PERFORMANCE AUDIT REPORT

University of North Dakota
School of Medicine and Health Sciences

August 22, 2007

Report No. 3025

August 22, 2007

Honorable John Hoeven, Governor

Members of the North Dakota Legislative Assembly

Transmitted herewith is the performance audit report on aspects of the University of North Dakota's School of Medicine and Health Sciences. This report contains the results of our review of the adequacy of the system established to monitor operations as well as a consultant's review of the primary care education training, research, and a merger of two departments.

The audit was conducted at the request of the Legislative Audit and Fiscal Review Committee. We conducted this audit under the authority granted within North Dakota Century Code Chapter 54-10. Included in the report are the goals and scope, findings and recommendations, and management responses.

Sincerely,

Robert R. Peterson
State Auditor

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Executive Summary

Results and Findings

Recommendations addressed in this report are listed in Appendix A. Discussions relating to individual recommendations are included in Chapters 1 through 3 with information for legislators consideration presented in Chapter 4.

Monitoring Operations

We determined the School of Medicine and Health Sciences (SMHS) has not established an adequate system for monitoring its operations. We noted a number of areas of concern including SMHS not complying with the legislative purpose and duties established for the school, a lack of monitoring compliance with state laws, a lack of adequate performance measures and benchmarks, and other issues.

Consultant's Findings

A consultant hired to review certain areas as part of this performance audit identified SMHS has a tradition of educating and training primary care physicians who deliver healthcare in the state. The consultant noted improvements could be made relating to residency and fellowship positions. A need was identified for support in developing clinical research programs as well as providing incentives to encourage and reward faculty. The consultant concluded the merger of the Department of Family Medicine and the Department of Community Medicine was not unreasonable based on comparable departments in other medical schools although it resulted in unnecessary acrimony that far offset the financial savings offered as a rationale for this merger.

Legislative Issues

A number of areas are identified which are brought to the attention of public policy makers for informational purposes as well as areas which require consideration and possible action. The consultant recommends consideration be given for a regional model for the delivery of health care in rural and underserved areas. This differs from the traditional model of placing a family medicine physician in every community. The consultant also noted it was essential to establish an effective organizational and management structure for residency programs and offered a model in which the health care delivery system (i.e. a consortium of major hospitals) act as the primary sponsor of the program with SMHS as an affiliate.

We noted real property will be obtained without legislative approval due to a financing arrangement with the UND Alumni Foundation. While we noted appropriated funds are used to supplement research, we could not determine the extent to which this does occur. Due to the current accounting of general funds, we are unable to perform an analysis or identify information related to how general funds are being specifically expended. We also identified a lack of accurate and reliable information being readily available to ensure SMHS stays within their legislatively authorized full-time equivalent (FTE) amount.

Issues Related to State Law

Introduction

A goal of this performance audit was to answer the following question:

> "Has the School of Medicine and Health Sciences established an adequate system for monitoring operations?"

We determined the School of Medicine and Health Sciences (SMHS) has not established an adequate system for monitoring its operations. In this chapter, we identify concerns related to SMHS not complying with the legislative purpose and duties established for the school as well as other noncompliance issues related to state law. Additional areas of a lack of monitoring operations are discussed in Chapter 3.

To determine whether SMHS had established an adequate monitoring system, we:

- Reviewed applicable laws and policies;
- Reviewed support for selected expenditures and other financial areas;
- Reviewed applicable management controls;
- Reviewed strategic planning documents and performance data; and
- Interviewed selected staff.

Improving Issues with Legislative Intent

Based on a review of the purpose and duties established by state law for SMHS, we noted improvements were needed to ensure compliance. We also noted the mission statement of SMHS was not consistent with the purpose established in state law.

Complying with the Established Purpose and Duties of SMHS

In a comparison of the purpose and certain duties established by state law and the actions taken by SMHS, we noted the following:

- North Dakota Century Code (NDCC) Section 15-52-01 states the purpose of SMHS "must be to provide facilities for the coordination, improvement, expansion, and unification of health and welfare activities of the state and its agencies and its political subdivisions and private medical practitioners." While SMHS has taken steps related to this section of law (such as entering into partnerships with the North Dakota Department of Health and establishing the Center for Rural Health), we concluded SMHS may not fully coordinate, improve, expand, and unify the health and welfare activities of the state. The purpose established in state law has remained unchanged since 1945. The consultants hired to assist with this performance audit stated this purpose does not appear to be consistent with other medical schools across the country.
- NDCC Section 15-52-15 requires the university "to compile a list of cities, towns, and other municipalities in this state without a qualified physician or dentist or with an insufficient number of qualified physicians or dentists, and to endeavor to supply physicians or dentists to such cities, towns, and other municipalities." While SMHS has a vacancy list identifying where job openings are located in the state, there is not a list of cities and towns without a qualified

The purpose and certain duties established by state law are not accomplished by SMHS.

physician or dentist. SMHS has compiled maps identifying shortages for certain fields (such as primary care health professionals). However, such maps are compiled based on guidelines not established by SMHS. SMHS has not established criteria for determining what an "insufficient" number of qualified physicians is and uses guidelines established by the federal government and the state Department of Health. Criteria for determining an 'insufficient' number is essential for determining the extent to which SMHS is endeavoring to supply physicians in these cities and towns. SMHS has established certain programs in an effort to supply physicians to rural locations. For example, all medical students complete a minimum of four weeks during their last two years in a rural location and the Rural Opportunities in Medical Education (ROME) program was initiated in 1998 to have self-selected junior students spend seven months in rural communities. However, the Dean of SMHS noted to us there was an unrealistic expectation some people have regarding a doctor in every community. Until criteria is established for "insufficient," it is difficult to determine whether the Dean's interpretation is consistent with legislative intent.

- NDCC Section 15-52-29 authorizes and directs SMHS "to provide or encourage means for providing for the training of such psychiatrists and other psychiatric personnel as may be necessary to properly staff state institutions and agencies providing services in the field of mental health." This requirement has remained unchanged since 1957. SMHS does not identify the psychiatric need or appropriate staff required at state institutions and agencies providing services in the field of mental health.

While certain laws have not been modified in a significant number of years and may be in need of review, SMHS has not taken appropriate action to comply with legislative intent or initiate changes to state law. As a result, SMHS may be using appropriated funds for purposes other than those which have been legislatively mandated.

Recommendation 1-1

We recommend the School of Medicine and Health Sciences comply with state laws regarding the purpose and duties of the medical school or take appropriate action to modify state laws.

Management's Response

Agree with the recommendation. The SMHS endeavors to comply with state law, but believes that NDCC Chapter 15-52 needs to be modified, as it is outdated and is in need of being rewritten. The SMHS will petition the Medical Center Advisory Council and the SBHE for direction and assistance in transmitting a petition to the State legislature to achieve this goal.

It should be noted that the Center for Rural Health maintains an active database of health workforce shortages that is conducted and updated three to four times per year. The vacancy list identifies the cities, towns and areas that self-report as having vacancies for not only physicians, but also nurses, laboratory technicians, mental health providers, physical

therapists, occupational therapists, and others. These reports are available on the Center for Rural Health Website.

The SMHS, through its Center for Rural Health (CRH), does use two established criteria for determining physician capacity and need. The first criterion is set forth by the federal government's Office of Shortage Designation and is the methodology that the CRH follows for designating shortages of physicians, dentists, and mental health providers. The second is the criterion followed to determine insufficient capacity as established in the State's loan repayment programs for physicians and dentists, which is more lenient than the federal definition.

To avoid confusion as to which standard for shortage is being used, the SMHS will establish and use a single criterion when reporting workforce shortage data.

Improving the Mission Statement

The mission statement of SMHS states:

> "The mission of the University of North Dakota School of Medicine and Health Sciences is to educate and prepare North Dakota residents as physicians, medical scientists and other health professionals for service to the people of North Dakota and the nation, and to advance medical and biomedical knowledge through research."

The mission of SMHS is not consistent with the purpose established in state law.

The mission statement is not consistent with the purpose of SMHS established with NDCC Section 15-52-01. As a result, resources used in accomplishing the mission of SMHS may not be in accordance with legislative intent. For example, we noted certain instances in which appropriated funds were supplementing research. We could not determine how often this was occurring (this issue is further addressed in Chapter 4, section entitled *Supplementing Research*). According to SMHS, the mission statement was last modified in 1996. Necessary changes to the mission statement should not occur until the previous recommendation regarding the legislative intent of the medical school has been addressed.

Recommendation 1-2

We recommend the School of Medicine and Health Sciences ensure their mission statement is consistent with legislative intent established in state law.

Management's Response

Agree with the recommendation.

Disagree with the narrative, as NDCC Section 15-52-01 specifies certain 'purpose(s)' of the state medical center. The SMHS does not agree that such specified 'purpose(s)' constitute a mission statement for the SMHS. Accordingly, to ensure that the mission statement of the SMHS is consistent with state law, we will ask the Medical Center Advisory Council and the SBHE for direction and assistance in petitioning the State legislature to rewrite NDCC Section 15-52-01.

State Auditor's Concluding Remarks

SMHS states it does not agree the purpose statement within state law constitutes a mission statement. We never say it does. We identify an inconsistency with the purpose established by state law and what SMHS believes its purpose is. Consistency should exist between what state law says the purpose of the school is and what SMHS believes the purpose is.

Ensuring Compliance with State Law

Through a review of information and discussions with representatives, we concluded improvements were needed to ensure SMHS and the Medical Center Advisory Council were in compliance with state law requirements. We noted SMHS has no process for monitoring compliance with state law requirements.

Making Changes with the Medical Center Loan Fund

North Dakota Century Code (NDCC) Chapter 15-52 establishes a Medical Center Loan Fund. The purpose of this fund is to make it possible for all qualified students attending the medical school to complete their education in medicine. By state law, the loan amount may not exceed $6,000 each year with an interest rate not to exceed 6%. In review of information regarding the loan fund, we noted:

- The $6,000 maximum loan amount is low. The loan amount covers approximately 29% of the in-state tuition amount. When the loan amount was last increased, the loan was then covering approximately 39% of tuition compared to 30% prior to the increase.
- Interest currently charged is 6.8% which exceeds the maximum amount established in state law.
- The loan fund is being operated as a revolving loan fund but there is no specific authority within state law to operate a revolving loan fund. While NDCC Section 15-52-26 provides up to $100,000 a year of mill levy revenue for loans, it appears no such revenue has been used for a number of years and proceeds of loans are used to operate the loan fund. At the end of fiscal year 2007, the fund had cash of approximately $650,000 and loan receivables of over $1.8 million.

Changes need to be made related to the maximum loan amount, interest charged, and how the fund is operated.

Recommendation 1-3

We recommend the School of Medicine and Health Sciences, in conjunction with the Medical Center Advisory Council, make improvements with the Medical Center Loan Fund. At a minimum, the School should:

a) Take appropriate action to increase the maximum loan amount;
b) Ensure the interest rate charged does not exceed the maximum rate established by state law; and
c) Ensure proper authority exists to operate a permanent revolving loan fund or take appropriate steps to comply with state law.

Management's Response

Agree with the recommendation. Should the SMHS become aware of a circumstance where the Medical Center Advisory Council is considering an action that appears to be in conflict with relevant state law, it will bring this concern to the attention of the Medical Center Advisory Council or other appropriate body.

The loan fund has been operated as a revolving fund since established in 1957. The SMHS will bring the other concerns of the State Auditor regarding the loan program to the attention of the Medical Center Advisory Council and/or State Board of Higher Education as appropriate.

Establishing a Formal Process for Monitoring Compliance

In determining whether SMHS was in compliance with certain requirements within state law, we noted a number of noncompliance issues and there was no process for monitoring compliance. We also noted a number of state laws have not been modified in a significant number of years. As a result, the current functions, activities, and accomplishments may not be consistent with legislative intent.

Recommendation 1-4

We recommend the School of Medicine and Health Sciences establish a formal process to ensure compliance with state laws. This process should include a periodic review to ensure laws are not outdated, and a plan to take appropriate action to update laws if necessary.

Management's Response

Agree with the recommendation for the SMHS, in coordination with the SBHE, to establish a formal process to periodically review state laws.

Improving Advisory Council Compliance

NDCC Chapter 15-52 establishes a Medical Center Advisory Council comprised of 14 members including legislators, members representing various state departments, and members representing health and medical associations. In a comparison of the requirements established in state law and the actions taken by the Advisory Council, we noted the following:

The Advisory Council duties and responsibilities established in state law are not accomplished.

- According to NDCC Section 15-52-03, the Advisory Council is "established to advise, consult, and make recommendations to the university administration, and to the several agencies represented on the council concerning the program of the North Dakota state medical center, the adaptation of the medical center to the needs of the state and to the requirements and facilities of the several agencies involved, and the use of the North Dakota state medical center and its facilities by the various institutions and agencies of the state and its political subdivisions." In a review of meeting minutes and discussions with representatives, we noted the Advisory Council does receive a large amount of information regarding SMHS and does discuss such information. However, we noted the Advisory Council does not adequately advise or make recommendations.
- NDCC Section 15-52-03 requires the Advisory Council to meet not less than twice each year. We noted only one meeting was held in calendar year 2005.
- NDCC Section 15-52-04 states the Advisory Council "shall study, consider, and formulate plans for facilitating and implementing, through the North Dakota state medical center, a unified program for the improvement and maintenance of the health of the people of the state in all of its phases. The study must include specifically ways and means of bringing about the complete training of adequate numbers of qualified physicians and surgeons for the people of the

state, both in the general practice of medicine and surgery and the field of public health, of allied health professionals, and all other personnel concerned with the improvement and preservation of the health of the people of this state." Plans have not been formally developed by the Advisory Council. Also, a determination as to the "adequate numbers of qualified physicians and surgeons" has not been established. As a result, steps towards a unified program for the improvement and maintenance of the health of the people of the state have been limited.

The number of times and amount of time the Advisory Council meets limits the ability to comply with the responsibilities assigned by state law. For example, the Advisory Council met twice in 2006 for less than three hours each time. It appears the Advisory Council is not adequately informed of its responsibilities (SMHS is the Executive Secretary of this council). While we did note certain changes being made by the Advisory Council in more recent meetings, additional steps will need to be taken to ensure compliance.

Recommendation 1-5

We recommend the Medical Center Advisory Council comply with requirements within North Dakota Century Code Chapter 15-52 and, at a minimum:

a) Advise, consult, and make recommendations related to the School of Medicine and Health Sciences;
b) Meet at least the number of times required by state law; and
c) Study, consider, and formulate plans for facilitating and implementing, through the School of Medicine and Health Sciences, a unified program for the improvement and maintenance of the health of the people of the state or take appropriate action to modify the state law.

