purchased from the Nebraska Health and Human Services System (NeHHSS). Through the McGoogan Library, residents of Nebraska will have convenient, no cost access to this information.

Health Information Partnerships. McGoogan teamed with the Nebraska Library Commission, NeHHSS, and the National Network/Libraries of Medicine to promote and fund Health Information Partnerships (HIP) within Nebraska communities. An initial symposium in 2005 identified 11 potential community groups willing to address health information literacy. Now, partnerships are being built between public libraries and community groups as they promote health information access and utilization across their populations. This includes bilingual resources that had not previously been identified. The community partnerships have resulted in production of brochures, and development of health fairs promoting health literacy.

Bioterrorism Consortium

The Center for Biopreparedness Education was commissioned by NeHHSS in 2002. The state asked UNMC and Creighton University to join forces with a multi-agency consortium to meet Nebraska's need for biopreparedness education, training and resources.

Through a variety of workshops and seminars, the center provides education in several areas: first responder training, hospital preparedness, school (K-12) programs, and medical provider education. The center is overseen by a consortium of 45 local agencies that are stakeholders in preparing the region for biologic threats. Members include the state health department, state hospital association, state long-term care association, the Red Cross, several hospital systems, several agricultural organizations, state organizations for various professional groups (physicians, physician assistants, occupational health nurses, ER physicians, nurses, pharmacists, nurse practitioners, etc), the Army Corps of Engineers, the Nebraska Department of Education, the Poison Control Center, several public health education organizations, and the two medical schools. The full consortium meets annually to review educational program evaluations, update center activities, and coordinate biopreparedness education efforts between the center and the member organizations.

The center, which is on the UNMC Omaha campus, has taken a series of 12 interdisciplinary bioterrorism preparedness symposia to six cities across Nebraska since 2003 (Grand Island, Kearney, Norfolk, Gering, Lincoln and Omaha). A total of 1,253 professionals and licensed health care personnel have participated from 77 counties across Nebraska and 20 counties in neighboring states. Each series has an average attendance of about 400 persons. During each program, attendees are asked to complete evaluations of each activity to assess program effectiveness for continuing education certification, seek opinions about program improvement, and solicit suggestions about future programming

In addition, three military courses have been brought to Omaha in collaboration with the U.S. Medical Research Institute of Infectious Disease, the U.S. Army Medical Research Institute of Chemical Defense, and the Armed Forces Radiobiology Research Institute. The courses are taught by military experts, providing participants with an increased awareness of emergency medical aspects of biological and chemical warfare agents, didactic training in the pathophysiology, diagnosis, treatment of biological and chemical weapon injuries, and information concerning the biomedical consequences of radiation exposure. These military ventures have attracted 398 participants, mostly nurses, physicians and emergency management specialists from 37 Nebraska counties and 38 counties in neighboring states.

UNMC's Center for Biosecurity (CB) is a member of the Center for Biopreparedness Education consortium, and focuses primarily on the laboratory aspects of biosecurity (testing clinical specimens and suspicious powders). It serves the state of Nebraska and the nation by addressing both human and agricultural (plant and animal) biosecurity concerns. The CB draws on the expertise of faculty members from our four campuses in a unique educational collaboration of scientists and clinicians in clinical and public service educational and research programs. Like the Center for Biopreparedness Education, the CB is involved in learning from its constituents to better serve their needs via:

- An internal advisory committee composed of representatives from participating campuses
- State of Nebraska Homeland Security Policy Group collaboration
- A University of Nebraska System Preparedness Team addressing equipment, communications, and table top drills
- Conducting educational programs that are a part of National Disaster Life Support courses
- Planning for a Mid-America Alliance, a 10-state regional cooperative program for mutual aid

Economic Development Partnerships

UNeMed Corporation. As introduced in Chapter 2, UNeMed⁹ was established in 1991 to carry out the development and transfer of UNMC inventions to the marketplace. UNeMed is a for-profit organization that provides technology transfer services to UNMC. It also provides the management, marketing and financial expertise required to establish or manage joint ventures between UNeMed and industrial or commercial strategic partners.



Destination Midtown. Building upon the historic strengths of the area surrounding UNMC's Omaha campus, Destination Midtown (DM)¹⁰ is an active group of government, business, education, health care, and neighborhood leaders united for neighborhood improvement and economic development. The vision of DM is to establish a nationally known, vibrant and distinct urban environment that promotes economic development activities, advances neighborhood goals, and forges special partnerships. The mission is to create a premier urban environment where people want to live, work, shop and play. It is a proactive model that addresses issues initiated by businesses, institutions, neighborhoods, the Greater Omaha Chamber of Commerce, and the City of Omaha.

In summary, UNMC colleges, schools, institutes, leaders and its hospital partner are adept at forging a variety of key partnerships. Over the years, these forward-thinking relationships have flourished, benefiting all those affiliated with UNMC and the communities it serves. UNMC will continue this fruitful method of responsiveness to its constituents, in addition to its many other approaches.

CORE COMPONENT 5D: Internal and external constituencies value the service the organization provides.

UNMC has received numerous external validations of its value to constituencies, some of which are mentioned here; others are noted in other chapters and/or displayed in the Resource Room. Its ever-increasing partnerships (local, state,

national and international), awards and testimonials, grants received, national rankings, and student and faculty achievements demonstrate this.

The 2005 survey revealed that UNMC's internal constituencies – faculty, students and staff – perceive that UNMC's constituents value its services. More than 77 percent of both faculty (77.2 percent) and staff (77.7 percent) and 86.8 percent of students agreed or strongly agreed that our constituents value UNMC's services. Likewise, surveys of graduates of UNMC's colleges and schools, as reported in Core Component 3a, consistently show that graduates – an important internal constituency – value the service UNMC provides them because they rank the quality of their education very highly.

Health Care Providers for Nebraska

One of the clearest indicators of UNMC's value to the state of Nebraska is the fact that a large percentage (in some cases a majority) of physicians, nurses, and other health providers practicing in Nebraska received some or all of their training at UNMC. The positive economic impact of this is undoubtedly significant, but difficult to measure; documentation of the number of health care providers practicing in Nebraska who trained at UNMC is available in Appendix X.

A special function of UNMC's mission includes reaching underserved populations, such as rural Nebraskans. As noted throughout this self-study, UNMC has developed innovative programs and activities designed to recruit and retain health professionals in rural areas of Nebraska. These activities have been proven successful by the number of UNMC graduates providing the majority of the health care services available in Nebraska's rural counties. The chart below demonstrates the increasingly high and growing percentage of rural practitioners who are UNMC graduates.

Rural Nebraska Practitioners Educated at UNMC

	<u>Jan-03</u>	<u>Jan-04</u>	<u>Feb-05</u>
Physicians	64%	64%	67%
Pharmacists	64%	64%	66%
Dentists	83%	84%	85%
Physician Assistants	58%	67%	69%
Nurse Practitioners	45%	54%	56%

Mini-Medical School

UNMC began its semiannual Mini-Medical School for anyone who wants to learn more about advances in health, research and patient care in 1995, and it has become the largest public educational event sponsored by UNMC. Mini-Medical School is taught by UNMC faculty and other health experts each spring and fall on the Omaha campus. The three-to-four-week program is held one night per week, broadcast to 15 or more sites across the state, and is free to the public.

The program has been very popular and highly acclaimed by participants. Topics have ranged from cancer, the brain and the immune system, to bioterrorism and small pox. Each evening program is two-hours long; the format includes individual presenters, panel discussions and question and answer sessions. Participants at off-campus sites may fax or e-mail their questions to speakers. Each program is videotaped and then posted on the UNMC Mini-Medical School Web site,¹¹ where it can be viewed at any time. All previous sessions are archived on the site for future reference by any member of the public. Mini-Medical School is promoted through brochures, the Web, and advertising in local newspapers, as well as through the efforts of contacts in communities.

Library Feedback

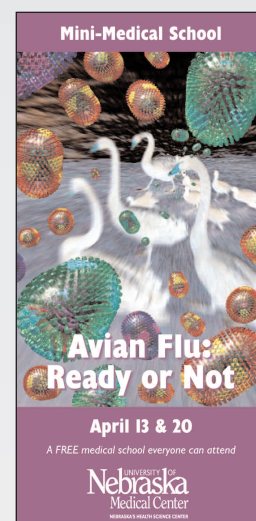
During April 2006, McGoogan Library staff personally visited over 200 public libraries in Nebraska to distribute materials promoting Go Local, CHIRS, and MedlinePlus. The longest trip involved 1,274 miles and 43 libraries at the western edge of the state. Additional health information training and continued backup from the McGoogan Library were also offered. These visits were well-received and feedback from the libraries indicates McGoogan's staff and outreach services are greatly valued.

Frequent letters of appreciation indicate CHIRS is meeting or exceeding the expectations of users. The program's role in rural Nebraska was noted by the Nebraska Legislature in September 2005, when a task force identified CHIRS as one of four UNMC programs that promote and sustain rural economic development in the state. Data submitted to the task force indicate CHIRS is an outstanding example of a value-added service that produces benefits beyond the library's primary user group. CHIRS' cost of operation is relatively modest; personnel costs are covered by the library's state general fund allocation.

2006 has seen a renewed emphasis on consumer health information across the state. Using CHIRS as a model and McGoogan Library staff as mentors/consultants, the Nebraska Library Commission is investing in eight communities that have potential to enhance health-related information services.

AAMC Outstanding Community Service Award

For significant contributions to local and statewide communities, Omaha's two academic medical centers, UNMC and Creighton University, were co-awarded the prestigious Outstanding Community Service Award for 2003 from the Association of American Medical Colleges. The schools were chosen from among 125 medical schools in the nation. This was the first time two medical schools shared the award.



SHARING Clinic Awards

The SHARING Clinic and its subsidiaries, the GOODLIFE and RESPECT Clinics, have received two prestigious awards for community service. In 2001, the SHARING Clinic won the Secretary of Health and Human Services Award for Innovations in Health Promotion and Disease Prevention sponsored by the Health Resources Service Administration (HRSA). The clinic won first place in the interdisciplinary category. When UNMC won the 2003 AAMC Outstanding Community Service Award, the SHARING Clinic was cited for its significant contributions.



Bioterrorism Preparedness Recognition

The bioterrorism consortium project was praised by Julie Gerberding, M.D., M.P.H., director of the Centers for Disease Control and Prevention (CDC), in a public address during her visit to Omaha in April 2005 as a model for collaboration in education and planning. The Nebraska HHSS in 2002 had commissioned the state's two medical schools to join forces and form The Center for Biopreparedness Education. The center, under the direction of the chiefs of the infectious disease departments at both medical centers and a multi-agency

consortium, is charged with meeting Nebraska's need for biopreparedness education, training and resources. The Center for Biopreparedness Education houses the nation's only free-standing library devoted exclusively to information on chemical, biological, nuclear/radiological, and explosive events.

The Nebraska Medical Center Physician and Patient Survey

The 2005 physician and patient survey completed by The Nebraska Medical Center showed that both physicians and patients ranked The Nebraska Medical Center above the national average in several service areas including overall quality of care. As mentioned in Core Component 5a, quality improvement efforts by The Nebraska Medical Center led to receiving the JD Power Award for Quality Patient Experience in 2005. Survey results are available in the Resource Room.

Nebraska Public Opinion Survey

The most recent statewide public opinion survey on NU as a whole and on its four institutions showed strong support for UNMC. Our institution received the highest ranking, an 89.6 percent approval rating on overall quality, from a random telephone survey of 1,800 Nebraskans. On a scale of 1 to 5, with 5 being excellent, UNMC received top ratings on all of its campus areas.¹⁴

External Peer Validation

As noted in other chapters, UNMC faculty, staff and administrators frequently merit national and international distinction from their peers. These outside sources of validation serve to reinforce the work that is being done at UNMC. Examples can be viewed in the Resource Room.

Community Financial Support

Further proof of the value of UNMC's service to constituencies can be found in the private philanthropic support for programs and building projects at UNMC. Millions of dollars have been contributed from the community to support the three clinical and two research buildings and the educational Sorrell Center planned or completed over the past decade. These buildings constitute the largest expansion in facilities since the founding of UNMC.

SUMMARY OF CRITERION FIVE FINDINGS

Demonstrations of UNMC's value to its constituencies have been spelled out in this chapter and throughout this report. The many programs cited that UNMC undertakes are costly, so feedback on their acceptance and value justifies our investment in them. As UNMC strives to fulfill its world-class aspirations, these internal and external validations become all the more important. This analysis of UNMC's efforts to engage and serve its constituencies and communities has led to perceiving the following strengths and opportunities:

Strengths:

- Engagement and service are embedded in UNMC's mission documents and vision.
- Constituents value UNMC's outreach programs.
- Regular surveys identified constituents to determine their needs and acts upon those results.
- Constituencies are well-defined by NU bylaws.
- A wide variety of innovative outreach programs is maintained.
- UNMC commits resources to engagement and service.
- Students, faculty and staff are involved in a wide variety of community outreach activities.
- The community expects to be involved in UNMC's outreach activities.
- UNMC transfers scientific discoveries for the public good via translational programs such as UNeMed.

Challenges and Opportunities:

- Communities and constituencies have high expectations of UNMC's community service programs.
- Efficiently coordinating outreach activities across the spectrum from grade school to practicing professionals is an ongoing challenge.
- Defining UNMC's plan for international health education and care in collaboration with The Nebraska Medical Center is a challenge.
- UNMC is working to improve complex technology transfer processes.

References

- ¹ All UNMC Unit Mission statements: Resource Room
- ² JD Power Award: <http://www.nebraskamed.com/newsreleases/pdf/10-17jdpower%20final.pdf>
- ³ Rural Health Education Network: <http://www.unmc.edu/dept/rhen/>
- ⁴ Nebraska Public Health Lab-BioSecurity Preparedness Laboratory:
<http://www.unmc.edu/bioterrorism/default.htm>
- ⁵ NU Center for Biosecurity: <http://bioterrorism.nebraska.edu/biosecurity.asp>
- ⁶ UNMC Alumni Affairs: <http://www.unmc.edu/alumni/>
- ⁷ Consumer Health Information Service: <http://www.unmc.edu/library/consumer/>
- ⁸ healthHQ: <http://www.healthhq.org/>
- ⁹ UNeMed: <http://www.unmc.edu/dept/unemed/>
- ¹⁰ Destination Midtown: <http://www.destinationmidtown.org/>
- ¹¹ UNMC Mini-Medical School: <http://www.unmc.edu/minimed/>
- ¹² Public opinion survey: Resource Room

CHAPTER 6

Distance Learning

Seeking Approval of Proposed Changes: Changes Requiring Commission Approval HLC – NCA Handbook Chapter 7.2 - “The Ongoing Relationship”

Introduction

The University of Nebraska Medical Center has a long history of using distance education to facilitate delivery of its health science programs. Indeed, our Omaha campus was considered a pioneer in the use of television and other educational technology which emerged in the late 1950’s and the immediate period thereafter (CL Wittson & R Dutton. “Interstate Telecommunication”, *Mental Hospitals* VIII:15-17, 1957). In 1963, the first two-way closed circuit television system in the U.S. used for patient care activities was described by Dr. Cecil Wittson, who was then the Chair of Neurology and Psychiatry (CL Wittson & R Benschoter. “Two way television: Helping the Medical Center Reach Out”, *Amer J Psych* CXXIX:624-627, 1972). With time, more and more of our educational and clinical programs have applied the increasingly diverse methods associated with distance technology to reach learners (students, faculty, professionals and the public). This has particular importance across our large rural state as well as in places much further away.

Although two of our degree granting programs have prior approval of the Higher Learning Commission for delivery by distance approaches, our recognition of increasing dependence on distance education to deliver larger and larger portions of our degree programs (“distance education creep”) prompts us to seek a broad approval for the use of distance education to deliver many of our academic programs.

The University of Nebraska Medical Center considers itself a mature academic institution and seeks approval to employ distance delivery methods for all of our health science degree programs except the M.D., D.D.S. and the Pharm. D. Although the latter programs will use distance technology, they will remain primarily campus-based programs. This section is written to address the general characteristics of all UNMC distance delivery programs and an Appendix for Distance Education contains additional program specific materials.



“These programs will greatly enhance the availability of graduates of specialized health science programs to Nebraska communities as well as neighboring areas.”

1. What Change is Being Proposed?

Specific Changes Proposed. The University of Nebraska Medical Center seeks to extend accreditation to additional degree programs offered in large part by distance delivery methods. Presently these programs include the non-clinical components of the following:

- Certificate in Cytotechnology
- Bachelor of Science in Nursing (BSN)
- Bachelor of Science in Dental Hygiene
- Bachelor of Clinical Laboratory Science (BCLS)
- Master of Science in Nursing (MSN)
- Master of Public Health (MPH)
- Doctor of Philosophy in Nursing (PhD)

Furthermore, UNMC requests approval to develop and employ distance delivery methods for all of our health science degree programs except the M.D., D.D.S. and the Pharm. D.

In addition, we seek recognition and acceptance of degree completion programs that are offered using distance education delivered in association with our Center for Continuing Education. These programs include:

- Bachelor of Clinical Laboratory Science
- Bachelor of Radiation Science Technology Education
- Master of Perfusion Science
- Master of Physician Assistant Studies
- Doctor of Physical Therapy

Expected Outcomes of the Proposed Changes. The delivery of these programs to students who are place-bound, particularly in distant rural communities, will greatly enhance the availability of graduates of specialized health science programs to Nebraska communities as well as neighboring areas. The potential for individuals to use distance education programs to acquire additional training beyond their current health professional activity can allow certification or licensure in secondary areas. This capability is a unique added benefit to communities struggling to attract health professionals with the full range of training in allied health areas. Although only a moderate increase in enrollment is projected for these programs, even the small number of additional specialized health professionals is very important to our rural communities.

Project the Impact of the Proposed Changes. The University of Nebraska Medical Center is the only state-supported institution charged with educating students in the health professions, and as such, it serves a “500 mile-wide campus.” We take this charge seriously and continue to seek ways to reach students who will serve our rural as well as urban communities. We know that students already residing in rural communities and who cannot leave those communities for specialized training are likely to remain in those communities if we

can deliver a high quality educational experience that leads to professional licensure or certification (see page 144 in Chapter 5 for retention of rural trainees). More training delivered in those areas will lead to more professionals available for local health professional needs, thus helping to improve the health of Nebraska in keeping with our core mission.

Commission's Policies Relevant to the Proposed Changes. The Higher Learning Commission requires prior approval for a "Change in Educational Offering" (policy I.C.2.b). More specifically we seek approval for "Degree programs offered through distance delivery methods" (I.C.2.b.4).

2. What Factors Led the Organization to Undertake the Proposed Change?

Relationship of the Proposed Changes to Ongoing Planning. Strategic Planning activities at the University, campus and College level have all identified distance education as an important component of our responsibility for delivery of health science education programs. These planning sessions also recognize that not all health science programs can fully utilize distance education methods to deliver the entire curriculum, though nearly all can benefit by selective use of distance education, even in the on-campus setting. Indeed, long-range planning for Distance Education is now the focus of a system-wide, Distance Education Coordinating Committee (DECC) and has been the focus topic of the University of Nebraska Board of Regents on a number of occasions.

Needs Analysis Related to the Proposed Changes and Involvement of Constituencies in Developing the Proposed Changes. The desire to increase our program offerings by distance delivery methods is the result of several factors. In many of our curricula, the instructional faculty have been gradually applying distance methods to more and more of the course offerings. In those programs, the availability of distance courses and increasingly large components of the curriculum through these approaches have been supported by positive feedback from the students and their employers as well as continued high success rates of graduates on professional licensure and certification exams. Increasingly, surveys of students and communities have shown a desire for health science programs available by distance education methods. Often the limiting factor in increasing the number of slots and sites for distance courses and programs is the finite number of clinical preceptor locations for training in the clinical setting.

3. What Necessary Approvals have been Obtained to Implement the Proposed Changes?

Internal Approvals and Documentation. No internal approvals, other than those that are associated with the specific program in its own college or school, are required at the campus or system level to offer degree programs by distance delivery methods.

“All of the programs consider the development of distance technology-facilitated curricular components as part of their charge to serve as the primary state-supported educational site for health sciences in Nebraska.”

External Approvals and Documentation. The primary external oversight for most of our health science programs resides with the professional accreditation organizations that regularly review our offerings, including those offered at a distance. A full listing of accreditations is provided in Appendix 1 and is maintained on our website at: www.unmc.edu/nca

4. What Impact Might the Proposed Changes have on Challenges Identified by the Commission as Part of or Subsequent to the Last Comprehensive Visit?

Challenges Directly Related to the Proposed Changes. One of the “suggestions” in the January, 1997 Report of Visit was related to continued resource development by our Information Technology Services. These resources directly impact distance education efforts. UNMC has made extensive advances in this area and the details are presented in Chapter 3 under Core Component 3d “The organization’s learning resources support student learning and effective teaching.”

How the Organization will Address the Challenges. NOT REQUIRED

5. What are the Organization’s Plans to Implement and Sustain the Proposed Changes?

Each of the academic programs has developed plans for implementation and support of the degree programs that will be delivered at a distance. Many of these plans have been, or will be, implemented over an extended period of time. The faculty effort to convert and validate traditional curricular elements to formats for distance delivery is considerable and takes time. It also takes new or reallocated resources. All of the programs consider the development of distance technology-facilitated curricular components as part of their charge to serve as the primary state-supported educational site for health sciences in Nebraska. Few of the programs have budget line items for “Distance Education,” and the resources for development of such programs come from several sources.

