THE FAMILY PRACTICE RESIDENCY COMMUNITY/MIGRANT HEALTH CENTER LINKAGE MANUAL

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Under subcontract from

The American Academy of Family Physicians
8880 Ward Parkway
Kansas City, Missouri 64114

with funds from the

National Health Service Corps
Bureau of Health Care Delivery and Assistance
Health Resources and Services Administration

(Contract #HRSA 240-89-0029)

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The Family Practice Residency Program
Community/Migrant Health Center
Linkage Manual

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FOREWORD

This linkage manual was developed with the purpose of bringing clarity and understanding to a set of education and service relationships which, to date, has not been well defined in the literature. In the process of shaping that definition, it became clear that not all service delivery sites or educational programs should develop linkages. For those programs interested in undertaking linkage building activities, we hope the information provided will enhance opportunities for a successful collaboration.

The authors would like to acknowledge the contributions made in the development of the manuscript by members of the AAFP/PHS Advocacy Network Steering Committee. James F. Calvert Jr., M.D., William R. Gillanders, M.D., Larry A. Green, M.D., Sandral Hullet, M.D., Daniel Lasser, M.D., M.P.H., Ramoncita R. Maestas, M.D. and Jonathan E. Rodnick, M.D. reviewed the draft material and their constructive comments and suggestions shaped the content of the document. A special note of appreciation to Joan Hedgecock of the American Medical Student Association Foundation for sharing relevant information gathered as a consequence of their Community Responsive Residency Training Project.

Gerald R. Hejduk
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March 1992

INTRODUCTION

This manual describes how leaders in community and migrant health centers (C/MHCs) and family practice educators can work together to bring family practice residents into these settings. Residents who are receiving training to become family practice specialists can provide comprehensive, continuous care for patients in the C/MHCs under the supervision of the full-time C/MHC physicians and faculty from the family practice residency programs.

Cooperation between C/MHCs and family practice teachers can benefit both the C/MHC and the residents. The residents come to understand the special needs of patients with varied economic and ethnic backgrounds and may well decide to work in a C/MHC setting after they finish their training.

Because you are reading this manual, you are probably interested in the idea of "linking" education and service in your particular setting. Community/Migrant Health Centers (the service delivery link) and Family Practice Residencies (the education link) are used to illustrate the issues involved in developing education-service affiliations. The issues raised by implementing linkages in these settings encompass other health professions, specialties and disciplines, as well as other community-based systems of primary care.

Community/Migrant Health Centers

C/MHCs provide community-based, comprehensive, prevention-oriented primary care services. With support from federal grants, these services are made available to all clients regardless of ability to pay. "Primary Care" services emphasize first-contact care as well as ongoing professional responsibility for the patient in both health maintenance and treatment of illness. Primary care providers are responsible for the overall coordination of the care of their patients. For this reason, C/MHC staff often include family physicians.

C/MHCs are located in areas throughout the United States where there are financial, geographic, cultural or language barriers to primary health care for a substantial part of the population. They were first funded by the Federal Government as part of the war on poverty in the mid-1960s and since that time, have been supported by a variety of funding mechanisms.

Approximately 550 public and private nonprofit organizations receive federal Community/Migrant Health Center grants. About 60 percent are located in rural areas of the country and the remainder are in medically underserved urban areas. Around 1400 clinics are supported through these 550 grants. Approximately six million individuals receive services annually from C/MHCs. Nearly four million of these are members of minority groups. All C/MHCs are governed by a community board, over half of whose members must be users of the center.

C/MHCs are required to maximize non-grant revenues, particularly third party reimbursements (Medicaid, Medicare and private insurance), and to ensure that all persons who have the means to pay all or a part of the cost of their health care do so. C/MHCs collect sliding-scale fees from patients to cover most of their expenses. Federal grant money is available in most cases to cover deficits.

Family Practice: A Capsule View

The specialty of family practice was officially recognized in 1969 with the incorporation of the American Board of Family Practice. As the 20th medical specialty, family practice developed from a recognition of the need for doctors who would specialize in providing first contact care for patients with a broad range of health problems. Family physicians are experts in caring for 85 to 90 percent of health problems presenting in the outpatient setting. The scope of family practice includes the care of adults and children, women's health, pregnancy and birth, geriatrics, disease prevention and health promotion. When faced with an unusual problem requiring complicated medical care from another specialist, family physicians are specially trained to coordinate such care and to provide continuity in the relationship between the health care delivery system, the patient and the family. Family physicians integrate the social and economic situations of patients into their health care, and are trained to use a wide range of community services in the care of patients. The National Health Service Corps, a federal agency that helps recruit physicians for C/MHCs, has acknowledged that family physicians are requested as the specialists of choice by the C/MHCs.

Physicians who decide to specialize in family practice receive three additional years of training after they complete medical school to obtain the necessary skills to be competent family physicians. These three years of residency training focus on teaching resident physicians to give outpatient and inpatient care to patients of all ages and both sexes. Nationally, there are nearly 400 family practice residency training programs. This manual describes how family practice residency training activities can be developed in C/MHCs.

"Linkage" Implications and Limitations

Linked training and service programs are already working in a number of settings; for example, the Sea Mar Community Health Center in Seattle, Salt Lake Community Health Centers affiliated with The University of Utah Family Practice Residency, the Brown University Family Practice Program in Pawtucket, Rhode Island, the University of Massachusetts Coordinated Program in Worcester and the Montefiore Health Center in the Bronx. In these settings, family practice residents receive part of their training in C/MHCs where they develop the knowledge, skills and attitudes to care for people in medically underserved communities. By combining service and education missions, these C/MHCs have chosen to become teaching sites. Their medical staffs have made a commitment to teaching and supervising physicians-in-training.

For linkages to occur, there must be a benefit to both the residency and the health center. Each must believe that its individual mission is enhanced or the quality of its program is strengthened by the linkage. For both residency programs and C/MHCs this implies a commitment to expanding health care access to medically underserved patient populations.

When appropriate and when resources permit, C/MHCs are encouraged to develop affiliations with clinical training programs. It is expected that any such arrangements should have a positive impact on clinician recruitment, retention and quality of care. The ultimate purpose of such affiliations should be the exposure of C/MHC practices to clinicians in training and the sensitization of clinicians and faculty to C/MHC practices.

The development of a linkage usually calls for each institution to expand its scope of activities beyond the original goals and purposes which brought the program into existence. Linkages are risk-taking efforts; and in order to take risks, programs must be strong and internally stable. While there is much to be gained from efforts to develop stronger relationships between training and service programs, linkages should not be developed as a means to solve existing problems within either residencies or community-based systems of primary care.

This document was designed to help both residency directors and their faculty as well as C/MHC boards, clinic administrators and their clinical staffs assess whether or not they should enter into a linkage arrangement which combines service and education. It will provide an evaluative framework to help make this important decision as well as guidelines to establish a linkage arrangement where one is indicated. In summary, this manual is a guide for those who seek to expand the roles and responsibilities of their institutions beyond traditional boundaries.

As used in this manual, "linkage" is defined as an ongoing agreement between a residency program and a C/MHC by which residents receive training in the C/MHC as a required and integral part of their experience. This "longitudinal training" is different from a block rotation which provides a limited short-term exposure in the C/MHC to the resident (or medical student) who "rotates" temporarily as a guest at the host training site. Rural C/MHCs, because of the distance from a residency program, will usually not be able to develop longitudinal linkages due to limitations of accreditation requirements. However, the information in this manual may be useful in developing other models of education/service cooperation. These alternatives are listed in the Appendices.

It is important to recognize that linking education and service missions, while enhancing the primary care training environment for teachers, learners and patients, also creates the potential for discord. This manual identifies the potential sources of difficulty that arise when linkages are formed and suggests ways of dealing with them. Section One provides basic information about Family Practice Residency Programs and Community and Migrant Health Centers. Section Two addresses the pros and cons of linkages. Section Three explores the environmental context in which linkage development occurs. Section Four outlines some predictors of successful linkages based on the information available from the models which exist. Section Five is a checklist of essential steps to follow in creating linkage affiliations. Section Six presents a troubleshooting guide. Section Seven identifies the strategies to provide ongoing feedback and evaluation. The Appendices offer reference information for those who actually become involved in the planning, implementation and evaluation of linkages.

SECTION ONE

Questions and Answers About Family Practice Residency Training Programs and Community/Migrant Health Centers

Family Practice Residencies:

What is Family Practice?

Family practice is the medical specialty which provides continuing and comprehensive health care for the individual and the family. Family physicians are experts in the evaluation and management of common health problems and understanding the patient in the context of the family and community.

What are the training requirements for family physicians?

In order to enter residency training, an individual must have obtained a Doctor of Medicine (M.D.) or Doctor of Osteopathy (D.O.) degree. All accredited training programs are three years in duration and emphasize the principles of continuous and comprehensive medical care for patients and their families. Responsibilities are divided between both hospital (inpatient) and clinic (outpatient) training sites with increasing responsibility by residents for patient care in the outpatient setting as they progress through the three years of training. Unique aspects of family practice training include the emphasis on ambulatory medicine as well as emphases on preventive medicine, community medicine and the application of the behavioral sciences to the day-to-day practice of medicine. Because of the ambulatory focus of family practice residency training, community and migrant health centers are potentially ideal training sites.

So, what is a family practice residency?

A family practice residency is a postgraduate training program for physicians. The residents already have their medical degree having completed four years of medical school. With three years of additional accredited training, they become eligible to make application for the American Board of Family Practice Certification Examination and become a Board-certified family physician, a specialist in family medicine.

Are residents licensed doctors?

Yes. In most states, medical residents are licensed after one year of training. During their first year of residency training, residents normally function under the supervision of licensed physicians. For educational purposes, even second and third year licensed residents should be under the supervision of a faculty physician.

What can they do?

Family practice residents are in training to be family physicians and develop the essential skills to provide comprehensive care to the entire family. They are being trained to deliver babies and provide care to infants, children, adults and the elderly.

Are residents very busy?

A typical resident work week is 60-80 hours long. When residents are not caring for patients in the health center, they are in the hospital attending to sick patients. Every four to five nights, residents are "on call." These nights will often be very busy and residents do not always get to go home the day after an "on-call" night. Indeed, they may be scheduled to come to the health center.

What is their training like?

Much of their training in the first year is hospital-based and residents are often the ones who provide 24 hours of coverage for hospital patients. In their second and third years of training, they also provide supervision to the first year residents and may do some out-of-hospital electives. A typical three year training schedule is included in the Appendix.

Will they be supervised in the clinic?

Always! A faculty member/preceptor must be available to them for questions and assistance at all times. This preceptor will be one of the C/MHC physicians or a designated faculty member from the affiliated residency program.

Will their schedule be flexible?

Unfortunately, not always. Although residents can often say which clinic sessions they can staff one or two months in advance, this availability must be balanced with their other clinic rotations (OB/GYN, Pediatrics, Surgery, etc.).

Community and Migrant Health Centers:

What is a Community Health Center?

A community health center (CHC) is a community-based health care facility which offers prevention-oriented primary care services. These services are made available regardless of the patient's ability to pay. They are provided through approximately 550 federally funded grantees in rural and urban underserved areas across the country.

What are the requirements for being a Community Health Center?

Section 330 of the Public Health Service Act states that CHCs must:

- Serve areas designated as medically underserved;
- Provide basic primary medical care services plus support and facilitating services appropriate for the target population;
- Have a governing board, the majority of whose members are users of their services; and
- Adjust the cost of services to the patient's ability to pay.

What kind of people do CHCs serve?

CHCs serve approximately six million people. Surveys have shown that 60 percent of CHC patients have incomes under the poverty level, 48 percent lack any form of health insurance, over one-third are children under the age of 14 and one-third are women of child-bearing age. These patients generally have complex health problems and often face barriers to health care access as a result of language, cultural or socio-economic factors.

What kind of health services are provided?

CHCs have pioneered the concept of comprehensive community-based care. Starting with a knowledge of their population's health needs, they directly provide comprehensive primary care services and manage speciality and hospital care.

What are Migrant Health Centers?

A migrant health center (MHC) is a health care facility which offers prevention-oriented primary care services to migrant and seasonal farmworkers and their families. The migrant health center program supports the delivery of health services to nearly half a million individuals annually. Services are provided by 117 MHC grantees through primary care clinics, birthing centers and in hospitals reimbursed through an interagency agreement. Funded centers must be in areas where there are at least 4,000 seasonal and migrant farmworkers for at least two months each year.

What are Community/Migrant Health Centers ?

Because of the similarities between CHCs and MHCs in funding, regulation, administration and mission, the two programs are often referred to jointly as C/MHCs, as is being done in this manual.

How are the C/MHCs funded?

The C/MHC programs are funded through Sections 330 and 329 of the Public Health Service Act.

The Federal subsidy to C/MHCs covers less than half of the cost of providing care to this population; the remaining costs are covered through payments from Medicare, Medicaid or fee-for-service charges.

How is the program administered nationally?

Central direction for C/MHCs is located in the U.S. Department of Health and Human Services, Bureau of Health Care Delivery and Assistance (BHCDA) in Rockville, Maryland. Line administration is provided through the Department's 10 regional offices.

How is the program administered locally?

Each C/MHC is a private non-profit corporation governed by a Board of Directors (Community Governing Board).

What are the responsibilities of the community governing board?

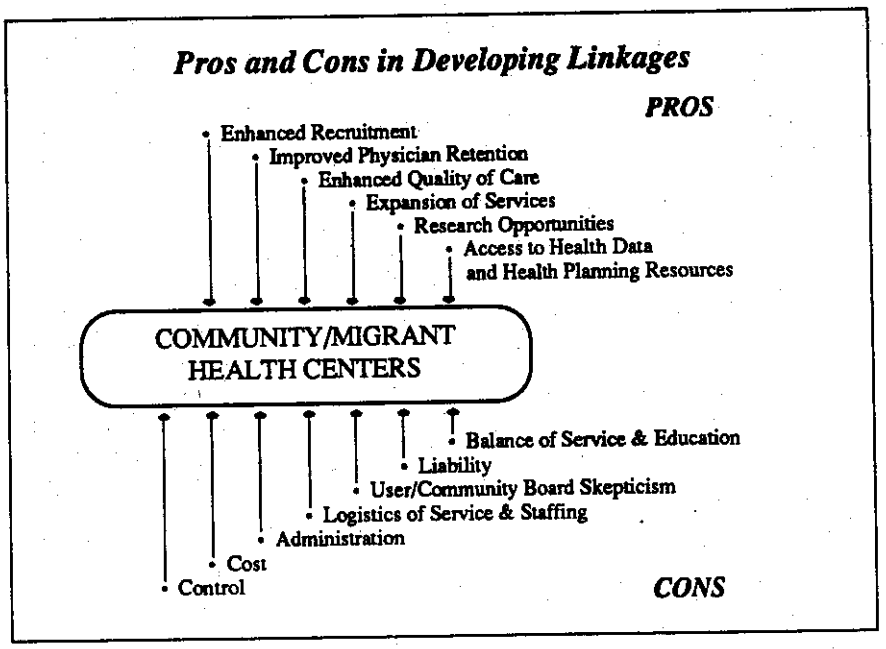
The governing board of a C/MHC is legally charged with the ultimate responsibility for the center's operations. In general, board responsibilities can be divided into six functional areas:

- Establishing goals and objectives;
- Establishing and monitoring policy;
- Selecting and evaluating the executive director;
- Monitoring and evaluating center performance;
- Representing the center in the community; and
- Monitoring and evaluating board performance.

SECTION TWO

Assessing the Pros and Cons of Linkage Affiliations

Community/Migrant Health Centers



PROS: Benefits and incentives for developing linkages for C/MHCs include:

Enhanced recruitment of physicians

Residents are more likely to consider a C/MHC site for future practice following a positive training experience there. Students and residents trained in medically underserved settings are more likely to practice in such settings. Physicians so trained will have the skills, knowledge and attitudes to meet the needs of the underserved. Also, many physicians, because of an interest in teaching, are attracted to clinical settings which also train medical students and residents.

Improved retention among physician staff

Most physicians enjoy the teaching and the creativity engendered through exposure to residents and other academic colleagues. Faculty status in residency programs and teaching in hospitals or medical centers are attractive options to most physicians. The linkage may provide assistance for on-call and hospital coverage.

Enhanced quality of care

The academic relationship helps keep physicians abreast of changes in treatment and technology. Training and educational opportunities for all health center staff will be enhanced. The referral system with the sponsoring hospital will often be improved, which can enhance patient care.

Expansion of service and patient volume

Linkages can attract new patients who associate the medical center/hospital's partnership with high quality health care. Often, the academic setting creates an opportunity to expand patient volumes for particular services (e.g. obstetrics). It may also provide an opportunity to qualify for health foundation dollars that support programs to increase access to care for underserved populations.

Access to health data and health planning resources

The data collection and health planning analysis capabilities made possible and facilitated by an academic presence can

help C/MHCs document their activities and more accurately assess and describe the health needs of the target population. This information can make it possible to improve managed care programs, to provide more cost effective health care and to demonstrate the impact of new programs on health outcomes. These data are valuable when securing new funding.

Research Opportunities

Because BHCDA program dollars cannot be used directly for research, the research resources made available through a linkage with a residency program may help C/MHCs to better understand the health care problems or practice patterns of their patients. This knowledge can facilitate more effective use of limited service resources. Research opportunities may attract physicians interested in combining research and service activities.

CONS: Because a linkage affiliation introduces more complexity into the C/MHC mission (just as it does for residencies), there are issues which must be addressed as a consequence of the relationship.

Control

Confusion can occur with respect to who establishes policies and objectives to implement a linkage affiliation. Within the C/MHC, the executive director, clinical director and community board must negotiate to protect their particular interests. Balance must be achieved between the academic center's mission to educate and the C/MHC's mission to serve. The responsibilities for these activities are often blurred.

Cost

Cost considerations include: lost productivity due to medical staff teaching and faculty responsibilities; lower productivity of residents (particularly first-year residents); development of adequate on-site education resources such as a medical reference library and computer learning packages; space needs, such as adequate exam rooms, offices and a conference area; the ordering of more tests, prescription drugs and x-rays by residents.

Administration

Administrative effort is required to operate a more complex clinic schedule, document resident educational experiences, ensure adequate supervision of residents and accomplish residency maintenance activities such as interviewing resident applicants, advising, mentoring and evaluation.

Logistics of service/staffing

Residency program expectations include an adequate patient mix and the opportunity to practice continuity of care. The C/MHC must be able to schedule patients to meet these needs. Professional staffing levels must be sufficient to release providers from patient care responsibility while they are teaching. Support staff must also be adequate to assist the increased number of providers.

User/community board skepticism

The patients and community board may have concerns regarding the following: the quality of care provided by a "doctor in training"; being used as "guinea pigs" or "experimented on"; the mission of the C/MHC straying from service to education and/or research; and the sensitivity of residents and students to the differing socioeconomic and cultural backgrounds of the patients.

