

# Bringing Health Care to the Heartland: An Evaluation of Minnesota's Loan Forgiveness Programs for Select Health Care Occupations

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## Executive Summary

In 1990, the Minnesota State Legislature created and funded a program to recruit physicians to practice in rural Minnesota. Since then the program has expanded to assist 564 physicians, nurses, nurse practitioners, nurse-midwives, physician assistants, clinical nurse specialists, pharmacists, dentists and allied health or nursing faculty in rural Minnesota or other high need locations such as nursing homes, intermediate care facilities for the mentally retarded, and dental practices serving more than 25 percent low income or public program patients. This is not the only tool the state uses to recruit health care providers to rural or high need occupations. Federal programs also support this effort by targeting limited federal loan repayment funds to Health Professional Shortage Areas through the state Loan Repayment Program.

The Minnesota Department of Health-Office of Rural Health and Primary Care is responsible for the administrative direction and oversight of these Loan Forgiveness Programs. To this end a program evaluation was initiated to determine the effectiveness of the program, whether it was meeting its intended legislative purpose, and to identify potential administrative improvements.

After almost 17 years of operation and growing from an annual state appropriation of \$320,000 to \$1.295 million in 2007, the Minnesota Loan Forgiveness Programs have served over 300 health care facilities and educational institutions throughout the state. In the past seven years, Minnesota has invested a total of \$7.789 million in the Loan Forgiveness Programs.

Are these programs effective in meeting their goals? This study addressed the following questions:

- *Are the programs effective in recruiting to each setting?*
- *Are the programs effective in retaining providers?*
- *What recruitment/retention challenges exist?*
- *When in education/training are decisions made on specialty/location?*
- *What opportunities exist for improvement?*

Between January and March of 2007, 405 program participants and 138 sponsoring facilities were contacted and asked to complete a three- to five-page evaluation survey. The response rate was high with an overall completion rate of 73 percent. Results were also compared to the last program evaluation, which was completed in 1999. Due to the nature of the program, most of the respondents were from rural Minnesota.

## Key findings

- 1. The Loan Forgiveness Programs were effective in recruiting health care practitioners into high need locations.**
  - In 57 percent of the sponsoring facilities, the program was important to very important in recruitment.
  - In 25 percent of the sponsoring institutions, the program was important to very important in recruitment.
  - Since 2001, 326 health care providers and faculty have chosen rural or high need practice locations as a result of the Loan Forgiveness Programs.
- 2. A majority of health care practitioners who complete their service obligation remain in similar practice settings in Minnesota.**
  - Of the responding physicians who completed their service obligation, 86 percent remained at their sponsoring facilities.
  - Of the responding midlevel practitioners who completed their service obligation, 76 percent remained at their sponsoring facility after completion.
  - Of the dentists who completed their service obligation, 52 percent remained at their sponsoring facility after completion.
  - 93 percent of nurses who completed their service obligation remained at their sponsoring facility after completion.
- 3. Sponsoring facilities (placement sites) vary in their dependence on the Loan Forgiveness Program as a recruitment/retention tool.**
  - Primary care and specialty clinics with less than 20,000 patient visits in 2006 valued the program the most (60 percent).
  - Nursing home survey respondents valued the program the least (20 percent) as a recruitment and retention tool, primarily because many were unaware of it.
  - Adequate salary, availability of nurses and of primary care physicians were the top recruitment challenges faced by sponsoring facilities and educational institutions.
  - Nursing homes (86 percent) and educational institutions (83 percent) reported adequate salary for staff as the primary recruitment challenge compared to pharmacies (40 percent) and dental clinics (30 percent) that have the fewest challenges with adequate salary for staff recruitment.

- Signing bonuses, relocation expenses or other loan repayment funds are used by over 75 percent of the responding sponsoring facilities. No educational institutions that responded to the survey provided signing bonuses or relocation expenses to their health occupation faculty.
  - The Loan Forgiveness Programs are reaching some of the facilities most challenged with recruitment difficulties—small primary care practices located in greater Minnesota and outside of any major population center (Rochester, Duluth, St. Cloud, Moorhead, Mankato).
  - Of the responders from the sponsoring facilities, 76 percent were aware of at least one of the Loan Forgiveness Programs by name. Only 17 percent of the survey respondents use the program as a recruitment tool for their health care facility.
- 4. Students are considering health occupations specialties/practice locations at earlier stages in their education, which can be prime marketing opportunities.**
- Of the responding physicians, 71 percent decided to specialize in primary care between high school and their third year of medical education.
  - Of the responding physicians, 44 percent decided to practice in a rural area between high school and their third year of medical education.
  - Of the responding midlevel practitioners, 55 percent decided to practice in a rural area between high school and completion of their undergraduate education.
- 5. Opportunities exist to improve the program.** Four recommendations are made, based on the survey results and program review.
- Target marketing to high school and undergraduate students in health occupations training.
  - Invest in additional communication materials and marketing efforts that promote the Loan Forgiveness Programs and the Health Care Safety Net Workforce Development Pipeline in Minnesota.
  - Maximize the use of technology to increase awareness and track outcomes.
  - Request an opinion from the Attorney General’s Office on the tax deductibility of the service obligation funds in light of several recent tax rulings.

In conclusion, the Loan Forgiveness Programs examined in this report and administered by the Minnesota Department of Health-Office of Rural Health and Primary Care are successfully meeting their program goals and increasing the number of health care providers and educators in rural Minnesota and specialty locations.

## Introduction and Background

The Minnesota Loan Forgiveness Program began in 1990 to provide incentives to physicians to practice primary care in rural and underserved urban areas. In 1993, the program was expanded to include midlevel practitioners committing to rural practice (nurse practitioners, physician assistants, clinical nurse specialists, and nurse midwives) and nurses agreeing to practice in nursing homes and/or intermediate care facilities for the mentally retarded (ICFMR). In 2001 the program was further expended to include dentists serving high proportions of public programs patients and in 2005 pharmacists and health careers faculty in post-secondary education.

Through January 2007, 564 health care providers and educators have benefited from the Minnesota Loan Forgiveness programs. Over 300 Minnesota health care facilities and educational institutions, primarily in high need settings, have served as placement sites for the loan forgiveness programs. These hospitals, nursing homes, clinics, pharmacies, dental practices and allied health and nursing training programs have been able to use the loan forgiveness program as a recruitment incentive.

### **Key Issues Identified and Recommendations from 1999 Evaluation**

After almost 10 years of operation and an expansion of annual state appropriations from \$320,000 to \$857,000 in 1999, the program was the subject of an external evaluation to determine its effectiveness. The intent of the evaluation was to determine whether the loan forgiveness program was effective in meeting the legislative purpose and to identify potential administrative improvements. The following questions formed the basis of this evaluation:

- Were the programs effective in retaining health care providers to the identified high need settings?
- What recruitment and retain challenges were sponsoring facilities encountering and did the Loan Forgiveness Program assist in their efforts?
- What administrative opportunities existed for improving the program?

Key findings from this evaluation included:

- The Loan Forgiveness Program was effective in getting medical practitioners into rural Minnesota.
- The majority of participating health professionals who completed their service obligation remained in practice in the same or a similar setting.
- Many opportunities exist to increase the awareness of the Loan Forgiveness Program and to use them as an effective recruitment tool.
- Opportunities also exist to improve the administration of the program.

In addition to its research findings, the evaluation made recommendations on several key issues.

- Clarify the intended goals of the program in statute or rule to support future development, education, and evaluation of the programs.
- Consider an increase in funding and the number of program participants who are selected.
- Market the program and revise the timing of such efforts to fourth year medical students, midlevel practitioners and nursing students.
- Continue and expand marketing of the programs to potential, sponsoring facilities in areas of the state with major recruitment challenges.
- Consider changing the application schedule, selection criteria for participants, and the selection process in order to increase the influence the program may have on practice specialty and practice site.
- Simplify the repayment process to reduce the administrative burden for both participants and the Minnesota Department of Health, Office of Rural Health and Primary Care staff.

The Minnesota Department of Health, Office of Rural Health and Primary Care, which is responsible for the management, administration and administrative direction for the loan forgiveness program, reviewed the evaluation report and as a result made the following changes to the program:

- Secured legislative revisions and appropriations that added additional professions and consolidated what had been separate programs for each profession into one fund. The consolidated program provides all disciplines the same relative incentives and apportions the funds proportionately so that the highest need settings receive the greatest share of funds available.
- Revised the selection criteria and application cycle timing to better reach prospective applicants nearest to when they are seeking work to increase the program's influence on candidates' employment decisions.
- Matched the level of marketing to historic interest and funds available.
- Changed payment process from paying the loan servicer to paying the participant directly. This avoided complications experienced while administering the programs as a third-party payment process.
- Conducted a second program evaluation in 2007.

## **Program descriptions**

Occupations supported with state funding for the Minnesota Loan Forgiveness Program include:

- **Physicians** have been supported in their choice of primary care practice in either a rural community or practice in medically underserved urban area. Most of the physicians in this program practice in rural Minnesota communities.

- **Nurse practitioners, nurse midwives, nurse anesthetists, advanced clinical nurse specialists and physician assistants** are recruited for rural practice through the Rural Midlevel Practitioner Loan Forgiveness Program.
- The **Nurses in Nursing Homes or Intermediate Care Facilities for Persons with Mental Retardation (ICFMR)** Loan Forgiveness Program target licensed practical nurses (LPN) and registered nurses (RN) in training and who agree to work in nursing homes or ICFMR facilities.
- The **Dentist** Loan Forgiveness Program supports those agreeing to work in rural or urban clinics that serve more than 25 percent public program or sliding fee scale patients.
- **Pharmacists** in the Loan Forgiveness Program agree to work in rural pharmacies.
- **Allied Health and Nursing Faculty** participants benefit from the Loan Forgiveness Program if they agree to teach at schools preparing nurses, respiratory therapists, and practitioners in clinical laboratory technology, radiological technology and surgical technology.

Each of these programs is governed by Minnesota Statutes, Chapter 144.1501 for its operation and funding.

The Minnesota Loan Forgiveness Programs provide \$1.295 million in 2007 to improve distribution of health care practitioners in rural Minnesota and in other high need settings as specified in state statute. A summary of each program is provided below.

Key components of the **Rural and Urban Physician LFP** include:

- Applications for this program must be submitted during medical school or prior to/during residency.
- It is available to family practice, pediatric, internal medicine, obstetrics and gynecology and psychiatric residents.
- Designated rural sites for areas outside the seven metropolitan counties (Hennepin, Anoka, Ramsey, Dakota, Washington, Carver and Scott) and exclude the cities of Rochester, Moorhead, St. Cloud, Duluth and Mankato.
- Loan repayment of \$17,000 per year is available for a minimum of three years.
- Over the past five years, there has been an average of 24 applicants annually for the funded rural and urban positions. In 2007, there were 14 applicants for the program.

The **Rural Midlevel Practitioner Loan Forgiveness Program** is available for nurse practitioner, nurse midwife, nurse anesthetist, advanced clinical nurse specialist, and physician assistant students who agree to practice in a designated rural area for at least three years. Candidates must apply for the program while still in school.

- Designated practice areas are the same as for the Rural Physician program. Loan forgiveness of \$6,750 per year is available for a maximum of four years.
- Selected participants must sign a contract with the Minnesota Department of Health-Office of Rural Health and Primary Care and begin their practice in the designated area for a minimum of 30 hours per week.

- Over the past five years, there has been an average of 17 applicants that applied for the funded positions offered each year. In 2007, there were 19 applicants for the program.

The **Nurses in Nursing Home Loan Forgiveness Program** offers loan repayment to registered nurse and licensed practical nurse students. Those who are selected must agree to practice in a nursing home or in an Intermediate Care Facility for Persons with Mental Retardation (ICFMR).

- Candidates for the positions must apply while still in school.
- The designated facilities may be located anywhere in the state of Minnesota.
- Nurses must work a minimum of 30 hours per week. Loan repayment of \$3,750 is available for a minimum of three years, maximum four.
- Selected participants must sign a contract with the Minnesota Department of Health-Office of Rural Health and Primary Care and start practicing at the qualified site.
- Over the past five years, an average of 33 applicants annually applied for the funded positions. In 2007, there were 42 applicants for the program.

The **Rural Pharmacist Loan Forgiveness Program** offers loan repayment to students and residents in pharmacy programs or practicing licensed pharmacists who agree to practice in a designated rural area for at least three years.

- Designated practice areas are the same as for the Rural Physician program. Loan forgiveness of \$13,750 per year is available for a maximum of four years.
- Selected participants must sign a contract with the Minnesota Department of Health-Office of Rural Health and Primary Care and begin their practice in the designated area for a minimum of 30 hours per week.
- Since the program began two years ago, an average of 22 applicants applied each year for the funded positions. In 2007, there were 37 applicants.

The **Dentist Loan Forgiveness Program** offers loan repayment to students and residents in dental programs or licensed dentists who agree to serve at least 25 percent public program enrollees or patients receiving sliding fee scale discounts for at least three years.

- Designated practice areas are anywhere in the State of Minnesota. Loan forgiveness of \$19,000 per year is available for up to four years.
- Selected participants must sign a contract with the Minnesota Department of Health-Office of Rural Health and Primary Care and begin their practice in the designated area for a minimum of 30 hours per week.
- Over the past five years, there were an average of eight applicants each year for the funded positions. In 2007, there were four applicants.

The **Allied Health and Nurse Faculty Loan Forgiveness Program** offers loan repayment to individuals teaching or studying to teach in allied health or nursing programs, who agree to teach for at least three years at a post-secondary school working a

minimum of 20 hours per week. Designated practice areas are anywhere in Minnesota. Loan forgiveness of \$6,750 per year is available for a minimum of three years.

- Selected participants must sign a contract with the Minnesota Department of Health-Office of Rural Health and Primary Care to teach a minimum of 20 hours per week.
- Since the program began two years ago, each year an average of 56 applicants applied for the funded positions. In 2007, there were 70 applicants.

