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Access to Primary Health Care in Texas

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EXECUTIVE SUMMARY

Primary care is the first line of defense in the medical world. It should be the first point of service a person has with health care professionals for diagnosis, treatment, and prevention of acute or chronic illness. While expanding Medicaid eligibility criteria for children may reduce financial barriers to obtaining these essential services, it does not guarantee adequate access to primary care when there are vast disparities in the number and distribution of physicians available to treat Medicaid patients. There are 254 counties in Texas and 228 of them are either wholly or partially designated as a Medically Underserved Area (MUA) or Medically Underserved Population (MUP) (TDH 1993-1994). Although rural doctors participate in Medicaid at a higher rate than urban doctors, the recent trend in Texas is for rural doctors to reduce the volume of their Medicaid practice (Phelps Nov. 1994).

A head count of the number of doctors with a Medicaid provider number is not an accurate reflection of the availability of care in an area; the composition of the caseload of participating physicians must also be taken into account. Even when a large number of physicians accept Medicaid, if they limit the number of Medicaid patients they treat then inadequate access to care will result (Lewis-Idema, 1-2). There are several disincentives to participation by providers in the Medicaid program; the main reasons, as perceived by physicians, are inadequate and delayed reimbursement, and complex regulations and paperwork (Yudkowsky, 6). Texas Medicaid fees for primary care services in rural areas average about 60-65% of what the doctor bills (Phelps 1995), which is at the low end of what some insurance pays. Nationally, physicians had to wait an average of 7.9 weeks to receive reimbursement from Medicaid in 1993 (Yudkowsky, Table 7). Concomitantly, several studies have shown that physicians are more amenable toward treating Medicaid patients in areas where reimbursement is higher and where there is a larger Medicaid population (Mitchell, 646).

A broad array of public health services, public hospitals, medical schools, Federally Qualified Health Centers, Rural Health Clinics and other types of health delivery systems attempt to fill the primary health care voids. These numerous facilities and public programs are aimed at specific groups of people who live in certain areas. Those who are not in the correct age group, do not have the health problem

they treat, do not live in the service area or for some other reason do not meet eligibility criteria and cannot afford to pay out of pocket will find it difficult to locate care. Texas is testing a Medicaid managed care solution for the problems of fragmented, inaccessible care and cost containment. The LoneSTAR Health Initiative consists of two managed care pilot projects, one taking place in Travis county and one in the Tri-county area (Chambers, Jefferson, Galveston). A main objective of these projects is the creation of a "medical home," a primary care physician or clinic responsible for providing continuous care and making necessary referrals for a specific group of people assigned to them. Another goal of these projects involves encouragement of cost efficiency by use of non-traditional means of reimbursement such as capitation, global fees, and case management fees (LBJ School of Public Affairs, 1). Implementing Medicaid managed care statewide will be very difficult. The same shortages of primary care physicians that plague the current health delivery system will affect any attempt at managed care. In rural areas with no or only a few health professionals, it will be very difficult to set up the provider networks accomplished in the pilot areas.

Inadequate access to care has repercussions. People will still seek medical care, but they may resort to less desirable consumption habits when a regular medical home is unobtainable due to a lack of participation or availability of primary health care providers. The result of these factors is inappropriate utilization of emergency rooms and outpatient hospital services for treatment which could be more economically provided by a doctor or nurse in an office setting with the same results. According to the Texas Poll conducted April 1995, 5.5% of the respondents who took their children to the emergency room did so for routine check-ups or for immunization. The evidence of this lack of primary health care includes the resurgences of measles and tuberculosis and the increasing numbers of infants with low birth weights.

Solutions for enhancing availability of primary care providers must focus on methods to recuit primary care providers to underserved areas as well as providing encouragment for them to stay in underserved areas, both urban and rural. Financial incentives such as restructuring Medicaid reimbursement, subsidies for locating in underserved areas, and educational debt forgiveness would assist in increasing the supply of providers and encourage participation in Medicaid. Structural changes in

health care delivery which would enhance accessibility of care include: co-location of public health care and primary care in easily accessible urban areas, such as was done in the Community Oriented Primary Care pilot for Parkland Hospital in Dallas Tx; and case-management to assure that persons who receive Medicaid have one primary provider of care and are directed to other providers in their area who accept Medicaid when the need arises.

ACCESS TO PRIMARY HEALTH CARE IN TEXAS

A child's health has repercussions on his or her development both mentally and physically. Without timely, comprehensive and regular health care such as well-child checks and immunizations, the door is opened for poor health, chronic disease and learning problems. While moderating Medicaid eligibility criteria for children may reduce financial barriers to obtaining services, it does not guarantee adequate access to primary care when there are insufficient numbers of primary care providers willing to accommodate the currently eligible population. In Texas, the inability to provide comprehensive primary health care to all people is exemplified by our numerous Medically Underserved Areas (MUAs), Medically Underserved Populations (MUPs), and Health Professional Shortage Areas (HPSAs) (Smith 1992, 47). The evidence absence of comprehensive primary health care includes the resurgences of measles and tuberculosis and the increasing numbers of infants with low birth weights. We must begin resolving the insufficiency of health care professionals for the indigent by addressing issues on the availability and accessibility of primary care and preventative services (ibid). Among the foremost problems to be addressed by Texas are the shortages of primary care providers in certain areas of the state; the decreasing numbers of primary care physicians accepting any Medicaid patients; the increasing numbers of participating physicians who limit their Medicaid practices; the underutilization of non-physician health care providers, and; the fragmentation of public health services.

For the 196 rural counties in Texas, the core difficulty lies in attracting primary health care providers to those largely isolated areas. For urban areas, there are problems associated less with the overall number of primary care providers as with their location in relation to patients and their willingness to accept patients whose only coverage is Medicaid. For both areas, transportation to caregivers is a significant barrier to many low income individuals. When doctors are inaccessible, whether it is due to distance or the fact that they will not see Medicaid patients, then those who have no other payment resources must seek care through less efficient means. They may seek care at hospital

emergency rooms or outpatient departments or they may try to navigate the maze of public programs which each offer limited treatment and assistance. None of these options provide the continuity or comprehensiveness of care which a consistent medical home would provide. Attempts to rectify these deficiencies in a cost effective manner are being made through managed care initiatives. Managed care, however, is not the panacea for all of Texas' health care ills. In order to formulate workable solutions, identifying why these access barriers to primary care exist needs to be explored. This discussion focuses on structural barriers to health care, specifically availability of providers and the structure of the health care system.