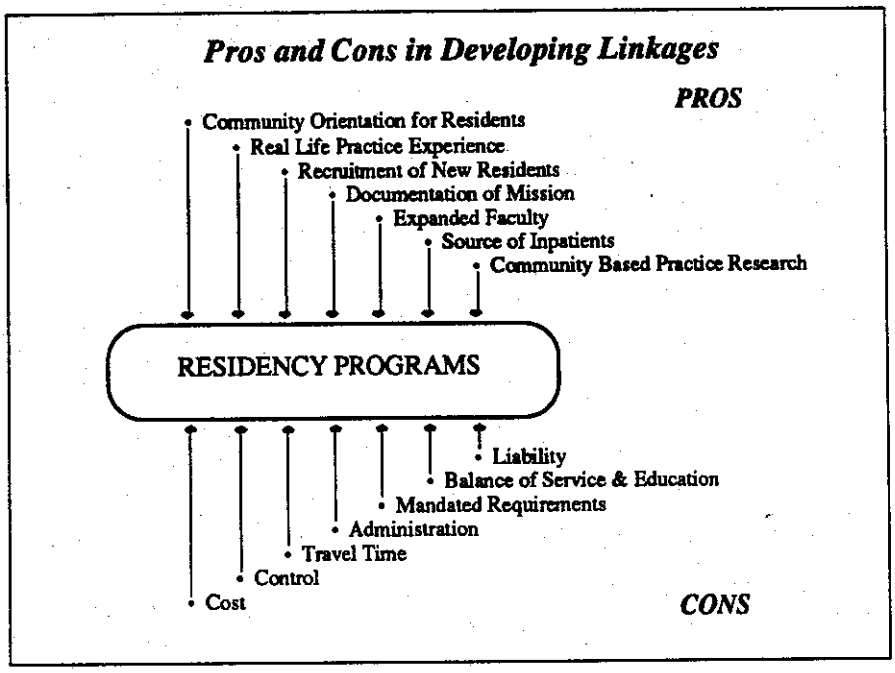
Liability

The C/MHC may have liability and risk management issues to consider including malpractice costs associated with training programs. For example, who is liable if a resident makes a mistake or who covers for a C/MHC faculty member when that individual is working at the residency site? Responsibility for paying malpractice insurance on preceptors and residents/students must be clearly determined.

Balance between service and education

Meeting federal guidelines for provider productivity may be more difficult when providers spend time supervising residents.

Family Practice Residency Programs



PROS: Benefits and incentives for residency programs in developing linkage affiliations with C/MHCs include:

A more complete community orientation for residents

Residents gain an understanding of the relationship between the community and its environment and their influence on the health of individual patients and their families.

A more realistic training environment

Residents care for patients in a practical ambulatory clinical environment which more closely resembles their future practice settings.

Recruitment of new residents

A health center training site can be a marketing tool for the residency. Some medical school graduates are seeking a residency which offers an expanded ambulatory care experience in a C/MHC, a rural area or one which cares for a special or medically needy population.

Documentation of mission

Affiliation with a C/MHC provides the opportunity for the sponsoring medical center/residency program to demonstrate a commitment to care for the underserved and to train future caregivers for health professional shortage areas and medically underserved areas.

Expanded faculty

Health center physician faculty may also supervise residents in the hospital. Health center physicians broaden residents' exposure to differing practice styles and role models.

Source of inpatients

A health center offers a potential source of inpatients for the hospital/residency program, broadens the patient base and increases the patient diversity for all of the residents on the inpatient service.

Community-based practice research

A health center offers a special environment for residents, faculty and staff to carry out clinical and health services research activities in a primary care setting. Community-based primary care research has been relatively neglected compared with other types of health research. Linkages can open up new

opportunities to develop projects which can impact on the health status of a target population, or provide new information about that group's health status, while also enhancing needed research skills.

CONS: Disincentives and obstacles for residency programs in regard to implementing linkage affiliations include:

Costs

Financing the residents, on-site faculty and support staff is a critical issue because training and service costs are often difficult to separate.

Control

The responsibility and authority for making and implementing decisions related to teaching, medical practice policy and service schedules may have to be shared or negotiated. This may compromise a residency program's autonomy.

Work and travel time

Family practice residents may experience increased stress by working in two separate clinical settings (the hospital and the C/MHC). Commuting time between training sites can complicate the problem by overloading a resident's schedule.

Administration

Considerable administrative effort and coordination are involved for the residency in establishing and maintaining an accredited ambulatory care training site and in continued nurturing of the relationship to promote an optimal experience for residents, faculty and patients.

Mandated requirements

The Residency Review Committee for Family Practice of the Accreditation Council for Graduate Medical Education, which oversees the accreditation process for the residency program, has requirements which impact on a satellite ambulatory care training site. To be approved as a satellite ambulatory care training site, the C/MHC must have board certified staff, adequate exam space, medical reference materials, access to laboratory facilities and patient care continuity or, in effect, the same components as any primary teaching clinic.

Balance of service and education

The difficult balance between service and education may be even more complex in the C/MHC. Federal guidelines for C/MHC productivity make it challenging for the residency program to reach an acceptable balance between service and education.

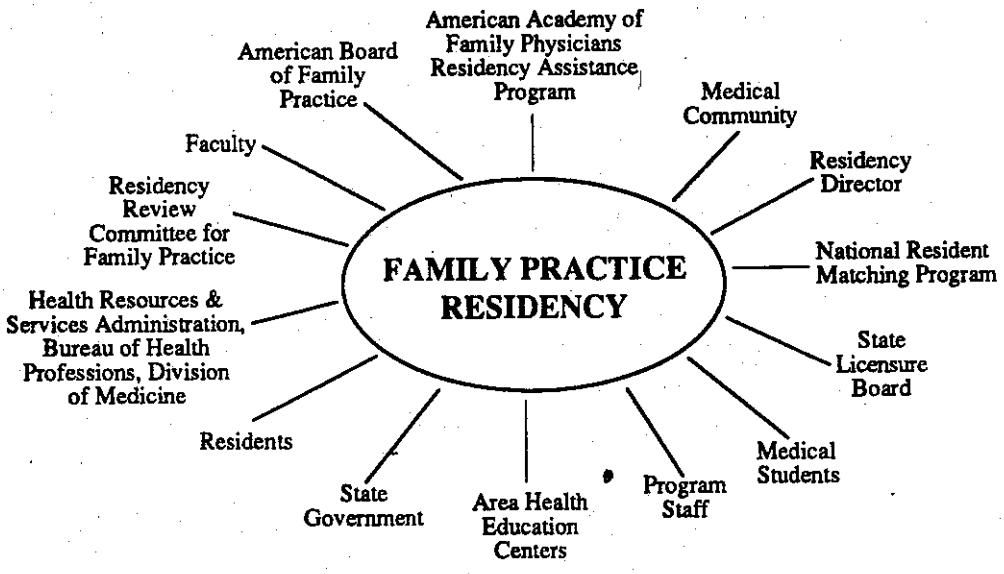
Liability

Any expansion of clinical activities involves increased liability exposure. Additionally, the liability insurance for residents may need to be changed as additional sites for training are involved.

SECTION THREE

Individuals and Groups to Consider in Linkage Development

Many individuals and groups may impact on family practice residency programs and C/MHCs. Some can be used as consultants in developing a linkage, some should be considered due to the linkage's potential impact on them and still others will be part of the ongoing linkage process.



Family Practice Residency Programs

Medical Community

Many family practice residency programs have significant interactions with the local physicians in their communities. Any new relationship, such as a linkage, must be carefully considered in the context of the larger medical community. Will this linkage be perceived as meeting needs, or will it be interpreted as increasing competition for patients?

Residency Program Director

The residency is administered by a residency program director. He/she is ultimately responsible for all activities related to the residency and each resident's training. The program director must be certain that the requirements of all agencies impacting on the residency (see below) are met. Additionally, this person is a clinician, a teacher and generally a source of support for the residents. Any new program, such as a linkage, will directly impact on the program director's workload.

The National Resident Matching Program (NRMP)

The NRMP is a computerized system that matches medical students with residency programs. Senior medical students interview with residency programs and each residency program and student submit a ranked list of their preferences to the NRMP in February. Through a large, sophisticated computer program, the NRMP matches students to a residency program in mid-March.

State Licensure Board

Residency programs must prepare their residents to be licensed by the state Board of Medical Examiners. This is the process

whereby an agency of state government grants permission to an individual physician to practice medicine within the jurisdiction of that state.

The American Board of Family Practice (ABFP)

The ABFP is the specialty board for family physicians. At the end of the three years of residency, the residents will be able to take a certification examination to become Board-certified family physicians if they have met certain requirements. These include:

1) 36 months of training in an approved family practice residency program.
2) Patient continuity of care is not interrupted by more than two months during each of the second and third years of training (unless prior approval is received from the ABFP).

Medical Students

As noted above, medical students must choose one residency from among many for their post-graduate training. During medical school training, they will either spend a few weeks on rotation with the residency or visit it for an interview. Each residency seeks to attract the most qualified medical students. A linkage can have a significant positive impact on medical student applicants.

Program Staff

As with almost any agency, a residency program has both secretarial and support staff. Any new relationship, such as a linkage, will involve additional paperwork and communication over questions as the two programs "get to know each other." Many of these administrative responsibilities will rest with the staff.

State Government

Some residencies are part of a state university or sponsored by state funded hospitals. Similarly, the residency may receive funding from the state for the residents' salaries. Legislators and public officials are interested in knowing where the residents receive their training. If the C/MHC serves an underserved population, the linkage may help the residency justify the expenditure of public funds.

Residents

The residents are the learners and the service providers. They are learning to be family practice specialists and they are the ones who also provide service to patients in the hospitals and health centers where they train. Family practice residencies are three years in length, with trainees being called residents. They are "real doctors" (they have graduated from medical school) and are training to become specialists in family practice. They work long hours and generally receive a salary of $25,000-$30,000 per year.

Health Resources and Services Administration (HRSA), Bureau of Health Professions (BHPr), Division of Medicine (DM)

Many residency programs receive funding from the Bureau of Health Professions, of HRSA, the federal agency responsible for administering training grants for family practice. The funds are provided by Title VII of the Public Health Service Act. Many family practice residencies use funds for operational costs and the development of new programs within the residency. (See Appendix for agency organizational chart.)

Area Health Education Centers (AHECs)

The AHEC programs are aimed at attracting and retaining health care personnel in scarcity areas and they would be supportive of linkages. They tie the academic resources of the university health science center to local planning, educational and clinical resources. AHEC grants are awarded under Section 781 of the Public Health Service Act and administered by the Division of Medicine, Bureau of Health Professions.

Residency Review Committee for Family Practice (RRC-FP)

The Accreditation Council for Graduate Medical Education (ACGME), an independent organization, is charged with accreditation of residency training programs. There are both **general requirements** for all residency programs and **special requirements** for each program by specialty or discipline. The Residency Review Committee for Family Practice (RRC-FP) reviews the accreditation of family practice residency programs on a continuing basis every one to five years. RRC-FP requirements related to ambulatory care training such as would occur in C/MHCs include:

1) There must be progressive assumption of personal responsibility for patient care in supervised environments.
2) The ambulatory site must be the same for at least the last two years of training.
3) Residents must be able to admit and care for family practice clinic patients in the hospital with supervision as appropriate.
4) During the first year, a resident must spend at least one half-day per week in the family practice center (FPC); in the second year, two to four half-days per week; and in the third year, three to five half-days per week.

5) Minimum encounter requirements: first year, one to two patients per hour; second year, two to three patients per hour; and third year, three to four patients per hour.
6) The FPC must be clearly identifiable, have a separate entry, waiting room and appointment system and have provisions for handicapped persons.
7) There needs to be two examining rooms per physician working in the FPC at the same time (including both residents and attendings).
8) There must be a business office, a record room, an office library, patient care rooms, a conference room, a basic laboratory appropriate to office practice and a resident and attending work area.
9) There must be prompt and convenient access by patients and residents to diagnostic laboratory and imaging services.
10) Patient's medical records must be maintained so that easy and prompt accessibility is assured at all times.
11) The record system must provide for patient care audit and chart reviews and the ability to monitor residents' experiences.
12) The FPC must be open during week-day hours commensurate with community medical practices.
13) When the FPC is closed, there must be a system for patients to gain access to their physician or designated substitute.
14) The fiscal operation of the FPC must reflect a balance between service and education which does not adversely affect the educational objectives.

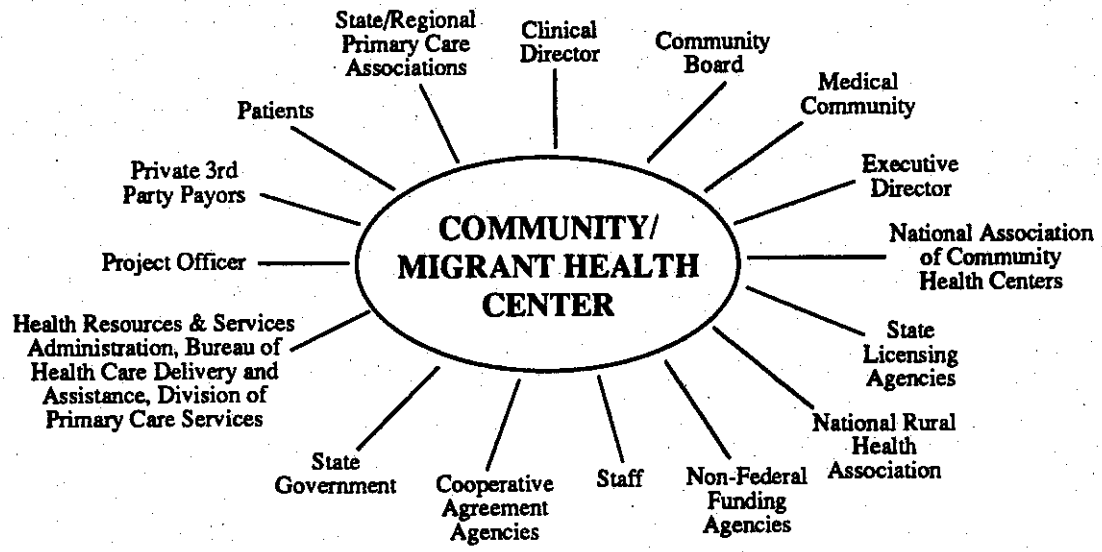
Although the RRC-FP conducts periodic reviews, if a program were to form a linkage with a C/MHC, prior approval of the RRC-FP would be required. Approval would depend in part upon fulfillment of the above requirements.

American Academy of Family Physicians (AAFP)/ Residency Assistance Program (RAP)

The American Academy of Family Physicians (AAFP) is the specialty society for family physicians. The Residency Assistance Program (RAP) began in 1975 under a grant from the W.K. Kellogg Foundation to promote the development of quality graduate medical education in family practice (residency programs) through the provision of consultative services. To date, over 700 consultations have been performed. Although RAP has no connection to the RRC-FP, RAP's consultation service may be helpful to the program when preparing new training sites for residents.

Faculty

The faculty of a residency program is responsible for the learning experiences their residents receive and takes great pride in their graduates. As a linkage would involve a new learning experience for the residents, the faculty will become involved in developing the program. Faculty members want to be certain the training meets the standards set for the residency. They likely will have many questions. Additionally, they may have concerns that the linkage will mean additional responsibilities and time commitments. They will need to understand the impact of the linkage on their professional roles as instructors and mentors for residents. These same concerns will, of course, be shared by C/MHC health care providers who will assume faculty roles like their colleagues in the residency.



Community and Migrant Health Centers

Executive Director

The executive director is the individual responsible for the implementation of policies established by the board and for the overall administration of the C/MHC. This person's role in merging education and service functions is critical to the success of any linkage.

Clinical Director

The clinical director is responsible for health programs and the supervision of physicians in a C/MHC. Usually, the clinical director is a physician who has special training or experience in health care administration.

Patients

C/MHCs serve a wide variety of patients. In order to establish a C/MHC, there must be a documented need for primary care services in the area. Because this need for services can be demonstrated through cultural language or geographic access barriers, as well as financial barriers, C/MHCs are not just "poor people's clinics." In order to qualify for federal funding, C/MHCs are required to serve all patients, regardless of their ability to pay. C/MHCs use a sliding fee scale which determines a patient's fee based on financial status.

Private Third Party Payors

Generally, these are insurance companies, such as Blue Cross/Blue Shield, that pay for hospital and doctor bills and certain other health care services for subscribers. The percentage of C/MHC patients having private or third party coverage varies from site to site, but it is estimated that nationally, only 6 percent of C/MHC costs are covered by private third party payors.

Health Resources and Services Administration (HRSA), Bureau of Health Care Delivery and Assistance (BHCDA), Division of Primary Care Service (DPCS)

The federal dollars which support C/MHCs are administered by the Bureau of Health Care Delivery and Assistance (BHCDA) which is located in the Health Resources and Services Administration (HRSA) of the United States Public Health Service (PHS) which is located in the Department of Health and Human Services (DHHS). (See organizational chart in Appendix.) BHCDA has requirements for C/MHCs, some general and others very specific. A brief outline of these requirements and expectations is provided in Section One.

State Government

The degree to which a state supports C/MHCs varies widely. In some states, there is direct funding for C/MHC services, and in return there are expectations as to the number and types of patients who will be seen, the type of services provided and the locations of health centers.

Staff

The staff of a C/MHC includes health center staff, administrative staff (accountant, assistant administrator) and administrative support staff (receptionist, secretary). All these people

will be affected by a linkage development with a residency program. It is important to nurture their support in the development of a linkage as their cooperation will help ensure the success of the program.

Non-Federal Funding Agencies

Many C/MHCs utilize funding sources other than the federal government for support of their programs. These sources can be national, such as large philanthropic private foundations (e.g. Robert Wood Johnson, Kellogg), state-based or other private entities. While the basic mission of the C/MHC—to provide primary care services to people who need them—cannot shift, funding sources may impose additional specific expectations on the C/MHC. These expectations may include a focused research project or the provision of categorical services.

State Licensing Agencies

As with all health centers, C/MHCs are regulated by the state licensing agencies. The regulations to which the center must adhere pertain to laboratory formularies, building structure, credentials of staff and hours of operation.

Medical Community

Historically, there has been tension between publicly subsidized health care programs and private practice. While this relationship is improving, sensitivity to potential conflict is important in the planning process. Private provider needs and roles must be recognized and respected in planning for any C/MHC program expansion or enhancement.

Community Board

By statute, C/MHCs are required to have a policy making board of directors. This board is made up of nine to 25 people, over half of whom must be users of the C/MHC. The governing board is legally responsible for ensuring that the C/MHC is operating in accordance with applicable Federal, state and local laws and regulations. The board meets at least monthly to provide policy leadership and guidance to the C/MHC's management and clinical staff and to monitor and evaluate the center's performance.

Project Officer

Each C/MHC is assigned a Federal Project Officer who, as part of a management team including a clinical consultant, serves as a liaison between the center and BHCDA. Located in one of the 10 BHCDA Regional Offices, this individual provides monitoring and liaison services for BHCDA as well as support, information and technical assistance to the center's executive director and community board.

National Association of Community Health Centers (NACHC)

NACHC represents the interests of C/MHCs around the nation and provides a forum for disseminating information to them. NACHC is supportive of all efforts to recruit and retain health professionals in C/MHCs and can provide encouragement and help in establishing linkages.

National Rural Health Association (NRHA)

NRHA is actively involved in promoting discussion and understanding about the special health needs of rural areas through education and networking efforts among legislators, policy-makers and educators. It recognizes that rural health care providers play an important role in rural settings and supports training programs which will enhance the preparation of physicians and other health care providers for rural health.