- First, the regular educational budget of each unit is distributed as needed across all of the educational activities of the unit. Many of the programs utilize the “distance materials” for both the on-campus and distance students, thus making maximum use of resources.
- Second, many of the courses for programs were initially developed and implemented using federal grant and contract support that was competitively awarded to our faculty. These resources have been important in covering start-up costs for some new programs and accelerating the process of development and implementation of distance materials for curricular components. Some of these programs have been accepted as models for other programs across the country.

- Third, university policy allows a distance education fee to be charged to students who are enrolled in distance education programs and for that income to flow directly back to the generating unit. Similarly, some programs have a “technology fee” that is applied to all students regardless of location and is used to support the added costs of technology applications in both distance and on-campus programs.
- Finally, some programs are offered through the Center for Continuing Education or by contract with a sponsoring agency (e.g., another university or the Armed Forces). In each of these cases, a portion of the CE fees or the contract income is used to support the distance education aspects of the program.

Details of these various implementation and support approaches are described for each program in the Supplemental Materials which follow.

6. What are the Organization’s Strategies to Evaluate the Proposed Changes?

UNMC requires a systematic and comprehensive evaluation of all academic programs, including the distance education components. Students and faculty are regularly surveyed for their input regarding specific courses and curricula. The results of such surveys are used in unit and campus strategic and curricular planning. Outcome assessments associated with required licensure and certification exams are monitored and compared for distance and on-site students. No differences in “pass rates” or other outcomes measures have been observed. Indeed, in some cases the students have expressed a higher satisfaction with the distance components compared to the on-site components. Often this elevated satisfaction has been linked to flexibility of scheduling and convenience of local access to the program. Program specific evaluation strategies are described in the following supplemental materials.

SUPPLEMENTAL MATERIALS FOR DISTANCE EDUCATION REQUEST

Support Services

STUDENT SERVICES: UNMC Student Services will extend administrative and support services to their distance learners in accordance with federal rules and regulations as follows:

Dental Hygiene: These distance learning students are considered regularly enrolled students in an undergraduate degree seeking program. These students receive all of the same student service support that on campus dental hygiene students receive at the College of Dentistry located on the University of Nebraska Lincoln campus. Student support services for these students are provided by the College of Dentistry or UNMC Student Services programs located in Lincoln, Omaha, or Gering/Scottsbluff. All distance learners are charged the same fees regardless of campus location. Financial aid is delivered to students via campus liaisons located at the College of Nursing Division in Scottsbluff; aid is processed through the Office of Financial Aid at the UNMC, Omaha campus. Student billing, transcripts, and grades are facilitated by the Office of Student Accounts or Student Services/Registrar at University of Nebraska, Lincoln. Student Health Services in Scottsbluff are managed through a contractual agreement with Regional West Medical Center (RWMC).

Master of Public Health: These distance learning students are considered regularly enrolled students in graduate degree seeking programs. These students receive all of the same student service support that on campus MPH students receive. Since the MPH program is joint program between UNMC and the University of Nebraska at Omaha (UNO), support services for these students is provided by the campus to which they applied and were accepted: the UNMC Graduate Studies/Student Services for students with Public Health Administration concentration; the UNO Graduate Studies/Student Services for students with Community Health Education concentration. All distance learners are charged the same fees regardless of campus/distance location. Financial Aid, Student billing, transcripts, and grades are facilitated by the campus with which the students have applied and are completing their concentration. The MPH Program Coordinator and staff operate as a liaison between the students and the campuses to ensure continuity of program benefits.

College of Nursing: Distance learning students are considered regularly enrolled students in undergraduate and graduate degree-seeking programs. These students receive most of the same student service support that all on campus nursing students receive. Student support services for these students are provided by the UNMC College of Nursing and UNMC Student Services. Students enrolled half-time

or more are charged UNMC UPFFund A UPFFund B (University Program and Facility Fees) regardless of their location and/or ability to utilize UNMC Health/Fitness facilities (see the UNMC Student Handbook, page 84 for explanation and details; <http://net.unmc.edu/care/docs/handbook.pdf>). All students, regardless of distance learning status are charged the same rates of tuition and fees according to their resident or non-resident status. Graduate students enrolled in MSN/PhD programs that are 'home based' are provided student services to the fullest extent possible (i.e., an MSN/PhD student living in Reno, NV could not access the UNMC Fitness Center, but this student is entitled to financial aid, academic records information, billing information, on-line services, etc.) Students enrolled half- time or more are eligible for federal financial aid (6 hours for undergraduate or 4 hours for graduate students).

RN-to-BSN students are required to complete several courses through the Center for Continuing Education (CCE). This course work is considered toward student enrollment for loan deferments and for federal financial aid if the student has applied for federal aid funds and is enrolled at least half-time. When coursework is considered, it is the responsibility of the students to keep the Office of Financial Aid informed of their continuing enrollment to insure compliance with federal financial aid regulations. It is also the responsibility of the students to submit the grades earned in Continuing Education course work to the Office of Academic Records for inclusion on their academic transcripts. When enrolled half-time or more, these students are charged the UNMC Student UPFFund A and UPFFund B fees regardless of their ability to access the UNMC Health/Fitness facilities.

School of Allied Health Professions, Clinical Laboratory Sciences (CLS):

Distance learning students that have applied to, been accepted by and are enrolled in UNMC CLS classes are considered regularly enrolled undergraduate students. These students receive most of the same student services support that all on campus CLS students receive. All students, regardless of distance learning status are charged the same rates of tuition and fees relative to their resident/non resident status. Students are charged the UPFFund A and UPFFund B regardless of their location and access to the UNMC Health and Fitness facilities.

School of Allied Health Professions and the Center for Continuing Education:

The following programs are Distance Learning programs offered by contract or through the Center for Continuing Education (CCE). Availability of services is listed accordingly.

- **Clinical Laboratory Science (CLS) Missouri:** These students are considered 'visiting' students in the UNMC student database. By contract, the University of Missouri at Columbia provides all student services to these students. These students do not receive any of the student services provided by UNMC Student Services.

- **Clinical Laboratory Science Degree Completion Option; Radiation Therapy Degree Completion Option; Master of Perfusion Science Degree Completion Option; Master of Physician Assistant Studies Degree Completion Option; Master of Physicians Assistant Studies (Military Program); and, Doctor of Physical Therapy Degree Completion Option:**

These students are enrolled through the Center for Continuing Education and are not considered regularly enrolled, degree seeking students at UNMC. These students do not receive student services provided by UNMC Student Services. Upon completion of their degree course work, the student's CCE records are forwarded to the Office of Academic Records to create a permanent academic record on the UNMC student database (Track2) system. UNMC confers the appropriate degree during the May, August, or December Commencement ceremony depending on program and when the student completed the degree requirements. These students are then entitled to the same Academic Records services as any enrolled/graduated UNMC student: transcripts, licensure verification, enrollment verification, etc.

UNMC Student Services will not provide federal tax information (1098T) to students enrolled through the Center of Continuing Education. CCE provides cost and payment information to their enrolled students if students use their own resources to fund CCE coursework.

LIBRARY: Support for distance students is an important aspect in the service and resource provision and acquisition at the McGoogan Library of Medicine. While all library departments address distance needs and issues, the Distance Education/ Outreach Librarian's position is focused on advocating and providing support for the distance student and faculty.

An ever increasing number of online resources are accessible off-campus through a proxy server. These resources include over 4,200 journal titles and a large selection of electronic books. A small number of electronic journals are not available off-campus. The licenses for these journals dictate that policy; however, these articles can be copied and mailed to the student. Similarly, items in the library's print collection can be copied and mailed. Items not in the library's collection can be ordered from other libraries and mailed through the interlibrary loan service. This service excludes actual book volumes due to liability issues. The interlibrary loan service for students is subsidized by the Chancellor's office and provides students with 50 free interlibrary loans or photocopies per fiscal year. This service is available to distance faculty and staff for a nominal fee. Students receiving UNMC instruction on other University of Nebraska campuses also have access to their libraries. Libraries in hospitals in which the student is receiving instruction or clinical experience are also available.

Students enrolled in UNMC courses through the Center for Continuing Education are considered unclassified students. Therefore, they do not qualify for remote

online access to the library's resources or the 50 free interlibrary loans. However, online access may be considered on a program by program basis and students can receive free literature searches and copies of articles and book chapters for a nominal fee.

To support faculty in disseminating course materials online, the library provides an electronic reserve platform. The library also has a direct toll-free telephone number and an e-mail address to enable easy and cost-free communication for distance students and faculty. Also, librarians are available by telephone for scheduled personalized instruction. Additional database navigation and search tips are available through online tutorials and instruction materials.

INFORMATION TECHNOLOGY SERVICES (ITS): UNMC ITS provides extensive information technology resources for the support of distance education at UNMC. Both online and asynchronous/synchronous resources are provided for faculty and student use.

UNMC uses the Blackboard™ Course Information for support of all courses for both campus and distance students. The system includes the capability to store course material, provide links for external course material, online testing, grade reporting, discussions, group tools and many other functions. Material can be posted for students and students can upload assignments to the Blackboard™ system. Included in the Blackboard™ system is an asynchronous tool usable for online office hours and basic whiteboard and web browsing sharing. All students receive ID's and passwords to the campus email system and the Blackboard™ Course Information system.

Advanced video and data synchronous services are used for UNMC distance delivered classes and students. The video resources include an Accord and Codian MCU and an extensive network of Polycom video conferencing units linking classrooms throughout campus locations in Omaha, Lincoln and Kearney. Currently classes supported with video conferencing technology can also be streamed and digitally recorded for later viewing. UNMC has also been using video streaming since the late 1990's to deliver selected campus lectures and grand rounds. UNMC is a major partner in the Nebraska Network that links educational and other public entities throughout Nebraska. Recently, UNMC has been a major founding member of a group of Healthcare Institutions that are setting up a Nebraska Healthcare Network to be used for both patient care and Healthcare Professionals education using video conferencing resources at participating institutions.

ITS has staff in both the academic computing and video services areas supporting student and faculty use of these synchronous and asynchronous educational technologies and systems. A team of four computer and education specialists provides support for the educational use of information technology resources. Four individuals also support campus classrooms and two individuals are dedicated

to supporting video conferencing services that include classroom video conferencing. These individuals provide support services to faculty to assist in the creation of online materials for courses and the live support of faculty delivering synchronous classes both via video and computer.

An ITS helpdesk also provides support for distance students and their use of the online information technology resources.

Description of Programs by Colleges/School

BACHELOR OF SCIENCE IN DENTAL HYGIENE, COLLEGE OF DENTISTRY

The program is delivered using two primary strategies. First, all didactic coursework is delivered by IP Video in real time from Lincoln. Occasionally the lectures originate from the west Nebraska site (Gering) and are delivered to Lincoln. The IP Video system utilizes a television quality signal for the instructor in the lecture and a Polycom 9000 XGA signal for Powerpoint™ or other visuals. Second, there are 1.5 FTE faculty on site in Gering to help supervise the distance learning and to teach the laboratory and clinical techniques and to supervise clinical work. Third, there are a number of rotations of the outstate students to Lincoln each year to participate in clinical work and extramural experiences based out of the Lincoln campus. Outstate students also come to Lincoln for new student orientation week (August) and Professionals' Day (March).

1. What change is proposed?

The proposed change is to expand the B.S. in Dental Hygiene to include a remote site in Gering, NE in addition to the primary site at the College of Dentistry (COD) in Lincoln, NE. The major outcomes expected from this change include an increase in class size from 20 to 24 students (total increase of 8 dental hygiene students enrolled at the COD). The intent is to recruit students from western Nebraska who will then be more likely to remain in western Nebraska after graduation to serve in high need areas. It is anticipated that some of these students may be second career or non-traditional students who have ties to the area and so will remain there to enter the profession. While in the program more dental hygiene services will be provided to residents of the Panhandle by virtue of the clinical education that occurs during the academic program. It is not anticipated that this will lead to any increases in revenue, curriculum or breadth of educational offerings or changes to the mission or structure of the COD.

The program is located in a modern four-chair dental clinic at Panhandle Community Services (PCS), a Federally Qualified Health Center in Gering. Four students per class and 1.5 FTE COD faculty are administratively housed in the COD Department of Dental Hygiene but reside and work in Gering. All didactic classroom work is provided by IP Video in real time. All laboratory and clinical work is performed at PCS.

The College of Dentistry is open to implementing additional distance sites for dental hygiene education based on State needs and the availability of local facilities and resources. There are no other sites under discussion at this time.

Commission's Policies Relevant to the Proposed Changes. The Higher Learning Commission requires prior approval for a "Change in Educational Offering" (policy I.C.2.b). More specifically we seek approval for "Degree programs offered through distance delivery methods" (I.C.2.b.4).

2. What factors led the organization to undertake the proposed change?

For many years UNMC and the COD have been trying to find ways to respond to the mal-distribution of health professionals that has resulted in major shortages in the western half of the State as documented by the Nebraska Health and Human Services System. Specialized recruitment programs had met with only minimal success, so about 1990 the COD decided that the best way to respond to the dental hygienist shortage was to establish an educational program in the western part of the State. Early attempts to get grant funding for this were unsuccessful. In 2001, grant funds became available which looked more promising, and the COD was successful in obtaining funds sufficient to begin offering the dental hygiene program in Gering. The grant proposal was developed with input from the COD, UNMC, Panhandle Community Services (a Federally Qualified Health Center in Gering), the community of Gering and the West Nebraska Dental Society.

3. What necessary approvals have been obtained to implement the proposed change?

Internal approvals were required in order to submit the grant application to Nebraska-HHSS. The grant was funded and accepted by UNMC and was active from October 1, 2002 to September 30, 2005. During that time the program was developed, two classes were admitted and one class graduated. Soon after the program began, the Gering site was visited by a site-visit team from the American Dental Association Council on Dental Accreditation. The site and program were approved with no reporting requirements and several commendations. The next ADA accreditation site visit is scheduled for October 23-25, 2007.

4. What impact might the proposed change have on challenges identified by the Commission as part of or subsequent to the last comprehensive visit?

As far as we are aware, there is no impact of this change on Commission identified challenges.

5. What are the organization's plans to implement and sustain the proposed change?

The program is the responsibility of the chairperson of the department. Implementation is done with the dental hygiene faculty through the UNMC COD. Faculty in Gering are part of the regular faculty of the department and participate fully in departmental activities. Evaluation of faculty, the program, instruction and

learning outcomes is the same as for the primary program site in Lincoln. All student support services are provided by either the UNMC COD in Lincoln or through other UNMC programs already established in Gering/Scottsbluff to support other approved UNMC programs at that site.

Dental hygiene student admission, enrollment, financial aid, orientation and book and instrument supply are managed for Gering students exactly the same way as for Lincoln students. The only differences are student health services and library. Student health services are managed through a contractual arrangement with Regional West Medical Center (RWMC) in Scottsbluff. Library services are provided at a distance from the McGoogan Library of Medicine and the library on the campus of RWMC. Students and faculty have access to Lincoln faculty and staff through mail, e-mail, telephone and daily IP Video conferencing.

The program was implemented over a three-year period with a grant from the NE-HHSS. During the final year of the grant, alternative funding was secured through the NE-HHSS using Medicaid funds as part of an agreement to provide increased services to underserved patients. These funds are ongoing and permanent to the extent that federal Medicaid funding continues. Other College of Dentistry fees for books, supplies and equipment and for major equipment replacement are charged to all students equally regardless of site. These fees include a distributive education fee which is charged to all students to help defray the costs of providing electronic resources to students both on and off campus. Such resources include digital cameras for case documentation, distance education technical resources, availability of recorded lectures to be used in special cases such as illness and other approved absence, weather and transmission problems and other instances where students need to review previously delivered material and resources necessary for the production of Powerpoint™ and other AV presentations for students classroom and professional presentations.

6. What are the organization's strategies to evaluate the proposed change?

The COD employs several strategies to evaluate the proposed change.

- First is basically an ongoing strategy to evaluate the quality of the daily IP video transmissions to ensure they are at the level required by the faculty and students. The transmission began with some minor problems which were largely resolved in the first year of operation so that the quality of IP Video services is no longer a issue with faculty or students.
- The second strategy is to determine whether students admitted to the program and attending at the Gering site are from rural communities and preferably from western NE or close to the Panhandle. So far all students admitted to the program (12 as of Fall, 2005) have met this criterion.

- The third strategy is to determine whether the Gering students make satisfactory progress in the program as presented by monitoring examination results, clinical performance, the results of special portions of the program such as extramural rotations and the Student Scientific Program and the results of the students on National Board and regional licensure examinations. So far there is no difference in the rates of academic progress or graduation or National Board or licensure examinations results between students in Lincoln and students in Gering.
- The fourth strategy is to determine whether graduates locate in western Nebraska or close to the Panhandle to begin their professional practice. So far all graduates have started professional practice in or close to the Panhandle. We deem this program to be a great success.

MASTER IN PUBLIC HEALTH

1. What change is being proposed?

The Master of Public Health Program, sponsored by UNMC in collaboration with UNO, began operations in January, 2002. Since offering its inaugural distance education course in the fall semester of 2002, the MPH Program has expanded its distance education offerings to include all five (and soon to be six) core required courses, all four of the concentration courses required for its Community Health Education concentration, one of the four courses required for the Public Health Administration concentration, and several elective courses. It is now possible to complete the entire MPH degree via distance education.

With the approval of the new College of Public Health, new specialty programs as well as further enrollment growth and increased outreach to public health professionals across the entire state is anticipated. The program's mission/purpose is to improve the health of a diverse public by preparing students from Nebraska and the surrounding region to serve as ethically, culturally, and scientifically competent practitioners. In order to fulfill this mission, a commitment was made from the program's inception to offer as many courses as feasible (logistically and financially) via distance to support statewide access to the program.

Commission's Policies Relevant to the Proposed Changes. The Higher Learning Commission requires prior approval for a "Change in Educational Offering" (policy I.C.2.b). More specifically we seek approval for "Degree programs offered through distance delivery methods" (I.C.2.b.4).

2. What factors led the organization to undertake the proposed change?

As noted above, in order to fulfill the program's mission, a commitment was made early on to offer as many courses as feasible via distance to support statewide access to the program. The majority of students in the MPH Program are employed full-time in the public health workforce. In order to attract them to the

program, it is important to be able to offer them classes in a way that enables them to continue their employment and maintain their home/ families where they are currently located.

The directors of the core sponsoring departments supporting the MPH Program held a strategic planning retreat in January 2005 and reaffirmed a commitment to offering courses via distance education. Students living in remote sites repeatedly affirm their appreciation for the remote access and advocate for the continuation/ expansion of offerings.

3. What necessary approvals have been obtained to implement the proposed change?

When the MPH program was originally approved by the Board of Regents of the University of Nebraska, the commitment to ongoing program outreach and expansion of access through distance education was made explicit. These changes are merely implementation of the original intent/program design. As noted above, the directors of the core sponsoring departments supporting the MPH Program held a strategic planning retreat in January 2005 and reaffirmed a commitment to offering courses via distance education. The MPH Program's Graduate Program Committee meets monthly and receives status reports on the distance education offerings within the program.

4. What impact might the proposed change have on challenges identified by the Commission as part of or subsequent to the last comprehensive visit?

There were no challenges identified by the Commission that are relevant to this program.

5. What are the organizations plans to implement and sustain the proposed change?

Program representatives are actively involved in the Distance Education Council at UNMC, working to identify common interests/issues and to learn from other program's experiences in order to efficiently and cost-effectively manage the distance education component. The primary challenges related to the expansion of distance education are financial and logistical. Costs of "broadcasting" courses to remote sites by IP video, satellite and Polycom systems have increased over time, forcing choices to be made about how to use limited resources. Thus far, distance education has remained a priority within the MPH Program. As more and more faculty get on board with the distance education modality, the number of course offerings increases and the need to coordinate schedules, locations, and broadcast details increases, resulting in a need for dedicated staff support time. The MPH Program has created a graduate assistant position devoted to providing this support.

6. What are the organization's strategies to evaluate the proposed change?

Each year the MPH Program administers a student survey, which includes a series of questions about student satisfaction with and suggestions for improving the distance education component. The results of this survey are shared with students, faculty and administrators. In addition, the MPH Program has a standing program evaluation committee which reviews program operations, including distance education, and reports to the Graduate Program Committee. The survey and results are provided in the resource room.

MSN AND PhD IN NURSING, COLLEGE OF NURSING

1. What change is being proposed?

The MSN and PhD in nursing programs are available to students at a distance. These are not separate programs because on-campus and distance students are in courses together. Any technology used for distance delivery involves all students. The primary modalities for distance delivery are internet protocol (IP) video (which only works well across the College of Nursing's four Divisions), television, telephone conferencing, chat rooms, and a variety of asynchronous learning activities. No courses are totally asynchronous. Almost all specialties in the MSN program require some on-campus time. PhD students at a distance have regularly scheduled on-campus times.

Commission's Policies Relevant to the Proposed Changes. The Higher Learning Commission requires prior approval for a "Change in Educational Offering" (policy I.C.2.b). More specifically we seek approval for "Degree programs offered through distance delivery methods" (I.C.2.b.4).