Information about all state- and federally-funded loan repayment and loan forgiveness programs administered by the Minnesota Department of Health-Office of Rural Health and Primary Care can be found at [www.health.state.mn.us/divs/orhpc/funding/index.html](http://www.health.state.mn.us/divs/orhpc/funding/index.html) or by calling (651) 201-3838.

### **Evaluation Questions**

After 17 years of operation and a current (2007) annual appropriation of \$1.295 million, the Loan Forgiveness Programs have served over 564 health care practitioners. Are these programs effective in achieving their goals? The remainder of this report will focus on these questions:

1. Are the programs effective in recruiting health care practitioners to each program setting and what are the significant variables that impact practice location decision-making?
2. Are the programs effective in retaining health care practitioners in high need settings after a service obligation is completed?
3. What recruitment and retention challenges are the sponsoring facilities (placement sites) encountering and does the Loan Forgiveness Program assist their efforts?
4. What administrative opportunities exist to improve the programs as a result of responses from key program stakeholders? What, if any, process or administrative changes should be considered that would result in a higher number of successful program participants?
5. What is the relative importance of the availability of loan forgiveness as a factor in practice location decision-making? What is the impact of deductibility of student loan debt on income taxes as a decision-making factor? And, what is the impact of IRS treatment of loan forgiveness as income?
6. At what stage in a student's educational program would be the optimal time to market the loan forgiveness program(s) to influence the decision to practice in a high need setting?
7. Does the allied health care and nursing faculty Loan Forgiveness Program result in an increase in the number of post-secondary teaching faculty members and is the program successful in increasing the number of professionals with recent clinical experience who enter teaching?
8. Where are the program participants from—rural or urban setting? Does their point of origin influence their decision to practice in a rural setting?
9. Are there currently or projected to be other health occupations that are recruitment critical for rural Minnesota? Should these be considered for Loan Forgiveness Programs?

10. How did participants and sponsoring facilities hear about the Loan Forgiveness Program and what program marketing suggestions do they have for the Minnesota Department of Health-Office of Rural Health and Primary Care?

To answer these questions, the Office of Rural Health and Primary Care surveyed all participants (405) selected between 1999 and 2007. A sample of the over 300 sponsoring health care facilities and educational institutions from the past eight years were also surveyed.

***“I can’t tell you how grateful I’ve been for the assistance in paying off my loans. Just coming out of residency and starting practice, there are plenty of stresses and other financial burdens. This program helped ease some of the burden and I feel very blessed to have received the help. Thank you!”***

**A physician in rural Minnesota**

## Methodology

Eight surveys requesting information on the state-funded Loan Forgiveness Programs were developed with input from the Minnesota Department of Health-Office of Rural Health and Primary Care staff. The surveys were pilot tested by a group of physicians, nurse practitioners, allied health and nursing faculty, pharmacists, dentists, nurses and hospital and nursing home administrators. The surveys were mailed to all current and past participants of the programs since 1999. Four hundred and five persons and 138 facilities/educational institutions received a program-specific survey. They were asked to complete the survey and return it by fax or mail. Surveys were fielded during January and February 2007. Non-respondents from the initial mailing were re-contacted with a second and third request for survey completion.

**The overall response rate was 73 percent. The response rate varied for each group with the following rates:**

- 76 percent of physicians
- 75 percent of mid-level practitioners
- 65 percent of nurses
- 76 percent of pharmacists
- 75 percent of dentists
- 84 percent of allied health and nursing faculty
- 72 percent of sponsoring facilities and
- 92 percent of sponsoring educational institutions.

Over the past nine years, 241 individual sponsoring facilities (participant placement sites) were identified. A survey specific to the issues for sponsoring facilities was developed with input from Minnesota Department of Health-Office of Rural Health and Primary Care staff and from comments received from a test panel of rural and urban facilities. A one third sample was selected from the hospital, clinics and nursing homes for the survey. All of the dental clinics, pharmacies, and educational institutions that served as service obligation sites were included in the survey. The survey was mailed in January 2007 and returned by mail or fax. Non-respondents were re-contacted in February with up to three requests for survey completion.

In their responses, health care facility representatives were also requested to identify the type and size of their clinic/hospital/nursing home or ICFMR. Facilities were also asked to identify whether they were an independent operation, part of a larger health care system or owned by a larger entity. A copy of each survey is available from the Minnesota Department of Health-Office of Rural Health and Primary Care at (651) 201-3838.

All past and current participants were contacted. Given the frequency of moves and name changes over the past eight years, a variety of methods were utilized to locate participants. State licensing boards, internet searches and calls to last known practice facility were involved in the participant location methodology to achieve the overall 73 percent response rate.

The following groups of past participants (or those still completing their service obligation) and facilities were surveyed:

- 109 physicians (sample reduced to 108 due to one death)
- 62 midlevel providers - nurse practitioners, physician assistants, certified nurse midwives and clinical nurse specialists
- 128 nurses (sample reduced to 118 nurses due to death or lost to follow-up)
- 53 dentists (sample reduced to 52 due to one dentist lost to follow-up)
- 21 pharmacists
- 32 allied health and nursing faculty
- 122 clinics, hospitals, dental clinics, nursing homes, ICFMRs and pharmacies (sample reduced to 119 due to facility closures) and
- 16 educational institutions that train allied health or nursing professionals (sample reduced to 13 due to multiple campuses under the direction of a central administration).

***“This is a great program, but I would never have known that it existed had it not been for the administrator at the nursing home where I am employed. She found the Web site and encouraged me to apply. Thank you!”***

**Minnesota nurse working in the metro area**

## Survey Findings

### Question 1. Are the programs effective in recruiting health care practitioners to each program setting and what are the variables that impact practice location decision-making?

The original goal of the Minnesota Rural Physician Loan Forgiveness Program in 1990 was to recruit new physicians to rural Minnesota practice. During the 1999-2007 evaluation period, 191 physicians, midlevel providers and pharmacists contractually agreed to practice in a rural community as their service obligation site. The pharmacist program placed 21 pharmacists in rural communities, but none have completed their service obligation because the program is so new.

Other health care providers and educators agreed to work in high need settings as part of their service commitment in the Loan Forgiveness Program. Fifty-two dentists agreed to practice at clinics serving patients with low incomes or participating in public programs. One hundred and twenty-eight nurses (RN and LPN) agreed to work in nursing homes or ICFMR facilities.

- 57 percent of sponsoring facilities said the program was important to very important in recruiting staff to work in their facility.
- 25 percent of sponsoring educational institutions said the program was important to very important in recruiting faculty to work in their facility.
- Over 240 health care providers and educators (who responded to the surveys) have chosen rural or high need settings in the past eight years as a result of the Loan Forgiveness Programs.
- 95 percent of health care provider and educator respondents would recommend the Loan Forgiveness Program to other eligible students.

### Would you recommend this program to other eligible students?

	Yes	No	Don't know
Rural physician	97.5% (79/81)	1.2% (1/81)	1.2% (1/81)
Rural midlevel providers	97.8% (44/45)	0% (0/45)	2.2% (1/45)
Nurses	92.2% (71/77)	5.2% (4/77)	2.6% (2/77)
Pharmacists	93.8% (15/16)	0% (0/16)	6.2% (1/16)
Dentists	89.5% (34/38)	7.9% (3/38)	2.6% (1/38)
Allied Health and Nursing Faculty	100% (27/27)	0%	0%
Total:	95% (270/284)	2.8% (8/284)	2.2% (6/284)

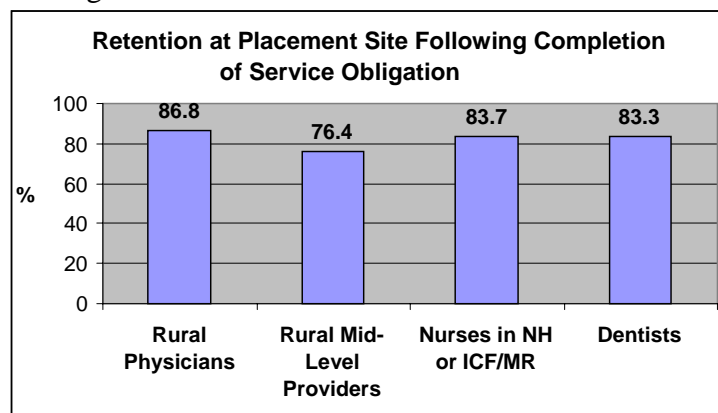
### Availability of jobs in high need settings for LFP-eligible health care practitioners

Some program participants were asked how long it took them to find a Loan Forgiveness Program-eligible position. Results varied from 0 to 48 months. Physicians were not asked this question.

	Average number of months to find a LFP-eligible position	Range
Rural Midlevel Practitioners	4.1 months	0 – 12 months
Nurses in NH or ICFMR	< 1 month	0 – 12 months
Rural Pharmacists	< 1 month	0 – 6 months
Dentists serving low income patients	4.4 months	0 – 48 months
Allied Health and Nursing Faculty	4.5 months	0 -24 months

### Question 2. Are the programs effective in retaining health care practitioners in high need settings after a service obligation is completed?

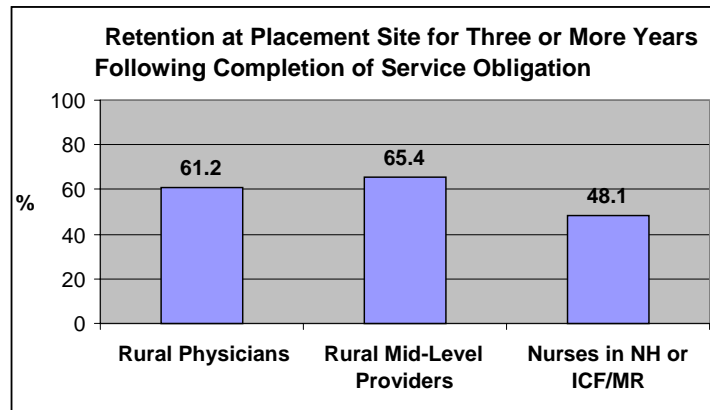
The Loan Forgiveness Programs for Rural Physicians, Rural Midlevel Practitioners, Nurses and Dentists are very effective in retention of health care practitioners in high need settings as indicated by the rates of providers who remained at their service obligation site following the completion of their agreement.



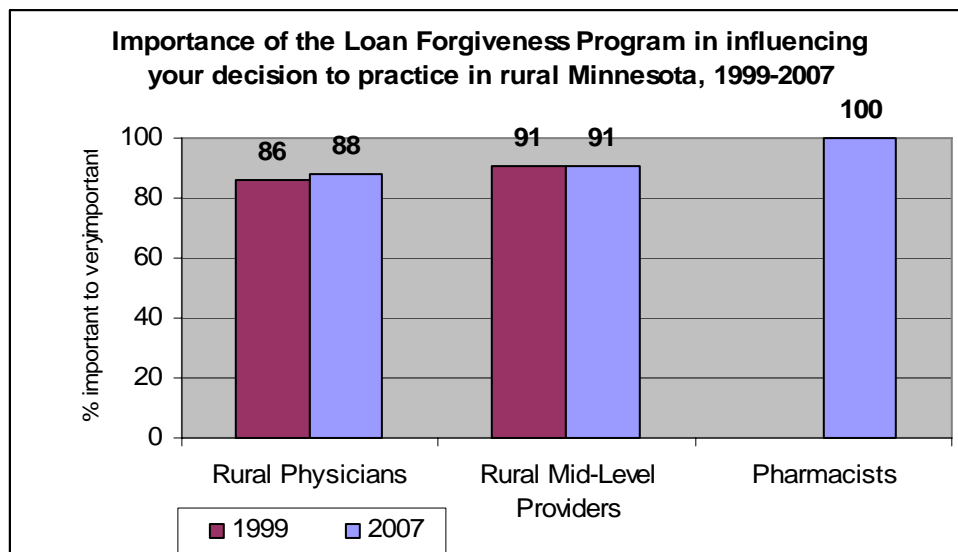
Survey results show that the length of practice at high need settings following completion of the service obligation remained high.

- 86 percent of responding physicians continued medical practice at their sponsoring facility (placement site) after completing their service obligation
- 76 percent of responding midlevel practitioners stayed at their rural placement after completing their obligation.

The total number of physicians and midlevel practitioners who remained at their service obligation after three years is low. This evaluation identified 102 health care providers who reported their current practice location three years post-obligation completion. This will be an important indicator to track in future participant surveys to monitor long-term effectiveness of the program. **Over 60 percent of physicians and midlevel providers remained at their original service obligation site three years after their service obligation was completed.**



A follow-up question about the effectiveness of the Loan Forgiveness Programs in influencing physicians to select primary care as their specialty area was also asked. Forty-four percent of physicians responding to this question said that the LFP was important to very important in influencing their decision to choose primary medical practice. This was down from 70 percent in the 1999 program evaluation with no apparent explanation or comments from program participants. Program data indicates a distinct decline in physician applications in 2007. One-third fewer applications were submitted in 2007 than in 2006 and more than a 50 percent reduction since 2003.



However, in the 2007 evaluation, 88 percent of the physician respondents reported that the Rural LFP was important to very important in influencing their decision to practice in a rural area.

For mid-level practitioners, 91 percent (21 out of 23) responded that the LFP was important to very important in influencing their decision to work in rural Minnesota. This was unchanged from 91.3 percent in the 1999 program evaluation.

All pharmacists reported that the LFP was important to very important in rural practice selection. This program did not exist in 1999, for comparison purposes.

