Pathways to Rural Practice:

A Chartbook of Family Medicine Residency Training Locations and Characteristics

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ABOUT THE WWAMI RURAL HEALTH RESEARCH CENTER

The WWAMI Rural Health Research Center (RHRC) is one of eight centers supported by the ORHP, a component of HRSA of the Public Health Service. The main focus of the WWAMI RHRC is to perform policy-oriented research on national issues related to rural health care and the rural health workforce. Specific interests of the RHRC include the training and supply of rural health care providers and the content and outcome of the care they provide; the availability and quality of care for rural women and children, including obstetric and perinatal care; and access to high-quality care for vulnerable and minority rural populations.

The WWAMI RHRC is based in the Department of Family Medicine at the University of Washington (UW) School of Medicine, and has close working relationships with the UW Center for Health Workforce Studies, other health sciences schools at the UW, other major universities in the five WWAMI states, state offices of rural health, Area Health Education Centers, and other professions and organizations concerned with rural health care. The UW has over 25 years of experience as part of a decentralized, educational research and service consortium involving the WWAMI states.

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Executive Summary

BACKGROUND: While many factors influence the supply of rural physicians, a significant determinant is the number of family physicians who receive their residency training within rural areas. Furthermore, rural training better prepares family physicians for successful rural practice. This chartbook explores what proportion of all family medicine residency experience actually takes place in rural areas in the United States.

PURPOSE: The main purposes of this chartbook and the associated survey are to 1) determine the amount of rural allopathic family medicine training taking place within the United States; 2) depict the geographic distribution of that training; 3) describe the types of rural training provided; and 4) establish a baseline from which to measure future changes in the nature and location of rural family medicine training.

METHODS: Questionnaires were mailed to all 453 U.S. civilian family medicine residencies in January of 2000. After two additional mailings and telephone reminders, useable responses were obtained from 435 programs, 96 percent of the total. Programs were asked to indicate the extent to which training rural physicians was part of their core mission and to specify where all residency training sponsored by their programs took place (e.g., ZIP code areas). Through the use of Rural-Urban Commuting Areas (RUCAs), the ZIP codes of these locations allowed us to determine the rurality of all U.S. family practice residency training.

RESULTS: Only 33 of the responding family medicine residency programs (7.6%) are located in rural areas; these programs are predominantly in community hospitals with no other residency programs. Nearly all of the training sponsored by these rural programs occurs in rural areas. Although over one-third of the urban programs listed rural training as an important part of their mission, only 2.3 percent of their training took place in rural areas. For the nation as a whole, 7.5 percent of family medicine residency training occurred within rural areas, although 22.3 percent of the U.S. population lives in rural places. Detailed results document the nature of the rural training, the locations of the rural residencies as well as the "parent programs" that sponsor them, and the geographic variation of the training programs.

CONCLUSIONS: Very little family medicine residency training actually takes place in rural areas, largely because very few residencies are located within rural America. The number of residencies in rural areas has actually declined since the survey was conducted. Since there is a clear link between the place of training and future practice, the dearth of family medicine residencies in rural sites contributes to the shortage of rural physicians. Unless significant efforts are made to increase rural residency training, rural physician shortages are likely to persist.

Introduction

While general practitioners have existed for hundreds of years, the specialty of family medicine was born in 1969 with the founding of the American Board of Family Practice (ABFP). Prior to that time there were no family medicine residencies, but there were a few "general practice residencies" scattered around the United States. About 20 of the original three-year family medicine residency programs grew out of "retooling" the two-year curriculums of existing general practice programs. From 1969 through 1996, the number of family medicine residencies grew from 15 to over 470. By 2000, there were family medicine residencies in community hospitals in all states, and most medical schools had both residencies and departments of family medicine. Unlike residency training programs in most specialties, which tend to cluster in academic medical centers, the majority of family medicine residency programs have always been located in community hospitals.

Family medicine residency programs provide integrated experiences in a variety of ambulatory, community and inpatient environments over the course of a three-year training period. The first year of residency includes hospital-based rotations in the major disciplines of medicine, with dedicated once or twice weekly continuity clinics in the outpatient family medicine center. In the second and third years of residency, additional resident exposure is given to the major specialty and subspecialty areas, with increasing time spent in the family medicine center. Family medicine residency programs have a long history of curricular innovation. Programs offer pathways to "certificates of added qualification" in clinical fields such as geriatrics, sports medicine, and women's health. Lately, programs have offered curricula in genetics, medical informatics, and practice-based quality improvement. In December 1999, there were 69,063 family physicians in the nation, and an additional 15,943 general practitioners, most of whom were trained as family physicians (AMA, 2001).

In a WWAMI Rural Health Research Center working paper written by our colleagues based on this same survey, Rosenblatt and colleagues (2002a) note that the tendency of physicians to disproportionately practice in urban areas (physician maldistribution) is a persistent problem in our health care system (Geyman et al, 2000). There has been awareness of a relative deficit of rural physicians in the United States since the distribution of health care professionals was first tracked (COGME, 1998). Physician maldistribution is associated with physician specialty: the more specialized the physician, the more likely he or she is to choose urban practice (Amundson and Rosenblatt. 1991; Rosenblatt et al, 1992).

