

**Commission to Study
Primary Care Medical Practice**

INFORMATION ON MEDICAL EDUCATION INCENTIVES

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Title 20-A: EDUCATION**Part 5: POST-SECONDARY EDUCATION**

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Chapter 424: MEDICAL EDUCATION AND RECRUITMENT**(HEADING: PL 1991, c. 830, §4; c. 832, §10 (new))**

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§12101. DefinitionsStatute SearchList of TitlesMaine Law

As used in this chapter, unless the context otherwise indicates, the following terms have the following meanings. [1991, c. 830, §4 (new); c. 832, §10 (new).]

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1. Authority. "Authority" means the Finance Authority of Maine. [1991, c. 830, §4 (new); c. 832, §10 (new).]

2. Chief executive officer. "Chief executive officer" means the Chief Executive Officer of the Finance Authority of Maine. [1991, c. 830, §4 (new); c. 832, §10 (new).]

3. Clinical education. "Clinical education" means any on-location teaching environment ranging from a one-to-one training between a physician and a medical student to a training in a health clinic or hospital with or without a residency program. [1991, c. 830, §4 (new); c. 832, §10 (new).]

4. Health professional shortage area. "Health professional shortage area" means an area in the State lacking in medical professionals as designated by the Commissioner of Health and Human Services. [1991, c. 830, §4 (new); c. 832, §10 (new); 2003, c. 689, Pt. B, §7 (rev).]

5. Insufficient veterinary services. "Insufficient veterinary services" means an insufficient number of practitioners of veterinary medicine in either a veterinary specialty or a geographic area, as determined by the Commissioner of Agriculture, Food and Rural Resources. [1991, c. 830, §4 (new); c. 832, §10 (new).]

6. Maine resident. "Maine resident" means a person who has been a resident of the State for a minimum of one year as determined by rule of the authority who shall consider:

A. Length of residence in Maine for other than tuition purposes; [1991, c. 830, §4 (new); c. 832, §10 (new).]

B. Secondary school attended; [1991, c. 830, §4 (new); c. 832, §10 (new).]

C. Legal residence of parents; [1991, c. 830, §4 (new); c. 832, §10 (new).]

D. Place of voting registration, if registered to vote; [1991, c. 830, §4 (new); c. 832, §10 (new).]

E. Place where taxes are paid; and [1991, c. 830, §4 (new); c. 832, §10 (new).]

F. Other indicators established by the authority. [1991, c. 830, §4 (new); c. 832, §10 (new).]
[1991, c. 830, §4 (new); c. 832, §10 (new).]

7. Nonresident tuition. "Nonresident tuition" means tuition charged to persons who are not residents in the state where an institution of allopathic or osteopathic medical education with which the authority has a contract is located. If the institution makes no distinction between the tuition charged resident and nonresident students, then "nonresident tuition" means the tuition charged all students. [1991, c. 830, §4 (new); c. 832, §10 (new).]

8. Primary health care. "Primary health care" means general or family practice of medicine, general internal medicine, general pediatrics, general dentistry and obstetrics and gynecology. [1995, c. 117, Pt. D, §1 (amd); §3 (aff).]

9. Underserved group. "Underserved group" means a population group in the State receiving insufficient primary health care, as determined by the Commissioner of Health and Human Services. [1991, c. 830, §4 (new); c. 832, §10 (new); 2003, c. 689, Pt. B, §7 (rev).]

10. Underserved specialty. "Underserved specialty" means a medical specialty in which there are insufficient practitioners either throughout the State or within a designated geographic area of the State, as determined by rule of the Commissioner of Health and Human Services. [1991, c. 830, §4 (new); c. 832, §10 (new); 2003, c. 689, Pt. B, §7 (rev).]

Section History:

PL 1991, Ch. 830, §4 (NEW).
PL 1991, Ch. 832, §10 (NEW).
PL 1995, Ch. 117, §D1 (AMD).
PL 1995, Ch. 117, §D3 (AFF).
PL 2003, Ch. 689, §B7 (REV).

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Title 20-A: EDUCATION

Part 5: POST-SECONDARY EDUCATION

Chapter 424: MEDICAL EDUCATION AND RECRUITMENT
(HEADING: PL 1991, c. 830, §4; c. 832, §10 (new))

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§12102. Comprehensive programs

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The chief executive officer shall administer the comprehensive programs established in this chapter to address the shortage of primary health care professionals in underserved areas of the State. With the assistance of the Advisory Committee on Medical Education, established by Title 5, section 12004-I, subsection 7, the chief executive officer shall plan, evaluate and update the programs to ensure that Maine residents have access to medical education and to primary health care. [1991, c. 830, §4 (new); c. 832, §10 (new).]

Section History:

PL 1991, Ch. 830, §4 (NEW).

PL 1991, Ch. 832, §10 (NEW).

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PDF, Word (RTF)**Chapter 424: MEDICAL EDUCATION AND RECRUITMENT
(HEADING: PL 1991, c. 830, §4; c. 832, §10 (new))**Download Section 12103
PDF, Word (RTF)**§12103. Access to Medical Education Program**[Statute Search](#)[List of Titles](#)[Maine Law](#)[Disclaimer](#)[Revisor's Office](#)[Maine Legislature](#)

1. Positions. The Access to Medical Education Program is established under this section. Under this program, the chief executive officer shall secure up to 21 positions annually for Maine students at schools of allopathic, osteopathic or veterinary medical education up to an aggregate of 84 positions. Five positions are for students of osteopathic medicine, 15 positions are for students of allopathic medicine and one position is for students of veterinary medicine. If there is an insufficient number of qualified applicants for positions in either allopathic or osteopathic medicine, the chief executive officer may increase or decrease the number of positions available in either discipline. The allopathic and osteopathic medicine positions are available only to eligible students commencing professional education on or after January 1, 1993. The veterinary medicine position is available to a student commencing medical education on or after January 1, 1999. [1997, c. 765, §1 (amd).]

2. Application process. Students shall apply directly to an institution of allopathic, osteopathic or veterinary medical education with which the authority has a contract to secure positions. [1997, c. 765, §1 (amd).]

3. Requirements. Each student obtaining a position in an institution of allopathic or osteopathic medical education shall enter into an agreement with the authority by which the student agrees during the student's medical education to complete clinical education in rural areas and health professional shortage areas of this State as provided in the contract between the institutions of medical education and the authority. Each student obtaining a position in an institution of veterinary medical education shall enter into an agreement with the authority by which the student agrees during the student's medical education to complete clinical education in an area determined to have insufficient veterinary services as provided in the contract between the institutions of veterinary medicine and the authority. [1997, c. 765, §1 (amd).]

4. Repayment of tuition differential. A student receiving a position secured by the authority shall enter into an agreement with the authority promising to pay back to the authority any amounts expended by the authority that reduce the nonresident tuition to be paid by the student. Such an agreement must be on the same terms and conditions as the agreement required by section 12104. [1991, c. 830, §4 (new); c. 832, §10 (new).]

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Title 20-A: EDUCATION**Part 5: POST-SECONDARY EDUCATION**

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Chapter 424: MEDICAL EDUCATION AND RECRUITMENT**(HEADING: PL 1991, c. 830, §4; c. 832, §10 (new))**

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§12104. Loans for medical educationStatute SearchList of TitlesMaine Law

The Health Professions Loan Program, referred to in this section as the "program," is established and is administered by the authority. [1991, c. 830, §4 (new); c. 832, §10 (new).]

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1. Eligibility. Loans are available to Maine residents pursuing allopathic, osteopathic, optometric, veterinary and dentistry education who meet eligibility criteria, established by rule of the authority, which at a minimum must require:

A. That the student show financial need for a loan; and [1991, c. 830, §4 (new); c. 832, §10 (new).]

B. That priority be given to students:

(1) Who have previously received a loan pursuant to this section and who exhibit financial need as determined by the authority; or

(2) Who are participants in the access to medical education program established in this chapter.

