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Programs Designed to Increase The Number of Providers In Medically Underserved Areas of Nebraska

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EXECUTIVE SUMMARY

As is the case in many areas of the country, certain communities in the State of Nebraska suffer from a shortage of health care providers. In response to this shortage, state government has implemented a number of programs which have as their goal increasing the number of health care providers who practice in medically underserved areas throughout Nebraska. The purpose of the program evaluation that is the subject of this report was to study these state programs with an eye toward determining whether they have, in fact, met this goal.

Measuring the Need for Medical Service

An important step in evaluating the effectiveness of programs designed to encourage medical practitioners to locate in underserved areas is the development of measures to be used in determining which geographic areas are medically underserved. While there is no universally accepted or perfect means of describing such medical need, the process generally begins with a calculation of an area's population-to-primary-care-physician ratio (commonly known as the "population-physician ratio"). The federal government uses a ratio of 3,500 (population) to 1 (primary-care physician) to define areas of "critical" shortage. In Nebraska, a "family practice shortage area" ratio of 2,500 to 1 has been established by the Nebraska Rural Health Advisory Commission, which advises the Nebraska Department of Health and Human Services' Office of Rural Health (ORH).

In addition to the population-physician ratio, other factors—such as a high infant mortality rate, a large elderly population, or the availability of mid-level providers—can be considered in identifying a medically underserved area. The federal government considers the population-physician ratio, along with the aforementioned (and other) factors, and designates areas throughout the country as Health Professional Shortage Areas (HPSAs). HPSAs describe areas in need of medical providers at a given point in time and can include an entire county, parts of several counties, parts of a single county, or a "special population" (such as the Medicaid population) in a given city or county. (While the phrase "underserved area" or "medically underserved area" is popularly understood in Nebraska to apply only to rural areas, the terminology is also applicable to populations in urban areas.)

For the purpose of evaluating the effectiveness of government programs designed to encourage practitioners to locate in areas in the state which have inadequate medical service, the Legislative Program Evaluation Unit (unit) developed and used two measures that focus attention on geographic areas that have experienced need for medical providers *over a period of time*. In addition, the unit refined the traditional population-to-primary-care-physician ratio and developed an "adjusted population-physician ratio" which was used to measure *current* need.

The first of these measures looks to county population as an indicator of ongoing medical need. A determination of the population-to-primary-care-physician ratio for each Nebraska county reveals a marked discrepancy in the level of need between counties with populations of 15,000 or more and counties with populations of less than 15,000. Historically, the less populous counties have had a significantly higher (frequently as much as twice as high) population-to-primary-care-physician ratio than counties with populations of 15,000 or more. And the higher the ratio, the greater the need. Given the historical tendency for counties with populations of less than 15,000 to be medically underserved, the unit evaluated the extent to which the targeted programs were successful in causing medical practitioners to locate in such areas.

Second, to determine which areas in the state have been the most in need of medical service over time, the unit developed a measure which utilizes federally designated primary care HPSAs as a starting point. The unit developed a list of locations that have been consistently designated as primary care HPSAs over a period of at least ten years, thereby creating a category of "chronic" HPSAs. Forty-two of Nebraska's 93 counties are wholly or partially located within a chronic HPSA. (Significantly, 37 of these are also included in the under-15,000 population category.)

While the small-county/large-county and chronic-HPSA measures developed by the unit are useful for identifying areas of long-term need for medical services, they do not measure *current* need. To measure current need, the unit developed an "adjusted" population-to-primary-care-physician ratio which takes into account services offered by physicians who travel outside their main-practice counties in delivering medical services. Additionally, the unit took note of the number and practice locations of physician assistants and nurse practitioners throughout the state.

Programs Reviewed

The programs targeted for review by the Legislative Program Evaluation Committee (committee) are administered by two separate entities—the ORH and the University of Nebraska Medical Center (UNMC). For purposes of conducting the evaluation, the unit grouped the programs into two, fairly broad categories: (1) Programs that provide direct financial incentives designed to induce individuals to practice health professions in underserved areas of the state, and (2) the ORH and UNMC Family Practice Residency Programs, which are more broadly designed to increase the overall number of physicians practicing in the state. (This focus of the residency programs—which do not provide financial incentives directly to individuals and which do not concern themselves specifically with the needs of medically underserved areas—causes them to have only an indirect potential impact on medically underserved areas.)

Additionally, the unit examined similar federal programs and included a summary of reports from UNMC and Creighton University to the Governor and the Legislature regarding each institution's plans for increasing the number of medical school graduates who enter primary care residencies. These residencies were targeted because of a need for primary care practitioners across the state.