Medical Center Advisory Council's Response

Agree with the recommendations of the performance audit.

Actions pertaining to part a) and b) of the recommendation: Over the past year and one-half, the Medical Center Advisory Council has revised the structure of its meetings to provide greater oversight and advising to the School of Medicine and Health Sciences. Additionally, the Council has implemented a structure under which subcommittees are assigned to complete in-depth study and recommendations for the Council on an ongoing basis. The Council will continue to implement these processes in such a way as to provide all needed consultation related to the SMHS, meeting at a minimum the number of times required by NDCC Chapter15-52.

Actions pertaining to part c): In the long period since this statute was adopted, various state and other agencies have become involved in programs/plans for the improvement and maintenance of health for North Dakotans. The first step to address this recommendation will be to assess the scope and adequacy of current programs. Following this, the Council will need to determine how best to unify efforts into a single

program under the MCAC, or to take action to modify the state law if this function can better be accomplished under another agency.

Chapter 2

Consultant's Findings

Introduction

We selected a consultant, DJW Associates, to assist us with certain aspects of this performance audit. DJW was required to review the following three areas and to offer recommendations for improvement if applicable:

- Educational training related to primary care with an emphasis on family medicine;
- Research efforts and research programs; and
- Merger of the Department of Family Medicine and Department of Community Medicine.

The consultant identified the School of Medicine and Health Sciences (SMHS) has a tradition of educating and training primary care physicians who deliver healthcare in the state. The consultant noted improvements could be made relating to residency and fellowship positions. DJW identified a need for support in developing clinical research programs as well as providing incentives to encourage and reward faculty. DJW concluded the merger of the Department of Family Medicine and the Department of Community Medicine was not unreasonable based on comparable departments in other medical schools although it resulted in unnecessary acrimony that far offset the financial savings offered as a rationale for this merger. DJW provided a timeline from 1999 to July 2006 related to certain events occurring at SMHS (Appendix B). DJW's observations and conclusions regarding the educational curriculum for medical students can be found in Appendix C.

Making Changes with Residency Programs

Upon completion of medical school, graduating students are "matched" to a residency program. "Match Day" is the culmination of a process that begins in the fall when fourth-year medical students start applying to residency training programs through a national computer system. Students are invited to interview at the discretion of each program. The National Resident Matching Program (NRMP) has strict rules regarding communication between students and residency programs. No one, for example, can be "guaranteed" a position in a particular program. Students electronically rank the programs in their order of preference and residency program directors across the country do the same. The "Match" refers to the computerized process by which the students' and the program directors' rank lists are compared resulting in the selection of students for residency positions. DJW concluded a need exists for developing additional residency positions within the state.

Residency Programs Identified

Within the state, SMHS operates six residency programs. The location of these programs, as well as the number of residency positions available, are identified in Table 1 on the following page.

Table 1 SMHS Residency Programs		
Residency Program	Location	Approved Positions
Family Medicine	Bismarck	15
Family Medicine	Minot	15
Internal Medicine	Fargo	25
Psychiatry	Fargo	16
Surgery/Surgery-Preliminary	Fargo	12
Transitional Year	Fargo	8

As noted in Chapter 3 (section entitled *Developing Additional Incentives*), there has been a decline in the number of students graduating from SMHS who are entering a SMHS residency program within the state.

Placement of SMHS Graduates

The following table provides data for 2003-2007 regarding student placements in the National Resident Matching Program (NRMP). "Primary Care" would include the three disciplines of family medicine, internal medicine, and pediatrics. The last columns in the table record the number of students electing to stay in residency training programs in North Dakota. Some students elect a one-year program as an initial part of their training and North Dakota offers a total of 10 such positions on an annual basis. Students included in the "North Dakota Initial" column elected to stay for at least one year. Those students continuing their residency training in North Dakota beyond the first year are tabulated in the "North Dakota Net" column. For example, in 2007, 10 students elected to stay in North Dakota for their first year of residency training but only 5 will stay on past this first year to continue their training within the state. The "% U.S." column is the national average for primary care (only includes family medicine, internal medicine, and pediatrics).

While SMHS sends a greater percentage of its graduates into primary care specialties than the national average, there is a decline in this percentage. The number of graduates staying in the state is relatively low.

Table 2 Residency Placements[1]						
Year	SMHS Graduates Selecting Primary Care			North Dakota Initial		North Dakota Net
	#	%	% U.S.	#	%	#
2003	13	24.5	40.5	10	18.9	4-6
2004	20	37.0	39.8	11	20.4	6-8
2005	22	44.0	39.6	9	18.0	6
2006	23	43.4	38.9	11	20.8	9
2007	22	40.7	38.5	10	19.2	5

[1] Graduate data provided by SMHS and national statistics obtained from the National Resident Matching Program.

DJW notes SMHS is currently sending a greater percentage of its graduates into the primary care specialties than the national average (not all graduates would be selecting primary care residencies in the state). Although the declining rates are a source of some concern among internal and external constituencies with whom DJW spoke, DJW

notes the rates are the result of a combination of factors: (1) life-style choices by today's students; (2) dual-careers that cannot be accommodated in a rural setting; (3) increasing personal debt from both undergraduate and medical school training; and (4) perceived educational advantages for children of these students in urban settings.

Family Medicine Residency Programs

DJW notes management of the Centers for Family Medicine (formerly called Family Practice Centers) at all sites has been a continuing problem. A confluence of factors driven largely by financial pressures, strong personalities, and unrealistic assumptions that each of these centers deliver family practitioners only to rural North Dakota contribute to these on-going problems.

DJW's review of the two former SMHS family medicine residency programs and the two current SMHS family medicine residency programs follows:

Family Medicine Residency Program in Fargo

The rationale for closing the program in Fargo, as best DJW could determine, was based on three factors: (1) financial losses by the Community Health Clinic that housed the program and looked to SMHS to underwrite a deficit of $475,000; (2) marginal quality of the training program in comparison with programs in Grand Forks, Minot, and Bismarck; and (3) failure to train a significant number of family practitioners who would take up residence and serve rural areas of North Dakota. The initial decision to close this program was made by the former Chair of Family Medicine and was supported by the Dean of SMHS.

DJW examined each of the reasons for closing this program and noted the following:

1. While it is true the Fargo program was losing money, the Grand Forks, Minot and Bismarck programs have similar problems. DJW confirmed with the current residency program directors in Minot and Bismarck, as well as with the Associate Dean for Finance and Administration that the residency programs in Minot and Bismarck are experiencing financial difficulty.
2. DJW found nothing to suggest the Fargo program was marginal in quality in comparison with programs in Grand Forks, Minot and Bismarck. They suspect this impression may have been generated by the nature and outcome of the residency "match" process. Residency programs, particularly those in Family Medicine, experience difficulty in filling all of the new residency slots each year. Over the past five years, on average, DJW notes fewer than 1,000 medical students graduating nationwide have matched to programs in family medicine while there are approximately 2,700 entry-level residency positions offered in this field. Under these circumstances, it is not surprising residency positions, particularly those in less-populous states, go unfilled. It is more a reflection of the times than

DJW concluded the closure of the Fargo program was based on weak rationale and communication was incomplete.

a reflection of the quality of a program if slots are unfilled after "match day". Furthermore, these open positions are often filled subsequent to the "match day" with international medical graduates. DJW's discussions with the faculty in Grand Forks or Fargo did not suggest these individuals provided anything less than high quality care to their patients.

3. Although it is true the Fargo program provided the smallest percentage of physicians who located to small towns across the state, it is also true this particular model for health care delivery is dated, perhaps outdated. Regional networks of providers with tertiary care hospitals as the ultimate destinations may provide patients with more confidence in the quality of their health care and provide relief from the "24/7 schedule" and burnout of the rural physician. Even if this program provided relatively few physicians in remote locations, it provided physicians needed by the Meritcare and Dakota systems. And, perhaps most critically, these primary care practitioners within these systems provided much needed medical care for North Dakota residents, including those from remote locations who made use of these systems.

DJW concluded the rationale for the closing of the Fargo program was weak and communication among all parties affected by this change was incomplete. The subsequent rancor among many influential individuals, despite the fact this decision was made some years ago, threatens continued progress at SMHS and undermines what DJW recommends should occur: (1) a new model for residency training that addresses the continued indebtedness of all the residency programs; and (2) a new model for the delivery of health care in remote regions of the state.

Family Medicine Residency Program in Grand Forks

In February 2004, a majority of the faculty in the Grand Forks Department of Family Medicine submitted their resignation over a disagreement with the administration of the medical school over the management of the Center for Family Medicine and the roles and responsibilities of those faculty members. This resulted in the destabilization of the residency program. After a tumultuous year in which the school and a private health care system provider in Grand Forks attempted to sustain the residency program under a joint operating agreement, both the medical school and the private provider agreed to transfer the operational, financial, and leadership responsibilities for the residency program to the private provider as of April 4, 2005. At the time of the transfer of the program from SMHS, the Center's deficit was approximately $750,000 according to the Associate Dean for Administration and Finance. This debt is being recovered through the lease payments by the family medicine group for clinical practice space in the University Health Service Building.

At the present time, the residency program is sponsored by the private health care provider with an affiliation with the medical school. In practice, the residency program operates independently of the medical

The Grand Forks program was transferred to a private health care provider which could be considered as an option for the remaining two programs.

school. This model of the management of the Center for Family Medicine by the hospital affords certain advantages. There is better integration of the residency program with the hospital than in the past resulting in economies of scale and the use of a single, electronic medical record. Since the residency program is no longer in competition with the hospital for patients, the hospital worked with the program to achieve an increase in the patient load. Further, the private provider is the entity receiving Medicare reimbursement for residency training and is now directly responsible for the salaries of the residents and the teaching staff.

While this transition was not accomplished under ideal circumstances, the outcome is a positive one. This model could be exported to the remaining Centers for Family Medicine with additional involvement of SMHS in providing the educational program (more than is currently provided with Grand Forks). At the very least, the teaching staff should have faculty appointments and participate in teaching third and fourth-year students in addition to residents. As noted in Chapter 4, the direct operational and financial involvement of other health systems in residency programs could lead to increased interest in pursuing funding for new residency programs.

Family Medicine Residency Program in Bismarck

The Bismarck program is in debt.

Based on interviews conducted by DJW, the Bismarck Center for Family Medicine needs to relocate. Although DJW did not conduct an on-site visit, we note the center is housed in a location difficult to access. SMHS noted there is inadequate office and conference room space and the condition of existing space is deficient. The two local hospitals have not remitted funds to the medical school from their Direct Medical Education (DME) and Indirect Medical Education (IME) Medicare reimbursements. The Centers for Medicare and Medicaid Services is challenging the hospital reimbursements and a final decision has not been made. Although these funds are in arrears, the Center budget records them as revenue, according to the Director. The Center was in debt at the end of the last fiscal year due to inefficient practice plan management. The Director has introduced better billing procedures than in the past, increased advertising and instituted cost-cutting measures and anticipates an increase in revenue by the end of the current fiscal year.

A request to provide a new facility for this program was not approved by the Legislature. SMHS does have approval to construct, remodel, or purchase a building for the Center but no funds were appropriated by the Legislature for this. It appears this decision derives, at least in part, from the Dean's decision to construct a new facility in Minot rather than accept remodeled space for the program in a local Minot hospital. DJW did not assess this particular decision, but did conclude that only an absence of open communication could lead to an impasse where the needs of one facility effect the decision made with respect to another.

Family Medicine Residency Program in Minot

The Minot Center for Family Medicine is in a new building, but the Center is burdened with high fixed costs and high faculty turnover. Most recently, two very productive faculty members, one in obstetrics and gynecology and the other in family medicine, left to practice at the local hospital in Minot. According to the Director, the budget for the Center was adequate until last year when the Center was in deficit. Additional losses are predicted for the current year. The local hospital provides funds for the residency program from their DME and IME Medicare reimbursements. The hospital would like to reduce this payment from $1 million to $800,000, further exacerbating the financial problems within the Center. There are plans, however, to restructure the budget for this Center to address the shortfall, but these plans are dependent on increased funding from SMHS. Other plans to increase revenues include making the pharmacy in the Center more profitable than the past and expanding profit-generating services by hiring two mid-level practitioners and one additional patient care physician.

The Minot program is burdened with high fixed costs and faculty turnover.

Financial Support for Family Medicine Residency Programs

DJW notes the financial support for the Centers for Family Medicine is quite complicated with funding provided from the medical school, grant support, hospital revenues, and patient reimbursement. Since 2001, SMHS has provided additional appropriated funds and funds from local sources of approximately $2.5 million according to the Associate Dean for Finance and Administration. This would include funding for start-up costs and new equipment at the Grand Forks Center, amounts to cover operating deficits, and to support the building payments at the Minot Center.

Net equity statements for each of the centers for 2004 through 2007 reveal deficits for most years. At the time of transfer to the private health care provider, the center in Grand Forks carried a deficit of $743,086. The center in Bismarck had a negative net equity of $727,850 in June 2006. Despite significant increases in medical school support noted above, the deficit was $548,316 as of March 31, 2007. For the Minot center, the negative net equity in June 2006 was $731,384 and only decreased to $677,132 as of March 31, 2007. This continuing deficit, despite increased medical school support, is related to the loss of patient care revenues.

As of the end of March 2007, the Bismarck program had net equity deficit of approximately $550,000 and the Minot program had a deficit of approximately $680,000.

Although the Centers for Family Medicine provide excellent services to the communities, they do not represent good business investments for the medical school. Based on current revenues and projections, their long-term financial viability is doubtful. The maintenance of these centers will require careful management and most likely additional external support.

Increasing Number of Residency Positions

DJW notes a relatively constant and small percentage of students graduating from SMHS remain in North Dakota to pursue residency training. These figures may well reflect the limited opportunities for residency training in the state. Further, since a large percentage of physicians practice within a 200 mile radius of the site where they complete their residency training, these figures also have some correlation with the number of physicians practicing in North Dakota.

At the present time, DJW concludes there are not enough first-year resident physician positions available in state to accommodate the number of graduates from SMHS. In addition, 10 of the first-year positions are only one-year positions. Thus only 30 positions are available each year for individuals desiring to remain in North Dakota to complete their residency training. Over one-half of those positions are in family medicine, a specialty of declining interest among US medical school graduates.

DJW concludes there are not enough first-year residency physician positions available in the state.