IMPORTANCE OF PRIMARY CARE

Primary care is the first line of defense in the medical world. It is the first point of service a person has with health care professionals for diagnosis, treatment, and prevention of acute or chronic illness. It deals with the person as a whole and a wide array of diseases. The entire range of primary care providers traditionally includes general practitioners, family practitioners, general pediatricians, general internists, obstetrician/ gynecologists, nurse midwives, physician assistants, nurse practitioners, dentists, optometrists, pharmacists etc. Preventative care includes actions that impede the initiation of disease or injury or reduce the severity after onset; these are services such as immunization, injury prevention, etc. (TX SHCC, 23-24). Lack of easily accessible primary care contributes to increased use of emergency rooms to receive routine health care, increased numbers of unimmunized children which leads to the spread of preventable disease and a preponderance of other problems such as low birth weight and premature babies, all of which increase health care costs. "A healthy, well nourished, and emotionally stable child is more likely to be a receptive student and productive citizen" (Price, Kirkland, Kreisler, 71).

State and local funds pay for comprehensive preventative services at local health departments for children under 200% of the federal poverty level and for those who qualify for Medicaid. The children visiting these clinics average only two visits per year instead of the recommended eight for the first couple of years of life; possible reasons are lack of outreach, transportation difficulties, inconvenient hours of operation or lack of information on the importance of immunization (ibid). Children with Medicaid as their only source of insurance will also have difficulty seeking services from office-based pediatricians. In

1992 there were 1158 pediatricians participating in Medicaid, most of which participated at a low or mid-volume level (low defined as 29 or less patients treated per three months and mid defined as between 30-99 per three months)(ibid p 73).

Inadequate access to care has repercussions. The percentage of babies born with low birth weights has stayed fairly constant over the past ten years in Texas (ibid, 74). Texas is second only to California for rate of births to girls between 15 and 17 years old (Texas State Medicaid Office May 1994, 92). Children are failing to receive all immunizations. In 1991 the percentage of two-year old children who had received full vaccination was as low as 12% in Houston and 42% in El Paso (Starke, Tan Chacko, 36). This has contributed to outbreaks of vaccine-preventable diseases such as the outbreaks of measles in 1988 and 1989 and increases in the number of mumps cases (ibid). Between 1987 and 1991 Texas had a 44% increase in tuberculosis cases, compared to 17% for the United States over the same period.; cases of tuberculosis in children under age 15 in Texas increased 77% during that time frame (ibid).

DEFINING UNDERSERVED AREAS

The first step in pinpointing where problems of access and availability to health care lie is the identification of areas where there is a shortage of medical professionals. There are vast disparities between the number of physicians available and willing to treat Medicaid patients throughout the state compared to the number and distribution of Medicaid recipients. There are 254 counties in Texas and 228 of them are either wholly or partially designated as a MUA or MUP (TDH 1993-1994). The MUA designation is given by the federal government based on the area's Index of Medical Underservice (IMU) and a MUP designation is based on an evaluation of the unusual local conditions and access barriers that cause a population to be underserved (Center for Rural Health Initiatives. Feb. 1994, 18). A MUA is an area recognized as having a shortage of personal health services. The four indicators used in measuring inadequate supply are as follows: 1) percentage of population age 65 and older, 2) poverty rate, 3) infant mortality rate, 4) ratio of physicians practicing in primary care versus population for a given area. Designations are made for an entire county, or a portion of a county, or census tracts, or census county divisions. MUPs are areas not qualifying as MUAs that have "unusual local conditions which result in

access barriers or the unavailability of personal health services" (Health Professions Resource Ctr., 5). This provision recognizes that certain populations may be underserved although the area as a whole appears adequately served. Designation as a MUP requires the recommendation of the governor to the U.S. Department of Health and Human Services. A Health Professional Shortage Area (HPSA) is also a federal designation that indicates a rural or urban area which is a rational area for the delivery of health services which has a shortage or primary medical care because one of the following conditions exist: 1) the area has a ratio of population 3,500 to 1 full time equivalent primary care physicians, or 2) the area has a ratio of at least population 3,000 to 1 full time equivalent primary care physicians, and the primary medical care professionals in nearby areas are either "overutilized, excessively distant or inaccessible to the population of the area" (Center for Rural Health Initiatives Feb. 1994, 19). There are 124 counties in Texas with a HPSA designation, 89% of which are rural (TX SHCC, 56).

PRIMARY CARE PHYSICIAN AVAILABILITY IN TEXAS

Although rural doctors participate in Medicaid at a higher rate than urban doctors, the recent trend in Texas is for rural doctors to reduce the volume of their Medicaid practice (Phelps 1994). The definition of high, medium and low participation in the Texas Physician Participation reports is as follows: low is 0-29 clients in the three month period, medium is 30-99 clients, and high is 100 and over in the reporting period. Between the observation periods of January through March 1994 and July through September 1994 the percentage of high volume participants declined for rural counties from 32% of primary care providers to 22% of providers (Phelps 1994). A decline was also noted for urban counties, though not as dramatic, from 23% to 22%. In contrast, between the reporting periods of Sept. 1992- Nov. 1992 and Nov. 1993- Jan. 1994 there had been a slight increase in physician participation at the high level, from 21% to 24% and in overall physician participation from 76.% to 81% during that time frame (TDH 1992-1994). A contributing factor to these trends could be the increasing numbers of Federally Qualified Health Centers (FQHCs), Rural Health Clinics (RHCs) and other forms of organized care which are reimbursed on a cost basis rather than according to the fee schedule used to reimburse private physicians which has not been updated since April 1992 (Phelps 1994). It is important to note that once

doctors are recognized as "clinic" settings, they are no longer statistically considerd as primary care providers, which will cause some skewing of the data.