[1991, c. 830, §4 (new); c. 832, §10 (new).]

Loans under this section are available only to eligible students on or after January 1, 1993.

[1991, c. 830, §4 (new); c. 832, §10 (new).]

2. State contract students. Students who entered into agreements pursuant to section 11804-A and who are otherwise eligible are eligible for a loan under this program. Any amount the authority paid on behalf of a state contract student under section 11804-A that is not directly used to secure a position at a school of medicine is deemed a loan for purposes of determining the maximum loan amount a student may receive under this section. [1991, c. 830, §4 (new); c. 832, §10 (new).]

3. Maximum loan amount. The chief executive officer may establish the maximum loan amount and may provide for a different maximum loan amount for applicants in different categories. [1991, c. 830, §4 (new); c. 832, §10 (new).]

4. Allocation of loan fund. The loan fund must be allocated as follows.

A. Ninety percent of the loan fund designated for loans must be available for students of allopathic medicine and osteopathic medicine. [1991,

c. 830, §4 (new); c. 832, §10 (new).]

B. Up to 10% of the loan fund designated for loans is available for Maine residents studying optometry, veterinary and dental medicine. [1991, c. 830, §4 (new); c. 832, §10 (new).]
[1991, c. 830, §4 (new); c. 832, §10 (new).]

5. Loan agreement. The student shall enter into a loan agreement that provides for the following.

A. Upon completion of professional education the student shall repay the loan in accordance with the following schedule.

(1) A loan recipient who does not obtain loan forgiveness pursuant to this section shall repay the entire principal portion of the loan plus simple interest at a rate to be determined by rule of the authority. Interest does not begin to accrue until the loan recipient completes medical education, including residency and internship. The authority may establish differing interest rates to encourage loan recipients to practice primary health care medicine in the State.

(2) Primary health care physicians and dentists practicing in a designated health professional shortage area, any physician practicing in an underserved specialty or any physician providing services to a designated underserved group are forgiven the larger of 25% of the original outstanding indebtedness plus any accrued interest or \$7,500 for each year of practice.

Primary health care physicians and dentists practicing in the State, but not practicing in a designated health professional shortage area, are forgiven the larger of 12.5% of the original outstanding indebtedness plus any accrued interest or \$3,750 for each year of practice.

(3) Veterinarians providing services to Maine residents with insufficient veterinary services are forgiven the larger of 25% of the original outstanding indebtedness plus any accrued interest or \$7,500 for each year of practice.

(4) Any student completing an entire residency at any primary health care residency program in the State is forgiven 50% of the original outstanding indebtedness for each year of practice in a designated health professional shortage area, as a physician practicing in an underserved specialty or as a physician providing services to an underserved group or 25% of the original outstanding indebtedness for each year of primary health care practice in the State.
[1995, c. 117, Pt. D, §2 (amd); §3 (aff).]

B. Loans must be repaid over a term no greater than 10 years, except that the chief executive officer may extend an individual's term as necessary to ensure repayment of the loan. Repayment must commence when the loan recipient completes, withdraws from or otherwise fails to continue

medical education. [1991, c. 830, §4 (new); c. 832, §10 (new) .]

C. Any loan recipient requesting forgiveness or an interest rate reduction under this section, excluding veterinarians, shall report annually to the Department of Health and Human Services, Office of Rural Health the following:

- (1) The number of Medicaid patients served by the loan recipient and the percentage of the loan recipient's overall service provided to Medicaid patients;
- (2) The number of instances in which a loan recipient accepted a Medicare assignment and the number of and basis for any rejections during the period of the report; and
- (3) The amount of time devoted by the loan recipient to practice in a public health clinic during the period of the report.

The Department of Health and Human Services, Office of Rural Health and the Finance Authority of Maine shall determine whether the level of service provided by the loan recipient to Medicaid and Medicare patients and in public health clinics was reasonable. If the Office of Rural Health and the Finance Authority of Maine determine that the level of service provided was not reasonable or if the loan recipient fails to provide the report by the date required, the loan recipient is not entitled to any loan forgiveness or interest rate reduction under this section for the year of the report. [1991, c. 830, §4 (new); c. 832, §10 (new); 2003, c. 689, Pt. B, §6 (rev) .]
[1995, c. 117, Pt. D, §2 (amd); §3 (aff); 2003, c. 689, Pt. B, §6 (rev) .]

6. Deferments. Deferments may be granted for causes established by rule of the authority. Interest at a rate to be determined by rule of the authority must be assessed during the deferment. The student's total debt to the authority, including principal and interest, must be repaid either through return service or cash payments. The chief executive officer shall make determinations of deferment on a case-by-case basis. The decision of the chief executive officer is final. [1991, c. 830, §4 (new); c. 832, §10 (new) .]

Section History:

PL 1991, Ch. 830, §4 (NEW) .
PL 1991, Ch. 832, §10 (NEW) .
PL 1995, Ch. 117, §D2 (AMD) .
PL 1995, Ch. 117, §D3 (AFF) .
PL 2003, Ch. 689, §B6 (REV) .

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[PDF](#), [Word \(RTF\)](#)**§12105. Nonlapsing fund**[Statute Search](#)[List of Titles](#)[Maine Law](#)[Disclaimer](#)[Revisor's Office](#)[Maine Legislature](#)

1. Fund created. A nonlapsing, interest-earning, revolving fund under the jurisdiction of the authority is created to carry out the purposes of this chapter. Any unexpended balance in the fund carries over for continued use under this chapter. The authority may receive, invest and expend, on behalf of the fund, money from gifts, grants, bequests and donations, or other sources in addition to money appropriated or allocated by the State. Loan repayments under this chapter or other repayments to the authority must be invested by the authority, as provided by law, with the earned income to be added to the fund. Money received by the authority on behalf of the fund, except interest income, must be used for such purposes; interest income may be used for such purposes or to pay student financial assistance administrative costs incurred by the authority. [2001, c. 479, §1 (amd) .]

2. Separate account authorized. The authority may divide the fund into separate accounts it determines necessary or convenient for implementing this chapter, including, but not limited to, accounts reserved for the purchase of positions and accounts reserved for loans. [1991, c. 830, §4 (new); c. 832, §10 (new) .]

3. Allocation of repayments. The authority may allocate a portion of the annual loan repayments for the purpose of recruiting primary health care physicians for designated health professional shortage areas. That portion may be used:

A. To generate additional matching funds for recruitment of physicians for designated health professional shortage areas; or [1991, c. 830, §4 (new); c. 832, §10 (new) .]

B. In accordance with criteria established by the authority, to encourage primary health care physicians to practice medicine in health professional shortage areas. [1991, c. 830, §4 (new); c. 832, §10 (new) .]

[1991, c. 830, §4 (new); c. 832, §10 (new) .]

4. Borrowing permitted. The authority may borrow funds pursuant to chapter 417-B for application to the fund established in subsection 1 and may pledge all or part of the fund or any assets or revenues of the fund in connection with any such borrowing. [2001, c. 479, §2 (amd) .]

Section History:

PL 1991, Ch. 830, §4 (NEW).
PL 1991, Ch. 832, §10 (NEW).
PL 1993, Ch. 410, §EEEE3 (AMD).
PL 2001, Ch. 479, §1-2 (AMD).

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Title 20-A: EDUCATION**Part 5: POST-SECONDARY EDUCATION**Download Chapter 424
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(HEADING: PL 1991, c. 830, §4; c. 832, §10 (new))**Download Section 12106
PDF, Word (RTF)**§12106. Advisory Committee on Medical Education**[Statute Search](#)[List of Titles](#)[Maine Law](#)[Disclaimer](#)

1. Committee. The Advisory Committee on Medical Education, established pursuant to Title 5, section 12004-I, subsection 7, shall assist the chief executive officer in evaluating and improving the programs established by this chapter. [1991, c. 830, §4 (new); c. 832, §10 (new).]