North Dakota ranks 42nd among all states for the number of physicians in residencies and fellowships accredited by the Accreditation Council for Graduate Medical Education (ACGME) with 17.5 per 100,000 population compared to the national average of 34.3. Another measure of the impact of the number of accredited residencies and fellowships available in-state is the percentage of active physicians in-state who completed their training in-state. North Dakota ranks 41st in this measure with 11.3% compared to the national average of 44.7%. Despite these figures regarding residency and fellowship training, North Dakota ranks 27th in the percentage of active physicians in state that attended medical school in state at 25.5% (national average is 29.6%). This data suggests while graduates of SMHS are leaving the state to seek residency training, they are returning to practice. However, the greatest draw in retaining students to practice within the state remains residency and fellowship training.

Data reported by the Center for Rural Health noted 81% of the state's 53 counties are designated as federal primary care health professional shortage areas. In 2003-2004, 23 counties had fewer primary care physicians than the national average and 10 counties had no local physicians. Two-thirds of the family practitioners practice in four cities within the state: Fargo, Grand Forks, Bismarck, and Minot.

In order to increase the number of physicians practicing in-state, DJW notes consideration should be given to increasing the number of residency and fellowship positions. This is a particularly good time to be considering such an option. On February 14 and 15, 2007, legislation was introduced in both the U.S. Senate and the U.S. House of Representatives to increase the number of residency positions for which Medicare payments will be made to teaching hospitals in states with a shortage of residents. The "Resident Physician Shortage Reduction Act," S. 588/H.R. 1093 would allow teaching hospitals in states that have ratios of resident physician to 100,000 population below the national

median to be eligible to increase their "resident caps" (i.e., the number of residency positions). Under this new legislation, North Dakota would be eligible to receive additional resident slots. Restrictions on the size of the increase have been proposed, but approximately 1,200 additional positions would be made available nationwide.

Increasing the number of residency positions in the state will require careful planning and should be made with caution.

Increasing the number of residency and fellowship positions in North Dakota will require careful planning by a consortium of state agencies, community hospitals, the medical school, and third parties interested in health care delivery. Residency and fellowship programs must meet standards for accreditation. These criteria are established by the Residency Review Committees of the ACGME for all specialties and subspecialties. Some additional training in specialized fields is not under the jurisdiction of the ACGME but must comply with standards established by certifying boards. Residency programs in family medicine, obstetrics and gynecology, and pathology in Fargo have been closed for various reasons. Based on this history, decisions regarding the creation of new programs must be made with caution. DJW cautions against an immediate re-opening of the Family Medicine Residency Program in Fargo unless a careful study supports such a decision.

A preliminary list of new training programs has been developed as a result of discussions with various program directors. These include an additional internal medicine residency, pathology residency, obstetrics fellowship in family medicine, and a sports medicine fellowship in family medicine. Consideration for reestablishing the family medicine residency in Fargo must take into account the declining interest in family medicine among current medical school graduates. This year there were 100 fewer positions nationally available in family medicine residency programs than in 2006 and more than 500 fewer than in 2000. Despite decreasing availability, only 42.1% of positions were filled by US medical school seniors and only 88.3% of all positions were filled. These are the lowest percentages for all of the primary care residencies. The three existing programs in family medicine in North Dakota currently yield 15-16 graduates a year. In 2005, there were only 10 family practice vacancies in the state.

In conclusion, DJW states the medical school should investigate increasing the number of residency and fellowship positions supported by Medicare Direct Medical Education (DME) and Indirect Medical Education (IME) including the potential re-creation of the Family Medicine Residency Program in Fargo. The Medicare DME payment compensates teaching hospitals for some of the costs directly related to the graduate training of physicians such as stipends and fringe benefits of residents, salaries and fringe benefits of faculty who supervise the residents, other direct costs and allocated institutional overhead costs, such as maintenance and electricity. The IME payments are made in recognition of the differences in operating costs between teaching and non-teaching hospitals in which the Medicare program includes a special payment adjustment in its prospective payment system. Any plans to

increase residency or fellowship positions should be carefully reviewed regarding Residency Review Committee requirements in order to assure compliance with standards for accreditation.

Recommendation 2-1

DJW recommends the School of Medicine and Health Sciences investigate increasing the number of residency and fellowship positions supported by Medicare Direct Medical Education (DME) and Indirect Medical Education (IME) and carefully review any plans to increase residency or fellowship positions with the Residency Review Committee requirements.

Management's Response

Agree with the recommendation. The SMHS has considered this issue repeatedly over the years, and is reviewing the situation again at present. Potential adjustments in federal policy that are under consideration at this time may permit such an expansion of residency positions in the future for North Dakota.

Research Programs

DJW concluded the Dean of SMHS, the Associate Dean for Research and Program Development, and the chairs of the basic science departments have done an admirable job of recruiting talented faculty and assembling an environment supporting faculty research interests. DJW noted funding concerns with research which needed to be addressed. DJW also determined a need exists to provide encouragement and incentives to faculty.

Research Program Development

DJW notes the Dean of SMHS recognizes the faculty is the key to the development of the research initiatives and to the success of the teaching programs at the graduate and medical school levels. The research infrastructure, ranging across laboratories, the library, sophisticated instrumentation, and support facilities such as animal-care facilities is in place and functioning with a high degree of faculty satisfaction. The Dean and his associates, through their manifold efforts, have responded to challenges from the President of UND to expand the research enterprise, increase research and contract expenditures, and elevate the national stature of UND.

To accomplish the directive from the President of UND, DJW noted the Dean of SMHS combined some medical school departments into larger, more functional units than in the past, invested in the recruitment of faculty trained at the best institutions in the country, appointed talented chairs, developed the infrastructure to support basic research, and demanded research excellence be coupled to a continued commitment to teaching excellence. The Dean recognized the need for basic science faculty who possessed expertise across a range of disciplines and who could deliver the necessary elements of medical student education. Beyond this foundation, the Dean also recognized the need to focus in a limited number of interdisciplinary initiatives. The Dean, Associate Dean for Research and Program Development, and chairs selected four key areas for development: neurosciences, rural health, environmental

sciences, and infectious diseases. These areas reach across the boundaries of clinical and basic science departments and even into colleges outside the medical school. They are areas where extensive federal funding is available and where advances, in some cases, could lead to intellectual property that could be sold or commercialized.

Within the four interdisciplinary focus areas, DJW noted the neuroscience initiative and rural health program have developed a significant, national reputation. Within the last five years, SMHS has developed a national reputation for research in the area of neurosciences. DJW noted SMHS secured a $10.4 million grant from the Centers of Biomedical Research Excellence (COBRE) through the National Institutes of Health (NIH) in support of a center of biomedical research excellence in the pathophysiology of neurodegenerative diseases. DJW learned this grant was sufficiently successful in its first five-year award period and it was recently renewed. Its renewal, largely driven by the superior work done by the participating scientists, undoubtedly was assisted by the funding provided through an arrangement between the Dean and the President to return a significant portion of the indirect costs to SMHS. DJW also noted the Center for Rural Health and its leadership is an asset worthy of any major institution. The Center effectively leverages significant federal dollars for research, performs services for an array of sectors within the statewide health care community, and provides educational and training opportunities. DJW concluded the election of the Director to the Institute of Medicine, the most prestigious honor accorded a health care professional in the country, speaks directly to the caliber of the Director's efforts and the regard in which the Director is held at the national level.

DJW noted the neuroscience initiative and rural health program have developed a significant, national reputation.

In summary, with limited resources and a small but committed faculty, DJW noted the Dean and SMHS leadership have delivered to the University two remarkable accomplishments: a neuroscience program capable of attracting funds from one of the most competitive federal programs and a nationally renowned program in Rural Health led by a member of the Institute of Medicine. DJW is aware of institutions with far larger numbers of faculty and significantly greater extramural funding than SMHS that have not achieved both of these accomplishments.

The remaining two focus areas, environmental sciences and infectious diseases, have pockets of research strength and DJW notes it remains to be seen whether these areas will reach their full potential. Part of this will be dependent on the recruitment of key chairs in the coming year. The Dean of SMHS also suggested other areas of potential interest, such as obesity, cancer and prevention research (*i.e.*, drug, alcohol, and tobacco-cessation studies), may come forward as candidates for development in the future.

Research Program Assessments

DJW notes the metrics for evaluating a research enterprise typically involve an assessment of faculty quality and productivity, student and postdoctoral training, physical facilities, intellectual property development, and return on investment. The calculus needed to quantify these variables is not trivial, and the data is not readily available with which to compare individual universities, much less colleges of medicine within universities. In some cases, medical schools exist as stand-alone entities that limit interdisciplinary activity across college boundaries (*e.g.,* with engineering). In addition, some schools, like SMHS, have units that are found in traditional medical schools as well as units often found in separate colleges at other institutions. Some schools include faculty in departments like Pathology/Laboratory Medicine among the clinical departments; others like SMHS include them among the basic science departments. Finally, counting faculty full-time equivalents is often a problem. Absent a comprehensive public database, it is difficult to know if the number of faculty listed on a college's website corresponds to full-time equivalents or a head-count of part-time and full-time faculty. Further compounding this situation is the inability to secure accurate, up-to-date information: universities and federal agencies are often on different fiscal years.

SMHS research generated approximately $8.5 million in NIH funds in fiscal year 2005.

The lengthy explanation is offered to substantiate why the proxy for research excellence in higher education remains federal funding in general and NIH funding in particular for medical schools. DJW noted SMHS research generated $8.49 million in funds from NIH in fiscal year 2005. While this ranked SMHS 109 out of 123 medical schools (based on total NIH funding), DJW noted the size of SMHS is much smaller compared to its peers. DJW attempted to identify faculty numbers but was unable to verify whether faculty numbers correspond to full-time equivalents or head-counts. In review of such information, DJW did note it appeared SMHS generated a higher per faculty research amount than many other community based medical schools.

DJW noted a concern was raised by certain individuals regarding the research programs effect on the Family Medicine Residency Programs. DJW noted the data provided by SMHS identified appropriated funding increases to family and community medicine which exceed, on a percentage basis, the increases allocated by the legislature for SMHS.

Research Program Future Prospects

DJW notes NIH seeks to develop a national consortium that will transform how clinical and translational research is conducted in the country. This program, funded through the Clinical and Translational Science Awards (CTSA) will, as the NIH envisions this change, provide new treatments efficiently and quickly to patients. This new consortium will initially have twelve partners in academic health centers dispersed across the nation. An additional group of institutions, among them SMHS, received planning grants to help them prepare applications to join the consortium. DJW noted a group of committed faculty at SMHS, recognizing they had not engaged as fully in clinical research and

provided training opportunities for medical students and residents in this area, are now working to submit a grant application.

In the past, SMHS played a role in the development and commercialization of intellectual property. DJW learned a faculty member in the medical school was the founder of a company in 1985 in which the Center for Innovation assisted with the business plan. More recently, the Center for Innovation has worked with another faculty member to launch a company that plans to lease space in a technology park building soon to be constructed. DJW noted SMHS needs to do more in this area to contribute to the state's economic development. Incentives may be needed to encourage faculty to compete for Small Business Innovation Research (SBIR) or Small Business Technology Transfer (STTR) grants that will support translation of research discoveries from the laboratory to actual products. The Center for Innovation was among the first such centers in the nation when it was formed in 1984. The Center provides assistance to innovators, entrepreneurs, and researchers to launch new ventures, commercialize new technologies, and secure access to capital from private and public sources.

Building a research enterprise is expensive. Recognizing this expense, the Dean of SMHS negotiated with the President for the medical school to receive 80% of the indirect costs on grants and contracts above a base figure in support of the research enterprise. In fiscal year 2005, the annual F&A (*i.e*., indirect costs) from the medical school's grants and contracts was $2,621,012. The University received the base amount of $330,000, and the remaining $2,291,012 was split between the University (20% or $458,202) and the medical school (80% or $1,832,810). These funds provided the mechanism for dealing with startup costs, new equipment, infrastructure such as the cyclotron facility, renovations, and "bridge-funding" for investigators who are "between" grants. By making the medical school a partner in the sharing of these funds, DJW concluded the President prudently provided funding to the school from non-state resources that could be utilized to develop the research enterprise.

Efforts must be made to maintain SMHS's research and teaching distinction, serve the state's need for physicians, and look for new avenues to serve the state.

DJW learned a proposal is under consideration that would curtail this sharing of indirect costs and jeopardize the future research development at UNDSMHS. Under the new plan, the University and the medical school would each receive 50% of the funding above the base. This change will result, using the fiscal year 2005 figures, in a loss of $864,897 to the medical school. Coming at a time when federal funding at major agencies like NIH is "flat", a loss of this magnitude has engendered considerable concern within the leadership and the faculty. This loss may require the closing of research-related facilities and/or elimination of positions supporting the grant enterprise. DJW also noted the President of UND is leaving, the vacancy of the Vice President for Research at the university level, and pending retirements within SMHS

(including the Associate Dean for Research and Program Development) compound this problem.

In summary, DJW noted SMHS has built a remarkably successful research program with two focal areas that have national distinction. Efforts must be made, particularly during the leadership transitions described in the preceding paragraph, to preserve this research enterprise, maintain the medical school's teaching distinction, serve the state's needs for physicians, and look for new avenues, such as clinical research and economic development, to serve the state.

Recommendation 2-2

DJW recommends the School of Medicine and Health Sciences develop its clinical research programs for the school to be competitive for a Clinical and Translational Science Award (CTSA). This will require additional financial support.

Management's Response

Agree with the recommendation. The SMHS is a major partner in a Clinical and Translational Science Award (CTSA) grant application that is to be submitted to the National Institutes of Health in November, 2007. These grants are extremely competitive, but we believe that the UND submission will stand a reasonable likelihood of being funded.

Recommendation 2-3

DJW recommends the School of Medicine and Health Sciences provide additional incentives to encourage and reward faculty to commercialize intellectual property arising out of their research.

Management's Response

Agree with the recommendation. The relevant intellectual property policy (which can be accessed at http://www.und.edu/dept/ttc/ppund.html) for SMHS faculty is established by the University of North Dakota (i.e., not the SMHS), and is considered to be one of the more progressive in the country. The SMHS is one of UND's leaders in applications for patents involving intellectual property, and has just been awarded a $2.5M grant from the North Dakota Center of Excellence program for a research commercialization project. Nevertheless, the SMHS will work with the University of North Dakota to see what further steps might be taken to stimulate the commercialization process to an even greater extent.

Recommendation 2-4

DJW recommends the University of North Dakota continue the arrangement under which the School of Medicine and Health Sciences shares in 80% of the indirect cost pool above the fixed base of $330,000.

University of North Dakota's Response

Disagree with the recommendation. The President, the Budget Director, and the Dean have worked out an arrangement whereby the School of Medicine will continue to receive an extra measure of indirect cost return, with movement toward the rate that is actually existing in other colleges and schools of the University over the next several years. The Medical School's share of the indirect cost revenue will remain extraordinarily high and the University will continue to provide a subsidy that has clearly helped get the results that we all have wanted to get.