2. What factors led the organization to undertake the proposed change?

Since 1975 the College of Nursing has provided portions of the undergraduate curriculum via interactive TV to its Divisions in Lincoln, Kearney and Scottsbluff. The growing need for advanced practices nurses (with the MSN degree) in rural Nebraska, coupled with evidence of demand for an educational program more in tune with the needs of nurses who were place-bound, led to the development of distributive (distance) learning strategies that would allow these individuals to complete a degree near their home. In the earliest efforts (funded by HRSA beginning in 1989), core courses in the graduate curriculum were televised to two rural sites, and faculty traveled to these sites to teach courses in adult critical care and adult oncology.

In 1992, an HRSA-funded training grant for the family nurse practitioner specialty in the MSN program expanded the distance technologies to include audio-conferencing and e-mail. Faculty and students continued to travel, sometimes over long distances, for portions of the courses. The introduction of desktop videoconferencing (now called IP video) in 1995 for a HRSA-funded project for advanced practices nurses in adult health allowed nurses beyond the reach of our

interactive television to enroll. At this point we had also reached the limits of time available on the interactive television, and IP video allowed us to reach the other Divisions when the television was not available.

Faculty in other specialties began to explore the use of these technologies to reach underserved areas of Nebraska. This was further funded in training grants from HRSA for the innovative health systems nurse specialist track (1997-2005), women's and children's health (1998-2000), family nurse practitioner (1999-2002) and the combined family nurse practitioner/psychiatric mental health advanced practice nurse specialty. In all of these efforts, students in the classroom on the home Division at Omaha had the same classes and other learning experiences as the students at other sites. Over time the core courses were modified so that they were more accessible to students not at one of our Divisions. Again, students at all locations had the same classes and used the same learning modalities.

In 1997, the Associate Dean for Graduate Programs was approached by the dean of another college of nursing in a rural area with a request to facilitate the enrollment of some of her faculty in our PhD program with part of the course work delivered at a distance. In Fall 1997, the core courses of the PhD program were televised to two sites in South Dakota. The following year, other sites were added.

Now (2006) approximately 50% of each core course is delivered asynchronously to both local and distance students. All course work for the PhD program is synchronous via television, IP video or audio-conference. There are frequent telephone contacts with advisors and mandatory on-campus time every semester. At all stages of this process, faculty and key stakeholders in rural areas were engaged in the planning.

The development of courses and programs available to students away from our physical campuses has been an incremental process. The first changes made some of our graduate offerings available to students on our Kearney and Scottsbluff Divisions. Prospective students who were place-bound in rural areas were the impetus for extending access to our programs beyond our four Divisions. Later, nurses who were working in positions that did not allow participation in courses taught during the daytime asked for more flexible options (the first group were school nurses with a fixed daytime schedule). Now, more and more students desire the flexibility of course delivery that is not exclusively bound to time and place, a phenomenon occurring in many institutions of higher education.

3. What necessary approvals have been obtained to implement the proposed change?

Because the curriculum was not changed, approval was not necessary outside of the College of Nursing. We worked with other units of UNMC (Graduate Studies, Student Financial Aid, Instructional Technology) to facilitate these changes.

4. What impact might the proposed change have on challenges identified by the Commission as part of or subsequent to the last comprehensive visit?

These changes do not appear to be related to any of the challenges identified by the Commission at the last comprehensive visit.

5. What are the organization's plans to implement and sustain the proposed changes?

These changes have been implemented over a period of 17 years. The College of Nursing has demonstrated the ability to implement and sustain these changes even after training grant funding has ended. Each student pays a distributive education fee on a per semester basis that provides partial funding for our learning resource centers, distance delivery of courses, and technical assistance. All students (local and distant) pay the same fee just as distance students pay fees that support on-campus infrastructure.

The evaluation of distributive technologies has been a part of end-of-course evaluations for almost 10 years and is reviewed carefully. The technical support team has grown with the increase in the number of courses offered using technology and faculty have acquired many technology skills that allow some (but not all) faculty to be relatively independent in the use of distance technologies.

Because the courses are not sectioned by local and distance student groups, the faculty are the same for both groups of students, so differences in faculty credentials are not an issue. The College of Nursing programs (BSN and MSN) were fully accredited by the Council on Collegiate Education in Nursing in 1999 and a midpoint review in 2004 offered no recommendations.

The distance delivery methods are supported by the leadership of an Assistant Dean for Informatics and Learning Technologies, a Director of Learning Resources, a Coordinator of the Learning Resource Center on each Division and a team of instructional technologists.

Support services including Student Services, Library, Financial Aid and academic advising is available to all students regardless of physical location via e-mail and telephone. The need to provide these services for students at a distance has improved our services to all students. The development of electronic journals has greatly simplified the process of providing access to required reading from the periodical literature, and the staff members of the McGoogan Library of Medicine have dedicated resources to meet the needs of students at a distance. Local Omaha students also benefit from the increased flexibility of learning resources and other support services.

6. What are the organization's strategies to evaluate the proposed change?

The College of Nursing Evaluation Plan calls for systematic, comprehensive data collection on all elements of its programs, including but not limited to mission and philosophy, structure and governance, resources and facilities, programs/curricula, faculty, students, and graduates. Each of these areas includes specific evaluation questions and sub-questions; for each of these the evaluation plan delineates all data sources (i.e., individuals and groups including students, faculty, alumni, mentors, employers) from whom data are collected; all data collection methods including quantitative and qualitative (i.e., nationally normalized survey tools, College of Nursing-developed survey tools, focus group protocols); timetable (intervals) for data collection; standards for assessing quality and adequacy of data; and feedback loop, including persons and groups who are to receive data, deliberate, and make evaluative decisions. The College of Nursing directs considerable resources to program evaluation. It employs a director of evaluation who oversees all phases of the College of Nursing's evaluation and assures that the plan is fully operational and remains relevant as the College of Nursing's programs change and grow. All aspects of distance delivery of courses are included in this evaluation.

Providing courses and programs at a distance is not without concerns. Both faculty and students require considerable attention to orientation and access to technical support to ensure a successful educational experience. The need to keep up with advances in computer technology involves considerable expense for equipment and technical support. Changes in the proportion of distance to local students require revision of course activities to promote the best learning experience.

RN TO BSN PROGRAM, COLLEGE OF NURSING

1. What change is being proposed?

The College of Nursing offers an online RN to BSN completion program. This program is offered throughout Nebraska. There is a laboratory component to one course that is completed by traveling to a designated site 3 days during the semester. A clinical component in another course is completed by working with a faculty supervised preceptor in the student's home town. All courses at the undergraduate level may soon be available asynchronously for learners at a distance yet there are always clinical requirements that require faculty supervision and may necessitate adjunct faculty and/or telehealth methods of evaluation.

Commission's Policies Relevant to the Proposed Changes. The Higher Learning Commission requires prior approval for a "Change in Educational Offering" (policy I.C.2.b). More specifically we seek approval for "Degree programs offered through distance delivery methods" (I.C.2.b.4).

2. What factors led the organization to undertake the proposed change?

Throughout the years, there have been shortages of baccalaureate prepared nurses in the state, especially in rural areas. The creation and continuance of the RN to BSN program have been responses to these shortages. This program, which offers the same curriculum as the on-campus program, provides flexibility to rural and/or urban nurses in taking courses anytime and anywhere. Busy work and family schedules often preclude travel to a campus site.

The College has worked with community college associate degree programs in nursing to insure a seamless approach to obtaining the baccalaureate degree. General education courses, taken at the community college level, transfer to our program. In addition, 31 credits of coursework from the associate degree nursing programs are transferred to our baccalaureate program. The RN to BSN program consists of 24 nursing credits; 20 credits must be taken at UNMC. Four credits may be transferred from another institution or can be assessed and accepted by a challenge procedure.

3. What necessary approvals have been obtained to implement the proposed change?

This change was approved by the Nebraska Board of Nursing. The College of Nursing BSN was fully accredited by the Council on Collegiate Education in Nursing in 1999. A review in 2004 resulted in no recommendations.

4. What impact might the proposed change have on challenges identified by the Commission as part of or subsequent to the last comprehensive visit?

There were no challenges identified that are relevant to this program.

5. What are the organization's plans to implement and sustain the proposed changes?

An RN to BSN program has been offered in the College of Nursing since the 1970's when faculty would travel to sites around the state. Print and videotape media were employed for independent study enhanced by faculty visits to the site. As the satellite interactive television system became available in Nebraska, some courses were televised to certain sites, usually to a community college setting. In the late 1990's, five years of federal funding were obtained for conversion of the curriculum to asynchronous delivery via the UNMC Blackboard™ course management system. At the end of this year, seven courses in the program were available online. For five years students who did not have computer access were loaned a laptop computer for their coursework. Most students now do not have problems with computer access; those few who experience problems are assisted in finding libraries, co-operative extension offices or community colleges where internet access is available.

Students were required to come to a community or campus site approximately three times a semester for one laboratory course. Supervision of clinical practice

was performed by community preceptors under the direction of faculty who traveled to the site periodically. An instructional technologist in the college is assigned to each course to assist the faculty in implementing changes to the online course and to provide technical support.

6. What are the organization's strategies to evaluate the proposed change?

The program has been evaluated by a comprehensive evaluation system in the College: evaluation of the course, evaluation of the instructor, and evaluation of the technology. This program was evaluated by a program evaluator with students from each graduating class. Phone calls were made to each student asking about the positive and negative aspects of the program and what changes the student recommended.

SCHOOL OF ALLIED HEALTH PROFESSIONS

The School of Allied Health Professions (SAHP) has two distance education programs previously approved by the Higher Learning Commission of the North Central Association (NCA) the BS in Clinical Laboratory Science (formerly Medical Technology) and the BS in Radiation Science Technology. The School is also requesting the following specific changes:

Distance Education Program for

- A. Certificate in Cytotechnology
- B. Master of Perfusion Sciences
- C. Master of Physician Assistant Studies
- D. Doctor of Physical Therapy

A detailed response to each of the Commission's questions is given below for each program listed above. The School expects that it will continue to expand its distance learning programs and options and will keep the NCA informed of additional programs and sites.

First an update of the two approved education programs follows.

BS in Clinical Laboratory Science (formerly Medical Technology): The BS in Medical Technology degree program has been offered via distance since 1992. Initial funding to begin its development and delivery came as an Allied Health Project Grant from the Health Resources and Services Administration (HRSA). The program began because of the critical need for medical technologists in the rural parts of the state. When first offered via distance the program was delivered synchronously via satellite television to six Nebraska sites, Scottsbluff, Kearney, North Platte, Hastings, Grand Island and Lincoln. Students from the rural sites attended an 11-week student laboratory during the summer in Kearney, while the urban students attended their student laboratory in Omaha. Lectures were delivered via distance and faculty for the laboratory instruction were on-site in the two locations. After completion of the student laboratory phase, students (usually

2 per site) received clinical experiences at full-service hospitals in each of the communities named.

Since that beginning, two Nebraska sites, Scottsbluff and Lincoln, have chosen to discontinue having students, and Creighton University Medical Center and Norfolk have been added. At the request of pathologists and laboratories in other states, a site in Casper, WY and another in Sioux Falls, SD have also been added. In all of these cases, all student issues (admissions, counseling, insurance, medical insurance, financial, etc) were handled exactly as for on-campus students.

The program has gradually added more on-line technology and less satellite delivery, until today the program is almost entirely on-line and can be taken asynchronously. There are scheduled telephone conferences for case studies or certain class discussions. Over the more than 10 years of evaluations comparing on-campus students to distance students, there has not been a statistically significant difference in learning, satisfaction or outcomes between the two delivery approaches. The Medical Technology program won the University-wide Award for Outstanding Teaching in 2002, i.e., the top teaching award among all four University of Nebraska campuses. The program is a national model in distance learning.

In 2005, the degree program changed its name from Medical Technology to Clinical Laboratory Science, and the degree now awarded is the BS in Clinical Laboratory Science. In 2004, the School and the department were approached by the University of Missouri at Columbia to develop a partnership so that a clinical laboratory science program could be offered to students in the Columbia, MO area. Clinical laboratory science programs are expensive to offer, the state of Missouri did not have the resources to reinstate its own program (it had been cut due to lack of funding), yet the state desperately needed clinical laboratory scientists. Since the UNMC program is offered almost entirely on-line, a partnership was begun.

The first students (three) from the University of Missouri entered in June of 2005. Through this partnership, the Missouri students remain University of Missouri students. The University of Missouri is responsible for recruiting, advising, professional liability and medical insurance, taking care of standards regarding health and immunizations status, criminal background and drug screening checks, counseling, financial aid issues and library access. The students graduate from the University of Missouri. UNMC enrolls the students as visiting students; the students attend the summer student laboratory, and then return to Boyce and Bynum Pathology Laboratories, P.C. in Columbia, MO for their clinical rotations. The students complete all of the courses and develop all of the competencies for a clinical laboratory science graduate through the UNMC clinical laboratory science program. UNMC coordinates, develops, delivers, and evaluates all activities involved with the UNMC clinical laboratory science curriculum. UNMC maintains accreditation with the National Accrediting Agency for Clinical Laboratory Sciences

(NAACLS). At completion of the UNMC clinical laboratory program, UNMC transfers the academic credit to the University of Missouri and notifies the American Society of Clinical Pathology (ASCP) that the student qualifies for taking the Board of Registry or another national certifying examination. The UNMC clinical laboratory science program is contracted by the University of Missouri to deliver this education, and the University of Missouri receives tuition from the students.

The benefits of this partnership are numerous: Missouri has a program which generates clinical laboratory scientists to fulfill the needs of the state of Missouri; the students are able to participate in an academic program that the state of Missouri cannot afford to offer; the students do not have to leave their home state to attend this program; the students are able to participate in an excellent, proven clinical laboratory science program; and UNMC brings in some additional revenue to help with the operations of the program. Since there is a national shortage of clinical laboratory scientists and some states are eliminating clinical laboratory science programs because of their costs, UNMC expects to develop similar partnerships with other states in the region. In fact, the department has already been contacted by the University of Iowa and the University of Colorado, Colorado Springs about similar partnerships.

In the past 10 years the Clinical Laboratory Science/Medical Technology program has received many calls from practicing medical laboratory technicians (graduates of an associate degree program) who would like to earn their baccalaureate degree in clinical laboratory science. Since the entire didactic program is now on-line, it became feasible to offer a degree completion option. The School also received another Allied Health Project Grant to develop this option. The degree completion option had already been developed in the Radiation Sciences (see below), and the clinical laboratory science baccalaureate program was modeled after that.

The Degree Completion Option (DCO) is a collaborative effort between the Center for Continuing Education (CCE) at UNMC and the School of Allied Health Professions. Because this is a nontraditional educational program within the Clinical Laboratory Science Program, students are not classified as regularly enrolled students. Potential students apply directly to the Degree Completion Option, Distance Education Office, School of Allied Health Professions, UNMC. A minimum of 86 hours before they start the program and a minimum of 39 semester hours of coursework from UNMC must be completed to qualify for degree completion. Students must be awarded a minimum of 125 total semester hours of college credit to be eligible to graduate from UNMC; therefore, additional coursework may be required. Students are allowed up to 5 years to complete the degree completion option, but it is possible to complete the program in two years.

Courses are available through a variety of distance learning technologies (mostly online, CD ROMs, independent reading, and projects). Students are required to

write papers, complete projects, conduct research, communicate with professors and students online, work independently on assignments and with coworkers on group projects, do case presentations, take quizzes and exams, etc.

For more information, see http://www.unmc.edu/dept/alliedhealth/mt/index.cfm?L2_ID=10&L1_ID=4&L3_ID=21&CONREF=58

BS in Radiation Science Technology: The BS in Radiation Science Technology is the degree received by graduates of the following professional programs: Radiography, Radiation Therapy, Diagnostic Medical Sonography and Nuclear Medicine Technology.

Radiation Therapy was the first program to be delivered via distance. In a response to severe shortages in western Nebraska, the Radiation Therapy was first delivered via distance to Scottsbluff, NE in the fall of 2002 and continues to be delivered at this site. The distance program includes exactly the same courses as those offered on the UNMC campus, while nearly all of the clinical work is done in Scottsbluff. Some of the courses are delivered via IP video at the hospital site, and other courses are on-line using the Blackboard™ system. The remote students come to UNMC for a two-week period where they are tested for some competencies. The Scottsbluff students complete their education in two years on a part-time basis at the request of both the students and the clinical site. The students in Omaha attend full-time and complete the program in one year.

The Radiography program was first delivered via distance in the fall of 2005. Again, the primary reason was a response to shortages of radiographers in the rural areas of the state. A partnership between Central Community College, St. Francis Medical Center in Grand Island, and UNMC was formed in 2004 and 2005 to begin offering the two-year radiography program in Grand Island. Students are able to take the prerequisite courses at Central Community College, and then receive their radiography courses via IP video at Central Community College and their clinical training at St. Francis Medical Center. For both of these radiation science technology education programs, student support issues are handled through UNMC. However, the community college and St. Francis Medical Center help UNMC with the recruiting and admission processes.

The final responsibility for student issues (recruiting, advising, professional liability and medical insurance, taking care of standards regarding health and immunizations status, criminal background and drug screening checks, counseling, financial aid issues and library access) are the responsibility of UNMC and are handled through the usual student services at UNMC. Students are registered at UNMC, pay UNMC tuition and are considered UNMC students. It is anticipated that the number of students and the number of sites might increase as UNMC responds to the needs of the state and region. The University of Missouri at Columbia is discussing the possibilities of expanding the partnership mentioned under BS in Medical Technology to include the Radiation Therapy program which results in a BS

in Radiation Sciences. The School has also received requests to expand the diagnostic medical sonography class to a distance education option. Additional modifications of the distance delivery of the radiation science programs are probable.

The School also offers a Degree Completion Option for the BS in Radiation Sciences. Nationally, there are over 400,000 practicing radiation science technologists with associate degrees. Many of these technologists are interested in pursuing a baccalaureate degree as evidenced by articles in the national professional journals as well as by a survey of allied health practitioners in the state. To meet this need the School decided to modify current allied health and advanced radiation science curriculum to an on-line format to develop a Degree Completion Option (DCO). Another Allied Health Project Grant was obtained to aid the development of this option. The DCO is a collaborative effort between the UNMC Center for Continuing Education (CCE) at UNMC and the School of Allied Health Professions.

Because this is a nontraditional educational program within the Radiation Science Technology Education (RSTE) Division, students are not classified as regularly enrolled students. Potential students apply directly to the NMT/RT to BSRT Option, Distance Education Office, School of Allied Health Professions, UNMC. Qualified candidates are interviewed and mentored by a faculty advisor who works with them to develop an Individual Plan of Study for degree completion. The Plan of Study includes a core of required allied health courses and a selection of radiation science courses that tailor the technologist's clinical and educational background with their professional goals. Once the Individual Plan of Study has been determined, accepted students will be approved to enroll in the DCO and will register for classes and pay tuition and fees directly to the CCE.

A minimum of 20 semester hours of coursework from UNMC must be completed to qualify for degree completion. Students must be awarded a minimum of 120 total semester hours of college credit to be eligible to graduate from UNMC; therefore, additional coursework may be required. Courses are available through a variety of distance learning technologies (mostly online, CD ROMs, videotapes, independent reading, and projects). Students are required to write papers, complete projects, conduct research, communicate with professors and students online, work independently on assignments and with coworkers on group projects, do case presentations, take quizzes and exams, etc.

For more information, see http://www.unmc.edu/dept/alliedhealth/rste/index.cfm?L2_ID=10&L1_ID=2&L3_ID=56&CONREF=43

Proposed Changes for School of Allied Health Professions

The School wishes to propose additional distance education degree programs for approval by the HLC-NCA. These are modeled after those already approved by the Commission. Three are degree completion options. A discussion of each of the proposed changes follows.

A. Distance Education Program for Certificate in Cytotechnology.

This distance education program comprises the same courses and requirements as the on-campus program. The students receive didactic instruction via distance and clinical education at a remote laboratory in Urbana, IL. The courses are delivered via IP video and on-line via Blackboard™. This program is a partnership with the Carle Clinic in Urbana, the UNMC Continuing Education Center, and the School of Allied Health Professions. Students are registered through the Continuing Education Center and receive their courses through the School of Allied Health Professions. At the end of their study they receive the Certificate in Cytotechnology.

For information on this certificate program, see http://www.unmc.edu/dept/alliedhealth/ct/index.cfm?L1_ID=1&CONREF=1

1. What change is proposed?

The outcomes of this certificate in cytotechnology via distance will be an increased number of certified cytotechnologists in the nation and an enhancement of resources for the UNMC program. Cytotechnology is an expensive program to maintain with only the 4 to 5 graduates a year needed by the state of Nebraska. Expanding via distance would increase the efficiency of the UNMC program. This expansion is consistent with the mission of the Medical Center, "to improve the health of Nebraska through premier educational programs." The program which prepares graduates for the state will be able to continue with the added resources from this expansion. The program plans to increase gradually, with four or five students per site, one to two new sites a year. The students will be recent college graduates and second career non-traditional students. The entire program will be offered with the didactic portion via the internet and IP Video, the clinical portion at each clinical site.