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2. Members. The Advisory Committee on Medical Education consists of the following 19 members:

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A. Nine members appointed by the chief executive officer and subject to approval by the joint standing committee of the Legislature having jurisdiction over education matters. Of these members:

(1) One must be a representative of a major statewide agency representing allopathic physicians;

(2) One must be a representative of a major statewide agency representing osteopathic physicians;

(3) One must be a representative of a major statewide agency representing family physicians;

(4) One must be a member of the major statewide agency representing hospitals;

(5) One must be a representative of the major statewide agency representing community health centers;

(7) One must be a representative of an association of commercial health insurance companies doing business in the State;

(8) One must be a representative of a statewide area health education center program; and

(9) Two must be at-large members; [2001, c. 417, §22 (amd).]

B. The Commissioner of Health and Human Services or the commissioner's designee; [1991, c. 830, §4 (new); c. 832, §10 (new); 2003, c. 689, Pt. B, §7 (rev).]

C. [2001, c. 417, §23 (rp).]

D. Three at-large members from areas of the State lacking reasonable access to health care: one appointed by the Governor; one appointed by the President of the Senate; and one appointed by the Speaker of the House of Representatives, all of whom are subject to approval by the joint standing committee of the Legislature having jurisdiction over education matters; and [1991, c. 830, §4 (new); c. 832, §10 (new).]

E. Six members appointed by the chief executive officer and subject to approval by the joint standing committee of the Legislature having jurisdiction over education matters. These members must include:

(1) A chief executive of a family practice residency in the State;

(2) A representative of an institution of allopathic medical education at which the authority secures positions for students;

(3) A representative of an institution of osteopathic medical education at which the authority secures positions for students;

(4) A Maine student, resident or practicing physician who has obtained a position secured by the authority at an institution of allopathic medical education;

(5) A Maine student, resident or practicing physician who has obtained a position secured by the authority at an institution of osteopathic medical education; and

(6) A representative of a major teaching hospital in the State.
[2001, c. 417, §24 (rpr).]

[2001, c. 417, §§21-24 (amd); 2003, c. 689, Pt. B, §7 (rev).]

3. Vacancies. In the case of vacancies or resignations, appointments must be made as for a new member to fill the vacancies until the expiration of the terms. [1991, c. 830, §4 (new); c. 832, §10 (new).]

4. Terms. The terms of office for all appointees is 2 years. [1991, c. 830, §4 (new); c. 832, §10 (new).]

Section History:

PL 1991, Ch. 830, §4 (NEW).

PL 1991, Ch. 832, §10 (NEW).

PL 2001, Ch. 417, §21-24 (AMD).

PL 2003, Ch. 689, §B7 (REV).

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Title 20-A: EDUCATION

Part 5: POST-SECONDARY EDUCATION

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Chapter 424: MEDICAL EDUCATION AND RECRUITMENT (HEADING: PL 1991, c. 830, §4; c. 832, §10 (new))

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§12107. Rules

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The authority shall establish rules necessary to implement this chapter. The Commissioner of Health and Human Services shall develop rules for determining health professional shortage areas for the practice of primary health care medicine and dentistry, for determining the reasonableness of the service provided by loan recipients to Medicaid and Medicare patients and participation by loan recipients in public health clinics, for determining underserved groups and for determining underserved specialties. The Commissioner of Agriculture, Food and Rural Resources shall develop rules for the determination of insufficient veterinary services. The rules authorized by this section must be adopted in accordance with Title 5, chapter 375, subchapter II. [1991, c. 830, §4 (new); c. 832, §10 (new); 2003, c. 689, Pt. B, §7 (rev).]

Section History:

PL 1991, Ch. 830, §4 (NEW).

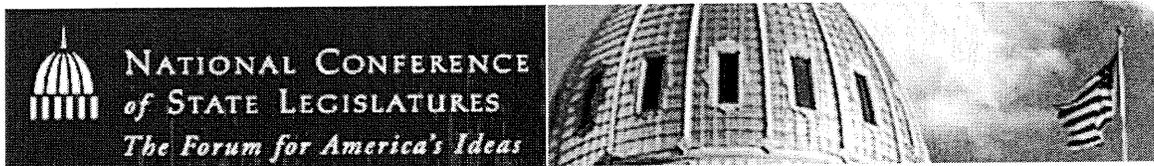
PL 1991, Ch. 832, §10 (NEW).

PL 2003, Ch. 689, §B7 (REV).

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Focus on Health Policy

EFFECTIVE STATE INCENTIVES TO ENCOURAGE HEALTH CARE PROFESSIONALS TO WORK IN RURAL AREAS

May 2000

<p>For More Information:</p>	<p>Tim Henderson, California Legislative Health Policy Center, NCSL @ 202/624-3573</p> <p>Margaret Laws, California HealthCare Foundation @ 510/238-1040</p>
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Despite talk of an oversupply of physicians in this country, many rural communities face a persistent shortage of doctors and health care professionals. Although about 20 percent of the population lives in rural areas, less than 11 percent of the nation's physicians are practicing in nonmetropolitan areas. More than 2,200 physicians are needed in these areas to remove all nonmetropolitan health professional shortage area (HPSA) designations for primary care.

Physicians in rural areas tend to be older and face a greater workload and lower remuneration than do most urban physicians. The supply of primary care physicians in nonmetropolitan counties rises as the size of the county's population increases. Nonmetropolitan counties with populations of 50,000 or more had nearly three times as many physicians per 100,000 residents in 1995 as did counties with fewer than 2,500 residents.¹

Persistent and worsening shortages of physicians and other health workers have contributed to a weakening overall health care infrastructure in many rural areas. Although a large number of rural hospitals remain, most are small and struggling to attract and retain insured patients, have aging equipment and lack capital for investment. Such changes have made it difficult for many rural hospitals to recruit and retain various health personnel. In response, some small hospitals would like to have the flexibility to train and utilize certain health workers differently for multiple tasks, but are restricted from doing so by current state regulations. Furthermore, many physicians often bypass rural hospitals and instead, refer their patients to more modern urban hospitals. These developments also significantly affect the local rural economy. One study finds that, for every job that an average rural physician practice generates, an additional 1.78 jobs are created locally. Moreover, for every \$1 of direct income to the practice, a total of \$1.52 was generated throughout the local economy.

Numerous federal, state and local programs-such as the National Health Service Corps (NHSC) and targeted state health service loan repayment initiatives-are intended to spur recruitment of new primary care physicians and other health care providers to rural and inner city areas. Although the NHSC is widely regarded as important among efforts to correct the maldistribution of health care providers, the Corps' current group of clinicians placed in medically underserved communities meets just 12 percent of overall identified need. Service obligations have not always been effectively enforced, nor is the NHSC necessarily doing a good job of retaining providers beyond their payback period. It also may be difficult in many states to obtain federal shortage designations for communities to qualify to receive NHSC clinicians.

Critics point out that the increased supply of generalist physicians in rural and urban areas has not helped to reduce the overall number of federally-designated health professional shortage areas and the total positions needed to alleviate these shortage areas. Supporters of the Corps and similar state initiatives, however, note that as private managed care plans, large group practices and health networks in urban areas increasingly entice larger numbers of primary care physicians to enroll, it is more difficult for isolated rural communities to compete. Thus, they say these government programs are needed now more than ever. At the same time, some argue that a more aggressive mindset

and an increased effort are needed by these communities to market themselves and their practices, regardless of the ability of government initiatives to provide assistance.

POSSIBLE SOLUTIONS

The above findings indicate the need for programs that do a better job of recruiting and retaining health care practitioners in rural and underserved areas. Some of the strategies used effectively by many states include the following.

Preferentially selecting students and minorities for health professions training who are familiar with and interested in rural and underserved communities.