Merger of Family Medicine and Community Medicine

DJW notes community medicine as a specialty is built on the principles of public health and deals with medical concerns at the level of the community rather than the individual patient. The goals of the Department of Community Medicine had remained stable since its inception and included the need to enhance public health education in North Dakota and to address the problem of health care access in the state. Practitioners of community medicine consist of physicians, usually internists or family physicians, and basic scientists, epidemiologists, and public health experts.

The Department of Community Medicine at SMHS was established in 1968 when the medical school only delivered two years of instruction and awarded a Basic Science in Medicine degree. The founding chair of the department retired in 1999 and a new chair was appointed. By 2005-2006, the Department of Community Medicine was the smallest in the medical school with two part-time academic faculty members, one of whom devoted 30% effort and served as chair. There were two other part-time non-academic clinical faculty members who worked on a contracted basis and an additional non-physician educator.

A proposal to merge the Department of Community Medicine into the Department of Family Medicine at SMHS was approved by the North Dakota State Board of Higher Education (SBHE) on June 15, 2006 with an effective date of July 1, 2006. The medical school anticipated recouping approximately $150,000 in faculty salary and operating expenses as a result of the merger. This was to accrue through economies of scale and the elimination of the duplication of support services. The faculty members were to be transferred to the newly constituted Department of Family and Community Medicine, and the full-time administrative officer would be offered continuing employment within SMHS.

There was to be no decrease in the teaching and educational activities in community medicine as a result of this merger. Additional benefits anticipated from the merger included the potential for greater faculty collaboration, especially in the areas of training medical students and family medicine residents in preventive medicine and other public health practices. The level of emphasis of instruction in public health and community medicine, community health and social services, and health promotion and disease prevention were rated higher than national figures by graduating senior medical students for each of the past three years.

DJW noted events preceding the proposal to merge the departments suggest deconstruction of the department started well before the proposal to SBHE, decisions made with respect to the Center for Rural Health, funding from a Health Resources and Services Administration grant, and the Physician Assistant Program predestined a decision along these lines. The Center for Rural Health was established in 1980 as an independent center and maintained as such to the present time. The

Center was, however, geographically close to the Department of Community Medicine and maintained an affiliation, if not a direct relationship, with the Department of Community Medicine until such time as a new Dean for Rural Health and Director of the Center for Rural Health was recruited by the Dean of SMHS to direct the Center's activities. Aspects of the mission of the Center for Rural Health to identify and research rural health issues, analyze health policy, strengthen local capabilities, develop community-based alternatives, and advocate for rural concerns clearly overlapped with the goals of the Department of Community Medicine.

DJW noted the distribution of funds from a Health Resources and Services Administration grant for prevention with the Dean as the principal investigator was originally partitioned between community medicine and prevention research. The funding progressively shifted primarily to prevention based on the Dean's assessment of productivity and leadership in the two areas, a decision well within the prerogatives of the Dean as the principal investigator. Finally, the Physician Assistant program was redirected from the Department of Community Medicine to the Department of Family Medicine in February 2003 to resolve problems in management.

The merger of Family Medicine and Community Medicine is common among medical schools in the country.

DJW noted the model of having a combined department of family medicine and community medicine is common among medical schools in the country. There are 46 medical schools with combined departments and 68 schools with departments of family medicine or family practice. Eleven medical schools do not have departments of family medicine and only eight schools have freestanding departments of community medicine. One of the schools in this latter group does not have a Department of Family Medicine. Thus, only seven medical schools in the US maintain a Department of Family Medicine and a Department of Community Medicine as independent units.

DJW concludes the only demonstrable consequence of the merger has been the resignation of the former Chair of the Department of Community Medicine. In DJW's opinion, the decision to merge these two departments was less of an issue than the manner in which it was handled. The former Chair's long history with SMHS and the University merited some consideration as to his future status. Such recognition might have avoided the unfortunate ill-will and public discord this merger engendered and retained the services of the former Chair as a faculty member.

The Dean of SMHS might have considered the creation of an endowed chair in the Department of Internal Medicine with fund-raising among former students and with the endowment income as a supplement to the former Chair's current salary. Since the former Chair is an internist, this appointment is quite reasonable. Alternatively, the Dean might have considered appointing the former Chair as an Associate Dean for International Programs. Certainly, medical students, many of whom

have spent their entire lives in North Dakota, would benefit by an overseas experience. International programs are a particular interest of the former Chair, and such an appointment might have been an attractive capstone to his career. DJW did not discuss any of these options with the former Chair and do not know whether or not these would have been acceptable alternatives. These points are raised to illustrate the Dean's management style, more than the Dean's decision to merge these departments, may lie at the heart of the strained relationships between the Dean and some external constituencies.

Improving how Major Management Decisions are Made

DJW noted the management style of the Dean of SMHS is to be vested personally in all decisions without relying on formal, faculty-driven processes and without - at least in some circumstances - an appreciation for the political consequences of these decisions. This behavior may lie at the heart of the strained relationships between the Dean of SMHS and some external constituencies. As previously identified in this chapter of the report, DJW noted strained relationships as the result of the Dean's decision to close the Fargo Family Medicine Residency Program as well as the merger of the Department of Family Medicine and Department of Community Medicine.

DJW noted major management decisions within SMHS should begin with a formal, internal review process with key partners and an attempt to build a consensus to support the desired outcome. Appropriate consultation with external parties needs to be the hallmark of future decisions impacting communities across the state. DJW does note they were not retained to provide a performance analysis of the Dean of SMHS. To the extent the three subjects of this report involved decisions made by the Dean, DJW offered their observations.

Recommendation 2-5

DJW recommends the School of Medicine and Health Sciences develop a culture within the school in which major management decisions begin with a formal, internal review process with all key partners and an attempt to build a consensus to support the desired outcome.

Management's Response

Agree with the recommendation. However, a formal process presently exists for discussion of major issues. The Dean meets semi-monthly with the associate deans as a group and meets regularly with them on an individual basis. In addition, he meets with the department chairs and associate and assistant deans as a group on a bi-monthly basis. During these meetings, there is vigorous discussion. However, the internal review process will be examined and revised accordingly.

Further, there are a wide variety of faculty governance policy matters that are handled through formalized policies and procedures as outlined in the SMHS Faculty Handbook (available at http://smhs.med.und.nodak.edu/AIS/FacultyResources/Bylaws.pdf).

Reviewing how Financial Information is Tracked and Presented

DJW noted a concern related to the financial presentation of the operations of SMHS. DJW identified to us they had a difficult time in reviewing financial information provided by SMHS. In interviews conducted with SMHS representatives, concerns were noted by certain SMHS management regarding financial information provided to them regarding their program operations. Information provided to program chairs or directors should be in an understandable format to ensure informed decisions are being properly made. DJW noted the current financing model for the remaining Centers for Family Medicine appears to be unique to each center and needs reexamination in order to promote stability and support for the residency programs. Our survey of employees and discussions with external parties also identified such a review could alleviate certain concerns addressed regarding financial transactions.

Recommendation 2-6

DJW recommends the University of North Dakota undertake a financial review by an outside firm of all School of Medicine and Health Sciences programs to review how information is tracked, used, and presented to assist in providing appropriate information to the entire management team of the school and to ensure the financial viability of the school in comprehensive but understandable financial statements.

University of North Dakota's Response

Disagree with the recommendation. The Vice President for Finance and the Budget Director for UND are in frequent contact with the Associate Dean for Finance and Administration at the SMHS, and monitor the financial and other operations of the School. UND will work with the SMHS to optimize the way financial information is collected, tracked, and presented. No further financial review is required.

Chapter 3

Monitoring Operations

Introduction

Based on our review, we concluded the School of Medicine and Health Sciences (SMHS) has not established an adequate system for monitoring its operations. In addition to the issues noted in Chapter 1, we noted a number of areas of concern including a lack of adequate performance measures and benchmarks, changes needed with the organizational structure and reporting relationships, improvements with evaluating performance, and other issues. Significant improvements needed are included in this chapter. Improvements of less significance were communicated to SMHS management in a separate letter.

Improving the Measuring of Performance

In a review of the strategic plan established by SMHS and other documentation, we noted measurable benchmarks need to be established. In addition, improvements should be made in how performance is being measured.

Establishing Specific Performance Measures

The strategic plan established by SMHS contains a large amount of information. The process used by SMHS to develop the plan appears appropriate and the plan corresponds with the University of North Dakota's strategic plan. However, the plan contains very limited measurable performance goals or objectives. There are very limited benchmarks or other criteria established to compare SMHS's performance or outcomes. For example, SMHS has established a success indicator of "low staff turnover." There is no criteria or benchmark regarding what is considered "low." Other success indicators are also very generic and lack specific criteria. As a result, concluding on whether the school's performance is meeting or exceeding expectations is difficult. While SMHS identifies a number of statistics and information related to outcomes and its performance, they are unable to identify if such data is meeting or exceeding expectations.

The lack of benchmarks makes it difficult to conclude on whether SMHS's performance is meeting or exceeding expectations.

In August 2005, the Dean of SMHS noted to the State Board of Higher Education one of his goals is to make the Department of Family Medicine at UND one of the top ten in the country. While this goal appears reasonable, SMHS has no criteria to determine whether they are a top 10 school and did not include such a goal in their strategic plan.

Recommendation 3-1

We recommend the School of Medicine and Health Sciences establish specific performance measures for monitoring the effectiveness of the operations of the school. Appropriate benchmarks or other standards to measure the school's performance should be identified.

Management's Response

Agree with the recommendation. Specific performance measures will be identified and monitored.

Improving Reports Measuring Performance

Every year, each department within SMHS completes a report which is to measure their progress in achieving the goals established in the strategic plan. We determined these "Annual Reports" are not user friendly and do not adequately measure the strategic plan established for

SMHS. The reports are very lengthy documents (2 to 3½ inches thick), information such as goals are repeated year after year, some goals identified appear unattainable, and timelines do not exist for certain goals. We did not identify a document which measures the overall progress of the strategic plan established for SMHS.

Recommendation 3-2

We recommend the School of Medicine and Health Sciences make improvements to their "Annual Report" document to make it user friendly and provide for a reasonable means of measuring the performance of the school or establish a better tool to measure the school's performance.

Management's Response

Agree with the recommendation. Since the content, format, and metrics employed by the SMHS in its "Annual Report" is dictated by University of North Dakota and is a required document, this recommendation will be forwarded to the University of North Dakota administration. Nevertheless, the SMHS will endeavor to affect the changes and improvements suggested, to the extent permissible under University policies and procedures.

Improving Organizational Structure

In a review of the organizational charts for SMHS and in discussions with management, we noted changes are needed to make the organizational and reporting structure more efficient and effective. We noted employees were reporting to more than one individual and in one instance a department has not developed an organizational chart. In addition, we noted the Associate Dean for Student Affairs and Admissions has responsibilities related only to the medical school students of SMHS which is not reflected on the organizational chart.

The organizational chart identifies the Dean of SMHS is responsible to evaluate and supervise 30 employees. This is an unusually high number of individuals for the Dean to be responsible for and uses time which could be spent on other activities. With a span of control this large, one of two things may occur – (1) micromanaging (more time spent on areas which could be handled by other employees); or (2) inability to efficiently and effectively monitor all areas. In review of the consultant's information and our review of information, areas were identified in which the Dean needs to do a better job of involving people in decisions.

Recommendation 3-3

We recommend the School of Medicine and Health Sciences formally review the organizational structure and reporting relationships and make the appropriate changes to ensure the structure becomes more efficient and effective. At a minimum, changes should be made to:

a) Ensure employees are only reporting to one supervisor;
b) Establish an organizational chart for each department;
c) Ensure managers/supervisors are only responsible for a reasonable number of employees; and
d) Have the organizational chart reflect actual responsibilities of employees.

Management's Response

Agree with the recommendation. The Dean of the SMHS had previously recognized that the organization has grown sufficiently that he required additional senior administrative assistance to run the organization. Accordingly, following UND policies, he initiated a national search for an Executive Associate Dean (EAD). That search culminated in the hiring of an EAD, whose credentials include an M.D., M.B.A. and an M.P.H. The EAD has assumed some of the administrative responsibilities previously held by the Dean. The SMHS will follow the recommendation and update the organizational chart to reflect the reorganization that has occurred since the EAD was hired.

Making Improvements with Performance Evaluations

In a review of information related to performance evaluations, we noted improvements were needed. Monitoring of the Dean of SMHS requires improvement to ensure problem areas are adequately addressed. Changes are needed with the faculty evaluation process to ensure annual evaluations are performed, state law is complied with, and accurate and complete information is obtained. The evaluations of regular, full-time staff also require improvement to ensure evaluations are conducted within established timelines.

Improving the Monitoring of the Dean's Performance

The Dean of SMHS receives an annual evaluation from the President of UND. Most appear to be self-evaluations. We noted formal monitoring of the Dean requires improvement. Repetitive performance issues which should have been addressed do not appear to have been addressed.

In 2005, a survey was completed by UND's Office of Institutional Research. The survey was sent to various students, faculty, professional staff, administration/chairs, and alumni. A number of questions on the survey received negative rankings regarding the Dean. Examples include (responses of "N/A" were excluded from the results):

A survey conducted regarding the Dean's performance identified a number of areas requiring improvement.

- For the statement "Considers views contrary to his own," 59% of those expressing an opinion disagreed.
- For the statement "Communication style promotes open communication," 57% of those expressing an opinion disagreed.
- For the statement "Appropriately weighs the opinions of stakeholders," 61% of those expressing an opinion disagreed.

The poor survey results were not formally addressed in the subsequent evaluation of the Dean. The President of UND did note to us the issues in the survey were discussed with the Dean. However, no formal plan or additional monitoring appears to have taken place as a result of the survey results. One other Dean at UND had a similar survey conducted during our audit time period. The survey results identified significantly higher ratings compared to the results for the Dean of SMHS.

The hired consultant identified certain areas where the Dean's management style and/or lack of communication strained relationships or led to apparent problems. For example, the consultant stated the

Dean's management style is to be vested personally in all decisions without relying on formal, faculty-driven processes and without, in some circumstances, an appreciation for political consequences. The consultant also stated the Dean's management style lies at the heart of strained relationships between the Dean and some external constituencies.

Our office conducted an employee survey as part of this performance audit. We noted a number of responses related to the Dean and/or his management team were indicative of a need for improvement. Examples include:

- In response to the statement "When problem areas/concerns are brought to the attention of senior management, timely actions are taken to address the situation," 28% of those answering the question selected "Strongly Disagree" or "Disagree."
- In response to the statement "I am able to take issues to or can disagree with senior management without fear of consequences," 26% of those answering the question selected "Strongly Disagree" or "Disagree."
- In response to the statement "Senior management communicates sufficiently with employees," 26% of those answering the question selected "Strongly Disagree" or "Disagree."