### **Question 3. What recruitment and retention challenges are the sponsoring facilities (placement sites) encountering and does the Loan Forgiveness Program assist their efforts?**

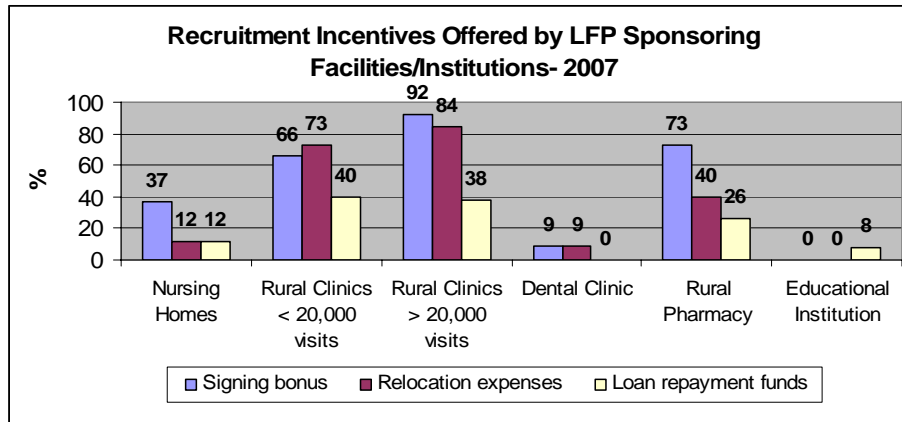
Sponsoring facilities (placement sites) were asked if the Minnesota Loan Forgiveness Programs (LFP) were important to their recruitment efforts. Overall, 57 percent of all responding health care facilities said that the Loan Forgiveness Program was important to very important to their recruitment efforts. Further analysis by type of facility was done.

The smaller clinics (with fewer than 20,000 patient visits) report slightly higher rates of importance. Caution is urged in interpreting these results as the clinic numbers in each subset are small.

- Of the rural primary care clinics with less than 20,000 patient visits, 60 percent (9 out of 15) responded that the Loan Forgiveness Programs were important to very important to recruitment.
- Of the rural primary care clinics with more than 20,000 patient visits, 46 percent (6 out of 13) responded that the Loan Forgiveness Programs were important to very important to recruitment.
- Of the health care facilities with pharmacies, 46 percent (7 out of 15) responded that the Loan Forgiveness Programs were important to very important to their recruitment.
- Of the dental clinics, 45 percent (10 out of 22) responded that the Loan Forgiveness Programs were important to very important to their recruitment efforts.
- Of the facilities with nursing homes, 20 percent (5 out of 24) responded that the Loan Forgiveness Program was important to very important to their recruitment efforts.
- Most of the facilities with nursing homes (75 percent) were either not aware of the program or did not respond to this question.

### Other recruitment incentives

A majority (75.5 percent) of the sponsoring health care facilities report that they offer other recruitment incentives to attract health care workers as displayed below. Of these 65 facilities offering some type of recruitment incentive, many offered more than one incentive. No educational institutions who responded to this survey report offering signing bonuses or relocation expenses to their allied health or nursing faculty.



### Summary of Other Recruitment Incentives Offered by Sponsoring facilities/Institutions

	Signing Bonus	Relocation expenses	Loan Repayment funds	Other
All Health Care Facilities (n=86)	46.5% (40/86)	36% (31/86)	20.9% (18/86)	19.7% (17/86)
Nursing Homes (n=24)	37.5% (9/24)	12.5% (3/24)	12.5% (3/24)	25% (6/24)
Rural Clinic ≤ 20,000 pt. visits (n=15)	66.6% (10/15)	73.3% (11/15)	40% (6/15)	20% (3/15)
Rural Clinic > 20,000 pt. visits (n=13)	92% (12/13)	84.6% (11/13)	38.4% (5/13)	15% (2/13)
Dental Clinics (n=21)	9.5% (2/21)	9.5% (2/21)	0% (0/21)	14.2% (3/21)
Rural Pharmacy (n=15)	73% (11/15)	40% (6/15)	26.6% (4/15)	13.3% (2/15)
Educational Institutions (n=12)	0% (0/12)	0% (0/12)	8.3% (1/12)	8.3% (1/12)

Physicians, pharmacists and midlevel practitioners reported receiving signing bonuses more than any other group. Nurses in nursing homes were not asked a specific question on signing bonuses. Instead, those who identified recruitment incentives referred to other non-monetary incentives for their site selection.

### Summary of Other Recruitment Incentives Offered to Health Care Practitioners/Faculty

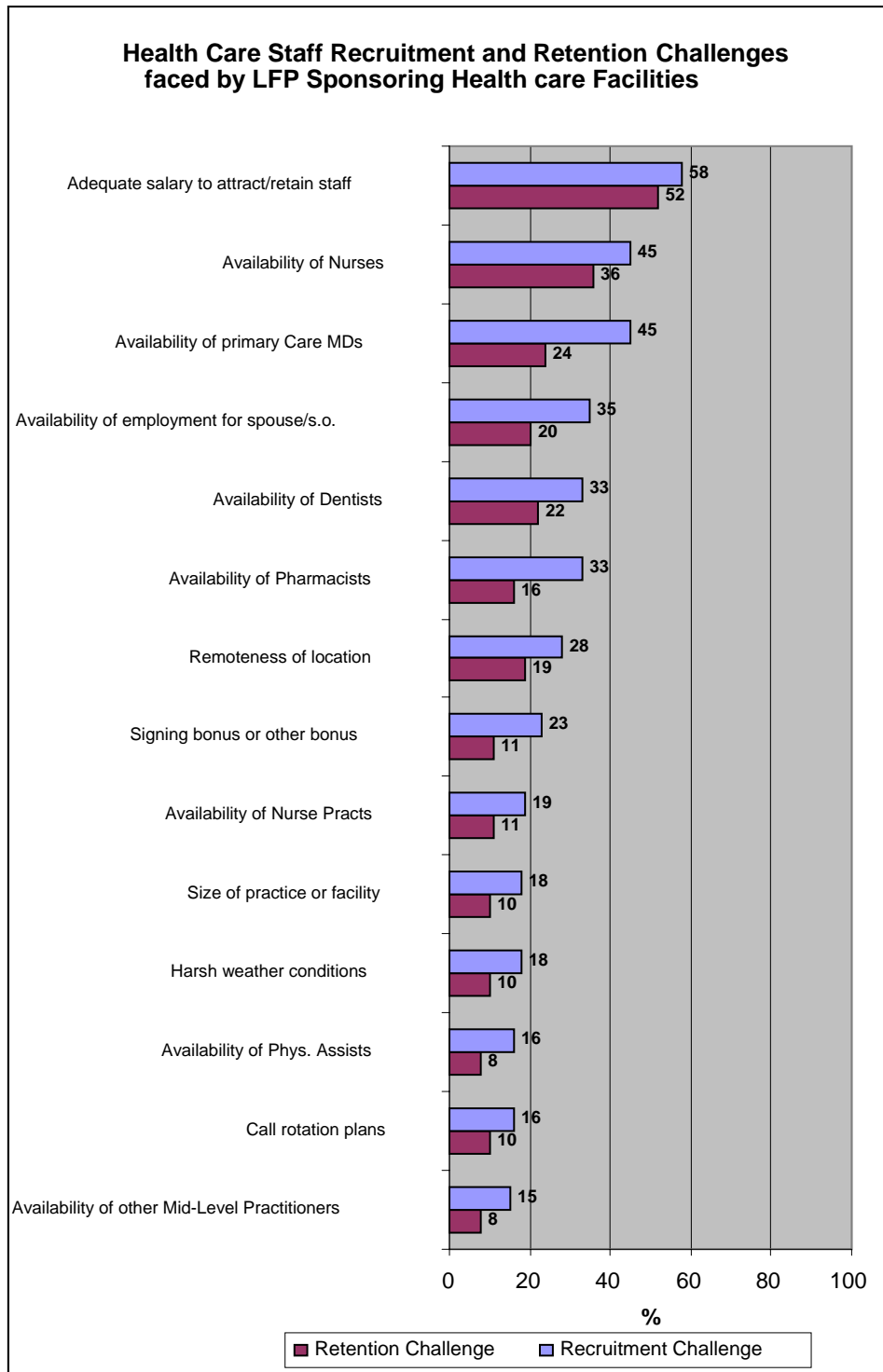
	Signing Bonus	Loan Repayment funds	Other
Rural Physicians	60.9% (50/82)	19.5% (16/82)	9.7% (8/82)
Rural Midlevel Practitioners	8.5% (4/47)	19.1% (9/47)	21.2% (10/47)
Rural Pharmacists	37.5% (6/16)	0% (0/16)	6.2% (1/16)
Dentists serving patients with low incomes	0% (0/39)	0% (0/39)	2.5% (1/39)
Allied Health and Nursing Faculty	0% (0/27)	3.7% (1/27)	11.1% (3/27)

Several program participants, especially physicians and midlevel providers, commented on the financial hardship they experienced in taking rural positions. There was no question asked of participants on whether they received multiple offers.

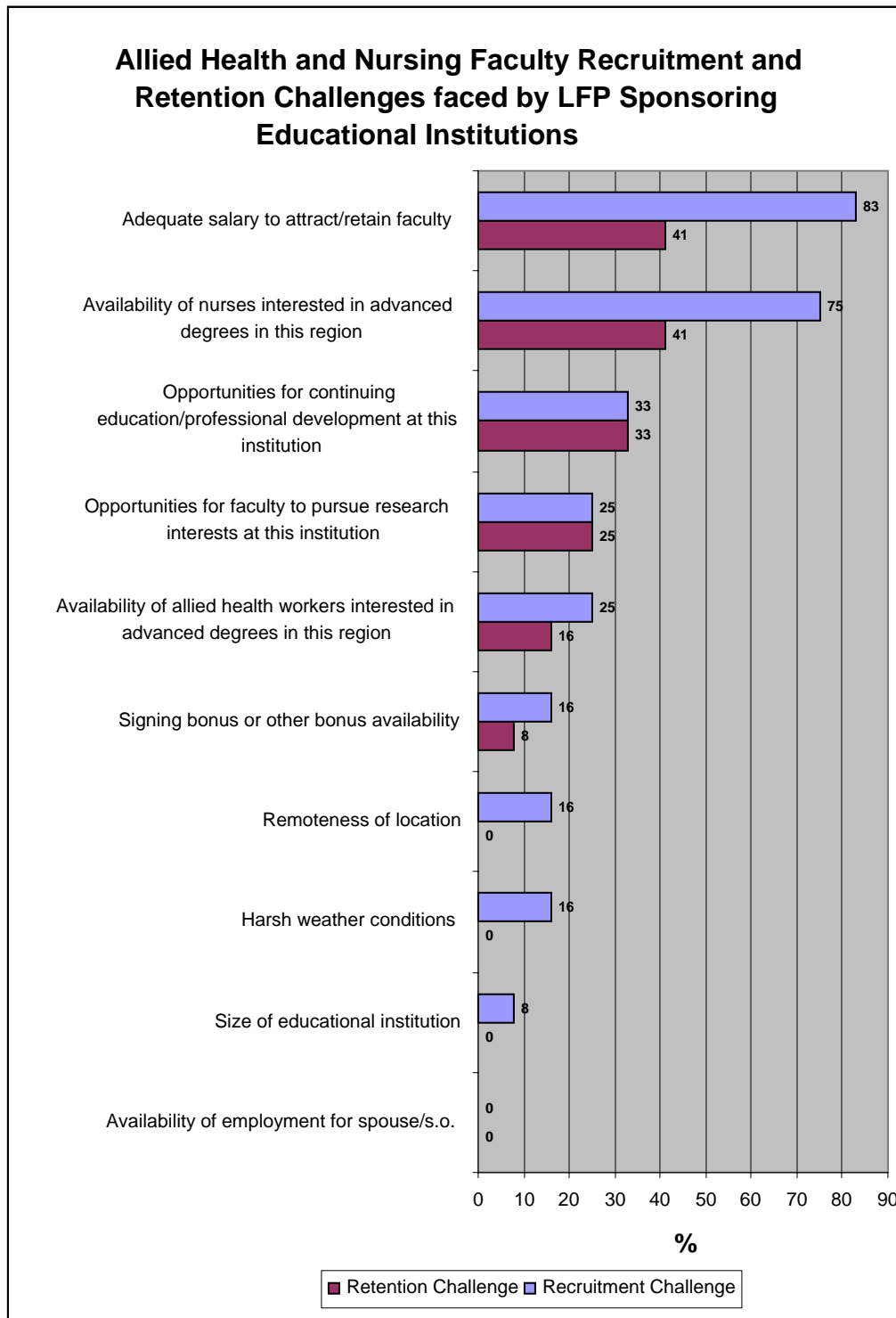
***“I am so appreciative of this loan repayment money. It is special incentive for choosing to live and work in a rural area, especially when the closest available job was 65 miles away.”***

**Rural pharmacist**

The top recruitment and retention challenges faced by the sponsoring health care facilities are displayed below. Adequate salary, and the availability of nurses and primary care physicians in the region were the top recruitment and retention challenges.



Educational institutions that train allied health and nursing occupations were asked about their recruitment and retention challenges for faculty members. Adequate salary to attract allied health and nursing faculty was the primary recruitment and retention challenge for these institutions and appeared to be even more of a challenge than for the sponsoring health care facilities. Comments from sponsoring educational institutions indicated that competition with private colleges/universities was also a faculty retention factor.



Survey data support four key findings related to recruitment and retention challenges encountered by sponsoring facilities (placement sites). These include the following.

- Adequate salary was the primary recruitment and retention challenge cited by the Sponsoring facilities/Institutions, although it was most notable with the nursing homes and clinics with less than 20,000 patient visits in 2006.
- Adequate salary was the primary recruitment and retention challenge cited by the sponsoring educational institutions.
- Availability of nurses was the leading secondary recruitment challenge for sponsoring facilities.
- Availability of nurses interested in advanced degrees was the leading secondary recruitment challenge for sponsoring educational institutions.

#### **Recruitment and Retention Challenges by Type of Sponsoring Facility/Institution Minnesota Loan Forgiveness Program Evaluation**

Facility/Institution	Adequate Salary is a Recruitment Challenge	Adequate Salary is a Retention Challenge
Nursing Homes	86% (20/23)	73% (17/23)
Educational Institutions	83% (10/12)	41% (5/12)
Clinics $\leq$ 20,000 patient visits in 2006	57% (8/14)	35% (5/14)
Clinics with $>$ 20,000 patient visits in 2006	50% (6/12)	33% (4/12)
Pharmacy	40% (6/15)	26% (4/15)
Dental Clinic	30% (6/20)	45% (9/20)

#### **Question 4.**

**What administrative opportunities exist to improve the programs as a result of responses from key program stakeholders? What, if any, process or administrative changes should be considered that would result in a higher number of successful program participants?**

The survey respondents provided high ratings for the majority of administrative tasks of the Loan Forgiveness Program. Consistently, the following functions received good to excellent ratings from stakeholders on administrative tasks performed by the Minnesota Department of Health-Office of Rural Health and Primary Care for the Loan Forgiveness Program:

- Over 90 percent (94.3 percent) of participants rated the **Ease of application** as good to excellent with a range of 87 percent to 100 percent

- Almost 94 percent of participants (93.9 percent) rated the **Notification of selection** as good to excellent with a range of 89 percent to 100 percent and
- With a range of 84 percent to 91 percent, 87 percent of participants rated **Completion of annual forms** as good to excellent. All participant groups gave a slightly lower rating of MDH staff performance on completion of annual forms.