State/Regional Primary Care Associations (S/RPCAs)

S/RPCAs aim to facilitate the sharing of services and expertise among C/MHCs and other primary care organizations within a state. The services and resources available through the S/RPCAs vary from state to state; however, they will be interested in linkage programs because of their role in supporting C/MHCs.

Cooperative Agreement Agencies

A Cooperative Agreement is a mutual arrangement between a state and the Public Health Service to accomplish common objectives in the development and delivery of comprehensive primary health care services to underserved areas and populations. Most states have cooperative agreements with the Federal Government.

NOTES

SECTION FOUR

Predictors of a Successful Linkage

Common patterns emerge when existing linkage programs are examined. A list of several successful linkage programs is included in the Appendix. If your program is seriously contemplating establishing a linkage, a visit to one of these programs, or at least contact, is highly recommended. Listed below are attributes common among these residency programs and C/MHCs, some specific to one entity; several of which are shared (mutual).

Family Practice Residency Programs

Mission

In addition to its teaching mission, the residency program has a mission to expose residents to the provision of health services to underserved people. This mission is reflected in the history, priorities and activities of the program.

Collegiality

Residency faculty accept and value C/MHC faculty as co-equals in training residents. C/MHC colleagues are included in conferences, faculty development and decision making about the residency program.

Opportunity for Integration

Since didactic training usually occurs at the academic institution, an opportunity is provided for C/MHC residents to process and integrate their training experiences acquired at the C/MHC. The residency program recognizes that the residents working at the C/MHC may be encountering vastly different experiences and stresses than their on-site resident colleagues.

Previous Experience Recognized

The resident's expressed interest and previous experiences in community health are considered when selecting residents for the C/MHC.

Appropriate Curriculum

As C/MHC residents are caring for patients with different health problems and cultural backgrounds, the residency program curriculum addresses these issues (e.g. different life cycle issues, cultural differences, and illnesses associated with poverty).

Mutual

Respect and Understanding

There is mutual respect between the C/MHC and the residency program with an understanding of each others' mission, as well as its reporting requirements and responsibilities to external parties.

Roles/Responsibilities Understood and Documented

In negotiating a linkage, all details of the relationship are discussed and documented in advance. These issues include:

Who is in charge?
How will decisions be made?
Who evaluates residents' performance?
What are the costs involved and who pays for what?
What legal issues need to be addressed?
Who supervises residents?
Are written contracts drawn up?
How are residents oriented to the C/MHC?
How is patient satisfaction assessed?
How is quality of care evaluated?
Who is responsible for scheduling?
Will faculty appointments be given?
Are there clear guidelines for mediating disagreements?

Faculty Development Efforts Supported

The residency and the C/MHC recognize the importance of developing clinical teaching skills and value activities which enhance academic roles of faculty.

Communication! Communication! Communication!

Once the linkage is developed, the relationship is continually evaluated in order to address any problems before they become

insurmountable. The residency program director and C/MHC executive director communicate regularly. Each entity regularly assesses the satisfaction among its physicians, support staff, residents, board and patients.

Community/Migrant Health Centers

Internalized Educational Objectives

The objectives of the center include education. Educational interests are represented in all areas of the center's operation. The center's board, administrative staff and clinical staff share a commitment to education and a belief that participating in this collaborative effort will produce physicians who will continue to practice in C/MHCs.

Adequate Resources and Logistics

The center is able to provide the resources and logistics necessary for a good training environment. This includes not only adequate space, library resources and dedicated staffing, but a sufficient patient mix and volume.

Positive Attitude Toward Teaching

The role of teaching is seen by the C/MHC as positive rather than an added burden. C/MHC faculty members are not "penalized" for lost productivity for the time they spend teaching.

Organizational Stability

A linkage program was not proposed as a solution to basic organizational problems such as dwindling user numbers or inability to recruit providers. The additional responsibilities placed on a C/MHC entering a linkage arrangement requires a stable foundation upon which to build.

Adequate Patient Population

All residents at the C/MHC have a group of patients assigned to them for whom they are responsible to provide continuous care and follow-up. Having their own "panel of patients" teaches the residents to function more like independent physicians and less as trainees.

Predictors of Successful Linkages

Family Practice Residency Program

- Mission of Service
- Collegiality
- Opportunity for Integration
- Previous Experience Recognized
- Appropriate Curriculum

Community Migrant Health Centers

- Internalized Educational Objectives
- Adequate Resources and Logistics
- Positive Attitude Toward Teaching
- Organizational Stability
- Patient Panels

Mutual

- Respect and Understanding
- Roles/Responsibilities Understood and Documented
- Communication
- Faculty Development

SECTION FIVE

Checklist of Steps to Follow to Create a Linkage

This section outlines some of the fundamental steps in the process of developing a linkage affiliation. While four distinct phases are outlined, there will be overlapping and parallel efforts as the linkage evolves.

Checklist for C/MHCs

Completed

Assessment Phase

1. Determine whether training family practice residents is consistent with the mission, goals and objectives of the health center. _____

2. Review the pros and cons of linkage programs. Determine whether training family practice residents will help the health center better serve its users. If a longitudinal linkage seems too big a step, consider offering a block rotation. _____

3. Discuss the formation of a linkage with the C/MHC board. If they are reluctant, determine what their specific concerns are and address them. The troubleshooting section includes suggestions for addressing various concerns. _____

4. Discuss the linkage with administrative, clinical and support staff. These discussions can be held jointly, if these groups regularly meet together, or in separate meetings. Again, if there are concerns, find out specifically what they are. Ask for suggestions from the person/ group voicing the concerns as to how they might be addressed. If not already done, the BHCDA project officer should be included/informed of the proposed linkage at this point. _____

5. Identify individuals committed to explore the concept and form a Linkage Development Committee which will assume responsibility for gathering information and participating in the planning process to establish a linkage. While the participation of the clinical director will be crucial, it is a good idea to recruit individuals from different groups, as they contribute varied skills, contacts and viewpoints. For example, a board member who is respected in the community, may help with marketing the idea to users. The support staff person who will be responsible for scheduling may be an appropriate candidate. His or her responsibilities will be affected by the linkage and this individual may foresee potential problems which others couldn't predict. Anticipate the need to budget for committee time to participate in the planning process. _____

Data Collection Phase

1. Assess nearby family practice residency training programs to identify potential linkage candidates. Proximity is a crucial factor, particularly in developing a longitudinal linkage, as the residents spend a great deal of time traveling back and forth. A history of successful collaboration is an important factor to consider. _____

2. Contact and/or visit C/MHCs with educational affiliations to gather information about linkages. A listing of such programs is included in the Appendix, or the BHCDA project officer may be able to assist in identifying comparable programs. Prepare a list of questions in advance. Be sure to include questions which address the specific concerns voiced in the assessment phase. _____

3. Gather information about the training requirements for family practice residency programs and their residents, including the accreditation process. This information is available from the residency program, the American Academy of Family Physicians and the Residency Review Committee for Family Practice of the Accreditation Council for Graduate Medical Education. Make sure members of the Linkage Development Committee become familiar with the basic requirements. _____

4. Estimate the potential financial impact of a training program on the C/MHC, incorporating direct costs for anticipated needs for additional space, staff, equipment and educational resources. Include staff time for clinical and administrative efforts as well as evaluation and monitoring of the linkage. Develop two or three scenarios based on alternative assumptions. _____

5. Summarize data and prepare a discussion paper which addresses the issues and outlines the advantages and disadvantages of a linkage affiliation. Discuss these issues again with the board and administrative, clinical and support staff. _____

Planning Phase

1. Establish a joint C/MHC-family practice residency planning task force to develop an affiliation plan and timetable for achieving an affiliation agreement. This task force should include, at a minimum, the clinical director, a residency faculty member, administrators from both programs and a C/MHC board member. _____

2. Consider consultant visits by AAFP/RAP, NACHC, NRHA and BHCDA. Review consultants' recommendations and incorporate into the planning process. Consultants can provide technical assistance and information on funding available to support linkage efforts. _____

3. Prepare a detailed curriculum outline for the C/MHC training program which includes goals and objectives for each component of the training program. Include an evaluation mechanism for each goal. _____

4. Prepare a list of topics relevant to the C/MHC environment. These should be included in the regular residency educational conferences to be given at either site. _____

5. Prepare a memorandum of understanding regarding the proposed affiliation agreement which outlines the financial, service, educational and legal responsibilities for each party to the affiliation agreement. Include the mission and objectives of the linkage and details regarding expectations of each party, how decisions will be made and how disagreements will be handled. This memorandum will be the basis for developing an affiliation agreement. _____

Affiliation Phase

1. Pilot block rotations for current family practice residents if this has not been done. _____

2. Prepare for residency accreditation and permission to enter the NRMP "Match." This will involve gathering data and supplying information in support of the residency program's application. _____

3. Develop a program implementation and evaluation plan (See Section Seven). _____

4. Negotiate an affiliation agreement between the C/MHC and the family practice residency program which formalizes the collaborative effort and assigns operational authority and responsibility for key program functions. (A section on contract development is included in the appendix.) _____

5. Conduct or sponsor faculty development training for C/MHC faculty to strengthen teaching and curriculum planning and evaluation skills. _____

6. Participate in the "Match" with the residency program. Interview applicants and recruit new residents. _____

7. Develop an orientation program for residents. Include orientation to practice management, quality assurance, community project opportunities, staff roles and responsibilities, community resources and perspectives from the board. _____

8. Establish a joint strategic planning committee and process to monitor and evaluate the affiliation and plan for long-term viability. _____

9. Implement and evaluate the new training program. _____

Checklist for Family Practice Residencies

Completed

Assessment Phase

1. Determine whether or not conducting family practice training in a C/MHC is consistent with the mission, goals and objectives of the family practice residency program. Meet with faculty and residents. _____

2. Determine whether family practice residents can benefit educationally through training in a C/MHC. Specifically, is there any reason why they cannot? _____

3. Determine whether the residency faculty and staff, hospital administration, medical community and residents support the concept of affiliation with a C/MHC. Meet with each group to address the "political" costs and benefits of such an affiliation. _____

4. Identify individuals, committed to explore this concept, who will assume responsibility for gathering data and participate in the planning process to establish a linkage with a C/MHC. Anticipate the need to budget for faculty and secretarial time. _____

Data Collection Phase

1. Identify C/MHCs which could be potential candidates for affiliation with the residency program. Consider distance, facilities, patient population, existing hospital affiliations and specialists relationships when examining a C/MHC. _____

2. Contact and/or visit residency programs which have affiliations with C/MHCs (see partial listing in Appendix). _____

3. Become familiar with C/MHC programs, their purposes, objectives, organizational arrangements and sources of funding (see Section One). _____

4. Review the financial status of the residency in terms of current and projected service income, institutional support, grant income, other sources of income and potential sources of salary support for additional residents. Review the idea of developing an application for Bureau of Health Professions training funds. Project additional costs associated with increasing the size of the residency and establishing an additional training site. These costs will include the following: administrative relative to scheduling and evaluation; personnel related to additional residents' salaries; and faculty time related to additional residents and patients. _____

5. Identify curriculum, clinic schedule and conferencing changes which would occur as a consequence of expanding the size of the residency and developing an affiliation with a C/MHC. A meeting with the persons responsible for scheduling from both the C/MHC and the residency would be helpful. _____

6. Review the accreditation process and determine the issues which should be addressed in developing an affiliation (see Section Three). _____

7. Summarize data and prepare a discussion paper which addresses the issues and outlines the advantages and disadvantages of a linkage affiliation. Sponsor a retreat to facilitate an open discussion of the concept among all residency faculty and staff, appropriate hospital personnel, the medical community and other constituencies of the residency program. _____

Planning Phase

1. Establish a joint family practice residency-C/MHC planning task force to develop an affiliation plan and timetable for achieving an affiliation agreement and training program. This task force should include, at a minimum, a residency faculty member, a C/MHC physician, an administrative person from both the C/MHC and residency and a C/MHC board member. _____

2. Schedule consultant visits with the RAP, NACHC and BHCDA. Review consultants' recommendations and incorporate into the planning process (see resource list in Appendix). _____

3. Prepare a detailed curriculum outline and rotation schedule for all residents which incorporates the continuity and conference schedules at the C/MHC. _____

4. Prepare a memorandum of understanding regarding the proposed affiliation agreement which outlines the financial, service, educational and legal responsibilities for each party to the affiliation agreement. _____

Affiliation Phase

1. Pilot block rotations at the C/MHC for current family practice residents if this has not been done. _____

2. Submit requests for accreditation and permission to enter the NRMP "Match." _____

3. Develop a program implementation and evaluation plan (see Section Seven). _____

4. Negotiate an affiliation agreement between the family practice residency program and the C/MHC which formalizes the collaborative effort and assigns operational authority and responsibility for key program functions. _____

5. Have residency faculty attend a C/MHC board and staff meeting for an orientation to the center and its services and programs. _____

6. Enter the "Match," interview candidates and recruit a resident class. _____

7. Conduct an orientation program for residents. Include practice management, quality assurance, community project opportunities, staff roles and responsibilities, community resources and perspectives from the board. _____

8. Establish a joint strategic planning committee and process to monitor and evaluate the affiliation and plan for long-term viability. This committee should have a similar composition to the task force in the planning phase. _____

9. Implement and evaluate the new training program (See Section Seven). _____

SECTION SIX

Troubleshooting

Nearly every linkage is likely to experience difficulties at some point. This section is intended to address some of those problems and propose possible solutions. Some issues will arise during the planning stage, some will occur while the linkage is in effect. This section is divided into two parts—Planning and Maintenance. Some problems occur in both stages. Many of the solutions noted come from programs where linkages exist.

Planning Stage

The C/MHC community board is not supportive of the linkage relationship.

First determine the specific cause of the board's concern and then address the issue. Arrange for hesitant members to talk with board members from other C/MHCs where a successful linkage is in place. If after a period of time (e.g., three to six months) the concern remains, abandon the idea of linkage for now. Consider offering block rotations as an alternative.

There is a lack of consensus of the residency faculty for involvement in the C/MHC.

The greater the change of focus or mission the linkage project represents for a residency program, the greater the likelihood of discord. Inviting faculty members to the C/MHC board meetings may increase their appreciation for the service mission of the C/MHC. If the faculty has concern about the C/MHC physicians as teachers, faculty development training as described below may help.

The learning resources at the C/MHC are inadequate for developing a linkage.

If your state has an Area Health Education Center (AHEC), contact them for assistance. A local computer outlet may be willing to donate computer learning equipment in return for recognition. Additional resources may be found in the medical library.

The C/MHC program is concerned that residents will not be able to see enough patients and will lower the center's productivity levels.

The C/MHC productivity guidelines were not made for residents. Involve the federal project officer at an early stage to garner his/her support for the linkage so they appreciate the other benefits linkages provide. Establish specific goals for resident productivity.

The planning process is moving slowly.

Ask why. Recognize that effective planning takes time. The more time spent in planning, the more likely problems will be identified and addressed. Additionally, step-wise planning establishes communication patterns which will be helpful later on. A solid and engaged planning process is key to a successful linkage. If planning is slow because the parties are not engaged or committed, that is a good indication that the success of the project is in doubt.

C/MHC faculty do not feel prepared to teach.

Faculty development for C/MHC faculty members will strengthen their self-confidence as teachers. Good clinical teaching skills can be acquired and, once learned, will enhance the ability of C/MHC faculty to become invested in the success of the linkage affiliation. Faculty development training to strengthen competencies in clinical teaching should be scheduled prior to the arrival of the first residents at the C/MHC. Joint faculty development conferences for faculty in the C/MHC and the residency should be held to build a shared identity as faculty. Information about faculty development programs, strategies and curricula can be obtained from the Society of Teachers of Family Medicine (STFM).

Maintenance Stage

The C/MHC usually affiliates with a hospital not related to the residency.

A linkage relationship does not necessarily imply a change in affiliation. The residents need to follow their hospitalized patients, but this can happen at the usual C/MHC hospital. Alternatively, some C/MHC patients may choose to be hospitalized at a different hospital.

Residents are not part of the community served by the C/MHC and may not be sensitive to its cultural context.

The greater the residents involvement in the community, the more likely they will be sensitive to its cultural context. This could include involvement on the C/MHC board, assignment to a community committee, responsibility for a community based project and specific cultural sensitivity or language skill training. Careful selection of residents who have demonstrated community involvement may be helpful.

C/MHC support staff are noncooperative in performing the additional paperwork or effort required in a linkage project. For example: Staff find it too troublesome to identify a resident's patient and to alert the resident that the patient had a non-routine visit.

All levels of support staff will be affected by the linkage project. Involving them early on so they understand and appreciate the reasons behind the decision is important. Their involvement might also alert you to situations or problems you had not considered. Have the staff make visits to the residency program. Take advantage of support staff expertise in developing systems addressing problems which may arise. After you've provided them sufficient information to understand the issue, ask how they would handle the problem.

Residents are unavailable to see patients many days of the week.

Pairing the residents at the C/MHC so patients will identify both of them as their physician may help. In this way, when one is unavailable, the other may be able to see the patients.

C/MHC physicians are not integrated into the residency.

C/MHC physicians have skills that may be very valuable to the residency. For example, they may teach about practice management, cross-cultural issues, community resources, etc. Invite them to residency faculty meetings and arrange joint conferences, some of which are at the C/MHC. Arrange for all appropriate academic appointments, privileges and titles.

C/MHC medical staff is not accustomed to working with family physicians.

Particularly in urban CHCs, where the providers have come through the NHSC, there may be no family physicians. Meetings between the residency and the C/MHC physicians will help promote mutual understanding. Sharing research ideas, joint patient care conferences and rounds presentations will also help build positive professional relationships.

Patients do not see residents as "real doctors."

The community board can help patients understand that residents are real doctors. Additionally, the manner in which the staff introduces them to patients will help.

If the C/MHC reimburses the residency for residents' time in the C/MHC, calculations are complicated.

Residents do not always see as many patients/hour as full time providers. Reimbursement may need to be changed to per encounter or patient visit instead of per hour.

Residents order too many tests, thereby increasing the cost per encounter.

Include as part of orientation the cost of tests and teach residents the implications of these costs on the C/MHC's budget and ability to provide services. Incorporate seminars in practice management and clinical cost effectiveness led by the executive and/or clinical director of the C/MHC into the resident conference schedule.

Senior residents have limited teaching opportunity in the C/MHC since there may be no medical students.

The residents can teach the C/MHC staff with in-services. Additionally, the C/MHC might consider bringing medical students in for block rotations or for community medicine projects.

There is poor communication between the C/MHC and the residency.

Sharing a newsletter or inter-office bulletins may help staffs to learn about each other. Consider an ongoing "brown bag lunch" with both staffs.

There are "inappropriate" residents assigned to the C/MHC.

Have the C/MHC staff and/or board participate in the selection process.

Residents experience "burn-out."

Residents DO burn out in all settings. Reminders to the staff about residents' heavy schedules and responsibilities may increase the support they provide. Stress management resources may be available through the residency program.

Scheduling for residents is difficult.

The people responsible for scheduling from the residency and the C/MHC should meet personally during the planning stages, then every three months during the first year. This personal contact may help them work more cooperatively toward handling this unavoidably difficult task.