Recommendation 3-4

We recommend the University of North Dakota ensure areas identified as requiring improvement are adequately addressed, documented, and monitored in the evaluation process of the Dean of the School of Medicine and Health Sciences.

University of North Dakota's Response

Agree with the recommendation. The most important measure of the effectiveness and performance of the Dean is the success of the SMHS, and by any criterion the School has enjoyed extraordinary success under his stewardship. This high opinion of the teaching and academic success of the SMHS is amply documented in the review by DJW as summarized in the Performance Audit Report, as well as the School's accrediting body (the Liaison Committee for Medical Education, LCME).

Part of the reason for the impressive success of the SMHS over the past decade has been that the Dean has not shied away from making tough or controversial decisions. It is not surprising that not every one has been happy with those decisions, or with the Dean. To some extent, that outcome is unavoidable. The President plans to develop a more formalized review process to assess senior management performance on a periodic basis. In this way, any recurrent performance issues or questions will be able to be addressed effectively.

State Auditor's Concluding Remarks

The University's response indicates the most important measure of the effectiveness and performance of the Dean is the success of SMHS. We did not identify formal criteria being established for specifically determining the success of SMHS. We are unsure if the University's criteria is strictly monetary based or if it even factors in the current health care issues in the state and what attempts, or lack thereof, SMHS is taking. We noted a number of areas in which the Dean's actions have resulted in a negative effect with the medical community, faculty, and other key stakeholders. The success SMHS has attained is possible without such problems and we believe could be increased if appropriate action is taken.

Improving the Faculty Evaluation Process

State Board of Higher Education (SBHE) and University of North Dakota (UND) policies require all faculty to receive an annual performance evaluation. SMHS has established a policy for evaluating faculty which establishes a schedule of evaluations to be performed dependent upon the faculty's status. For example, a tenured faculty member would receive an evaluation on their fourth year of tenure and then again every three years after that. This SMHS policy is in direct conflict with policies established by both SBHE and UND. SMHS followed their own policy for evaluating faculty and, as a result, the required annual evaluations were not performed (21 of 23 faculty we reviewed did not have annual evaluations).

SMHS established a policy regarding faculty evaluations which contradicted SBHE and UND requirements.

North Dakota Century Code Section 54-06-21 requires all documents addressing an employee's character or performance be signed by the employee prior to it being placed into their file. In a review of 23 faculty files, we noted 20 files contained documents which were not properly signed by the faculty member.

Periodically, a committee performs an evaluation of a faculty member. When this occurs, the faculty member prepares a packet of information for the committee including information related to or a synopsis of student survey results. This information should be provided to the committee from an independent source to ensure accurate and complete student survey results are being obtained.

Recommendation 3-5

We recommend the School of Medicine and Health Sciences modify their policy related to faculty reviews and evaluations and ensure it complies with State Board of Higher Education and the University of North Dakota policies.

Management's Response

Agree with the recommendation. The SMHS has recently promulgated a policy to require annual faculty reviews, using a process that is in compliance with SBHE, UND policies and state law.

Recommendation 3-6

We recommend the School of Medicine and Health Sciences make improvements with the faculty evaluation process. At a minimum, the school should:

a) Complete evaluations on an annual basis in order to comply with State Board of Higher Education and University of North Dakota policies;
b) Require signatures on all documents placed in personnel files to ensure compliance with state law; and
c) Ensure student survey results used in the evaluation process are obtained from an independent source.

Management's Response

Agree with the recommendation. The SMHS has recently promulgated a policy to require annual faculty reviews, using a process that is in compliance with SBHE, UND policies and state law.

Improving Evaluations of Regular Staff

Established timelines for completing evaluations are not always being met.

Timelines related to performance evaluations are established in various SBHE and UND policies and procedures. North Dakota University System human resource policies require probationary evaluations to be completed at the end of the initial six months of employment. SBHE policy requires all employees to have an annual written performance evaluation. UND's Human Resource Office requires all evaluations to be completed and turned into them by the 28th of February. In review of these policies regarding regular, full-time staff evaluations and a sample of employees, we noted the following:

- 1 of 7 applicable employees reviewed did not have a probationary evaluation completed within six months.
- 3 of 25 employees reviewed did not receive annual evaluations over the last three years.
- 15 of 25 employees reviewed did not have their evaluation completed and submitted to the Human Resource Office by February 28th within the last three years.

Recommendation 3-7

We recommend the School of Medicine and Health Sciences conduct regular, full-time staff employee evaluations within established timelines.

Management's Response

Agree with the recommendation. The SMHS Human Resource Manager and the UND Human Resource Office have historically worked very hard to achieve a 100% compliance goal with regard to timely submission of annual evaluations and will continue to do so in the future.

Ensuring Accurate Information is Provided

During our review of information, we identified areas in which information provided by SMHS appears to be misleading or inaccurate. Examples include:

- At the Budget Section meeting in October 2006, the minutes note the Dean of SMHS stated funding provided for education is not used for research. This statement can not be corroborated. The Legislature does not identify how appropriated funds are to be used by colleges

and universities (legislative intent statements can be added to specifically identify certain funding issues). In addressing this area, SMHS noted it does not provide state appropriation funding to faculty for their research programs. This does not appear to be accurate. Our tests of expenditures noted appropriated dollars were used to help purchase equipment as sufficient grant funds were not available. In addition, we noted certain instances in which SMHS employees' time spent on federal projects exceeded the amount of federal funds used to pay employees' salaries.

- At the Higher Education Committee meeting in August 2005, the minutes note the Dean of SMHS stated the financial status of both the Bismarck and Minot Centers for Family Medicine (CFM) was solid. The financial status of each center is below:
    - The net equity of the Minot CFM decreased over $500,000 from fiscal year 2004 to fiscal year 2005. While the center had nearly a $1 million equity surplus at the end of fiscal year 2002, the amount was approximately $99,000 at the end of fiscal year 2005.
    - The net equity of the Bismarck CFM decreased over $50,000 from fiscal year 2004 to fiscal year 2005. The ending equity was approximately a negative $100,000.

  SMHS noted the CFMs had lost money in fiscal year 2005 but going into 2006 they had hope for improved financial outcomes. This did not occur.
- In a letter dated August 9, 2005 to the Chancellor of the University System, the Dean of SMHS states another letter previously received by the Chancellor "inaccurately states that a recent article in the US News and World Report ranks SMHS as the eighth lowest in the nation in the percentage of students who choose primary care as their specialty. It alarms me that this interpretation is included in a letter which could be circulated more widely as it is simply inaccurate . . . ." The Dean made an error as the information in the letter to the Chancellor was, in fact, accurate.

Information provided by SMHS needs improvement.

- Annually U.S. News and World Report publishes a magazine on America's best graduate schools. In the 2006 edition, UND was ranked 3rd under Rural Health based on a survey of medical school deans and senior faculty. No criteria is established for this. The Dean noted: "This recognition reaffirms our role as a national leader in the education and training of physicians for rural practice. We are pleased to be viewed as a model for how medical education and practice can best be carried out in a rural, sparsely populated state." However, the Dean failed to note SMHS was not listed in the top 10 in the category of Family Medicine. According to SMHS, family medicine is the most important issue in primary care in the state. The 2007 and 2008 editions also did not have UND in the top 10 for Family Medicine based on the survey of medical school deans and senior faculty. UND was not listed in the top 11 and was 5th in the rural medicine category for the 2007 and 2008 editions, respectively (survey of medical school deans and senior faculty).

Recommendation 3-8 We recommend the School of Medicine and Health Sciences take appropriate steps to ensure the school provides accurate information.

Management's Response Agree with the recommendation. The SMHS makes a conscientious effort to provide accurate information. Some of the apparent confusion likely results from differing baseline assumptions and differing time periods of data collection, rather than any intent to be misleading or inaccurate. Any accusation that the School or its officers are intentionally untruthful or misleading will be strongly defended.

State Auditor's Concluding Remarks Management's response indicates there is apparent confusion that is causing us to note differences in what they have stated and what is accurate. This is another indication of SMHS providing inaccurate information. There are no differences in baseline assumptions or different time periods of data collected in the examples we cite in this report. We never accuse SMHS of being intentionally untruthful but note improvements are needed relating to the information it provides.

Improving Compliance with SBHE Motions

While "lease" payments were to be made with revenue generated from operations, we noted appropriated funds were used.

The minutes of the June 26, 2003 North Dakota State Board of Higher Education (SBHE) meeting identify a motion passed for the University of North Dakota to acquire real property for the construction of a Center for Family Medicine facility in Minot. The minutes state the University is authorized to "acquire real property through a lease agreement with the UND Alumni Foundation and permission to solicit approval for the same acquisition from the Budget Section. Acquisition of the property will be made through the terms of the lease, with rent payments made possible through revenue generated by operation of the clinic." SMHS made initial payments using revenue from the operation of the clinic. However, we identified over $76,000 of appropriated funds were expended on the principal and a portion of the interest payment made in December 2006. This financing arrangement to obtain real property is further addressed in Chapter 4 (section entitled *Obtaining Real Property Through a Financial Arrangement with Alumni Foundation*).

Recommendation 3-9 We recommend the School of Medicine and Health Sciences comply with motions passed by the State Board of Higher Education.

Management's Response Agree with the recommendation. All future lease payments will be made from Minot CFM local fund.

Making Improvements with Procurement

Based on a review of SMHS procurement practices, we noted improvements were needed to ensure compliance with established policies and procedures. We noted SMHS departments were inappropriately splitting invoices and we also identified a need for additional training. Contracts entered into by SMHS required improvement relating to stated terms and conditions.

Complying with Purchasing Policies and Procedures

In a review of a sample of expenditures, we noted SMHS was in noncompliance with State Board of Higher Education and University of North Dakota purchasing policies and procedures. As a result, resources may have been used in an inefficient manner. Examples include:

Improvements are needed to ensure compliance with established purchasing policies.

- SBHE policy requires all consulting or other contracted services estimated at less than $100,000 to be purchased by negotiation, telephone, or informal written quote or proposal. We noted SMHS did not receive informal quotes or proposals for 10 of 18 applicable expenditures.
- UND policy requires the Purchasing Office to be involved with purchases between $5,000 and $10,000. We noted SMHS did not properly include the Purchasing Office for 8 of 11 applicable expenditures.
- SBHE policy requires payments for services to be made only pursuant to a written contract. We noted SMHS did not have written agreements in place for 13 of 23 applicable expenditures (payments ranged from approximately $150 to $4,200).

Recommendation 3-10

We recommend the School of Medicine and Health Sciences comply with State Board of Higher Education and University of North Dakota purchasing policies and procedures.

Management's Response

Agree with the recommendation. All SMHS departments have been reminded to be aware of and to follow all UND purchasing policies. Effective July 1, 2007, UND implemented the auditor's recommendation of requiring written agreements or signed invoices for all payment for services.

Discontinue Splitting Invoices

In a review of a sample of 184 expenditures, we noted artificial fragmentation in 15 expenditures. For example, a department used three invoices ranging in amounts of $4,098 to $4,972 to purchase medical supplies from the same vendor (invoices were approved in a four day period). This avoided the use of the Purchasing Office of UND which is required by policy to be involved with purchases greater than $5,000.

Recommendation 3-11

We recommend the School of Medicine and Health Sciences discontinue splitting invoices and ensure the Purchasing Office of the University of North Dakota is appropriately used.

Management's Response

Agree with the recommendation. Most of the vouchers cited originated in one department. This practice has now been stopped, and all other SMHS departments have been reminded to follow proper purchasing policies.

Provide Training

Within SMHS, the procurement process is decentralized as departments initiate the procurement process. Due to the number of noncompliance

issues noted with purchasing policies and procedures, additional costs and personnel time are being expended.

Recommendation 3-12 We recommend the School of Medicine and Health Sciences ensure training is provided to employees on purchasing policies and procedures.

Management's Response Agree with the recommendation. All employees are encouraged to attend the on-going training that is available throughout the year through classes available at UND.

Improving Contract Language

During a review of selected contracts, we noted improvements were needed with contract language and terms. Using information identified in Attorney General Opinions as well as the Office of Attorney General's "Contract Drafting and Review Manual," we identified information which should typically be included in contracts. Our review identified SMHS was not signing contracts prior to work being performed (73% of applicable contracts), did not include a non appropriation clause in contracts which crossed bienniums (60% of applicable contracts), and was not including other contract language (insurability, liability, etc.) in all contracts.

Recommendation 3-13 We recommend the School of Medicine and Health Sciences make improvements relating to contract terms and conditions.

Management's Response Agree with the recommendation. Since the contract templates are provided by and/or issued by the UND Grants & Contracts Administration Office, they have been working with UND Legal Counsel to include the recommended improvements relating to contract terms and conditions.

Making Improvements with Moving Expenses

Moving expense reimbursement policies have been established by the State Board of Higher Education (SBHE) as well as the University of North Dakota (UND). These policies address areas regarding reimbursing moving expenses of newly hired employees. In a review of selected moving expenses, we noted policies were not followed and improvements with the offer of employment letters were needed.

Complying with Policies

In a review of selected moving expenses, we noted the following noncompliance issues:

Improvements are needed to ensure compliance with established moving policies.

- SBHE policy requires approval of the President or designee be obtained prior to offering the reimbursement of moving expenses as part of the employment contract. For one reimbursement (total of approximately $1,000) approval was provided by an employee who was not authorized. In two instances, approval was not obtained prior to the employment letter. For example, while the offer of employment letter was dated July 1, 2004, proper authorization was not obtained until January 2005 (total reimbursement of approximately $30,000).

- UND policy limits the cost of moving personal goods/furnishings to invoice cost, not to exceed 11,000 pounds. We noted one moving reimbursement paid the entire cost of an invoice identifying a weight of over 30,000 pounds.
- SBHE moving policies allow meal reimbursement at the per diem rate for employee travel. We noted reimbursements were made at a higher rate than the amount established in state law.
- UND policy requires the UND Purchasing Office to be contacted for available contracts and potential cost savings for moving expenses. We noted SMHS did not use the moving vendor the Purchasing Office had contracted with.

Recommendation 3-14

We recommend the School of Medicine and Health Sciences comply with moving expense policies and procedures.

Management's Response

Agree with the recommendation. A greater effort will also be made to comply with all moving policies and procedures of UND.

Improving Offer of Employment Letters

When a determination is made to pay the moving expenses of a newly hired employee, SMHS includes information in the offer of employment letter explaining the limits and procedures. We noted the letters do not address requirements established in both SBHE and UND policies. In addition, even when requirements were listed within the letter (such as a requirement to obtain three estimates), these were not followed. We also noted letters do not establish a reasonable number of moving days allowed. One moving reimbursement reviewed included seven nights lodging for a 1,520 mile move.