**Completion of Loan Forgiveness Program Administrative Tasks  
as Rated (Good to Excellent) by Participant Group  
Minnesota Loan Forgiveness Program Evaluation- 2007**

Participant Group	Ease of application process	Notification of selection	Completion of annual forms
Rural physician	96.3% (78/81)	93.8% (76/81)	89.6% (69/77)
Mid-level providers	95.6% (44/46)	93.4% (43/46)	84.7% (39/46)
Nurses in nursing homes, ICFMR	95.9% (71/74)	94.6% (71/75)	87.5% (63/72)
Pharmacist	100% (16/16)	100% (16/16)	86.6% (13/15)
Dentist	87.1% (34/39)	89.7% (35/39)	84.2% (32/38)
Allied health and nursing faculty	88.8% (24/27)	92.6% (25/27)	91.3% (21/23)
Total:	<b>94.3%</b> (267/283)	<b>93.9%</b> (266/283)	<b>87%</b> (237/271)

Survey respondents provided comments on their suggestions for improving these administrative tasks. Many participants requested that all forms be available online and at a minimum, a downloadable application from the Internet. Participants asked for electronic follow-up reminders and notification of receipt or missing components of their applications. Some participants requested periodic updates on the program. Many of these suggestions would require MDH to collect and maintain email addresses for participants and systems for maintaining email communication.

A summary of program administration suggestions from facilities and participants are listed below.

**Marketing of programs:**

- Let students of health professional programs know before they graduate that these programs are available. Increasing the amount for some of the programs.
- Link MNCare to this program more aggressively.
- Increase advertising about the programs to schools through additional sources like drug companies, Minnesota Health and Housing Alliance and facilities.
- Partner closely with training sites to encourage students to consider high need settings early in their career.
- Have a flier available on the Minnesota Department of Health-Office of Rural Health and Primary Care Web site to download and print at facilities.
- Send a promotional flier to facilities via email.
- Make the Web site easier to find.

**Recruitment/approval of sponsoring facilities:**

- Put facilities that have enough doctors last on the list for approval as a sponsoring facility.
- List areas or health care facilities that qualify for the program on the Web site.
- Communicate with facilities in underserved areas to encourage them to use the programs as a recruitment tool.

**Processing of forms and participant information:**

- Send an email directly to the clinic manager so employers are aware immediately who is participating.
- Make forms (PDF) available online for download.
- Have a form with a “no changes since last year” check box, which the clinic can verify and return. Annual requirements of forms are redundant.
- Do not require such precision on the loan balance sum of payments
- Offer electronic updates; send an email reminder as due date approaches
- Identify a better process for updating mailing addresses.
- Increase the funding. There are too many applicants for the limited money.
- Do not require notarization of forms in rural areas
- Improve notification process from the Minnesota Department of Health-Office of rural Health and Primary Care when something is missing, especially when an address change or job location change has occurred.
- Do not send out the form so early (payment verification), or send out subsequent reminder forms.
- Notify participants when all the needed paperwork has been received. The annual update of the form and application process is simple and easy.
- Communicate by email on a regular basis.

**Consider Program Requirements in special conditions:**

- Examine the minimum hours requirement when qualified work sites are far away.
- Clearly identify “Dental Hygiene” on forms as an option to attract more persons to this opportunity.
- Include doctoral level persons in the criteria to meet demand for nurse practitioner programs.
- Review current procedures for handling participant disability or death during service obligation period.

**Financial Management:**

- Change the program funds to tax free.
- Withhold income taxes from yearly disbursement
- Take into account recipient attempts to pay off loans on their own to prevent the interest accrual.

### Question 5.

**What is the relative importance of the availability of loan forgiveness as a factor in practice location decision-making? What is the impact of deductibility of student loan debt on income taxes as a decision-making factor? And, what is the impact of IRS treatment of loan forgiveness as income?**

#### **Increasing Health Occupations Educational/Training Debt**

Program participants reported their health occupation education/training debt in the 2007 survey. Three other groups responded to the same question in the 1999 survey which serves as a basis for comparison. The reported health occupation education/training debt appears to have increased the most between 1999 and 2007 for nurses who elected to practice in nursing homes or ICFMR.

#### **Health Occupations Educational/Training Debt Reported by Participant Group Minnesota Loan Forgiveness Program Evaluation**

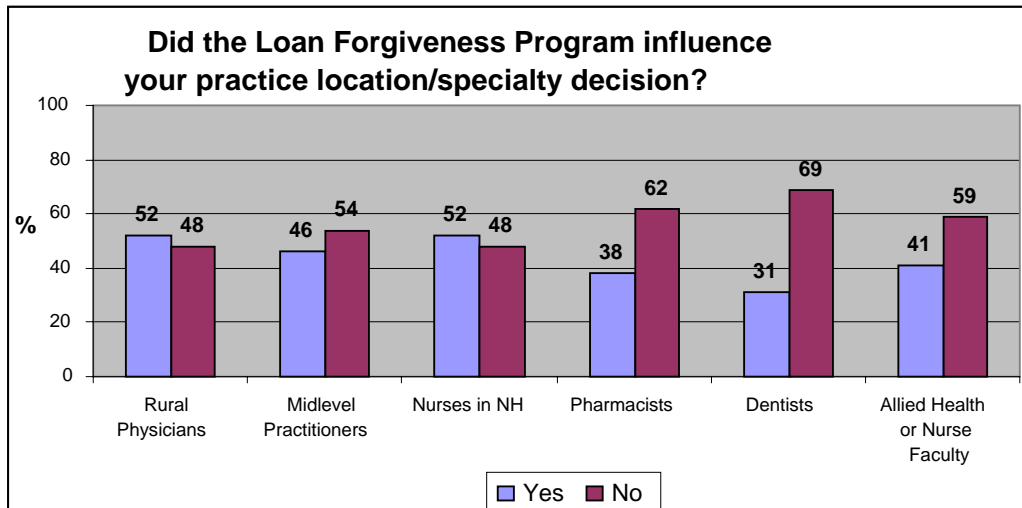
<b>Participant Group</b>	<b>Average 2007</b>	<b>Average 1999</b>	<b>Range 2007</b>	<b>Range 1999</b>
Rural physician	\$100,683	\$72,137	\$ 20,000 - \$250,000	\$20,000 - \$180,000
Mid-level providers	\$ 40,477	\$25,334	\$ 11,000 - \$100,000	\$ 5,000 - \$ 80,000
Nurses in nursing homes, ICFMR	\$ 17,774	\$ 9,880	\$ 2,000- \$ 50,000	\$0 to\$ 40,000
Pharmacist	\$ 94,686	-	\$ 28,000 - \$175,000	-
Dentist	\$117,810	-	\$ 20,000 - \$250,000	-
Allied health and nursing faculty	\$ 30,005	-	\$ 11,700 - \$ 75,000	-

Program participants were very appreciative of the financial assistance. Some participants inquired if they could have even more of their loans paid if they remained at rural locations beyond their four-year commitment.

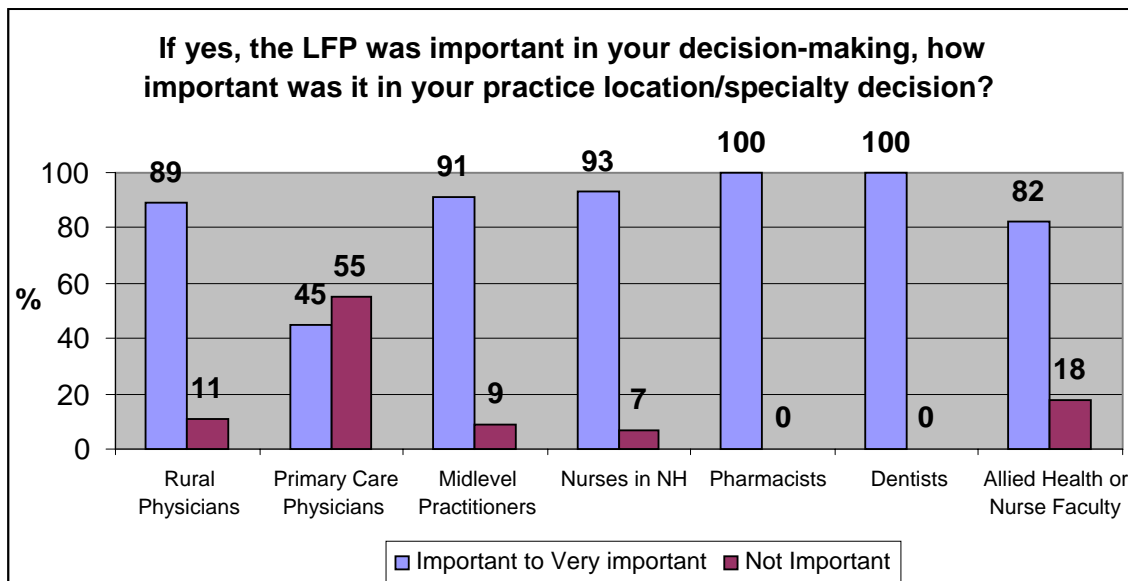
Some program participants were highly critical of the interpretation that the Loan Forgiveness Funds must be treated as income and are taxed as income by both the state and federal government. Several participants had received alternative tax advice from their private accountants. It appears important to revisit the question of whether these funds are to be treated as income or are payment for a service obligation. Recent IRS rulings could be forwarded to the State Attorney General's office for a review of any relevant changes in tax treatment of the funds for program participants in 2008.

***“Rural Minnesota continues to need primary care doctors to help support our hospitals and existing staff. Anything that you can do to assist would be greatly appreciated!”*** Rural Minnesota physician

**The Program influences physicians and nurses to choose rural/specialty practice**  
The availability of the Loan Forgiveness Program was a variable factor in the selection of high need settings by the responding program participants in this survey.



For those program participants who were influenced by the Loan Forgiveness Program to select high need settings, it was an important motivator.



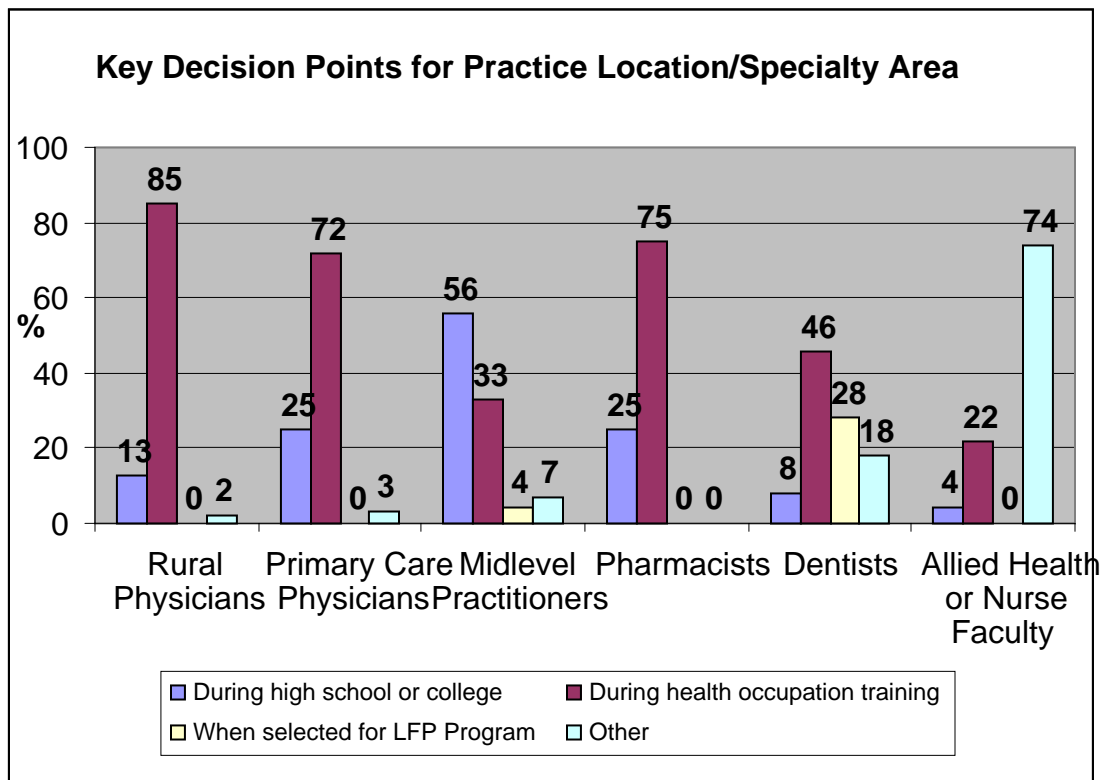
## Question 6.

**At what stage in a student's educational program would be the optimal time to market the loan forgiveness program(s) to influence the decision to practice in a high need setting?**

The surveys included important information on when respondents identified primary care, rural area, nursing home/ICFMR or low income/public programs as their practice preference. Identifying when future health care practitioners decide on an area or practice specialty will support more targeted marketing of programs and supports to these students.

Physicians appear to be deciding earlier in their training to specialize in primary care.

- In the 2007 evaluation, 72 percent of the physician respondents had made that decision between high school and their third year of medical school. By the fourth year of medical school, 93 percent of the physician respondents in 2007 decided to specialize in primary care. This compares to 81 percent of physician respondents identifying the fourth year of medical school as the key time for primary care practice selection in the 1999 evaluation
- When asked if the Loan Forgiveness Program influenced their decision to practice in primary care, 44 percent of the respondents indicated that the program was important to very important in influencing their decision.