Residents often arrive late to the C/MHC for afternoon clinic because noon conferences at the hospital run late.

This is a concern even at the residency due to the dual responsibilities of a training and education program. Open and frequent communication may address some of the concerns. Holding some of the conferences at the C/MHC may help alleviate the problem.

Residents assigned to the C/MHC feel left out of the "camaraderie" of the rest of their class because they spend less time together or because their health center experiences are so different.

Encourage the development of a system whereby all residents rotate through the C/MHC for at least small blocks of time. This will help them appreciate the experiences of their colleagues.

Residents take too long with individual patients.

During orientation, residents need to be exposed not only to the mission of the C/MHC but to the requirements and restrictions within which it operates. Despite all efforts, residents, especially in their first year, may take longer with patients. It is part of the learning process. The C/MHC will need to understand this.

Issues keep arising between the C/MHC and the family practice residency. You tackle one problem only to have another arise.

At the onset of linkage negotiations, it should be acknowledged that some difficulties are bound to arise. Both groups should work together to develop a system by which disagreements will be handled. Having a mutually agreed upon "mediation system" is much more efficient than tackling each problem individually.

NOTES

SECTION SEVEN

Evaluation and Feedback

Evaluation strategies and individuals responsible for implementing them should be identified during the process of developing a linkage affiliation as noted in Section Five. These strategies should be uncomplicated and designed to provide practical information to enable the residency and C/MHC staff to monitor the linkage affiliation, identify specific issues and deficiencies and implement a mechanism to improve the situation. Since information-gathering activities are already central to the operations of residencies and C/MHCs, many of the components to evaluate the linkage affiliation will already exist. What follows are suggested general questions and themes to address:

Check if Evaluation Strategy Addresses Question:

Regarding the Written Affiliation Agreement:

1. Is the agreement working as expected? _____
2. Is there provision to amend the agreement periodically based on program experience? _____
3. Are all pertinent groups represented in the agreement? _____
4. Are the agreement's objectives specific enough so that their accomplishment can be measured? _____
5. Are legal responsibilities clearly delineated? _____

Regarding the Impact of the Linkage of the C/MHC:

1. How satisfied with the linkage are C/MHC providers? _____
2. Have there been any changes in patient satisfaction since the affiliation began? _____
3. How satisfied are the board members and the C/MHC administration? _____
4. Does the added educational mission of the residency impact on the accessibility, continuity, comprehensiveness and quality of the care provided at the C/MHC? _____
5. Does the C/MHC play a sufficient role in the selection and evaluation process of the residents? _____
6. Is orientation of C/MHC staff to the residency adequate? _____
7. Do staff have a clear understanding of their role in the linkage? _____
8. Are C/MHC faculty integrated into the residency program? _____
9. Do C/MHC faculty receive ongoing faculty development training? _____
10. Does the linkage affiliation compromise the C/MHC in terms of meeting BHCDA requirements? _____

11. Is there on-going communication with the residency faculty? _____

12. Are users satisfied with care provided by residents? _____

13. Are residents supervised appropriately? _____

14. Do residents comply with the quality assurance system and protocols as established by the C/MHC? _____

Regarding the Impact of the Linkage on the Family Practice Residency Program:

1. Are residents satisfied with the program? _____

2. Are C/MHC-based residents well integrated into the residency? _____

3. Are residency curriculum requirements being met? _____

4. Are residency faculty regularly briefed on the program by C/MHC faculty? _____

5. Do residents receive an adequate orientation to the epidemiology and demography of the patient population of the C/MHC? _____

6. Do all residents learn about the unique characteristics and features of clinical practice in the C/MHC? _____

7. Do all residents learn about the unique practice management/financial/quality assurance issues in the C/MHC? _____

8. Are C/MHC faculty identified as clinical teachers? _____

9. How are residency faculty affected by the addition of the C/MHC? _____

Regarding the Impact of the Linkage on Management and Financial Issues:

1. Is the affiliation consistent with the long-term mission of the residency and the C/MHC as had been envisioned? _____

2. Are staffing, equipment and space requirements being met? _____

3. Are there procedures for removing residents, if this becomes necessary? _____

4. Are the scheduling procedures satisfactory to both the residency and the C/MHC? _____

5. Are agreements about financial support of the residents satisfactory to both the C/MHC and the residency? _____

6. Are malpractice costs and costs related to teaching activities and equipment being managed appropriately? _____

7. Is there a mechanism in place to account for resident productivity and income generation? _____

8. Is sufficient information available to satisfy the reporting requirements of public agencies and funding authorities? _____

Regarding the Outcomes of Linkage:

1. Is there a tracking system in place to gather data for all trainees to document their practice location and type? _____

2. Is the linkage a factor in recruiting and retaining physicians at the C/MHC? _____

3. Is the linkage a factor in recruiting new residents? _____

4. Is the linkage an influence on attracting family medicine faculty to the residency program? _____

5. Is the linkage a factor in stimulating community-based health services research activities? _____

6. Do important constituencies external to the linkage (such as the hospital) support the program? _____

7. Have relationships with community physicians changed? _____

General Evaluation Strategies:

1. **Use existing evaluation documents and procedures for data sources wherever possible.** Family practice residencies and C/MHCs collect and report information to meet internal and external program requirements. Identification of available, pertinent, information is a crucial first step in designing a linkage evaluation framework. Information is generated through:

   - observation;
   - written evaluations of residents by their clinical instructors;
   - resident feedback to faculty and advisors;
   - staff input, both written and verbal;
   - patient satisfaction surveys;
   - periodic review of the program by the curriculum committee of the residency;
   - discussion of the program by the C/MHC board as an agenda item during its regular and annual meetings;
   - monitoring of resident performance on in-training and board certification examinations;
   - C/MHC financial reports and user tracking data;
   - quality assurance reports;
   - minutes of meetings: C/MHC staff, residency faculty, planning, etc.
   - periodic review of the linkage agreement.

2. **Concentrate on evaluating program effectiveness issues.** Begin by evaluating whether the health center and residency are meeting their individual objectives. Compare C/MHC and residency staff perspectives to answer essential questions about linkage effectiveness. Use objective data from different sources and gathered at different times.

3. **Establish performance indicators.** The residency programs will need to gather data to demonstrate that the linkage enhances its mission to prepare appropriately trained community oriented family physicians while maintaining accreditation requirements established by the Residency Review Committee for Family Practice. The C/MHC will need to gather information which addresses the impact of the linkage on quality of care, recruitment and retention of health center providers and productivity of residents and clinical staff.

4. **Use collaboration as the underlying principle.** The establishment of mutually agreed upon linkage objectives will make it easier to conduct a more effective evaluation process. Direct communication and exchange of relevant information between individuals in the C/MHC and the family practice residency will invest both groups in the mission to achieve them.

5. **Share evaluation results.** It is important to provide feedback to program participants at all levels on a regular basis. Not only is this an opportunity to highlight successes and identify areas for change, the opinions and differing perspectives of an informed team often produce creative and constructive ideas.

NOTES

APPENDICES

APPENDIX ONE

Bibliography

Ambulatory Pediatric Association Educating Pediatric Residents to Provide Health Care to Underserved Children. Conference Proceedings. Alexandria, Virginia. March 1990.

Recommendations are offered at a conference held by the Ambulatory Pediatric Association for developing a strategic plan consisting of both short-term and long-term objectives. The short-term objectives include developing a core curriculum of knowledge, skills and techniques about educating residents to provide care to underserved children. This curriculum should concentrate on certain general areas. These include: clinical issues, organization of clinical services, community, public policy, and personal factors such as career opportunities and financial considerations in careers which serve the underserved. Curriculum methodologies for educating residents about underserved children are also outlined. The importance of faculty role models and mentors, community experiences and the multidisciplinary team approach to providing care to underserved children was recognized by conference participants. The long-term objectives which are outlined include the Ambulatory Pediatric Association's involvement with other organizations to affect public policy.

Amundson, Loren H. Family Practice Residency Training and the Community Health Center. *South Dakota Journal of Medicine.* January 1985: 5-10.

This paper reviews the community medicine content expected during family practice residency training. A historical review of the development of Community Health Centers is included. It outlines the involvement of a family practice residency program delivering health care and receiving community medicine training at the Sioux River Valley Community Health Center in South Dakota. The article concludes that significant and appropriate community medicine training during a family practice residency can be obtained through affiliation with a Community Health Center.

Association of American Medical Colleges. *Study and Comparison of Transition of Medical Education Programs From Hospital Inpatient to Ambulatory Training Programs.* Prepared for the Bureau of Health Professions, Health Resource and Services Administration, U.S. Department of Health and Human Services, Contract No. HRSA 240-86-0068. Nov 20, 1987.

The need for more ambulatory training in both undergraduate and graduate medical education and the educational objectives for using ambulatory settings are explored. The issues which surround the ambulatory and inpatient setting and the cost of financing outpatient education are also discussed. Key factors which are crucial in assuring a successful ambulatory training include: Recruitment of qualified faculty, defining the learning objectives, communication with off site faculty, and obtaining student feedback. It concludes by stating that the growth of ambulatory education is dependent upon the availability of resources, such as qualified faculty, appropriate sites and financing.

Bass, Joel L.; Mehta, Kishor A.; Alpert, Joel J.; and Pelton, Stephen. Residency Training in Community Pediatrics. *Clinical Pediatrics.* 20(4) April 1981: 249-253.

A required PL-3 rotation in community pediatrics, including assignments to preschool and school settings, private pediatric offices, and in-hospital responsibilities in the Department of Pediatrics at Framingham Union Hospital, a Boston University affiliate, is described. After 14 PL-3 rotations, analysis of program content, as well as resident and community response, shows the experience to be a practical and workable model for incorporating community pediatrics into residency training.

Brazeau, Nancy K. The Upper Peninsula Program: A Successful Model for Increasing Primary Care Physicians in Rural Areas. *Family Medicine.* 22(5) 1990: 350-355.

In 1974, Michigan State University established the Upper Peninsula Medical Education Program (UP) to improve the physician supply in rural areas of Michigan by training students in a rural, practice-based setting. Practicing graduates

of the program (N=28) were surveyed by mail and their responses compared to a random sample of downstate MSU graduates (N=57) with regard to practice location, specialty choice, hometown, and medical education and training. UP Program graduates showed a tendency to rural origin and chose rural practice and primary care specialties, especially family practice, more often than did their downstate colleagues. Responses of UP graduates suggested that rural residency locations would lead to increased numbers of rural practitioners. The rural UP Program has been successful to date in training medical students who ultimately pursue careers in rural primary medicine.

Brook, Robert H.; Fink, Arlene; Kosecoff, Jacqueline; Linn, Lawrence S.; Everett Watson, Wendy; Ross Davies, Allyson; Clark, Virginia A.; Kamberg, Caren; the Group Practice Project Directors; Delbanco, Thomas L.; and the National Program Staff. Educating Physicians and Treating Patients in the Ambulatory Setting: Where Are We Going and How Will We Know When We Arrive? *Annals of Internal Medicine*. 107 1987: 392-398.

We evaluated 15 group practices in general internal medicine in university hospitals with regard to access to and quality of care, patients' satisfaction with that care, and quality of residency education provided. We used these data to speculate about potential changes in ambulatory care programs in university teaching hospitals. All 15 practices participated for 4 years. One third of their patient population had no medical insurance. Practice patients had twice as many chronic illnesses as did the general population, and two fifths of patients stayed at least 2 years in the practice. Few faculty members spent more than 14 hours weekly in the practices, and housestaff worked an average of 4 hours per week. Patient waiting times did not meet ideal standards, but patient satisfaction was higher than in a general population. Compliance with quality of care criteria was not exceptional; for example, 10# of eligible patients received an annual influenza vaccination. Housestaff assigned a relatively low ranking to their educational experience in the practices. We recommend the institution of additional experimental programs in ambulatory care and housestaff education to improve the quality of care in the ambulatory setting.

Cluff, Leighton E. Medical Schools, Clinical Faculty, and Community Physicians. *Journal of the American Medical Association*. 247(2) January 8, 1982: 200-202.

The affiliation between medical schools and community hospitals is discussed. The author states that more patients have access to medical care than ever before, physicians with specialized skills are increasingly found in community hospitals, and medical students and residents now have access to training in ambulatory care settings other than hospital-based, outpatient clinics. Although the above changes affect society in a positive way, they do bring about some tension between teaching hospitals and community hospitals as well as between medical school faculty and community physicians. Details on how this tension and the competition between community and teaching hospitals for patients should be handled is presented.

Colwill, Jack M. Barriers to an Enhanced Linkage Between Education and Delivery of Primary Care. *Education of Physicians to Improve Access to Care for the Underserved*. Proceedings of the Second HRSA Primary Care Conference. March 1990: 319-341.

A historical review of the difficulties in access to health care and the attempts to alleviate these problems are presented. In spite of these attempts, the maldistribution of primary care providers continues. With this information in mind, the author discusses the purpose of linkages between medical education and the delivery of primary care in the community setting and the specific barriers which prevent this linkage. Cultural, financial, local and logistical barriers are delineated. Although the problems of access to care go beyond medical education, the author concludes that education is one part of the solution.

Colwill, Jack M.; Glenn, John K. Patient Care Income and the Financing of Residency Education in Family Medicine. *The Journal of Family Practice*. 13(4) 1981: 529-536.

The cost of financing residency education at the University of Missouri-Columbia, Department of Family and Community Medicine is examined. Two different practice centers were considered, one within the University Hospital and one in a rural community. The authors then compare their findings with 80 similar programs across the country and state that they found, on average, only 20 percent of total program costs are generated through family practice patient income in a teaching program. Explanations for these results include the high cost of programs, the low volume of

patients, and unrealistic expectations for patient care income. It is concluded that patient care income will not be able to finance family medicine residency training in the near future and that continued sharing of the cost is essential.

Dorner, Fred H.; Burr, Richard M.; and Tucker, Stephen L. The Geographic Relationships Between Physicians' Residency Sites and the Locations of Their First Practices. *Academic Medicine*. September 1991: 540-544. 66(9)

The uneven geographic distribution of physicians has been identified as a significant problem for the delivery of health care services. The present study examined one of the factors that contributes to the distribution of physicians: how far they move from their residency sites to establish their first practices. In 1989, the authors selected a random sample of 701 U.S. residency programs in the ten specialties with the most practitioners, and measured the distance each of these physicians moved to his or her first practice location. Of the 701 programs, 58.5% provided usable information about 2,612 physicians. Of these physicians, over 40% had moved less than 10 miles from their residencies, and over 50% had moved less than 75 miles. Comparisons among the physicians from the various specialties showed that the primary care physicians moved significantly shorter distances than did those from the other specialties. In the last two decades, many efforts have been made to increase the geographic distribution of physicians. The evidence from this study suggests that so far as the distances that physicians move from their residencies are concerned, little has changed. Recent graduates of residency programs show no more tendency to move far from their residency sites than did their counterparts 30 years ago, as reported in the literature.

Eisenberg, John M. Financing Ambulatory Care Education in Internal Medicine. *Journal of General Internal Medicine*. 5(1) Jan/Feb 1990: S70-S80.

As graduate medical education (GME) shifts to ambulatory settings, it is critical that financing follow suit. However, present financing of GME by Medicare is linked to payment for inpatient service, and few other payors pay explicitly for education. Human capital theory suggests that hospitals will be unwilling to finance GME unless their expenses are reimbursed. Reform of Medicare should include changes in how residents' time in ambulatory settings is counted, incentives for primary care education, and direction of funds to medical educators (rather than hospital administrators). Other federal initiatives could include changes in U.S. Department of Veterans Affairs (VA) support of residents and in Title VII grants. Non-federal payors also should contribute to paying for GME. Physician payment reform could help finance primary care GME, and an additional payment for bills submitted by physician-teachers should be considered. Medical educators must share responsibility by assuring that residencies are operated efficiently and that national needs for physicians are not subjugated to local service requirements.

Engebretsen, Bery J. Family Medicine and Community Health Centers: A Natural Alliance. *Family Medicine*. 21(6) Nov-Dec 1989: 417-418.

This editorial discusses the ever increasing numbers of medically underserved populations and suggests a way of addressing this problem. A natural alliance between family medicine and community health centers, which was initiated in the 1960's and then later dissolved, should be renewed in light of the current issues facing health care. The reasons for renewing the relationships include the fact that since both sides have less public support, they need strong, committed allies; both have sophisticated, political expertise and networks; and both share resources which are currently scarce. By working together, some individual needs may be met and many common goals, such as delivering public health care to the underserved, can be achieved.

Foreman, Spencer. Graduate Medical Education: Focus for Change. *Academic Medicine*. 65(2) 1990: 77-84.

The author documents a significant broadening of the interest of both state and federal government in influencing graduate medical education. He states that the unwillingness of the academic medical community to address the issues of manpower supply and specialty distribution, the limited effectiveness of minority enhancement programs, and an ambiguous position on foreign medical graduates have invited government intervention. The author maintains that such intervention was inevitable because academic medical centers have focused only on the educational process and the quality of graduates but have not dealt with the need to shape the output of their training programs to meet national health needs. He challenges the academic medical community to seize the initiative in seeking the difficult-to-find solutions to major issues of medical training or be prepared to yield to the decisions of lawmakers and regulators.

Garg, Mohan L.; Boero, Joseph F.; Christiansen, Richard G.; Booker, Craig G. Primary Care Teaching Physicians' Losses of Productivity and Revenue at Three Ambulatory-care Centers. *Academic Medicine*. 6(6) June 1991: 348-353.

This study reports two years of basic data concerning University of Illinois clerkship students, their teaching faculty, and their patients at three community health centers. Students from four classes (1985, 1986, 1987, and 1988) were studied in 1985 and 1986. The faculty were family physicians, internists, and pediatricians who provided 20# of the undergraduate medical education for the last 30 months of a four-year curriculum. The study's goal was to develop estimates of the primary care teaching physicians' productivity, to compare them with the productivity of physicians not involved in teaching, and to provide estimates of revenue shortfalls that occurred for the physicians who were teaching. The estimated productivity of the teaching physicians, working 29 hours a week in ambulatory-care settings, was lower by 30-40% when they were teaching medical students than the productivity of nonteaching physicians regionally and nationally. The average patient-care revenue loss for a full-time equivalent faculty member per full-time equivalent student for 1985 was estimated to be $27,531 (regional comparison) or $21,143 (national comparison). The corresponding figures for 1986 were $24,294 and $21,525, respectively. The study's results should be useful to those who are planning to establish ambulatory-care delivery systems and also to directors of existing ambulatory-care delivery systems who may be contemplating accepting medical students.

Gessert, Charles; Blossom, John; Sommers, Peter; Canfield, Maria D.; and Jones, Clark. Family Physicians for Underserved Areas: The Role of Residency Training. *Western Journal of Medicine*. 150 Feb 1989: 226-230.

Graduates of four rural and four urban family practice programs in California were interviewed to determine the nature of their practices and the factors that had influenced their practice location decisions. All programs gave residents substantial experience providing continuity of care for underserved populations. Of the 158 physicians surveyed, 58 (46%) were working in areas designated as underserved. The percentage of physicians in underserved areas was higher than that reported in other studies and was much higher than would be expected if practice sites were selected on the basis of population distribution alone. Notable differences in personal and practice characteristics were found between the physicians who chose to work in underserved areas and those who did not and between those who established practices in rural and in urban underserved areas.