Recommendation 3-15

We recommend the School of Medicine and Health Sciences make improvements to the moving allowance terms and conditions included in the offer of employment letters. The school should, at a minimum:

a) List all moving restrictions and conditions;
b) Establish a reasonable number of moving days allowed; and
c) Ensure compliance with established parameters.

Management's Response

Agree with the recommendation. The policies and procedures of UND/SBHE regarding moving expenses will be incorporated into letter of offer, and a greater effort will be made to comply with all moving policies and procedures.

Making Changes with Monitoring

During a review of expenditures, adjustments, and transfers, we noted improvements were needed to ensure an adequate review of expenditures was being performed by SMHS prior to expenditures being processed. In addition, departments within SMHS are using "shadow systems" to monitor financial information rather than using the state's system.

Improving Monitoring of Financial Transactions

Within SMHS, departments incur expenses and submit documentation to the Accounting Services Office of SMHS. The information is reviewed and provided to UND's applicable department(s) for processing. In our review of expenditures, we noted a number of problem areas which an effective review process by SMHS could have identified and corrected prior to being submitted for processing.

Recommendation 3-16

We recommend the School of Medicine and Health Sciences effectively review support for expenditures prior to submitting such information for processing.

Management's Response

Agree with the recommendation. A greater effort will be made to review supporting documentation.

Improving Departments Monitoring

During our review and in discussions with representatives, we noted certain departments within SMHS were using additional financial software to track their budget and financial transactions. This information is already on the state's PeopleSoft system. However, the departments appear to use such "shadow systems" to track their activity because they believe PeopleSoft is not reliable and believe there are a number of downfalls with the system. SMHS noted if they didn't put information into another software program, it could be lost. The use of "shadow systems" creates a duplication of work and requires additional time of staff to reconcile information on a monthly basis.

Recommendation 3-17

We recommend the departments of the School of Medicine and Health Sciences make improvements with the processes used in monitoring their budget and financial transactions. At a minimum, the departments should receive training on PeopleSoft and all of its financial related features, functions, and capabilities in an attempt to discontinue using other financial software for monitoring budget and financial transactions.

Management's Response

Disagree with the recommendation. Although trained in its use, the SMHS and UND continue to experience problems with the PeopleSoft system. The system still cannot be relied upon to provide accurate, up-to-date, and/or complete information at this time. The SMHS continues to work with UND to seek improvements in the PeopleSoft system. Until such time as the existing problems with PeopleSoft are resolved, the SMHS will need to continue to utilize "shadow" systems in an effort to conscientiously discharge its fiduciary responsibilities.

State Auditor's Concluding Remarks

Management's response does not indicate a strong commitment to making PeopleSoft work and instead, is relying on duplicate processes. While the University System has encountered certain problems with PeopleSoft, UND implemented the system nearly three years ago which appears to be plenty of time to address problem areas. At a minimum, all efforts should be taken in an effort to discontinue using duplicate processes and attempt to fully utilize the system the state has attempted to implement.

Ensuring Employee Time Charged to Grants is Accurate

Federal funds would be at risk if employees' time is determined to be inaccurate or inappropriately charged to a grant.

Three times a year, Personal Activity Confirmation Reports (PACR) are generated by the University of North Dakota. These reports reflect an employee's time charged to federal grants. The employee is required to sign the report signifying the information is an accurate reflection of the time they spent on grants. In our review of selected PACR, we noted these forms were not being signed in a timely fashion. For example, one employee signed the report on September 28, 2006 for the time period of May 2005 through August 2005. Another employee signed the report on July 26, 2006 for the time period of May 2005 through August 2005. Due to the long delay, the accuracy of an employee's time spent on grant projects could be questionable. A number of employees working on grant projects are not completing timesheets or logging their time. Thus, it is unclear how employees can recall with accuracy how their time was spent a year prior. In limited discussions with employees, we noted concerns with employees just signing the reports without a thorough review or support for their time. If an employee's time was determined to be inaccurate, federal funds would be placed at risk.

Recommendation 3-18

We recommend the School of Medicine and Health Sciences process reports reflecting employees' time charged to federal grants in a more timely fashion. If these reports cannot be processed more timely, another mechanism (timesheets, log books, etc.) will need to be established.

Management's Response

Agree with the recommendation. UND has recognized that the timeliness of effort certification forms is an issue. Since the Personal Activity Confirmation (PAC) Reports are generated by the UND Grants & Contracts Administration (GCA) Office and distributed to the SMHS, the GCA Office is working towards a goal of distributing PAC Reports within 30 days after the last pay period covered by the certification period. Once the SMHS receives the PAC Reports from GCA, the school's goal is to receive the employees signed report within 30 days.

Making Improvements with Tuition

In a review of tuition rate information, we identified the resident, medicine tuition rate has increased approximately 63% in five years. While this is a significant increase, it should be noted the University of North Dakota's undergraduate and graduate tuition rates have increased approximately 74% over the same time period. In our review of SMHS tuition information, we noted a formal policy related to tuition waivers was needed and the nonresident tuition rates appeared low.

Establishing a Formal Policy

SMHS has established an Academic Achievement Waiver in which the top academic performing students in three classes have their tuition reduced. For the 2006-2007 academic year, two sophomores received a 50% waiver of their tuition, two sophomores received a 25% waiver, three juniors received a 50% waiver, and four seniors received a 50% waiver. SMHS noted the total amount of tuition waived was $102,100. While SBHE policy states institutions may adopt procedures for the

waiver of tuition, we noted formal policies have not been established by SMHS for the Academic Achievement Waiver.

Recommendation 3-19 We recommend the School of Medicine and Health Sciences establish a formal policy regarding Academic Achievement Waivers.

Management's Response Agree with the recommendation. The SMHS has a standard practice regarding this issue that has been followed consistently over the years. The SMHS concurs that this policy needs to be formally promulgated and adopted.

Reviewing Nonresident Tuition Rates

Starting with the 2006-2007 academic year, the nonresident, medicine tuition rate of SMHS was reduced by 25%. The new rate is now 1.85 times higher than the resident tuition rate compared to 2.67 times higher as it was in the previous five academic years. Both the University of North Dakota's undergraduate and graduate nonresident rates are 2.67 times higher than the resident rate. If no decrease would have occurred and the amount would have increased as in years past, SMHS may have been able to collect over $330,000 more in nonresident, medicine tuition in the 2006-2007 academic year.

Nonresident tuition rates appear low.

SMHS also has tuition rates established for Physical Therapy (PT) and Occupational Therapy (OT). The percentage of increase for the rates in these two programs has been relatively the same as increases for the medical tuition rates. However, the PT, nonresident tuition rate is 1.38 times higher than the resident rate. The OT, nonresident tuition rate is 1.4 times higher than the resident rate. If PT were to charge a nonresident rate which was 2.67 times higher than the resident rate (same rate as UND undergraduate and graduate), it may have been able to collect over $310,000 more in the 2006-2007 academic year.

Recommendation 3-20 We recommend the School of Medicine and Health Sciences formally review the nonresident tuition rates to make a determination as to whether the rates should be increased.

Management's Response Agree with the recommendation. The SMHS believes there is uncertainty as to the effect of an increase in tuition rates on overall revenue generation; raising prices may, in general, lead to either greater or lesser revenue. The SMHS has carefully studied the issue of non-resident tuition rates, and has arrived at the current rates after careful analysis and reflection. Much of our information is based on informal surveys of potential students (i.e., small focus groups). These informal surveys have consistently indicated that any substantive increase in tuition rates would result in fewer non-resident students enrolling at UND. Nevertheless, we concur with the recommendation to more formally study this issue, and we will do so.

Making Improvements in Personnel Areas

During our review of expenditures, payroll information, and the process followed for hiring employees, we noted improvements were needed with two personnel areas. SMHS should obtain formal verification of the employee/independent contractor status of certain workers. Changes are also needed with the direct hiring of employees (no competitive hiring process used).

Submitting Information to Department of Labor

Through a review of payments to individuals and medical facilities, we noted a concern related to the employee/independent contractor status of some workers. A number of legal and liability issues may arise if the employee/ independent contractor status is not adequately addressed. The two areas indentified include:

- SMHS has an Associate Dean, an Assistant Dean, and a Chairman who do not receive payments through payroll. These individuals, all doctors, are considered to be employees by SMHS (receive performance evaluations, listed on their web site) but the hospitals/clinics these doctors work for are paid by SMHS to help pay the salary of the doctors.
- SMHS contracts with both hospitals/clinics and individual doctors to be preceptors (doctors who monitor medical students or residents at hospitals and clinics). When individual doctors are contracted for this service, they are paid through the payroll system but the payments to hospitals/clinics are not processed through payroll. The preceptors under contracts with the hospitals/clinics are considered to be employees by SMHS.

A formal determination is needed of the status of certain employee/ independent contractor relationships.

The North Dakota Department of Labor is authorized to verify the independent contractor status of future and existing work relationships in the state. This process is voluntary and offered at no cost. An affirmative verification of the independent contractor status from the Department of Labor protects the entity from retroactive liability if another agency later determines that the verified relationship is, in their view, an employment relationship.

Recommendation 3-21

We recommend the School of Medicine and Health Sciences submit the necessary information to the state Department of Labor to obtain formal verification of the employee/independent contractor status of workers not being paid through payroll.

Management's Response

The University of North Dakota and SMHS agree in principle with the recommendation. The SMHS will review the status of its employee and independent contractors. Depending on the outcome of that review, the University may seek guidance from the Department of Labor. As a community-based medical school, the SMHS contracts with medical facilities to acquire services necessary in the provision of clinical teaching for medical student and medical resident education. This arrangement not only leverages the resources of the SMHS, but assists in the development of relationships with the external medical community. Contract terms specific to the arrangement are negotiated with each

medical facility. In those situations in which the medical facility requires that their physicians have 100% of the revenue generated by their work paid directly to their respective hospitals, payments for services are made directly to the medical facility.

State Auditor's Concluding Remarks

The fact UND and SMHS appear to be unwilling to go directly to the Department of Labor with these relationships is very concerning. The Department of Labor is the authorized entity within state government to determine the status of employee and independent contractor status, not UND or SMHS. Thus, a decision by UND or SMHS is meaningless. The unwillingness of UND and SMHS to provide information to the Department of Labor continues to raise a potential liability issue for the state which could be adequately addressed if they would just provide the necessary information to the Department of Labor. In our discussions with representatives of the Department of Labor, it was obvious to us information regarding the relationships needed to be provided for a documented decision to be made.

Discontinuing Hiring Employees Directly

In a review of 10 newly hired regular, full-time staff employees, we identified an employee was hired directly without a competitive hiring process. The individual was hired directly as they were named in a grant application and it has apparently been SMHS's practice to allow individuals to be hired without a competitive process if they are named in a grant application. Competitive hiring processes should be used to ensure legislative intent established in state law is complied with (such as veterans' preference). We noted another university requires direct appointment of an individual named in a grant to be done as a temporary appointment. SMHS hiring individuals directly requires another funding source be identified or a reduction in force to occur once the grant project is completed.

Recommendation 3-22

We recommend the School of Medicine and Health Sciences no longer directly hire individuals named in grant applications. The school should either:

a) Work with the University of North Dakota's Office of Human Resources to establish formal procedures for the temporary appointment of individuals named in grant applications; or
b) Use a competitive hiring process.

Management's Response

Agree with the recommendation. The SMHS will no longer directly hire individuals named in grant applications.

Locating a New Rotation Site

SMHS has a four week in-patient pediatric rotation established in Hawaii for its residents. This rotation was established to address a concern noted in an accreditation review. SMHS noted there are few options available in this area and the site was selected due to a relationship with the military base hospital in Hawaii. The associated costs of the first three residents who completed the rotation in fiscal year 2007 exceeded

$19,500 (six to eight residents in each of the next two fiscal years are expected to complete the rotation).

Recommendation 3-23 We recommend the School of Medicine and Health Sciences conduct a formal review in an attempt to find a pediatric rotation site in a less expensive location.

Management's Response Agree with the recommendation.

Developing Additional Incentives

SMHS has six residency programs within the state – Internal Medicine, two Family Medicine, Psychiatry, Surgery, and a Transitional Year (one year residency program to provide a preparatory year of training to develop fundamental skills). These residency programs have graduating students from medical schools around the country (upon completion of medical school, graduates are "matched" to a residency program). Using information identified by SMHS, the following table identifies a decline in the number of students graduating from SMHS who are entering a SMHS residency program within the state.

With a shortage of health professionals and a decline in the number of SMHS graduates entering in-state residency programs, additional incentives should be developed.

Table 3
SMHS Total Resident Information[1]

Year	Number of Residents	Number of Residents Graduated from SMHS	Percent of Residents Graduated from SMHS
2002-2003	105	20	19%
2003-2004	105.5	26.5	25%
2004-2005	105.5	21	20%
2005-2006	90	12	13%
2006-2007	90	11	12%

[1] Information provided by SMHS included a range for residents which was averaged (all SMHS residency programs included). Number of residents reduced due to Family Medicine Residency Program in Grand Forks being taken over by a private provider.

In review of information related to medical schools and in discussions with the hired consultants, statistics show residents typically establish their practice near their last year of residency. A reduction in the number of graduating students entering SMHS residency programs could lead to a reduction in the number of physicians in the state. According to information from the Center for Rural Health within SMHS, there are a number of areas within the state where there is a primary care health professional shortage.

Recommendation 3-24 We recommend the School of Medicine and Health Sciences, in conjunction with the Medical Center Advisory Council, develop additional incentives and continue to take appropriate steps for keeping graduating students within the state.

Management's Response Agree with the recommendation.

Issues for Public Policy Makers' Consideration

Introduction

The hired consultant, DJW Associates, identified two areas in which legislative input and direction are needed. DJW did make recommendations in both of these areas for legislators to consider. Rather than recommend legislative action, the information is presented for legislators to consider and determine the appropriate action(s) to be taken. During our review, we identified a number of areas which should be presented to legislators for their consideration.

New Models for Healthcare Delivery

Coupled with an increase in the number of residents trained in the state (as recommended by DJW in Chapter 2 of this report) and the anticipated increase in the number of practicing physicians in the state is a need to resolve the problem of the distribution of practicing physicians. In this instance, DJW noted the Center for Rural Health is the ideal entity to consider alternative options.