Rural counties face particular difficulty regarding patient to physician ratios. There are 24 rural counties with no primary care physicians in direct patient care; 15 of these have populations of more than 1500 people. There are 46 counties which have either one or two physicians (Center for Rural Health Initiatives Jan. 1995, 50). As of June 1994 the ratio of patients per primary care doctor was nearly 35% higher for rural doctors compared to urban doctors (ibid, 50-51). The disparity may be worse than this statistic indicates since urban patients may go to a specialist to receive basic care. Living in an urban area, however, does not guarantees access to care. The average patient to primary care physician ratio was 1674 to 1 for urban areas (ibid, 50). The situation is worse for those who receive Medicaid since the majority of participating physicians in the urban areas participate at the low levels. In Travis county, 87% of participating physicians see less than 30 Medicaid patients per month (TDH July-Sept. 1994.). In an effort to mitigate these problems along with others, the Texas Department of Health is conducting two managed care pilots known as the LoneSTAR Health Initiative, one is being conducted in Jefferson, Chambers and Galveston counties (Tri-County Area) and one in Travis county. Details regarding the pilots will be discussed later in this paper.

PHYSICIAN PARTICIPATION

Fifty-six percent of Medicaid recipients in 1993 were children (TX State Medicaid Office May 1994) but neither they nor expansion groups will reap the benefits of medical care unless physicians and other health care providers accept Medicaid patients. A simple head count of the number of doctors with a Medicaid provider number is not an accurate reflection of the availability of care in an area; the composition of the caseload of participating physicians must also be taken into account. Even when a large number of physicians accept Medicaid, if they limit the number of Medicaid patients they treat then inadequate access to care will result (Lewis-Idema, 1-2). Nationwide there has been a decrease in the percentage of Medicaid patients in physicians' caseloads between the late 1970's and mid 1980's, from 12.1% to 9.5% (ibid. 36).

There are several disincentives to participation by providers in the Medicaid program; the main reasons are inadequate and delayed reimbursement, and complex regulations and paperwork (Yudkowsky, 6). Texas Medicaid fees for primary care services provided in rural areasaverage about 60-65% of what the doctor bills (Jeffrey Phelps 1995), which is at the low end of reimbursement of some insurance plans. Nationally, physicians had to wait an average of 7.9 weeks to receive reimbursement in 1993 (Yudkowsky, Table 7). Concomitantly, several studies have shown that physicians are more amenable toward treating Medicaid patients in areas where reimbursement is higher and where there is a larger Medicaid population (Mitchell, 646).

SIZE OF MEDICAID PRACTICE

There have been several studies conducted regarding trends in the size of physicians' Medicaid practices and the rate at which they participate. The results of these studies were occasionally contradictory depending on the source of data and how participation was defined. A study by Janet B. Mitchell, which used sample data from the National Opinion Research Center, showed there was a decrease in percentage of Medicaid patients comprised of the average physicians' caseloads from 12.1% in the mid-1970s to 9.5% in the mid 1980s(Lewis-Idema, 36). The study found a statistically significant increase in Medicaid caseloads among pediatricians from 14.1% to 16.9% (ibid). The American Academy of Pediatrics also conducted surveys of thirteen states Medicaid participation in 1978, 1983, and 1989 and reported a decrease in the size of pediatricians' Medicaid practices. The percentage of pediatricians limiting their Medicaid clientele increased from 26% in 1978 to 39% in 1989 (ibid).

EFFECTS OF INCREASED PHYSICIAN SUPPLY (URBAN AREAS)

Intuition dictates that if there is a shortage of a good or service then the logical course of action is to increase the supply of that good or service. There are several economic reasons why the seemingly logical course of action is , in certain situations, counterproductive in formulating policy to increase access to primary care physicians in urban areas. A number of studies have shown that there are "strong negative relationships between the supply of physicians and Medicaid participation and equally strong positive relationships between supply and the concentration of Medicaid patients in small numbers of large Medicaid practices" (Fossett, Peterson, 386). More simply phrased, there are two main factors at

work in determining rates of physician participation in Medicaid: 1) location of the practice versus location of the patients, and; 2) economies of scale.

According to the Fosset, Peterson study which used Illinois Medicaid data from 1985, primary care physicians tend to draw their clientele from the immediate area of their practice location and patients generally want to limit travel time to their sources of primary care. This is particularly true for low income persons who have the additional barrier of transportation obstacles. Physicians in urban areas are apt to locate their practices in upper income neighborhoods (ibid, 388) or near hospitals. This residential segregation offsets the effects of competition which would normally cause increased acceptance of Medicaid patients as the pool of private pay patients is divided among an increased number of physicians. Only physicians located in or near residentially segregated areas could increase their Medicaid practice easily. Doctors in more affluent areas would be hesitant to relocate their practices to poorer areas for fear of losing their private pay patients (ibid, 388-389).

Also at work in this urban scenario are physicians' practice costs. High practice costs and the large disparity between prevailing rates and Medicaid fees mean that doctors would have to treat large numbers of Medicaid patients, or change their methods in delivering treatment (i.e. enhanced use of non-physician primary care providers) in order to reduce the average cost per patient and make their business economically viable. They would be required to hire additional staff (nurses, clericals) and/or invest in computerized billing to process these additional patients and bring down average costs. Since the minimum efficient scale is likely to be smaller for private pay patients than for public patients and the number of Medicaid patients which can be attracted to a practice is limited by the practice location, doctors in an increasingly competitive market respond by limiting the number of Medicaid patients they treat rather than increasing that part of their practice. Demographic and economic considerations create incentives to either severely restrict the Medicaid practice or to treat an extremely large number. To maintain a moderate Medicaid clientele in a practice between these extremes is not profitable (ibid, 390).