Over half of the midlevel practitioners (56 percent) decided to practice in a rural area before or during their undergraduate training.

Nurses focusing on nursing home or ICFMR practice were not asked to identify when they decided to focus in those areas. However, 52 percent did identify that the Loan Forgiveness Program influenced their practice decision. Other reasons for selecting that practice area for this group included a desire to work with the elderly or previous work with a nursing home or with ICFMR clients. This represents a decline from the 1999 evaluation when 74 percent of nurse respondents identified the Loan Forgiveness Program as influencing their practice decision. However, program data document that the highest number of applications since 2003 for the nurse LFP were received in 2007.

The majority (75 percent) of pharmacists decided to practice in a rural area during their pharmacy training while the remainder made their decision between high school and their undergraduate education. The Loan Forgiveness program was not an influencing factor to work in a rural area for the majority (62 percent) of these pharmacists.

The majority (66 percent) of allied health and nursing faculty participants decided to become a health occupations educator/faculty during their employment in a health occupation. Thus targeted recruitment at work sites may be most effective for this group. The majority (59 percent) of the allied health and nursing faculty responded that the Loan Forgiveness Program did not influence their decision to work as a health occupations educator.

While less than half (46 percent) of dentists made their decision during dental training to practice in a clinic serving sliding fee scale or public program patients, that appears to be the best time to try and influence their decision to choose this practice area. Of all participants, dentists had the highest rate of selecting their practice area when they were selected for the Loan Forgiveness Program (28 percent).

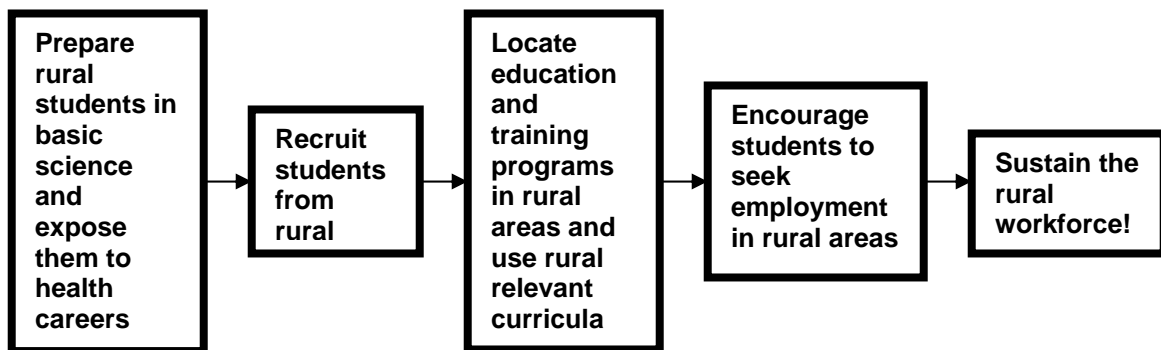
### **The Health Care Safety Net Workforce Development Pipeline**

National research supports the training of future health care workers by investing in elementary and secondary school students with strong math and science education while exposing them to health careers.

- A high school-based “Doctor’s Academy” in California, partnered middle and high school students with university-based health profession students for a successful, community-based academic enrichment program.<sup>1</sup>
- Health professional programs in New Mexico studied over 1,300 recent graduates and found that size of childhood town, rural practicum completion, age at graduation and discipline were associated with rural practice choice. Rural practice background and preference for smaller communities are associated with both recruitment and retention.<sup>2</sup>
- Family medicine residents in Alberta, Canada established an outreach program to rural and regional high schools in partnership with community-based hospitals, physicians, pharmacists, nurses, physical and occupational therapists. This early exposure to health careers was identified as an effective way to increase interest in health careers.<sup>3</sup>

- A University of California study found that census tract of a medical resident's high school was predictive of future practice location for rural medical practice and for practice in a proportionally high minority community.<sup>4</sup>
- A study of undergraduate and graduate nursing students from the United States and Canada found that those with early life experiences and connections in small communities are more likely to choose this future practice setting.<sup>5</sup>
- The University of Virginia Medical School studied medical students' high school, college and permanent addresses and their predictive value of rural medical practice. The "grew up rural" self-description and career preferences were predictive of future rural practice.<sup>6</sup>

## The Rural Workforce Pipeline



(Source: M Schoenbaum. Minnesota Department of Health. Office of Rural Health and Primary Care. Pipeline Power. 2007)

These strategies for increasing rural health care providers can also be expanded to boost the supply of urban health care practitioners. Additionally, the following components can be part of the investment in Health Care Safety Net Workforce Development:

- Recruit traditional and non-traditional students into health careers training
- Locate education and training programs, especially clinical training experiences, in high need settings
- Encourage graduates to seek employment in high need settings and
- Retain the safety net workforce.

The investment in the Minnesota Loan Forgiveness programs contributes to the Health Care Safety Net Workforce Development statewide.

### Question 7.

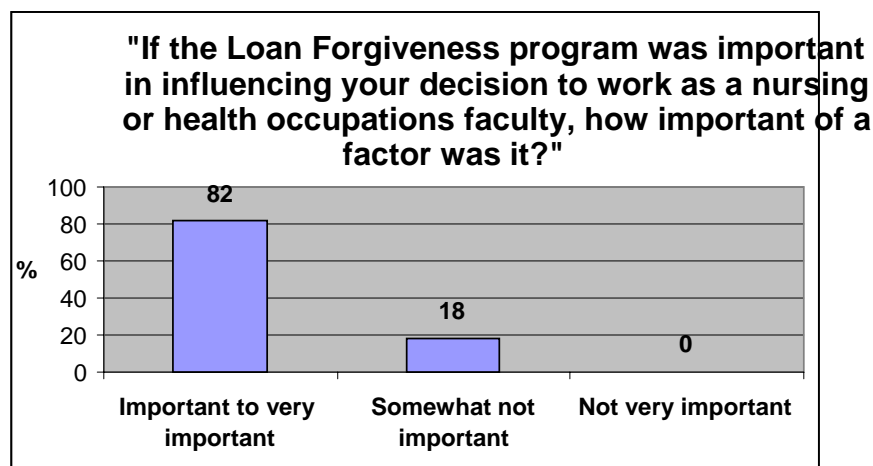
**Does the allied health care and nursing faculty loan forgiveness program(s) result in an increase in the number of post-secondary teaching faculty members and is the program successful in increasing the number of professionals with recent clinical experience who enter teaching?**

This relatively new program has resulted in commitments from 32 allied health or nursing faculty in the past two years. The survey does not provide information to determine if these individuals would have pursued teaching if the Loan Forgiveness Program was not available. However, several questions asked in the survey did identify the influence that the Loan Forgiveness Program played in their decision and other incentives they perceived for this career change.

Forty percent of the participants in this program responded that the Loan Forgiveness Program influenced their decision to work as a health occupations educator/faculty and 82 percent of these participants felt that the program was important to very important in influencing their decision.

#### **Importance of the Loan Forgiveness Program (LFP) in influencing your decision to work as a health occupations educator/faculty**

	<b>Did the LFP influence your decision to work as a health occupations educator/faculty?</b>
<b>Yes</b>	40.7% (11/27)
<b>No</b>	59.3% (16/27)



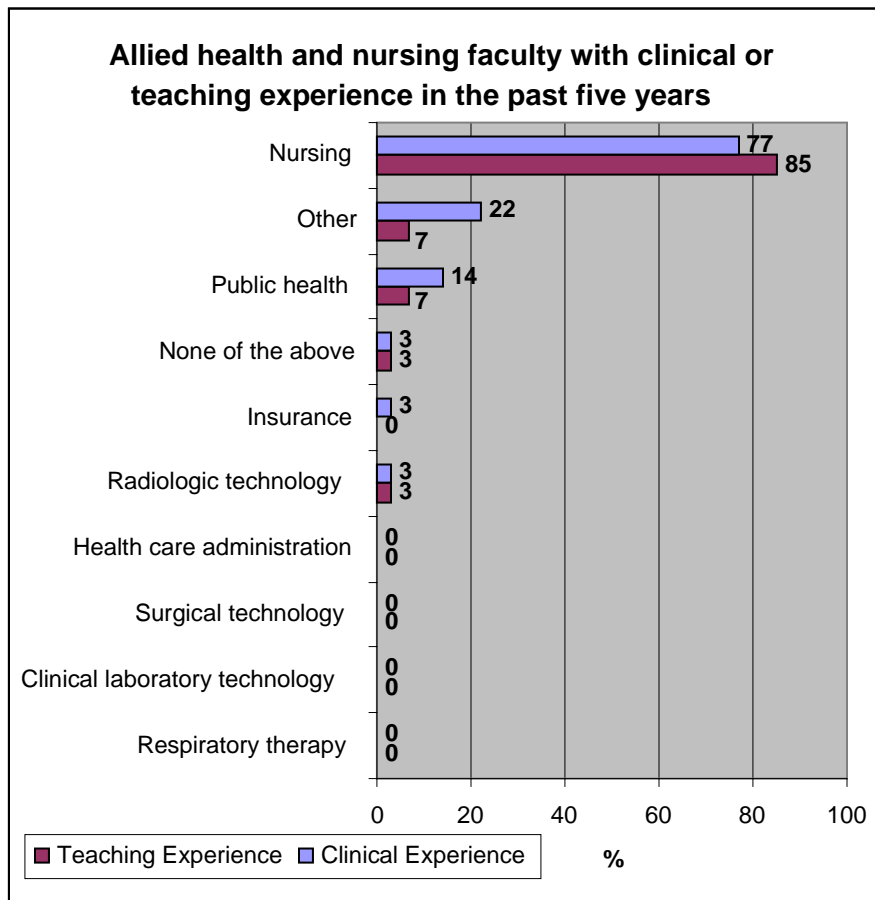
Participants responding that LFP did influence their decision to work as health occupations educators were similar in employment locations to all program participants.

***“It is one of the best recruitment tools we use.”***

**Dental clinic serving three Minnesota communities**

### **Recent clinical experience of allied health and nursing faculty participants**

Over ninety-two percent of the program participants had recent clinical experience in one or more areas over the past five years. Even more participants (96 percent) had recent teaching experiences. Twenty-two percent of participants had “other” previous clinical experience, which included a foreign medical clinic, dental hygiene, paramedic service, mental health and clinical education.

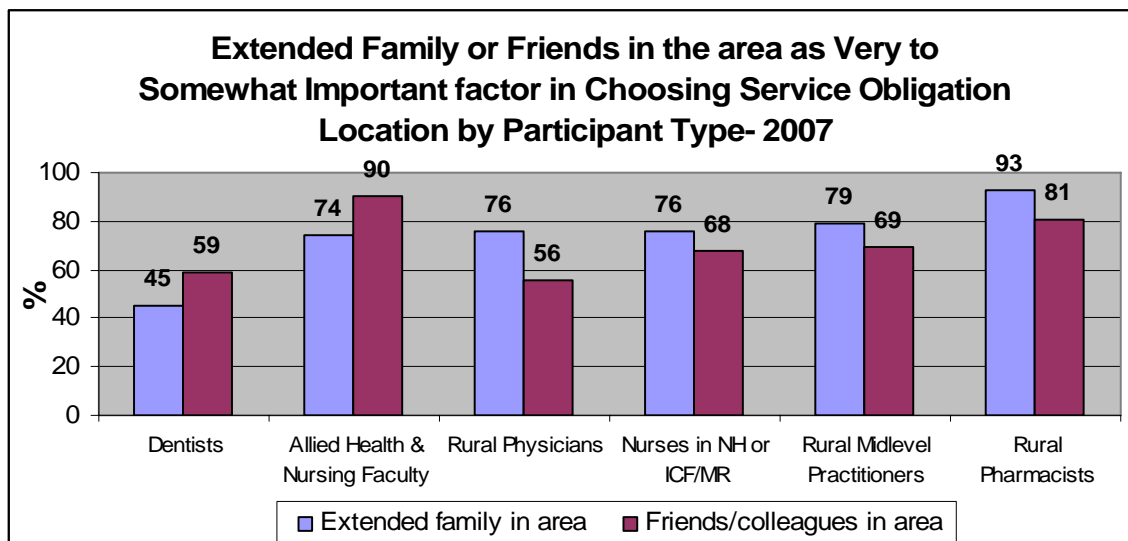


## Question 8.

### Where are the program participants from—rural or urban settings? Does their point of origin influence their decision to practice in a rural setting?

Recent research indicates that the census tract/zip code/city of high school attendance or answer to a question of “grew up rural” has predictive value in identifying health care practitioners who will choose to practice in rural areas. Census tract of past residence and high school attendance also have shown some predictive value among medical residents who choose to practice in a proportionally high minority community.<sup>2,4,5,6</sup>

There were no specific questions asked in this survey on rural or urban residency prior to health occupation training or during training. Applications indicating this information were not available for all participants due to the length of the look-back period. The survey development team used a question to attempt to get this information as it related to choosing the location of the service obligation position. For rural health care practitioners (physicians, mid-level providers and pharmacists), over 70 percent had extended family in the area of their service obligation site.



### Question 9.

**Are there currently, or projected to be, other health occupations that are recruitment critical for rural Minnesota? Should these be considered for future loan forgiveness programs?**

Respondents from the Sponsoring Health Care Facilities identified the following “recruitment critical” health occupations that should be considered for future Loan Forgiveness Programs:

- Physical therapy, occupational therapy, speech therapy
- Medical records staff, health information managers, coders
- Psychiatrists
- Laboratory technicians and radiology technicians
- Respiratory therapist
- Surgical technicians
- Specialists, such as orthopedic, pediatrics, internal medicine
- Registered nurses for hospitals and clinics
- Anesthesia (CRNAs)
- General surgery, OB/GYN
- Behavioral health (mental health and chemical dependency) professionals.

***“It at least brings health care professionals to the rural area. Some of them are bound to end up at our nursing home. As a nursing home, we have inadequate funding and cannot compete with hospital wages, much less have monies for recruitment bonuses.”***

**A rural Minnesota nursing home administrator**

## Question 10.

### How did participants and sponsoring facilities hear about the Loan Forgiveness Program and what program marketing suggestions do they have for the Minnesota Department of Health-Office of Rural Health and Primary Care?

