REPORT OF THE SURVEY OF

UNIVERSITY OF NORTH DAKOTA
SCHOOL OF MEDICINE AND HEALTH SCIENCES

Grand Forks, North Dakota

March 5-9, 2006

PREPARED BY AN AD HOC SURVEY TEAM
FOR THE
LIAISON COMMITTEE ON MEDICAL EDUCATION
June 7, 2006

Charles Kupchella, PhD
President
University of North Dakota
Centennial Drive
Twin City Hall, Room 300
PO Box 8193
Grand Forks, ND 58202

Dear Dr. Kupchella:

The purpose of this letter of accreditation is to inform you of the action taken by the Liaison Committee on Medical Education (LCME) at its June 5-6, 2006, meeting regarding the accreditation status of the University of North Dakota School of Medicine and Health Sciences, and to transmit to you the final report of the LCME survey team that visited the medical school on March 5-8, 2006.

After reviewing the report, including the information from the Medical Education Database and the Institutional Self-study, the LCME voted to continue the accreditation of the University of North Dakota School of Medicine and Health Sciences for an eight-year term. The next full survey will take place during the 2013-2014 academic year.

In its review of the report, the LCME identified the following areas of institutional strength:

1. Driven by the vision and energy of Dean H. David Wilson, and with the commitment and creativity of the faculty, the school developed and implemented a Patient Centered Learning (PCL) curriculum during years 1 & 2. PCL is innovative and prepares students exceptionally well for their clinical education and the practice of medicine.

2. The focused research strategy developed by the school, together with the sustaining funding commitment from indirect cost recovery, has resulted in strong growth of the research program in a manner that is a model for community based medical schools.

3. The commitment and cooperative spirit of the volunteer faculty and of the health systems in which many of them are employed are remarkable. They are a major influence on the institution’s ability to offer clinical education at a large number of sites around the state.
4. The Rural Opportunities in Medical Education (ROME) program provides students with excellent opportunities for education in rural communities. In addition to offering unique learning experiences, ROME is designed to help address the state's physician workforce needs in rural areas.

5. The Clinical Education Center and the educational programs it supports represent a model for the implementation and integration of clinical skills learning, assessment, and improvement.

6. The Indians into Medicine (INMED) has a well deserved national reputation as an established successful program for bringing an underrepresented population into the health professions.

The LCME identified the following areas of partial or substantial noncompliance with accreditation standards.

IS-12. A medical school should be a component of a university offering other graduate and professional degree programs that contribute to the academic environment of the medical school.

There should be regular and formal reviews of all graduate and professional programs in which medical school faculty participate. Basic science graduate programs have not been reviewed in well over a decade, despite the policy for reviews every seven years.

ED-2. The objectives for clinical education must include quantified criteria for the types of patients (real or simulated), the level of student responsibility, and the appropriate clinical settings needed for the objectives to be met.

While there is a PDA-based reporting system for students to record the numbers and types of patient interactions, reporting by students is not consistent. Most clerkships do not have quantified criteria for the types of patients, level of student responsibility, or appropriate clinical setting. This is particularly problematic given the use of multiple clinical teaching sites and the need to make educational adjustments if experiential deficits are noted during the clerkship.

ED-33. There must be integrated institutional responsibility for the overall design, management, and evaluation of a coherent and coordinated curriculum.

The Medical Curriculum Committee (MCC) has been successful in the planning, directing, evaluating, and reporting of the curriculum of years 1 and 2. The curriculum in years 3 and 4, in contrast, is managed by individual departments with no centralized assessment or planning. The new Clinical Education Committee, which is composed of clerkship directors and reports to the MCC, has not resulted in enhanced coordination of years 3 and 4 or of the design, management, and evaluation of the overall medical school curriculum.
ED-38. The committee responsible for the curriculum, along with medical school administration and educational program leadership, must develop and implement policies regarding the amount of time students spend in required activities, including the total required hours spent in clinical and educational activities during clinical clerkships.

The Medical Curriculum Committee has not developed a unifying policy regarding the amount of time students spend in required activities. However, most clerkship directors and site coordinators do monitor the time students spend performing clinical duties.

MS-9. Each school must develop and publish technical standards for admission of handicapped applicants, in accordance with legal requirements.

The published admission information available and distributed to applicants does not contain technical standards. The database indicated that the technical standards document is currently under review; a copy of the standards dated May 4, 1992 was included in the appendix of the database.

ER-7. A hospital or other clinical facility that serves as a major site for medical student education must have appropriate instructional facilities and information resources.

Most of the clinical sites have adequate instructional facilities and information resources for students. However, the MeritCare hospital in Fargo has no call rooms for students who take overnight call while on the OB/Gyn clerkship. Also, there are small lockers for students and residents in this hospital, but they are located in a closet that is barely accessible. Planning is underway for a new facility.

The LCME noted the following areas to be in transition. The outcome of which could affect the school's ongoing compliance with accreditation standards.

1. There has been substantial progress in increasing faculty salaries to national benchmarks. This has had to be supported, to a large degree, by tuition increases. State support has remained static and other sources of revenue are minimal. Though student debt is near the national median, it has been steadily rising.

2. The basic science departments have assumed major university-wide teaching obligations. Currently faculty has been able to manage this increased work load. The trend of increasing credit hours has the potential to significantly strain existing faculty resources.

3. The school relies extensively on volunteer community faculty to provide clinical education for its medical students. As the physician practice patterns in the state change and the clinical productivity demands increase, volunteer faculty may not be able to contribute to the educational program at their current level. This could significantly impact the ability to implement the educational program. For example, the Pediatrics clerkship in Bismarck has lost faculty members, who have not been replaced.

Both transition items 2 and 3 could become more serious in the context of increasing medical student enrollment.
To address the areas of noncompliance and transition noted above, the dean of the School of Medicine is requested to provide a report with the following information to both LCME Secretaries by September 1, 2007.

**Review of Basic Science Graduate Programs.** Describe the process for review of graduate programs in the basic sciences. Provide a schedule of reviews, including those that already have been undertaken and those planned for the future.

**Objectives for Clinical Education.** For each required clinical clerkship, provide the quantified criteria for the types of patients, the level of student responsibility, and the appropriate clinical setting(s). Describe how student clinical experiences are monitored and how you assure that all students have the specified experiences.

**Integrated Institutional Responsibility.** Describe the role of the Clinical Education Committee and its relationship to the Medical Curriculum Committee. Describe the issues considered by the Clinical Education Committee during 2005-2006 and 2006-2007, and the outcomes. What steps have been taken by the Clinical Education Committee, the Medical Curriculum Committee, and central medical school administration to centralize the planning, management, and evaluation of years three and four?

**Monitoring Student Workload.** Provide a copy of medical school policies addressing the amount of time students spend in required activities. Describe how and by whom student duty hours are monitored during required clinical clerkships.

**Technical Standards for Admission.** Provide a copy of the technical standards for admission and indicate when they were approved. Describe how these standards are made available to potential applicants and others.

**Clinical Facilities.** Describe the status of call room space and lockers at the MeritCare Hospital in Fargo. Do students taking overnight call in obstetrics-gynecology have access to call rooms?

**Medical School Financing and Student Debt.** Provide a copy of the most recent LCME Part 1A Annual Medical School Financial Questionnaire. Complete the following table:

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Describe any trends in revenue sources, especially state funding.
Basic Science Faculty Teaching Responsibilities. Complete the following table on entering class size.

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Have there been any changes in the responsibility of basic science faculty members to teach in courses outside the medical school since the time of the 2006 survey visit? Describe any steps the school is taking to assure the availability of basic science faculty to teach medical students.

Volunteer Clinical Faculty. Describe any changes in the numbers or availability of volunteer clinical faculty to teach medical students. What steps are being taken to assure the availability of volunteer clinical faculty?

Accreditation is awarded to the program of medical education based on a judgment of appropriate balance between student enrollment and the total resources of the institution, including faculty, physical facilities, and the operating budget. If there are plans to significantly modify the educational program, or if there is to be a substantial change in student enrollment or in the resources of the institution so that the balance is distorted, the LCME expects to receive prior notice of the proposed change. Substantial changes may lead to re-evaluation of the program’s accreditation status by the LCME.

A copy of this letter is being sent to Dean H. David Wilson. The report is for the use of the medical school and any public dissemination is at the discretion of institutional officials.

Sincerely,

Frank A. Simor, MD
LCME Secretary, 2005-2006

cc: H. David Wilson, MD
    Carol A. Aschenbrener, MD, LCME Secretary

Enclosure
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>COVERING MEMORANDUM TEAM SECRETARY TO LCME</td>
<td>1</td>
</tr>
<tr>
<td>INTRODUCTION AND COMPOSITION OF SURVEY TEAM</td>
<td>2</td>
</tr>
<tr>
<td>SUMMARY OF SURVEY TEAM FINDINGS</td>
<td>3</td>
</tr>
<tr>
<td>THE MEDICAL EDUCATION DATABASE AND INSTITUTIONAL SELF-STUDY</td>
<td>8</td>
</tr>
<tr>
<td>HISTORY AND SETTING OF THE SCHOOL</td>
<td>8</td>
</tr>
<tr>
<td><strong>I. INSTITUTIONAL SETTING</strong></td>
<td></td>
</tr>
<tr>
<td>A. Governance and Administration</td>
<td>10</td>
</tr>
<tr>
<td>B. Academic Environment</td>
<td>11</td>
</tr>
<tr>
<td><strong>II. EDUCATIONAL PROGRAM FOR THE MD DEGREE</strong></td>
<td></td>
</tr>
<tr>
<td>A. Educational Objectives</td>
<td>13</td>
</tr>
<tr>
<td>B. Structure</td>
<td>13</td>
</tr>
<tr>
<td>C. Teaching and Evaluation</td>
<td>23</td>
</tr>
<tr>
<td>D. Curriculum Management</td>
<td>24</td>
</tr>
<tr>
<td>E. Evaluation of Program Effectiveness</td>
<td>25</td>
</tr>
<tr>
<td><strong>III. MEDICAL STUDENTS</strong></td>
<td></td>
</tr>
<tr>
<td>A. Admissions</td>
<td>27</td>
</tr>
<tr>
<td>B. Student Services</td>
<td>28</td>
</tr>
<tr>
<td>C. The Learning Environment</td>
<td>30</td>
</tr>
<tr>
<td>D. Student Perspective</td>
<td>31</td>
</tr>
<tr>
<td><strong>IV. FACULTY</strong></td>
<td></td>
</tr>
<tr>
<td>A. Number, Qualifications, and Functions</td>
<td>31</td>
</tr>
<tr>
<td>B. Personnel Policies</td>
<td>32</td>
</tr>
<tr>
<td>C. Governance</td>
<td>33</td>
</tr>
<tr>
<td><strong>V. EDUCATIONAL RESOURCES</strong></td>
<td></td>
</tr>
<tr>
<td>A. Finances</td>
<td>33</td>
</tr>
<tr>
<td>B. General Facilities</td>
<td>35</td>
</tr>
<tr>
<td>C. Clinical Teaching Facilities</td>
<td>35</td>
</tr>
<tr>
<td>D. Library and Information Resources</td>
<td>36</td>
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</tbody>
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MEMORANDUM

TO: Liaison Committee on Medical Education

FROM: The Secretary of the ad hoc Survey Team That Visited the University of North Dakota School of Medicine and Health Sciences on March 5-9, 2006

RE: Final Team Survey Report

On behalf of the ad hoc LCME survey team that visited the University of North Dakota School of Medicine and Health Sciences on March 5-9, 2006, the following final report of the team’s findings and conclusions is provided.

Respectfully,

Barry T. Linger, Ed.D., Secretary
INTRODUCTION

A survey of the University of North Dakota School of Medicine and Health Sciences was conducted on March 5-9, 2006, by the following ad hoc team representing the Liaison Committee on Medical Education (LCME):

Chair:
Darrell Kirch, M.D., (Psychiatry)
Senior Vice President for Health Affairs
Dean, College of Medicine
The Pennsylvania State University
Hershey, PA

Secretary:
Barry T. Linger, Ed.D. (Medical Education)
Assistant Dean for Medical Education
West Virginia University School of Medicine – Eastern Division
Martinsburg, WV

Member:
C. Nanette Clare, M.D. (Pathology)
Senior Associate Dean for Academic Affairs
University of Texas Medical School at San Antonio
San Antonio, TX

Member:
David Swee M.D. (Family Medicine)
Acting Senior Associate Dean for Education
University of Medicine and Dentistry of N J
Robert Wood Johnson Medical School
New Brunswick, NJ

LCME Faculty Fellow:
Thomas Norris M.D. (Family Medicine)
Vice Dean, Academic Affairs
University of Washington School of Medicine
Seattle, WA

The team expresses its sincere appreciation to Dean H. David Wilson, his staff, faculty, and students for their many courtesies and accommodations during the site visit. Judy Bruce, Madonna Hajicek, and Richard Vari merit special recognition and commendation for their thoughtful visit preparations and generous support during the conduct of the survey.
DISCLAIMER: This report summarizes the findings and professional judgments of the ad hoc survey team that visited the University of North Dakota School of Medicine and Health Sciences from March 5th through 9th, 2006, based on the information provided by the school and its representatives before and during the accreditation survey, and by the LCME. The LCME may come to differing conclusions when it reviews the team’s report and any related information.