Direct Financial Incentive Programs

The unit examined five programs that provide financial incentives directly to individuals in an effort to encourage them to locate in medically underserved areas: The State Scholarship Program; the State Loan Repayment Program; the National Health Service Corps Scholarship and Loan Repayment Programs; the Rural Health Opportunities Program (RHOP) Student Loan Program; and the Rural Nursing Incentive Program. The unit evaluated the effectiveness of each program in increasing the placement of health care providers in underserved areas and in inducing the providers to remain in such areas over a period of time. Because of differences in the programs (relating to such things as length in existence, funding levels, goals and objectives, and the availability and quality of data), the scope of each program review, as well as the specificity of the findings, varies.

The unit analyzed program data to determine (1) the extent to which each program's participants entered into practice in underserved areas, (2) whether participants completed their required service obligations, (3) whether participants continued to practice in medically underserved areas after completing their service obligations, and (4)

the number of participants who defaulted on their obligations and the resulting cost to the state.

State Scholarship and Loan Repayment Programs

The State Scholarship Program and the State Loan Repayment Program are administered by the ORH. The ORH receives from the state a single appropriation which is divided between the two programs. During FY1997-98, the ORH was appropriated $523,000 for the two programs. Out of that amount, $210,000 was allocated to the State Scholarship Program and $313,000 to the State Loan Repayment Program. The total appropriation for the two programs has grown from $333,000 in FY1994-95, when the State Loan Repayment Program was first funded.

The State Scholarship Program, which began awarding funds in 1979, is the "grandfather" of medical incentive programs. It provides student loans to eligible physician and physician assistant students. In return, the student agrees to practice in a "designated shortage area" of the state for the same number of years that the loan is received, once his or her education is completed.

The unit found that the program appears to be successfully placing providers in medically underserved areas, especially smaller-population counties; most of the program participants who begin service complete their service obligations; of those participants who were in the program long enough to have stayed in a community at least five years beyond their service obligations, most have stayed that long; and the cost-per-year of service provided by program participants is reasonable. Although a large number of students drop out of the program before beginning their service obligations, this is not surprising given the length of time between acceptance of the funds and the beginning of the service obligations.

The State Loan Repayment Program encourages medical practitioners to locate in underserved areas by providing a mechanism which allows the state and underserved communities to cooperate in paying off practitioners' medical education debt. In return, a participating practitioner agrees to practice in the cooperating community for a specified number of years. The first award was made under the program in 1994, and, because the program's history is so short, there are not enough data upon which to base conclusions about its long-term success. However, to date, the program appears to be successful in placing providers in medically underserved rural areas, especially smaller-population counties.

The evaluation revealed that coordination between the State Scholarship and State Loan Repayment Programs could be improved and that a comprehensive debt-collection policy is needed. The ORH generally agreed with the findings and, in fact, prepared a draft debt-collection policy before the evaluation was completed.

National Health Service Corps Scholarship and Loan Repayment Programs

The unit attempted to evaluate the National Health Service Corps Scholarship and Loan Repayment Programs. (These programs are the federal counterparts of the State Scholarship and State Loan Repayment Programs.) Due to a lack of program data, the unit was unable to conduct a comprehensive evaluation of the impact of these programs in Nebraska. However, it was determined that most of the placements made by the federal programs are in the smaller-population counties and that the federal programs are more successful in placing program participants in chronic HPSAs than are the state programs. (This is not surprising, given the fact that the federal programs' placements target HPSAs.)

The unit also reported the results of a General Accounting Office study, which found that federal Loan Repayment Program participants were more likely than the federal Scholarship Program participants to complete their service obligations and remain in the community after completing their obligations. The study also found the federal Loan Repayment Program to be less costly than the federal Scholarship Program.

RHOP Student Loan Program

The state-funded Rural Health Opportunities Program (RHOP) was developed in 1989 to enhance the recruitment of rural students to UNMC, based on the assumption that such students would be most likely to select rural areas in locating their practices. High school students selected for RHOP are guaranteed admission to UNMC, contingent on their meeting ongoing eligibility requirements while in college.

In 1993, the RHOP Student Loan Program was created. It received a one-time General Fund appropriation of $400,000, and the University of Nebraska Foundation has provided an equal match as loans have been awarded. The RHOP Student Loan Program Fund was expected to be self-sustaining, based on the repayment of outstanding loans.

The unit conducted a survey of RHOP Student Loan Program participants, and the results confirmed UNMC's belief that the Student Loan Program is not a significant factor in attracting students to RHOP. (This finding duplicated the results of a 1995 evaluation of RHOP conducted by UNMC's Center for Rural Health Research.) The unit's survey results indicated that students' top reasons for participation in RHOP, in priority order, are: Guaranteed acceptance into UNMC; a desire to practice in a rural setting; and RHOP's emphasis on rural health care. Based on this finding, the unit recommends elimination of the RHOP Student Loan Program.