This hypothesis has not been tested in Texas, but it was tested in Chicago, Illinois. Fossett, Perloff, Peterson, and Kletke looked at demographic data from 1985-1987 in Chicago. Their studies showed that the poorest Medicaid patients, particularly black and Hispanic AFDC households, were

disproportionately concentrated in ghettos and this dramatically reduced their access to mainstream physician care since doctors offices (OB/GYNs in this case) were located away from the depressed areas. They speculate that expansion groups of the newly eligible for Medicaid who are "near poor" rather than the poorest of the poor would have increased access to care since they tend to live in economically non-segregated areas. Even though the doctors in these areas did not accept Medicaid patients at high levels, they would start to accept more as the Medicaid population increased. This would not hold true for those in economically segregated areas since the few doctors in those areas are already seeing a maximum of Medicaid patients and more doctors would not desire to locate their practice in these areas.

These considerations apply less to rural areas since both practice costs and prevailing charges are lower than in urban areas and Medicaid recipients generally compose a larger percentage of their practice. This eliminates the economies of scale created by large urban Medicaid practices since that many patients cannot be gathered in one rural practice and there is not an appreciable difference in the net revenue per patient (ibid, 389). Neither would this apply in areas with little or no residential/ economic segregation. It is easy to assume that increasing the supply of primary physicians through reoriented education and through financial incentives such as loan forgiveness will help ease the shortages of health care availability and improve access. The caveat to this assumption is that the new supply must be located and encouraged to remain in underserviced areas.

EFFECTS OF INCREASED REIMBURSEMENT LEVELS

There have been several studies done on the effect of payment levels and other factors on physician participation. Janet B. Mitchell from the Center for Health Economics Research, Waltham Massachusetts performed a study based on the national physician surveys conducted by the National Opinion Research Center for the Health Care Financing Administration (HCFA) in 1977, 1978, and 1984-1985. She used basic supply and demand as the analytic framework of her discussion. When fees are predetermined, the physician decides how many patients he/ she will serve at the fixed price (Mitchell, 648). As long as private insurance pays more than Medicaid, the doctor will prefer to see the higher paying patient (ibid, 649). Higher Medicaid reimbursement rates positively affected physician participation in urban areas; a 10% increase in fees raised participation by 3.6% (ibid, 651). The supply

of primary care physicians available to Medicaid patients is relatively inelastic. A change in fees paid produced a disporoportionately smaller increase in participation. It was hypothesized that rural physicians were unresponsive to fee increases due to less private pay competition and a higher burden of uninsured patients. A study by Joel W. Cohen of the U.S. Department of Health and Human Services indicated that more generous Medicaid reimbursement did not result in greater access to physician care but was better correlated with where the care was obtained. Where Medicaid reimbursement of private physicians was higher, Medicaid patients were more likely to obtain care from an office-based physician rather than in a hospital based setting (Cohen, 289).

Unfortunately, there have been no more recent studies of the effects of reimbursement levels and demographics and how they affect Medicaid patients access to care- particularly on how it relates to Texas. Any reform effort should take into consideration these factors when formulating new policy.

NURSE PRACTITIONERS

Physicians are not the only health care provider for which there is a shortage and/ or underutilization (Center for Rural Health Initiatives Jan 1995, 56); advanced practice nurses are also capable of providing many primary care services but are often impeded from expanding their practices due to state and national limitations on their prescriptive authority, some nurses' inability to practice independently from a doctor and their limited third party reimbursements (Inglis, 5). As with doctors, there are also vast disparities in the location and numbers of advanced practice nurses as compared to the needy populations. Of the 196 rural counties, 103 do not have a practicing advanced nurse practitioner and 58 rural counties only have one (Center for Rural Health Initiatives Jan 1995, 57-58). In Texas, only advanced nurse practitioners may practice independently, registered nurses cannot. As of September 1994 there were 1,515 nurse practitioners practicing in Texas and only 156 were practicing in rural Texas (ibid). Physician Assistants are also in short supply in rural areas. Physician Assistants cannot practice independently from a doctor in Texas. Ninety-seven rural counties do not have any physician assistants. There are 1,029 physician assistants in Texas as of September 1994 of which 191 practice in rural Texas. Care provided by APNs is holistic and emphasizing early intervention and case management of health status, thereby correcting for expensive and fragmented care (Inglis, 6). They provide direct care, risk

assessment, health education, counseling, community analysis and other services (TX SHCC, 58). Specialties of APNs include certified nurse midwives, certified registered nurse anesthetists, clinical nurse specialists, and nurse practitioners. Nurse practitioner subspecialties include neonatal, pediatrics, women's health, family practice, adult health, mental health, school health and geriatrics (Inglis, 6). They are capable of performing a wide array of primary care tasks such as obtaining medical histories; performing physical examinations; providing prenatal care and family planning,; providing well-child care, screening and immunizations; diagnosing and managing common acute health problems such as infections and minor injuries as well as common chronic diseases such as diabetes (Inglis, Kjervik 45).

In many instances nurses are the essence of the primary care health team; public health nurses are the largest category of public health professionals and provide 70-90% of personal health services (TX SHCC, 58). Physician assistants (PAs) and nurse practitioners form the backbone of many rural clinics and in the circumstances of these underserved sites they have limited prescriptive authority through protocol developed by a physician. The doctor always signs the prescriptions and maintains responsibility for them. They are not trained or licensed to act without the direction of a physician (TX SHCC, 57). A study by the Office of Technology Assessment (OTA) in 1986 for the Senate Committee on Appropriations shows that within their areas of expertise, the quality of care provided by NPs and CNMs was comparable to that provided by physicians (Inglis, 8-9). OBRA 1989 specifies the conditions under which NP services are covered under Medicare and requires that they work under the supervision of a physician. NP reimbursement is capped at a percentage of the physician fee schedule (ibid). Elimination of these restrictions may enable APNs to fill many of the primary care gaps.

ORGANIZATIONAL DELIVERY OF PRIMARY CARE

Private practices are not the only sources of primary health care. There are numerous health care delivery systems currently in place to provide medical care to underserved, rural and indigent populations. These must also be taken into consideration in determining availability of primary care to a population. Rural Health Clinics (RHCs) attract health care providers to rural areas that previously had little or no medical attention and receive cost-based reimbursement. Federally Qualified Health Centers (FQHCs) are reimbursed at cost and provide medical service in underserved areas both urban and rural. The Primary

Health Care Services Program provides treatment and prevention to indigent adults and children along with several other federally funded intervention programs. The County Indigent Health Care Program (CIHCP) offers health care to the poorest Texans in conjuction with hospital districts, public hospitals and medical schools. The Community Oriented Primary Care (COPC) pilot programs show promise for offering primary care services which focuses on entire communities rather than fragmented, limited groups of individuals.