SUMMARY OF SURVEY TEAM FINDINGS

Institutional Strengths

The team identified the following particularly noteworthy achievements of the School of Medicine:

- Driven by the vision and energy of Dean H. David Wilson during his decade of leadership, and the commitment and creativity of the faculty, the school developed and implemented a Patient Centered Learning (PCL) curriculum during years 1 & 2. PCL is innovative and prepares students exceptionally well for their clinical education and the practice of medicine.
- The focused research strategy developed by the school, together with the sustaining funding commitment from indirect cost recovery, has resulted in strong growth of the research program in a manner that is a model for community based medical schools.
- The commitment and cooperative spirit of volunteer faculty, as well as the health systems in which many of them are employed, are remarkable and are a major influence on the institution’s ability to offer clinical education at a large number of sites around the state.
- The Rural Opportunities in Medical Education (ROME) program provides students with excellent opportunities for education in rural communities. In addition to offering unique learning experiences, ROME is designed to help address the state’s physician workforce needs in rural areas.
- The Clinical Education Center and the educational programs it supports represent a model for the implementation and integration of clinical skills learning, assessment, and improvement.
- The Indians into Medicine (INMED) has a well deserved national reputation as an established successful program for bringing an underrepresented population into the health professions.

Areas of Partial or Substantial Noncompliance

The survey team also noted the following items where it believes the school is not in full compliance with accreditation standards:

IS-12 A medical school should be a component of a university offering other graduate and professional degree programs that contribute to the academic environment of the medical school.

There should be regular and formal reviews of all graduate and professional programs in which medical school faculty participate. This has not occurred in any of the school’s basic science graduate programs in well over a decade.

ED-2 The objectives for clinical education must include quantified criteria for the types of patients (real or simulated), the level of student responsibility, and the appropriate clinical settings needed for the objectives to be met.

While there is in place a PDA-based reporting system for students to record the numbers and types of patient interactions, the reporting by students is not consistent and most clerkships do not have objectives
for quantified criteria for the types of patients, level of student responsibility, or appropriate clinical setting. This is particularly problematic given the use of multiple clinical teaching sites and the need for educational adjustments if experiential deficits are noted during the clerkship.

**ED-33** There must be integrated institutional responsibility for the overall design, management, and evaluation of a coherent and coordinated curriculum.

The Medical Curriculum Committee (MCC) has been successful in the planning, directing, evaluating, and reporting of the curriculum of years 1 & 2; however, the curriculum in years 3 & 4 is managed by individual departments with no overall assessment or planning. There is a recently developed Clinical Education Committee that is composed of clerkship directors and reports to the MCC. However, there has been no demonstration of coordination of years 3 & 4, nor of the design, management, and evaluation of the overall medical school curriculum.

**ED-38** The committee responsible for the curriculum, along with medical school administration and educational program leadership, must develop and implement policies regarding the amount of time students spend in required activities, including the total required hours spent in clinical and educational activities during clinical clerkships.

The Medical Curriculum Committee has not developed a unifying policy regarding the amount of time students spend in required activities. Most clerkship directors and site coordinators are watchful of the time students spend performing clinical duties.

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A review of the published admission information available and distributed to applicants indicates that they do not contain the technical standards. The database indicated that the technical standards document is currently under review; a copy of the standards dated May 4, 1992 was included in the appendix of the database.

**ER-7** A hospital or other clinical facility that serves as a major site for medical student education must have appropriate instructional facilities and information resources.

Most of the clinical sites have adequate instructional facilities and information resources for students. However, the MeritCare hospital in Fargo has no call rooms for students who take overnight call while on the OB/Gyn clerkship. Also, there are small lockers for students and residents in this hospital, but they are located in a closet that is barely accessible. Planning is underway for a new facility.

**Areas in Transition**

The following items represent activities in progress that merit follow-up to determine the final outcome:

- There has been substantial progress in increasing faculty salaries to national benchmarks. Unfortunately, this has been supported to a large degree by tuition increases, while state support has remained static and other sources of revenue are minimal. These financial variables bear close monitoring.

- The basic science departments have assumed major university-wide teaching obligations. While currently being managed by these departments, the trend of increasing credit hours for this type of
teaching has the potential to significantly strain existing faculty resources.

- The school relies extensively on volunteer community faculty to provide clinical education for the medical students. As the physician practice patterns in the state change and the clinical productivity demands increase, volunteer faculty may not be able to contribute to the education mission at their current level. This could significantly impact the educational program. For example, the Pediatrics clerkship in Bismarck has lost faculty who have not been replaced.

PRIOR ACCREDITATION SURVEY, April 11-15, 1999

The last full survey of the University of North Dakota School of Medicine occurred on April 11-15, 1999. The survey team identified the following institutional strengths:

1. Dean H. David Wilson has demonstrated leadership in the following areas:
   - expanding the mission and programmatic functions of the school to incorporate health professions education.
   - guiding the development of a comprehensive strategic plan for UNDSMHS.
   - building an effective leadership team to manage the ongoing functions of the school and to assist the dean in guiding development as defined in the strategic plan.
   - renewing and strengthening relationships with community-based health systems and physician groups which serve as essential resources to the medical education program.
   - initiating and empowering the curriculum renewal process.

2. Since the last accreditation visit, significant actions have been taken to move toward effecting the central management of the curriculum. A curricular policy body, the Medical Student Education Council (MSEC), has been appointed and empowered by the dean to guide and to manage the curriculum. In addition, a new Office of Medical Education has recently been established to provide further central support for curriculum development and evaluation.

3. The faculty has developed a comprehensive set of curricular goals and objectives which are behavior-based and measurable and which serve as a template for the curriculum renewal process.

4. A significant number of faculty and departmental chairs in the basic sciences are enthusiastically committed to and highly involved in the design and implementation of the new curriculum.

5. The evolving, new Patient Centered Learning (PCL) curriculum has been well-designed to insure that students acquire an understanding of the scientific concepts underlying medicine and develop self-initiated learning and problem-solving skills.

6. The student body is bright, enthusiastic, and both knowledgeable and supportive of the mission and objectives of the school.

7. Effective mechanisms are in place to insure that third year clerkships across the geographically separate campuses are comparable in educational experiences and consistent in the evaluation and assessment of learners.

8. Many graduates of UNDSMHS have returned to the region and serve as volunteer and part-time faculty members, providing an important resource for the educational programs.

9. UNDSMHS enjoys the strong support of its affiliated teaching hospitals and health systems which serve as essential resources for the medical education program. The leadership of these institutions view
medical education and their association with UNDSMHS as supportive of their own respective missions and goals.

10. The multi-disciplinary, integrated Neuroscience department (Neurology, Psychiatry, Neuroradiology, and Neurosurgery) provides UNDSMHS with an effective model for outstanding achievement in education, research, and clinical service.

11. The Indians Into Medicine (INMED) programs, which enhance science education in grades four through college, have increased the pool of qualified Native Americans entering fields of health professions education. These programs have effectively assisted the school in fulfilling its mission to provide physicians for the native population of the state of North Dakota and the nation.

12. The educational facilities on the Grand Forks campus are well-designed and appointed, and they offer an environment which particularly supports the new curriculum and is highly conducive to student and faculty productivity.

The survey team noted the following areas of concern:

1. Since the last accreditation visit, no significant progress has been made toward development of a centralized educational program evaluation process that uses a variety of measures to evaluate program quality and effectiveness. Although a plan is in place which will establish an Education Program Evaluation Committee to accomplish this goal, the committee has yet to be convened.

2. While Campus Coordinating Committees for three of the regional campuses have been appointed, the delineation of lines of authority, the development of effective communication channels, and the clarification of operational responsibilities for each of these committees have not been firmly established or fully understood by all involved parties.

3. Although there appear to be a plethora of committees, many students, faculty, and department chairs (even several members of specific, relevant committees) do not seem well-informed about the development of policy and the evolution and evaluation of programs.

4. Students feel that they have limited input into the policy- and decision-making process at the level of the dean and/or the administrative staff.

5. While the Rural Opportunities in Medical Education (ROME) program concept presents an exciting new direction through which the school can pursue its mission, the pilot implementation currently suffers from inadequate interdepartmental planning, ambiguous curricular responsibility, and incomplete instructional design. As presently structured, the pilot project may not adequately guarantee comparable experiences in the requisite disciplines of the clinical clerkships at each of its remote sites.

6. Although major strides have been made to centralize the management of the curriculum through the newly empowered Medical Student Education Council (MSEC) and the Office of Medical Education (OME); the operational interfaces, the authority, and the responsibilities of the MSEC and the OME relevant to the many MSEC sub-committees have not been clearly and fully defined. For example, the relationships between the MSEC/OME and the Campus Coordinating Committees and the ROME Coordinating Committee are not well-understood.

7. Although funding from the state appropriations is adequate to support the general operations of UNDSMHS, the absence of a significant practice plan and current University policies limiting indirect cost return and tuition recovery to the dean have severely constrained discretionary funds available to
8. There are limited computing and communication technologies available to support student educational programming at the geographically remote campus sites. It is further noted that student technology fees are not routinely returned to the UNDSMHS to address these issues.

9. Although the strategic plan identifies research development as a primary goal for UNDSMHS, there is no centralized office at the School of Medicine level to facilitate research activities of the basic science and clinical faculty.

While not areas of concern, the following require monitoring by the institution:

1. The Assessment Committee is developing a creative and effective student evaluation system that proposes to measure student cognitive learning, mastery of basic skills, and the ability to use clinical data for clinical problem-solving. Further progress of this effort and the outcomes of this committee should be reviewed.

2. While there are specific policies and guidelines for the evaluation of student achievement and for making decisions regarding promotion and graduation, there appear to be variations in the application of these policies related to the new curriculum.

3. Policies for the prevention and management of exposure to infectious and environmental hazards need to be updated to accommodate the clinical experiences that now occur earlier in the new curriculum.

4. Although the Practice-Based Medical Education (PBME) model is not planned to be implemented until July 2000, this program may require considerable additional planning and development. UNDSMHS should carefully monitor and direct curricular evolution consistent with LCME standards requiring comparability of educational experiences and consistency of student evaluation.

PROGRESS REPORT, June 14, 2000
The Dean reported a change in the policies for the prevention and management of exposure to environmental hazards. At its meeting of June 7, 2000, the LCME reviewed and voted to accept the report with appreciation.

PROGRESS REPORT, October 9, 2001
The Dean reported on the development of a centralized program evaluation process, the restructuring of the ROME program, the status of computer and communication technologies at geographically remote clinical sites, the development and implementation of the “Practice-Based Medical Education Model”, the relationships among the Medical Curriculum Committee and the Campus Coordinating Committees, the financial status of the medical school, the adequacy of the library and computer/information resources, the adequacy of career counseling across the clinical campuses, and the management of the research enterprise. At its meeting of August 25, 2001, the Liaison Committee on Medical Education reviewed and voted to accept the report. Some of the areas remained in transition and the LCME asked for a follow up report.

PROGRESS REPORT, November 25, 2002
Robert Rubeck, Associate Dean of Academic Affairs and Information Services reported on the establishment of an additional clinical training site at ALTRU Health System in Grand Forks. At its meeting of October 16-17, 2002, the Liaison Committee on Medical Education reviewed and voted to
accept the letter with and the letter of September 24, 2002 regarding the proposed increase of enrollment by 5 students a year.

PROGRESS REPORT, October 13, 2003
The Dean reported on progress in implementing plans to increase horizontal and vertical integration in the basic and clinical sciences; the status of the SPIRAL system to evaluate student learning; the status of the clinical education center; the availability of clinical sites and preceptors for the Practice-Based Medical Education model; the status of ROME program; the availability and funding of the information technology infrastructure at medical school sites; the financial status of the medical school; and student satisfaction with the academic program, including career counseling and information resources. At its meeting of October 8-9 2003, the Liaison Committee on Medical Education reviewed and voted to accept the progress report.

PROGRESS REPORT, February 10, 2004
The Dean reported on the status of the new clinical campus in Grand Forks. At its meeting of February 4-5, 2004, the Liaison Committee on Medical Education reviewed and voted to accept the report.

PROGRESS REPORT, October 13, 2004
The Dean reported on implementation plans of the Year 3/4Working Group for the clinical curriculum; outcomes of the validation of the SPIRAL assessment system and the status of implementation; student satisfaction with career counseling; and student satisfaction with the organization of the ICP block. At its meeting of October 6-7, 2004, the Liaison Committee on Medical Education reviewed and voted to accept the report.