Commission's Policies Relevant to the Proposed Changes. The Higher Learning Commission requires prior approval for a "Change in Educational Offering" (policy I.C.2.b). More specifically we seek approval for "Degree programs offered through distance delivery methods" (I.C.2.b.4).

2. What factors led the organization to undertake the proposed change?

One of the strategic directions of the School of Allied Health Professions has been and still is to develop distance learning options for the allied health programs offered at UNMC. The first reason for pursuing distance delivery models is to increase access to allied health education, especially in rural areas. Many potential students are place-bound and not free to move in order to pursue education in an allied health field. The second reason is to increase the number of allied health professionals in the nation because most allied health professions have a 5 to 20% national shortage. The third reason is to optimize the efficiency of the allied health programs at UNMC. The School's associate dean and program directors reasoned that by developing and delivering distance education in the smaller allied health programs, the School and the individual program could not only survive, but thrive. This would bring national recognition and increased dollars to the UNMC allied

health programs. The programs would remain viable and the School would be able to serve the needs of the state of Nebraska. In the case of the cytotechnology program, the national shortage is 5 to 10%. There are only 35 programs accredited in the U.S. All states in the U.S. need cytotechnologists to prepare and analyze cell samples by screening of abnormalities at the cellular level. A distance education program could meet this need.

3. What necessary approvals have been obtained to implement the proposed change?

The School approved the distance delivery option for the cytotechnology program through the curriculum committee. The Programmatic Accrediting Body, Cytotechnology Program Review Committee, and Commission Accreditation of Allied Health Education Programs (CAAHEP) were then notified, and they encouraged the Program Director to develop a distance learning model. The distance delivery option for the Certificate in Cytotechnology was then approved by the Vice Chancellor for Academic Affairs and the Provost of the University of Nebraska system. Because UNMC was already offering a Certificate of Cytotechnology, the approval process did not need to go beyond the Provost.

4. What impact might the proposed change have on challenges identified by the Commission as part of or subsequent to the last comprehensive visit?

Ten years ago, the NCA site visitors mentioned the nationwide trend of an over-supply of health professionals. Now there clearly is a nationwide shortage of most of the health professionals, but the worst crisis was about four years ago. The shortage is not as acute in Nebraska as it has been. This proposed change is related to the Commission's statement: "In light of a rapidly changing marketplace, the institution should be accorded maximum operational flexibility in order to meet these changing needs." The School has rapidly responded to the changing marketplace.

5. What are the organization's plans to implement and sustain the proposed changes?

Since only four additional students are involved, to make a total of ten (10) students, the current faculty (the program director and three courtesy appointment pathologists) are able to handle the proposed changes. The program plans to hire a project assistant to help with scheduling clinical rotations and coordinating the student support services. Academic advising is handled by the program director. Library services are available through the Lotus Notes™ connection to the UNMC library. These students are not eligible for financial aid. Students are offered the option of enrolling in the UNMC on-campus program and receiving student aid while remaining in Urbana. This is an area of concern and other options for financial aid are being investigated.

As the program expands to other sites, another faculty member will be hired. In this manner the entire program improves and additional innovative teaching and

outreach strategies will be the result. The programmatic accrediting body, Cytotechnology Program Review Committee, and Commission Accreditation of Allied Health Education Programs (CAAHEP) is very excited about this model and thinks it is a way to meet the demands of the nation for cytotechnologists in a cost-effective manner.

6. What are the organization's strategies to evaluate the proposed change?

The proposed changes will be evaluated in the same manner as other SAHP outcomes: quality and number of applicants and matriculants, performance of students in the curriculum, student satisfaction, programmatic accreditation self-studies and site visit, performance of students on national exams, survey of programs by graduates and employers of those graduates, fulfilling the state's, region's, and nation's needs for cytotechnologists, access to a diverse student body, and the percent employment of the graduates. (A copy of the SAHP educational outcomes assessment is in the Resource Room). The results on national testing, graduate and employer surveys of distance program option students will also be compared to the on-campus students. The revenue generated will need to exceed the costs of adding the distance education option.

B. Distance Education Option for Master of Perfusion Science.

This distance education option is a degree-completion option for practitioners in clinical perfusion. The Master of Perfusion Science degree is a professional graduate degree. To be accepted, applicants must have completed perfusion training in the United States at a perfusion education program approved by Accreditation Committee on Perfusion Education. Additionally, the applicant must have entered perfusion training with a Bachelor's degree. Applicants who are admitted receive a maximum of 60 semester hours of credit for their perfusion program and complete 11-14 hours credit of on-line courses at UNMC. Students take course work in advanced perfusion technology, health care management, and research design. They also complete a research project. All students are required to travel to Omaha and to present their research work to the Nebraska Society of Clinical Perfusionists. This degree-completion option is also a collaborative effort between the UNMC Center for Continuing Education (CCE) and the School of Allied Health Professions. Because this is a nontraditional educational program within the Clinical Perfusion Program, students are not classified as regularly enrolled students. Potential students apply directly to the clinical perfusion program.

For more information, see <http://www.unmc.edu/dept/alliedhealth/cpe/index.cfm?conref=9>

1. What change is proposed?

The outcomes of this distance learning option include providing practicing perfusionists with an update on current clinical perfusion theories and procedures, knowledge of the economic aspects of health care, basic health care management techniques, and an understanding of research in the perfusion sciences which includes completion of a research project.

Commission's Policies Relevant to the Proposed Changes. The Higher Learning Commission requires prior approval for a "Change in Educational Offering" (policy I.C.2.b). More specifically we seek approval for "Degree programs offered through distance delivery methods" (I.C.2.b.4).

2. What factors led the organization to undertake the proposed change?

One of the strategic directions of the School of Allied Health Professions remains the development of distance learning options for the allied health programs offered at UNMC. The first reason for pursuing distance delivery models is to increase access to allied health education, especially in rural areas. Many potential students are place-bound and not free to move in order to pursue education in an allied health field. The second reason is to increase the number of allied health professionals in the nation because most of these workforces are short 5 to 20%. The third reason is to improve the efficiency of UNMC's allied health programs. The School's associate dean and program directors reasoned that by developing and delivering distance education in the smaller allied health programs, the School and the individual program could not only survive, but thrive. This would bring national recognition and increased dollars to the UNMC allied health programs. The programs would remain viable and the School would be able to serve the needs of the state of Nebraska. There are only 18 accredited clinical perfusion programs in the U.S. The aging of the population will mean more patients with heart disease and an increased need for open-heart surgery; therefore an increased demand for clinical perfusionists. A distance education program could help meet this demand.

3. What necessary approvals have been obtained to implement the proposed change?

The School approved the degree completion option available via distance through the curriculum committee. Approval by the programmatic accrediting body, Accreditation Committee on Perfusion Education, and the Commission Accreditation of Allied Health Education Programs (CAAHEP) is not required because the degree completion students are already practicing perfusionists and have completed approved programs. The degree completion option via distance was then approved by the Vice Chancellor for Academic Affairs and the Provost of the Nebraska University system. Because UNMC was already offering a Master of Perfusion Science, the approval process did not go any further.

4. What impact might the proposed change have on challenges identified by the Commission as part of or subsequent to the last comprehensive visit?

This request for a change in degree programs offered is not related to any challenges or concerns identified by the Commission as part of or subsequent to the last comprehensive visit.

5. What are the organization's plans to implement and sustain the proposed changes?

This degree completion option is expected to bring in 10 to 15 new students. The teaching is all on-line, and the load is divided among several allied health and clinical perfusion faculty. The current faculty are able to handle this load. SAHP has developed an infrastructure to handle the student services issues for the degree completion programs with an administrative coordinator who is accountable to the associate dean. This administrative person coordinates all aspects of the student's experience while enrolled in the degree completion option, referring to the program director when the questions require faculty interaction. Students register on-line through the continuing education department, are advised on-line and via the telephone by the SAHP distance education office and/or faculty, and complete their exams on-line under the supervision of a proctor. Library services are available through the Lotus Notes™ connection to the UNMC library. Financial aid is not available for the degree completion option. The revenues from the continuing education program are used to fund the operation of the program. As more students enroll, additional faculty will be added.

6. What are the organization's strategies to evaluate the proposed change?

The proposed changes will be evaluated in the following manner: performance of students in the curriculum, student satisfaction with courses and the degree completion option, and assessment survey of programs by graduates and employers of those graduates. The quality of the coordination by the SAHP office will be determined by a survey of those students who receive their degree through the degree completion option.

C. Distance Education Option for Master of Physician Assistant Studies.

This distance education option is a degree-completion option for practicing physician assistants leading to a Master of Physician Assistant Studies, a professional graduate degree. For admission, students must be a graduate of an accredited PA program, possess a baccalaureate degree from an accredited institution of higher learning, be certified by the National Commission on Certification of Physician Assistants (NCCPA), have personal professional liability coverage or be covered by an employer and have a current state PA license. Students are mentored in advanced clinical practice, take additional courses in health care economics and understanding the U.S. health care system, and in health care ethics. Students improve their research skills by gaining an understanding of scientific papers through didactic study and writing a paper related to medicine on a topic of their choice. Some of the courses are available via distance, and the advanced clinical courses are taken with a faculty-approved preceptor in the students' surrounding communities. The students complete 30 hours of semester credit. This program is also run through the Continuing Education Partnership.

For more information, see http://www.unmc.edu/dept/alliedhealth/pa/index.cfm?L2_ID=24&L1_ID=9&CONREF=9

1. What change is proposed?

The graduate outcomes of this distance learning degree completion option in physician assistant studies include the additional competencies and skills gained by the hundreds of hours of advanced clinical practice, the understanding gained by considering the complex issues in health care ethics, the ability to critically review scientific papers, and the ability to write a scientific paper. The financial outcomes for the programs include additional funding for faculty and department operations.

Commission's Policies Relevant to the Proposed Changes. The Higher Learning Commission requires prior approval for a "Change in Educational Offering" (policy I.C.2.b). More specifically we seek approval for "Degree programs offered through distance delivery methods" (I.C.2.b.4).

2. What factors led the organization to undertake the proposed change?

One of the strategic directions of the School of Allied Health Professions has been and still is to develop distance learning options for the allied health programs offered at UNMC. The first reason for pursuing distance delivery models is to increase access to allied health education, especially in rural areas. Many potential students are place-bound and not free to move in order to pursue education in an allied health field. The second reason is to increase the number of allied health professionals in the nation because most of these workforces are short 5 to 20%. The third reason is to improve the efficiency of the allied health programs. The School's associate dean and program directors reasoned that by developing and delivering distance education in the smaller allied health programs, the School and the individual program could not only survive, but thrive. This would bring national recognition and increased dollars to the UNMC allied health programs. The programs would remain viable and the School would be able to serve the needs of the state of Nebraska.

The UNMC PA program expanded its curriculum and began offering a Master of Physician Assistant Studies in 1993. Many of the former UNMC PA graduates were interested in taking courses to upgrade their skills and earn the Master of Physician Assistant Studies themselves. A distance education program could meet this need.

3. What necessary approvals have been obtained to implement the proposed change?

The School approved the degree completion option available via distance through the curriculum committee. Approval by the Programmatic Accrediting Body, Accreditation Review Commission on Education for the Physician Assistant (ARC-PA), is not required because the degree completion students are already practicing physician assistants and have completed approved programs. The degree completion option via distance was then approved by the Vice Chancellor for Academic Affairs and the Provost of the University of Nebraska system. Because UNMC was already offering a Master of Physician Assistant Studies, the approval process did not need to go beyond the Provost.

4. What impact might the proposed change have on challenges identified by the Commission as part of or subsequent to the last comprehensive visit?

This request for a change in degree programs offered is not related to any challenges or concerns identified by the Commission as part of or subsequent to the last comprehensive visit.

5. What are the organization's plans to implement and sustain the proposed changes?

This degree completion option brings in over 300 students. The teaching load is divided among several faculty, and there is a preceptor for each student. The PA program has increased its faculty by 2 FTE in the last five years, which helps to handle this load. The PA program has developed an infrastructure to handle the student services issues for the degree completion programs with an administrative coordinator who is accountable to the program director. This administrative person coordinates all aspects of the student's experience while enrolled in the degree completion option, referring to the program director when the questions require faculty interaction. Students register on-line through the continuing education department, are advised on-line or via the telephone by PA administration personnel or faculty, and complete their competency exams in the presence of the preceptor. Financial aid is not available for the degree completion option. The revenue generated by this option has funded the additional faculty and the administrative personnel to coordinate the distance education option.

6. What are the organization's strategies to evaluate the proposed change?

The proposed changes will be evaluated in the following manner: performance of students in the curriculum, student satisfaction with courses and the degree completion option, and assessment survey of programs by graduates and employers of those graduates. The quality of the coordination of the PA degree completion option coordinating office will be determined by a survey of those students who receive their degree through the degree completion option.

D. Distance Education Option for Doctor of Physical Therapy

This distance education option is a degree-completion option for practicing physical therapists leading to a Doctor of Physical Therapy (DPT), a professional graduate degree. For admission, students must have been graduates of the UNMC Master of Physical Therapy Program from the years 2000-2003. However, the Physical Therapy Division is considering expanding this degree completion option to graduates of other accredited (accredited by the Commission on Accreditation in Physical Therapy Education) Physical Therapy program and who are licensed in the U. S. as a physical therapist. Students take additional courses (24 semester hours) in critical inquiry, professional practice expectations, prevention and wellness, imaging for physical therapy and advanced integumentary, musculoskeletal, neuromuscular and cardiopulmonary physical therapy. Students are required to attend classes in Omaha one weekend per semester. The rest of the courses are available on-line. This option is also administered through the UNMC Center for Continuing Education partnership with the School of Allied Health Professions.

1. What change is proposed?

The graduate outcomes of this distance learning degree completion option for a Doctor of Physical Therapy include the additional competencies and skills gained by the course in critical inquiry and the evidence-based practice theory woven throughout the curriculum. The students will become competent in advanced clinical practice in cardiopulmonary, neuromuscular, and musculoskeletal PT, and understand the complex interactions between behavior, exercise and nutrition in prevention and wellness. The financial outcomes for the program include additional funding for faculty and department operations.

Commission's Policies Relevant to the Proposed Changes. The Higher Learning Commission requires prior approval for a "Change in Educational Offering" (policy I.C.2.b). More specifically we seek approval for "Degree programs offered through distance delivery methods" (I.C.2.b.4).

2. What factors led the organization to undertake the proposed change?

This option was developed in response to student pressure to develop an option for those students completing a Master of Physical Therapy as the Physical Therapy program was transitioning to the professional doctorate. Students were quite insistent that a way be found for them to obtain the DPT degree. The PT Division decided that the faculty would develop a curriculum for the UNMC Master of Physical Therapy graduates from the prior four years to be able to obtain a DPT. A two-year 24 semester credit hour curriculum was developed and offered on a one-time basis. There were 70 UNMC MPT graduates who completed this curriculum and earned their DPT. The program was so successful that there are many requests to offer the program again. The faculty is studying the issue and planning a needs assessment to determine whether to continue offering the degree completion program.

3. What necessary approvals have been obtained to implement the proposed change?

The School approved the degree completion option available via distance through the curriculum committee. Approval by the programmatic accrediting body, Commission on Accreditation in Physical Therapy Education, is not required because the degree completion students are already practicing physical therapist and have completed an approved program. The degree completion option via distance was then approved by the Vice Chancellor for Academic Affairs and discussed with the Provost of the University of Nebraska. Because UNMC was already offering a Doctor of Physical Therapy, the approval process did not need to go beyond the Provost.

4. What impact might the proposed change have on challenges identified by the Commission as part of or subsequent to the last comprehensive visit?

This request for a change in degree programs offered is not related to any challenges or concerns identified by the Commission as part of or subsequent to the last comprehensive visit.

5. What are the organization's plans to implement and sustain the proposed changes?

This degree completion option had 70 students when it was delivered in 2004-2005. The teaching load was divided among the entire PT faculty. The PT program used their current administrative infrastructure to handle the student services issues for the degree completion program. The PT administrative personnel coordinated all aspects of the student's experience while enrolled in the degree completion option, referring to the program director and other faculty when questions required faculty interaction. Students registered on-line through continuing education, were advised on-line or via the telephone by PT administrative staff or faculty. Library services were available through Lotus Notes™ connection to the UNMC library. Financial aid was not available for the degree completion option. The revenue generated by this option was used to fund the operations of this option. As mentioned before, this program may continue if the needs assessment demonstrates such a need.

6. What are the organization's strategies to evaluate the proposed change?

The proposed changes were evaluated in the following manner: performance of students in the curriculum, student and faculty satisfaction with courses and the degree completion option. The students who took this first two-year degree completion option to earn the DPT were very satisfied with the outcome of their experience and thanked the faculty profusely for doing the work to develop the curriculum and to teach the courses.

SUMMARY OF DISTANCE EDUCATION REQUEST

Strengths

- The University of Nebraska Medical Center has had experience over a long period of time offering programs to students at a distance.
- Distance education programs are equal in measures of quality and outcomes as compared to traditional onsite programs.
- Equivalent services are provided to distance education students.
- The Colleges/School has been able to sustain the programs that were initially grant-funded. Some units are able to offer synchronous classes to distance and onsite students at the same time. This has been cost-effective and provides students interaction with students who live in a rural area, outside of Nebraska or sometimes, from a different country. The College/School has contracts at those distance sites where appropriate.
- There is an extensive network of qualified volunteer personnel at distance sites who provide technical support.

Challenges and Opportunities:

- With declining resources to the University from the state level, there may be difficulty supporting or expanding distance programs. However, the Board of Regents allows out of state tuition dollars collected from distance students to be “retained” by the College/School offering the program. In addition, each area is allowed a distance education fee in addition to tuition and other fees.
- Synchronous technology is not always reliable. Programs that require a synchronous component in their courses are limited in the location and number of sites to which they can offer courses.
- The number of technical support staff is not always sufficient to provide technical support to the courses and to the distance students, particularly with synchronous delivery.
- ITS Help Desk hours presently are limited to an 8 to 5 daytime schedule, weekdays only.

CONCLUSION

UNMC presently delivers a full spectrum of professionally accredited academic programs and respectfully requests Commission approval to extend those presented here to distance learning formats. UNMC also seeks pre-authorization to develop similar distance delivery extensions for other professionally accredited programs.

CONCLUSION

This Self-Study Report has afforded UNMC the opportunity to take a step back from the crush of meeting daily and yearly objectives to reflect on where the institution is now, where it is headed, and where we desire to be. It gave a wide range of representatives from all colleges and schools on all four campuses the chance to come together for this significant endeavor.

The self-study pinpointed many opportunities and challenges UNMC faces, even as a promising future is in sight. Internal surveys in some cases revealed areas for dialogue and improvement. Matters that were already receiving attention, such as the imperative for more diverse student and faculty populations, came into clearer focus. The importance of persistent planning, assessment, focused leadership, communication and pursuit of funding sources was reaffirmed. Senior leadership is taking seriously the challenges outlined in the report, ensuring that appropriate and timely steps are being taken to address them.

The self-study's findings of strengths – examined through the lens of the Commission's four suggested themes of future orientation, focus on learning, connectedness and distinction – indicate that UNMC is largely on target as a mature, forward-thinking, high-performing institution.

Future-orientation

It is clear that UNMC, while cognizant of its rich history and always mindful of its commitment to integrity, is moving forcefully into the future.

- All levels of the institution, inspired by a stable, action-oriented leadership team, embrace planning, change and growth, guided by a well-developed and well-understood mission and vision.
- Current and predicted financial and political resources indicate strong support for this growth.
- Recent new structures and planned educational and research facility expansion, including a College of Public Health and geriatric and research centers, will enable both recruitment of investigators and expansion of class sizes to meet workforce deficits. (See future campus site plan on page 189.)
- The emphases on preparing health care practitioners for rural practice and developing innovative minority recruitment programs are long-term efforts that are showing results.

- The commitment to research as a driving force is paying big dividends that are laying a foundation for further progress, including local economic development and enhanced recruitment capability.
- The well-embedded practice of surveying internal and external constituents – and then acting on the results – will generate positive future momentum.

Focus on Learning

UNMC maintains its focus on student learning and faculty development in the midst of change from every direction. Student pass rates on standardized and licensure exams keep improving, but the institution doesn't rely on these assessments as proof of quality teaching and resultant learning.

- In the last 10 years, UNMC colleges and schools have come to depend on correlations between internal and external measurements for continuous curricular quality improvement.
- Significant resources have been and are being allocated for learning, including increased physical space, advanced technology, comprehensive biomedical information sources, and quality clinical experiences.
- Problem-based learning (PBL) and integrated clinical experiences (ICE), an institution-wide commitment to research, and an increasing number of interprofessional training programs are examples of UNMC's efforts to enhance the educational experience.
- UNMC allocates significant resources for faculty development programs, recognition for outstanding teaching, and support for expanding teaching innovation.
- The Center for Continuing Education is an important purveyor of lifelong learning for health care professionals in Nebraska, the region and beyond.
- A pioneer in distance education, UNMC continually responds to learners' needs with increasing numbers of distance offerings.
- International collaborative relationships for students, faculty, administrators and researchers are aiding and will continue to aid the breadth of scholarship at UNMC.

Internal and External Connectedness

UNMC's mission statement reflects its connections to the people of the state of Nebraska, its students, its patients and the underserved. The self-study repeatedly showed an ever-increasing capacity to engage and serve UNMC's many constituencies.