RURAL HEALTH CLINICS

Public law 95-210, The Rural Health Clinic Services Act, was passed in 1977. It was passed to increase the availability of primary and emergency health care to rural areas suffering from inadequate numbers of health care services or professionals (Center for Rural Health Initiatives Feb. 1994, 4). The 1980's saw a resurgence in interest for RHCs because of the closing of many rural hospitals, improved reimbursement to attract more providers to rural areas, expansion in Medicaid coverage which created increased demand for primary care services and a dramatic reduction in the National Health Service Corps (Center for Rural Health Initiatives Feb. 1994, 3). In 1989 there were no RHCs in Texas; by November 1991 there were 18 freestanding and 14 provider based RHCs (TX SHCC, 69) following reductions in restrictions on Rural Health Clinics in Texas; in October 1994 there were 278 RHCs in 148 counties in Texas (Center for Rural Health Initiatives Oct. 1994). As of April 13, 1995 there are 333 active RHCs in Texas and 144 applications pending (Roehrig 1995). A total of 290 RHCs were certified in Texas between 1989 and November 1994 (Center for Rural Health Initiatives Jan. 1995, 14.) Rural Health Clinics provide the same types of services offered by physicians' offices, outpatient clinics and emergency rooms (Center for Rural Health Initiatives Feb. 1994, 53).

There are two basic types of Rural Health Clinics, provider based (owned by a hospital, nursing home or home health agency) and independent clinics. Reimbursement for RHCs is based on "costs which are reasonable and related to the cost of furnishing such services" (Center for Rural Health Initiatives Feb. 1994, 4). Hospital based RHCs utilize the cost/ charge ratio of the outpatient department of the hospital (the RHC's costs are lumped together with the outpatient department costs). The hospital is initially reimbursed at an estimate of the ratio of the RHCs costs to charges of the clinic. At the end of

the fiscal year the hospital submits the RHC costs aggregated with total hospital outpatient cost report. Reimbursement is then adjusted based on the audited expenses and the hospital is paid the lower of costs or charges (Center for Rural Health Initiatives Feb. 1994, 11). Independent clinics, which are usually owned by physicians, receive interim payments from Medicaid and Medicare based on an all inclusive encounter rate which is computed by Medicare and adjusted at the end of the fiscal year to reflect actual costs. Medicare reimburses the clinic at 80% of the approved rate. Medicaid pays 100% of the Medicare approved all inclusive encounter rate and also pays separately, according to the state's Medicaid established fee for service amounts, for services in addition to those used by Medicare to calculate the all inclusive encounter rate per visit (Center for Rural Health Initiatives Feb. 1994, 12, 74). There is a cap on allowable costs per visit at independent clinics for Medicare and Medicaid which is annually readjusted according to the Medicare Economic Index (Center for Rural Health Initiatives Feb. 1994, 73). For 1994 the maximum allowed encounter rate is $54.39.

In order to be certified for RHC status the provider must be located outside an urbanized area as defined by the U.S. Bureau of the Census and be in a MUA or HPSA (Center for Rural Health Initiatives Feb. 1994, 9). Medicare certification requires the following criteria be met: 1) At least one nurse practitioner, physician assistant or certified nurse midwife must be employed and be on duty at least 50% of the time the clinic is open and must be under the general direction of a physician, 2) furnish routine diagnostic and basic laboratory services , 3) written policies and procedures must be provided, 4) arrangements must be established to make available medically necessary services not offered at the clinic through other Medicare/ Medicaid participating health care providers, and have procedures for transferring patients who need acute care, 5) provide emergency care including drugs, 6) assure maintenance and security of patient records, 7) uphold health and safety standards and, 8) have policies for yearly evaluation of the clinic's program (Center for Rural Health Initiatives Feb. 1994, 10). Once a clinic is Medicare certified it is automatically eligible to participate in the Medicaid program. The clinic must be Medicare certified even if it will only be participating in Medicaid. (ibid). RHCs, unlike Federally Qualified Health Centers, are not required to treat all indigent patients who come to them.

Clinics staffed only by physician assistants, advanced nurse practitioners and /or certified nurse midwives with physician supervision are eligible for certification as an RHC. In clinics where there is no full time physician, a minimum of supervision by a physician must be provided. This is met if the physician receives a daily status report on any complications or problems encountered that are not covered by protocol or if the doctor visits the clinic at least once weekly during regular business hours to diagnose and treat patients requiring physician examination, to verify the quality of patient care, to provide medical direction and consultation and is otherwise available by phone or other direct telecommunication during open hours (Center for Rural Health Initiatives Feb. 1994, 67-68). Where a doctor is not always onsite, NPs and PAs provide medical attention under the direction of established protocols. Protocols in Texas are standing orders provided by the supervising physician regarding the treatment of a population with certain diseases, or sets of symptoms. Protocols may authorize the diagnosis and treatment of patients including the prescription of some dangerous drugs, which is an activity that nurses in areas which not underserved are not authorized to perform (Center for Rural Health Initiatives Feb. 1994, 67).

COMMUNITY AND MIGRANT HEALTH CENTERS

C/MHCs have five guiding principles: "equity in access, services to defined communities and populations, partnership with communities, multidisciplinary family heath care teams, and community oriented primary care (COPC)" (TX SHCC, 66). Texas has 32 federally funded Community Health Centers (CHCs) and Migrant Health Centers (MHCs) which, in accordance with section 42 CFR part 51c of the law, "provides primary health services for all residents of its catchment area" (ibid, 66). The services they are required to provide by law include physician, PA and nurse clinician services, diagnostic, laboratory and radiological services, preventive health services including children's eye and ear exams, prenatal services, well child services, family planning, transportation services as required, preventative dental services, pharmaceutical services, and emergency medical services. Referrals are made if these services are not available on-site (ibid, 66). They are required to have a governing board comprised of at lease 51% of the center's users. C/MHCs must be placed in a MUA with high infant mortality and poverty rates and MHCs have the additional restriction of being located in rural areas that have large inflows of migratory and seasonal agricultural workers (ibid', 68).