THE MEDICAL EDUCATION DATABASE AND INSTITUTIONAL SELF-STUDY
The medical education database was carefully prepared and provided a full accounting of the school’s programs. Additional and updated information requested by the survey team was rapidly provided by the school. A large number of faculty and staff members participated fully in the preparation of the report which was complete and showed attention to detail. The conclusions of the survey team were consistent with many of the findings of the school regarding strengths and areas of noncompliance. The student analysis was well done with summary assessments for each section and an executive summary of overall strengths and areas for improvement. The response rate for classes was evenly distributed with an overall response rate of approximately 96%. This extremely high response rate strengthened the student analysis. The summary conclusions were supported by results of the survey.

HISTORY AND SETTING OF THE SCHOOL
The establishment of a School of Medicine in North Dakota was authorized through an allocation of $1,000 by the territorial legislature in 1878. This commitment to education, and professional education in particular, was decided early in the region’s history. The University of North Dakota opened in 1883, six years prior to North Dakota becoming a State.

The University of North Dakota School of Medicine was established as a basic science school in 1905. Initial consideration for developing a four-year, degree-granting medical school surfaced in the late 1940's. In November of 1948, the State’s residents approved a one-mill statewide property tax levy to support the School of Medicine. In 1953, legislation allowing a four-year program was passed, but it was repealed in the 1960's. The Carnegie Report on Medical Education of 1970, recommending that two-year schools be phased out or become degree-granting institutions, promoted an internal and external review of North Dakota’s alternatives. A five-to-ten year plan to develop a four-year, degree-granting school was recommended and approved by the 1973 Legislative Assembly. The initial phase was a 2-1-1 program,
which in essence continued teaching the basic sciences at the main campus in Grand Forks, contracted the third year to the University of Minnesota and Mayo Medical Schools, and provided teaching the fourth year at four regional campuses in North Dakota.

The 1981 Legislative Assembly approved a resolution recommending the necessary steps to provide the third-year medical school curriculum in the State. This action was based on a consultant’s recommendation from a study directed by the 1979 Legislative Assembly. The third year was implemented in phases beginning in 1982-83, with the full program operational in the 1984-85 academic year. The citizens of North Dakota reaffirmed the one-mill levy in the September 1980 primary election and again in the November 1982 general election. A legislative monitoring committee of the budget section was established and reported favorably on the School of Medicine to the 1983 Legislative Assembly. The numerous external studies and reviews, spanning the decades of the 1970's and 1980's, were conducted that led to the establishment of the four-year degree granting medical program. The four year program included the teaching during the clinical years at four regional campuses in North Dakota (Bismarck, Fargo, Grand Forks and Minot).

During the decade of the 1990's, the School of Medicine became the UND School of Medicine and Health Sciences (UNDSMHS), a name more accurately reflecting the broad range of professional educational programs including physical therapy, occupational therapy.

The Physical Therapy Program received approval for a Doctorate of Physical Therapy and accepted the first class in 2002. In addition, the Occupational Therapy Program and the Physician’s Assistant Program gained approval for a Master of Occupational Therapy and a Master of Physician’s Assistant Studies. The first classes for these two programs were both admitted in 2004.

In addition to the schools and departments, two units are key to attainment of UND School of Medicine and Health Sciences goals. The Indians into Medicine (INMED) program was established in 1973 to support the recruitment and education of American Indian physicians. Up to seven fully qualified American Indian students are admitted to each entering class at the UNDSMHS through INMED. A total of 153 American Indian physicians are graduates of the program. The Office of Rural Health was established in 1980, recognizing the rural nature of the State. In 1986 it became the Center for Rural Health, serving as a focal point for rural health in North Dakota and connecting the School to rural communities and their health institutions. Four core areas serve as the focus for Center activities: education, information development, community assistance, and research. The Center is recognized nationally as one of the most innovative and creative rural health programs in the country.

The following table compares selected data from the time of the last site visit to information provided for the current accreditation survey.

<table>
<thead>
<tr>
<th></th>
<th>[Previous Survey]</th>
<th>[Current Survey]</th>
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<td>Source of Revenue</td>
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<td>2005 ($)</td>
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<tr>
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<td>Revenue from clinical affiliates</td>
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<tr>
<td>Other revenues</td>
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</table>

*– All gifts and endowments are reported directly to the UND Alumni Foundation.

I. INSTITUTIONAL SETTING

(See appendix for the following:
- Current entry in AAMC Directory of American Medical Education
- List of changes in Directory, if appropriate
- Organizational chart(s) showing relationship of medical school to university and clinical affiliates
- Dean’s brief resumé
- Organizational chart for dean’s office
- Table showing enrollment in graduate programs in basic sciences
- Table(s) showing number of house officers by specialty)

A. Governance and Administration

The University of North Dakota is a public, not-for-profit institution which holds full accreditation from the North Central Association of Colleges and Schools, with its next survey scheduled for 2014. Governance of the University of North Dakota and the medical school and oversight of all relevant policies are provided by the state board of higher education. The board consists of eight members (one of whom is a resident student) appointed by the governor with confirmation by the state senate. Board members have staggered four years terms (with a maximum of two terms), and a president of the board is elected by the board annually. State policies for board members are in place and followed regarding employment by the university, alumni status, and other relevant issues for board members in order to avoid potential conflicts of interest. Authority for medical school appointments is delegated to the president of the university, while tenure decisions require approval of the university president and chancellor, as well as the board.

The dean, reporting directly to the president, serves as chief academic and administrative officer for the medical school, with full responsibility for all personnel, facilities, and financial issues involving teaching, research, and service, including patient care. In addition, the dean holds the title of vice president for health affairs, advising the president on public service related to health and coordinating efforts of all university health-related programs. While the university does not own a hospital, a large number of formal clinical affiliation agreements are in place. Within the structure of these agreements, the dean appears to have exceptionally collaborative, productive relationships with the leadership of the clinical affiliates. The model of organizational decision-making for the medical school is viewed as interactive and inclusive, a culture facilitated by the relatively small size of the faculty and the longstanding collegial relationships at the leadership level.

The dean, H. David Wilson, M.D., has served in that role since 1995, and assumed the additional role of vice president for health affairs in 2001. He is a distinguished educator with a long history of medical
education leadership at the institutional and national level, and eminently well qualified for his position. His long tenure has created institutional stability and facilitated non-disruptive transitions in the dean’s office and at the department chair level. Two key recent appointments, Dr. Joshua Wynne as executive associate dean and Dr. Manuchair Ebadi as associate vice president for health affairs and medical research, have increased effectiveness and provided key points of contact for the department chairs with the dean’s office. In turn, this has allowed the dean to devote more time to university-wide efforts, including fund-raising for the medical school. Both faculty members and students see the dean’s office as accessible and very responsive to concerns.

All department chairs serve at the discretion of the dean. The appointment of department chairs is for a period of up to five years, with reappointment allowed for unlimited additional terms. Medical school guidelines specify that review of chairpersons takes place annually. The institution has a history of relatively long tenures for department chairs and, at the time of the review, there were no interim chairs in the core medical school departments. (The chair of occupational therapy, who also reports to the dean of the medical school, was appointed chair on 2/1/2006.)

Given the community-based nature of the medical school, the majority of the full time faculty resides within the basic science departments. The enthusiasm of the basic science chairs and faculty for the new curriculum for the first two years was widespread and strong. Similarly, the basic science faculty members appear to understand and support the highly focused research development strategy being pursued by the school. One area of concern noted frequently during the survey visit is the significant commitment of the basic science departments to university teaching beyond the medical school. While currently being managed by the faculty, the trend toward increasing credit hours in this form of teaching may strain faculty resources. The clinical departments rely heavily upon an enthusiastic and committed cadre of volunteer faculty members in a highly distributed network of affiliates for medical student teaching. Despite the geographic and administrative challenges created by this model, the clinical faculty members appear strongly committed to the academic effort. For both basic science and clinical chairs, administrative and budgetary authority is well defined and overall resources appear adequate.

B. Academic Environment

There are 4 PhD programs offered in the Graduate School, they are departmentally based in Anatomy and Cell Biology, Biochemistry and Molecular Biology, Pharmacology, Physiology and Therapeutics, and Microbiology and Immunology. In addition, there is a doctoral program in Physical therapy. At the time of the visit there were approximately 47 PhD candidates and 78 DPT candidates. The mean time to completion of the doctoral degree is 6 years. Financial support for students is derived from central and departmental sources. There should be regular and formal reviews of all graduate and professional programs in which medical school faculty participate. The school reported in the database that the graduate school reviews all graduate programs on a seven year cycle. This has not occurred in any of the school’s basic science graduate programs in well over a decade.

Medical students have many opportunities to participate in research. During the orientation week, the associate dean for research and program development informs all entering first year students that they are eligible to participate in a chosen research program by selecting either the M.D. /Ph.D. Scholars Program or spending one or two summers in a laboratory of their choice. The office of associate dean for research and program development provides a total of $2000 for eight weeks of participation in an active research program. A prospective student is required to write a research proposal in advance of commencing a research program. This proposal is developed with the advice and consent of the mentor. At the end of summer, the student is required to submit a progress report, along with the information whether the results of studies are being presented at the UND School of Medicine and Health Sciences Annual Frank Low Research Day or submitted for publication. Usually four or five first year students apply for the
summer research opportunities.

The School’s formalized M.D. /Ph.D. program is a primary means for extensive student research. Students satisfy their Ph.D. course work and bench work during an extended period between the completion of Year two and beginning third clerkships. Four students have been in the program during the past five years and one or two first year students usually apply to the M.D. /Ph.D. Scholars Program. Funding is from individual faculty, departments, and the Office of Research and Program Development.

There are residency programs in internal medicine, surgery, psychiatry, and a transitional year in Fargo. Grand Forks has programs in surgery and family medicine, while Bismarck and Minot only have family practice programs. Each of these programs is overseen by the school’s Graduate Medical Education Committee which coordinates the work of the residency programs. The director of graduate medical education maintains ongoing contact with program directors. Each program submits an annual report to the GMEC that reviews all information pertinent to program accreditation, policies, manpower, recruitment, and faculty development. All of the UNDSMHS residency programs are fully accredited and in good standing with their respective RRC’s. The GMEC conducts internal reviews of all residency programs between RRC surveys. UNDSMHS maintains its full ACGME institutional accreditation with a survey anticipated in late 2005 or early 2006.

No residency programs are currently on probation. During the last five years UNDSMHS closed a family medicine residency program in Fargo, North Dakota and expanded the size of its transitional year program from 6 to 8 residents per year. UNDSMHS residency programs commonly participate in the “scramble” in order to fill available positions after the match. Sustained program vacancies are rare.

The UNDSMHS CME program provides CME approval service for all UNDSMHS affiliates except for those accredited by the North Dakota Medical Association. The Office of Continuing Medical Education and Outreach (OCMEO) has been surveyed by the Accreditation Council for Continuing Medical Education (ACCME) and awarded the status of Accreditation with Commendation, a level of accreditation rarely given by the national accrediting agency. The OCMEO received the maximum six-year accreditation from the ACCME in July 2005. Students are able to attend any of the CME activities organized by the School or the hospitals without charge. In some clinical clerkships, it is expected that students will attend. Some CME activities are designed to improve faculty teaching, and of course these are of significant benefit to the students.

While it is not the top priority of the school, research is still a priority. During the past three years the dollar amount of direct federal grants and contracts has increase from thirteen million to almost eighteen million. There is adequate infrastructure and support in place for the research efforts and efforts are in place to enhance it. There is an explicit strategy to pursue specific research directions especially in the neurosciences.

UNDSMHS offers extensive opportunities for integrated teaching efforts, collaborative research projects, and faculty development activities. Clinicians and basic scientist collaborate in the development and teaching of the first two years of the curriculum, share laboratory space, and many have joint appointments.

II. EDUCATIONAL PROGRAM FOR THE MD DEGREE

(See appendix for the following:
- A schematic showing the placement of courses and clerkships within each academic period
- Table [from ED-10] indicating the presence in the curriculum and the amount of structured teaching time devoted to subjects required for accreditation

12
A. Educational Objectives

The educational objectives were originally adopted in 1998 and were revised in 2004 by the Medical Curriculum Committee (MCC). The revised objectives are closely aligned with the ACGME residency competencies. The overall goals are to “prepare medical students to be competent, caring physicians who have skills of lifelong learning necessary to incorporate new knowledge and methods into their practice and to adapt to a changing professional environment”. The detailed goals and objectives are listed in appendix.

A PDA reporting system is in place for students to record each patient encounter in the third year clerkships. However, students do not consistently enter the appropriate data. While clerkship directors monitor this data, most clerkships do not have objectives with quantified criteria for the types of patients, level of student responsibility or appropriate clinical setting. This is particularly problematic as multiple sites are utilized for clinical training in the third year.

The educational program objectives are posted on the Office of Medical Education website, accessed by students and faculty. Faculty and residents for individual courses and clerkships are given the goals and objectives each year. Beginning MS 1 students are given the goals and objectives during orientation to medical school.