A longer-term strategy created in a few states, communities and training programs is intended to increase interest in health careers and primary care by going to the source: high school students. So-called "grow your own" initiatives have been put in place statewide in a few states, including Pennsylvania and Texas.

- Pennsylvania: A statewide magnet school program was established in 1991 to expose the "best and brightest" secondary school students to a variety of health care careers. Designated one of the governor's "schools of excellence" for high school students, and with support from the state department of education and hospital association, the program annually selects about 150 disadvantaged and minority students from rural and urban underserved areas across the state to participate in a five-week residential program in the summer between the junior and senior years of high school. Students get an introduction to health care with special emphasis on careers in primary care and underserved communities. When students return to their communities, the hospital association helps to identify mentors in local hospitals and clinics to sustain student interest and experience.
- Texas: A 1993 law created a "health careers fund" to encourage high school students from underserved areas to consider careers in medicine, osteopathy, nursing and allied health. Students who participate receive education loans that are forgiven when they return to practice in their home communities on completion of training.

A number of medical schools (e.g., Jefferson Medical College in Pennsylvania and the University of Washington School of Medicine) also have selective admission policies to enhance primary care career choice and rural preference. Several studies have shown that these policies effectively increase the number of physicians serving in rural areas.

Developing/improving linkages between community provider practice sites and health professions training programs.

The lack of an appropriately trained health workforce for medically underserved areas is prompting increased concern. Current education of medical students and residents occurs almost exclusively in tertiary care settings of large urban teaching hospitals. Such training rarely provides many students and residents with opportunities to learn about the vast majority of primary care delivered in community-based and rural settings. Studies show that recruitment to rural practice is aided by exposure to positive rural physician role models and early and long-term clinical training in rural sites and hospitals. Graduate training can positively enhance recruitment to rural communities and affect retention by training the physicians for the realities of practice through rural selectives, rural training tracks and rural emphasis.

Major deterrents to conducting health professions education in underserved communities are the location of and financial support for appropriate teaching resources. Many states are supporting various direct and indirect methods for paying a significant portion of the costs of education in these settings. For physicians, states are creating or expanding primary care residencies and directing medical schools to offer or require community-based training experiences for generalist students at both the undergraduate and graduate levels. Some states have enacted laws that call for studying the feasibility of establishing graduate medical education (GME) programs in family practice, based on utilizing both community and hospital clinical sites in rural areas. For advanced practice nurses and physician assistants, states have begun paying direct and indirect portions of general funds to support training programs, which typically are based in non-hospital settings.

A growing number of the 45 states and the District of Columbia that make some level of payment for GME under their

Medicaid programs distribute these funds in a manner that is explicitly tied to public accountability. Of the 10 states that require that some or all Medicaid GME payments be directly linked to state policy goals that are intended to vary the distribution of the health care workforce, three use GME payments to encourage training of physicians in certain settings (e.g., ambulatory sites, rural locations). The goal of encouraging the training of physicians in certain specialties (e.g., primary care) is the most common; it is applied to GME payments by eight of the 10 states.

State-funded training programs are increasing the number of required and elective clerkships, rotations and other clinical training arrangements, typically in community-based settings, for generalist medical students and residents.

- South Dakota: A governor's task force on improving recruitment and retention of family physicians in the mid-1990s recommended ways that state funds for residency training could be maximized to place family medicine graduates in rural areas. These included evaluating strengths and weaknesses of medical school/residency program relations that may hamper greater attention to community-based rural education; requiring or encouraging clear affiliation agreements between schools of medicine and residency programs that engage in rural training to improve coordination of student needs and grant greater incentives for rural-based educational opportunities; and developing new programs or approaches to get more residents into significant rural-based training experiences.
- Texas: The Texas Legislature is the only one to mandate that all third-year medical students complete a clerkship in family medicine and that all primary care residents be required to be offered a rotation in a rural setting.

Improving the site placement process for loan repayment and scholarship recipients to better match community and provider interests, and increasing government contact with and support for scholarship and loan recipients.

The oldest and most prevalent mechanism in the states to improve the supply and distribution of physicians in rural areas has been scholarship and loan programs for health professions students and residents. These programs offer financial assistance for tuition, loans and debts in return for a service obligation to practice in designated geographic areas that are rural or underserved and in designated specialties of care (most often primary care) for a specified time period. Generally, each year of financial support is linked to one year of service in an underserved area.

These programs are being reevaluated in a number of states to determine changes that would make the programs more effective. Several states have begun to differentiate priorities (as they collect more data on workforce needs and supply) and structure scholarships and loans to be more responsive to these needs. In many states, the selection criteria for scholarships and loans have been expanded and better delineated, just as they have for school admissions. Consideration also is being given to the timing of scholarship and loan awards and the possible need to indicate the availability of these awards at an earlier point in the education process in order to have more of an influence on practice decisions. In addition, there is increasing emphasis on developing community sponsorship in rural and underserved areas for individual scholarship and loan candidates, as well as for overall financial support for efforts to attract health professionals to their areas. Some loan and scholarship programs now include additional requirements, such as provision of care to indigent or government-insured patients. Stronger penalty provisions for noncompliance have been instituted in a growing number of states, but more emphasis generally has been placed on enhancing incentives for practice in underserved areas.

State lawmakers in recent years have relied upon loan repayment initiatives rather than scholarships. Such a strategy is seen as a more immediate solution to provider shortages in rural areas because it targets students who are nearing the end of their training. Still, continuing fiscal problems that plague most states limit the effectiveness of even this strategy by limiting participation to only a small number of recipients. Effective loan programs in Idaho and Nebraska are described below.

- Idaho: In hopes of improving its efforts to recruit health professionals to rural communities, the Idaho Legislature in 1993 established a health professional loan repayment program. The program targets licensed primary care physicians, nurse practitioners and physician assistants in their final year of training who are willing to practice primary care for at least two years in a state-designated shortage area. As part of an initial

evaluation of the program, the state surveyed 16 of the 21 participating health care providers. All but two of the respondents were raised in a rural area; all of those surveyed said they plan to be practicing in rural Idaho (most in the same community) in five years. Although 45 percent of rural communities gave the loan repayment program an excellent grade in helping them to recruit a provider, many felt the program would be more effective if greater funding were available. Nearly 80 percent of the communities said they would be willing to approach their legislator and encourage them to provide increased support for the program.

- Nebraska: The Student Loan or Scholarship Program began in 1979, first awarding medical students attending the state's two medical schools educational loans annually in exchange for an agreement to practice one year in a state-designated shortage area for each year a loan is received. In essence, the program provides scholarships or loans that must be forgiven by practice in a shortage area. The program is widely viewed as successfully placing and retaining primary care providers in rural, underserved areas of the state. State officials believe the main reason for the success has been the state's selection of students who predominantly are from rural Nebraska. Efforts to improve placement and retention of program participants early in the initiative also have helped the program to secure higher levels of funding.

Developing recruitment centers, databases/clearinghouses and job fairs.

States have been involved in recruiting physicians and other health professionals to rural underserved areas for many years. Recently, many of these states have taken more of a coordinated approach to provider recruitment. Recruitment efforts in these states often have matured and become more effective in conjunction with state economic development authorities, state and regional health professions training programs, systematic community organization programs, and other resources. Some states have effectively used their offices of rural health to conduct on-site workshops to educate community leaders about recruitment and retention skills and resources. The intent is for these communities to rely less upon professional headhunters. A few states also are beginning to educate rural communities to use the state's economic assistance capabilities to help them prepare practice opportunities and recruitment strategies. Several states promote placement opportunities by establishing a toll-free number(s) of statewide recruitment clearinghouses and offering information about job fairs and other activities. In addition, an agency or program in nearly all states now contracts with the National Rural Recruitment and Retention Network, a nonprofit system of organizations that help health professionals find practice opportunities in rural areas throughout the country. In general, most state recruitment initiatives still lack the funding and technical support necessary for database development, profiling and proper resource allocation. Effective programs exist in the following states.