Rosenblatt and colleagues (2002a) assert that part of the rationale for creating the discipline of family medicine was to provide a way to improve the supply of rural physicians. Because 22 percent of recent family physician graduates settle in rural areas, a much higher percentage than any other discipline, increasing the number and proportion of family physicians is a rational approach to augmenting the supply of new

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rural physicians (AAFP, 2002). There are significant differences among residency programs even within family medicine, both in the emphasis they put on rural practice and on their effectiveness in encouraging their graduates to establish practices in rural areas (Rabinowitz, 1993).

Rosenblatt and colleagues (2002a) suggest that an important element of the equation is the extent to which residency training occurs in rural areas. Because it has long been known that physicians tend to practice in areas near where they did their training—and because rural training experiences provide physicians with the broad scope of educational experiences they need to become confident and competent rural physicians—it makes sense to train future rural physicians in rural areas (Rosenthal et al, 2000; Rosenthal, 2000; Denton et al, 1989; Dorner et al, 1991). However, little is known about the extent to which family medicine residency training actually occurs within rural areas across the United States.

This monograph addresses this knowledge gap by providing the results of a survey of all allopathic family medicine residency programs in the United States. Some of the findings from this survey have been published elsewhere. Rosenblatt and colleagues (2002a and b) found that while a large number of family medicine residency programs in the United States considered training rural physicians to be a central mission, very few of these programs were actually located in rural areas, and none were located in isolated small rural places. Schneeweiss and colleagues (2003) examined the impact of the 1997 Balanced Budget Act on family medicine training programs in the United States, and reported that while the overall immediate impact was small, there has been an alarming increase in residency closures since 1997. Chen and colleagues (2002) assessed the knowledge of family medicine residency directors from 328 programs regarding the amount of federal Graduate Medical Education (GME) funding they received, and found that more than half of the respondents did not know the approximate amount. These three authors are senior investigators at the WWAMI Rural Health Research Center and have conducted these related studies using the same survey data upon which this chartbook is based. Where appropriate, some of their findings and conclusions are reported and cited within this chartbook.

This chartbook focuses on a series of questions from the survey data set to address the following questions: What proportion of all family medicine residency training occurs in rural settings? How does rural training vary geographically in relation to the location of the parent residency program and across types of rural locations? Which types of educational experiences tend to be located in rural areas? How much regional variation is there in the availability and type of rural training? Do programs with a self-proclaimed mission of preparing future rural physicians preferentially locate their training experiences in rural areas? Findings are shown in a series of figures, tables, and maps, with key points noted in the text. The chartbook is divided into four sections. Chapter 1 focuses on the **overall** characteristics and rural/urban locations of family medicine residency programs in the United States. The residency programs that sponsor rural residencies are designated as "parent programs" throughout the charts and text. Chapter 2 illustrates the regional variation in the productivity and characteristics of those residency programs located in **rural** areas. Chapter 3 depicts the different types of rural training tracks that are offered, by geographic location. Chapter 4 examines the purported rural mission of the family medicine residency training programs and its association with the amount of rural training actually taking place. Beside each chart there is either a key point or an example of what that chart depicts. These key points and examples are not comprehensive but rather are meant to be indicative of the information that can be derived from the figures and maps.

Methods

This survey was conducted by the University of Washington's WWAMI Rural Health Research Center in collaboration with the Robert Graham Center for Policy Studies in Family Practice and Primary Care, and the Association of Family Practice Residency Directors. Funding was provided by the federal Office of Rural Health Policy (ORHP). A 16-item questionnaire was developed to determine the precise locations of all allopathic family medicine training in the United States and the proportion occurring in rural areas. The questionnaire was reviewed by the 16 University of Washington-affiliated Family Practice Residency Network Directors and the Project Advisory Committee.

In January 2000, questionnaires were mailed to the 453 civilian family practice residency programs located in the United States and listed in the 1998 American Academy of Family Physicians (AAFP) Directory of Family Practice Training Programs that had active residents in 1999. Two subsequent mailings were sent to non-respondents, and investigators personally contacted the remaining non-respondents. Useable responses were provided by 435 of the programs, for a response rate of 96.0 percent. The geographic location of non-responding programs did not differ significantly from those that responded. None of the non-responding programs were located within a rural area. All data in this chartbook are based on the 435 responding programs, except where otherwise noted. Some information was obtained on each of the 18 non-responding residency programs and is included in this chartbook where indicated.

The questionnaires queried each program director about the extent to which preparing future rural physicians was an important part of their mission. Detailed information was collected about the ZIP code and geographic location of every rural training experience offered by each residency, including the location of the model family practices, rural training tracks, block rotations, or other more intermittent rural experiences. Each of these locations' ZIP codes was geocoded using the Rural-Urban Commuting Area (RUCA) taxonomy system, a method that assigns each ZIP code within the United States to a spectrum of rural and urban location types, based not only on the size of the Census Bureau defined places (e.g., Urbanized Areas and Urban Places) but by its work commuting relationship to surrounding larger places (WWAMI RHRC web site, 2002; ERS, 2002; Morrill et al, 1999). Each training location was assigned to one of four mutually exclusive categories: urban areas (A), large rural city areas (B), small rural town areas (C), and isolated smaller rural town areas (D). This approach approximates the Office of Management and Budget (OMB) metropolitan-nonmetropolitan dichotomy but has the advantage of accurately classifying subcounty-sized communities and identifying those small places that are suburbs of larger cities (Hart, Larson, Lishner, 2005).[1]

[1] *A full description of the RUCA coding system is available at http://www.fammed.washington.edu/ wwamirhrc/descript.htm.*

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