DJW notes it is unrealistic to expect physicians will voluntarily migrate to rural communities that are now without resident physicians. The state, however, could commission the Center for Rural Health to undertake a study of options to encourage such migration, even if only for a limited number of years. A program, for example, might provide financial incentives such as educational loan repayment plans. It should be recognized physicians utilizing such programs tend to be transient. Once they have met the obligations of the program, they tend to leave the rural environment. The state or any entity created to manage such a program would need to recognize the continuing nature of such an investment

The J-1 Visa waiver program is also a mechanism for achieving temporary relief through the employment of international medical graduates from foreign countries. Foreign nationals who have J-1 Visas are subject to a rule that they must return to their home-country for a two-year period before seeking re-entry and residence in the United States. Under the Immigration and Nationality Act, they may apply for a waiver of that requirement if they seek to remain in the United States beyond the end date of their training programs or if they seek to submit an application to the Immigration and Naturalization Service for a change in visa status. Foreign nationals, trained as physicians, apply for such a waiver through a state health department or its equivalent and agree to full-time employment at a health care facility in a designated health care professional shortage area for not less than three years. In many cases, these physicians leave these designated areas after completing their three-year obligation.

DJW notes many states make use of the "J-1 visa waiver" program in order to recruit physicians. For example, the California J-1 visa waiver program targets primary care physicians who have completed a U.S. residency training program in one of the following specialties: Family Medicine, General Pediatrics, General Obstetrics, General Internal Medicine, or General Psychiatry with no subsequent specialty training.

DJW noted an interesting alternative for the Center for Rural Health to consider would be the development of a new model of rural health care delivery. Instead of trying to place physicians in underserved areas, a system for the delivery of care in such areas could radiate from a focus of health care providers who were responsible for delivering care locally and in rural and underserved sites. Initial care could be delivered by midlevel practitioners and individuals seeking health care could be guided, as needed, to a central location. Options such as telemedicine need exploration. The effectiveness of this model would need to be studied but could serve as a plan to be followed by other states.

DJW recommends consideration be given for a regional model for the delivery of health care in rural and underserved areas. This would differ from the traditional model of placing a family medicine physician in every community. Such a model, developed with the assistance of SMHS and the Center for Rural Health, will better serve the underserved populations of North Dakota than the past and could serve as an example for other states. Among the provisions of this new model is a consortium of community hospitals, SMHS, and other third parties in the oversight and development of residency training programs.

DJW recommends consideration be given for a regional model for delivery of health care in rural and underserved areas.

In our review of information, we noted in the summer of 2006, a group of leaders from both the private and public sectors initiated a voluntary, self-funded collaborative effort to explore innovative, statewide approaches to improving the health status of North Dakotans. This initiative was convened by Healthy North Dakota and facilitated by a private consulting company. The group focused on the development of a vision and strategy for the healthcare system in the state. A representative of SMHS is included in this group.

DJW's conclusion of developing a new model should also address an area identified by the Dean of SMHS. In our discussions with the Dean, he noted there was an unrealistic expectation some people have regarding a doctor in every community. Legislative intent should be clearly established as to what the expectation should be regarding the delivery of health care to the residents of the state.

Organization and Management of Residency Programs

In addition to considering the specialties for new residencies and fellowships, DJW notes it is essential to establish an effective organizational and management structure for those programs. The educational program in a residency is best supported through a medical school. On the other hand, in those cases where a medical school does not own and operate its own hospital and clinics, the finances may be best managed by a health care delivery system.

Medicare direct and indirect reimbursement for graduate medical education is paid directly to health care facilities. A model that might work best for new and current programs in North Dakota would be to

DJW concludes a new model is needed for the residency programs.

have the health care delivery system (i.e. a consortium of major hospitals) act as the primary sponsor of the program and SMHS is an affiliate. The resident salaries and support for administrative personnel and teaching faculty could be paid from the Medicare funds. Any agreement must place the medical school in control of the educational program. This model could be used to convert existing residency programs and avoid issues of transfers of funds from the health care system to the medical school to sustain programs. Sound financial support for residency and fellowship training is essential to ensuring the quality of the educational programs.

DJW does not underestimate the challenge of implementing such a model, particularly in those cities with multiple health care systems. DJW recommends the state take the lead role in establishing a consortium, in partnership with the hospital systems, the University, and private foundations with an interest in health care to make this model work. The reorganization would have sponsorship of residency and fellowship programs be the responsibility of a local, health-care facility with SMHS serving as an affiliate with the involvement in providing the educational program.

DJW also noted innovative programs to attract residents, such as loan-forgiveness programs in exchange for service, also need development.

Obtaining Real Property Through a Financial Arrangement with Alumni Foundation

During a review of expenditures, we identified SMHS will obtain real property without legislative approval as a result of a "lease" agreement with the Alumni Foundation. The minutes of the June 26, 2003 North Dakota State Board of Higher Education (SBHE) meeting identify a motion passed for the University of North Dakota to acquire real property for the construction of a Center for Family Medicine facility in Minot. The minutes state the University is authorized to "acquire real property through a lease agreement with the UND Alumni Foundation and permission to solicit approval for the same acquisition from the Budget Section. Acquisition of the property will be made through the terms of the lease, with rent payments made possible through revenue generated by operation of the clinic." While the Budget Section was informed of the decision to acquire real property, approval was not obtained since the Budget Section appears to have no authority to approve such transactions. A "lease" agreement was entered into with the Alumni Foundation in which the Alumni Foundation obtained bonds ($4.4 million), SMHS makes payments to the Alumni Foundation to cover the costs of the bonds, and the property is turned over to SMHS once the bonds are paid in full.

In our review of information, we were concerned such financial agreements may not be authorized by state law and real property was being obtained with no legislative approval. For example, North Dakota Century Code Section 54-27-12 states SBHE "may not make nor authorize knowingly any expenditure in the matter of the erection or

improvement of any public building or structure, or the purchase of any real property, in excess of any appropriation made by the legislative assembly for such purpose." In addition, NDCC Chapter 54-17.2 empowers the Industrial Commission, subject to legislative authorization, "to issue evidences of indebtedness to make funds available for a project or projects as directed by the legislative assembly."

University of North Dakota (UND) representatives noted they were advised by the North Dakota University System (NDUS) state law does not require legislative approval for purchase of real property by a NDUS institution and no state law requires legislative approval for a NDUS institution to lease a building or facility.

In further correspondence with UND representatives justifying the appropriateness of the financial arrangement, they noted on August 6, 2007 public funds contained in the budget of SMHS (and appropriated by the legislature) will be used to make the lease payments. This statement is concerning to us considering the Board's authorization for this arrangement was to use revenue generated by the Center for Family Medicine and not appropriated funds. Thus, no funds should have been contained in the budget of SMHS for these "lease" payments. In this same correspondence, UND states payments will not be made with appropriated funds. This contradicts the statement UND made in the same correspondence that appropriated funds would be used.

In discussing this issue with a representative of the Office of Attorney General, we were informed UND could legally enter into the "lease" agreement. The representative noted the language within the "lease" does not make it a debt of the state, the "lease" agreement does contain a non appropriation clause, and until there is something established which says these types of agreements are not legal, they will remain valid.

Real property is being obtained by a state entity with no legislative approval due to a financial arrangement entered into with a foundation.

In effect, this "lease" is a financial agreement with the Alumni Foundation who issued bonds which is allowing UND to obtain real property. While apparently UND did not violate a legal statute when it obtained real property through this arrangement due to language contained in the agreement (non appropriation clause, not a debt of the state, etc.), it does appear to circumvent the typical processes used to expend public funds. No legislative authority was granted to UND to enter into such an agreement. While the Alumni Foundation obtained the bonds, the foundation is a component unit of UND as identified in various financial audit reports. UND used this relationship to have the foundation obtain the bonds. In the agreement, UND is able to make a number of decisions and there is no specific payment amount to be made (UND is to pay rental payments in amounts and at times which shall be adequate to pay interest on the bonds when due and for periodic principal payments on the bonds). Such financial arrangements will apparently continue to be entered into unless a change is made within state law.

Supplementing Research

During a review of selected expenditures, we did note appropriated funds (general funds, mill levy revenue, or tuition dollars) were used to make a payment for the lease/purchase of a microscope which was used for a research project. Approximately $29,000 of appropriated funds was used to assist in paying the yearly installment payment of $108,000. In addition, we also noted certain instances in which employees' time spent on research or grants was not completely paid for with research or grant funds. For example, while an employee's time spent on a project was identified at 19%, federal funds were used to pay only 12% of the employee's salary and appropriated funds were used to pay the difference. Thus, while we are aware appropriated funds are used to supplement research, we could not determine the extent to which this occurs. When federal funds are used, a project number is assigned. However, if this project were to use appropriated funds, no project number is entered into the system when this transaction is processed. SMHS does not track appropriated funds expended on research as no such requirement currently exists. Thus, in order to determine the extent to which supplementing of research occurs with appropriated funds, a review of every transaction would need to be conducted or a change in the coding of expenditures would need to occur.

While we identified instances in which appropriated funds supplemented research, we could not determine the extent to which this occurs.

Tracking Appropriated Funds

As part of the audit, we were unable to perform an analysis or identify information related to how general funds were being specifically expended. SMHS identified three appropriated funding sources (general funds, mill levy revenue, and tuition revenue) and all three are accounted for in the same fund level, as they have been for years across the North Dakota University System (NDUS). When these funds are expended, there is no identifying information as to whether general funds, mill levy revenue, or tuition revenue is being used. A NDUS representative noted this differs for capital projects which are accounted for separately. According to a representative of the NDUS, these funds have traditionally been accounted for as a single funding source since the combined revenue from these sources are the primary sources of revenues used to support the instructional mission of the campuses.

Tracking Appropriated FTE

In review of budget documents identifying legislatively approved appropriation information, we noted SMHS was provided a legislatively authorized 157.74 full-time equivalents (FTE) for the 2007-2009 biennium. Chapter 3 of the 2007 Session Laws states the State Board of Higher Education "is authorized to adjust full-time equivalent positions as needed, subject to availability of funds, for institutions and entities under its control. The university system shall report any adjustments. . . " There is no accurate or reliable information readily available to ensure SMHS properly reports FTE positions so it is unlikely any adjustment could be properly tracked or reported. The lack of proper reporting and tracking of FTE amounts appears to exist at all colleges and universities.

Chapter 5

Audit and SMHS Background Information

Purpose and Authority of the Audit

The performance audit of the School of Medicine and Health Sciences (SMHS) was conducted by the Office of the State Auditor at the request of the Legislative Audit and Fiscal Review Committee. Approval was obtained at a subsequent committee meeting for an outside consultant to be selected to assist in conducting the performance audit.

A performance audit is an objective and systematic examination of evidence for the purpose of providing an independent assessment of the performance of a government organization, program, activity, or function in order to provide information to improve public accountability and facilitate decision-making by parties with responsibility to oversee or initiate corrective actions. The purpose of this report is to provide our analysis, findings, and recommendations regarding our limited review of SMHS.

Background Information

In 1905, a school of medicine was established as a basic medical science school offering the first two years of medical education. In 1973, legislative action created an expanded curriculum and authorized the granting of the Doctor of Medicine (M.D.) degree. A complete, in-state medical education program was made available in 1984. In 1996, the school of medicine changed their name to the School of Medicine and Health Sciences (SMHS).

SMHS is a community-based medical school meaning it uses private hospitals for its clinical work and teaching (non community-based medical schools have a university owned facility). SMHS operates six resident programs within the state (upon completion of medical school, graduating students are "matched" to a residency program).

According to survey data from the American Academy of Family Physicians, SMHS was ranked 4th out of 125 medical schools in the percentage of students graduating medical school and entering family medicine post graduate training. A survey of medical school deans and senior faculty conducted by U.S. News and World Report for a category termed "Rural Medicine" had SMHS ranked 5th in the 2008 edition, not ranked in the top 11 in the 2007 edition, and ranked tied for 3rd in the 2006 edition. For the category "Family Medicine," SMHS was not ranked in the top 10 for any of the three years.

In addition to medical student and resident education, SMHS also provides educational opportunities for a wide variety of health professionals including clinical laboratory science, athletic training, physical therapy, occupational therapy, and the physician assistant program. All of these programs as well as the medical program have separate accreditation requirements. SMHS has an enrollment of approximately 250 medical students and 750 other students.

SMHS expenditures for the 2005-2007 biennium exceeded $128 million. The budget for the 2007-2009 biennium includes approximately $34.5

million general funds (a 10% budget increase over the previous biennium).

Goal of the Audit

The goal of this performance audit is listed below:

- Has the School of Medicine and Health Sciences established an adequate system for monitoring operations?

In addition, a Request for Proposal seeking competitive bids from consultants with expertise in the medical school area was sent to selected organizations. Based on proposals received, a contract was awarded to the consulting firm of DJW Associates. The three areas to be reviewed by the selected consultant included:

- Educational training related to primary care with an emphasis on family medicine;
- Research efforts and research programs; and
- Merger of the Department of Family Medicine and Department of Community Medicine.

Scope & Methodology

This audit was conducted in accordance with generally accepted government auditing standards and includes appropriate performance auditing and evaluation methods. Audit field work was conducted from January 2007 through August 2007. The audit period for which information was collected and reviewed was July 1, 2004 through December 31, 2006. In certain cases, additional information was reviewed. This was done, in part, to obtain additional information on certain events. Specific methodologies are identified in the respective chapters of this report.

Appendices

List of Recommendations

Recommendation 1-1 We recommend the School of Medicine and Health Sciences comply with state laws regarding the purpose and duties of the medical school or take appropriate action to modify state laws.

Recommendation 1-2 We recommend the School of Medicine and Health Sciences ensure their mission statement is consistent with legislative intent established in state law.

Recommendation 1-3 We recommend the School of Medicine and Health Sciences, in conjunction with the Medical Center Advisory Council, make improvements with the Medical Center Loan Fund. At a minimum, the School should:

a) Take appropriate action to increase the maximum loan amount;
b) Ensure the interest rate charged does not exceed the maximum rate established by state law; and
c) Ensure proper authority exists to operate a permanent revolving loan fund or take appropriate steps to comply with state law.

Recommendation 1-4 We recommend the School of Medicine and Health Sciences establish a formal process to ensure compliance with state laws. This process should include a periodic review to ensure laws are not outdated, and a plan to take appropriate action to update laws if necessary.

Recommendation 1-5 We recommend the Medical Center Advisory Council comply with requirements within North Dakota Century Code Chapter 15-52 and, at a minimum:

a) Advise, consult, and make recommendations related to the School of Medicine and Health Sciences;
b) Meet at least the number of times required by state law; and
c) Study, consider, and formulate plans for facilitating and implementing, through the School of Medicine and Health Sciences, a unified program for the improvement and maintenance of the health of the people of the state or take appropriate action to modify the state law.