- New York: In 1991, legislation modified the state's physician placement and recruitment program that was created in 1981. A central organization, supported by client fees, now provides information to all state service-obligated physicians, primary care residents and residency training programs about positions in rural and underserved areas. State officials view the new program as a much more organized, coordinated effort that potentially will be more effective.
- North Carolina: The Office of Rural Health and Resource Development has historically taken a more direct role in physician placement. In the 1970s, the office established the Physician Location Assistance Program (PLAP). Drawing from both national primary care residency programs and the state's Area Health Education Center program, about 1,500 physicians have been recruited through PLAP's national advertising and mass mailings. Some of these physicians originally were recruited to provide backup to midlevel practitioners serving in state-funded clinics located in underserved rural areas of the state. North Carolina (as well as Minnesota and New Hampshire) maintains computerized data bases on communities and provider practices within the state and on physicians who are seeking in-state positions.

Providing practice subsidies and other income incentives.

A number of states have established income subsidies for providers in rural and underserved areas, in recognition of the financial burden associated with practice start-up, as well as the problems of inadequate income support to sustain a practice in many underserved areas. States have provided start-up grants, bonuses and income supplements that are capped at a certain amount and tied to a certain number of years of practice. These subsidies also may be

targeted, either to specific geographic areas, types of facilities (e.g., county hospitals), or services such as obstetric care. Examples include Arkansas and Texas.

- Arkansas: A recent enactment provides grants and loans to rural communities to establish primary care clinics. The measure expands earlier state initiatives. In 1991, the state enacted the Rural Physician Recruitment and Retention Program, providing grants for physicians in specified rural or medically underserved areas. Eligible physicians must practice full-time in a community with fewer than 8,000 residents. Because funds were not available to cover all the eligible physicians who applied, targeted criteria were implemented to ensure funds go to the neediest areas. Two 1993 laws raised the population limit for rural communities that are eligible for medical clinic loans and financial assistance grants. Any family physician practicing full time in these places is eligible to receive \$6,000 annually for up to five years.
- Texas: A 1995 law establishes an underserved community-state match program. Eligible communities may sponsor a primary care physician by contributing start-up funds over 24 months to be matched by the state.

At least six states--Alabama, Georgia, Louisiana, Montana, Oregon and Virginia--have used an alternative incentive--income tax credits--to attract physicians to practice in rural communities. Each of these states has specific criteria defining rural practice and what types of providers are eligible to qualify for the credit; all provide a maximum credit of \$5,000 per year.

- Georgia provides a credit of up to \$5,000 annually for five years. New physicians practicing primary care and general surgery in rural underserved counties are eligible.
- A 1989 *Oregon* law provides credit for up to 10 years to licensed physicians, physician assistants and nurse practitioners.
- Physicians must agree to practice a minimum of three years in *Louisiana* under a 1991 measure to obtain the tax credit, which can extend for a total of five years. In *Montana*, a 1991 law states that a tax credit can be used for four years and requires that the physician practice full-time for at least nine months per year. Both *Louisiana* and *Montana* require repayment of the credit if the physician leaves the area with a specified time.
- Alabama passed legislation in 1993 that provides a \$5,000 tax credit for up to five years to physicians who practice in small or rural communities.

Developing incentives for rural providers to work in managed care arrangements.

Many rural providers perceive managed care organizations (MCOs) as a threat because they may absorb most of the newly graduating primary care providers, thereby draining health care resources from rural communities. In fact, many urban MCOs have been hesitant to move into rural markets because of the general undersupply of rural providers. Of particular concern to health providers in rural areas is their ability to function under capitated or other risk-sharing arrangements, because they often lack the patient base, financial reserves or technical expertise needed to cope with the random risk of serving a particularly costly group of patients. Rural providers, resigned to negotiating to participate in such plans in order to secure their patient base, also are fearful that urban-based MCOs are not interested in making concessions for circumstances--such as smaller caseloads and limited clinical management information systems--that are common to rural areas. This may be because opportunities for MCOs to extract savings from rural delivery systems are limited by already low costs.

There is a growing belief that rural managed care will expand as more rural providers attempt to integrate services to adapt to market changes, more urban-based insurers attempt to expand their markets, and more employers and government insurers attempt to reduce their health care costs. In general, many analysts believe that managed care plans have the potential to stabilize the rural health delivery system. Because under managed care there would be a financial incentive to use local primary care providers, it is possible to retain more health dollars in the rural community by reducing patient migration to urban providers. Also, because many rural physicians practice in relative isolation, managed care arrangements may facilitate a greater sharing of information among physicians through

utilization review and quality assurance activities.

Because of limited access to capital and shortages of technical expertise, rural providers and businesses that are interested in managed care are more likely to form partnerships with urban MCOs rather than develop their own plans. Many MCOs, because of their size, have the potential to invest in building (or rebuilding) adequate infrastructures for rural health delivery systems, providing sorely needed capital and improving access to medical technologies in urban areas. Although few MCOs operate solely in rural areas, rural communities comprise a small but potentially important new market for urban-based plans, especially as metropolitan markets become more competitive. As large employers turn to formal processes (i.e., requests for proposals) to select managed care plans, they often seek guarantees that their employees in nonmetropolitan areas have the same benefit options as urban employees. This may require that urban-based plans expand their provider networks to include more rural providers. Further, given the importance of Medicare and Medicaid in rural areas, managed care is likely to increase its presence in rural markets in the near future.

A number of states have instituted strategies as part of their managed care initiatives to overcome obstacles of participation by rural providers. Some states with capitated Medicaid managed care programs have tried to encourage rural provider participation by sharing risk for the first few years with health plans that are willing to serve rural communities, or by contractually requiring urban plans to also serve rural areas within a defined region. Other states allow or require that many different types of providers be designated as essential primary care providers (given low provider supply in many rural areas) including specialists, federally qualified health centers (FQHCs), rural and Indian health clinics, public health clinics, and certain non-physician professionals. A few states allow greater flexibility on 24-hour coverage requirement and ease restrictions or standards on minimum travel distances to providers in rural areas. Effective state strategies include the following.

- Oklahoma: Under its Medicaid managed care program, SoonerCare, the state offers incentives for fully capitated urban MCOs to network with rural providers immediately adjacent to metropolitan areas. Because most rural areas cannot support a fully capitated care network, the state makes available a series of limited-risk capitation models with emphasis on primary care and focuses on well-defined service areas with at least one hospital. The program also is designed to encourage participation of "essential community providers"-such as nurse practitioners and physician assistants-in rural areas and to spur development of a telemedicine network. The state helps broker an arrangement whereby a nonprofit community program, along with the state, would contract with an MCO to deliver services. A subcapitated portion of the payment would flow directly to the community program responsible for establishing a set of primary care and other services. Rural communities are able to sustain local control over funds, patients and providers.
- Oregon: With a long history of managed care in urban areas, the state has tried to stimulate formation of plans in rural communities by extending coverage to large numbers of uninsured, aligning rates more closely with actual costs, and designing a range of participation options for providers who have little managed care experience.
- Michigan and Vermont have extended the bidding period for MCOs that are submitting rural bids in order to give them more time to organize rural provider networks.

Providing civil immunity from malpractice and subsidizing malpractice premiums.

Health workforce problems are being exacerbated by restrictions in services, particularly obstetric care, that are associated with higher risks and, consequently, higher medical liability insurance costs as well as the potential for malpractice suits. More than two-thirds of the states have addressed the problem of potential malpractice risk to providers through some type of immunity from liability. Typically, these states grant protection by state statute to providers who deliver free care or charity care, absent gross negligence or malicious conduct. States enact this protection, known as charitable immunity, to encourage health care professionals to provide free care to the indigent and uninsured.