The goals and objectives are utilized by the MCC to guide educational planning and teaching, and serves as a basis for curriculum planning and implementation.

B. Structure of the Educational Program

1. General Design

The first-year curriculum occupies 41 weeks on the school calendar. The second-year curriculum is 40 weeks in duration. The third year includes 48 weeks of clerkship time, and the fourth year a minimum of 33 weeks. The total duration of the curriculum is thus 162 weeks. The first two years are taught in a PBL-hybrid model that is called “Patient-Centered Learning” (PCL). Lectures and laboratories are designed around paper patient cases and organized into blocks. The blocks include nine hours per week basic sciences lectures, 4 hours per week clinical sciences lectures and 2 hours of clinical skills, coupled with significant small group teaching. In addition there is laboratory time that varies each week. The PCL curriculum emphasizes self-directed and lifelong learning; the early and ongoing teaching of clinical skills; and the continuing attention to the development of professionalism. Overall, students are satisfied with the instruction and are pleased with the PCL style of learning with 88% of the students in the self-study survey reporting that they felt that the PCL program was a positive learning experience. Clerkship directors and clinical faculty indicated that since the implementation of PCL, students have been better prepared for their clinical education and the practice of medicine.

The third year clerkships are traditionally organized and managed. According to the associate dean for medical education, the major challenge facing the clerkships is coordinating the students’ experiences at the many different sites at which all or parts of the individual clerkships are taught. The required third year clerkships are offered on one of three clinical campuses: Bismarck, Fargo or Grand Forks, or...
through the ROME Program. The Minot campus is used for fourth year students only. All of the clerkships systematically distribute their respective learning objectives and grading systems to the various sites to which students are assigned. This distribution typically includes a preceptor handbook or similar guide. The dissemination of the clerkship materials and the grading system is via the clerkship coordinator who serves as the point of contact at each site and who oversees the distribution and coordination of information to all faculty and residents with responsibility for teaching medical students. There is a single clerkship director for each department, who is responsible for overseeing the clerkships on all campuses as well as the ROME experience.

The curriculum includes the full complement of behavioral and socioeconomic subjects in addition to basic science and clinical disciplines.

2. Content

Years One and Two

YEAR ONE

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<tr>
<th>Course</th>
<th>Lecture</th>
<th>Lab</th>
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<th>Patient contact</th>
<th>Other</th>
<th>Total</th>
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<td>304</td>
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<td>334</td>
<td>33</td>
<td>336</td>
<td>1256</td>
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</tbody>
</table>

* Includes case-based or problem solving sessions

MED 600: Orientation to Patient Centered Learning

This “course” is held during the first week of medical school, and essentially is the initial orientation to issues ranging from computer use, to diversity, to a campus tour. It is directed by the associate deans for medical education and for student affairs and admissions. Faculty teachers are drawn from multiple departments and support service areas of the medical school. A centerpiece of the week is a first exposure to the clinical case process of instruction, with the students learning how to work in facilitated small groups. Student evaluation consists of verbal feedback from the facilitator to each student in the group. Students from years two through four participate in the course, and the culmination of the week is the White Coat Ceremony.

Med 601 Block I

Block I is the first of the integrated blocks in year 1. A total of 50 faculty participate from eleven different departments and two service areas. Objectives for the Block are written and are complete. This block concentrates on basic principles of biochemistry, particularly DNA/RNA, proteins, enzymes and energy. There are also topics of embryology, histology and anatomy. The Introduction to Patient Care (IPC) portion highlights issues of patient interviewing skills and how to take a medical history. Various pedagogical styles are utilized including lecture, lab, small group sessions, independent learning and a variation of problem based learning called Patient Centered Learning (PCL). The block is 8 weeks in
length and is placed appropriately in the beginning of the first year. This block provides a firm foundation in basic principles. There are sufficient resources to teach the block for the current number of students. Students are evaluated by multiple choice exams, case essays, clinical skills exam, and narrative comments. Students must pass all four elements to pass the block. This block has a higher rate of failure than subsequent blocks, reflecting the difficulty of the first exams in medical school. Students feel that faculty are receptive to comments and that improvements have been made over the years.

Med 602 Block II

Block II is the second of the integrated blocks in year 1. A total of 46 faculty participate from ten different departments. Objectives for the Block are written and are complete. This block concentrates on basic principles immunology, and the anatomy, histology and physiology related to the musculoskeletal, respiratory and cardiovascular systems. The IPC portion covers physical exam and history pertaining to the organ systems mentioned. Various pedagogical styles are utilized including lecture, lab, small group sessions, independent learning and a variation of problem based learning called Patient Centered Learning (PCL). The block is 8 weeks in length and is placed appropriately in the first year. There are sufficient resources to teach the block for the current number of students. Students are evaluated by multiple choice exams, case essays, clinical skills exam, and narrative comments. Students must pass all four elements to pass the block. The student survey shows that 79% of first and second year students are satisfied with the learning in immunology, while 89% of third year students are satisfied. Overall, 97% of the students believe that the overall quality of the Anatomy instruction met or exceeded their expectations. Histology is an area where students are satisfied with most aspects of the curriculum. Overall, 95% felt that the overall quality of the course met or exceeded their expectations. Physiology is an important component of Block II, with 86% of students believing that the overall quality met or exceeded their expectations. There has been a steady increase in satisfaction with the overall quality of this component of the curriculum.

Med 603 Block III

Block III is the Third of the integrated blocks in year 1. It is directed by an anatomist and it occurs in the second half of the first year of medical school. Content includes the anatomy and physiology of gastrointestinal track, renal anatomy and physiology, endocrine anatomy and physiology, and reproductive biology. This course content is integrated with the human life cycle in the IPC part of the course. The course includes 9 hours per week basic sciences lectures, 4 hours per week clinical sciences lectures and 2 hours of clinical skills, coupled with significant small group teaching. In addition, time is spent each week in the gross anatomy lab and in the histology lab (using virtual microscopy). The faculty report that sufficient teachers and TA’s are available for this course, and the students are quite satisfied with it. Written objectives are available for the course, both at the course level and at the individual lecture level. An attempt is made to integrate the content of the basic science portion of the course with the introduction to patient care portion of the course. As with the rest of the PCL curriculum, the methods of teaching emphasize small group, case based learning. One to two students fail Block III each time it is offered and adequate remediation is available. The major transition underway in the course at the present time is the move from light microscopy to virtual microscopy. Both faculty and students report that this transition is going well. The only significant problem reported for Block III is noted by the Introduction to Patient Care faculty, and they report problems in finding enough volunteers to monitor and evaluate the students during their clinical skills programs.

Med 604 Block IV

Block IV is the fourth of the integrated blocks in year 1. It is directed by an anatomist and it occurs in the second half of the first year of medical school. Content is focused on neurosciences and includes neural
development and growth, cell biology, and physiology, primary sensory and motor function, cerebro-cortical function and related human neurosciences topics. This course content is integrated with the approach to the neurologic patient in the Introduction to patient care part of the course. The course includes 9 hours per week basic sciences lectures, 4 hours per week clinical sciences lectures and 2 hours of clinical skills, coupled with significant small group teaching. Lab includes both gross and microscopic neuroanatomy. The faculty report that sufficient teachers and TA’s are available for this course, and the students are quite satisfied with it. Extensive written objectives (137) are available for the course, and objectives are available both at the course level and at the individual lecture level. An attempt is made to integrate the content of the basic science portion of the course with the introduction to patient care portion of the course. As with the rest of the PCL curriculum, the methods of teaching emphasize small group, case based learning. One to two students fail Block IV each time it is offered and adequate remediation is available. The major transition underway in the course, as in all histology courses, at the present time is the move from light microscopy to virtual microscopy. Both faculty and students report that this transition is going well. The only significant problem reported for Block IV is noted by the Introduction to Patient Care faculty, and they report problems in finding enough volunteers to monitor and evaluate the students during their clinical skills programs. It is noted that neurosciences is an especially strong area at UND, and this is a very solid course.

YEAR TWO

Formal instructional hours

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</table>

* Includes case-based or problem solving sessions

Med 701 Block V
Block V is the first of the integrated blocks in year 2. A total of 62 faculty participate from twelve different departments. Objectives for the Block are written and are complete. This block provides the students with an understanding of basic reactions, much at the cellular or tissue level, to a host of injurious events. The students are also provided with information about the related pharmacology. Various pedagogical styles are utilized including lecture, lab, small group sessions, independent learning and a variation of problem based learning called Patient Centered Learning (PCL). The block is 8 weeks in length and is placed appropriately in the second year. There are sufficient resources to teach the block for the current number of students. Students are evaluated by multiple choice exams, case essays, clinical skills exam, and narrative comments. Students must pass all four elements to pass the block. The student survey shows that student satisfaction with general pathology, which makes up the bulk of Block V is strong, with high quality faculty being cited as one of the main reasons for the high level of student satisfaction.

Med 702 Block VI
Block VI is the second of the integrated blocks in year 2. A total of 48 faculty participate from twelve different departments. Objectives for the Block are written and are complete. This block concentrates on hematologic, cardiovascular, and respiratory pathology. The students are also provided with information
about the related physical exam skills and pharmacology. Various pedagogical styles are utilized including lecture, lab, small group sessions, independent learning and a variation of problem based learning called Patient Centered Learning (PCL). The block is 8 weeks in length and is placed appropriately in the second year. There are sufficient resources to teach the block for the current number of students. Students are evaluated by multiple choice exams, case essays, clinical skills exam, and narrative comments. Students must pass all four elements to pass the block. Hematology is an area where student satisfaction is consistently rated highly. Ninety-one percent agree that the quality of instruction met or exceeded their expectations. Regarding the clinical application of basic science material, 95% report satisfaction. Cardiovascular pathology is currently a popular course. The students feel that the scheduling of cardiovascular pathology lectures in the mornings, followed by clinical cardiology in the afternoons helped solidify cardiovascular physiology in both the normal and diseased states. Overall, 84% of seniors, 91% of juniors, and 89% of sophomores agree that the quality of the respiratory pathology course met or exceeded their expectations.

**Med 703 Block VII**

Block VII is the third of the integrated blocks in year 2. A total of 63 faculty participate from twelve different departments. Objectives for the Block are written and are complete. This block concentrates on GI tract, liver & biliary system, pancreas, renal - glomerular, tubular & interstitial, lower urinary tract, reproduction, and breast. The IPC portion covers H&P skills focused on neuro-muscular skills (to be prepared for summative exam in Block VIII) and preventive medicine. Various pedagogical styles are utilized including lecture, lab, small group sessions, independent learning and a variation of problem based learning called Patient Centered Learning (PCL). The block is 8 weeks in length and is placed appropriately in the second year. There are sufficient resources to teach the block for the current number of students. Students are evaluated by multiple choice exams, case essays, clinical skills exam, and narrative comments. Students must pass all four elements to pass the block. Overall, 92% of students feel that the quality of the course met or exceeded their expectations.

**Med 704 Block VIII**

Block VIII is the fourth of the integrated blocks in year 2. A total of 82 faculty participate from twelve different departments. Objectives for the Block are written and are complete. This block concentrates on diabetes mellitus, endocrine, skeletal & soft connective tissue, skin, peripheral nervous system and skeletal muscle, CNS & special senses, environmental and nutritional diseases. The IPC portion covers psychiatry, bioterrorism, introduction to emergency systems, and the flight team presentation. Various pedagogical styles are utilized including lecture, lab, small group sessions, independent learning and a variation of problem based learning called Patient Centered Learning (PCL). The block is 8 weeks in length and is placed appropriately in the second year. There are sufficient resources to teach the block for the current number of students. Students are evaluated by multiple choice exams, case essays, clinical skills exam, and narrative comments. Students must pass all four elements to pass the block. On the students’ evaluations of the courses and the self-study, students have the concern about Block VIII being much less cohesive. The faculty report they are trying to improve it, although the last week of the Block will still be a catch-all set of topics.

**Years Three and Four**

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<th>Course or Clerkship</th>
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<th>% Amb.</th>
<th># Sites used*</th>
<th>Typical hrs/wk formal instruct.**</th>
<th>Quantified Criteria† (Y/N)</th>
<th>Patient Log (Y/N)</th>
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**YEAR THREE**

17
Med 8101 – Clinical Epidemiology

Clinical Epidemiology is a multidiscipline course sponsored by the department of medical education. It extends across the complete third year. This course has been recently restructured and reflects its written objectives. There are five faculty members who participate from three different departments. There are six lectures delivered through teleconference technology to students at the various campus sites. Students learn to apply the principles of epidemiology to the clinical setting. Students are required to accomplish a research project and to present the project to the entire class. Grades are determined by homework assignments, written research report and oral presentation. In addition to a grade, a written letter assessing the written manuscript and presentation based on the consensus of faculty reviews is provided. Because this course has been recently restructured, the GQ and Student Survey do not reflect how students feel about the current iteration.