FEDERALLY QUALIFIED HEALTH CENTERS

FQHCs were created by the Omnibus Budget Reconciliation Act of 1989 and can be located in rural or urban areas which are medically underserved , versus RHCs which are confined to rural areas. FQHCs are also not required to employ a NP, PA, or CNM and have no cap on their reimbursement for services, unlike Rural Health Clinics (Center for Rural Health Initiatives Feb. 1994, 13). For those which are C/MHCs or C/MHC "Look Alikes" there is also no cap on reimbursement for administrative costs (Pintz 1995). The Medicaid reimbursable services they supply include physician services, PA and ANP services, clinical psychologist services, clinical social worker services, services and supplies incident to practitioners' services, and visiting nurse services under limited situations (TX. State Medicaid Office Nov. 1994, 127). FQHCs, unlike RHCs, are required to provide ambulatory services included in the state Medicaid plan that are able to be provided by a FQHC (ibid, 128). All FQHCs are non-profit or public entities whereas RHCs can be owned by for profit entities. Under OBRA 1989 all federally funded Community and Migrant Health Centers and Health care for the Homeless Projects receiving grants under sections 329, 330, and 340 of the U.S. Public Health Services Act automatically qualify as FQHCs. Health care providers participating in a Federal Health Center Program which are certified by the Secretary of the U.S. Department of Health and Human Services as meeting the requirements of the grant programs may qualify as an FQHC "Look Alike" (ibid, 127). One of the advantages to classification as a FQHC is that they receive 100% of reasonable cost-based reimbursement for covered services; this resulted in significantly higher reimbursement than would have been paid under the existing Medicaid fee schedule. There are seven "Look Alike" clinics in Texas; the most recently authorized one was Holy Cross in San Antonio in 1994. There are a total of 45 FQHCs in Texas, 35-40 of which are migrant, community and homeless clinics (Pintz 1995). The most recent NHIC data shows that FQHCs in Texas received $18.4 million in comparison to $10.8 million that would have been paid under regular Medicaid (ibid, 128). FQHCs in Texas served over 350,000 medical and dental patients in 1993, of which 94,000 were Medicaid patients (Blasi 1995).

COUNTY INDIGENT HEALTH CARE PROGRAM

The CIHCP was implemented in 1986 in response to the Indigent Health Care and Treatment Act of 1985. The legislation was enacted to provide health care to the poorest of Texans who were either inadequately insured or lacked insurance altogether (TX DHS 1988, 1-3). Eligible persons are those whose primary residence is in a county without a hospital district, and whose countable resources do not exceed AFDC resource limits, and whose net countable income is not in excess of 25% of the federal poverty level (ibid). If they are eligible for Medicaid or residents of a county served by a public hospital or hospital district then they are not covered under this program. Services which are required are inpatient/ outpatient hospital services, rural health care clinic services, laboratory and X-ray services, physician services, prescription drugs, and skilled nursing facility services (ibid). There are limits on the fiscal responsibility of the county. There is a per patient limit of $30,000 or 30 days of hospital/ nursing facility care per eligible resident per program year, whichever comes first. After expenditures equal 10% of a county's annual general revenue levy, the county can receive state assistance of 80% of the cost of mandated care above the 10%; the county continues to pay 20% of the costs above 10% of the general revenue levy (ibid, 1-3 & 1-4). The county must reimburse a provider for emergency care to an eligible resident whether or not the provider is inside or outside the county as long as proper notification is given. The county may provide mandatory, non-emergent services through contracted providers inside or outside the county and can require recipients to receive their health care services through these providers (ibid, A-2).

The Indigent Health Care and Treatment Act does not affect a hospital districts responsibility to provide medical services. If the hospital district or districts serve the entire county, the county has no legal or financial obligation. If a district only covers part of a county, the county must provide services to the remainder of the eligible population just the same as counties without public facilities. In both instances, the hospital must provide inpatient/ outpatient hospital services only and the per patient limit and total expenditure and state assistance do not apply (ibid, A-3). Hospital authorities have no legal obligation to provide indigent health care.

HOSPITAL DISTRICTS, PUBLIC HOSPITALS AND MEDICAL SCHOOLS

According to the Texas Constitution, article IX sections 4 and 9 the "hospital district shall assume full responsibility for providing medical and hospital care to needy inhabitants of the county." Where there is no hospital district, the Indigent Health Care and Treatment Act prescribes the local governments responsibilities and therefore public hospitals bear some of the burden. An eligible resident is someone who lives in the hospital's service area and meets the income and resource guidelines for AFDC eligibility (Texas State Medicaid Office Nov. 1994, 202). Public hospitals are defined as hospitals owned, operated or leased by a government entity, excluding public hospitals of cities with a population under 5500, hospitals owned or operated by joint city-county hospital boards, hospitals operated by hospital authorities and hospitals leased before 1981 that had no legal obligation to provide indigent care at the time (ibid). Medical schools also contribute toward health care for the poor and indigent through their faculty physician services, state teaching hospitals (UTMB- Galveston, UT M.D. Anderson Cancer Center in Houston, UT Health Center at Tyler and Harris County Psychiatric Center in Houston), and medical residency programs usually located in large urban hospitals, including hospital district hospitals (ibid, 24).

COMMUNITY ORIENTED PRIMARY CARE

Primary care can be defined as "that array of health services provided by a practitioner to a patient that is accessible and acceptable to the patient, comprehensive in scope, coordinated and continuous over time and for which the practitioner is accountable for the quality and potential effects of the services" (Smith 1991, 313). COPC combines public health with traditional clinical services to provide a single point of contact to receive a wide array of health services in a more efficient manner; what distinguishes COPC from other models for delivery of primary care is its focus on the community . It delineates the geographic and demographic attributes of the community it serves and responds with health resources to the problems identified with the assistance of the community (ibid). The community is involved in the governance of the practice, the design of epidemiological activities and the implementation of resulting health programs. The effectiveness is measured by the general improvement

of health in the target population (ibid). The COPC concept has been implemented successfully in Texas and several other places in the United States.