Information about these programs is primarily spread by word of mouth and during health occupation training according to the survey respondents.

Two other marketing sources were effective in reaching nursing participants and facilities.

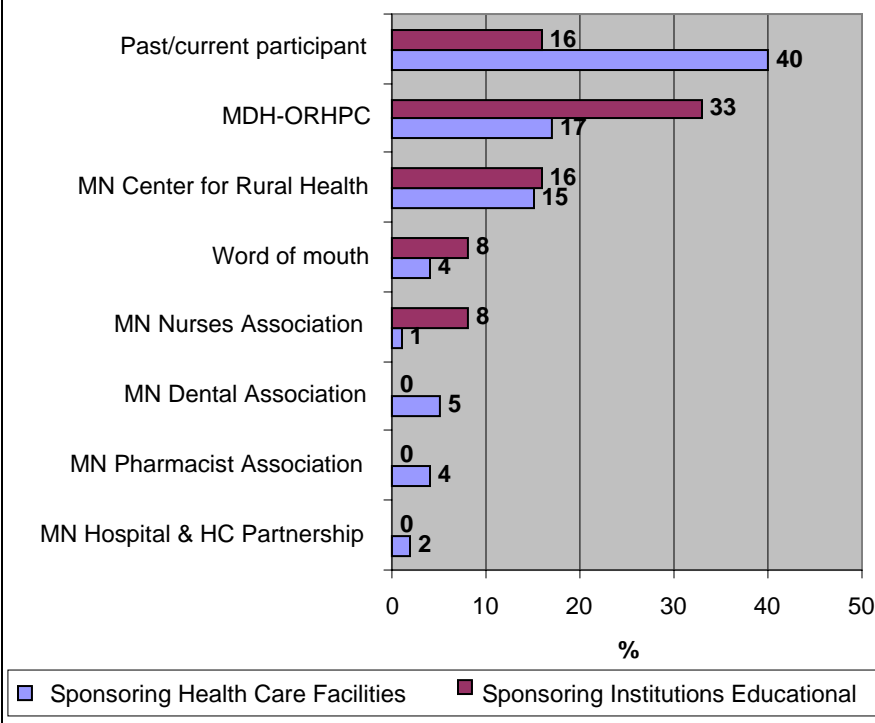
- Bulletin board postings, which were the leading way that nurses found out about the LFP in the 1999 evaluation (53 percent), were the third best method of informing nursing students about the program.
- Sponsoring facilities identified their main source of information about the program as “past/current program participants” in 40 percent of their responses.
- At least 25 percent of the nurses surveyed indicate that they previously worked at their placement site prior to completing their nursing education. Several comments from nurses indicated that the nursing home’s nursing director was committed to staff development and had informed them of the LFP opportunities.

Less than half (43 percent) of the sponsoring facilities that responded to the survey used the Loan Forgiveness Program as an incentive in their health care provider recruiting. Many of the completed surveys from sponsoring facilities requested more information about the Loan Forgiveness Programs to use in their recruiting efforts.

#### Sponsoring facilities/Institutions: How did you learn about this program?

	<b>Sponsoring Health Care Facilities</b>	<b>Sponsoring Educational Institutions</b>
From a past/current participant	40.7% (35/86)	16.6% (2/12)
MDH-ORHPC	17.4% (15/86)	33.3% (4/12)
MN Center for Rural Health	15.1% (13/86)	16.6% (2/12)
Word of mouth	4.6% (4/86)	8.3% (1/12)
MN Nurses Association	1.1% (1/86)	8.3% (1/12)
MN Dental Association	5.8% (5/86)	0% (0/12)
MN Pharmacist Association	4.6% (4/86)	0% (0/12)
MN Hospital and Healthcare Partnership	2.3% (2/86)	0% (0/12)

### Sponsoring Facilities: How did you learn about the LFP?

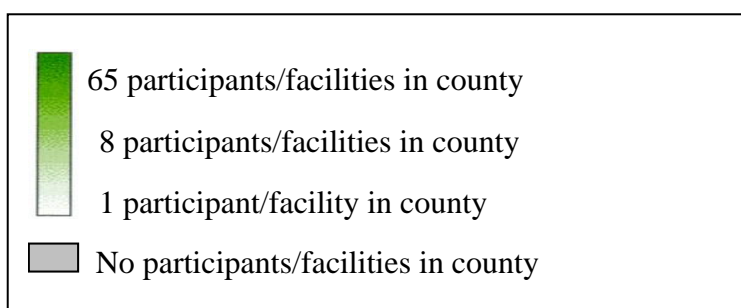
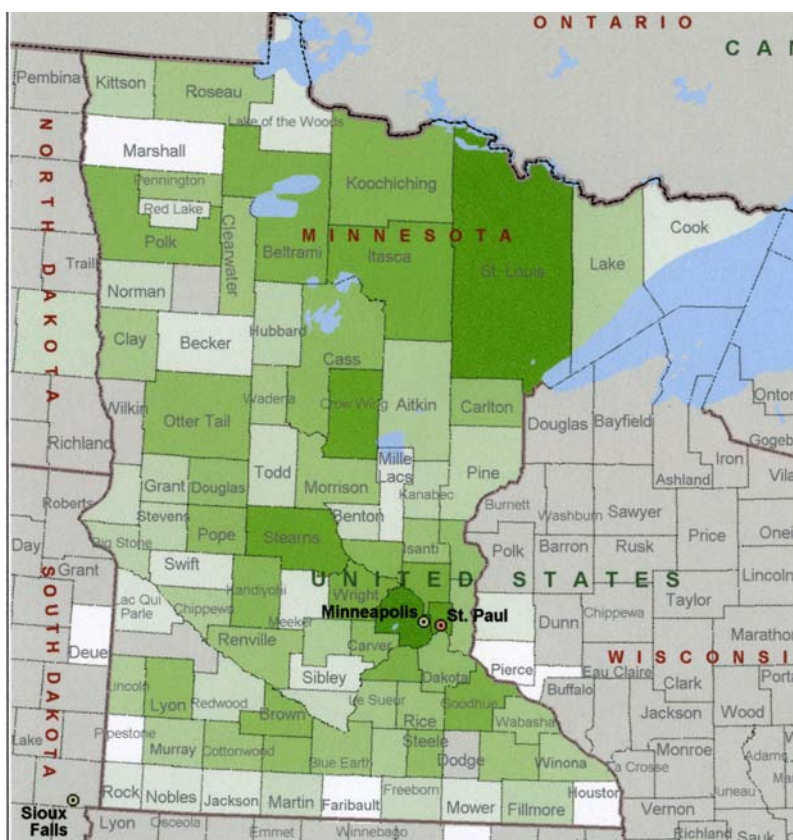


### Participants: How did you learn about this program?

	Rural Physician	Rural Midlevel provider	Nurses in nursing homes	Rural Pharmacist	Dentist	Allied Health/ Nursing Faculty
Word of mouth	48% (39/81)	34% (16/46)	29% (23/77)	62% (10/16)	76% (29/38)	70% (19/27)
Bulletin Board	0%	13% (6/46)	23% (18/77)	0%	0%	0%
Health occupation training program	30% (25/81)	41% (19/46)	36% (28/77)	43% (7/16)	13% (5/38)	11% (3/27)
MN Center for Rural Health	30% (25/81)	19% (9/46)	0%	0%	0%	3% (1/27)
MDH-ORHPC	18% (15/81)	13% (6/46)	0%	0%	10% (4/38)	18% (5/27)

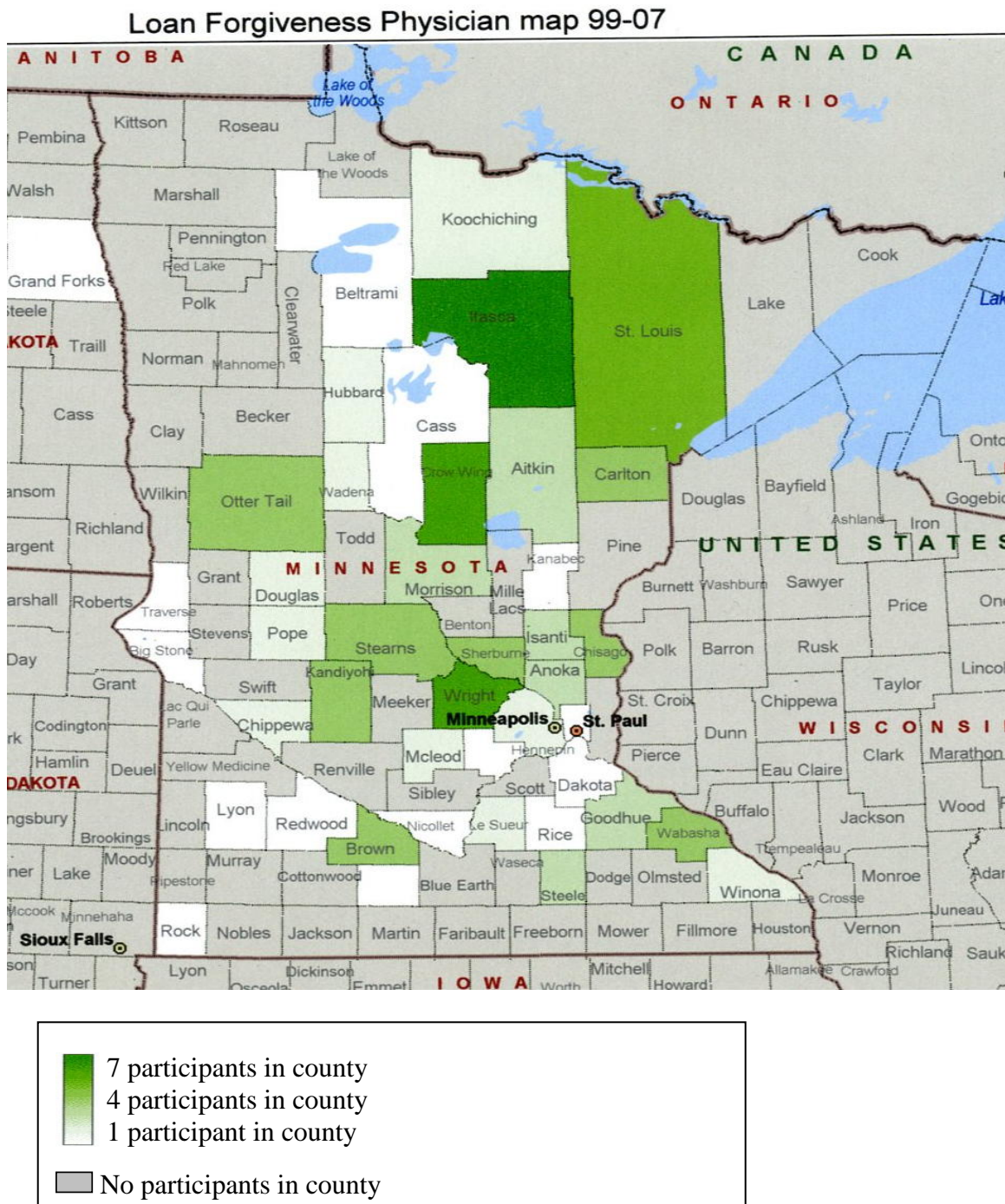
## Counties served by Loan Forgiveness Programs

Counties with Minnesota Loan Forgiveness Participants or Service Obligation Facilities from 1999 to 2007 (n=673)



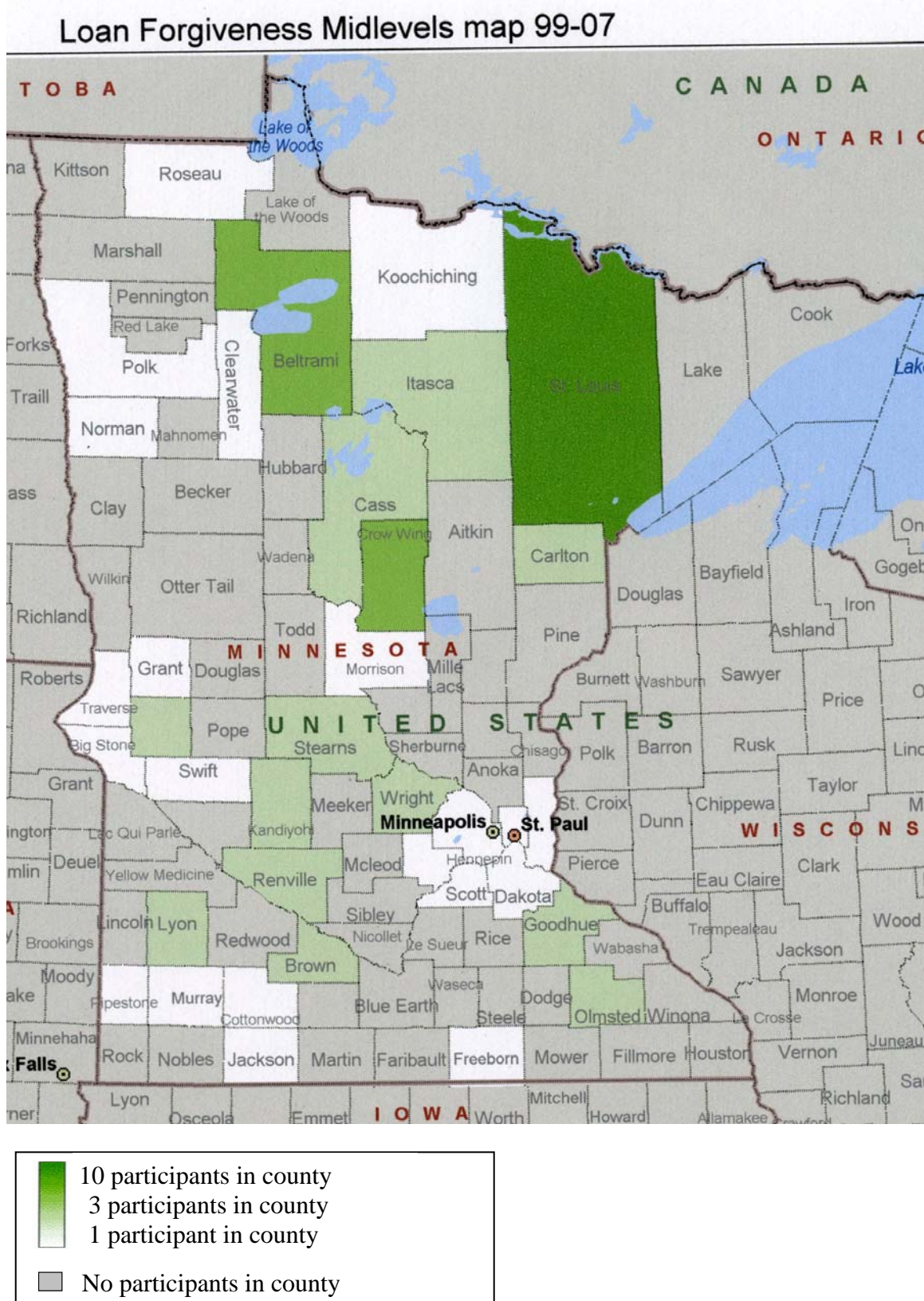
Note: Several non-Minnesota counties report facility or participant addresses for two reasons: the reporting address for a health care system with a sponsoring facility in Minnesota may be located in an adjoining state; or a participant may have subsequently moved to an adjoining state.