Glasser, Michael; Gravdal, Judith. Graduates' Assessments of Undergraduate Training in Ambulatory Primary Care Education. *Journal of Medical Education*. 62 May 1987: 385-392.

A random sample of graduates of an undergraduate medical education program was surveyed to determine the graduates' assessments of their community health center (CHC) training relative to how their time was spent in the training, goals of the experience, strengths and weaknesses of the program, and how the program prepared them for residency training. The graduates favorably evaluated patient contact time provided by the program but felt too much time was spent waiting for faculty members and more time should be spent interacting with other health professionals. Nearly two-thirds of the graduates indicated no change should be made in proportion of time spent in the CHC. The experience was viewed as providing early primary care exposure, the opportunity to follow patients over time, and the opportunity to learn the doctor-patient relationship. However, some of the graduates felt there was too much emphasis on primary care in their fourth year. Finally, over 91 percent of the graduates thought the training prepared them as well as or better than other residents were prepared by other programs.

Glenn, John K.; Hofmeister, Roger W. Rural Training Settings and Practice Location Decisions. *The Journal of Family Practice*. 13(3) 1981: 377-382.

Since 1974 the residency program in family medicine at the University of Missouri-Columbia has required resident physicians to spend approximately 25 percent of their last two years in a faculty supervised rural training center. This paper describes the setting of the rural training, the practice location decisions of the graduates, their recollections about their views regarding rural practice during their training, and their current judgments about the usefulness of that rural training experience. The results offer strong and corroborating evidence that such training is well received, is judged to be different from usual training, and is considered useful in both clinical and personal decision making. A ranking of ten training opportunities inherent in a rural center provides insight into why such experiences are well received. The data are suggestive, though far from conclusive, that participants' initial views about rural practice are reinforced by their rural training experience.

Goldenberg, Kim; Barnes, H. Verdain; Kogut, Maurice D.; Lemkau, Jeanne; Peterson, Stephen; and Wergowske, Gilbert. A Combined Primary Care Residency in Internal Medicine and Pediatrics. *Academic Medicine*. 64(9) Sept 1989: 519-524.

The authors describe the development and evaluation of a primary care residency program at Wright State University School of Medicine in Dayton, Ohio, encompassing both internal medicine and pediatrics. The combined residency is a four-year program of alternating six-month rotations in the two disciplines. One-fourth of the program is ambulatory medicine and includes training in a clinic for children and adults. Patient demographics are maintained for each resident, and an ambulatory-medicine-focused curriculum consisting of weekly conferences and self-directed independent study is used. The program is routinely evaluated and is highly rated by patients and residents. Factors critical to its success include emphasizing goals and experiences in outpatient versus inpatient care, developing an ambulatory practice to help support resident salaries, adequately preparing residents to take the board examinations in both disciplines, and providing a comprehensive primary care curriculum.

Goodson, John D.; Goroll, Allan H.; Barsky, Arthur J.; Treadway, Katharine K.; Thibault, George E.; and Stoeckle, John D. The Training of Physicians Outside the Hospital. *Archives of Internal Medicine*. 146 Sept 1986: 1805-1809.

The current ambulatory training of medical residents in the primary care program and the traditional program of the Massachusetts General Hospital, Boston, are described. All residents are assigned to work in a single medical group practice unit during their three years of training. Block outpatient rotations make up 32% of the primary care program and 6% of the traditional program schedules, while total ambulatory experiences, including weekly continuity sessions, make up 39% and 15%, respectively. Several components are important for a successful program. Above all is a vigorous group practice providing a sizable panel of patients with complex clinical problems from which residents can learn. Also important are financial support from the hospital and government or private grants and a commitment to outpatient teaching by the medical and nonmedical specialty staff.

Halperin, Alan K.; Kaufman, Arthur. Ambulatory Medical Education: A Reconsideration of Sites and Teachers. *Journal of General Internal Medicine*. 5(1) Jan/Feb 1990: S35-S44.

This paper deals with the varied sites and teachers that can and should be used in educating residents and medical students in ambulatory care. A basic premise is that sites other than academic medical centers and teachers other than physician faculty members should be among those used. the paper describes how institutions have used nontraditional sites and teachers. Then, after emphasizing the need to choose settings according to curricular objectives, it discusses teaching sites, both hospital-based (general medical, specialty, and multidisciplinary clinics) and community-based (home care settings, rural clinics, nursing homes, and community clinics). Current and potential teachers include generalist and specialist physician faculty members, community physicians, residents and allied personnel such as pharmacists and nurses. The paper also discusses forces resisting and supporting the use of new sites and teachers. It ends with general recommendations.

Hayashi, Steven A.; Hayden, Barbara B.; Yager, Joel; and Guze, Phyllis A. Graduate Medical Education in Ambulatory Care. *Academic Medicine*. 64(2) 1989: S16-S21.

Graduate medical education is currently in transition, with educators being asked to re-examine the extent to which hospital-based teaching models still provide adequate comprehensive training. To educate future physicians adequately, the Department of Veterans Affairs (VA) will have to change its system for delivering ambulatory care services and for teaching in ambulatory care settings. Workshop discussions focused on five major areas regarding educating residents in the ambulatory setting: educational goals and objectives, clinical experiences, curriculum development and evaluation, faculty issues, and fellowship opportunities. Recommendations include the need for residency programs to develop explicit educational goals and objectives for resident training, the identification of transdepartmental needs and coordinated planning, the support of academic clinical faculty, research and development of educational programs and further development of fellowship training in ambulatory care. Further integration of ambulatory care activities in graduate training will require significant effort, a shift in manpower and resources and, more fundamentally, a shift in attitude and commitment at all levels of the VA and medical schools.

Institute of Medicine, Division of Health Care Services. *Primary Care Physicians: Financing Their GME in Ambulatory Settings.* National Academy Press, Washington, D.C., 1989.

The results of a study by a committee of the Institute of Medicine, in their effort to develop strategies to overcome barriers to financing GME for primary care practitioners in ambulatory settings are presented. The report discusses the costs and revenues which are involved in primary care, ambulatory residency education and the options and recommendations for financing these programs. The committee's suggestions and recommendations for financing graduate medical education in primary care include physician payment reform, Medicare direct graduate medical education payment, Medicare indirect graduate medical education adjustment, direct support by states with a need for additional primary care practitioners, grants made available through Title VII of the Public Health Service Act for the development of model programs and demonstration sites, increased academic leadership with regard to primary care, and efficient use of training resources.

Kairys, Steven; Newell, Priscilla. A Rural Primary Care Pediatric Residency Program. *Journal of Medical Education.* 60(10) Oct 1985: 786-792.

Rural primary care is often reported in the medical literature as frustrating, lonely, and nonrewarding. Many graduating residents who choose small town practice become quickly disenchanted with the life-style and leave for a more populous territory or subspecialty training. Opportunities to learn how to take advantage of rural settings and establish rewarding community practices are few. The Primary Care Pediatric Residency Program the Dartmouth-Hitchcock Medical Center has developed a training program in rural primary care. Residents experience over a three-year period the many facets of rural practice and are introduced to community-oriented approaches to child health care. Selected rural pediatric practices within a 45-mile radius of the medical center serve as teaching laboratories in which residents develop the skills necessary to manage children's problems related to school, behavioral disorders, and chronic diseases.

Kar, Snehendu, B. Primary Health Care: Implications for the Medical Profession and Education. *Academic Medicine.* 1990: 301-306. 65(5) May

The Alma Ata Declaration has defined primary care as the new paradigm of health care systems for meeting the health care needs of both rich and poor populations. The author discusses the importance of physicians having skills in the area of health promotion and disease prevention in order to meet the changing health care needs of the U.S. Also, it is stated that medicine needs to recognize the value of primary care as an area of specialization. Specialization in other areas continues to grow despite the desperate need to increase the number of primary care providers. Five steps which the author feels medical education should take in response to societal needs are delineated. They include: careful selection of students, appropriate curriculum revision, internship in a health care organization, residency in or joint training program with public health and management and continuing education in population and public health.

Kaufman, Arthur; Mennin, Stewart; Waterman, Robert; Duban, Stewart; Hansbarger, Clark; Silverblatt, Helene; Obenshain, S. Scott; Kantrowitz, Martin; Becker, Thomas; Samet, Jonathan; and Wiese, William. The New Mexico Experiment: Educational Innovation and Institutional Change. *Academic Medicine.* 64 1989, 285-294.

Over the past ten years the University of New Mexico School of Medicine has conducted an educational experiment featuring learner-centered, problem-based, community-oriented learning. The experiment was introduced into an established institution by means of an innovative educational track running parallels to the more conventional curriculum. Students in the innovative track, compared with those in the convention track, tended to score lower on the National Board of Medical

Examiners (NBME) Part I examination (basic sciences) and higher on NBME Part II (clinical sciences), received higher clinical grades on clinical clerkships, and experienced less distress. They were more likely than conventional-track students to retain their initial interest in or switch their preference to careers in family medicine. The parallel-track strategy for introducing curriculum reform succeeded in fostering institutional acceptance of continuing educational innovation. Generic steps in overcoming institutional barriers to change are identified.

Lear, Julia Graham; Foster, Henry W. Jr.; Wylie, W. Gill. Development of Community-Based Health Services for Adolescents at Risk for Sociomedical Problems. *Journal of Medical Education*. 60 Oct 1985: 777-785.

Community-based service and training programs have been advocated as important for improving access to medical care for the poor as well as enhancing the ambulatory training setting for residents and medical students. In 1981 the Robert Wood Johnson Foundation provided funds to 20 teaching hospitals to support community-based, comprehensive health services to high-risk young people, that is, young people living in communities with high rates of sociomedical problems, such as adolescent pregnancy, drug abuse, alcohol abuse, accidents, homicide, suicide and depression. In this article, the authors describe the experiences of these institutions in establishing off-campus clinics, concluding that high-risk adolescents need additional services and that teaching hospitals and communities can collaborate to provide these comprehensive services. They discuss issues of maintaining services after foundation grants end and the impact of recent financial restraints on continued support from teaching hospitals for off-campus activities.

Lurie, Nicole; Yergan, John. Teaching Residents to Care for Vulnerable Populations in the Outpatient Setting. *Journal of General Internal Medicine*. 5(1) January/February 1990: S26-S34.

Residency programs have an obligation to teach house officers to care for vulnerable populations. Such populations consist of those whom physicians tend to consider undesirable as patients, and thus who often lack adequate care, because they cannot pay for medical services, because they have medical problems that are difficult to manage, or because they have characteristics giving them low social status. The authors identify and discuss key aspects of learning to care for such populations. These aspects include obtaining appropriate experience caring for disadvantaged patients, developing sensitivity to pertinent sociocultural issues, exploring biases, acquiring relevant special skills, studying epidemiology of diseases in specific vulnerable groups, and learning about heath care financing and health policy. Measures to help residents obtain more satisfaction from caring for vulnerable patients are among additional topics discussed.

Maestas, Ramoncita, R., Layton, Richard, H. Expansion of the Providence Family Practice Program to Sea Mar Community Health Center: A Linkage Between Graduate Medical Education and an Urban Community Health Center. *Education of Physicians to Improve Access to Care for the Underserved.* Proceedings of the Second HRSA Primary Care Conference. March 1990: 367-382.

The linking of a community clinic and a family practice residency is explored. The goals of the linkage were to increase the pool of primary care physicians for community health centers and to demonstrate that such a linkage can help to remedy the shortage of family physicians in medically underserved areas. The educational, financial, and organizational benefits of the participating organizations include faculty development, recruitment tool for staff, and increase in staff morale. The potential barriers in replicating this model at other sites are identified to be insufficient staff, nonsupportive administration or faculty and inadequate funding.

Massad, Robert J. Training for Inner-city Family Practice: Experience of the Montefiore Medical Center. in Birrer, Richard B. *Urban Family Medicine*. Springer-Verlag. 1987: 248-254.

This chapter presents a description of the Residency Program in Social Medicine at Montefiore Medical Center which was founded to prepare family physicians for practice in underserved areas and for leadership positions as agents of change in the health care system. Residents receive their longitudinal family-care experience in the Family Health Center which is located in a medically-underserved area. The curriculum is described in detail and data about the practice locations of graduates is presented.

Merenstien, Joel H.; Schulte, James J.; et al. A Residency Curriculum for the Future. *Family Medicine*. 22 1990: 467-473.

A new family practice residency curriculum in the format of the special requirements for residency is proposed. This new curriculum consolidates the original principles of family practice with current developments in medical practice and changes in society. The emphasis is on increased flexibility, a competency-based curriculum, an extensive evaluation and audit system, curricular control by family practice faculty, increased ambulatory care training, a commitment to the biopsychosocial model and community-oriented primary care, and the reiteration of the basic core of medical knowledge and clinical skills.

Natkow, Neil, A. Osteopathic Education: Does a Practice-Based Orientation Enhance Primary Care Delivery? *Education of Physicians to Improve Access to Care for the Underserved.* Proceedings of the Second HRSA Primary Care Conference. March 1990: 265-300.

The need for more primary care physicians and their placement in underserved areas is reviewed. The author states that osteopathic medicine has a good record of responding to the need for primary care providers and lists the driving forces and restraining forces which are involved in choosing primary care and in choosing to serve the underserved. Detailed suggestions for increasing the supply of primary care physicians are provided. These include: making primary care more attractive to students, structuring training institutions for primary care, recruiting students for primary care, offering appropriate medical school experiences, offering training opportunities in underserved areas and making practice in these areas more attractive. The paper concludes with an explanation as to why osteopathic medicine has been successful in producing a large number of primary care providers in the past and questions if this trend can continue.

Noble, John. Primary Care, Medical Education, and Health Services Research: The Common Ground for National Health Policy in the 21st Century. *Education of Physicians to Improve Access to Care for the Underserved.* Proceedings of the Second HRSA Primary Care Conference. March 1990: 473-490.

A brief summary of the problems confronted by academic medical centers and priorities of academic schools is presented. The basic strengths and weaknesses in primary care practice, primary care education, and primary care research are also discussed. Concepts which are to be included in the HRSA Report on Primary Care of 1990 are presented and include recommendations which state that the Federal Government should designate primary care training programs as essential priorities and will be supported for at least the next 15 years and that HRSA should develop a task force to work with the academic leaders of medical schools to accelerate the development of primary care curricula, experience, and teaching. The author concludes by stating that we must restore primary care and that the action agenda that is described in this paper will initiate changes in the American health care system.

Paccione, Gerald A.; Cohen, Ellen; Schwartz, Charles E. From Forms to Focus: A New Teaching Model in Ambulatory Medicine. *Archives of Internal Medicine.* 149 Nov 1989, 2407-2411.

We have developed a simple generalizable model of teaching ambulatory medicine that adopts successful elements of inpatient teaching and addresses deficiencies in traditional ambulatory forums. This model combines resident analysis of the patient encounter via a "clinical encounter form" (CEF) with faculty-led ambulatory medicine records (AMR). Its objectives are to integrate teaching and quality assessment; be explicit about the relation between the record and the physician's clinical thinking; teach around every patient; focus on selected aspects of a case in limited time; and permit appropriate rounds preparation by faculty. The CEF-AMR model, like inpatient rounds, allows teaching to be focused on real patient issues; all patients are reviewed and quality is assured, and interesting teaching points can be selected, prepared, and discussed efficiently in limited time. It is the "classroom" complement to faculty "bedside" precepting and has made teaching ambulatory medicine feasible, clinically relevant, and well-informed. Perhaps most importantly, the CEF-AMR model encourages self-analysis of clinical decisions and makes explicit the key elements of clinical judgment.

Perkoff, Gerald T. Teaching Clinical Medicine in the Ambulatory Setting: An Idea Whose Time May Have Finally Come. *The New England Journal of Medicine.* 314(1) Jan 1986: 27-31.

A resurgence of general interest in teaching clinical medicine in ambulatory-care settings has occurred for several reasons, including changes in the case mix in teaching hospitals, the new responsibilities of house officers and attending physicians brought about by the current payment systems for health care, the increased expectations of patients that medical care will be "personal," the progressive limitations imposed on the education of medical students by the shorter lengths of stay sought by hospitals under the diagnosis-related-groups system of payment, and the growing need for well-trained primary care physicians that has resulted from the increase in medical care organizations. In this paper, I review earlier attempts to emphasize ambulatory care, to identify the pitfalls that new efforts in this direction should avoid. I also compare inpatient and ambulatory-care teaching to provide a basis for understanding the educational goals that can be achieved more easily in each setting. In addition, I suggest major changes in the flow and use of clinical-practice funds and hospital payments so that they can become possible sources of the financing and organization of an expanded effort to teach clinical medicine in ambulatory-care settings.

Petersdorf, Robert, G. Primary Care: Present and Future. *Education of Physicians to Improve Access to Care for the Underserved.* Proceedings of the Second HRSA Primary Care Conference. March 1990: 41-55.

A review of primary care is presented and leads up to the current challenges of academic medicine. These challenges include changing the knowledge, skills and attitudes of faculty in order to meet the changing needs of medical education; identifying appropriate ambulatory care educational settings, and maintaining the integrity of the relationships between patients, students, and faculty. The author also discusses the structure of medical education and the evaluation process of students with regard to ambulatory care training. The paper concludes with a discussion of four actions which are necessary to meet the increased need for clinical education in an ambulatory setting. These actions include institutional and faculty commitment to provide the appropriate level of ambulatory care educational experiences for students and residents, curriculum changes which recognize these new educational experiences, the development of model settings for these experiences to take place, and the addressing of financial issues which should include asking the medical centers to contribute some of their resources to support medical education.

Peterson, Stephen E.; Goldenberg, Kim. Survey of Combined Residency Programs in Internal Medicine and Pediatrics on Curricula. *Journal of Medical Education.* 62(9) September 1987: 732-737.

Combined residency programs in internal medicine and pediatrics began to emerge during the past decade. Combined programs provide four years of training that leads to board eligibility in both disciplines. To learn more about the curricula of these programs, the authors sent a questionnaire to the directors of the 81 known combined programs. Sixty-eight such programs were active as of July 1986. Of these, 54 had been active in the 1985-86 academic year and had a total enrollment of 390 residents, an average of 7.2 residents per program. Fourteen new programs were activated in July 1986 and enrolled 46 residents, with an average of 3.3 residents per program. Virtually all the programs emphasized training in primary care and included the use of outpatient clinics where residents often work with nonphysician healthcare providers. Many programs provided instruction in the use of community resources, preceptorships, and outpatient-oriented conferences and emphasized data-gathering skills. Areas that need to be addressed by program directors and the accrediting organizations are discussed by the authors.

Politzer, Robert M.; Harris, Dona L.; Gaston, Marilyn H.; and Mullan, Fitzhugh. Primary Care Physician Supply and the Medically Underserved. *Journal of the American Medical Association.* 266 (1) July 3, 1991: 104-109.

This article discusses the current status of the primary care physician supply, the pending erosion of that supply, the role of the federal government in the training of primary care physicians, the difficulties of financing primary care training, and the influence of community-based training on career decisions. It then recommends courses of action to stem erosion and produce and adequate supply of primary care physicians to serve in the most severely underserved areas.

Rieselbach, Richard, E.; Jackson, Thomas, C. Public/Private Financing of Graduate/Undergraduate Medical Education. *Education of Physicians to Improve Access to Care for the Underserved.* Proceedings of the Second HRSA Primary Care Conference. March 1990: 147-182.