Internal Medicine Clerkship

The required internal medicine clerkship is eight weeks in length. Written clerkship objectives are in place and disseminated to faculty and to the limited number of residents. The self study acknowledges that quantified criteria for the types and numbers of patients to be seen have not been defined. Students use a PDA program to enter patient encounters and these results are monitored by the clerkship director. Approximately 45% of the students’ time is in ambulatory care. Students are assessed by faculty/resident evaluations, internal exams and NBME exam. The objectives and grading scale are the same for each clerkship site. Conferences and lectures are delivered statewide using teleconference technology. Residents participate in teaching students at the Fargo campus. The residents receive lectures and instruction on teaching and evaluation of students in early July. The students’ work load is watched by the clerkship and site director, but there is no policy regarding the amount of time students spend in clinical duties. The student survey reveals that 69% of students feel that the internal medicine clerkship met or exceeded their expectations.

Family Medicine Clerkship

The family medicine clerkship is an ambulatory, community-based eight week clerkship delivered by volunteer community faculty across the state of North Dakota and western Minnesota in 29 different sites. All students are required to do at least one month in a rural community. While the focus of learning is in the ambulatory setting, students at rural sites may be involved with continuity care when patients they see...
in the clinic are hospitalized for either illnesses or deliveries. The clerkship uses objectives developed by the UND Department of Family Medicine. The objectives are provided to the students in written form during the clerkship orientation. A list of common problems and procedures students are expected to encounter during the clerkship is provided in the manuals, but no quantified criteria is determined. A core standardized lecture program of eight hours per clerkship, delivered in two-hour blocks, via interactive video conferencing four times during the eight weeks is provided to all students. Feedback is provided for both their oral presentation and the progress comments elicited from preceptors. The students’ overall performance in the required 3rd year Family Medicine Clerkship is evaluated using written exams, oral exams, faculty ratings, and observations of clinical skills. Students noted no concern about work hours exceeding 80 hours per week, since many of the practices do not require night call. According to the student survey data, 91.5% of all students found that the clerkship met their educational needs, and there was little variance in the data between clerkship sites, 92.8% felt that the quality of the preceptors met or exceeded their expectations, and 92.7% felt that the patient number and variety was sufficient. The teleconferences received significant criticism. Overall, this seems to be a highly successful clerkship, but quantified and verifiable educational criteria should be developed.

Obstetrics and Gynecology Clerkship

The obstetrics and gynecology is a traditional eight-week third year required clerkship, taught in five separate sites (across three campuses). It is divided into half ambulatory and half in-patient, with the division of experiences being approximately 50-50 in terms of obstetrics and gynecology. Objectives are based on the APGO curriculum and are distributed in both paper and on the web. The quantified criteria for the types and numbers of patients to be seen have not been defined. The students are required to keep a PDA log of the patients they have significant contact with. These logs are reviewed by the clerkship director/coordinator on each campus to make sure that there is approximate parity in the types of patients seen. The clinical sites are adequate for basic ob-gyn education, and there did not appear to be any major variation in formal education (amount and type) across sites. Students are assessed with NBME shelf exams (with above average scores: 76 in 2003, 75 in 2004), oral exams, OSCEs, and clinical observation, as well as some internal exams using case-based questions, essay and short answers. Overall the clerkship is judged to be very effective. A majority of the students report satisfaction with the clerkship’s lectures and adequate exposure to faculty in their clinical instruction. There is some complaint from the students in Bismarck that the Ob-Gyn faculty from the Fargo campus could visit more. The students do no like the fact that the current Chair of OB-Gyn is reluctant to communicate by e-mail.

Pediatrics Clerkship

The pediatrics clerkship is a traditional eight-week third year required clerkship, taught in the three campus system of separate sites, using two hospitals in Bismarck, and one hospital in Grand Forks and one in Fargo. It is divided into 40% ambulatory, 50% in-patient, and 10% in the nursery. Written objectives are distributed in both paper and on the web to the faculty and students. The self study acknowledges that quantified criteria for the types and numbers of patients to be seen have not been defined. Students use a PDA program to enter patient encounters and these results are monitored by the clerkship director. All students have to complete all 31 CLIPP cases to standardize their experiences. Student performance on the shelf examination has been above average with scores in the high 70s (78 in 2004, 76 in 2003). Students are also assessed with an oral exam and by observation. The pediatric clerkship usually receives the highest evaluation of all clerkships. Students consider it well organized and coordinated. The clerkship also receives favorable comments regarding the balance and mixture of patient experiences and teaching seminars. Students also comment favorably on the enthusiastic teaching of the pediatricians/instructors. Students deny any problems with workloads.

Psychiatry Clerkship
The Psychiatry Clerkship is an eight week required course directed by the interdisciplinary Department of Clinical Neuroscience, with an adequate number of volunteer clinical faculty members providing the bulk of the teaching. Written clerkship objectives are in place and disseminated to faculty and to the limited number of residents. An annual retreat is held to discuss instructional approaches and student evaluation. The self study acknowledges that quantified criteria for the types and numbers of patients to be seen have not been defined. The clerkship is taught at five sites. It consists of experiences in inpatient care (4-5 weeks), outpatient clinic (1 week), substance abuse (1 week), neurology clinic (1-2 weeks), and inpatient consultation or partial hospitalization (0-1 week each). Overall, approximately 25% of the experience is ambulatory. Evaluation of students includes exams (both NBME subject and internal exams), oral and written case presentations, and direct observation of clinical skills. Narrative evaluations of student performance are given. Graduation Questionnaire responses indicate student satisfaction with the clerkship at or above national levels. Outcome measures on the NBME subject examination are in the average range, and USMLE Step 2 performance in psychiatry is modestly below the national average. One challenge noted by the course leadership is the heavy clinical workload experienced by the faculty and the impact on time available for teaching in the clinical setting.

Surgery Clerkship

This is a required eight-week third year clerkship, taught in the three campus system at separate sites, using two hospitals in Bismarck, and one hospital in Grand Forks and one in Fargo. Each student in the surgical clerkships spends one to two weeks with a general surgeon, one week on orthopedics and in some sites one week on cardiothoracic surgery. Written objectives are distributed in both paper and on the web. An annual retreat is held to discuss instructional approaches and student evaluation. The students are required to keep a PDA log of the patients they have significant contact with. These logs are reviewed by the clerkship director/coordinator on each campus to make sure that there is approximate parity in the types of patients seen. The quantified criteria for the types and numbers of patients to be seen have not been defined. Overall, approximately 40% of the experience is ambulatory. Evaluation of students includes NBME subject exams, oral and written case presentations, and direct observation of clinical skills. Narrative evaluations of student performance are given. The students rate clinical instruction in general surgery as one of the highest grades among all clerkships, as 91% agree, of which 29% strongly agree, that the quality of instruction by clinical preceptors met or exceeded their expectations. A total of 88% agree that the overall quality of this clerkship met or exceeded their expectations.

ROME

ROME is a seven month interdisciplinary continuity experience in a rural primary care setting. It is not an individual clerkship; instead it is an experience for which students receive clerkship credit. ROME participants must meet all the clinical course requirements established for traditional third year clerkships. ROME students can meet all requirements for both the eight week surgery clerkship and the eight-week family medicine clerkship during the 28-week rural experience. Four additional weeks of clerkship experiences are required on either the Bismarck or Fargo campuses to meet all the requirements of the pediatrics, internal medicine, and obstetrics and gynecology clerkships and each ROME student completes the entire 8-week psychiatry clerkship at the campus. Each clerkship director reviews ROME PDA data pertinent to their clerkship, and thus has the opportunity to structure the four-week campus experience to fill potential gaps in the rural experience. For both family medicine and surgery, the ROME data consistently supports the initial hypothesis that ROME students would have a broader, more interactive and hands-on experience than do most campus students. Currently four rural communities in North Dakota are designated as ROME sites. Basic requirements to become a ROME teaching site are the presence of three board-certified family physicians and one board-certified surgeon willing to teach third year medical students. Other local physicians also participate in teaching patient care. Community
hospitals in the four communities provide a broad spectrum of primary care services, including general surgery and obstetrics and gynecology. The number of slots available for students in this program is limited to eight a year. The students who have the opportunity to participate enjoy the ROME experience. They especially appreciate the individualized long term educational experiences they have with the preceptors at the ROME sites. The students on the ROME clerkships scored significantly higher on their subject exams than student in the traditional clerkships in two of the three academic years from 2001-2004.

YEAR FOUR

<table>
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<tr>
<th>Course or Clerkship</th>
<th>Total wks</th>
<th>% Amb.</th>
<th># Sites used*</th>
<th>Typical hrs/wk formal instruct.**</th>
<th>Quantified Criteria† (Y/N)</th>
<th>Patient Log (Y/N)</th>
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Surgery Acting-Internship

Students in the fourth year must take a four-week surgery acting-internship. Acting Internships must be taken in state. There are several offered that students can choose from at each of the clinical campuses. Grading is by faculty/resident evaluation. There are no written exams. Ninety-five percent of students on the student survey report that the overall quality met or exceeded their expectations.

Internal Medicine Acting-Internship

Students in the fourth year must take a four-week internal medicine acting-internship. Acting Internships must be taken in state. There are several offered that students can choose from at each of the clinical campuses. Grading is by faculty/resident evaluation. There are no written exams. Ninety percent of students on the student survey report that the overall quality met or exceeded their expectations.

Med 9502 Senior Colloquium

The Med 9502 Senior Colloquium (also known as the Dean’s Colloquium) is managed by the Dean’s Office (Office of Medical Education) and serves as a Capstone course that aims to accomplish the following objectives:

- To provide information on repayment of student loans and financial planning.
- To provide an opportunity for updating the graduating students on such topics as: evidence-based medicine, professionalism, drugs, the impaired colleague, medical licensure, credentialing, bioterrorism and infectious diseases
- To provide question and answer sessions and additional training for how to survive residency and medical marriages, improving clinical teaching skills for residency, etc.

In addition to three regular faculty members, residents and practicing medical doctors participate in the panel session on how to survive residency and medical marriages. The course is taught in May of each year to the graduating fourth year students. Topics include loan consolidation, repayment of student loans, financial planning, basic life support recertification, professionalism, medical liability, surviving residency, medical marriages, and an overview of bioterrorism preparedness and response. The course is
taught in both large group and small group formats. Space for teaching the course and faculty for teaching the course are sufficient. Student feedback on this course is limited.

Elective Courses

Elective experience makes up the bulk of the fourth year requirements accounting for at least 24 weeks. All fourth-year students must take six four-week electives. Sixteen weeks of the fourth year must be taken on the assigned clinical campus in the fourth year which would include at least eight weeks of electives. On average, students take eight weeks of electives at other institutions. There is faculty guidance to assure a balanced program appropriate to the students’ interests. The students are only allowed to take two electives in a specific specialty area. The students are presented with a Senior Year Elective Program Book that lists the electives on their campus and the ones available throughout the state. A review of the elective offerings indicated that there are an adequate number of electives being offered by the school.

3. Summary of Curriculum Structure

The curriculum is designed to allow students to achieve the objectives of the educational program. The first two years of the curriculum are primarily devoted to basic science and the last two years to clinical education. Students begin to acquire clinical skills in the first two years through the clinical skills portions of the “Patient-Centered Learning” (PCL) curriculum. PCL integrates clinical skills and basic sciences around paper patient cases. The clinical curriculum remains organized around required specialty clerkships and six months of the fourth year is reserved for electives. All required clerkships include ambulatory experiences except for the required acting internships. There is an appropriate balance among the methods of instruction used, between inpatient and outpatient clinical experiences, and between clinical experiences in primary care and specialties.
### C. Teaching and Evaluation

#### YEARS ONE AND TWO

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<tr>
<th>Course</th>
<th># of Exam(s)</th>
<th>Internal Exams</th>
<th>Lab or Practica l Exams</th>
<th>NBME Subject Exams</th>
<th>Faculty/ Residen t Rating*</th>
<th>OSCE/S P Exam</th>
<th>Paper or Oral Pres.</th>
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#### YEARS THREE AND FOUR

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<th>Course or Clerkship</th>
<th>NBME Subject Exams</th>
<th>Internal Exams</th>
<th>Oral Exam or Present</th>
<th>Faculty/ Residen t Rating*</th>
<th>OSCE/S P Exam</th>
<th>Other *</th>
<th>Clinical Skills Observed (Y/N)†</th>
<th>Mid-Course Feedback (Y/N)</th>
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<td></td>
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<td></td>
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<tr>
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<td>X</td>
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<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Surgery</td>
<td>X</td>
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<td>X</td>
<td></td>
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<td>Y</td>
<td>Y</td>
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In the pre-clinical years students are evaluated by multiple parameters: multiple choice question exam, case essay exam, clinical skills exam and facilitator evaluations and narrative comments. In each block of the first and second year, students must have a passing grade in each of these four elements to pass the block. The multiple choice question exams are prepared centrally by the assessment director in the Office of Medical Education. The quality of the exam questions is monitored. Exams are kept secure, producing a re-usable question bank. Attempts are made to provide consistency of grading for the essay exams. The facilitator evaluations are accomplished by using the Sequenced Performance Inventory and Reflective Assessment of Learning (SPIRAL) forms. Because of student feedback, these forms have been modified to include more narrative comments.