Parkland Memorial Hospital in Dallas, Texas in conjunction with the University of Texas Southwestern Medical School, has piloted a large COPC program partially supported by county taxes. The program has eight health centers that treat approximately 52,000 people annually (Stofko 1995). There are 29,918 community residents registered with the COPCs, 9390 of which are insured by Medicaid (Burt 1995). Three new health centers are expected to be opened in early 1996 (Stofko 1995). Physicians who work in the health centers and in the community are granted faculty status by the university and provide attending physician coverage in the inpatient units of Parkland Hospital and Children's Medical Center and thereby offer continuity of care for the practice and inpatient settings (Smith 1991, 317). In addition to the health centers, services were also offered in non-traditional settings such as homeless shelters, schools, churches, and activity centers for the elderly (ibid).

The Dallas County Hospital District's (DCHD) COPC program was implemented to test whether delivery of preventative health care would improve the overall health of the community and whether health care costs would be reduced due to that improvement in health status (Coyle et. al., 3). The program was "designed to provide accessible, accountable and high quality comprehensive health care characterized by continuity and coordinated services" (Coyle et. al., 4). The goal was to provide affordable primary care, preventative health services and to improve the health status of the target population by providing a network of community based health centers (ibid). The guidelines for preventative health care emphasized improvement of general health rather than treatment of disease. It identified the prevalent health problems of the community that were preventable or could be detected early enough to avoid costly subsequent treatment, disability or death and identified the risk factors associated with the health problems and formulated schedules for screening or other interventions (Coyle et. al., 9).

A tripartite incentive pay program which links clinical performance to health outcomes, merit and productivity is one of the unique aspects of the DCHD COPC. Staff as well as physicians can receive the incentive pay which is given annually. The merit incentive is based on job performance, the productivity incentive is given if collections from patient revenues exceed the annual budget and the

health outcome incentive is calculated by the number of health outcome objectives the health center achieves (Coyle et. al., 12). Initial findings show improvement in cost savings and other factors. In 1991 there were 341,264 hospital clinic visits with 111,487 handled by the program. The cost of a hospital visit was $126 compared to $77 for a health center visit. Hospital admissions for adolescents in one of the communities serviced by the program were down from 102.9 per 1,000 in 1989 to 83.1 per 1000 in 1991 (Coyle et. al., 2). A survey was done in Dallas county to measure the immunized population of children in 1991. School records of first grade children revealed that 39.2% in Dallas county were fully immunized by 24 months of age, 27.9% in the city of Dallas and 66.4% in West Dallas communities served by the COPC were fully immunized (Coyle et. al., 14).

COPC has tenets which could be incorporated into improvement of general health care delivery even though every community is not ideally situated for a COPC model. The DCHD COPC brought doctors into an area that was seriously underserved by providing educational incentive (association with a nearby prestigious school), breaks from the clinic setting (as attending physician at the hospital), and incentive pay. Similar inducements could be used in both rural and urban areas to attract physicians. COPC focused on locating health care where the people could easily reach it, utilizing schools, churches and other non-traditional settings. Again, both rural and urban areas have these edifices, from which a regular visiting doctor or other health care professional could operate a part-time primary care practice. Preventative care and continuity of care was a priority. Appropriate case management by either social workers or by health professionals could aid in ensuring that opportunities for treatment or prevention of illness in private practices and organizational practices are not missed as well as coordinate and expedite the services of the public health programs which are described below.

PROGRAMS FOR PREGNANT WOMEN/ INFANTS

The Federal Office of Technology Assessment estimated that covering prenatal care under Medicaid with an estimated cost of $400-$500 per pregnancy yields at a minimum an equal savings in terms of reduced hospital and medical costs for low birth weight babies (LBWs) and may save even more (Rickie Windle, "A Tourniquet for Rising Cost of Health Care," Austin Business Journal, May 1992, 18-24, vol. 12, no. 13). In 1986 the Texas House Select Committee on Children, Youth and Families

reported that $3.38 in medical costs was saved for every dollar invested in prenatal care and a WIC study indicates that ever dollar invested in nutrition assistance and counseling saves up to $4.00 in Medicaid costs for mothers and newborns (TX SHCC, 94). In spite of demonstrated cost savings, the current system of proactive care for pregnant women and infants is fragmented, difficult to utilize and discourages prompt diagnosis and adequate prenatal care. A woman with limited resources is forced to choose between "seeking care for her child at a well baby clinic to the exclusion of going across town to visit a welfare office, uptown for immunization and downtown for post partum care" (Smith, Anderson 1990, 225). A woman seeking pregnancy testing may not get referred for prenatal care or family planning the same day. The following are the chief programs assisting this delicate population.

WOMEN, INFANTS AND CHILDREN PROGRAM (WIC)

WIC provides nutritional counseling services and vouchers for purchasing food for the mother and formula for the infant. GAO reports that funds spent on WIC created substantial savings on health care costs in 1991 (TX SHCC, 93). Reaching the eligible WIC population continues to be problematic (ibid).

MATERNAL AND CHILD HEALTH PROGRAMS IN THE TX. DEPT. OF HEALTH

These programs provide prenatal and post-partum maternity care, family planning, newborn screening, speech, hearing and vision testing and child health clinics. The Maternal Infant Improvement Act Program focuses on case management for high risk pregnant woman and infants in low income families (ibid).

EARLY AND PERIODIC SCREENING, DIAGNOSIS AND TREATMENT

EPSDT is part of the Medicaid program and provides services for infants and children through age 21 who receive Medicaid benefits. It includes health and developmental screening, physical exams, immunization, nutritional assessments, vision and hearing testing. Annual health care costs of children receiving these services is 10% lower than for children who do not; however, only 17% of the children eligible for these services receive them (ibid).

EARLY CHILDHOOD INTERVENTION PROGRAM

This is an interagency program which provides services such as occupational, physical, and speech therapy, case management, parent support groups, parent training, and family counseling to infants and toddlers from birth to age 3 who are developmentally delayed. Services are delivered through 77 local programs which cover 254 counties (ibid). These services are provided free to all eligible children irrespective of income.