A review of the public/private financing of graduate/undergraduate medical education, with an emphasis on overcoming the barriers to the recruitment and retention of minority physicians interested in primary care is presented. The means whereby this financing could take place are delineated. The development of a program designed as a public/private partnership to establish Urban Health Education Centers (UHECs) which would serve as the administrative and financial base for a primary care career pathway (PCCP) for minorities is proposed. The authors also explain how UHECs and their associated PCCP programs would represent an effective way in which the education of physicians could be directed at improving access to care for the medically underserved.

Rieselbach, Richard, E.; Jackson, Thomas, C. In Support of a Linkage Between the Funding of Graduate Medical Education and Care of the Indigent. *The New England Journal of Medicine.* 314(1) Jan 2, 1986: 32-35.

In light of the current increasing cost of graduate medical education and the growing number of individuals without access to medical care, the authors explore the possibility of teaching hospitals establishing a system which links the delivery of ambulatory care for the medically underserved with the clinical training of residents and fellows. The residents and fellows would serve as the principle providers under the supervision of the proper faculty members. Funding for these

community ambulatory-training facilities could come from community resources or low-cost loans to hospitals. Ongoing costs could come from the state with matching federal dollars. The authors also discuss the advantages of this linkage as it relates to high-quality care for the medically indigent population, the learning experiences received by medical students and residents, and the possibility of training more needed primary care physicians.

Rodnick, Jonathan, Babitz, Marc. Family Practice Residency-Community Clinic Linkages for Physician Exchange. *The Journal of Family Practice*. 12(2) 1981: 361-363.

The experience of a third-year NHSC obligated family practice resident receiving training at an approved NHSC medically underserved site are discussed. Through a preapproved plan by the American Board of Family Practice, the resident was able to provide service to the health center, complete his electives, and become eligible to sit for the family practice board examination. The NHSC assignee, as a board certified family practitioner, continued to provide care at the health center and began teaching family practice residents, nurse practitioners, and medical students one half day per week at the family practice center of the residency program while faculty from the residency program taught at the NHSC site. All involved were satisfied with the exchange arrangement. Similar programs have been set up in other locations. There are many advantages to this structured interaction between family practitioners and underserved clinics. This example may serve as a model for others.

Rosenblatt, Roger, A. Current Successes in Medical Education Beyond the Bedside. *Journal of Internal Medicine*. 3 Mar-Apr Supplement 1988: S44-S60.

The author presents five exemplary ambulatory medical education programs. All five programs discussed have some common elements. These include: a strong leader who is willing to take risks; qualitative, as opposed to quantitative change in curriculum; flexible use of faculty and use of ancillary health personnel for teaching; fiscal creativity; and quality control. The relevance of ambulatory education is also discussed.

Schroeder, Steven A.; Showstack, Jonathan A.; Gerbert, Barbara. Residency Training in Internal Medicine: Time for a Change? *Annals of Internal Medicine*. 104 1986: 554-561.

Internal medicine residencies risk becoming obsolete if they are not adjusted to changing patterns of medical practice. Declining length of hospital stay, increased intensity of hospital care, movement of critical management decisions to outpatient settings, increased proportions of admissions for specific diagnostic procedures, and increased needs for perioperative consultations all erode the foundation of traditional internal medicine training. Furthermore, demographic shifts, the move to prepaid care, and a projected oversupply so subspecialists warrant more exposure to generalism and geriatrics. To prepare internists for clinical practice, some training should shift from medical wards and intensive care units to outpatient settings and surgical consultation, additional process skills must be taught, and the epidemiologically important non-internal-medicine disciplines should be included in the curriculum. These shifts will require changes in methods to pay for residency training, accreditation procedures for residency programs, and the residency certifying process. Most importantly, the model and organization of internal medicine training need to be reconsidered.

Shear, Charles, L.; Werblun, Merrill, N.; Solinas, Jeffrey, A. Hospital-Based Versus Community-Based Ambulatory Care: Implications for Family Practice Postgraduate Training. *Journal of Medical Education*. 58 Sept 1983: 742-744.

This study compared patient populations at a hospital-based (HB) family practice site and a community-based (CB) site for the residency program at San Bernardino County Medical Center, San Bernardino, California. A less healthy population was found in the HB site. These patients were determined to be in the practice twice as long as those at the CB site and also utilized the services of the clinic more often than did the CB site patients. While these differences have many educational and financial implications to residency training programs, the authors conclude that neither site has an advantage over the other in providing residency training. However, the CB site patient population is more demographically representative of census data than the HB site.

Shine, Kenneth, I. Innovations in Ambulatory-Care Education. *The New England Journal of Medicine*. 314(1) Jan 2, 1986: 52-53.

A brief review of the funding process of ambulatory education is provided along with suggestions for changes in this process. The author presents reasons for the need for ambulatory education and offers recommendations for ways in

which this type of training could be more readily provided. Suggestions include teaching substantial portions of ambulatory care in evenings and Saturdays, increased use of faculty volunteers for teaching medical students, and promotion of faculty who teach in ambulatory-care settings.

Smith, Blake W. H.; Landick, Robert; Dodge, Ross. A Curricular Model for a Rural Family Practice Clerkship. *Public Health Reports*. 97(4) July-Aug 1982: 373-379.

The Department of Family Practice in the College of Human Medicine at Michigan State University report on their strategy for influencing students toward selecting a career in family practice. A Rural Family Practice Clerkship is offered as an elective to third- and fourth-year medical students. The students spend time with both a family physician teacher and a behavioral science instructor. Ten curricular modules were developed for the rural clerkship. These include: family orientation, the individual patient interview, problem solving and recording skills, manual skills, continuing and comprehensive care, health maintenance and education, community orientation, practice management, professional relationships, and professional identity. All of the medical students who have taken the rural clerkship have had positive feedback on their experience. The authors also discuss some of the limitations of the program.

Stern, Robert S.; Calkins, David; Lawrence, Robert S.; Delbanco, Thomas. Joining a Rural Practice: A Pilot Program in Primary Care Education in Internal Medicine. *Journal of Ambulatory Care Management*. 3(89) 1980.

A pilot program affiliated with Beth Israel Hospital and Harvard Primary Care Program is described which involves placing four senior residents in four different rural practice sites in New England for four-six weeks. Each resident averaged 33 patients and fourteen hours direct patient care per week. Each rural site utilized a community hospital which was 100 beds or less. The residents also participated in rounds, emergency room, consultations, admission evaluations, and night and weekend coverage at the community hospitals. All the residents felt that the rural practice sites had important educational value and stressed its success in broadening their understanding of the mechanics of an office practice. In conclusion, the authors' findings indicated that rural rotations can enhance primary care and traditional internal medicine programs.

Stern, Robert S.; Jennings, Marion; Delbanco, Thomas L.; Dorsey, Joseph L.; Stoecle, John D.; and Lawrence, Robert S. Graduate Education in Primary Care: An Economic Analysis. *The New England Journal of Medicine*. 297 1977: 638-643.

To determine the financial requirements of an established primary-care educational program for house officers, we studied two prepaid and two fee-for-service Harvard Primary Care Program affiliated practices. Program-wide, each resident saw an average of 112 patients per month, with patient service costs of $2,580. With teaching and administrative expenses included, total monthly costs averaged $3,120 and $3,270 per trainee for prepaid and fee-for-service practices, respectively. In fee-for-service practices, resident billings for patient services averaged $2,790, yielding revenues of $2,510 per month, which offset 77 per cent of total program costs. At current reimbursement rates, covering full program costs in the fee-for-service practices would require an increase of more than 40 per cent in resident-provided patient-care volume. By reducing time available for broad ambulatory experiences, such an increase would necessitate substantial program restructuring and limit opportunities for innovation in the Harvard Primary Care Program.

Strelnick, A.H.; Bateman, William B.; Jones, Clara; Shepherd, Saundra D.; Massad, Robert J.; Townsend, Janet M.; Grossman, Richard; Korin, Eliana; and Schorow, Mitch. Graduate Primary Care Training: A Collaborative Alternative for Family Practice, Internal Medicine, and Pediatrics. *Annals of Internal Medicine*. 109 August 1988: 324-334.

The Residency Program in Social Medicine at Montefiore Medical Center is a collaborative, integrated training program for primary care pediatricians, internists, and family physicians within one interdisciplinary organization. Since 1970 we have trained more than 200 physicians, prepared them for board certification in their specialty, emphasized the psychosocial aspects and social determinants of health and illness, and shared a faculty, curriculum, and commitment to provide medical care for inner-city, underserved populations. We discuss the program's history and curriculum, administrative and academic structure, shared "crosstrack" faculty units (psychosocial; social medicine; and research, education and evaluation), and graduates' practice outcomes. The interdisciplinary character of the Residency Program in Social Medicine helps physicians successfully serve the underserved and exemplifies that interdisciplinary medical education succeeds when interdisciplinary health care teams are organized for optimal patient care. Only the federal government has the perspective and power to foster more interdisciplinary collaboration and strengthen primary care education in a period of shrinking resources.

Tally, Robert. Residency Training and Rural Health. A paper presented at the AAMC Invitational Symposium. Rural America: A Challenge for Medical Education. San Antonio, Texas. Feb 1990.

Four generally accepted "truths" with regard to rural health and student and resident choice of rural practice which the author discusses are: that if a student is from a rural area, he/she will be more likely that an urban student to train in primary care and return to a rural area to practice; that if a significant part of residency training is rural, there is a greater chance the resident will choose a rural practice of medicine; that Family Medicine is the key to rural health; and that the resident will practice close to where he/she trains. The author also explores problems which limit the ability to develop programs which adhere to the four "truths" described. Recommendations are offered for improving or developing rural health, residency programs. These recommendations range from educating rural communities as to the purpose of residency training and the need for appropriate attending physician supervision to encouraging the Family Medicine Residency Review Committee to support rural rotations of up to six months outside of the residency training center or more broadly define what the "center" is.

The Circle, Inc. *Physician Recruitment and Retention Patterns in Community and Migrant Health Centers Related to Training Programs.* Submitted to Bureau of Health Care Delivery and Assistance, Health Resources and Services Administration, U.S. Department of Health and Human Services. Contract No. 240-87-0057. August 1988.

Background information on changes in Federal health policy and in medical practice and education are presented. The details of the study conducted by The Circle, Inc. are described. Existing and potential relationships between community/migrant health centers (C/MHCs) and the educational institutions with whom these relationships could exist were studied. They conducted a series of site visits to areas where such relationships currently exist. The visits included twenty-six AHECs, thirty-one C/MHCs, and sixteen medical schools involving nineteen residency programs. The authors found that, with only one exception, C/MHCs that are in joint service-educational programs with AHECs either were generating net revenues as a result of the venture or felt that the benefits more than justified the cost and that C/MHCs that had not yet become involved in joint programs were supportive of the concept. Also, specific examples of successful program models are briefly described. Recommendations for Federal policy initiatives and program initiatives at the Federal, state, and local level concludes the report. The recommendations include encouragement of the BHCDA and BHPr to issue joint policy guidance to facilitate cooperative program development between C/MHCs and AHECs, and to sensitize the appropriate organizations to the potential for useful service.

U.S. Department of Health and Human Services, Health Resources and Services Administration. Education of Physicians to Improve Access to Care for the Underserved. *Proceedings of the Second HRSA Primary Care Conference.* Columbia, Maryland. March 1990.

The responsibilities of the Health Resources and Services Administration (HRSA) are reviewed. The problems which surround the need for primary care providers are also explored. The workshops which took place at the Second HRSA Primary Care Conference are presented, covering a variety of topics. Workshop I discusses alternative actions for recruitment and retention of primary care physicians. Educational reform is presented in Workshop II. Two of the issues presented are alterations in medical school curriculum to promote the education of students in primary care and the expansion of opportunities for graduate medical education in primary care. Workshop III explores the possibilities of enhancing the linkages between medical education and community settings for the delivery of primary care. Finally, Workshop IV offers suggestions for ways to implement a primary care workshop agenda. The plenary speakers' remarks are also presented.

U.S. Public Health Service, National Health Service Corps. Proposed Strategies for Fulfilling Primary Care Manpower Needs. A White Paper prepared for and approved by the National Health Service Corps, National Advisory Council. February, 1990.

The need for additional primary care physicians in designated geographic areas is well documented. Strategies for fulfilling this need which are outlined in this paper reflect the recommendations of the National Health Service Corps, National Advisory Council. The strategies range from establishing a professional advocacy network for the NHSC to creating formal linkages between resident training programs and community/migrant health centers to developing a major public relations and marketing campaign. Comments by invited guests at a conference convened in October, 1989 to discuss the recommended strategies for dealing with the primary care manpower shortage are also presented.

Walkington, Robert, A. Financing Primary Care Residency Training: Examples And Lessons From Successful Programs. *Primary Care Physicians: Financing Their GME in Ambulatory Settings.* National Academy Press, Washington, D.C., 1989: 230-267.

As the desire for ambulatory training in GME increases, so does the need for guidelines in financing these programs. The current problems in funding ambulatory primary care education are presented along with specific examples of successfully financed programs. Two tables are presented which explain factors that have been important in the financial accomplishments of the programs which are discussed. Some of these factors include leadership, institutional commitment, management skills, multiple sources of funding, and a goal or mission. The author concludes that many factors must come together if a program is to survive financially.

Wilkerson, Luann; Armstrong, Elizabeth; Lesky, Linda. Faculty Development for Ambulatory Teaching. *Journal of General Internal Medicine.* 5(1) Jan/Feb 1990: S44-S53.

This paper deals with helping faculty members and others learn to teach more effectively in ambulatory settings. First it suggests ways to help clinicians expand and update their knowledge and skills in ambulatory medicine as a foundation for teaching. Next it identifies six skills—establishing mutual expectations, setting limited teaching goals, asking questions, stimulating self-directed learning, giving feedback, and capitalizing on role modeling—that are basic to effective ambulatory teaching. Then it presents strategies for developing and maintaining such skills: assessment of teaching, consultation with experts in education, and participation in programs such as workshops. The paper ends by discussing aspects of institutional support and calling for research on the impact of faculty development efforts on teaching and learning in medicine.

Wartman, Steven A.; O'Sullivan, Patricia S.; Cyr, Michele G. The Service/Education Conflict in Residency Programs: A Model for Resolution. Journal of General Internal Medicine. 5(1) Jan/Feb 1990: S59-S69.

Residency programs consist of a range of activities involving service to patients and education of residents. The observation that a conflict exists between the service and education components of residency is widespread and has been used to explain many of the problems afflicting such programs today. The authors believe that the service/education conflict is a significant barrier to change in residency programs. A model is presented for residency education that reorganizes the service and education components. First, they present a broad overview of the conflict. Then they provide a brief historical perspective and comment on some of the current recommendations for residency programs. Next, they discuss how principles of adult learning relate to residency and propose a new model of residency that adheres more closely to these principles. Finally, the proposed model is presented in some detail and its implications are discussed. Only if the service and education components of residency are carefully delineated can residency programs adapt to the changing and growing needs of postgraduate medical education.

This annotated bibliography was prepared by the American Medical Student Association Foundation under contract no. 240-90-0058, October 31, 1990 and updated on November 6, 1991.

NOTES

APPENDIX TWO

Programs with Linkage Affiliations

The following list of programs with linkage affiliations was compiled by the American Medical Student Association (AMSA)/ Foundation which, with the cooperation of a consortium of primary care specialty societies—Ambulatory Pediatrics Association (APA), American Academy of Family Physicians (AAFP), and Society of General Internal Medicine (SGIM)—conducted a survey (1991) to assess the status of community-based training by primary care residency programs. Given that not all the programs contacted by mail responded, this list should be considered incomplete. The programs identified below, however, are known to receive federal funding and to offer residents longitudinal training in federally funded C/MHCs. They represent the type of service-education linkage discussed in this manual.

Residency

Deaconess Family Medicine
6125 Clayton Avenue, Suite 201
St. Louis, MO 63139
(314) 768-3204

Department of Family Practice
Valley Medical Center
444 South Cedar Avenue
Fresno, CA 93702
(209) 453-5705

Mercy Family Practice Center
2127 Jefferson Avenue
Toledo, OH 43624
(419) 259-1859

Montefiore Medical Center
Department of Family Medicine
111 East 210th Street
Bronx, NY 10467
(212) 920-4678

Providence Family Practice Residency
550 16th Avenue, Suite 100
Seattle, WA 98122
(206) 326-5511

Department of Family/Preventive Medicine
University of Utah
School of Medicine
1C26 Medical Center
50 North Medical Drive
Salt Lake City, UT 84132
(801) 581-7234

C/MHC

Carondelet Family Care Center
6313 Michigan Avenue
St. Louis, MO 63111
(314) 353-5190

Sequoia Community Health Center
2790 South Elm Avenue
Fresno, CA 93706
(209) 233-5747

Cordelia Martin Health Center
90 South Nebraska Avenue
Toledo, OH 43607
(419) 255-7883

Montefiore Family Health Center
360 East 193rd Street
Bronx, NY 10458
(219) 933-2400

Sea Mar Community Health Center
8720 14th Avenue, South
Seattle, WA 98108
(206) 762-3730

Salt Lake Community Health Center
2300 West 1700, South
Salt Lake City, UT 84104
(801) 973-0493

Residency

Department of Family Medicine
Memorial Hospital of Rhode Island
111 Brewster Street
Pawkucket, RI 02860
(401) 722-6000

Mt. Clemens General Hospital
Department of Family Practice
1000 Harrington
Mt. Clemens, MI 48043
(313) 466-8195

Department of Family Medicine
University of Rochester
Highland Hospital
8859 South Avenue
Rochester, NY
(716) 442-7470

Department of Family and Community Medicine
University of Massachusetts Medical Center
55 Lake Avenue North
Worcester, MA 01605
(508) 856-3025

C/MHC

Blackstone Valley Community Health Center
9 Chestnut Street
Central Falls, RI 02863
(401 724-7115

Down River Community Center
329 Colombia
Algonac, MI 48001
(313) 794-4982

Westside Health Services
480 Genesse Street
Rochester, NY 14611
(716) 436-3040

Family Health Social Service Center
875 Main Street
Worcester, MA 01610
(508) 756-3528

Hahnemann Family Health Center
39 Dean Street
Worcester, MA 01609
(508) 756-7301

Regional Family Health Center
Worcester Road
Barre, MA 01005
(508) 882-5512

APPENDIX THREE

Glossary

AAFP/RAP

American Academy of Family Physicians/Residency Assistance Program (See page 9).

ABFP

American Board of Family Practice (See page 7).

Accreditation

Recognition that a residency program meets the requirements of the Residency Review Committee for Family Practice (RRC-FP) which are approved by the Accreditation Council for Graduate Medical Education (ACGME) (See page 8).

Ambulatory Care/Outpatient Care

All types of health services which are provided on an outpatient basis. While many in-patients may be ambulatory, the term "ambulatory care" usually implies that the patient has come to a location to receive services and departed the same day.

Attending Physician

The physician legally responsible for the care of a patient.

BCRR

Bureau of Community Health Services Common Reporting Requirements: A uniform set of reports which must be completed by C/MHCs. The required reports are composed of a uniform set of tables, data elements and definitions pertaining to the operational, clinical, financial, and administrative management of the projects.