Some states also have responded to malpractice concerns that result in declining numbers of physicians who offer

obstetric, charity and other care. A 1994 *Washington* law requires the Department of Health to recommend whether retired providers who are interested in reentering practice should be exempt from a mandate to obtain malpractice insurance.

A few states are addressing this issue through medical liability premium discounts or subsidies. *Alabama* has increased Medicaid reimbursement for selected services, but a direct approach that focuses on high-risk providers (obstetric and sometimes pediatric as well as charitable care) is more common. *Louisiana* has instituted discounts in malpractice premiums for specified health care providers whose practice is comprised of at least 10 percent charity care; discounts are approved by the Insurance Rating Commission.

A number of other states subsidize insurance premiums for physicians who provide obstetric and prenatal care. *Illinois* requires the Department of Public Health to award grants to physicians who are practicing obstetrics in rural designated shortage areas to cover the cost of malpractice insurance for obstetrical care. *Maine* provides subsidies to primary care physicians in specifically designated underserved and health professional shortage areas who provide obstetrical and prenatal services. Physicians also must serve Medicaid patients, provide either prenatal care (with approved referral agreements for delivery) or complete obstetric services, and practice at least 50 percent of their time in state-designated underserved areas. This program is partly funded by an assessment on physicians.

Rather than subsidizing malpractice premiums, a few states directly indemnify physicians against malpractice suits, generally to the extent permitted under the state's medical malpractice coverage. *West Virginia* provides malpractice insurance for a broad range of practitioners who provide obstetric care to Medicaid patients. *Texas* partially indemnifies individuals who provide charity care under state-funded programs (at least 10 percent of the total practice) and provides for discounts in malpractice premiums; state liability limits are low, however. An assessment of the program in the early 1990s by the state's attorney general recommended that it be restructured to better control costs and monitor effectiveness. It was also suggested that the malpractice indemnification program eventually be repealed and replaced with a charity care program that utilizes direct premium subsidies and targets only those services where problems of access are the greatest.

As one of the most active states in promoting a more attractive legal environment for medical practice in underserved areas, *Maine* also has established a demonstration project to assist in reducing medical liability through the development of practice parameters and risk management protocols. Other states are giving more attention to this area as they initiate studies of the problems and possible solutions.

Increasing pay and providing *locum tenens* relief for rural providers.

Studies have found that physicians in rural areas derive a larger share of their gross practice revenue from Medicare and Medicaid patients than do urban physicians. It is known that these public programs pay physicians at lower rates than private insurers. Physicians in many rural areas are less able to perform economically enhancing procedures, further decreasing relative reimbursement rates. Rural physicians, on average, work more and earn less than their urban counterparts.

The presence of rural health clinics (RHCs) and FQHCs in designated HPSAs and medically underserved areas (MUAs) and differential Medicare payments to qualifying rural areas have helped to enhance reimbursement. The number of HPSAs is increasing, as more communities become aware of the importance of the designation in enhancing a provider's revenue to the point that it begins to approach that of urban providers. Studies show that rural areas with high numbers of Medicare, Medicaid and uninsured patients cannot support a provider without such programs. Currently, the mandate that states pay RHCs and FQHCs their reasonable costs under Medicaid is being phased out.

A number of states have indirectly attempted to make practice in underserved areas more attractive by modifying reimbursement levels for Medicaid. These reimbursement levels may be related to types of care that are in scarce supply or that are directed to particular geographic areas. For example, *Florida* increased Medicaid reimbursement for selected primary care providers (e.g., family practice and pediatrics) and for obstetricians/gynecologists in an effort to improve the availability of, and access to, these services. Enhanced Medicaid reimbursement levels in *Kentucky* have been focused on family practice physicians located in areas with no more than one primary care physician to a population of 5,000. Recently, some states (including *California*) have introduced or enacted legislation targeting

Medicaid payment hikes for rural hospitals, community clinics and telehealth consultations.

In addition, it is well documented that efforts to provide rural providers with professional relief often is critical to sustaining their presence in many more isolated rural communities. A few states have encouraged the provision of substitute physicians to provide rural physicians with time for vacation or continuing education.

- Tennessee: Up to four weeks of *locum tenens* (a temporary replacement for the physician who desires to take a leave of absence to pursue professional development opportunities) is provided by the state.
- Texas: Earlier legislation called for the development of a relief service program for rural physicians, specifically to allow them to participate in continuing education programs.
- Washington: The state has set up a temporary health professional substitute pool (including physicians, physician assistants, pharmacists and nurse practitioners) in rural and underserved areas. This program, established in December 1990, provides coverage for a maximum of 90 continuous days and includes payment for salaries, malpractice and expenses. The program has had mixed success. While several providers in rural areas have registered with the program, staffing needs are intensive and a number of other problems have surfaced which include the ability of private firms to pirate the lists of substitute personnel who are willing to work temporarily for providers in rural areas, as well as the difficulty in making matches at peak request times. A 1994 law amended the health care professional substitute resource pool to make certified health plans eligible to request temporary personnel. The state continues to build trust among providers but is doing more linking with private substitute pool firms. The state also is reevaluating their approaches.

Providing increased opportunity for continuing education and colleague interaction.

The retention of a physician in a community is dependent on the physician's perception that his or her life needs have been satisfied. Most states have matched state funds with federal grants to create Area Health Education Centers (AHECs). AHEC grants support educational programs in medically underserved communities for students in medicine, nursing, and other health professions. These centers also are intended to decrease professional isolation by supporting teleinformatics and outreach education programs for currently practicing health professionals in rural and underserved communities. In many states, AHECs allow rural clinicians to undertake periodic rotations through academic hospital services (with *locum tenens* backup) so they can learn or update procedures.

- Arkansas: In the 1970s, the University of Arkansas School for Medical Sciences was designated as an Area Health Education Center to address the need for more primary care physicians in rural communities. By the mid-1980s, six principal AHEC sites, in concert with an established network of several rural underserved community sites, were delivering multidisciplinary training programs for various health professions students and residents. About 70 percent of the AHEC graduates initially have remained in state, 44 percent decide to stay in the region of their training, and 28 percent have chosen to locate in towns with populations of 10,000 or less. The AHEC program now is well accepted by state lawmakers, and is viewed as both a training ground for needed health professionals and as a safety net provider of medical care for the indigent and underserved. The legislature is considering using some of the state's tobacco settlement money to fund a new community-based AHEC center to operate in the impoverished rural Delta region.

Promoting telemedicine to reduce the isolation of health care providers in remote areas.

As health care delivery becomes increasingly specialized and more dependent on expensive, high-tech equipment and procedures, rural access to these services has become even more limited. In fact, many rural access initiatives would not be possible without the advent of telecommunications. Satellite and fiber optics capabilities enable small rural hospitals to develop on-line links with urban medical centers, facilitate specialty contacts and consultations for isolated general practice physicians, and provide continuing medical education programs for nurses, physicians and their assistants.

Telecommunications plays a major role in the success of local efforts to bring health professions training to the

community. By establishing satellite links with larger universities, rural communities can provide residents with health care education that otherwise might be unavailable to them because of prohibitive travel or relocation costs. Area health care centers and schools can serve as local campuses for residents who enroll in distance learning programs, and nearby health care facilities provide the necessary clinical experience and training.

States have made substantial commitments to developing, regulating and paying for telemedicine programs and services. A number of states have provided funding support for telemedicine and often have been joined in these efforts by the private sector, sometimes by choice and at other times through regulatory judgments against telecommunications companies that have resulted in sizeable windfalls for telemedicine development. Types of state policy activity related to telemedicine development can be classified as initiating actions (task forces and coordinating bodies, studies and planning efforts), program development initiatives, special funds, other legislative funding, non-legislative funding for overall program development and specific program components, state agency support, infrastructure development (statewide, education and health), telecommunications rulings and regulations, provider licensing regulation, and actions related to reimbursement. Recently, states also have been encouraged to provide incentives to stimulate rural hospitals and telecommunication firms to work together to develop internet and telemedicine-based strategies to ease intensive care specialty and other health professions shortages in rural facilities. Particularly, each state program profiled below demonstrates ways that telecommunications make long-distance learning programs possible for rural health care professionals.