Counties with Minnesota Loan Forgiveness Physician Participants from 1999 to 2007  
(n=108)

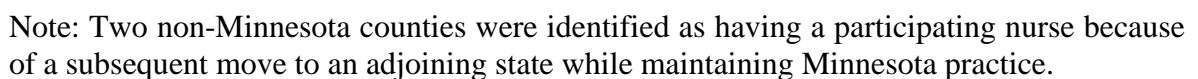


Note: One non-Minnesota county was identified as having a participating physician because of a subsequent move to an adjoining state while maintaining Minnesota practice.

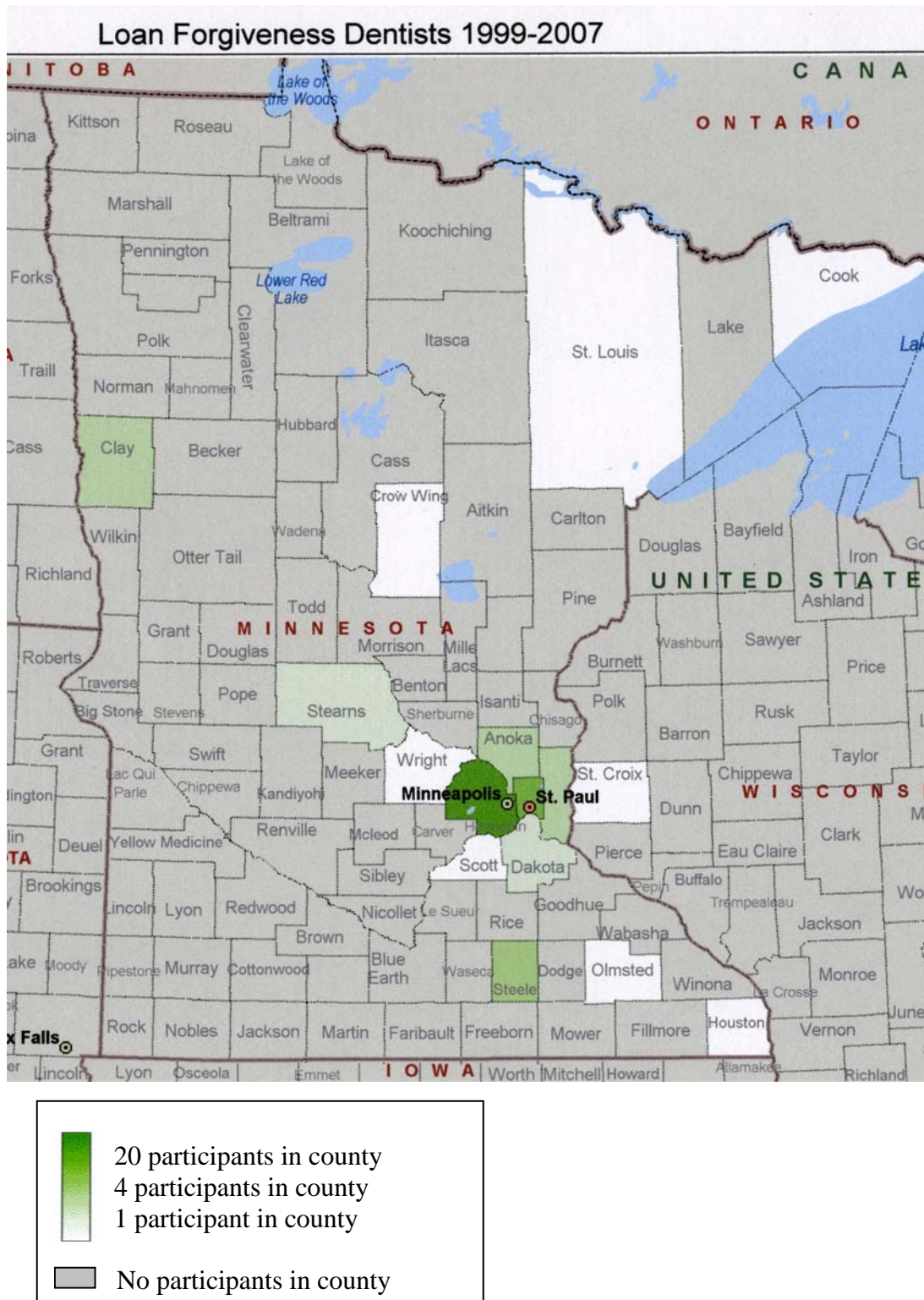
Counties with Minnesota Loan Forgiveness Mid-level Participants from 1999 to 2007 (n=61)



### Loan Forgiveness Nurse map 99-07

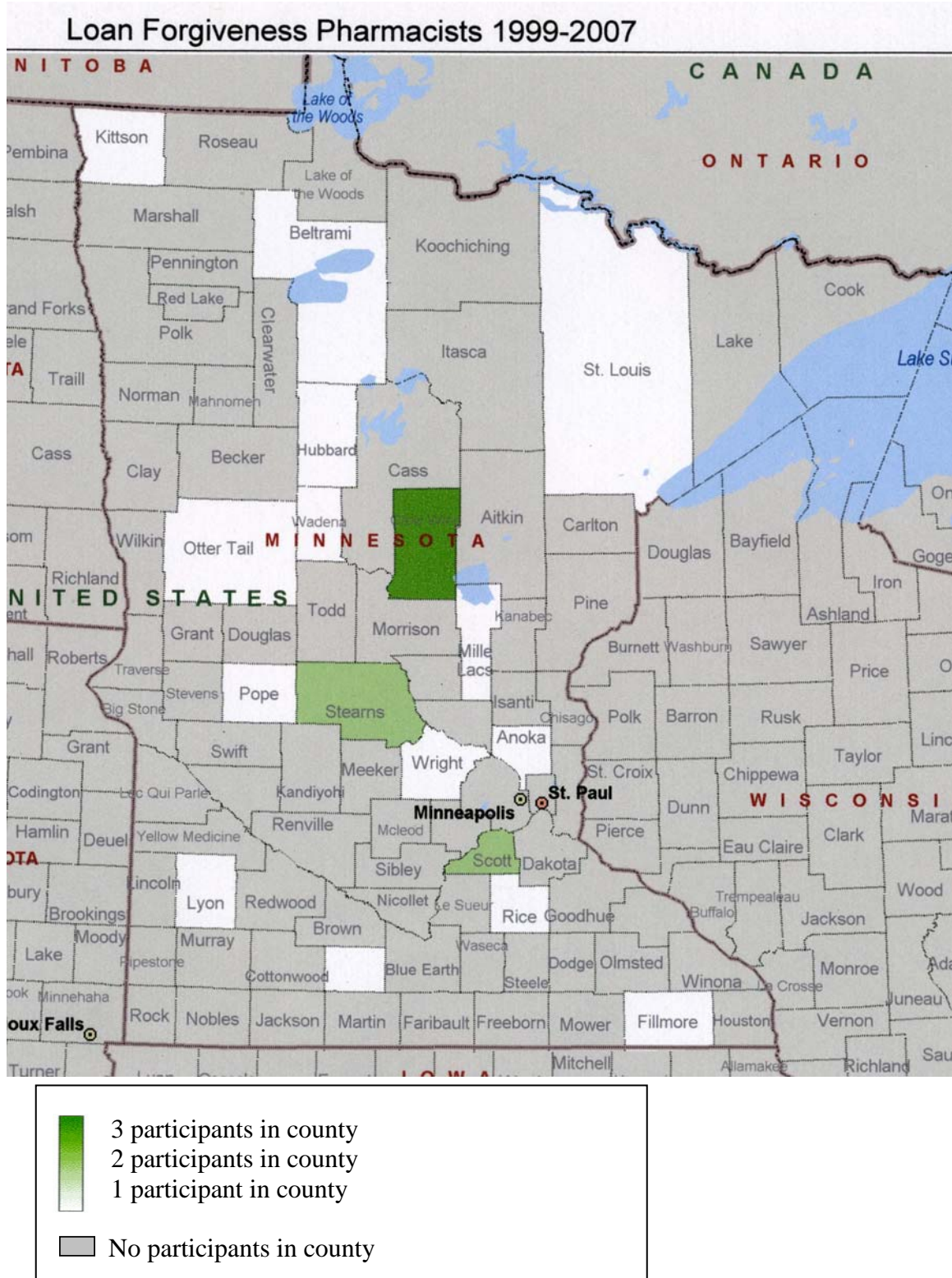


Counties with Minnesota Loan Forgiveness Dentists from 1999 to 2007 (n=51)

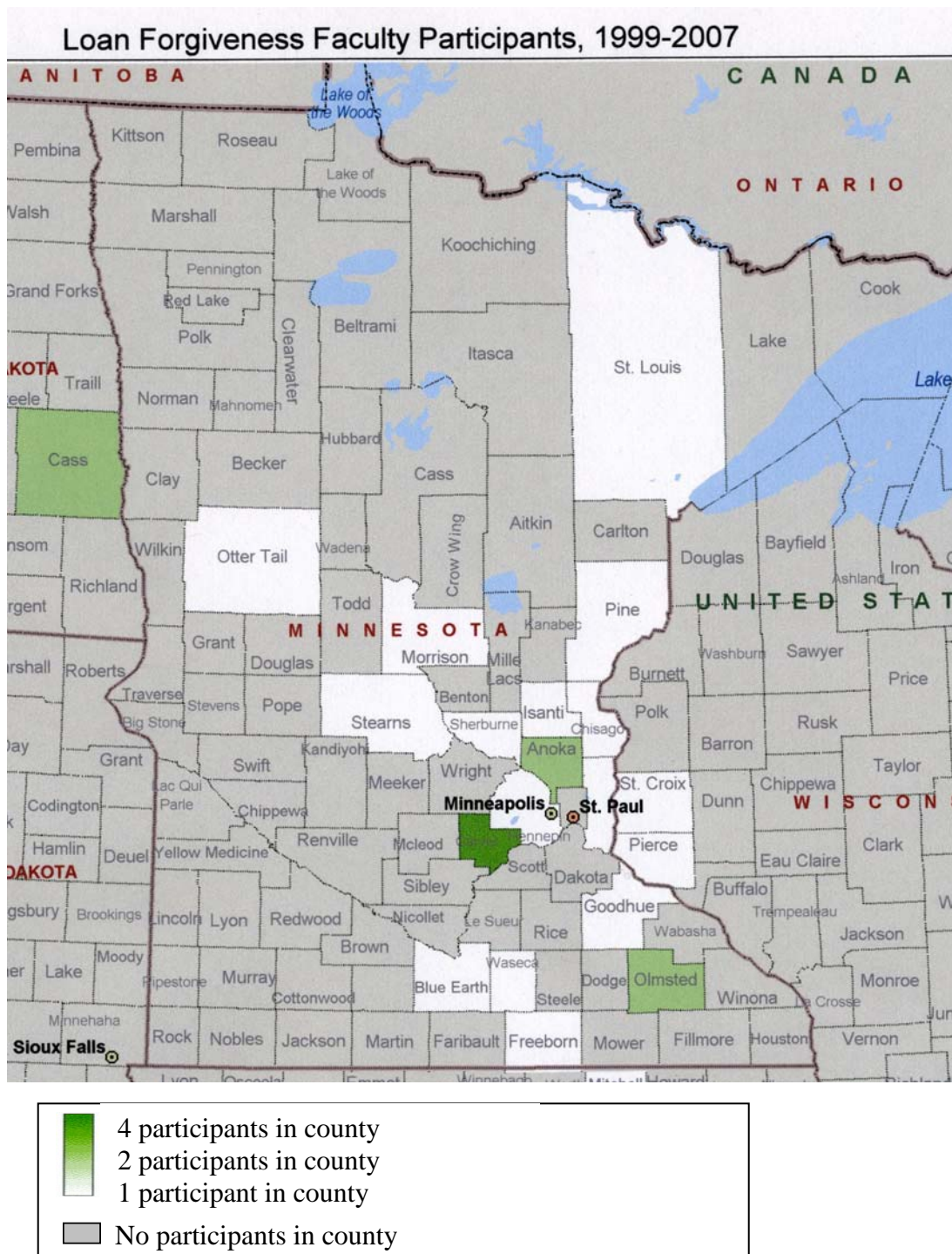


Note: One non-Minnesota county was identified as having a participating dentist because of a subsequent move to an adjoining state.