BHCDA

Bureau of Health Care Delivery and Assistance (See page 10).

Board Certification

(See page 1).

Community Oriented Primary Care (COPC)

A concept of health service delivery which includes systematically addressing the health problems of a defined population. It combines the principles of epidemiology and primary care.

A community-oriented primary care program must have:

1. A primary care practice or program.
2. A defined target population.
3. A systematic process that addresses the priority health problems of the target population with both public health and primary care strategies to:
   a. define and characterize the target population;
   b. identify priority health and health care problems of the population;

c. mount intervention strategies or modify practice patterns;
d. monitor the impact of interventions.

Reference: Paul A. Nutting, M.D., Research on Community-Oriented Primary Care, AHCPR Conference Proceedings, Primary Care Research: An Agenda for the 90s, September 1990.

Continuity of Care

The result of a planned treatment program designed to provide the individual patient with the total range of needed services under continuous responsible direction. Implicit in continuity of care is a provider-patient relationship that allows for uninterrupted medical care over a prolonged duration, whereby the patient has a trained advocate for all of his or her health care needs.

Didactic Training

That part of a training program which involves teaching through lectures and conferences. Conferencing is an important component of residency training.

Executive Director of C/MHC

The individual responsible for the implementation of policies established by the board and for the overall administration of the C/MHC.

HRSA

Health Resource and Services Administration (See page 10).

Longitudinal Training

Ongoing training with a panel of patients which residents receive throughout the three year residency as opposed to a single month's experience.

NP/PA/CNM

Nurse practitioners, physician assistants and certified nurse-midwives: primary care providers who have been trained, academically and clinically, to provide patient services which might otherwise be provided by physicians. They practice under the supervision of a physician. Federal and state regulations prescribe the extent of supervision.

NRMP

National Resident Matching Program (See page 7).

Preceptor

Faculty person in a clinical setting.

Primary Care

Basic level of health care generally rendered by family physicians, osteopathic general practitioners, general internists, general pediatricians and NP/PA/CNMs. This type of care emphasizes caring for the patient's general health needs as opposed to a more specialized or fragmented approach to medical care. Primary care is characterized by "first contact" with patients, continuity of care and a comprehensive integrated approach in managing their needs.

Project Officer

The Bureau of Heath Care Delivery and Assistance (BHCDA) assigns a Regional Project Officer to each C/MHC to assist and monitor center operations. Project Officers are located in the DHHS's ten Regional Offices.

Third Party Payor

An insurance company, such as Blue Cross/Blue Shield, that pays for hospital and doctor bills and certain other health care services for subscribers. Payment from these payors is commonly referred to as third party reimbursement.

NOTES

APPENDIX FOUR

Sources of Information and Assistance

American Academy of Family Physicians

The AAFP is the major professional organization of family physicians and represents the interests of the specialty. The AAFP produces a great deal of information of value to family physicians and family medicine educators. For more information about resources available contact:

American Academy of Family Physicians
Division of Education
8880 Ward Parkway
Kansas City, Missouri 64114
(800) 274-AAFP

American Medical Student Association/Foundation

The American Medical Student Association (AMSA)/Foundation has developed and managed over the past 22 years a variety of programs in collaboration with the U.S. Public Health Service. Recently, the AMSA Foundation assisted the Division of Medicine and the National Health Service Corps in assessing the extent and characteristics of affiliations between federally-funded Community and Migrant Health Centers and primary care residencies. Barriers and strategies for overcoming them were identified through a literature search, an assessment of current experiences, and an analysis of nine pilot sites enhancing and expanding their current linkages. In this effort, AMSA worked collaboratively with the Ambulatory Pediatrics Association, American Academy of Family Physicians, and Society of General Internal Medicine to study the nature and extent of current linkage-building efforts. For more information contact:

American Medical Student Association/Foundation
1890 Preston White Drive
Reston, VA 22901
(703) 620-6600

Area Health Education Centers

Area Health Education Centers (AHECs) sponsor programs which provide medical students, residents and other health professions students exposure to practice in rural and medically underserved areas. AHECs also provide resources and services which aid in the retention of medical providers in these areas. If your state has an AHEC, this program could assist in the development and maintenance of a linkage project.

To find out if your state has an AHEC, contact your nearest medical school. The Dean's Office or the Department of Family Medicine would be the best sources of this information. You might also contact the National AHEC program office at (301) 443-6950.

Bureau of Health Care Delivery and Assistance

BHCDA is discussed on page 10 of the Linkage Manual. In addition to its support of C/MHCs the Bureau of Health Care Delivery and Assistance also funds the "Cooperative Agreement" program at the state level and the State or Regional Primary Care Association. For information contact:

Office of the Director
Bureau of Health Care Delivery and Assistance
Parklawn Building, Room 7-05
Rockville, Maryland 20857
(301) 443-1363

Bureau of Health Professions

The Bureau of Health Professions administers a variety of programs which fund or support the training of health professionals. These include family medicine training grants authorized by Title VII of the Public Health Service Act. Training grants are competitive and award cycles generally occur each year. For further information contact:

Office of The Director
Bureau of Health Professions
Parklawn Building, Room 8-05
Rockville, Maryland 20857
(301) 443-6190

National Association of Community Health Centers

The National Association of Community Health Centers (NACHC) is located in Washington, D.C. and is the oldest and largest national organization of community and migrant health centers which includes both federally and non-federally-funded health centers. NACHC conducts a number of activities that improve the ability of health centers to provide community-oriented primary care, including providing technical assistance and promoting the involvement of health centers in the education of health professionals. NACHC holds two national meetings a year that brings health center administrators, clinicians, and consumer board members together.

The Department of Clinical Affairs at NACHC has adopted a four-level strategy that will increase the impact of health centers on the selection, education, and training of health professional students and graduates. This includes increasing the number of community health centers that serve as training sites for graduate health professionals. For information contact:

Department of Clinical Affairs
National Association of Community Health Centers
1330 New Hampshire Avenue, NW
Washington, DC 20036
(202) 659-8008

National Rural Health Association

Founded in 1978, the National Rural Health Association's (NRHA) mission is to improve the health of all rural Americans, and to provide leadership on rural issues, through advocacy, communication, education and research. Developing linkages between residency programs and health centers in rural or frontier areas creates additional logistical and geographic challenges. The NRHA can provide general guidance and referral to linkage models or training programs geared to rural sites.

National Rural Health Association
Policy and Programs Section
301 East Armour Boulevard, Ste. 420
Kansas City, Missouri 64111
(816) 756-3144

Primary Care Cooperative Agreements

Most states now have a Primary Care Cooperative Agreement (PCCA) with the Bureau of Health Care Delivery and Assistance. The major activities funded under these agreements include those related to primary health care access and the recruitment and retention of health providers. PCCAs focus their efforts on medically underserved and health professional shortage areas, many of which are served by Community/Migrant Health Centers. They would therefore have an interest in supporting linkage efforts.

To locate your PCCA, contact the state health department. It will most likely be located in the planning or community health divisions.

Society of Teachers of Family Medicine

STFM is the academic arm of family medicine. Composed of family medicine educators, it exists to support and promote family medicine as an academic discipline by encouraging research and teaching in family medicine and facilitating the professional growth and development of family medicine educators. Through its meetings, conferences and publications, STFM provides a forum for the interchange of experience and ideas among its members and other interested persons. For more information contact:

Executive Director
The Society of Teachers of Family Medicine
8880 Ward Parkway
Kansas City, Missouri 64114
(800) 274-2237

State/Regional Primary Care Associations

As with PCCAs, most states have a State/Regional Primary Care Association (S/RPCA). This association represents and provides services to, among others, the Community and Migrant Health Centers (C/MHCs) of a state. The services and resources available through the S/RPCA vary from state to state but S/RPCAs are likely to have an interest in linkage programs because of the benefits they bring to the C/MHC. To locate your S/RPCA, contact any Community or Migrant Health Center. They are most likely members.

NOTES

APPENDIX FIVE

Developing an Affiliation: Issues, Questions and Comments

Interviews with individuals in linkage sites indicate that a contract or written affiliation agreement between the residency program and the C/MHC can be an important factor in the success of the linkage. The affiliation is necessary for spelling out the specific roles and responsibilities of both parties. The process of developing such an affiliation provides an opportunity for each entity to assess its goals and expectations for the linkage and to discuss them with the other entity. As issues will continue to arise as the linkage relationship matures, the affiliation should be reviewed periodically to assure its appropriateness and acceptability to all parties.

Listed below are issues to be addressed and specific questions to be answered in developing a linkage contract. The extent to which these issues are specifically dealt with in an affiliation is negotiable, but they should all be thoroughly discussed among the C/MHC and the residency program staff.

Much of this information was obtained through interviews with C/MHCs and family practice residency program representatives currently involved in a linkage. In some cases examples from existing agreements are presented. Many of the financial issues are discussed in Appendix Nine.

Issue to Address: RESIDENT SALARIES

Questions to be Answered:

1. Who is responsible for the residents' salaries?
2. Is the revenue generated by the residents at the C/MHC applied toward residents' salaries?

Comments:

Examples include:

- The residency program pays residents' salaries.
- The C/MHC is totally responsible.
- The C/MHC pays 30% of residents' salaries all three years.
- In Year 1 the residency pays residents' salaries; In Year 2 the residency pays 70% and the C/MHC 30%; In Year 3 the residency pays 60% and the C/MHC 40%.
- The C/MHC assesses the revenue generated by the residents, determines FTE, and pays the residency for this amount of time.
- The C/MHC retains control of the revenues generated by the resident in all the cases that were examined.

Issue to Address: FACULTY SALARIES

Questions to be Answered:

1. Who pays the salaries of faculty teaching at the C/MHC?
2. What if residency program faculty teach on-site at the C/MHC?

Comments:

In most cases the C/MHC is responsible for paying the salaries of faculty teaching at the C/MHC. There were some exceptions:

- The residency program pays 75% and the C/MHC 25%.
- The residency program subsidizes faculty for two half days per week even though they are on-site at the C/MHC five days per week.
- The residency program subsidizes the C/MHC based on what it would cost to replace the lost clinical time of C/MHC physicians who are precepting.
- In several cases, the C/MHC had received supplemental monies from funding agencies to subsidize on-site faculty salaries, therefore, the residency program didn't need to contribute.
- In two instances, no funds were exchanged.

Issue to Address: TRAVEL AND HOUSING FOR RESIDENTS

Questions to be Answered:

1. Who pays for and arranges housing for residents and visiting faculty?
2. Are travel costs of faculty and residents reimbursed? And if so, at what amount and by whom?

Comments:

In almost all cases, the residency program and the C/MHC were close enough so that housing arrangements were not an issue. Mileage costs are reimbursed by the C/MHC in a couple of instances. When travel is minimal, no reimbursement is made.

Issue to Address: MALPRACTICE LIABILITY

Questions to be Answered:

1. Who provides the malpractice liability coverage for the residents?
2. Who provides the malpractice liability coverage for the on-site faculty?

Comments:

In most cases the residency program pays the malpractice coverage for the residents. In regard to C/MHC-based faculty, the C/MHC provides coverage while on-site, but the residency program or hospital covers them for inpatient exposure.

Issue to Address: ACADEMIC RELATIONSHIPS BETWEEN C/MHC FACULTY AND RESIDENCY PROGRAM

Questions to be Answered:

1. Will C/MHC-based faculty receive faculty appointments and privileges?
2. What are the requirements/expectations of becoming a faculty member?
3. To what extent can C/MHC-based faculty participate in or be expected to participate in faculty development activities?
4. How will C/MHC-based faculty be identified?

Comments:

In all cases, C/MHC-based faculty receive benefits or recognition for their teaching responsibilities and participate to some extent in faculty development programs. The level to which C/MHC faculty are integrated varies but it appears the more thorough the integration, the better the potential for a successful linkage.

Issue to Address: SELECTION OF C/MHC RESIDENTS

Questions to be Answered:

1. By what process will residents be selected?
2. What is the procedure to follow if a resident doesn't work out?

Comments:

In most cases there is some input from the C/MHC in selecting residents. The amount of input seems to vary depending upon the amount of time the resident would be spending at the C/MHC. The person(s) involved varies. It can be the clinic director, the executive director, other staff and even board members.

Issue to Address: RESPONSIBILITY OF THE C/MHC CLINIC DIRECTOR AND THE RESIDENCY DIRECTOR

Questions to be Answered:

1. How are objectives of the clinical training program established?
2. Who is directly responsible for supervision of residents while at the C/MHC?
3. Who will supervise residents on-call for hospital patients?
4. How are residents' schedules developed? Who is responsible for coverage when changes are requested or made?
5. To whom are residents ultimately responsible?

Comments:

In all cases, the residency program director has ultimate responsibility for the residents and, in collaboration with C/MHC-based faculty must work out acceptable procedures for scheduling and supervising resident experiences in the C/MHC. As an educational setting the C/MHC should participate equally in the development and evaluation of the training objectives. An effective contract will recognize the equal status of the C/MHC as compared to any other training location for the residency.

Issue to Address: EVALUATION RESPONSIBILITIES

Questions to be Answered:

1. How will residents be evaluated?
2. How will the linkage be evaluated?

Comments:

Resident performance at the C/MHC is evaluated by C/MHC-based faculty and health center staff using the prescribed procedures of the residency program. The overall linkage must be jointly monitored and assessed periodically as with any on-going relationship. Refer to page 23 for additional commentary on the evaluation process.

Additional Sections to Include

As with any contract, there are additional standard issues to be outlined, for example:

- The purpose and/or goals of the agreement.
- Compliance with any applicable laws or provisions.
- The duration of the contract.
- The process for terminating the contract.

Before signing the contract, both parties should have the affiliation reviewed by their legal counsels.

In summary, a contract will be the basis for addressing the specific issues related to a service-education linkage and help ensure a constructive and business-like arrangement. The process of developing a contract is itself important. It provides an opportunity for all entities to get to know each other and discuss the issues. Once in place the contract should be reviewed annually.

APPENDIX 6

Example of a Family Practice Residency Program Schedule

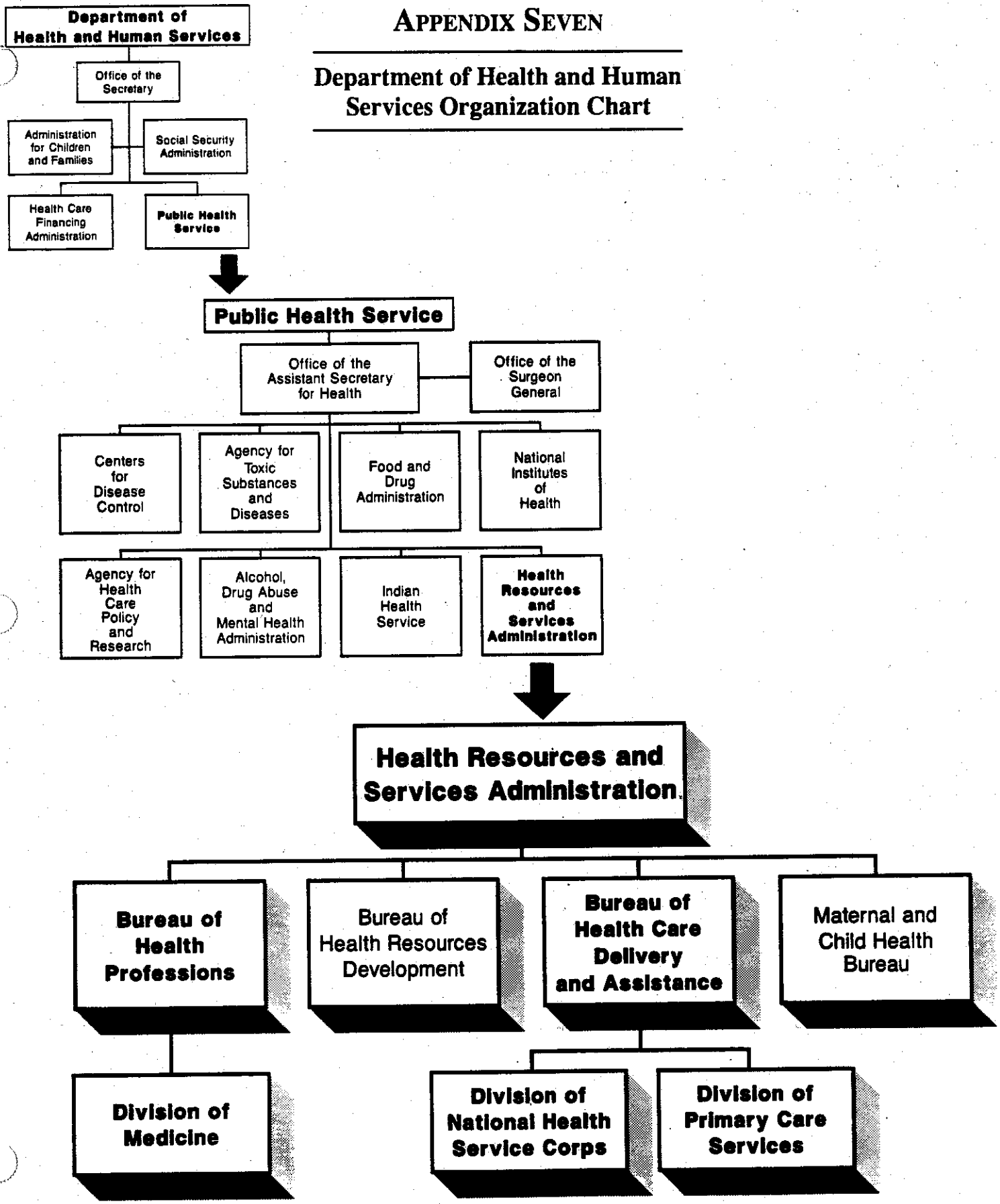
	Year 1 Family Practice Clinic/Health Center (1-3 half days/week)	Year 2 Family Practice Clinic/Health Center (2-4 half days/week)	Year 3 Family Practice Clinic/Health Center (3-5 half days/week)
July	Orientation	Principles of Family Medicine	Family Practice Ward
Aug	Intensive Care Unit	Family Practice Ward	
Sept	Dermatology	Pediatric Ward	Internal Medicine
Oct	Family Practice Ward		Behavioral Medicine
Nov		Obstetrics/Gynecology	Cardiology
Dec		Surgery	Surgery Ward
Jan	Obstetrics/Gynecology	Geriatrics	Orthopedics
Feb		Otolaryngology Urology	Ophthalmology Practice Management
March	Pediatric Clinic	Elective(s)	Research or Clinical Electives
April	Emergency Room	Neonatal Intensive Care Unit	
May	Internal Medicine	Gynecology	
June	Vacation	Vacation	Vacation

The order of rotations may vary from program to program

NOTES

Appendix Seven

Department of Health and Human Services Organization Chart



NOTES

APPENDIX EIGHT

Alternatives to Linkage

In the event that a C/MHC isn't ready for or, in a position to develop, a longitudinal relationship with a residency program, there are several other models which expose medical students and residents to practice in a C/MHC setting. Not only does participation in these programs enhance a C/MHC's recruitment efforts, but it provides valuable exposure to ambulatory care, underserved populations and a team approach to health delivery for students and residents. These experiences can help clarify students' and residents' decisions as to the type of medicine and in what setting they will practice.