- Hawaii: Provided by the Hawaii Public Broadcast Authority, the Hawaii Interactive Television System (HITS) plays a key role in nursing, allied health and public health courses offered by the University of Hawaii (UH). The instructional television initiative is part of UH's strategic plan for information activity and is included as part of a comprehensive package to respond to the state's unmet education needs. To facilitate instruction, students in the HITS courses have access to electronic mail, computer conferencing and specialized library support.

In addition, the UH School of Social Work and the Hawaii Department of Public Health have teamed with HITS to administer a joint project in interdisciplinary training for rural health care providers. The project is intended to establish a statewide coordinated structure for interdisciplinary training, recruit and retain rural health care professionals, establish a central database on rural health care services and issues, and publish a regular newsletter on rural health program activities. Health care workers and paraprofessionals-such as social workers, outreach workers, schoolteachers and counselors-are selected from rural counties to participate in the program. Clinical opportunities for students are provided by community public health nursing clinics and rural health programs.

- South Carolina: The Health Communications Network (HCN) at the Medical University of South Carolina (MUSC) provides more than 120 hours monthly of continuing education programming for physicians, nurses and allied health professionals, and hospital administrators. Now in its 23rd year, HCN links more than 50 hospitals and state agencies and reaches an audience of approximately 25,000 to 30,000 health care providers and consumers each year. 1

HCN's continuing education offerings consist of 30 professionally accredited, original one-hour programs shown several times each month to accommodate the variable schedules of HCN's audience of health care providers. In addition, HCN offers broadcasts of undergraduate and graduate courses taught at MUSC, the University of South Carolina School of Medicine and Clemson University.

- Texas: Since 1989, Texas Tech University has offered a wide range of telecommunications-based educational services for health care professionals. The programs, known as MEDNET, are targeted primarily to rural physicians in west Texas. Twenty-eight provider sites are connected to Texas Tech's four regional academic health centers. In addition to consultative services and community outreach, MEDNET offers approximately 12 hours of continuing medical education each month, using live, two-way teleconferencing. The programs are accredited and available to physicians, nurses and allied health professionals. Among the many MEDNET services available to physicians and other health professionals are accredited continuing education courses, access to medical information and library resources, and taped programs that may be organized into an on-site library of current topics.

CONCLUSION

As states work to reduce the shortage of health care professionals in rural areas, they will need to use **both short- and long-term** strategies. In the short term, loan repayment programs and other financial incentives (e.g., start-up practice subsidies) are intended to move health care providers quickly to needed practice settings. At the same time, strategies intended to interest more students in rural practice and primary care are a long-term proposition and need to be implemented:

- Sooner in the educational and career decision-making process (e.g., routinely in the early years of medical school before the beginning of residency training), and
- Sooner in the recruitment process (e.g., perhaps by using state funds to match an underserved community's financial support for a resident's medical education and service obligation).

Typically, most of these strategies-both short- and long-term-are small both in terms of the number of health professionals affected and the amount of supporting resources. One political agenda for these small state programs may be simply that they create "safety shields" for policymakers and medical educators, allowing them to not address more fundamental issues and institute more comprehensive solutions for health professions shortages in rural areas. For example, scholarship and loan programs by themselves traditionally have been a popular and somewhat successful incentive for promoting primary care practice in rural communities. However, state policymakers may want to continue to explore and experiment with other practice incentives in a coherent approach that fosters collaboration with separate state bureaucracies, university systems, constituents and interest groups.

States may also want to consider significantly increasing their evaluation of all existing health professions recruitment and retention programs for rural and underserved areas, resulting in expansion of the most successful initiatives and elimination of the others. Legislation and programs aimed at increasing recruitment and retention of health professionals in rural communities has not always translated into action or results. Budgetary crises and other financial barriers have delayed or downsized appropriations for more costly programs. Even the most well-designed initiatives remain small in scope and ultimately have not effectively addressed the aggregate problem. The effectiveness of many recently passed initiatives often is unknown because insufficient time has passed between placement and retention in practice, and often only limited centralized data is available in states on rural area practice costs and payer mixes, rural community needs and issues, participant practice concerns, retention rates in rural areas and other matters. Also, many laws obtain no appropriation to evaluate-nor do they contain measures to enforce-a new program's effectiveness, thus providing the state with little or no evidence of its success. In general, few sound evaluations have been performed of these various state strategies, particularly those initiatives that are common to many states.

It is incumbent upon state decision makers to demand some measure of accountability from these programs. Efforts to critically evaluate the success or failure of these programs can be of considerable help to state legislators as they set priorities for short- and long-term issues, solutions and allocation of funds. Recent legislation more often calls for some explicit form of evaluation to measure the progress and success of individual programs. This reflects the increasing interest of lawmakers in making programs more accountable; such efforts also may lend support to a state's decision to continue or expand a thriving program. Specifically, evaluation efforts need to be performed routinely, include more analysis and document a program's effectiveness in targeted communities.

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REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 4-A-07

Subject: Incentive Programs to Improve Access to Care
in Underserved Areas

Presented by: Melissa K. Thomas, MD, PhD, Chair

Referred to: Reference Committee C
(Edward C. Tanner, MD, Chair)

1 Resolution 810 (I-05), which was submitted by the American Academy of Pediatrics and adopted
2 as amended by the House of Delegates, asked that our American Medical Association

3
4 Conduct an analysis of the creative use of tax credits, student loan deferment and loan
5 forgiveness programs, J-1 visa waivers, and practice subsidies as financial incentives to
6 physicians for providing care in identified underserved areas.

7
8 Work with state medical societies and other appropriate entities to identify, catalogue,
9 and evaluate the effectiveness of incentive programs, including the J-1 visa waiver
10 program, designed to promote the location and retention of physicians in rural and urban
11 underserved areas and, consequently, improve patient access to health care in these areas.

12 13 Scope of Study

14
15 This preliminary report summarizes the published literature on the structure and outcomes of
16 various public and private sector incentive programs designed to attract physicians to practice in
17 underserved rural and urban areas. It is meant to identify gaps that will require additional
18 research and to promote dialogue among various stakeholder groups about best practices and
19 effective models.

20 21 Categories of Incentive Programs and Their Outcomes

22
23 A number of types of programs have been created with the explicit goal of motivating physicians
24 to practice in underserved areas.

25 26 *Educational Opportunities*

27 Some medical schools have developed educational tracks that focus on rural primary care. For
28 example, the Jefferson Medical College Physician Shortage Area Program (PSAP) selects
29 applicants from small towns in Pennsylvania and links them with family medicine faculty as
30 mentors. The students meet regularly and work clinically with PSAP faculty and typically take
31 required family medicine and outpatient rotations in rural areas. There is a small amount of
32 financial aid in the form of repayable loans associated with the program.¹⁻² Another model of a
33 rural educational track is a longitudinal experience where students spend much of the third year in
34 rural communities with a preceptor and his/her colleagues. Examples include the Minnesota
35 Rural Physician Associate Program and the New York Rural Medical Education Program.³⁻⁴ All
36 these programs demonstrate significant retention in primary care and rural practice, in part
37 because of the existing interest and commitment of students they select to participate.