Counties with Minnesota Loan Forgiveness Pharmacists from 1999 to 2007 (n=21)

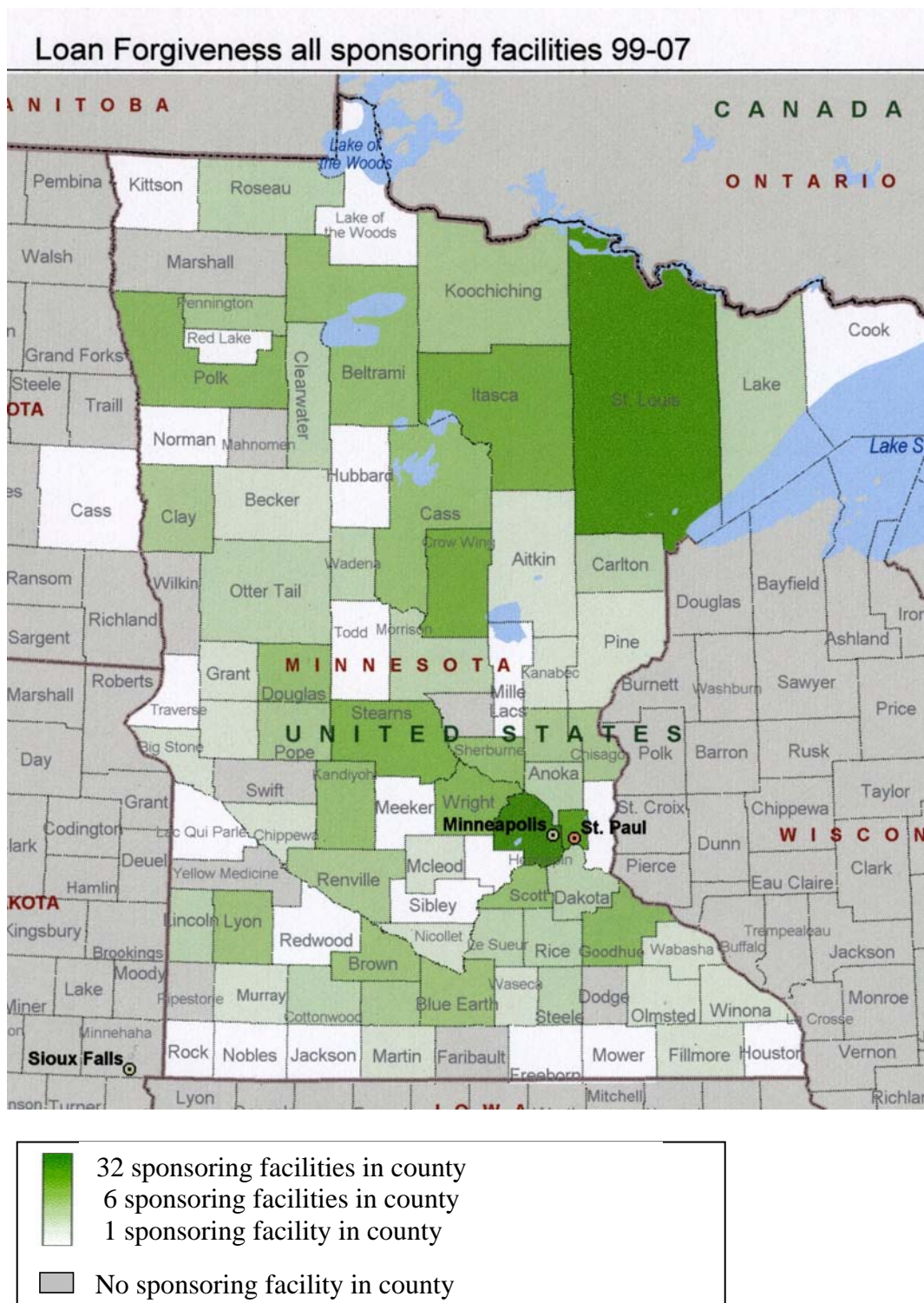


Counties with Minnesota Loan Forgiveness Allied Health and Nursing Faculty from 1999 to 2007 (n=22)



Note: Four non-Minnesota counties were identified as having a participating nursing or allied health faculty participants because of a subsequent move to an adjoining state while teaching in a Minnesota school.

Counties with Minnesota Loan Forgiveness Sponsoring Facilities from 1999 to 2007 (n=303)



Note: One non-Minnesota county reported an administrative address in an adjoining state. The sponsoring facility is in Minnesota.

### Minnesota Loan Forgiveness Program-Participants and Facilities by County, 1999-2007

County	All Facilities & Participants	Physicians	Midlevels	Nurses	Dentists	Pharmacists	Faculty
Aitkin	5	3	0	0	0	0	0
Anoka	17	3	0	5	3	1	2
Becker	2	0	0	0	0	0	0
Beltrami	15	1	3	4	0	1	0
Benton	3	0	0	3	0	0	0
Big Stone	4	1	1	0	0	0	0
Blue Earth	8	0	0	2	0	0	1
Brown	12	4	2	1	0	0	0
Carlton	9	4	2	0	0	0	0
Carver	10	1	1	3	0	0	4
Cass	11	1	2	2	0	0	0
Chippewa	5	2	0	1	0	0	0
Chisago	9	4	0	0	0	0	1
Clay	6	0	0	0	3	0	0
Clearwater	7	0	1	3	0	0	0
Cook	2	0	0	0	1	0	0
Cottonwood	7	0	1	3	0	0	0
Crow Wing	28	6	3	4	1	3	0
Dakota	9	1	1	3	2	0	0
Dodge	0	0	0	0	0	0	0
Douglas	9	2	0	1	0	0	0
Faribault	1	0	0	1	0	0	0
Fillmore	4	0	0	1	0	1	0
Freeborn	3	0	1	0	0	0	1
Goodhue	15	3	2	2	0	0	1
Grant	4	0	1	1	0	0	0
Hennepin	61	2	1	9	19	0	1
Houston	1	0	0	0	1	0	0
Hubbard	4	2	0	0	0	1	0
Isanti	8	3	0	0	0	0	1
Itasca	19	7	2	1	0	0	0
Jackson	2	0	1	0	0	0	0
Kanabec	4	1	0	1	0	0	0
Kandiyohi	12	4	2	0	0	0	0
Kittson	4	0	0	2	0	1	0
Koochiching	13	2	1	6	0	0	0
Lac Qui Parle	2	0	0	1	0	0	0
Lake	5	0	0	1	0	0	0
Lake of the Woods	2	0	0	1	0	0	0
Le Sueur	6	2	0	1	0	0	0
Lincoln	5	0	0	2	0	0	0
Lyon	10	1	2	1	0	1	0
McLeod	5	2	0	1	0	0	0
Mahnomen	0	0	0	0	0	0	0
Marshall	1	0	0	1	0	0	0
Martin	3	0	0	1	0	0	0
Meeker	2	0	0	1	0	0	0
Mille Lacs	2	0	0	0	0	1	0

County	All Facilities & Participants	Physicians	Mid- levels	Nurses	Dentists	Pharmacists	Faculty
Morrison	8	3	1	1	0	0	1
Mower	2	0	0	1	0	0	0
Murray	5	0	1	2	0	0	0
Nicollet	3	1	0	0	0	0	0
Nobles	2	0	0	1	0	0	0
Norman	3	0	1	1	0	0	0
Olmsted	7	0	2	0	1	0	2
Otter Tail	11	4	0	2	0	1	1
Pennington	7	0	0	3	0	0	0
Pine	4	0	0	1	0	0	1
Pipestone	1	0	1	0	0	0	0
Polk	13	0	1	5	0	0	0
Pope	11	2	0	4	0	1	0
Ramsey	32	1	1	1	8	0	0
Red Lake	2	0	0	1	0	0	0
Redwood	3	1	0	1	0	0	0
Renville	8	0	2	2	0	0	0
Rice	7	1	0	1	0	1	0
Rock	2	1	0	0	0	0	0
Roseau	6	0	1	2	0	0	0
Saint Louis	46	5	10	5	1	1	1
Scott	15	0	1	5	1	2	0
Sherburne	12	4	0	1	0	0	1
Sibley	2	0	0	1	0	0	0
Stearns	25	4	2	4	2	2	1
Steele	10	3	0	0	4	0	0
Stevens	4	0	2	0	0	0	0
Swift	2	0	1	1	0	0	0
Todd	3	0	0	2	0	0	0
Traverse	3	1	1	0	0	0	0
Wabasha	6	4	0	0	0	0	0
Wadena	6	2	0	0	0	1	0
Waseca	5	0	0	2	0	0	1
Washington	7	0	1	1	3	0	1
Watsonwan	10	1	0	4	0	1	0
Wilkin	2	0	0	0	0	0	0
Winona	5	2	0	1	0	0	0
Wright	17	6	2	1	1	1	0
Yellow Medicine	0	0	0	0	0	0	0
	693	108	61	137	51	21	22

## Recommendations for Consideration

### **1. Target marketing of the rural health care opportunities to high school and undergraduate students in health occupations training.**

#### Rationale:

- National research has identified effective outreach models for health occupations workforce development, especially for rural communities.
- Investment in rural health training programs at the high school, community college and college level in targeted Minnesota communities may be viewed as an investment in producing future health care providers who choose to practice near extended family in their rural communities.
- Linking mentorship programs at rural high schools with local health care facilities may be both a youth development and economic development engine to nurture health care leadership and entrepreneurship in rural communities.
- Over 70 percent of the participating physicians, nurses, midlevel practitioners, pharmacists and allied health and nursing faculty chose their service obligation location because it was “important” to “very important” that they had extended family in the area.
- Most of the midlevel practitioners (55 percent) decided to practice in a rural area before or during their undergraduate training.
- The majority (75 percent) of pharmacists decided to practice in a rural area during their pharmacy training while the remainder made their decision between high school and their undergraduate education.
- Of the physician respondents, 71 percent had made the decision to specialize in primary care sometime between high school and their third year of medical school. By the fourth year of medical school, 93 percent of the physician respondents in 2007 decided to specialize in primary care.
- Of responding physicians, 44 percent decided to practice in a rural area between high school and their third year of medical education.

### **2. Invest in additional communication materials and marketing efforts that promote the Loan Forgiveness Programs and the Health Care Safety Net Workforce Development Pipeline in Minnesota.**

#### Rationale:

- The Health Care Safety Net Workforce Development Pipeline in Minnesota could be a model of local-state and public-private partnerships that support the state’s health care economy and resident needs.
- Continue and expand marketing of the programs to potential sponsoring facilities (placement sites) in rural areas of the state with major recruitment challenges.
- Counties with no LFP participants or sponsoring facilities in the past eight years could benefit from additional outreach efforts.
- A quarter of the responding nurses identified that they worked at the LFP sponsoring facility in the past. Many of these commented that their current employers (nursing homes and ICFMR), promoted their continued education and the LFP program.

### **3. Maximize the use of technology to increase awareness and track program outcomes.**

Rationale:

- Program participants and sponsoring facilities want more electronic communication/updates from Minnesota Department of Health-Office of Rural Health and Primary Care about the Loan Forgiveness Program to keep them informed of their status.
- Suggestions from participants and facilities include: implementation of an electronic newsletter for all participants and sponsoring institutions/facilities; an electronic application and notification system for LFP administrative services; identification of all sponsoring facilities by type, main contact person, and past/current LFP participants; and maintaining email addresses on all participants and contact persons in each sponsoring facility.
- Consider targeting some communication efforts to rural Primary Care and Specialty Clinics that have fewer than 20,000 patient visits because they valued the LFP the most (60 percent) as a recruitment and retention program.
- Consider targeting communication efforts to nursing homes because these survey respondents valued the LFP the least (20 percent) as a recruitment and retention program, primarily because many were unaware of the program.
- Of the responders from the sponsoring facilities (placement sites), 76 percent were aware of at least one of the Loan Forgiveness Programs by name. Only 17 percent of the survey respondents use the LFP as a recruitment tool.

### **4. Request an opinion from the Attorney General's office on the tax deductibility of the service obligation funds in light of several recent tax rulings.**

Rationale:

- Adequate salary remains a recruitment challenge for nursing homes, small clinics and educational institutions.
- Nursing homes (86 percent) and educational institutions (83 percent) saw "adequate salary for staff" as the primary recruitment challenge.
- A vocal minority of several physicians, dentists and nurses identified differing advice from their accountants on the taxability of the LFP payments.
- The usefulness of this financial tool to assist rural health and specialty services may decline if tax consequences on new health care employees are a hardship.

In conclusion, the Loan Forgiveness Programs examined in this report and administered by the Minnesota Department of Health-Office of Rural Health and Primary Care are successfully meeting their program goals and increasing the number of health care providers and educators in rural Minnesota and specialty locations.

## **Selected Resources and References**

Minnesota Department of Health-Office of Rural Health and Primary Care-Loan Forgiveness Programs <http://www.health.state.mn.us/divs/cfh/orhpc/loan/home.htm>

Rural Health Resource Center [www.ruralcenter.org/mcrh](http://www.ruralcenter.org/mcrh)

American Association of Family Practice-Funding and Resources  
<http://www.aafp.org/online/en/home/clinical/publichealth/culturalprof/underserved/minnesota.html>

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- <sup>1</sup> Weaver S. *Sunnyside High School Doctor's Academy: a principal's experience with HPPI*. Acad Med. 2006; Jun;81(6 Suppl):S48-50.
  - <sup>2</sup> Daniels ZM, VanLeit BJ, Skipper BJ, Sanders ML, Rhyne RL. *Factors in Recruiting and Retaining Health Professionals for Rural Practice*. J Rural Health. 2007; 23(1):62-71.
  - <sup>3</sup> Bly J. *What is medicine? Recruiting high school students into family medicine*. Can Fam Physician. 2006. Mar;52:329-34.
  - <sup>4</sup> Hughes S, Zweifler J, Schafer S, Smith MA. *High school census tract information predicts practice in rural and minority communities*. J Rural Health. 2005 Summer;21(3):228-32.
  - <sup>5</sup> Bushy A, Leipert BD. *Factors that influence students in choosing rural nursing practice: a pilot study*. Rural Remote Health. 2005 Apr-Jun;5(2):387. Epub 2005 Apr 19.
  - <sup>6</sup> Owen JA, Conaway MR, Bailey BA, Hayden GF. *Predicting Rural Practice Using Different Definitions to Classify Medical School Applicants as Having a Rural Upbringing*. J Rural Health. 2007; 23 (2): 133-140.

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