- Students, faculty, staff and administrators are dedicated to the institution's interconnectedness with the communities it serves. In several cases, students themselves have initiated efforts to interact with and respond to community needs.

- UNMC has a burgeoning list of collaborations and partnerships in reaching diversity, planning, community, state, national and global objectives.
- Internal connections are vitally important at UNMC, shown by the many ways it takes the pulse of the organization and seeks to improve its response to students, faculty, staff and alumni concerns.

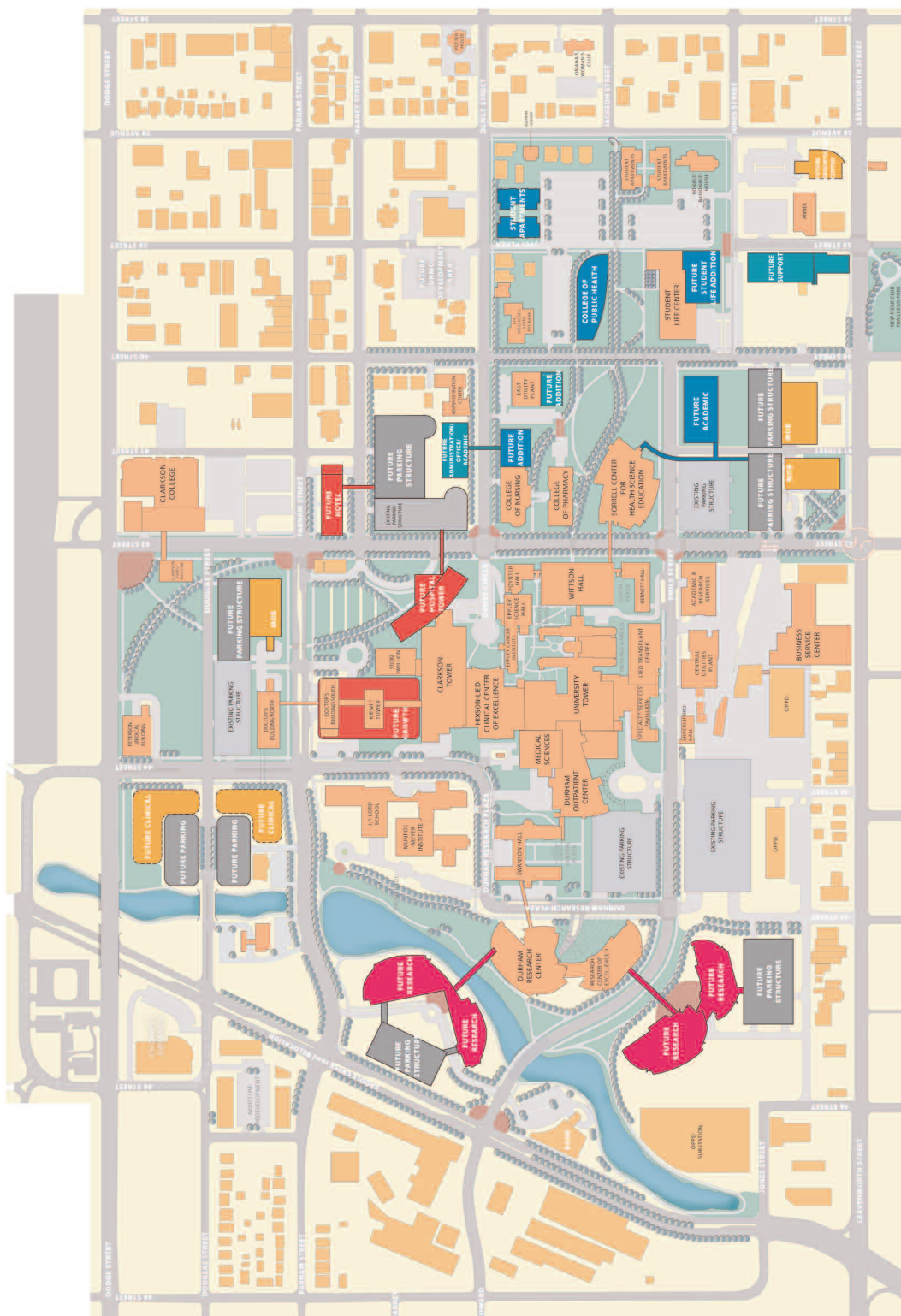
Distinctiveness

UNMC is unique by its very nature in the state of Nebraska, and perhaps among North Central Association members. But the institution's leadership is not content to be unique, and is dedicated to assuring that UNMC is a distinctive institution.

- The self-study brought to light a pervasive commitment to continually strive to do more, to be more, to serve more.
- Centers of excellence, faculty who are internationally recognized experts in organ transplantation and lymphoma, leadership in U.S. initiatives such as bioterrorism preparedness, and escalation in research are just a few of UNMC's marks of distinction.
- UNMC's willingness to embrace its distinctiveness in educating health care professionals in a largely rural state has earned it national merit and the fulfillment of its goal to provide the majority of rural practitioners in Nebraska.
- UNMC's technological proficiency, evidenced on all campuses and especially in its new structures, shows that it has come from what the site visitors deemed a shortcoming nine years ago to a point of pride today.
- UNMC is broadening its distinctiveness through partnerships and affiliations with diverse communities, groups and institutions.

UNMC has completed and now submits its Self-Study Report to The Higher Learning Commission of the North Central Association in preparation for the January 2007 site visit, and as an integral part of our request for continued accreditation. We have attempted to be as thorough as is humanly possible, and in the process, have produced this document not only to meet the Commission's Criteria, but also to serve UNMC's own needs for self-improvement. The process has strengthened well-established strategic planning, expanded centralized institutional data sets, and broadened our understanding of ourselves.

Future Campus Site Plan



GLOSSARY OF ACRONYMS

HLC-NCA	Higher Learning Commission - North Central Association
AAALAC	Association for Assessment and Accreditation of Laboratory Animal Care
AAMC	Association of American Medical Colleges
ACCME	Accreditation Council for Continuing Medical Education
ACGME	Accreditation Council for Graduate Medical Education
ACPE	Accreditation Council for Pharmacy Education
ADA	American Dental Association
AHEC	Area Health Education Center
ANCC	American Nurses Credentialing Center
AOA	Alpha Omega Alpha
ARC-PA	Accreditation Review Commission on Education for Physician Assistant
BOR	Board of Regents
BSN	Bachelor of Science in Nursing
CAPTE	Commission on Accreditation in Physical Therapy Education
CB	Center for Biosecurity
CCE	Center for Continuing Education
CCNE	Commission on Collegiate Nursing Education
CCPE	Nebraska Coordinating Commission for Postsecondary Education
CEO	Chief Executive Officer
CEPH	Council on Education for Public Health
CEU	Continuing Education Units
CHIRS	Consumer Health Information Resource Service
CHSE	Center for Health Science Education (Sorrell Center)
CM	Comparative Medicine (animal care)
CME	Continuing Medical Education
CoBRE	Centers of Biomedical Research Excellence
COD	College of Dentistry
COM	College of Medicine
CON	College of Nursing
COP	College of Pharmacy
COPH	College of Public Health
CPRC	American Society of Cytopathology: Cytotechnology Programs Review Committee
CQI	Continuous Quality Improvement
CRC	Clinical Research Center
CSF	Critical Success Factors
CTO	Clinical Trials Office

CU	Creighton University
DOC	Durham Outpatient Center
DRC	Durham Research Center
ECI	Eppley Cancer Institute
FMP	Facilities Management and Planning
FTE	Full-Time Equivalent
GAs	Graduate Assistants
HIPAA	Health Insurance Portability and Accountability Act
HPTC	Health Professions Tracking Center
HR	Human Resources
HRSA	Health Resources and Services Administration
IACUC	Institutional Animal Care and Use Committee
IAIMS	Integrated Advanced Information Management System
IBC	Institutional Biosafety Committee
ICE	Integrated Clinical Experience
INBRE	IDEA Networks of Biomedical Research Excellence
IPO	Intellectual Property Office
IRB	Institutional Review Board
ITS	Information Technology Services
JCAHO	Joint Commission on Accreditation of Health Care Organizations
JRCDFS	Joint Review Committee on Education in Diagnostic Medical Sonography
JRCERT	Joint Review Committee on Education in Radiologic Technology
JRCNMT	Joint Review Committee on Educational Programs in Nuclear Medicine Technology
LCME	Liaison Committee on Medical Education
LEIS	Learning Environment and Internet Services
LTC	Lied Transplant Center
MMI	Munroe – Meyer Institute
MPH	Master of Public Health
MS-1	Medical Student, First Year
MS-2	Medical Student, Second Year
MS-3	Medical Student, Third Year
MSIA	Medical Sciences Interdepartmental Area
MSN	Master of Science in Nursing
NAACLS	National Accrediting Agency for Clinical Laboratory Sciences
NBME	National Board of Medical Examiners
NCA	North Central Association of Colleges & Schools
NCLEX	National Council Licensing Exam
NHS	Nebraska Health Systems – Renamed The Nebraska Medical Center

NIH	National Institutes of Health
NRI	Nebraska Research Initiative
NU	University of Nebraska
NU-PATHS	Nebraska University Preadmission to Health Sciences
OSCE	Objective Structured Clinical Evaluation
OVAMC	Omaha Veterans Affairs Medical Center
P&T	Promotion and Tenure
PASS	Postdoctoral Application Support Service
PBL	Problem-Based Learning
POE	Program of Excellence
RCE	Research Center of Excellence (Durham Research Center)
RCE II	Research Center of Excellence II
RESPECT	Responsible Early STD Prevention Education and Community Testing (Clinic)
RHEN	Rural Health Education Network
RHOP	Rural Health Opportunities Program
SAGH	Student Alliance for Global Health
SAHP	School of Allied Health Professions
SHARING	Student Health Alliance Reaching Indigent Needy Groups (Clinic)
SPA	Sponsored Programs Administration
SS&C	Strategic Staffing and Compensation Division of Human Resources
SURP	Summer Undergraduate Research Program
UDA	University Dental Associates
UMA	University Medical Associates – Renamed UNMC Physicians
UNeMed	UNMC’s For-Profit Technology Commercialization Corporation
UNK	University of Nebraska – Kearney
UNL	University of Nebraska – Lincoln
UNMC	University of Nebraska Medical Center
UNO	University of Nebraska – Omaha
USMLE	United States Medical Licensing Examination
VAMC	Veterans Affairs Medical Center

APPENDIX 1

Specialized National Accrediting Agencies for UNMC Colleges and Programs

Graduate Medical Education Accreditations by Department Accreditation Council for Graduate Medical Education (ACGME)

Department	Status	Last Awarded	Next Action
Institutional Review*	Favorable	2002	2007
Anesthesia	Accredited	2003	2008
Pain Management	Accredited	2003	2006
Emergency Medicine	Prov. Accreditation	2002	2006
Family Practice - Omaha	Accredited	2005	2011
Family Practice - Rural	Accredited	2000	2006
Internal Medicine	Accredited	2006	2006
Cardiovascular Disease	Accredited	2006	2006
Interventional Cardiology	Accredited	2006	2006
Clinical Cardiac Electrophysiology	Accredited	2006	2006
Gastroenterology	Accredited	2006	2006
Hematology/Oncology	Accredited	2006	2006
Pulmonary/Critical Care	Accredited	2006	2006
Geriatrics	Accredited	2006	2006
Endocrinology & Metabolism	Accredited	2006	2006
Rheumatology	Accredited	2005	Pending
Sleep Medicine	Accredited	n/a	2008
Neurology (CU/NU Program)	Accredited	2004	2006
Neurosurgery	Accredited	2002	2007
Nuclear Medicine	Accredited	2001	2007
Obstetrics/Gynecology	Accredited	2004	2007
Ophthalmology	Accredited	2005	2009
Orthopedics (CU/NU Program)	Accredited	2005	2008
Otolaryngology	Accredited	2005	2010
Pathology	Accredited	2005	2010
Hematopathology	Accredited	2003	2008
Pediatrics (CU/NU Program)	Probation	2006	2010
Pediatric Gastroenterology	Accredited	2006	TBA
Pediatric Infectious Disease	Accredited	2003	TBA
Diagnostic Radiology	Accredited	2003	2008
Interventional Radiology	Accredited	2003	2008
Pediatric Radiology	Accredited	n/a	2007
Surgery	Accredited	2005	2009
Plastic Surgery	Prov. Accreditation	2004	2006
Urology	Accredited	2005	2007
Oral Surgery**	Approval	2004	2009

*Accreditation Council for Graduate Medical Education

**American Dental Association

CU/NU Program - Creighton University and UNMC Program

Institutional and Professional Accreditations

Campus Unit	Department/Program	Accrediting Body	Status	Last Awarded	Next Action
Institutional	University of Nebraska Medical Center	North Central Association of Colleges & Schools (NCA)	Accredited	1997	2006-07
Hospital	Nebraska Medical Center	Joint Commission on Accreditation of Health Care Organizations (JCAHO)	Accredited	2004	2007
Academic Affairs	Continuing Medical Education	Accreditation Council for Continuing Medical Education (ACCME)	Accredited	2006	2010
Allied Health	Cytotechnology Post-baccalaureate certificate	American Society of Cytotechnology: Cytotechnology Programs Review Committee (CPRC)	Accredited	2006	2013
Allied Health	Clinical Laboratory Science B.S.	National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)	Accredited	2005	2012
Allied Health	Medical Nutrition Education Post-baccalaureate certificate	American Dietetic Association (ADA)	Accredited	1999	2008
Allied Health	Perfusion Science Masters	Accreditation Committee-Perfusion Education (AC-PE)	Accredited	1999	2015
Allied Health	Physical Therapy Doctor	American Physical Therapy Association's Commission on Accreditation in Physical Therapy (CAPTE)	Accredited	2004	2014
Allied Health	Physician Assistant Studies B.S., & Masters	Accreditation Review Committee on Education for Physician Assistant (ARC-PA)	Accredited	2005	2012
Allied Health	Radiation Science Technology – Medical Sonography B.S.	Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS)	Accredited	1998	2009
Allied Health	Radiation Science Technology – Nuclear Medicine Technology B.S.	Joint Review Committee on Education in Nuclear Medicine Technology (JRC-NMT)	Accredited	2004	2011

Campus Unit	Department/Program	Accrediting Body	Status	Last Awarded	Next Action
Allied Health	Radiation Science Technology – Radiation Therapy B.S.	Joint Review Committee on Education in Radiologic Technology (JRC-ERT)	Accredited	1998	2007
Allied Health	Radiation Science Technology – Radiography B.S.	Joint Review Committee on Education in Radiologic Technology (JRC-ERT)	Accredited	1998	2007
Dentistry	College of Dentistry D.D.S., B.S.D.H.	Commission on Accreditation of the American Dental Association (ADA)	Accredited	2000	2007
Graduate Studies	Public Health	Council on Education for Public Health	Accredited	2004	2009
Medicine	College of Medicine Doctor & B.S.M.	Liaison Committee on Medical Education (LCME)	Accredited	2006	2012
Medicine	Graduate Medical Education (GME)	Council for Graduate Medical Education (ACGME)	Accredited	2005	2009
Medicine	Comparative Medicine	Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC)	Accredited	2005	2008
Nursing	College of Nursing B.S.N., M.S.N, Ph.D., Post Masters Certificate	Commission on Collegiate Nursing Education (CCNE)	Accredited	1999	2009
Nursing	Continuing Education in Nursing	American Nurses Division of Credentialing Center Association (ANCC)	Accredited	2000	2006
Pharmacy	College of Pharmacy Doctor	American Council on Pharmaceutical Education (ACPE)	Accredited	2000	2006
Pharmacy	Pharmacy Residency Program	Health Systems of Pharmacists	Accredited	2005	2009
Pharmacy	Continuing Education in Pharmacy	Nebraska Council for Continuing Pharmaceutical Education, Inc.	Accredited	2005	2009

APPENDIX 2

Executive Summaries of Surveys of Faculty, Students and Staff, 2005-2006

Survey of Students

Survey Response Rate

- 1,886 survey invitations e-mailed to students
 - 1,146 UNMC students completed surveys
 - 60.8% response rate
 - Under-represented
 - College of Dentistry students (quite a bit); Graduate Studies (somewhat)
 - Somewhat over-represented
 - College of Nursing and College of Pharmacy students
 - Students located at Kearney and Scottsbluff

Agreement with Accreditation Statements

Table 2

Student Agreement with Accreditation Statements

90 Percent or More "Strongly Agree" or "Agree"

- Q15-UNMC demonstrates that it values research.
- Q19-Faculty, students, and staff are supported by UNMC to acquire, discover and apply knowledge responsibly.
- Q5-UNMC upholds and protects its integrity as an institution.
- Q3-UNMC promotes participation and collaboration among students and faculty.
- Q17-UNMC demonstrates use of valid current evidence for best patient care.
- Q16-At UNMC intellectual inquiry is integral to educational programs.
- Q1-UNMC's mission is clear.
- Q14-UNMC promotes student learning across the institution.
- Q6-UNMC realistically prepares for a future shaped by multiple trends.
- Q2-Mission statement recognizes diversity of learners, constituencies, and society.
- Q11-Student learning outcomes are clearly stated for my program and students are effectively assessed.
- Q13-UNMC supports creation of an effective learning environment in my educational program.
- Q12-Values and resources of UNMC support effective teaching in my educational program.
- Q10-UNMC's resource base supports educational programs.

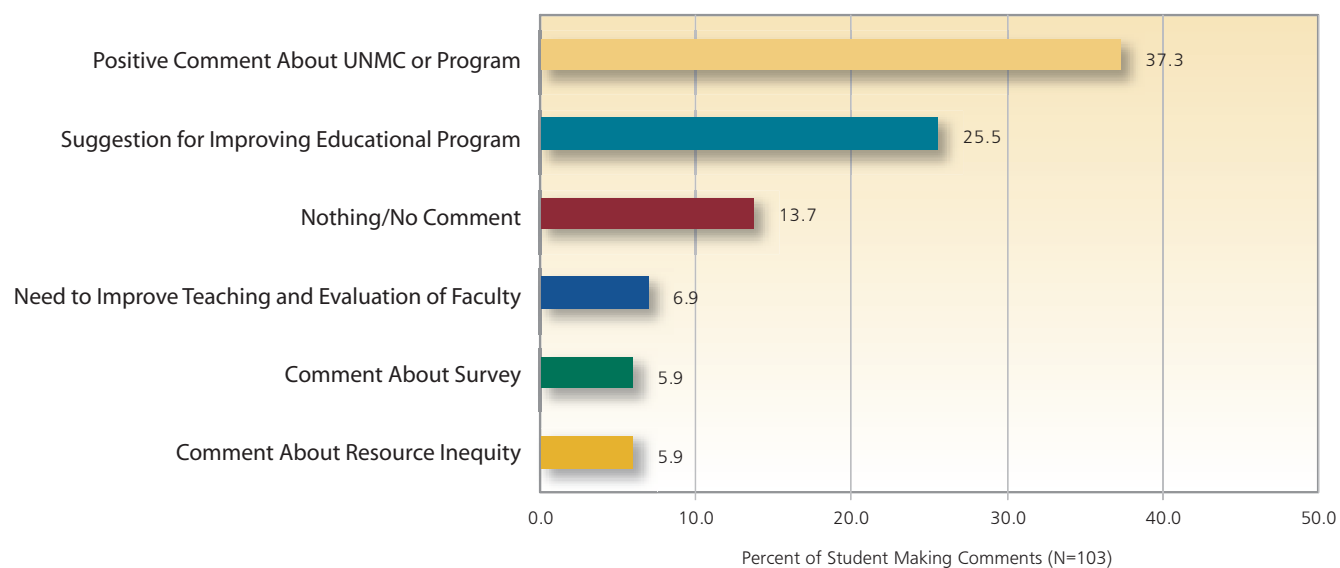
80-89.9 Percent "Strongly Agree" or "Agree"

- Q4-UNMC promotes effective leadership.
- Q9-UNMC administrators and faculty respond to future challenges and opportunities.
- Q18-UNMC assesses the usefulness of curricula to students who will live in a global, diverse and technological society.
- Q22-UNMC has a commitment to engage with constituencies and communities.
- Q23-Internal and external constituencies value UNMC services.
- Q7-Resource base supports UNMC plans for maintaining and strengthening quality.
- Q20-UNMC analyzes its ability to meet needs and expectations of constituencies.
- Q21-UNMC learns from its constituencies to determine needs.

70 -79.9 Percent "Strongly Agree" or "Agree"

- Q8-Results from course evaluations and assessments guide strategies for improvement in my educational program and teaching.