1 The Area Health Education Center (AHEC) program was established in 1972 to improve the
2 supply and distribution of generalist physicians and other health practitioners. Since the
3 beginning of the program, AHECs have been involved in the training of medical students and
4 resident physicians in rural areas and have shown some success as part of the efforts to enhance
5 workforce distribution.⁵⁻⁶

6
7 Beginning in 1978, Title VII of the Public Health Services Act has provided funding for the
8 development of educational programs at the medical school and residency program levels, and for
9 faculty development in generalist disciplines.⁷ Data indicate that Title VII funding is associated
10 with, and likely causally linked to, increases in the number of family physicians in rural and low-
11 income communities.⁸⁻⁹

12 13 *Scholarship and Loan Repayment Programs*

14 Scholarship and loan repayment programs have been created in the public sector at the federal
15 and state levels and also in the private sector. At the federal level, the National Health Service
16 Corps (NHSC) is the largest source of funding opportunities. It has been in existence since 1970,
17 placing primary care physicians and other health personnel in rural areas.¹⁰ Initially, the NHSC
18 concentrated on offering scholarships to individuals willing to commit to spending a period of
19 time in designated underserved areas after completion of their training. Relatively low retention
20 rates led to an increase in the NHSC use of the loan repayment option, where physicians do not
21 have to commit to service until they are ready to begin practice and more certain of their career
22 goals.¹¹ Beyond the service provided by obligated physicians, the NHSC has been shown to have
23 additional benefits. Counties staffed by NHSC physicians also experienced an increase in non-
24 NHSC primary care physicians.¹²

25
26 In the mid-1980s, states began to expand programs that offered financial incentives in return for
27 service, including scholarship and loan repayment programs, loan programs, and direct financial
28 incentive programs. Between 1990 and 1996 the number of state-based programs more than
29 doubled.¹³ A 1996 study on the outcomes of state-based programs¹⁴ showed that physicians
30 serving obligations to state programs were more likely to remain in practice in needier areas and
31 care for more patients insured by Medicaid and the uninsured than non-obligated physicians. In
32 addition, a study from Oklahoma indicated that a state-based incentive program led to higher
33 retention of physicians in the state than did the NHSC.¹⁵ This is likely due to the fact that state
34 programs are utilized by and target state residents and physicians trained in the state.¹⁶

35 36 *J-1 Visa Waiver Programs*

37 In this type of program, international medical graduates who entered the US on the J-1 (Exchange
38 Visitors) visa can waive the two-year home country physical presence requirement if they provide
39 service in an underserved area.¹⁷ The most numerically-significant example of J-1 visa waiver
40 programs is the Conrad-30. In this, states are allotted 30 J-1 visa waiver positions (all 50 states
41 participate).¹⁸ Programs are run through State Departments of Health. The US Department of
42 Health and Human Services (DHHS) also has a J-1 visa waiver program that places physicians in
43 severely underserved health professions shortage areas.¹⁸ Only 4 physicians were placed by
44 DHHS in 2005, while many states regularly fill their Conrad-30 allotment.¹⁸

45
46 J-1 visa waiver programs have been shown to increase the availability of physicians in rural
47 underserved areas, but do not necessarily lead to the retention of these physicians in the
48 community.¹⁹⁻²¹

1 *Tax Credits and Practice Support*

2 A number of states have introduced tax credits for physicians practicing in rural areas. For
3 example:

- 4 • Georgia provides a \$5000 income tax credit for rural physicians.
- 5 • Montana provides a tax credit for four years from the time the physician begins practice
6 in a rural area (with a payback requirement if the physician ceases to practice in the rural
7 area within four years of the taxable year).
- 8 • Louisiana allows a tax credit of a maximum of \$5000 per taxable year (for a maximum of
9 five years) for physicians practicing in a small community. As with Montana, there is
10 payback provision if the physician leaves rural practice before a specified time.
- 11 • Oregon grants \$5000 in personal income tax credits to physicians practicing in rural areas
12 or associated with specific categories of rural hospitals.

13 In January 2007, the Rural Physicians Relief Act of 2007, was introduced in the US Senate
14 (S.290). This legislation offers a \$1000 tax credit for each month that a physician provides
15 service in a designated “frontier” service area, or treats a high percentage of patients from these
16 areas.

17
18 Other types of practice-related incentives also exist. For example, geographic adjustment indices
19 (GPIC) have been created within Medicare to limit downward cost adjustment related to
20 practicing in rural areas. A 2005 study by the Government Accountability Office, however,
21 found that GPICs had a negligible effect on physicians’ decisions to locate in rural areas, since
22 the impact on income was generally quite modest (typically 2-3%).²²

23
24 The provision of locum tenens support for physicians in rural areas is another type of practice
25 support. In 1993, the New Mexico state legislature awarded funding to the University of New
26 Mexico School of Medicine to support primary care physicians and residents providing coverage
27 to physicians practicing in rural/medically underserved areas. In the first three years of operation,
28 placements occurred in 28 of New Mexico’s 33 counties, with overwhelmingly positive
29 reviews.²³

31 Summary and Lessons Learned

32
33 There has been some evaluation of the efficacy of incentive programs. A comprehensive analysis
34 of lessons learned from programs that provide financial support in return for service¹¹ showed the
35 following:

- 36 • Unfavorable contract terms, such as low financial benefits or high penalties/service
37 requirements, reduce medical student and physician interest in service programs.
- 38 • High concordance between the needs and interests of physicians and the characteristics of
39 the practice site increase physician and site satisfaction and enhance retention.
- 40 • High penalties for physicians who buy-out or do not complete their obligations enhance
41 completion but reduce satisfaction and ultimate retention. Loan repayment programs,
42 which are designed for more mature physicians who understand their needs and career
43 goals, have high completion rates, generally without the need for significant buy-out
44 penalties.
- 45 • Physicians participating in state-run loan repayment programs remain in their service
46 sites longer than comparable young physicians not in a loan repayment program remain
47 in their first practice site.

48 The study concluded that retention was enhanced by placing physicians in well-run practices in
49 communities that match with and serve their needs.

1 Similar findings came from a study comparing state scholarship and loan repayment programs.¹⁴
2 Participants in loan repayment, direct incentive, and loan programs for residents (low interest
3 loans that require repayment) completed their programs in over 90% of cases. In contrast, service
4 completion rates in scholarship programs were lower (an average of 66%).
5

6 Retention rates were highest for loan repayment, direct incentive, and loan programs.¹⁴ J-1 visa
7 waiver programs are an important source of physicians for health shortage areas, but more
8 analysis is needed of long-term retention.¹⁹⁻²⁰
9

10 Recommendations

11
12 While there have been studies of the efficacy of certain types of incentive programs (especially
13 public sector scholarship/loan repayment in return for service), a comprehensive analysis
14 comparing all types of support programs has not been attempted. The outcomes of tax incentive
15 and practice support programs on recruitment and retention, especially, have not been broadly
16 studied. Also, other strategies to address workforce maldistribution, such as mandatory service
17 for physicians, are only beginning to be explored. For example, the federal Council on Graduate
18 Medical Education has commissioned some informational reports on the desirability and
19 feasibility of mandatory service programs.
20

21 Based on this preliminary analysis, the Council on Medical Education recommends that the
22 following be adopted and that the remainder of this report be filed.
23

- 24 1. That our American Medical Association, in collaboration with state and medical specialty
25 societies, continue to collect and disseminate information on the efficacy of various types
26 of incentive and other programs designed to promote recruitment and retention of
27 physicians in underserved areas. (Directive to Take Action)
28
- 29 2. That, based on the analysis of the efficacy of the various types of incentive programs, our
30 AMA advocate to the federal government, the states, and the private sector for enhanced
31 support for successful models. (Directive to Take Action)
32
- 33 3. That a report on the outcomes of further study and actions taken related to incentive
34 programs to improve access to care in underserved areas be prepared for the 2008 Interim
35 Meeting of the House of Delegates. (Directive to Take Action)

Fiscal Note: \$7500 for staff time for data collection and analysis and for advocacy.

Complete references for this report are available from the Medical Education Group.