In the third year clerkships, students are evaluated by written examination and by preceptor evaluation. The clerkships utilize an on-line evaluation form. There are core questions shared by all clerkships and other questions are added that are specific to the individual clerkships.
Direct observation of core clinical skills, behaviors and attitudes in the first two years occurs with the PCL curriculum and the IPC/ICS courses. In the third year, behaviors and attitudes are documented on the student assessment form and clinical skills are directly observed in the end of year clinical skills assessment.

Mid-course evaluations in years one and two occur four weeks into the eight week blocks. Students complete a self-assessment and meet with the facilitator. In Block 1 and 2, on-line self assessment exams are available. Practice exams are also available for clinical skills assessment. In year three, a formative assessment plan with written feedback to the students was developed by the MCC and implemented in 2004-05.

In years one and two students receive results of exams/evaluations on Thursday or Friday of assessment week. In years three and four, clerkship/rotation grades are available within four to six weeks after completion of the clerkship/rotation. All clerkships include narrative evaluations as part of the student assessment.

Students are appropriately supervised during the third year clerkships

Graduate students perform as teaching assistants in the anatomy sessions. While they do receive the course objectives, there is no preparation or instruction on how to teach or evaluate students.

D. Curriculum Management

1. Roles and Responsibilities

The Medical Curriculum Committee (MCC) is composed of elected and appointed members from faculty, students and administration. There are four types of standing committees: 1. assessment of student learning; 2. campus coordinating committees (N=3); 3. clinical education committee; 4. ROME steering committee.

The charge of the MCC as stated in the bylaws of the faculty academic council is “…reviewing, evaluating and recommending policy and managing the medical student curriculum…” The associate dean of medical education and director of the office of medical education (OME) is an advisor to the committee and provides expertise in curricular design, pedagogy and evaluation methods.

The content of the basic science teaching is fully integrated in the Block system so that there are no individual courses owned by the departments in year one and two. The MCC has been successful in the oversight of the year one and two curriculum. However, the year three and four curriculum is managed by individual departments with no overall assessment or planning. The recently developed clinical education committee is composed of clerkship directors and reports to the MCC, but it has not yet demonstrated a coordination of year three and four with the design, management and evaluation of the overall medical school curriculum. The year one and two curriculum is fully integrated and coordinated with logical sequencing of the various blocks. All decisions, changes, and assessments are made centrally through the OME and MCC for years one and two.

There is yearly review of Blocks I – VIII for objectives, content, student performance and faculty performance. Changes are implemented whenever necessary. There is a yearly retreat of Block directors. Any recommended changes to the Blocks must be approved by the MCC. The associate dean for medical education monitors the curriculum content in year one and two and reports these findings to the MCC. There is no curriculum inventory. The school has a course inventory of Yrs. 01 & 02 including course
Clerkships in year three and rotations in year four are monitored by individual departments. There is no central oversight by the MCC in this process and the departments do not report the results of their clerkship/rotation evaluations to the MCC.

Clerkship/rotation directors are watchful of the duty hours for the third and fourth year students, but there is no overall policy for student work hours. Students were not concerned about the total number of work hours. Many students seem to feel that a discrepancy exists between call times and hours worked on the various campuses during the third year. However, most of the comments reveal that many students feel they have no way of knowing this other than by talking to fellow classmates. The team did not find this to be the case.

The chief academic officer has sufficient and appropriate resources to support the design, implementation and evaluation of the curriculum.

2. Geographically-Separate Programs

The clinical curriculum (third and fourth years) of the University of North Dakota School of Medicine and Health Sciences is delivered in four geographically separate sites (Grand Forks, Fargo, Bismarck, Minot). The number of third year students in Grand Forks is six third and twelve to fourteen fourth year students per year, in Fargo the number is twenty-eight to thirty-two third and thirteen fourth year students per year, in Bismarck the number is twenty to twenty-three third and twelve to fourteen fourth year students per year, and in Minot the number is zero third and twelve to fourteen fourth year students per year. In addition, eight students spend seven months of the third year at Rural Opportunities in Medical Education (ROME) sites around the state.

The chief academic officer of the medical school is the dean. The dean receives regular reports from the associate dean for medical education and the associate dean for academic affairs (twice a month) on the status of the educational program. Each of the four campuses (Grand Forks, Fargo, Bismarck, Minot) is directed by a campus assistant dean who oversees the student activities in the required clerkships and electives at their site. Monthly meetings of the campus assistant deans are held with the dean and associate deans for regular updates on the educational program at the other campus sites. In addition, each campus has a clerkship coordinator who reports to the overall clerkship director. The campus assistant deans meet regularly with the clerkship coordinators to discuss the implementation of the clinical clerkships on their campus. The ROME program director is responsible for disseminating the ROME objectives to the ROME coordinators at the rural sites. The ROME site coordinators relay the objectives to the teaching faculty who are all members of our clinical departments and receive orientation via departmental mechanisms as well.

A rigorous system has been developed to ensure equivalency across clinical sites. To ensure comparable levels of educational quality, objectives and grading criteria are sent to all faculty. In addition the same evaluations and evaluation criteria are used on each of the campuses. Students have the same access to services regardless of their campus. The survey team believes that that thoughtful and well-developed planning for the regional campuses has assured functional integration and achieved comparability in educational quality and evaluation of students across sites.

E. Evaluation of Program Effectiveness

The effectiveness of the program is assessed by the level of achievement of quantitative and qualitative outcome objectives though a variety of evaluation instruments, both internal (e.g., Clinical Skills...
Assessment, given at the end of the third year), as well as external (e.g., USMLE scores). UNDSMHS also collects information about the effectiveness of the program from several post-graduation sources, including residency program director surveys, the AAMC Graduation Questionnaire, and survey results from graduates at the end of their second year of residency. The Center for Rural Health also tracks ultimate practice location and type. The information is collated by the Office of Medical Education and provided to the Medical Curriculum Committee and any identified weaknesses are addressed as part of the curriculum improvement process.

Standardized evaluation forms are used throughout the curriculum. In fact, school faculty have published their work with the SPIRAL evaluation form used throughout the first two years in the PCL curriculum.

The UNDSMHS Goals and Objectives Document has outcome measures focused on knowledge, skills and attitudes. The school uses this as a framework for the development of assessment methodology targeting definite outcomes. The Medical Curriculum Committee (MCC) establishes policy by which assessment tools are used to test students’ abilities in these areas, and monitors student performance on internal and external exams. The Assessment Committee, a subcommittee of the MCC, meets on a regular basis to evaluate all assessment issues based on faculty and student feedback.

The Medical Curriculum Committee (MCC) is responsible for developing, reviewing and revising the institutional objectives for the educational program. The Associate Dean for Medical Education via the Office of Medical Education provides information to the MCC regarding curricular matching of content to the objectives.

Block directors have access to individual faculty lecture evaluations when preparing the next offering of their block. The associate dean for medical education has access to USMLE results and makes those available to block directors on a yearly basis. Clerkship directors and departmental chairs as appropriate use performance on NBME subject exams or internal exams, obtain feedback on their clerkships, and compare student performance on Step II of the USMLE. Campus deans and department chairs obtain evaluations of electives.

The associate dean for student affairs and admissions provides copies of the AAMC Graduation Questionnaire to the associate dean for academic affairs and the associate dean for medical education and the dean for analysis on a yearly basis.

Over the last three years, the students averaged a 90% pass rate on USMLE Step I (which is below the national norms that have ranged from 92-94% during this same period), and a 97% pass rate on Step II (as compared with 95% nationally). A 98% pass rate was achieved on the initial administration of the Step II Clinical Skills exam (which was better than the national 96% rate). About forty percent of graduates practice in North Dakota following completion of their residencies and fellowships.

Clinical skills assessment occurs at the end of each Block (I-VIII) in the Clinical Education Center (CEC). A final Clinical Skills Assessment is administered to all students at the end of Year 03. The CEC is a 9000 square foot space that is dedicated to the clinical skills assessment, with 16 examination rooms equipped with one-way mirrors and recording devices. Given their multiple exposures to this type of assessment, it is no surprise that to date 98% of the students have passed the USMLE Step 2 Clinical Skills Examination.

III. MEDICAL STUDENTS

(See appendix for the following:
• Student enrollment by class year
A. Admissions

As a state school, University of North Dakota School of Medicine and Health Sciences has a restrictive rule that requires all applicants to have been residents of the state for at least twelve months prior to applying. In addition, a small number of class slots are set aside for students pre-certified by the Western Interstate Commission for Higher Education or students coming from Minnesota. Also, up to seven positions are reserved for fully qualified members of the US-recognized tribes through the Indians into Medicine Program, no matter where they reside.

The premedical curriculum requirements are traditional science (chemistry, biology, physics, psychology and algebra) as well as language arts. While not required, there is a strong recommendation that students be computer literate, and that in preparation for medical school, they develop an understanding of literature, art, history, ethics and philosophy.

The admissions committee is a standing faculty committee, composed of eight faculty members (including the chair), and four medical students (two third and two fourth years). There are an additional seven faculty and four student alternates. Committee members review prospective students’ personal statements, four letters of recommendation, as well as their transcripts and MCAT scores. Selected students are offered a personal interview which is conducted by a team of a basic scientist, a clinician and a medical student.

The admission committee develops the admissions policies that must be approved by the faculty and the dean. Students are ranked on their current state residency (80% ND, 10% MN, 10% WICHE), health care experience, GPA, and MCAT scores. There is a subcommittee that deals with students with low scores (GPA<3.0; MCAT <6). Students are interviewed over three weekends (44 applicants per weekend). The INMED program has a separate interview day; there is no separate MD-PhD pool.

The selection criteria for admission are appropriate, given the mission of the school’s emphasis on educating and preparing physicians, medical scientists and other health professionals for service to North Dakota and the nation. It is also evident from the fact that 38% of the school’s graduates now practice in North Dakota.

The school reports that they have sufficient number of applicants for every admitted student (currently a ratio of four to one). The quality of the admitted students in terms of GPAs is very similar to the national norms. The MCAT scores are slightly lower than the national means, and this is seen in lower Step 1 scores.

The school does not have a specific goal regarding diversity. Similar to other medical schools, the admitted classes now are around fifty percent female. Medical students at UNDSMHS are more diverse than the state as a whole. As per the 2000 Census, only eight percent of the North Dakota population is from an under-represented minority.
A review of the published admission information available and distributed to applicants indicates that they do not contain the technical standards. The database indicated that the technical standards document is currently under review; a copy of the standards dated May 4, 1992 was included in the appendix of the database.

Prospective students are informed about admission requirements and the school’s curriculum through brochures (e.g., “A Guide for Prospective Medical Students”), as well as through the school’s web site (http://smhs.med.und.nodak.edu/UNDSMHS/admissions.html). The information appears accurate and up-to-date.

In 2003-2004, the school increased its first year class to 62, after the LCME assessed the adequacy of the resources for this proposed increase. There is every indication that there are still more than sufficient resources to support this increase. There are no current plans for further increases at this time.

There are adequate resources for students who are accepted as transfers, since this happens so rarely (one every two to three years), as well as visiting students (only a few fourth year students each year). The transferring students are equivalent to the current students in terms of academic performance.

The dean’s office is effective in verifying credentials and registering visiting students. There are no problems in ensuring that their immunizations are up-to-date, and that they have appropriate malpractice coverage. Criminal background checks will be initiated this fall.

B. Student Services

1. Academic and Career Counseling

Since the class is small, most academic counseling is handled by the course directors and the student affairs office. Problems are usually recognized early and managed successfully. The attrition rate is low, and 96.7% of students graduate in 4 years, with a 98.3% overall graduation rate. The school has effective programs after each block during the first 2 years to remediate students who have had problems in the block. If the remediation in the course in the one week after the block is not successful, another window for remediation exists in the summers after the 1st and 2nd years. This remediation program seems to work well. The student progress review committee functions well and is regarded as useful by both the students and faculty.