**Fig. 7 Summary Categories for Student Comments
on UNMC Accreditation Efforts**



Survey of Faculty

Survey Response Rate

- 778 survey invitations e-mailed to faculty
 - 602 faculty completed surveys
 - 77.4% response rate
 - Somewhat under-represented
 - Medicine and Monroe-Meyer Institute faculty
 - Faculty members with 3-5 years at UNMC
 - Somewhat over-represented
 - Academic Affairs, Allied Health Professions, and Pharmacy faculty
 - Faculty members with more than 20 years at UNMC

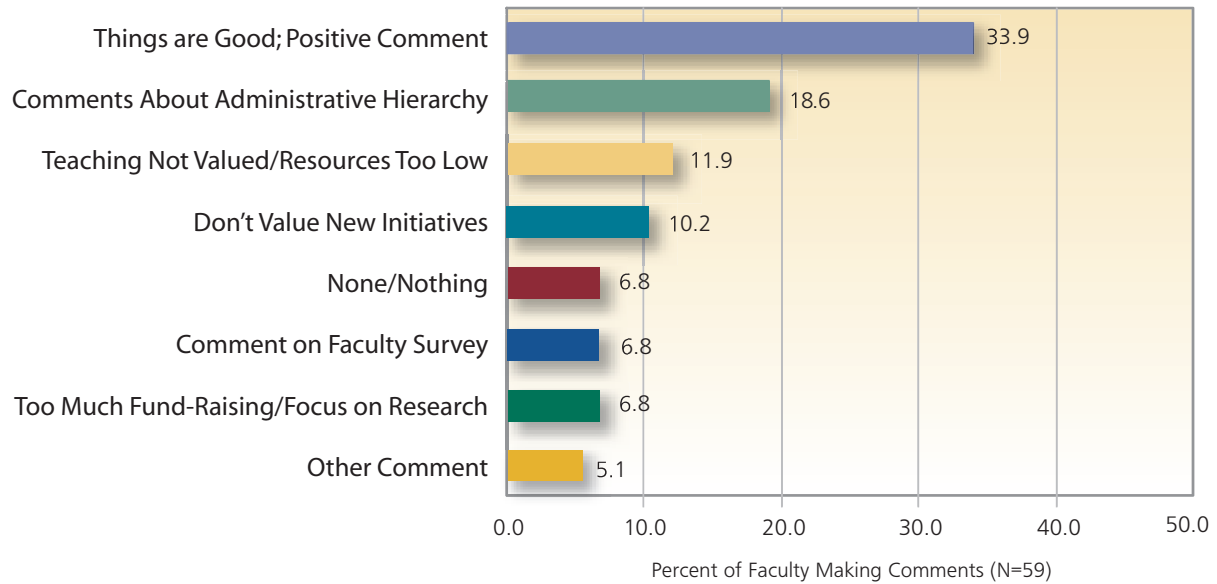
Agreement with Accreditation Statements

Table 2

Faculty Agreement with Accreditation Statements

90 Percent or More "Strongly Agree" or "Agree"
▪ UNMC demonstrates that it values research ▪ UNMC's mission is clear
80-89.9 Percent "Strongly Agree" or "Agree"
▪ UNMC upholds and protects its integrity as an institution dedicated to social good ▪ The UNMC mission statement recognizes the diversity of its learners, other constituencies, and the greater society it serves ▪ Faculty, students, and staff are supported by UNMC to acquire, discover and apply knowledge responsibly ▪ At UNMC intellectual inquiry is integral to its educational programs ▪ UNMC demonstrates that it uses valid current evidence for best patient care ▪ UNMC realistically prepares for a future shaped by multiple societal and economic trends ▪ UNMC promotes faculty, staff and student learning across the institution
70-79.9 Percent "Strongly Agree" or "Agree"
▪ UNMC's objectives for student learning outcomes are clearly stated for my educational program's goals and make effective assessment possible ▪ UNMC has a commitment to engage with its identified constituencies and communities ▪ UNMC's resource base supports its educational programs ▪ Internal and external constituencies value the services UNMC provides ▪ UNMC supports the creation of an effective learning environment in my unit ▪ Planning activities in my unit align with UNMC's mission, thereby enhancing our capacity to fulfill the mission ▪ The values and resources of UNMC support effective teaching in my unit ▪ UNMC assesses the usefulness of its curricula to students who will live and work in a global, diverse, and technological society ▪ UNMC analyses its ability to meet the needs and expectations of its constituencies ▪ The resource base supports UNMC's plans for maintaining and strengthening quality in the future
60-69.9 Percent "Strongly Agree" or "Agree"
▪ UNMC's administrative structures promote effective leadership ▪ UNMC's internal decision-making processes promote participation and support collaboration that enables my unit to fulfill its mission ▪ UNMC learns from its constituencies to determine their needs
50 -59.9 Percent "Strongly Agree" or "Agree"
▪ Evidence from UNMC's evaluation and assessment processes guide institutional strategies for improvement in my unit and programs

**Fig. 7 Summary Categories for Faculty Comments
on UNMC Accreditation Efforts**



Survey of Staff

Survey Response Rate

- 2,506 survey invitations e-mailed to staff
 - 1,755 staff members completed surveys
 - 70.0% response rate
 - Somewhat under-represented
 - Business and Finance, College of Medicine, and Pharmacy staff
 - Male staff
 - White, Non-Hispanic staff
 - Staff serving for 2 years or fewer
 - Somewhat over-represented
 - Chancellor's Office, Monroe Meyer Institute, Univ. Medical Associates, and VC for Research staff
 - Staff members with 11-20 years, and staff with more than 20 years at UNMC

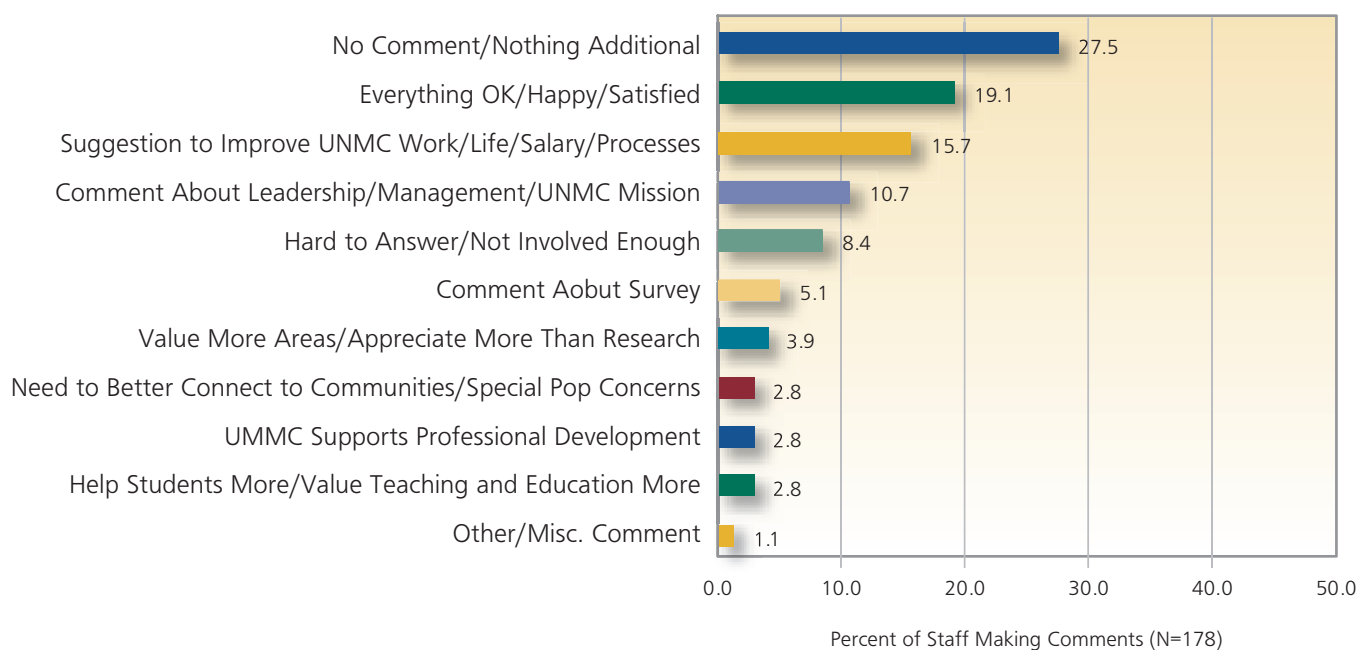
Agreement with Accreditation Statements

Table 2

Staff Agreement with Accreditation Statements

90 Percent or More "Strongly Agree" or "Agree"	
▪ UNMC demonstrates that it values research	
80-89.9 Percent "Strongly Agree" or "Agree"	
▪ UNMC's mission is clear	
▪ UNMC upholds and protects its integrity as an institution dedicated to social good	
▪ The UNMC mission statement recognizes the diversity of its learners, other constituencies, and the greater society it serves	
▪ At UNMC intellectual inquiry is integral to its educational programs	
▪ Faculty, students, and staff are supported by UNMC to acquire, discover and apply knowledge responsibly	
▪ UNMC's resource base supports its educational programs	
▪ UNMC realistically prepares for a future shaped by multiple societal and economic trends	
▪ UNMC promotes faculty, staff and student learning across the institution	
▪ UNMC has a commitment to engage with its identified constituencies and communities	
70-79.9 Percent "Strongly Agree" or "Agree"	
▪ UNMC demonstrates that it uses valid current evidence for best patient care	
▪ Internal and external constituencies value the services UNMC provides	
▪ The resource base supports UNMC's plans for maintaining and strengthening quality in the future	
▪ UNMC's objectives for student learning outcomes are clearly stated for my educational program's goals and make effective assessment possible	
▪ The values and resources of UNMC support effective teaching in my unit	
▪ UNMC analyses its ability to meet the needs and expectations of its constituencies	
▪ UNMC assesses the usefulness of its curricula to students who will live and work in a global, diverse, and technological society	
▪ UNMC learns from its constituencies to determine their needs	
60-69.9 Percent "Strongly Agree" or "Agree"	
▪ Planning activities in my unit align with UNMC's mission, thereby enhancing our capacity to fulfill the mission	
▪ UNMC supports the creation of an effective learning environment in my unit	
▪ UNMC's internal decision-making processes promote participation and support collaboration that enables my unit to fulfill its mission	
▪ UNMC's administrative structures promote effective leadership	
50-59.9 Percent "Strongly Agree" or "Agree"	
▪ Evidence from UNMC's evaluation and assessment processes guide institutional strategies for improvement in my unit and programs	

**Fig. 7 Summary Categories for Staff Comments
on UNMC Accreditation Efforts**



APPENDIX 3

University of Nebraska Medical Center Strategic Plan 2006-2009

UNMC

2006-09 Strategic Plan

Approved by the Chancellor's Council on May 16, 2006

Vision

The partnership of UNMC and the Nebraska Medical Center will be a world-renowned health sciences center that:

- Delivers state-of-the-art health care;
- Prepares the best-educated health professionals and scientists;
- Ranks among the leading research centers;
- Advances our historic commitment to community health;
- Embraces the richness of diversity to build unity;
- Creates economic growth in Nebraska.

Mission

The mission of the University of Nebraska Medical Center is to improve the health of Nebraska through premier educational programs, innovative research, the highest quality patient care, and outreach to underserved populations.

Values

Faculty, staff and students of UNMC will:

- Emphasize quality and have high expectations for performance;
- Pursue excellence in an ethical manner;
- Foster an environment of learning and communication;
- Respect individuals for their cultures, contributions and points of view;
- Support the mission and vision of UNMC in the best interests of our customers;
- Promote individual accountability for organizational success.

Critical Success Factors

A. UNMC will be learning-centered in education.

Rubens Pamies, M.D.

1: Complete a plan for a College of Public Health at UNMC

2006-07 Targets: We will establish necessary collaborative ties and develop or review sufficient data to determine how quickly and broadly, a College of Public Health can go forward.

Action Steps and Target Completion Dates:

- Initiate discussions with affiliated campuses (UNO/UNL/UNK & CU) by Fall 2006
- Establish appropriate benchmark data (e.g., peers) by Fall 2006
- Conduct a regional workforce needs assessment / market analysis by Fall 2006
- Assess space and facilities needs at UNMC by Fall 2006

- Develop a program statement and academic program request for a College of Public Health by Fall 2006

Leader and Team Members: **Dave Crouse**, Glenn Fosdick, Magda Peck, Jay Noren

2. Develop new health leadership Continuing Education programs through community and business partnerships

2006-07 Targets: Develop at least two new, highly marketable CE program related to health education and service leadership. Develop business plan for CE programs targeted to UNMC alumni and Nebraska health personnel, especially those in remote locations. Evaluate business case for technology-based consultations in relation to CE activities.

Action Steps and Target Completion Dates:

- Conduct market and customer analysis to determine demand for new CE programs, including interest in community-based programs by August 2006
- Evaluate UNMC CE products and capacity relative to needs and select programs, including those delivered electronically by September 2006
- Develop business plans and marketing campaigns for new CE programs by November 2006
- Identify and recruit community and business partners to sponsor and market new CE programs by December 2006
- Complete content and delivery system development and begin marketing by February 2007
- Deliver pilot programs beginning in April 2007
- Evaluate the potential for building on program successes to establish a Health Leadership Institute, complete evaluation by June 2007
- Evaluate business case for technology-based consultations in relation to CE activities by June 2007

Leader and Team Members: **Jim Linder**, Carl Greiner, Lois Colburn, Kim Cuda

3. Review and coordinate International Health Education efforts

2006-07 Targets: Consolidate the number of independent efforts in International Health Education as appropriate.

Action Steps and Target Completion Dates:

- Survey colleges and institutes regarding their International Health Education efforts or programs by Summer 2006
- Convene a Task Force to determine educational and business principles and recommendations to improve coordination, efficiency and effectiveness by Fall 2006
- Present preliminary findings at Chancellor's strategic thinking retreat by November 2006
- Submit final principles and recommendations to the Chancellor by Spring 2007
- Implement new or revised International Health Education programs by Summer 2007

Leader and Team Members: **John Adams**, Sheila Ryan, Ward Chambers and Sarah Pirtle

4. Develop new “majors,” unique educational tracks or dual degree options in some of our health science programs

2006-07 Targets: Develop options for specialization within existing programs (majors) in at least two health science disciplines to increase attractiveness of our programs to potential Nebraska and U.S. students.

Action Steps and Target Completion Dates:

- Assess which disciplines would consider optional “majors” for their programs by Fall 2006
- Survey students to determine their level of interest and possible participation by Fall 2006
- Charge disciplinary programs to develop “majors” requirements (participation, program content, timing, nature of “award, etc) by Spring 2007
- Admit first groups of students to “majors” or Tracks programs by Fall 2007

Leader and Team Members: **Jay Moore** and Curricular “Associate Deans” for all programs

B. Increase prominence as a research health sciences center.

Tom Rosenquist, Ph.D.

1. Obtain the full engagement of all departments and all colleges in the UNMC Research Strategic Plan.

2006-07 Target: All colleges, institutes, and department chairs will be accountable for meeting the objectives and goals of the UNMC Research Strategic Plan.

Action Step and Target Completion Date:

- Deans and Directors completed 1, 3 and 5 year research growth plans in 2005-2006; in 2006-07, Deans and Directors will incorporate into those plans a system of resource distribution and reward / recognition that gives a high priority to research activity and rigorously apply that system in all departments by July 2007.

2. Improve faculty recruitment strategies to facilitate research growth.

2006-07 Targets: Research will be a required component of the portfolio of all new UNMC faculty members.

Action Steps and Target Completion Dates:

- Research history and potential will be a factor in consideration of candidates for faculty positions in all departments, in all colleges; especially in departments with a health care delivery mission whose research activity currently is at a low level. To be applied to all recruiting activity by July 2007.
- Recruitment strategies will be developed in collaboration with NMC, for more effective recruitment of successful researchers into clinical departments in all colleges and institutes by July 2007.

Leader and Team Members (for goals 1 and 2): **Tom Rosenquist**, Ken Cowan, John Gollan, Jim Linder, Ginny Tilden, Paula Turpen

3. Strengthen emphasis on research with a rural focus.

2006-07 Targets: Improve coordination and value of UNMC research activities that have a rural focus.

Action Steps and Target Completion Dates:

- Form a UNMC Rural Research Initiative leadership group from among separate, ongoing UNMC project leaders by June 2006
- Identify a dedicated UNMC rural research leader by August 2006
- Identify UNMC's top rural health research priority by March 2007

Leader and Team Members: **Ken Cowan**, Jim Linder

C. Advance community/campus partnerships for health.

Bob Bartee

1. Build a statewide partnership that supports the establishment of a College of Public Health.

2006-07 Targets: By July 1, 2007, secure political and financial support required to create the College.

Action Steps and Target Completion Dates:

- Produce White Paper/Prospectus that "makes the case" for the College by June 2006.
- Build consensus among affected parties and stakeholders by September 2006.
- Identify and recruit partnership members and "standup" team by September 2006.
- Mobilize partnership to support strategic objectives by November 2006.

Leader and Team Members: **Magda Peck**, Roxanna Jokela, Joanne Schafer, Rubens Pamies, Steve Hinrichs, Jay Noren, Keith Mueller, Alice Schumaker

2. Design and implement a campus-wide, family-based, community initiative to promote early childhood development in children aged 0-5.

2006-07 Targets: Identify existing UNMC strengths in early childhood development and cooperate with community partners to develop strategic UNMC initiatives that assist 1,000 children and their families by January 1, 2008.

Action Steps and Target Completion Dates:

- Identify and assess UNMC's assets and university-wide strengths in early childhood development by August 2006.
- By October 2006, assess current national and community-based model programs and providers delivering programs to this population in order to maximize UNMC's role.
- Collaborate with partners to launch unique UNMC program(s) by January 2007.

Leader and Team Members: **Cindy Ellis**, Rubens Pamies, Peggy Pelish, Patrick McNamara, John Walburn, Valda Ford, Mary Jo Pankoke, Brenda Bell, Jennifer Skala

D. Create a culturally competent organization.

Ward Chambers, M.D.

1. Improve the culture at UNMC.

2006-07 Targets: Repeat Environmental Assessment survey; Increase patient satisfaction (clinical & hospital); obtain senior leadership buy-in.

Action Steps and Target Completion Dates:

- Create patient satisfaction survey for underserved populations by September 2006
- Create performance measure linked to appropriate incentives by September 2006
- Establish cultural competence leadership seminar by September 2006
- Repeat cultural survey and compare results from five years ago by January 2007

Leader and Team Members: **Valda Ford**, Linda Cunningham, Myrna Newland

2. Improve recruitment and retention of underrepresented faculty, staff and students.

2006-07 Targets: Unify student recruiting efforts within one year. Increase underrepresented minority students by a factor of 2 in five years. Increase underrepresented minority faculty by a factor of 2 in five years. Achieve comparable rates of recruitment and retention for underrepresented minority faculty staff and students as for other faculty staff and students within five years.

- Establish articulation agreements with additional community colleges by January 2007
- Add full-time Diversity Officer in each college by January 2007
- Add diversity-focused staff position in Human Resources by January 2007
- Create multi-unit recruitment committee by September 2007
- Promote health disparities conference.

Leader and Team Members: **John Russell**, John McClain, Mary Haven, Myrna Newland, Walter Brooks

3. Increase community ties.

2006-07 Targets: Engage community leaders. Increase participation of underrepresented minority patients in clinical research. Communicate the message.

Action Steps and Target Completion Dates:

- Establish minority advisory committee by September 2006
- Promote UNMC's Minority Health Education and Research Organization (MiHERO) in the community as a research center by September 2006
- Develop and implement communications strategy by September 2006
- Provide cultural competence training to businesses by June 2007
- Network with Chambers of Commerce to establish a Minority Young Professionals group by June 2007

Leader and Team Members: **Walter Brooks**, Tina Flores, Bob Bell, Linda Cunningham

E. Advance biomedical technologies to promote economic development in Nebraska by improving health education, science and clinical care.

Don Leuenberger

1. Achieve \$3 million in annual revenue from commercial activities

2006-07 Targets: Achieve \$500,000 in revenue from commercial activity.

Action Steps and Target Completion Dates:

- Appropriately staff UNeMed to achieve 3 year target of \$3.0 in annual revenue by October 2006
- Prioritize opportunities for commercialization in UNeMed portfolio by October 2006

Leader and Team Members: **Tom McDonald**, Rick Spellman, Michael Dixon, Rod Markin

2. Achieve one patentable disclosure to the Intellectual Property Office per \$1.0 million of NIH Funding

2006-07 Targets: Achieve 50 patentable disclosures to the Intellectual Property Office

Action Steps and Target Completion Dates:

- Actively mine research activities for intellectual property with commercial potential
- Enhance faculty awareness of IP opportunities by July, 2006
- Increase research fellowships by December 2006

Leader and Team Members: **Michael Dixon**, Tom McDonald, Deb Vetter, Jim Linder

3. Develop business support capability for faculty, staff and students who become engaged in entrepreneurial activity.

2006-07 Targets: Develop recommendations and organizational structure for entrepreneurial business support and implement approved recommendations. Develop additional measures for tracking progress in advancing technology advancement and commercialization and identify appropriate comparisons.

Action Steps and Target Completion Dates:

- Develop recommendations and organizational structure by October 2006
- Implement approved recommendations by March 2007
- Identify additional measures and make appropriate comparisons by March 2007

Leader and Team Members: **Jim Linder**, Rick Spellman, Sam Sanderson, Tom Porter, Dmitry Oleynikov

F. Employee Loyalty

1. Improve management ability to positively impact employee engagement through increased awareness of employee attitudes and opinions.

2006-07 Targets: Update the current Employee Opinion Survey database and trend information. Refocus the Employee Opinion surveying process to provide continuing information on a campus-wide basis, and also targeted reporting of more specific information. Unit leaders will develop initiatives based on survey results.