Listed below are several models for providing students and residents an opportunity to practice medicine in a C/MHC setting.

Undergraduate Medical Education — Preclinical Years

1. Physical Diagnosis

After demonstrations and lectures at the medical school, first and second year students can visit a C/MHC and apply their physical diagnosis skills. The students work under the close direction of a health center clinician. This is time-consuming but provides an early and meaningful exposure for students.

To explore this alternative, contact the Dean of Academic Affairs at the medical school.

2. National Health Service Corps - American Medical Student Association (AMSA) Health Promotion/Disease Prevention Program

Between the first and second years, medical students spend 6-8 weeks at a C/MHC working on a community project related to health promotion/disease prevention. Students receive a weekly living allowance and travel expenses through this program. The student's supervisor may be an administrator or clinician at the center, with ongoing guidance from AMSA staff.

For more information, contact AMSA at 1-800-729-6429.

3. Community Medicine Experiences

Many medical schools have developed curricula in preventive medicine, epidemiology, and biostatistics. Some offer field experiences which provide students with exposure to community agencies, state health departments, C/MHCs and other community-based organizations.

To find out more, contact the relevant Department in the medical school.

Undergraduate Medical Education — Clinical Years

1. Family Practice Clerkships/Preceptorships

Many medical schools offer a Family Medicine clerkship or preceptorship in the third or fourth year. Students spend a block rotation (4-8 weeks) at a C/MHC in a preceptorship relationship with one or a small number of family physicians devoted to learning principles of family practice. Students see patients under supervision at the center, participate in rounds in the hospital, and in some cases participate in night call.

Contact the Department of Family Medicine at the medical school.

2. US Public Health Service (USPHS) Commissioned Officer Student Training and Extern Program (COSTEP)

This program is available to students who have completed at least one year of medical school. It provides them exposure to the opportunities available through the USPHS which includes practice in a C/MHC site. Students are assigned to a site for 30 to 120 days and are paid a salary by the USPHS during this time. They have an assigned supervisor on site and their duties may include clinical, research or administrative functions. The program is operated year-round although most projects occur during the summer.

To find out more, contact the COSTEP office at (301) 443-6324.

3. Electives

The fourth year of medical school provides opportunities for students to participate in electives, including those at distant sites. C/MHCs can provide a wide variety of clinical and community-based experiences ranging from intensive obstetrics exposure to community projects.

For more information, contact the Dean of Academic Affairs of the medical school.

Graduate Medical Education

1. Family Practice Residency: Rotations at C/MHC

A second or third year resident has a total of 3-6 months of electives. The electives can be spent at an approved C/MHC, seeing patients, making rounds, and working as a "junior partner" under the supervision of staff physicians. This time is often used by a resident and the C/MHC to test out a potential working relationship. Family Practice residencies can allow month-long off-site educational experiences for residents who wish to set up this sort of elective.

For more information, contact the residency director of the Family Practice Residency Program.

2. Family Practice Residency: Residency Inpatient Service

A Family Practice residency inpatient service can potentially provide support to a C/MHC by allowing center physicians to admit patients who will then be cared for by residents or residency faculty. This is particularly helpful when the C/MHC generates a high volume of inpatient work. While space at the C/MHC may be inadequate to have residents on-site, they are still exposed to C/MHC patients within the hospital, and C/MHC physicians have the opportunity to teach as they manage their in-patients with the residents.

For more information, contact the residency director of the Family Practice Residency Program.

APPENDIX NINE

Financial Considerations

There are a number of costs involved, both in establishing linkages (as noted in Section Five), and also in maintaining a linkage. This section will first outline the potential cost centers which should be considered when developing a linkage and then present the experience of one program (UCSF-Fresno) which has addressed cost and productivity issues.

C/MHC

Caveats:

- Money from Section 329/330 of the Public Health Service Act cannot be allocated for research projects.
- The benefits and rewards of teaching cannot easily be quantified in an attempt to balance the additional costs.
- The potential recruitment and retention benefits of training residents in a C/MHC are equally difficult to quantify.

Cost Centers:

Administrative:

- Additional scheduling
- BCRR reporting costs
- Evaluation of linkage
- Additional liability exposure

Resources:

- Adequate exam room space
- Office library
- Conference room
- Basic laboratory
- Resident and attending work area

Personnel:

- Additional staff
- Faculty attending/preceptors (see below)
- Potential loss in productivity (see below)
- Faculty development

Patient Care:

- Residents order more tests
- Residents take more time with patients

Residency

Caveats:

- The benefits of training residents in underserved areas are difficult to quantify and measure.
- The potential good being done in the community by adding manpower to underserved areas is equally difficult to measure.
- The benefits in terms of recruitment to the residency of additional residents is difficult to measure.
- The added diversity that these residents will provide to the program and the training of all residents will be equally difficult to quantify.

Cost Centers:

Administrative:

- Additional scheduling
- Added evaluation component
- Additional paperwork (RRC, new contracts)

Personnel:

- Additional residents
- Additional faculty time in training residents

Patient Care:

- There may be additional patients to care for on the in-patient service

Ambulatory care education is expensive because of its reliance upon one-on-one teaching. In most specialties, the costs for graduate medical education are supported by patient care income. The costs of graduate education in primary care probably are not greater than costs in other specialties, but the income produced is less. Depending upon how many residents see their continuity patients in the C/MHC and how many of those residents are in the C/MHC at the same time, the loss in productivity for the faculty attending will be greater or lesser. For example, if four residents are in the C/MHC together, one faculty member can be the attending preceptor. The loss in that faculty member's productivity will likely be more than offset by the four residents' productivity. However, if only one resident is being precepted by a faculty member, then the loss of productivity will be greater. These issues will need to be addressed during the negotiation between the C/MHC and the residency.

The Fresno California Family Practice Residency Program, affiliated with Valley Medical Center and the University of California at San Francisco, has successfully expanded training opportunities through linkages—or pathways—for residents in addition to its traditional training program. In the process of planning and implementing these model educational projects, both residency and C/MHC educators have had to address cost and productivity issues. Their experiences and assumptions which follow offer insight and guidelines for other programs contemplating the development of linkages.

Balancing Service and Education: Anticipating Concerns and Providing Solutions

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I. Creation of an Educational Environment

Equipment:

EKG
Crash cart
Hyfercator
Audiometer
Hand held Doppler Ultrasound
Casting equipment
Recording equipment, VCR, Camcorder
Personal computer with modem
Sigmoidoscope with suction machine, light source, and teaching
Head or video adapter
Powered table
Colposcope
IV Equipment
Minor Surgery Instruments
Tympanometer
Circumcision kit
Cryotherapy
Pulmonary function testing and treatments
Indirect laryngoscopy
FAX

The opportunity to perform procedural skills in the C/MHC is an important component of family practice residency training. It is the best opportunity for family practice residents to learn how to incorporate procedural skills into a practice setting. It improves care to patients by minimizing outside referrals and providing convenient services at the C/MHC.

Discussion:

A. Cost: Many equipment items are quite expensive. For C/MHCs which receive reimbursement on a fixed rate basis or on a capitated basis for ambulatory services only, the provision of expensive procedures on site may not be cost effective. In addition, if a piece of equipment is not utilized on a regular basis, it may depreciate faster than it generates revenue. C/MHCs and Family Practice residencies will have to look at each piece of equipment on an individual basis while taking into account the demographics of their patient population, the availability of the services in question through other referral sources, and the expertise and interest of C/MHC physicians, and the residency faculty.

For some services, such as colposcopy or sigmoidoscopy, it may be beneficial to bring in a specialist from outside the C/MHC or family practice residency if the volume of patients and the reimbursement rate would justify this. Involving residents with procedures whenever possible will enhance the satisfaction of those physicians providing the services, and of the participating residents.

There may be some pieces of equipment which cannot be justified on purely economic grounds. However, if there is a strong educational payoff such as may be found with a personal computer hooked by modem to a medical library, then the C/MHC and residency should consider obtaining funds through local health care foundations or grant support.

B. Time: Procedures, especially when performed by residents, may be time consuming. In addition, support staff may not be familiar with the procedure or the supplies utilized during the procedure. Support staff should be given a standardized list of

(Two 1st year residents x 2 half days = 2 half days lost productivity. Four 2nd and 3rd year residents x 4 half days = 16 half days x 25% = 4 half days lost productivity)
Total lost productivity for supervising physician = .6 FTE

Discussion: The RRC specifies that there needs to be a physician who, without other obligations, is available to supervise residents whenever the residents are seeing patients. Under the assumptions listed above, a supervising physician for two first year residents would not have any patients scheduled. Similarly, a physician supervising four second and third year residents would not have any patients scheduled.

Most community health centers are not large enough to support four residents every half-day. In the model described above (2-2-2 residency, 2-4-4 clinics/week), residents are in the C/MHC 20 half-days a week, or an average of two residents per half-day clinic. If the two first year residents are scheduled together on two half-day clinics and if the four second and third year residents are scheduled in groups of four in four half-day clinics, there will be four half-day clinics with no residents. This uneven scheduling will result in erratic utilization of the facility and the support staff. A more efficient system from the C/MHC perspective would schedule two residents during each half-day clinic with a supervising physician having a proportionately reduced load based on the assumptions noted above. However, this is not a model which is currently acceptable to the RRC.

The total loss of productivity for the supervising physicians will be unaffected by how the residents are grouped. The main impact will be on utilization of support staff and the facility, and the perceived impact on the educational process.

Resident Productivity

Assumptions:

46 weeks/year
2 residents/year
1st year - 6 pts/ 1/2 day - 2 clinics/week
2nd year = 8 pts/ 1/2 day - 4 clinics/week
3rd year - 10 pts/ 1/2 day - 4 clinics/week

Productivity:

1st year 12 pts/week x 46 = 552 x 2 residents = 1104 pts
2nd year 32 pts/week x 46 = 1472 x 2 residents = 2944 pts
3rd year 40 pts/week x 46 = 1840 x 2 residents = 3680 pts
Total = 7728 pts

Discussion: The above productivity for family practice residents is based on the RRC requirements. In order for residents to achieve these productivity standards, it is necessary that the C/MHC provide a strong support system including scheduling, medical records, and nursing staff.

Additional Educational Activity

Curriculum development
Lectures and presentations
Recruitment
Advising residents and students
Research
Faculty meetings
Evaluation of residents and students
Estimated time required = 1-2 half days/week/FTE

Discussion: The linkage of C/MHCs and residency programs can be advantageous to both parties. C/MHC physicians can augment residency faculty and help meet some of the increased educational demands created by the family practice residency C/MHC linkage. Scheduling innovations such as an educational half-day each week, when educational presentations can be prepared for residents from the entire program, can maximize efficient utilization of faculty teaching time. The infusion of C/MHC physician faculty also is an opportunity for the residency to more clearly delineate the responsibilities of their existing faculty and staff.

C/MHCs can advertise the opportunity for C/MHC physicians to participate in residency educational activities. It should be noted that the additional educational activities delineated above do not cover such traditional C/MHC medical director functions as quality assurance, development of health care plans, oversight of nursing, equipment, and inventory issues.

Cost to CHC of 2-2-2 Residency

$63,000 for resident salaries = .6 FTE
Lost physician productivity secondary to precepting = .6 FTE
Lost physician productivity for other educational activities C/MHCphysicians/faculty = .4 FTE (for 2-3 FTE physicians)
Total cost to CHC in FTE = 1.6 FTE
Benefit to CHC
7728 additional patients seen
7728 pts. divided by 5000 pts/FTE = 1.6 FTE

Discussion: This analysis compares the cost to C/MHCs of resident salaries, lost physician productivity secondary to precepting and lost physician productivity for other educational activities to the additional patient volume generated by residents. It is apparent from this calculation that there is a balance between the cost and benefits to clinics utilizing the productivity assumptions discussed previously. It should be noted that overhead for both the C/MHC and the residency program are not included in this calculation. THIS CALCULATION IS BASED ON OUR SPECIFIC ASSUMPTIONS ABOUT PRODUCTIVITY AND DOES NOT ADDRESS ACTUAL REVENUE GENERATION. It is assumed that the C/MHC has calculated its expenses and revenues and has budgeted for a predetermined number of clinicians to provide the patient services. The calculations reviewed above substitute residents for C/MHC physicians.

CHCs contracting with the Residency for Faculty

It may be beneficial for the C/MHC to contract with the residency for physician clinical services. There are plusses and minuses to consider:

Benefits	Drawbacks
Teaching	Shared control of the physician
Provides clinicians	Unfamiliarity with C/MHCs policies
Flexible scheduling	Less continuity
	Potentially lower productivity

Assumptions:

Cost: 6% for faculty billing and payroll
10% to support residency program overhead
83% to support faculty salary

Example: $60/hr to FP program
$ 4/hr to billing/payroll organization
$ 6/hr to FP Department
$50/hr to faculty member

Annualized cost = $120,000/year (no vacation)

Discussion: A common frustration at the C/MHC is the need to hire locum tenens physicians to fill vacant physician slots. In some circumstances, the family practice residency program may have faculty who would be available to help meet patient care needs of C/MHCs. This would enable the residency to support an expanded number of faculty positions, while providing the C/MHC with a more stable source of skilled clinicians.

III. Hospital In-Patient Care

Resident Issues	Faculty Issues
Teaching	Teaching
A.M. rounds	Daytime supervision
Resident back-up	Evening & weekend call
Coverage during clinics	Bill & revenue sharing
Evening & weekend call	Fee for service
Continuity of care	Fixed rate
	Profit-sharing with CHC
	Profit-sharing with Family Practice Dept.
	Mode of practice

Discussion: In-patient revenues can be an important source of income. This is especially true if there is a large obstetric population. If the C/MHC is located a substantial distance from the residency, it may utilize a different hospital. In this situation, it is unlikely that there will be enough residents at the C/MHC to completely cover the inpatient demands of the C/MHC. In this situation, a call schedule and a schedule for morning rounds that incorporates both FP family practice residents on some days and family practice faculty on others may be necessary. An alternative approach would be to establish linkages or pathways to share inpatient responsibilities.

Revenue sharing for C/MHC physicians and residency faculty will also be an issue. The revenue distribution must be equitably distributed among the involved clinicians. In addition, both the C/MHC and the residency program are likely to have an interest in obtaining a portion of the inpatient revenue. Billing can be done either through the C/MHC or through the residency program through a faculty practice plan. In either arrangement, the involved clinicians must be aware of regulations governing mode of practice and guidelines for documentation while supervising residents, admitting patients, or performing procedures.

IV. Summary

Keys to Success in Balancing Service and Education in Family Practice Residency Program - C/MHC Affiliations

- Clear expectations regarding productivity and scheduling
- Adequate patient base and patient mix
- Establishment of a teaching environment at the CHC: including textbooks, equipment, students, precepting, and access to specialty consultation
- Access to quality hospital services with opportunities for revenue generation (OB)
- Establishment of centralized educational experiences (education half days)
- Mechanisms to support FP program overhead
- A critical mass of residents and faculty to support ambulatory and hospital based patient care services

APPENDIX TEN

Linkages and Organizational Dynamics

Change is challenging for any organization. The process of forming a training linkage requires a great deal of collaboration. The following describes the experiences and observations of the UCSF-Fresno Family Practice Residency Program and the Sequoia Community Health Foundation. These programs have carefully addressed and documented the organizational dynamics of the linkage process as it pertains to their setting.

The Importance of Observing Organizational Dynamics

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Organizational dynamics, especially as related to the process of change, are important phenomena to focus upon when two different organizations first attempt a linkage. This is particularly true in regard to efforts to combine the traditional medical education organizations within acute care hospitals with those of the service-oriented Community/Migrant Health Centers (C/MHCs). Although most experienced managers agree that human reactions to change are among the most complex and influential organizational dynamics, they often receive little attention during a major change process.

When we began our efforts to extend the Family Practice Medical Education Program to the Sequoia Community Health Foundation, we made a deliberate effort to analyze the process of change and how it might affect our efforts. This was not an easy task since daily job demands focus on facts, figures, and information rather than organizational dynamics and processes. Moreover, the issue of response to change is affected significantly by the "cultures" of our organizations. When these "cultures" are dramatically different, misunderstanding, miscommunication and confusion can occur and impede progress towards affiliation.

We decided to focus on the process of change in a formal way so that "process issues" would not get lost among the ever-increasing technical demands of the new relationship. We chose a 1985 survey instrument by John E. Jones, Ph.D. and William L. Bearley, Ed.D. which is designed to measure managers' perceptions of an organization's "change readiness." Because it is designed to elicit responses from managers of the involved organizations, it has the added benefit of focusing their attention on the fact that something new and different is taking place.

Although the survey was helpful to us, the actual results may be less important than the process of directing managers' attention to the change process. The creation of an awareness of how the organizations are "culturally" different contributes a valuable perspective on the delicate process of change that transcends facts, figures, and documents. This alerts participants to some of the powerful "cultural" forces within organizations which can hinder effective communication and create resistance to change.

Our survey measured five organization indicators of Change Readiness: structural, technological, climatic, systemic and people. For each of these, it quantified the forces supporting change as well as the corresponding barriers. Managers in the hospital affiliated with our residency program and in the health center participated in the survey and subsequent discussions. The survey profiles indicated that the health center had much lower barriers to change and much higher support for change than the hospital. It was more ready than the hospital to form a linkage.

Awareness of the contrast between the two organizations' relative readiness for change was important to our progress in developing a linkage. As an example, a key aspect of the project was that the hospital provide some financial support for the residency expansion in return for which it would receive referrals of CHC obstetrical patients. Since the hospital had a favorable reimbursement rate for obstetrical patients, it viewed increasing referrals as a way to offset its financial contribution. An agreement was negotiated between the Hospital Administrator and the Executive Director of the CHC and approved by the County Board of Supervisors which added the requirement for a quarterly audit. The hospital was to collect referral figures from the community center and present them, along with a financial analysis, to the Board of Supervisors.

Because the survey results indicated low hospital readiness to change, we realized that the hospital management might quickly turn their attention from our project to another area and not follow through on data collection and analysis. To avoid this outcome, and the potential negative consequences, we assumed responsibility for collecting the data which would form the basis of the financial report to the Board of Supervisors. In the process, it became evident that the hospital's tally of the number of deliveries was seriously understated. In fact, the hospital had established no system to gather accurate data on referrals. Use of the hospital data would have supported the contention by a minority of the Board of Supervisors that the affiliation was not cost effective to the hospital and might have resulted in accusations of bad faith. Although it took approximately eight hours of scarce management time over a one month period, the net result was the documentation of 48 patients (a more than adequate number) referred to the hospital over the three month audit period. Neither organization (hospital nor health center) was sufficiently concerned about the collection of data to ensure a positive, accurate outcome. Neither seemed aware of the potentially negative response of the supervisors which could have jeopardized the agreement.

The foregoing example is not meant as a criticism but simply to illustrate that organizations with different characteristics and missions behave differently. Unless we recognize this, we may tend to expect that others will behave as we do. This expectation can result in misunderstandings which may be interpreted as signs of bad faith, incompetence, or even sabotage. Often an acceleration into nonproductive exchanges can be traced to a confrontation between different organizational cultures and expectations. It is important that in planning for change as consequential as establishing medical education programs in C/MHCs that attention be given to the organizational dynamics of the involved organizations.