Recommendation 2-1 DJW recommends the School of Medicine and Health Sciences investigate increasing the number of residency and fellowship positions supported by Medicare Direct Medical Education (DME) and Indirect Medical Education (IME) and carefully review any plans to increase residency or fellowship positions with the Residency Review Committee requirements.

Recommendation 2-2 DJW recommends the School of Medicine and Health Sciences develop its clinical research programs for the school to be competitive for a Clinical and Translational Science Award (CTSA). This will require additional financial support.

Recommendation 2-3 DJW recommends the School of Medicine and Health Sciences provide additional incentives to encourage and reward faculty to commercialize intellectual property arising out of their research.

Recommendation 2-4 DJW recommends the University of North Dakota continue the arrangement under which the School of Medicine and Health Sciences shares in 80% of the indirect cost pool above the fixed base of $330,000.

Recommendation 2-5 DJW recommends the School of Medicine and Health Sciences develop a culture within the school in which major management decisions begin with a formal, internal review process with all key partners and an attempt to build a consensus to support the desired outcome.

Recommendation 2-6 DJW recommends the University of North Dakota undertake a financial review by an outside firm of all School of Medicine and Health Sciences programs to review how information is tracked, used, and presented to assist in providing appropriate information to the entire management team of the school and to ensure the financial viability of the school in comprehensive but understandable financial statements.

Recommendation 3-1 We recommend the School of Medicine and Health Sciences establish specific performance measure for monitoring the effectiveness of the operations of the school. Appropriate benchmarks or other standards to measure the school's performance should be identified.

Recommendation 3-2 We recommend the School of Medicine and Health Sciences make improvements to their "Annual Report" document to make it user friendly and provide for a reasonable means of measuring the performance of the school or establish a better tool to measure the school's performance.

Recommendation 3-3 We recommend the School of Medicine and Health Sciences formally review the organizational structure and reporting relationships and make the appropriate changes to ensure the structure becomes more efficient and effective. At a minimum, changes should be made to:

a) Ensure employees are only reporting to one supervisor;
b) Establish an organizational chart for each department;
c) Ensure managers/supervisors are only responsible for a reasonable number of employees; and
d) Have the organizational chart reflect actual responsibilities of employees.

Recommendation 3-4 We recommend the University of North Dakota ensure areas identified as requiring improvement are adequately addressed, documented, and monitored in the evaluation process of the Dean of the School of Medicine and Health Sciences.

Recommendation 3-5 We recommend the School of Medicine and Health Sciences modify their policy related to faculty reviews and evaluations and ensure it complies with State Board of Higher Education and the University of North Dakota policies.

Recommendation 3-6 We recommend the School of Medicine and Health Sciences make improvements with the faculty evaluation process. At a minimum, the school should:

a) Complete evaluations on an annual basis in order to comply with State Board of Higher Education and University of North Dakota policies;
b) Require signatures on all documents placed in personnel files to ensure compliance with state law; and
c) Ensure student survey results used in the evaluation process are obtained from an independent source.

Recommendation 3-7 We recommend the School of Medicine and Health Sciences conduct regular, full-time staff employee evaluations within established timelines.

Recommendation 3-8 We recommend the School of Medicine and Health Sciences take appropriate steps to ensure the school provides accurate information.

Recommendation 3-9 We recommend the School of Medicine and Health Sciences comply with motions passed by the State Board of Higher Education.

Recommendation 3-10 We recommend the School of Medicine and Health Sciences comply with State Board of Higher Education and University of North Dakota purchasing policies and procedures.

Recommendation 3-11 We recommend the School of Medicine and Health Sciences discontinue splitting invoices and ensure the Purchasing Office of the University of North Dakota is appropriately used.

Recommendation 3-12 We recommend the School of Medicine and Health Sciences ensure training is provided to employees on purchasing policies and procedures.

Recommendation 3-13 We recommend the School of Medicine and Health Sciences make improvements relating to contract terms and conditions.

Recommendation 3-14 We recommend the School of Medicine and Health Sciences comply with moving expense policies and procedures.

Recommendation 3-15 We recommend the School of Medicine and Health Sciences make improvements to the moving allowance terms and conditions included in the offer of employment letters. The school should, at a minimum:

a) List all moving restrictions and conditions;
b) Establish a reasonable number of moving days allowed; and
c) Ensure compliance with established parameters.

Recommendation 3-16 We recommend the School of Medicine and Health Sciences effectively review support for expenditures prior to submitting such information for processing.

Recommendation 3-17 We recommend the departments of the School of Medicine and Health Sciences make improvements with the processes used in monitoring their budget and financial transactions. At a minimum, the departments should receive training on PeopleSoft and all of its financial related features, functions, and capabilities in an attempt to discontinue using other financial software for monitoring budget and financial transactions.

Recommendation 3-18 We recommend the School of Medicine and Health Sciences process reports reflecting employees' time charged to federal grants in a more timely fashion. If these reports cannot be processed more timely, another mechanism (timesheets, log books, etc.) will need to be established.

Recommendation 3-19 We recommend the School of Medicine and Health Sciences establish a formal policy regarding Academic Achievement Waivers.

Recommendation 3-20 We recommend the School of Medicine and Health Sciences formally review the nonresident tuition rates to make a determination as to whether the rates should be increased.

Recommendation 3-21 We recommend the School of Medicine and Health Sciences submit the necessary information to the state Department of Labor to obtain formal verification of the employee/independent contractor status of workers not being paid through payroll.

Recommendation 3-22 We recommend the School of Medicine and Health Sciences no longer directly hire individuals named in grant applications. The school should either:

a) Work with the University of North Dakota's Office of Human Resources to establish formal procedures for the temporary appointment of individuals named in grant applications; or
b) Use a competitive hiring process.

Recommendation 3-23 We recommend the School of Medicine and Health Sciences conduct a formal review in an attempt to find a pediatric rotation site in a less expensive location.

Recommendation 3-24 We recommend the School of Medicine and Health Sciences, in conjunction with the Medical Center Advisory Council, develop additional incentives and continue to take appropriate steps for keeping graduating students within the state.

Timeline of Events

DJW Associates, the hired consultant who assisted with this performance audit, noted the following timeline of certain events related to the School of Medicine and Health Sciences (SMHS) from 1999 to July 2006.

January 4, 1999	Plan to close Family Medicine Residency in Fargo proposed
July 1, 1999	New chair of the Department of Community Medicine appointed
July 1, 2001	A federal Health Resources and Services Administration (HRSA) Prevention Grant under the direction of the Dean as Principal Investigator was partitioned as follows: 22% to Primary Prevention and 78% to Community Medicine
November 28, 2001	New Dean for Rural Health and Director of the Center for Rural Health appointed
December 5, 2001	Medical Group Management Association (MGMA) Health Care Consulting Group reported on the Medical Service Plan (MSP) for SMHS and specifically on the Department of Family Medicine (findings noted the MSP was not functioning as an organization that considered the overall clinical practice activities of the medical school's faculty or otherwise engaged in activities that would lead to successful management; there was a significant lack of coordination and planning for clinical services programs resulting in inconsistency of operations, poor medical practice management, and a lack of collaborative relationships between the centralized department and outlying centers; and there was a lack of coherent management structure for center operations)
February 28, 2002	Chair of the Department of Family Medicine resigned
June 30, 2002	Three-year phase-out of the Fargo Family Medicine Residency completed
July 1, 2002	The federal HRSA Prevention Grant under the direction of the Dean as Principal Investigator was partitioned as follows: 48% to Primary Prevention and 52% to Community Medicine
November 1, 2002	New Chair of the Department of Family Medicine appointed
February 1, 2003	Physicians Assistant (PA) Program is moved from the Department of Community Medicine to the Department of Family Medicine
July 1, 2003	The federal HRSA Prevention Grant under the direction of the Dean as Principal Investigator was partitioned as follows: 55% to Primary Prevention and 45% to Community Medicine
February 24, 2004	Grand Forks Family Practice Center physicians submitted resignation letter effective June 30, 2004, accepted February 27, 2004

Appendix B
Timeline of Events

May 19-20, 2004	Residency Assistance Program consultation regarding Family Practice residency in Grand Forks
July 1, 2004	The federal HRSA Prevention Grant under the direction of the Dean as Principal Investigator was partitioned as follows: 69% to Primary Prevention and 31% to Community Medicine
April 4, 2005	Transfer of the Grand Forks Family Medicine Residency program from SMHS to a private health care provider
August 1, 2005	The federal HRSA Prevention Grant under the direction of the Dean as Principal Investigator was partitioned as follows: 75% to Primary Prevention and 25% to Community Medicine
September 1, 2005	Chair of Family Medicine resigned
January 1, 2006	New Chair of the Department of Family Medicine appointed
June 15, 2006	Merger of departments of Family Medicine and Community Medicine approved by State Board of Higher Education
June 30, 2006	Former Chair of the Department of Community Medicine resigned
July 1, 2006	Merger of departments of Family Medicine and Community Medicine completed

Consultant's Observations on Education Curriculum

Educational Training for Medical Students

DJW noted the School of Medicine and Health Sciences (SMHS) has a tradition of educating and training primary care physicians who deliver healthcare in the state. In addition, the school has established a reputation in educating Native Americans in health sciences and creating a national resource center for rural health. DJW's additional observations related to the education curriculum and student recruitment follow.

Educational Curriculum for Medical Students

DJW noted SMHS provides a comprehensive medical education and opportunities for students to experience training at rural sites. The uniquely focused "Patient-Centered Learning" (PCL) curriculum, delivered exclusively on the Grand Forks campus, integrates educational experiences during the first two years. Instruction is designed around patient cases and organized into interdisciplinary blocks designed to show medical students the integration of their medical knowledge and prepare them for careers treating the whole patient. The curriculum design also emphasizes self-directed and life-long learning, ongoing teaching of clinical skills, and the continuing development of professionalism. This structure provides excellent preparation for future clinical experiences. As reported in the 2005 Association of American Medical Colleges (AAMC) Graduation Questionnaire, graduating students have consistently rated their preparation for clinical clerkships above the national figures for all basic science disciplines.

A comprehensive medical education and opportunities for students to experience training at rural sites is provided by SMHS.

During the third year, students are distributed to sites in Fargo, Bismarck, and Grand Forks for experiences in the traditional clerkships of family medicine, pediatrics, internal medicine, obstetrics/gynecology, surgery, and psychiatry. The majority of instruction is provided by one-on-one teaching by volunteer faculty physicians who are in private practice. DJW applauds these physicians for their efforts. All clerkships include ambulatory experiences and at least one-half of the family medicine clerkship must occur in a rural community. A unique alternative third-year program is available for students who desire a rural experience. The Rural Opportunities in Medical Education (ROME) program now utilizes five rural communities in North Dakota (Devils Lake, Dickinson, Hettinger, Jamestown, and Williston). This integrated clinical experience lasts 28 weeks and substitutes for much of the more traditional clerkships except for psychiatry. Between 6 and 10 students participate in this program each year.

The fourth year of medical school is delivered on all four regional campuses including Minot. This focus on personal instruction in rural settings helps to promote interest among students in primary care and rural health. Almost 92% of graduating students in 2005 reported on the AAMC Graduation Questionnaire they were satisfied with the quality of their medical education.

Student Recruitment

DJW concludes SMHS admits and graduates in-state medical students at or above the national averages. Out-of-state students are admitted under well established, intrastate programs or through the nationally recognized Indians into Medicine (INMED) program. DJW detected no bias, for or against, the admission of students with interests in primary care and noted such expressions of disciplinary interests by pre-matriculated students often change in the course of their medical education.

DJW concludes SMHS admits and graduates in-state medical students at or above the national average.

As reported by the AAMC, during the 2005-2006 academic year, 134 residents of North Dakota applied to medical school and 54 enrolled into medical schools accredited by the Liaison Committee on Medical Education (LCME). Of the 54 students entering medical school, 41 (76%) enrolled at SMHS. This compares very favorably with the national figure of 62% of students remaining in state.

The 2006 entering class of 62 students at SMHS was selected from 264 applicants and has 66% in-state students. North Dakota has approximately 36 medical students per 100,000 population and ranks 12th in the nation; the national mean is 26.6. Out-of-state students enrolled at SMHS are selected to fill a small number of positions that have been set aside for students pre-certified by the Western Interstate Commission for Higher Education (WICHE) and for residents of Minnesota. In addition, up to seven positions are reserved for fully-qualified members of the US-recognized tribes through the Indians into Medicine (INMED) program, no matter where they reside.

DJW noted SMHS maintains several programs to promote and attract residents of the state. Two courses, Introduction to the Health Professions and Introduction to Medical Terminology, are offered online three times a year to undergraduate college and senior high school students. For the current offering there are 60 college and 20 high school students enrolled in the first course and 100 college and approximately 20 high school students in the second course. The INMED program has a well deserved national reputation as a successful program for recruiting Native Americans. In addition to enhancing science education for students, recruitment includes annual visits to the schools on the 24 reservations in the regional five-state area and access to the AAMC's Medical Minority Applicant Registry (Med-MAR) list to identify and recruit applicants on a national basis. Additional programs are offered to recruit and retain accepted applicants. As a further incentive, Native American students admitted through this program are charged in-state tuition regardless of their state of residence.

North Dakota Century Code Changes

This performance audit identifies recommendations related to North Dakota Century Code (NDCC) sections pertaining to the School of Medicine and Health Sciences (SMHS). The table below identifies information related to state laws which may require changes.

NDCC Section	Description	Pages in Report
15-52-01	This section identifies the purpose of SMHS. We noted SMHS was in noncompliance with this section of law. The purpose established in state law has remained unchanged since 1945. The consultants hired to assist with this performance audit stated this purpose does not appear to be consistent with other medical schools across the country.	1
15-52-15	This section requires a list be compiled of cities, towns, and other municipalities without a qualified physician or dentist or with an insufficient number of qualified physicians or dentists. The section also requires the university to endeavor to supply physicians or dentists to such cities, towns, and other municipalities. We noted noncompliance issues with this section of law. The requirements of compiling such a list and endeavoring to supply physicians and dentists have remained unchanged since 1971.	1-2
15-52-29	This section authorizes and directs SMHS to provide for the training of psychiatrists and other psychiatric personnel as is necessary to properly staff state institutions and agencies providing services in the mental health field. We noted noncompliance issues with this section of law. The requirement has remained unchanged since 1957.	2
15-52-18	This section establishes a maximum $6,000 loan amount for the Medical Center Loan Fund. We determined this amount should be increased.	4
15-52-26	This section provides up to $100,000 a year of mill levy revenue for loans from the Medical Center Loan Fund. No such revenue is being used for the loan fund which is operated as a revolving loan fund. No apparent authority within state law exists for the operation of the fund as a revolving loan fund.	4