Action Steps and Target Completion Dates:

- Complete the 3rd biennial Employee Opinion Survey by November 2006
- Provide analysis and recommendations regarding survey by March 2007
- Develop more targeted “mini-surveys” (3 to 5 questions on specific topics) to be run more frequently than the biennial survey by March 2007
- Develop format and methodology for targeted surveys to be run at the unit or department level by June 2007

Leader and Team Members: **John Russell**, Carmen Sirizzotti, Victor Holly, Kris Hammond

2. Improve/enhance employee engagement through improved manager skills, communication, and programs

2006-07 Targets: Provide education and training regarding employee engagement to administrators, managers, and supervisors. Improve communication channels and practices. Provide opportunities for employee involvement in community and civic organizations.

Action Steps and Target Completion Dates:

- In partnership with the Chancellor’s office, assess current policies, practices and efforts at UNMC regarding employee volunteerism in the community by December 2006
- Implement one “Foundations for Success” development programs for 25 employees by March 2007
- Implement and complete one “Management Series” training program for 25 to 30 managers by June 2007
- Work with administrators to develop unit specific employee communication vehicles by June 2007
- Institute a “lunch ‘n learn” series for employees to bring issues of concern to appropriate administrators by June 2007
- Design coherent campus-wide strategy that promotes, monitors and recognizes employee volunteerism and community activity by June 2007
- Enhance employee selection processes through training of managers and addition of selection tools and Human Resources systems (Jobs@) Ongoing

Leaders and Team Members: **Rod Kelly and Bob Bartee (for Volunteerism)**, Carmen Sirizzotti, Linda Cunningham

3. Revitalize Reward and Recognition Program

2006-07 Targets: Assess awareness of Reward and Recognition programs. Solicit employee input and suggestions regarding reward and recognition. Improve manager and supervisor employee recognition skills. Promote R&R programs on a campus wide basis and improve employee awareness/appreciation of the UNMC compensation package.

Action Steps and Target Completion Dates:

- Survey employees to determine awareness and support for current R&R programs and to solicit employee suggestions by December 2006
 - Develop and distribute an annual "Statement of Earnings and Benefits" to each employee demonstrating the value of their compensation and benefits by December 2006.
 - Revamp R&R programs based on survey findings by June 2007
 - Modify Silver "U" recognition program to address multiple award winners by June 2007
 - Communicate the importance of recognition and feedback to managers and supervisors and provide tools for managers to accomplish these activities.
- Ongoing

Leader and Team Members: **Carmen Sirizzotti**, Employee Recognition Council

4. Improve faculty and staff salaries – TBD

Action Steps and Target Completion Dates:

- Compare UNMC faculty and staff salaries to relevant labor markets, develop a data base to be used for trending purposes and identify areas of greatest concern by October 2006
- Review U-wide and UNMC policies and practices to identify potential policy-based obstacles to addressing salary disparities by December 2006
- Correlate salary comparisons with other factors, such as turnover, to be used to support initiatives to improve salaries by January 2007
- Identify sources of funding to be used to address salary shortcomings by April 2007

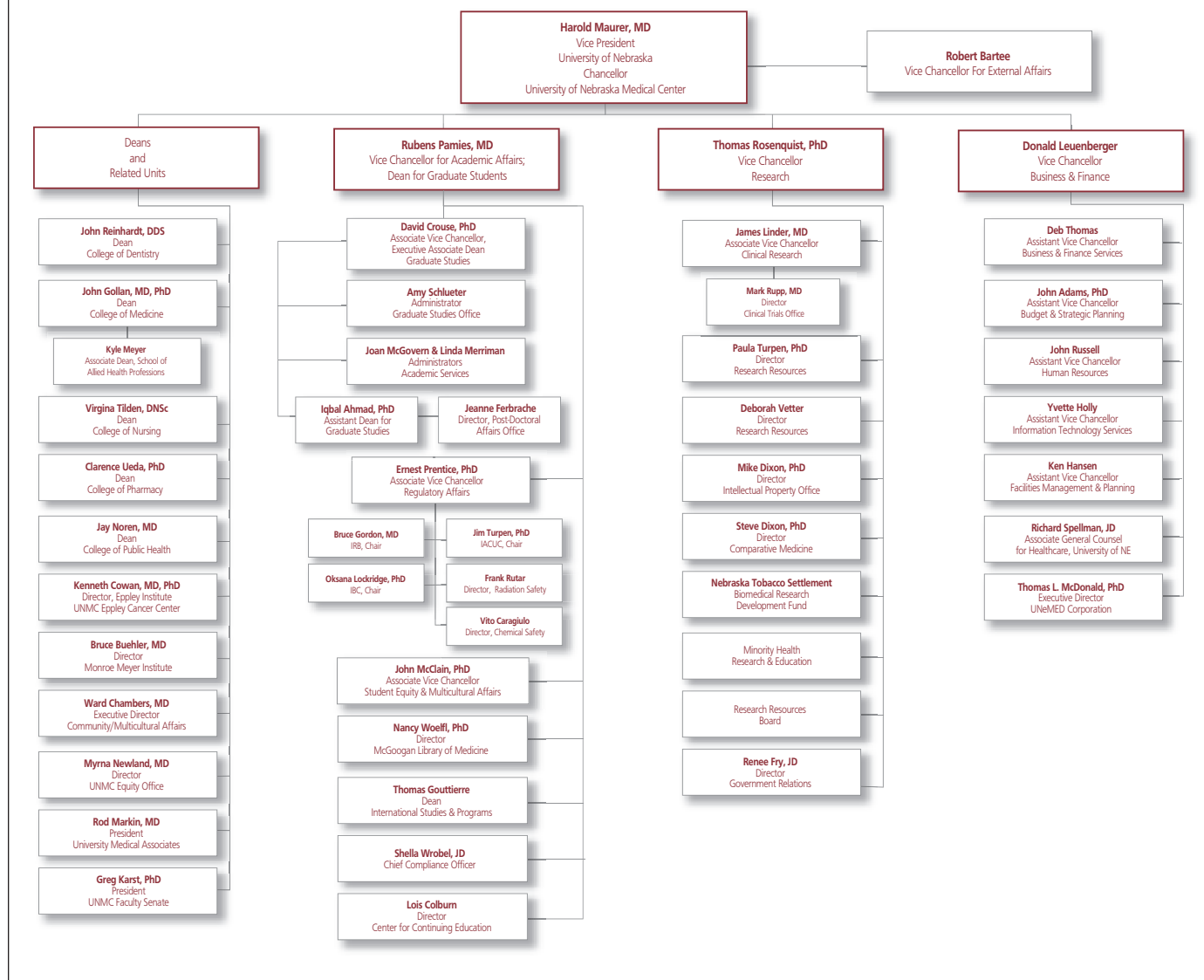
Leader and Team Member: **John Russell**, Dave Crouse, Rod Kelly

APPENDIX 4

University of Nebraska Medical Center

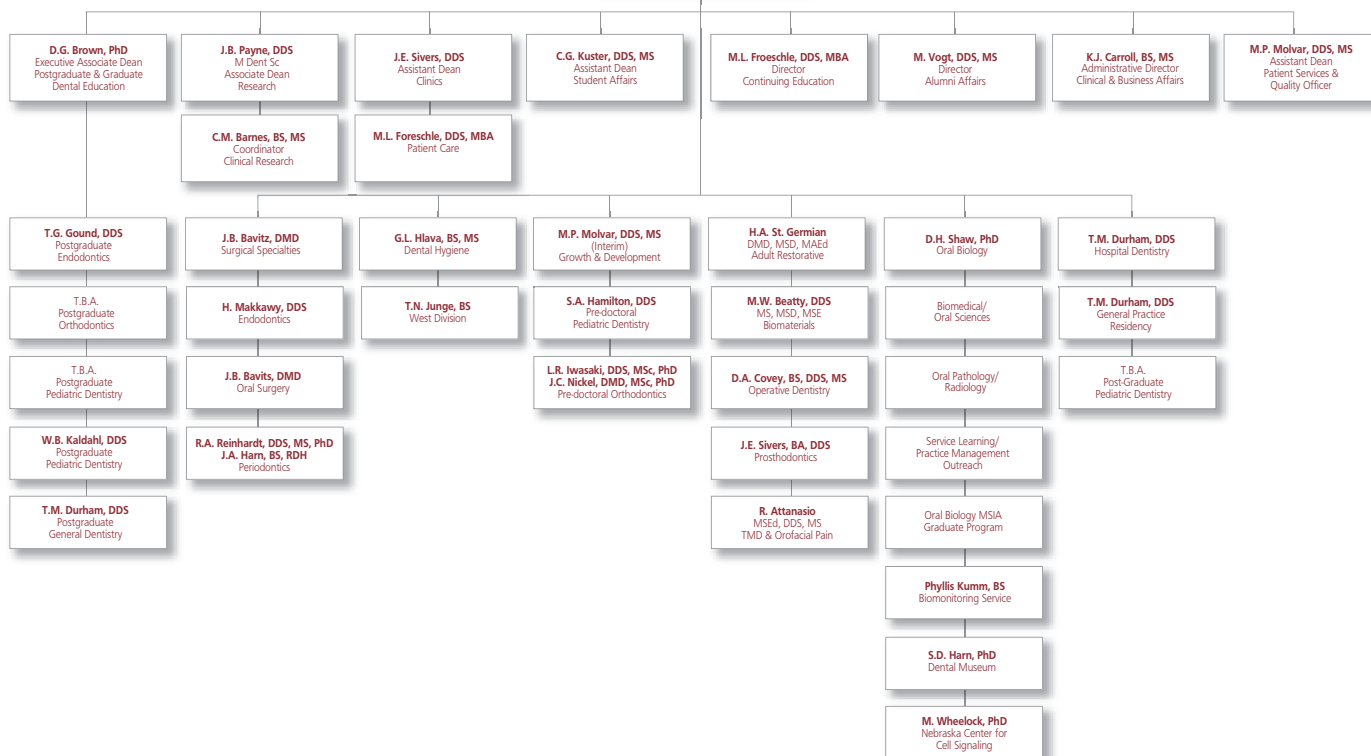
Organizational Charts

University of Nebraska Medical Center Chancellor's Office

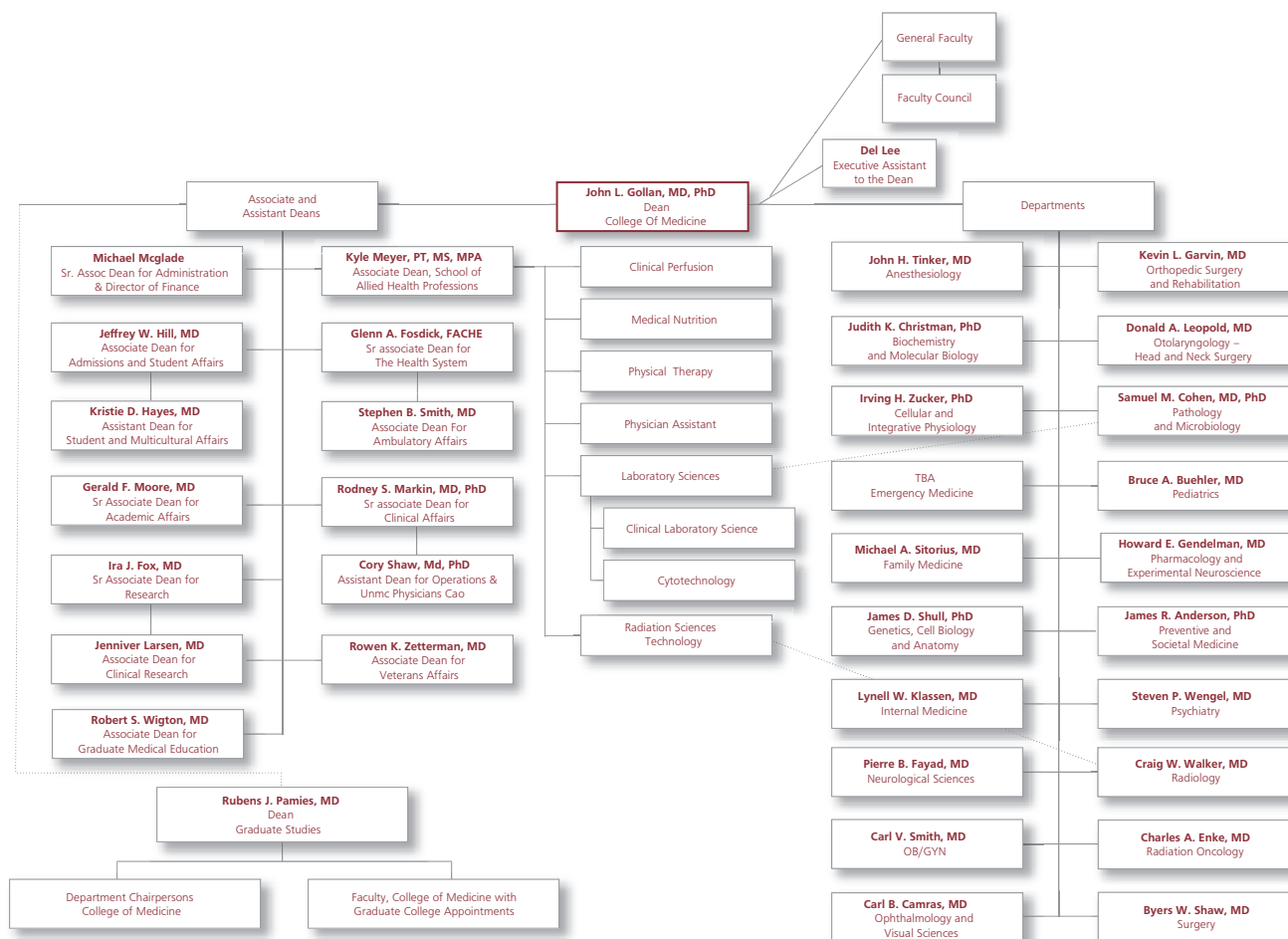


University of Nebraska Medical Center College of Dentistry

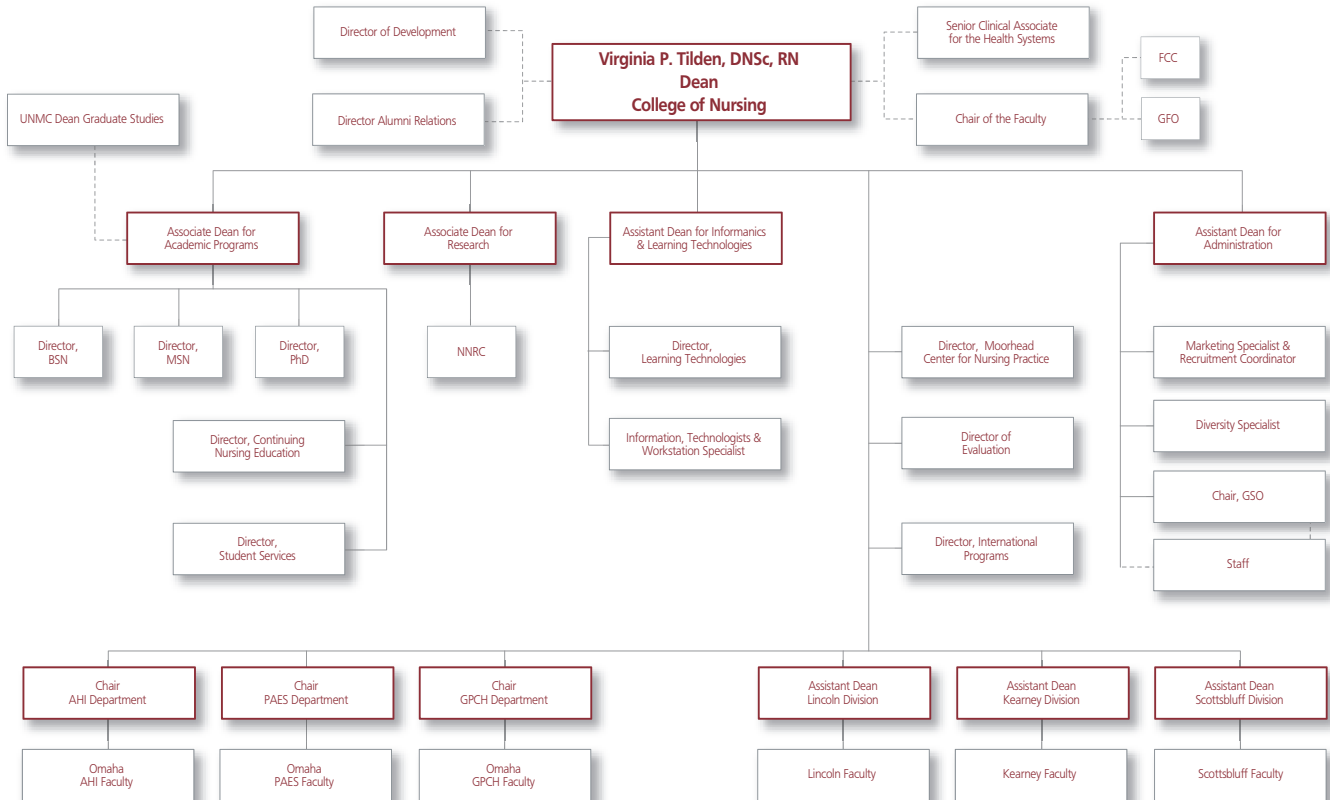
J.W. Reinhardt, DDS, MS, MPH
Dean



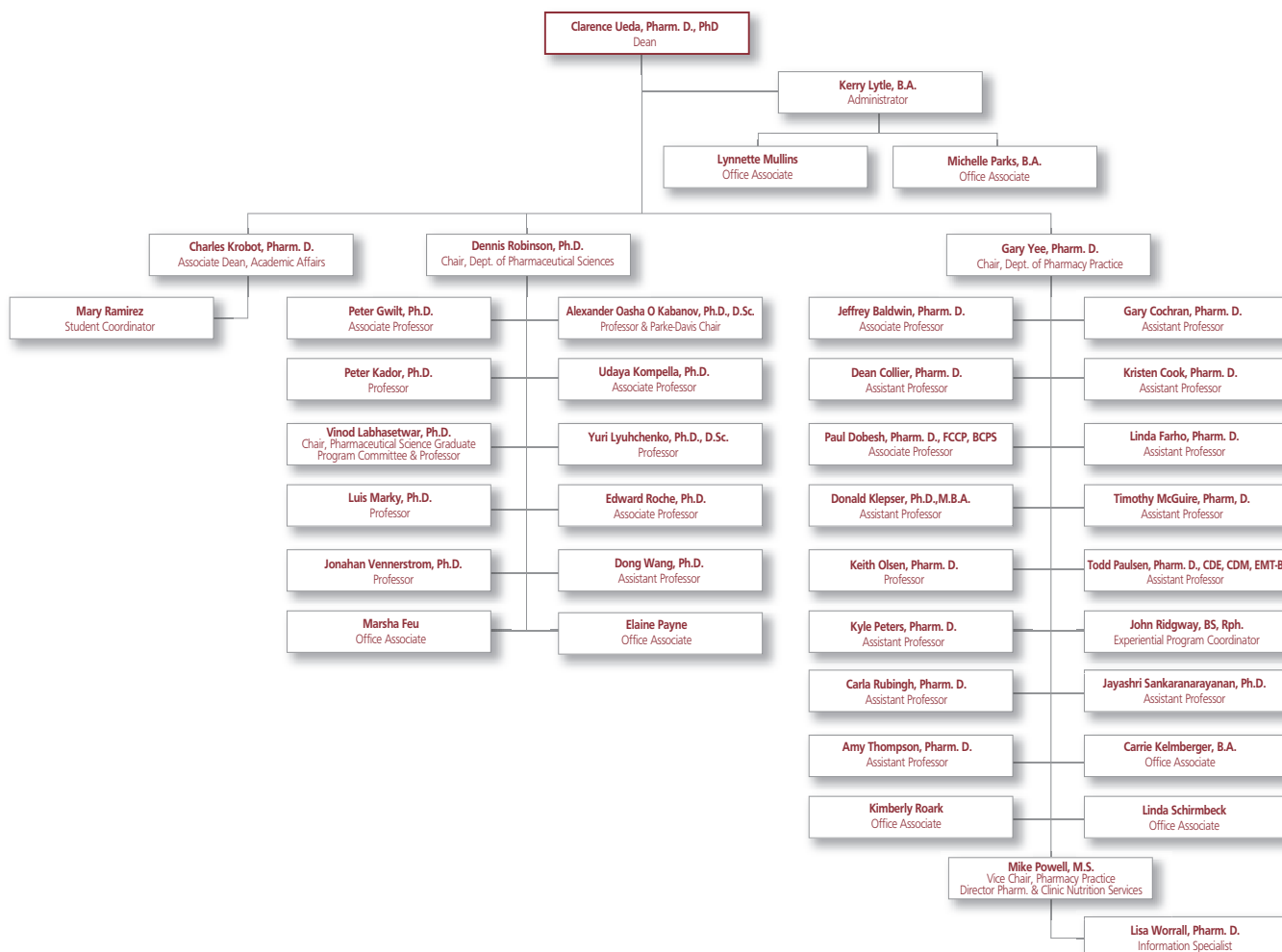
University of Nebraska Medical Center College of Medicine