The unit also found that the statutory penalties prescribed for those who default on an RHOP loan were not being implemented and recommends that, if the RHOP Student Loan Program is not eliminated, the penalties should either be implemented by UNMC or changed by the Legislature.

Rural Nursing Incentive Program

Although the state-funded Rural Nursing Incentive Program was targeted for evaluation by the committee, the unit did not conduct a full evaluation of the program because it was eliminated in 1997. The unit reviewed an internal evaluation conducted by the ORH and found that it provided sufficient grounds to support elimination of the program.

Administrative Issues Associated With Direct Incentive Programs

As a result of its evaluation of the direct financial incentive programs described above, the unit has raised the following issues relating to the administration of some of the programs:

> Individuals have received financial awards from more than one state-funded program, and the unit found that these multiple-program participants are allowed to complete their service obligations concurrently. While there is no statutory prohibition against such concurrent service, permitting it means that individuals who receive multiple benefits are not required to provide a correspondingly increased number of years of service. In these cases, the state is not getting the maximum return on its investment.
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> The unit also found that participants in the RHOP Student Loan Program are allowed to repay the

loans with money awarded under the State Loan Repayment Program. These participants are, in essence, "double dipping" into the state General Fund.

ORH/UNMC Family Practice Residency Programs

In addition to the direct financial incentive programs, the unit studied two state-funded residency programs—the ORH Family Practice Residency Program and the UNMC Family Practice Residency Program. As stated previously, these residency programs do not provide direct financial incentives to individuals but are expected to increase the overall number of physicians practicing in the state. The ORH program was created with an eye towards increasing the number of practitioners in rural areas (which are often medically underserved). The UNMC program was created to increase practitioners *statewide*, but may have a downstream effect in underserved areas—the more such physicians there are in the state, the greater the likelihood that at least some of them will locate in underserved areas.

The unit found several implementation problems associated with the ORH Family Practice Residency Program. Most significantly, the unit found that Creighton University is receiving funds for family practice residencies from both this program and the UNMC Family Practice Residency Program, in violation of state statute. Additionally, the unit found that, of the 18 residents who have graduated through the program to date, only half have remained in Nebraska and none have practiced in rural areas.

The program has also experienced higher-than-expected utilization and has not been fully funded. The unit estimates that appropriations of $863,000 for FY1997-98 and $921,000 for FY1998-99—compared to the current annual appropriation of $300,000—would be required to fully fund the program.

Regarding the UNMC Family Practice Residency Program, the unit found that, although UNMC has not consistently met the statutory goal of funding 60 or more family practice residencies per year, the program has played a role in increasing the number of doctors practicing in Nebraska. About 56 percent of the UNMC-funded residents who graduated between 1980 and 1986 remained in Nebraska, and about 58 percent of those practiced outside Douglas and Lancaster Counties (Nebraska's two largest counties). In addition, UNMC's family practice residents are more likely than UNMC's residents in other primary care specialties to practice in smaller-population counties. Finally, the unit found that UNMC's

family practice residents who are originally from Nebraska are more likely to stay in Nebraska than are those from other locales.

Conclusion

The unit's evaluation of state-funded medical incentives programs reveals that, despite some administrative and implementation problems, the programs generally appear to be successful in inducing practitioners to locate in medically underserved areas of the state. The family practice residency programs have demonstrated more mixed results. While the UNMC program has been successful in placing residents across the state and, more significantly, in small-population counties, the more recently established ORH program has, to date, failed to meet its goal of placing graduates in rural areas.

Focusing on the geographic areas and populations described in this report as most likely to manifest long-term need for medical service—counties with populations under 15,000 and areas / populations included within "chronic HPSAs"—it is clear that the state-funded programs as a whole have been more successful in making placements in the first category (smaller-population counties) than in the second. The failure of the programs to make a significant number of placements in chronic HPSAs is not, however, especially surprising. It is most difficult to attract providers to these areas, and it appears that the incentives offered by the existing state programs are not sufficient to offset these difficulties.

Additionally, an analysis based on the "adjusted" population-to-primary-care physician ratio developed in conjunction with this evaluation (see Map 3 at the end of Section II) reveals that, even when factors such as physicians who travel and the availability of physician assistants and nurse practitioners are taken into consideration, there are areas of the state which have experienced and are continuing to experience chronic, extreme need for medical services.

The specific findings and recommendations made by the unit in conjunction with this study are found on pages 47-55 and 69-71 of this report.