Career and residency counseling occurs throughout the four years of medical school, but activities tend to be concentrated in the third and fourth years. Students are encouraged to use the AAMC’s Careers in Medicine program, which is introduced to them in a workshop during orientation. When the students are in their second year, after the Match, a panel of senior students meets with them to discuss career choice. Additionally, several special interest groups are available for first and second year students. They include the special interest groups for Family Medicine, Internal Medicine, Surgery, Pediatrics, and Emergency Medicine. Finally, the three third year campuses conduct programming to assist students in making career decisions. The programs are organized by the campus deans, but in Grand Forks the clinical department chairs report that they are also involved on a regular basis. The students uniformly reported that the career counseling program works well. They note that the lack of large clinical departments limits their contact with faculty members who might personally know faculty in other specialties across multiple medical schools. However, students find that they can usually transcend this problem by arranging fourth year electives with appropriate subspecialists in larger communities. This point was also affirmed by an alumnus who is a radiologist.
As part of the career counseling program, the associate dean for student affairs and admissions also meets with each senior student, early in the year, to discuss career plans and the writing of the Medical Student Performance Evaluation (MSPE). The Medical Student Performance Evaluation (MSPE) is prepared by the dean for student affairs and admissions in collaboration with the student’s third year campus dean. The students each complete a questionnaire concerning specialty choice and then meet with the dean for student affairs and admissions to discuss both specialty choice and the MSPE. Utilizing the summary evaluations from Blocks I through VIII and from all six third-year clerkships, and including information on awards, scholarships, student government involvement, organizational leadership, committee memberships, and other extracurricular activities during medical school a draft MSPE is written by the associate dean. Any circumstances impacting the student’s academic progress also are noted. The draft is reviewed by the campus dean and the students—after inserting suggested changes, the document is finalized.

UND graduates have done well in the match, as indicated in the following table showing the percentage matched in the initial program:

<table>
<thead>
<tr>
<th></th>
<th>2001-02</th>
<th>2002-03</th>
<th>2003-04</th>
<th>2004-05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Match</td>
<td>94.0</td>
<td>96.0</td>
<td>94.3</td>
<td>95.9</td>
</tr>
</tbody>
</table>

2. Financial Aid Counseling and Resources

Financial aid assistance is organized through the Medical School Financial Aid Office, located in the Student Affairs area for students in Grand Forks. During clinical rotations, the medical students can obtain financial aid service by e-mail, phone, and mail or the web page. The students report that the financial aid office is accessible, but a few students expressed concerns about the adequacy and/or accuracy of the advice that is available there.

Financial counseling services for medical students occur at a number of times during their educational process, including individual pre-matriculation counseling, individual entrance counseling, primary care loan counseling, debt management/deferment counseling session in all years, and at an exit interview.

Tuitons have been increasing at a rate of 8-9% per year for the last several years, and both the overall cost of medical school and medical student debt have been rising. Tuitions are refunded when appropriate. Unfortunately, the availability of scholarships has not kept pace with tuition increases, and students are more dependent on loans than previously. The dean is clearly aware of this problem and is working to obtain additional endowment funds.

As noted below, the average indebtedness of the UND medical students in rising rapidly, but it is still below national averages:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt</td>
<td>85,906</td>
<td>88,290</td>
<td>98,679</td>
<td>95,287</td>
<td>108,713</td>
<td>123,519</td>
</tr>
</tbody>
</table>

3. Personal Counseling and Health Services

Personal counseling is available to first and second year students and some third year students at the Grand Forks UND campus counseling center. This is located only two blocks from the medical school and provides all types of counseling services including individuals, couples and substance abuse. The University Learning Center helps students to identify learning skills difficulties. All counseling at the
center is confidential and none of the counselors serve as faculty at the medical school. If psychiatric services are required, students are referred to psychiatrists who do not participate in the teaching program. Third and fourth year students in Bismarck and Minot utilize the centers of family medicine which have psychology services available. In Fargo, students use the employee assistance program at MeritCare Health System. Students are very satisfied with health and personal counseling services. The Graduation Questionnaire (GQ) indicates that 49% of students are satisfied-to-very satisfied with the personal counseling available, and the Student Survey indicates that 59% of students are aware of where to go for personal counseling.

Entering students participate in a one week orientation before classes begin. Many topics are addressed during this week, including group dynamics, stress management, professionalism, learning styles, etc. A peer advising system is also initiated at this time utilizing second year students. Students in the first two years also have access to the University wellness center that offers a broad range of services including nutrition advise and personal training.

Students in Grand Forks have access to the UND University Student Health Service. This is a full-service medical clinic. There is no charge for student office visits. Spouses and dependents may be covered by a per-semester fee. Students are only charged for x-ray studies, lab work and special procedures covered by insurance. Students are required to have medical insurance coverage and the school provides disability coverage. Students may be referred to Altru Health System for specialty care. Third and fourth year students in Bismarck and Minot use the centers for Family Medicine and are only billed to their insurance.

If a student received or is receiving treatment from a physician who also serves as clinical faculty, the student may request non-assignment to that physician, and a clinical faculty member can request non-assignment to a student whom they may have treated.

The Student Survey shows that 87% of students are satisfied with student health services.

There is an immunization policy that all students must follow, and it is monitored. Yearly TB testing is required and provided by the health service. The Student Survey shows that 95% of students feel that the school is adequately monitoring immunizations and testing.

Students receive information about infectious disease control guidelines beginning in the first year and again in the second and third years. All sessions have mandatory attendance. Policies and procedures for students who have a biohazard exposure incident are well published for each campus and students are aware of how to proceed. The Student Survey shows that 88% of students feel they have been well educated about biohazard exposures.

C. The Learning Environment

Two documents, a Statement of Teacher-Learner Relationship in Medical Education and a Code of Student Life, clearly articulate the institutional policies and procedures to prevent student mistreatment. These policies are widely disseminated, and discussions during the survey visit and Graduation Questionnaire data indicate widespread understanding of and adherence to the policies. As a result, incidents of mistreatment appear to be relatively infrequent, with only one to three students per year reporting mistreatment over the last three years of Graduation Questionnaire results.

Both the bulletin published by the medical school and its web site clearly state the policies and procedures regarding student advancement, graduation, disciplinary action, appeal, and dismissal. The self study reported a high level of student awareness (97%) of the policies, and during the survey visit students,
faculty members, and administrators confirmed general knowledge of and adherence to these procedures. The self study did note some misperceptions regarding student “ranking,” which the institution appears to be successfully correcting. In cases of possible probation, suspension, or dismissal, the student is notified in writing of the reasons at least 10 business days prior to a hearing before the Student Performance and Recognition Committee, and a formal hearing protocol is followed. Students may be accompanied at the hearing by legal counsel. Decisions by the hearing committee are made within 10 days, and the student has a right to appeal the decision to the dean, who also must act within 10 days and who represents the final level of appeal.

University policies assure the confidentiality of student records, which are maintained by the medical school in its office for student affairs and admissions. This office responds to all requests by students for access to their records, and works with the medical education office to allow inaccuracies which have been identified by a student and are confirmed to be corrected in the record. At the survey visit, students reported no problems with this system.

The availability of space for student study, relaxation, and storage was reviewed during the survey visit and in general appeared adequate. One problem noted at an affiliate, the MeritCare system in Fargo, was inadequate locker storage facilities and a lack of call room space for students on overnight obstetrics/gynecology call.

D. Student Perspective on the Medical School

An active Independent Student Analysis (ISA) Committee participated in the self study. In addition, the school has had a very high response rate to the AAMC Graduation Questionnaire, and the data base included results for 2003, 2004, and 2005. The survey visit also provided multiple opportunities for discussions with students, both at the main campus and at affiliates.

Strengths noted by the students include the accessibility and responsiveness of the administration, appropriate participation in decision-making processes, ample extracurricular opportunities, the learning and assessment resources of the Clinical Education Center, and the overall open learning environment and close professional relationships between faculty and students. Student concerns included perceived limitations on career counseling in the clinical years, concerns about the use of a complex “SPIRAL” evaluation in the first two years, and some questions regarding “ranking” of students. The team reviewed these concerns and felt that each of these was improving and the students concerns were being directly addressed.

IV. FACULTY

(See appendix for the following:
- Tables showing current numbers of full-time, part-time, and volunteer faculty members in the basic science and clinical disciplines, by department and total
- Tables of teaching responsibilities by department (from FA-2)
- Table (from FA-12) showing the major medical school faculty committees)

A. Number, Qualifications, and Function

Along with the increase in class size, the faculty numbers have increased slightly. Since the last survey, the basic scientists’ numbers have actually dropped, but there has been a significant increase in clinicians, including volunteers.

Faculty are sufficient in numbers and have appropriate staff support for the current teaching and scholarly
obligations. However, with the new curriculum drawing even more heavily on the time of clinicians, and with increasing teaching obligations for undergraduate courses, as well, there is the potential for increasing strain.

While there are no specific goals aimed at increasing faculty diversity, the school is sensitive to this issue and is looking for ways of responding. Of note, the State of North Dakota is known for its homogeneity, and the faculty reflect this reality.

Faculty are extensively evaluated by the students and there is also the more informal and formal interactions with each of the department chairs. Results of student evaluations of teachers are first shared directly with the involved faculty and not their course directors. However, if there is no improvement over time, then the course director and/or the chair is brought in, to help decide on further remediation, alteration of assignments, or replacement.

The school has many initiatives aimed at improving faculty performance. In addition, to evaluation and feedback, the Office of Education and various departments provide faculty development sessions that are open to all faculty including Teach the Teacher sessions. A number of departments (e.g., surgery, family medicine), fund the trips of faculty to national educational meetings. These faculty development initiatives extend beyond educational skills. For example, the chair of the Department of Clinical Neuroscience teaches an annual Research Methods course to all faculty members.

Faculty development at the level of basic science departments includes educational and research issues. Resources of the Office of Medical Education are used extensively. Needs assessments are based on observation, regular meetings, and both internal and external advisory boards (including annual visits on site).

Volunteer faculty are working for a sense of pride, but often feel they do not have the time to do faculty development. No similar problem with in-patient teaching was observed, where there are plenty of subspecialties in most departments to cover the load.

In North Dakota, eighty percent of the physicians are employed by large health systems, so that the volunteer faculty have other task-masters. Altru, St. Alexia, Merit Care, MedCenter 1, and Trinity, are among the important health care systems. Fortunately, all of these are not-for-profits, and doing quite well, so that their missions and that of the school are not that distinctive.

Departments have core faculty who are doing the scholarly work. While the school does value and foster scholarship, it is true that there is a balance between those with a clinical emphasis and others with a more academic bent.

B. Personnel Policies

The appointment, renewal, promotion, tenure, dismissal policies and procedures widely disseminated and understood by faculty. Departments have also generated promotion guidelines, and each faculty member keeps a portfolio. Departments and the school can have more stringent guidelines than that of the university. While the school is still struggling to clearly define the Education Scholars Track, it is now felt that this is much better defined. In 2004, a formal policy was adopted for the use of a formal document and standardization of the “Tenure plan” that is given to the faculty. This was later updated in 2006.

There is a well-documented and detailed a conflict of interest policy at the level of the university.
The faculty get formal notification about their current level of achievement, as well as faculty responsibilities on a yearly basis. It is felt that the yearly evaluation, review and feedback (for first three years from the department CPT committee, with the school-wide CPT committee also doing an evaluation in year three), is a very valuable addition. It helps keep them on track.

C. Governance

There is a complex, multi-layered committee structure with a significant amount of bureaucracy, given the relatively small size of the medical school.

The dean receives input through regularly scheduled meetings with students, faculty, chairs, and faculty leaders. These include the Faculty Assembly, Faculty Council, Dean’s Advisory Council, and several other informal and formal meetings.

There are multiple mechanisms for input of individual faculty into organizational decision-making, both through committees such as the MCC or the Admissions Committee, or directly, which, given the small size of the institution, is used frequently.

The dean meets with all the faculty at least yearly through the Faculty Assembly, with more contact through multiple committee meetings, and an open-door policy.