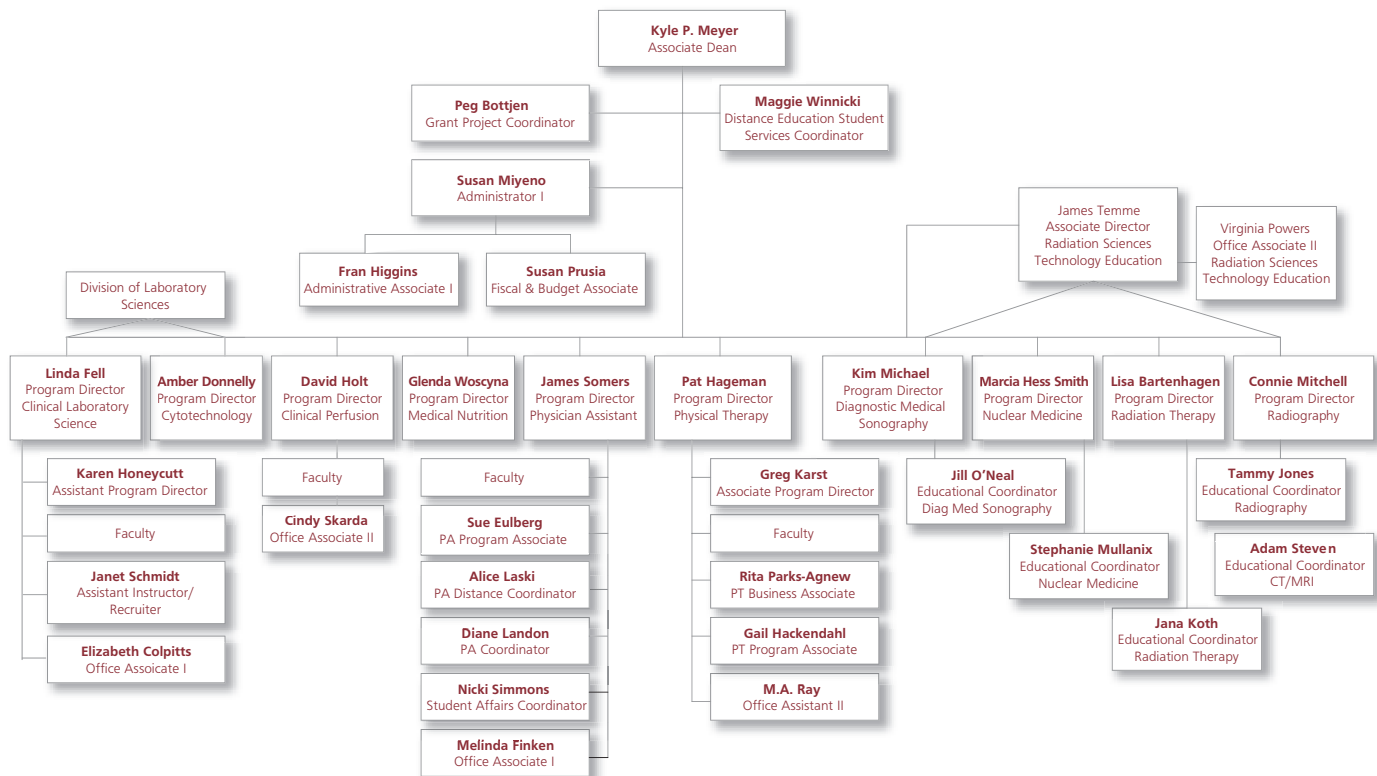
University of Nebraska Medical Center College of Nursing



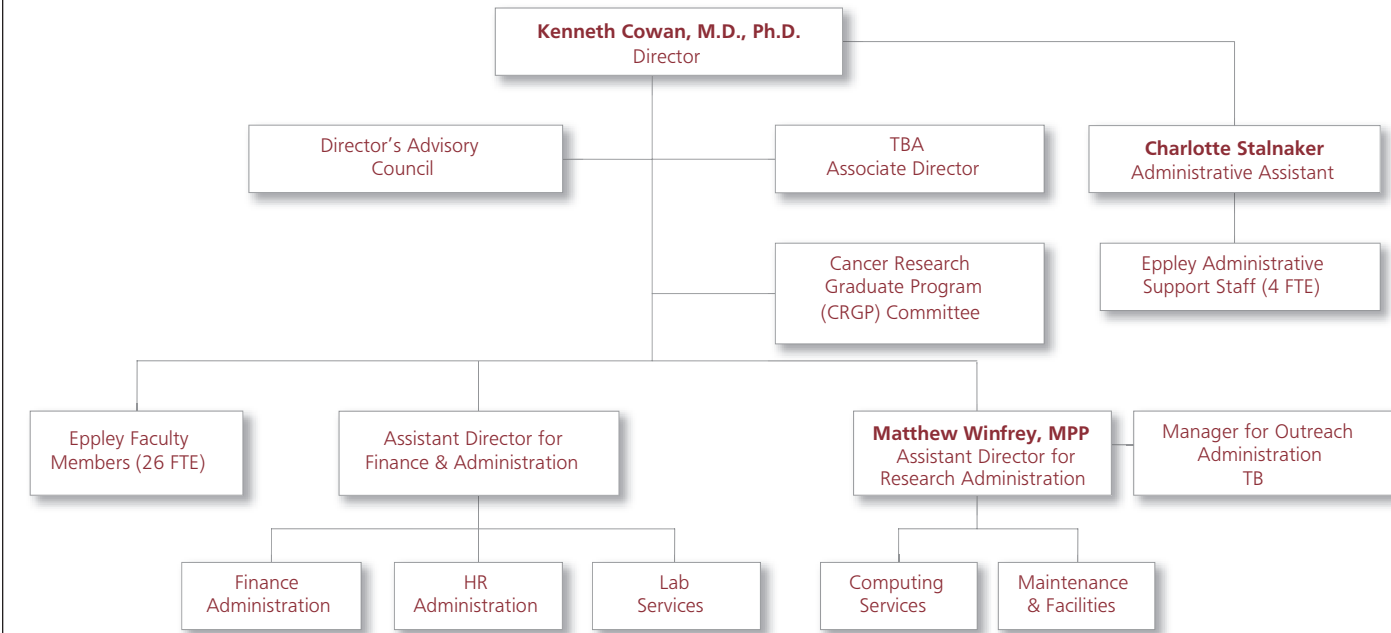
University of Nebraska Medical Center College of Pharmacy



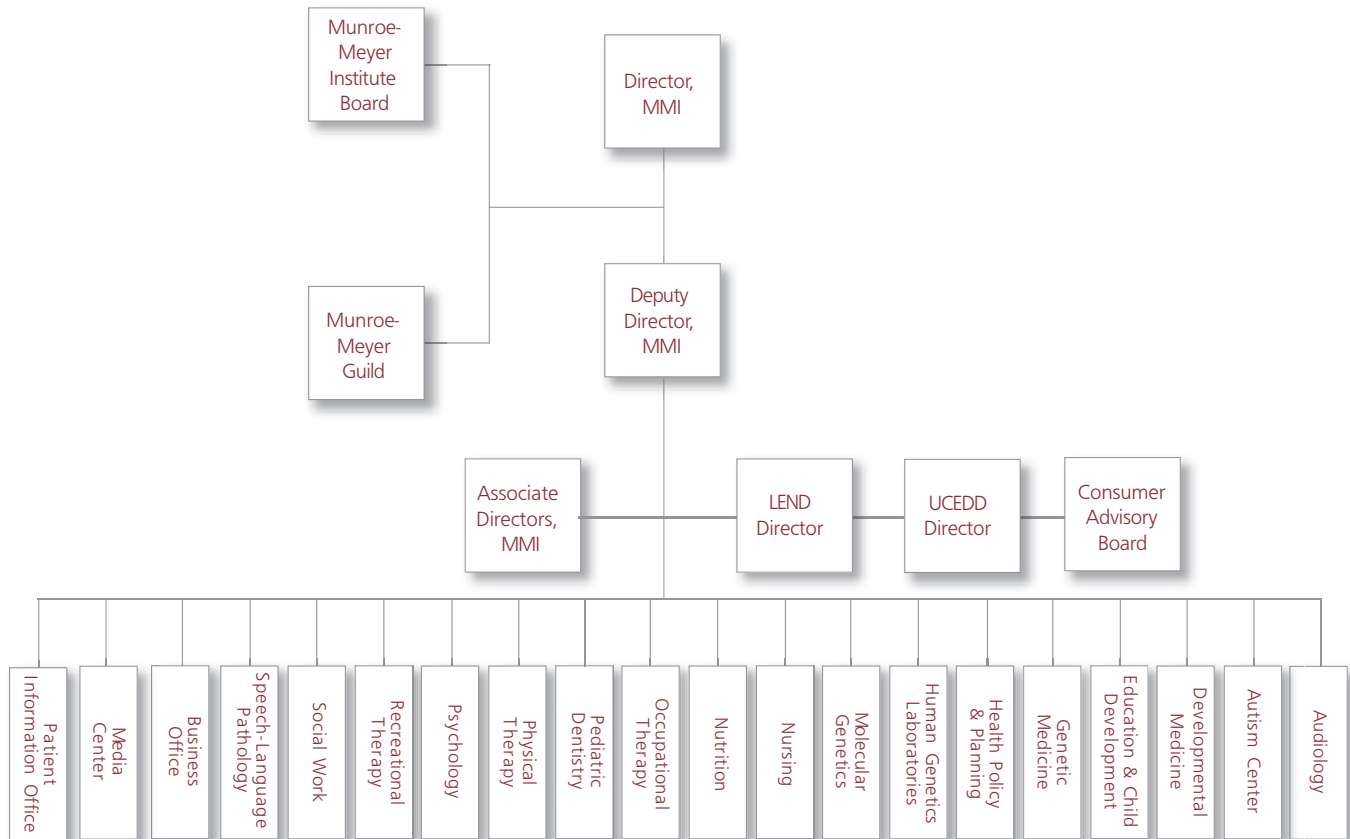
School of Allied Health Professions



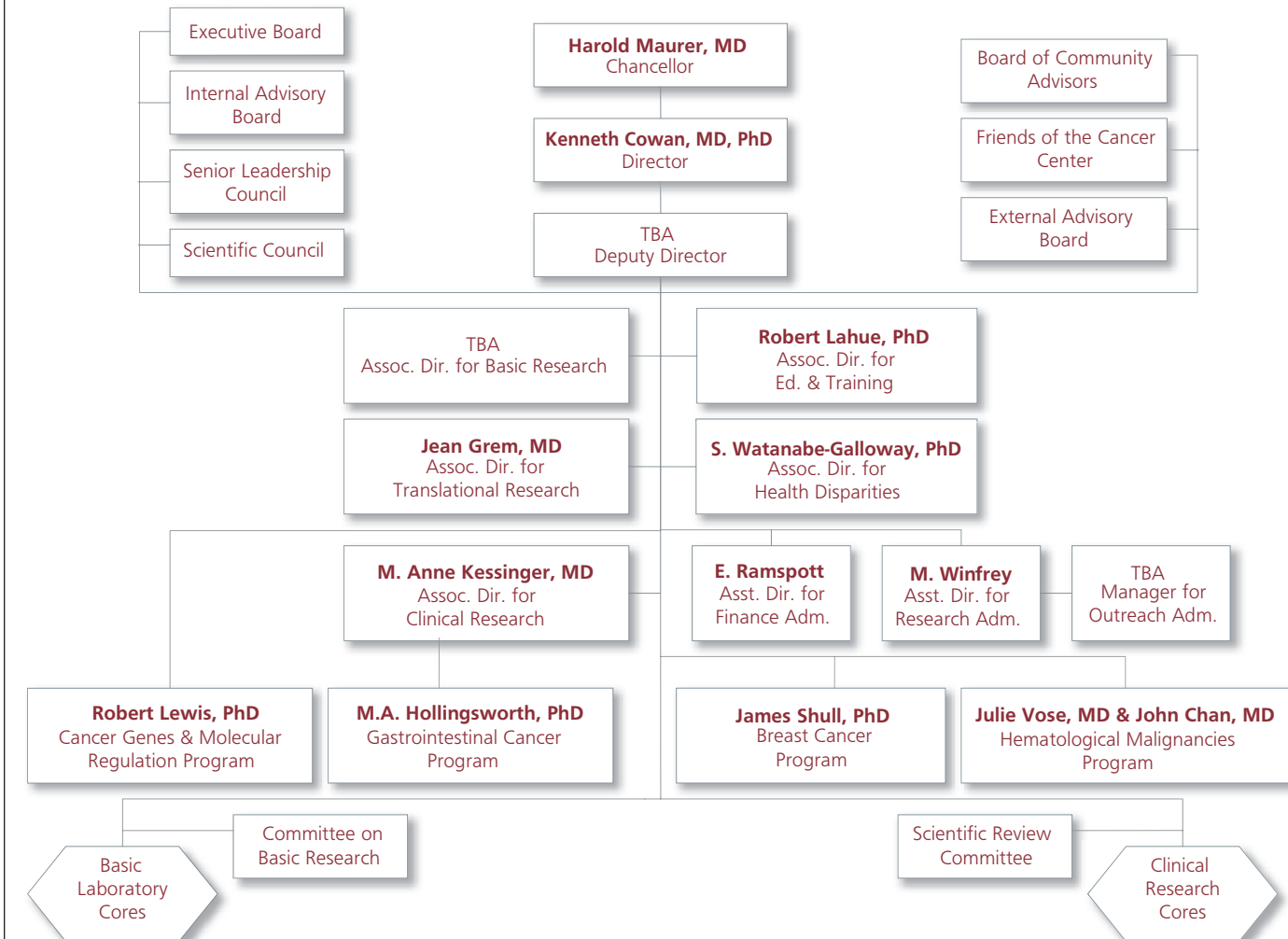
Eppley Institute for Research in Cancer and Allied Diseases



Munroe - Meyer Institute



University of Nebraska Medical Center Eppley Cancer Center



APPENDIX 5

UNMC Peer Groups (Board of Regents and Nebraska Coordinating Commission for Postsecondary Education)

University of Nebraska Board of Regents (BOR) Designated (December, 1992)

University of Colorado (Health Science Center) - Denver - <http://www.uchsc.edu/>
University of Illinois - Chicago - <http://www.uic.edu/index.html/>
University of Iowa - Iowa City - <http://www.uiowa.edu/>
University of Kansas (Health Science Center) - Kansas City - <http://www.kumc.edu/>
University of Kentucky - Lexington - <http://www.uky.edu/>
University of Minnesota - Twin Cities - <http://www1.umn.edu/twincities/index.php>
Ohio State University - <http://www.ohio-state.edu/index.php>
University of Oklahoma (Health Science Center) - Oklahoma City - <http://www.ouhsc.edu/>
University of Tennessee (Health Science Center) - Memphis - <http://www.utmem.edu/>

Nebraska Coordinating Commission for Postsecondary Education (CCPE) Designated 1994

Ohio State University - <http://www.ohio-state.edu/index.php>
Oregon Health & Science University - <http://www.ohsu.edu/>
University of Arizona - <http://www.arizona.edu/>
University of Cincinnati - <http://www.uc.edu/>
University of Colorado (Health Science Center) - Denver - <http://www.uchsc.edu/>
University of Florida - <http://www.ufl.edu/>
University of Iowa - Iowa City - <http://www.uiowa.edu/>
University of Kansas (Health Science Center) - Kansas City - <http://www.kumc.edu/>
University of Kentucky - Lexington - <http://www.uky.edu/>
University of Oklahoma (Health Science Center) - Oklahoma City - <http://www.ouhsc.edu/>
University of Tennessee (Health Science Center) - Memphis - <http://www.utmem.edu/>
University of Utah - <http://www.utah.edu/>

CCPE Alternates

Indiana University at Indianapolis - <http://www.iu.edu/>
University of Illinois - Chicago - <http://www.uic.edu/index.html/>

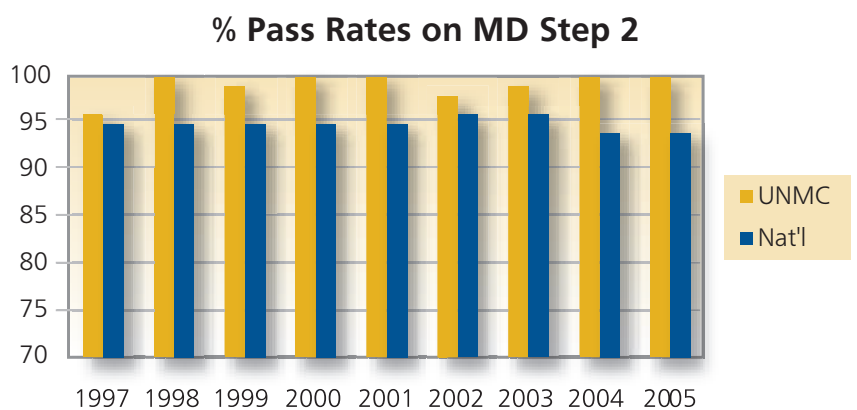
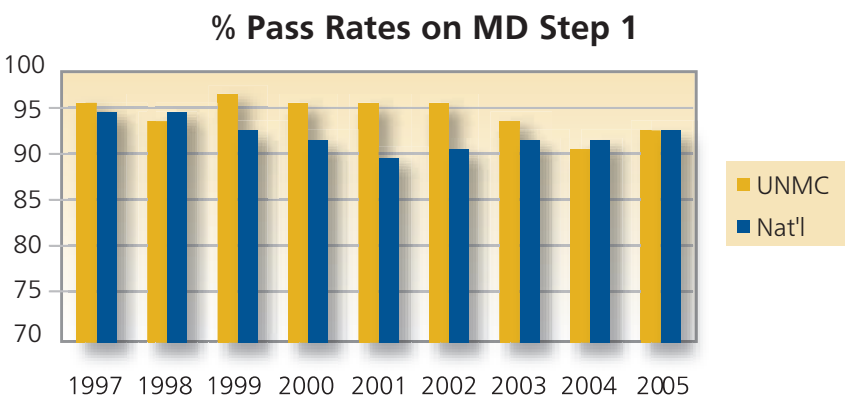
APPENDIX 6

Performance of Students on Licensure, Certification, or Board Exams

Performance of Students on Licensure, Certification or Board Exams

	2003				2004				2005			
	Fail %		Mean Score		Fail %		Mean Score		Fail %		Mean Score	
	UNMC	Nat'l	UNMC	Nat'l	UNMC	Nat'l	UNMC	Nat'l	UNMC	Nat'l	UNMC	Nat'l
Allied Health												
Clinical Perfusion	0	44	160	141	0	31	163	136	*	*	*	*
Cytotechnology	0	12	681	540	0	12	598	530	0	0	565	565
Medical Nutrition	0	17	29.4	27.8	0	20	28.8	27.5				
Medical Technology	0	17	559	485	1	15	572	505	8	13	508	505
Physician Assistant	2	13	545	483	3	10	542	496	0	14	551	486
Physical Therapy	0	23.4	638	627	10.5	27.4	639.9	624.2	10.3	15.4	652.3	644.3
Diagnostic Medical Sonography	0	36	473	431	0	32						
Nuclear Medicine	0	20.1	79.2	78	0	82.6	84	78.4				
Radiation Therapy	0	18.2	85	81	0	13.6	83.5	81.4	0	0	84.9	84.9
Radiography	0	11.4	83.5	83.1	0	11.2	88.9	83.9	0	0	88.5	88.5
College of Dentistry												
DDS Part 1	0	9.3	88.3	85.6	0	8.6	88.4	85.4	4.4	5.9	88	85.5
DDS Part 2	4.5		83.0	82.0	2.5	8.2	83.4	81.3	2.1	7.6	83.9	81.4
Dental Hygiene	0	3.7	85.6	83.6	0	3.7	92.8	88.4	0	4.7	88.2	83.3
College of Medicine												
MD Step 1	6	8	214	216	9	8	212	217	7	7	213	218
MD Step 2	1	4	225	216	0	6	226	218	0	6	227	220
College of Nursing												
	11	12			13	15			10	12		
College of Pharmacy												
	0	6.2	109.1	101.4	2	3.1	108.9	104.1	3.7	7.1	115.3	107.7

*Clinical Perfusion had no graduating class in 2005, for that one year only
 All fail percentages and mean scores are based on data available 02/07/06. Numbers for the most recent year likely will change as more students locally and nationally complete the tests.



**American Board of Medical Specialties
Pass Rates for UNMC Residency Programs
January, 2006**

	<u>Average % Pass</u>	<u>Reporting Period*</u>
Anesthesiology	80%	8 years
Family Practice - Omaha	99%	5 years
Family Practice - Rural	100%	5 years
Family Practice - Lincoln	100%	5 years
Internal Medicine	100%	8 years
Neurology	82%	4 years
Neurosurgery	100%	3 years
OB/GYN	100%	5 years
Ophthalmology	92%	6 years
Oral Surgery	92%	8 years
Orthopedics	100%	6 years
Otolaryngology	100%	5 years
Pathology	100%	3 years
Pediatrics	100%	1 year
Plastic Surgery	***	***
Radiology	67%	5 years
Surgery	85%	5 years
Urology	100%	3 years

*Average % pass rates are over the reporting periods

***New program

Note: The pass rate percentages do not necessarily reflect the total residents that completed the program. There may be some residents who elect to not take boards.



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