V. EDUCATIONAL RESOURCES

(See appendix for the following:
  • Four-year Revenue and Expenditure Summary and current Annual Financial Questionnaire
  • Table(s) of teaching facilities
  • Table of faculty offices and research labs
  • Summary data and associated tables for each clinical teaching site
  • Tables of library and information technology facilities, library holdings, and library/IT staff)

A. Finances

<table>
<thead>
<tr>
<th>Source</th>
<th>(2005)</th>
<th>% of Total Revenues</th>
<th>% of Total Revenues All Public Schools*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and fees</td>
<td>$9.6</td>
<td>15.2%</td>
<td>2.8%</td>
</tr>
<tr>
<td>State appropriation</td>
<td>$15.0</td>
<td>23.5%</td>
<td>12.4%</td>
</tr>
<tr>
<td>University</td>
<td>$0.8</td>
<td>1.2%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Grants &amp; contracts (direct)</td>
<td>$17.9</td>
<td>28.1%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Indirect cost recoveries</td>
<td>$3.0</td>
<td>4.7%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Practice plans</td>
<td>$7.3</td>
<td>11.5%</td>
<td>32.9%</td>
</tr>
<tr>
<td>Gifts and endowments</td>
<td>$0</td>
<td>**0%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Hospitals</td>
<td>$5.7</td>
<td>8.9%</td>
<td>12.4%</td>
</tr>
<tr>
<td>Other revenues</td>
<td>$4.3</td>
<td>6.8%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Total revenue</td>
<td>$63.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Total expenses and transfers**  $64.6

* Most recent (fiscal year 2003-04) data
** All gifts and endowments are reported directly to the UND Alumni Foundation

### BASIC SCIENCE DEPARTMENT EXPENDITURES (2004-2005) ($ in Millions)

<table>
<thead>
<tr>
<th>Department</th>
<th>Research and Training</th>
<th>State Funds</th>
<th>Other Sources</th>
<th>Total Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy</td>
<td>0.2</td>
<td>1.3</td>
<td>0.1</td>
<td>1.6</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>3.1</td>
<td>1.0</td>
<td>0.6</td>
<td>4.7</td>
</tr>
<tr>
<td>Microbiology</td>
<td>0.7</td>
<td>1.1</td>
<td>1.3</td>
<td>2.1</td>
</tr>
<tr>
<td>Pharmacology, Physiology &amp; Therapeutics</td>
<td>2.4</td>
<td>1.6</td>
<td>0.9</td>
<td>4.9</td>
</tr>
</tbody>
</table>

### CLINICAL DEPARTMENT EXPENDITURES (2004-2005) ($ in Millions)

<table>
<thead>
<tr>
<th>Department</th>
<th>Practice Plan</th>
<th>Grants and Contracts</th>
<th>Other School/ Dept Sources</th>
<th>Clinical Affiliates</th>
<th>State Funds</th>
<th>Total Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Medicine</td>
<td>0.2</td>
<td>0.4</td>
<td>7.0</td>
<td>3.6</td>
<td>2.7</td>
<td>13.9</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.7</td>
<td>1.3</td>
<td>2.0</td>
</tr>
<tr>
<td>Clinical Neuroscience</td>
<td>0.5</td>
<td>0.2</td>
<td>0.3</td>
<td>0.4</td>
<td>1.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Community Medicine</td>
<td>0.0</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
<td>0.3</td>
<td>0.6</td>
</tr>
<tr>
<td>OB/GYN</td>
<td>0.8</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>0.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Occupational Therapy</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Pathology</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.0</td>
<td>1.5</td>
<td>1.7</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>0.1</td>
<td>0.3</td>
<td>0.1</td>
<td>0.0</td>
<td>0.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0</td>
<td>1.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Radiology</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Surgery</td>
<td>0.3</td>
<td>0.4</td>
<td>0.1</td>
<td>0.5</td>
<td>1.0</td>
<td>2.3</td>
</tr>
</tbody>
</table>

From 2001-02 to 2004-05, total medical school revenue grew from $50.5 to $63.7 million, and expenditures increased from $50.1 to $64.6 million. State appropriations during that period were essentially static at approximately $15 million. A major revenue increase was a near doubling in grants and contracts. An innovative model of sharing indirect cost recovery between the medical school and university has been a critical element in facilitating this research growth. A second significant change was an increase in tuition and fee revenue of approximately 50%. The latter has created concern regarding the corresponding increase in medical student debt, which has risen to levels slightly above the national mean. On the positive side, the tuition increases have facilitated a multi-year effort to increase faculty salaries to near national benchmarks. Insofar as the institution has no hospital facility and relies heavily upon volunteer clinical faculty members, the opportunity for clinical professional fee revenue is limited, in 2004-05 totaling $7.3 million. The community-based structure of the school and an historical avoidance of direct competition with community faculty members make it unlikely that the school will significantly build clinical income as a revenue source.

With regard to construction and renovation projects, one outcome of the tragic flooding experienced by the school in 1997 was considerable renewal of existing facilities. That fact, combined with the recent construction of the Clinical Education Center, leaves no major capital needs looming in the near future.
While the financial situation of the school has been stable and there are no major immediate capital needs, the combination of static state appropriations, recent significant tuition increases, and limited opportunities for clinical revenue creates a financial situation that merits close tracking.

B. General Facilities

The main campus facility for the medical school in Grand Forks was constructed in 1952. It experienced significant damage in the massive flooding of April 1997 and subsequently underwent restoration and a series of major renovations, the most recent being completed in 2004-05. The lecture halls, small group rooms, laboratories, and other facilities are more than adequate to support the students and faculty in the current curriculum. Research space has been organized around a small number of highly focused initiatives (e.g., neuroscience) and has been adequate to handle the recent growth in the research enterprise.

A major asset is the Clinical Education Center (CEC), newly constructed in 2001 and located across the street from the main medical school building. With 9,000 square feet of space dedicated to the learning, assessment, and research of clinical skills, it is a state of the art facility.

C. Clinical Teaching Facilities

The UND medical school utilizes a large network of clinical facilities for the clinical teaching of its students. There are a total 35 inpatient facilities and 60 outpatient clinics where medical students can work in the third and fourth years. The quality of most of the facilities is very good and students have sufficient space for study, conferences, and over-night call. However, the MeritCare Health Center in Fargo does not have call rooms for students who take overnight in-house call while on the OB/Gyn clerkship. Also, there are lockers for students and residents, however, they are located in a closet that is accessible by only one person at a time. There are remodeling plans by MeritCare that include new facilities for students.

There are six major inpatient facilities that are used for third and fourth year required clinical experiences. Altru Health System in Grand Forks has 277 beds, 11,860 annual admissions, and 102,460 outpatient visits per year. It is a modern facility with sufficient space for student conferences and on-call rooms. There are computers available for students to access patient data and to access the electronic library on the main campus. The students have 24-hour access to the hospital library. There are accredited residency programs in Family Medicine and General Surgery.

The VA Medical Center in Fargo has 109 beds, 2,441 annual admissions, and 147,015 outpatient visits per year. It has recently been remodeled and has an active outpatient population. Students have 24-hour access to the library and computers with internet connectivity. Adjacent to the hospital is the Fargo campus teaching building with several classrooms that have teleconference technology capability. There is also a branch of the medical school library. There are accredited residency programs in Internal Medicine, Psychiatry and General Surgery.

The MeritCare Hospital in Fargo has 583 beds, 21,000 annual admissions, and 1.4 million outpatient visits per year. This facility is also undergoing some renovations. Students have access to the library and computers. There are no call rooms for students who take in-house call for Ob/Gyn rotations. Lockers are available for students and residents, but they are located in a closet with insufficient access. Accredited residency programs exist in Internal Medicine, Psychiatry and Transitional Year.
St. Alexius in Bismarck has 282 beds, 11,168 annual admissions, and 46,139 outpatient visits per year. Within the hospital there are sufficient facilities for student computers, call rooms and conference rooms. There is a residency program in Family Practice.

MedCenter One in Bismarck has 192 beds, 8,662 annual admissions, and 472,069 outpatient visits per year. Within the hospital there are sufficient facilities for the educational program to include computers for students, conference rooms and call rooms. There is a residency program in Family Practice.

Trinity Health in Minot has 586 beds, 9,440 annual admissions, and 144,124 outpatient visits per year. This is primarily a fourth year campus site and the facilities for students are sufficient. They include conference rooms, computers and call rooms. There is a residency program in Family Practice.

All the necessary affiliation agreements with the 35 hospital and 60 outpatient clinics are up to date. The role and expectations of the medical students are explicitly stated. The clinical service chiefs are appointed with concurrence of the medical school. The medical school faculty has control and authority for the educational programs. The medical school has very good working relationships with the clinical facilities, and the facilities are pleased to participate in the educational program. Currently, the number of faculty, mix of cases and patient diversity is sufficient for the educational program. However, there is concern that as the demands increase for clinical productivity, clinical faculty may not be able to contribute to the educational program at their current level.

D. Library Services and Information Resources
The Harley E. French Library of the Health Sciences, new in 1995, is located in the Karl Christian Wold Bio-information Learning Resources Center. Spanning 20,000 square feet and three levels, the library supplies numerous study tables and 36 public computers for student use. The Library features a staff readily available to assist students in accessing its diverse collection of print and electronic resources. As North Dakota's primary medical resource library, it participates in the state-wide Online Dakota Information Network, ODIN. The Library’s web site exhibits well-organized search engines and journals and includes links for “Live Help”, where students can get instant answers to questions in a chat-room-style from the library staff. The library also provides services to four clinical campus sites with librarians available to help in Fargo, Bismarck, Minot, and Grand Forks. It coordinates a statewide health science library system and assists in providing biomedical information and resources for the medical community and general public. The library staff provides training for faculty and students in a variety of specific skills, including usage of specific Microsoft packages, database search engines, and information retrieval and management.

Even though they would like to have more funding, it appears as though the library is adequately funded to serve the students and the state. They are able to provide the faculty, staff, students, and residents with the resources they need to be successful. This is especially important with PCL curriculum. It requires the student to use the library resources extensively.

The current hours of access to the library are: Monday - Thursday (7:30am – Midnight), Friday (7:30am – 6:00pm), Saturday (10:00am – 6:00pm), & Sunday (1:00pm – Midnight). One student notes, “I would like to see the library open earlier in the morning and have extended weekend hours, but otherwise I am satisfied with the library and librarians.” Overall, 93.7% of medical students find the library and its resources very satisfactory and more than sufficient to meet their needs. This includes the students on the four clinical campuses and at the ROME sites. One student noted, “The library resources are excellent and are a vital part of this curriculum.”

The state has a strong commitment to information technology that supports the educational mission of the school. North Dakota is one of the most wired states in the nation. This makes it easy to deliver
educational materials or lectures to the ROME sites and to the clinical campuses in Bismarck, Fargo, Grand Forks, and Minot. Each of these sites is connected by videoconferencing.

The school has a chief information officer who is responsible for providing the resources necessary to support the educational mission. This includes helping faculty to implement and develop computer-assisted learning tools, providing access at remote sites, developing curriculum delivery modules, and setting up training programs for faculty, staff and students. The chief information officer and the library staff work closely together to support the educational mission.
# APPENDICES

<table>
<thead>
<tr>
<th>Schedule of the Visit</th>
<th>39</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Map</td>
<td>56</td>
</tr>
<tr>
<td>Organizational chart of relationships of medical school, university, and clinical affiliates</td>
<td>57</td>
</tr>
<tr>
<td>Organizational Chart for dean’s office</td>
<td>58</td>
</tr>
<tr>
<td>Brief resumé, Dean H. David Wilson, M.D.</td>
<td>59</td>
</tr>
<tr>
<td>AAMC Directory of American Medical Education University of North Dakota School of Medicine</td>
<td>76</td>
</tr>
<tr>
<td>Table (IS-12) of enrollment in graduate programs in basic sciences</td>
<td>77</td>
</tr>
<tr>
<td>Tables (IS-12-A) of number of house officers by specialty</td>
<td>78</td>
</tr>
<tr>
<td>Goals and Objectives</td>
<td>81</td>
</tr>
<tr>
<td>Schematic of curriculum (block diagram)</td>
<td>96</td>
</tr>
<tr>
<td>Table (ED-10) Teaching time devoted to subjects required for accreditation</td>
<td>98</td>
</tr>
<tr>
<td>Organizational charts for management of curriculum</td>
<td>99</td>
</tr>
<tr>
<td>Composition of medical curriculum committee</td>
<td>101</td>
</tr>
<tr>
<td>USMLE Steps 1 and 2 performance data</td>
<td>102</td>
</tr>
<tr>
<td>Student enrollment by class year (MS-5)</td>
<td>103</td>
</tr>
<tr>
<td>Mean MCAT scores and premedical GPAs</td>
<td>104</td>
</tr>
<tr>
<td>Gender, racial, and ethnic distribution of medical students</td>
<td>105</td>
</tr>
<tr>
<td>Table of student attrition (MS-18)</td>
<td>106</td>
</tr>
<tr>
<td>Composition of admission committee</td>
<td>107</td>
</tr>
<tr>
<td>Sample Medical Student Performance Evaluation (“dean’s letter”)</td>
<td>108</td>
</tr>
<tr>
<td>Tables of financial aid support (MS-24)</td>
<td>115</td>
</tr>
<tr>
<td>Narrative of student self-study analysis/tally of responses to student questionnaire</td>
<td>116</td>
</tr>
<tr>
<td>Tables of faculty numbers by department and total</td>
<td>188</td>
</tr>
<tr>
<td>Tables (FA-2) of teaching responsibilities by department</td>
<td>190</td>
</tr>
<tr>
<td>Table (FA-12) of major medical school committees</td>
<td>192</td>
</tr>
<tr>
<td>Four-year revenue and expenditure summary and Annual Financial Questionnaire, 2004-2005</td>
<td>195</td>
</tr>
<tr>
<td>Tables of teaching facilities</td>
<td>210</td>
</tr>
<tr>
<td>Table of faculty offices and research labs</td>
<td>212</td>
</tr>
<tr>
<td>Summary data and associated tables for each clinical teaching site</td>
<td>213</td>
</tr>
<tr>
<td>Tables of library and information technology facilities</td>
<td>243</td>
</tr>
<tr>
<td>Self-study Steering Committee, Task Force, Subcommittees</td>
<td>255</td>
</tr>
<tr>
<td>Self-study Summary Findings</td>
<td>258</td>
</tr>
</tbody>
</table>