PRIMARY HEALTH CARE SERVICES PROGRAM

In fiscal year 1990, PHCSP provided primary care services to 90,000 medically indigent clients, only a fraction of the estimated eligible population of 1.4 million. PHCSP projects furnished early detection and treatment of over 50 different acute and chronic diseases. It affords a cost effective method of treatment by decreasing inappropriate use of emergency departments by providing early intervention and preventative services. In FY 1992, PHCSP funded 33 projects serving 72 counties focusing on diagnosis and treatment, emergency services, family planning, preventative services, and immunizations, health education, lab and X-ray. Transportation, dental care, prescription drugs and screening were also provided by some of the projects. PHCSP has required the use of the "Integrated Eligibility intake system" (IE) which reduces the number of applications for eligibility for health and human services programs (TX SHCC, 66).

COMMUNITY ACTION AGENCIES

These are agencies, some of which are private non-profit, some of which are part of a city or county government which help people "overcome their economic disadvantages and become self sufficient" (TX SHCC, 68). There are 51 CAAs in Texas providing services in all 254 counties and assisting a total of more than 1.25 million low income people. They include the Maternal and Infant Health Improvement Act (MIHIA), Primary Health Care Services Program (PHCSP), Community Health Clinics, Home Health Agencies, Chronically Ill and Disabled Children, Medical Prescription Program, Indigent Health Care Eligibility and Early Childhood Intervention Programs.

The aforementioned myriad private practices, organizational and public delivery of health care illustrates the current health care system in Texas. The numerous public programs are aimed at specific groups of people who live in certain areas. Those who are not in the correct age group, do not have a particular health problem which would result in program eligibility, do not live in the service area, or for some other reason do not meet eligibility criteria, and cannot afford to pay out of pocket will find it difficult to find care. A person or family may qualify for most of the programs, but due to travel distances between offices and the complexity of paperwork may not obtain all the assistance needed. In short, entitlement does not guarantee access to health care and it certainly does not ensure continuity of care or effective distribution. It is for these reasons that Texas is piloting two managed care delivery systems in Texas.

LONESTAR HEALTH INITIATIVE

The LoneSTAR Health Initiative consists of two managed care pilot projects, one taking place in Travis county and one in the Tri-county area (Chambers, Jefferson, Galveston). A main objective of these projects is the creation of a "medical home", a physician or clinic responsible for providing primary care and making referrals for a specific group of people assigned to them. Another goal of these projects involves encouragement of cost efficiency by use of non-traditional means of reimbursement such as capitation, global fees, and case management fees (LBJ School of Public Affairs, 1).

The Travis county model is based on a Health Maintenance Organization (HMO) and a Prepaid Health Plan (PHP). PCA Health Plans of Texas operates the HMO and Vista Health Plan operates the PHP. The pilot clientele is the AFDC and AFDC related Medicaid population. PCA covers all Medicaid services excluding family planning, dental, EPSDT, and pharmaceuticals to enrollees in exchange for a prepaid capitation payment. Vista provides physician, laboratory and X-ray services for a partial capitation payment. In the Tri-County model, NHIC developed a network of primary care providers (PCPs) that act as case managers and who are responsible for providing primary care and making referrals. They are paid $3.00 per client per month case management fee in addition to payment for services actually provided as per Texas medicinal methodology (ibid, 14).

For both pilots, a variety of primary care providers serve as the medical home: general and family practice physicians, pediatricians, internists, and obstetricians and gynecological physicians, advanced nurse practitioners and certified nurse midwives. The PCPs must provide all primary care, make referrals for specialized care as appropriate and be available 24 hours a day, seven days a week (ibid, 15).

One of the objectives of the pilot project was to recruit an adequate number of primary care providers in order to avoid client difficulty in accessing care. There were problems in attaining this goal in the Tri-County area due to unfamiliarity with managed care in the area and poor participation rates prior to the pilot implementation. To date, the total number of Medicaid providers in the pilot sites has decreased slightly relative to the control sites (Nueces county was control for Travis county and Bell, McCLennan and Falls counties were control for the Tri-County area). Access to care was adequate, however, due to increased client capacity for the participating providers. When they agreed to become part of the pilot program, providers decided how many Medicaid patients they would accept. At the inception of the pilot the average client capacity was 650 per provider in Travis county and about 870 in Tri-County. By December 1994 average client capacity in Travis county increased to around 1100 and decreased slightly in Tri-Count to about 850 (ibid, 27). In both cases provider capacity exceeded demand, that is the number of slots available exceeded the clientele. Among the enticements to participate in the pilot were exemption from statewide Medicaid fee freezes and allowing the provider to determine the maximum number of Medicaid clients they will be assigned (ibid).

Implementing managed care statewide will be very difficult. The low numbers of primary care providers in many areas of the state, the low number of primary care providers willing to see Medicaid patients, and the recent trends from high to low volume participation in the Medicaid program that plague the current health delivery system will affect any attempt at managed care. In the pilot areas, all the counties, except for Galveston, had primary care physician to patient ratios below the state average of 1674 to 1 (Center for Rural Health Initiatives Jan. 1995, 50 and Texas Dept. of Health Physician Participation Report July- Sept. 1994); however, these reports do not reflect the doctors at UTMB-Galveston, nor those in RHCs or FQHCs. As mentioned before, rural Texas has many counties with no or

few doctors in them. Fifty-three percent of rural counties do not have a practicing nurse practitioner and 29.5% of rural counties only have one (Center for Rural Health Initiatives Jan. 1995, 57). In areas with no or only a few health professionals, it will be very difficult to set up the provider networks accomplished in the pilot areas.

FQHCs and RHCs will also have difficulties under a managed care system. RHCs have expensive overhead requirements necessary to provide care in rural areas but may not have the patient volume over whom to spread out the costs (Texas State Medicaid Office Nov. 1994, 131). FQHCs clientele, which tend to be in medically high risk groups, tend to have high costs of care as well (ibid). Both these types of clinics have difficulty spreading out risk since they have no reserves and few or no private pay patients on which to cost shift (ibid). They also may encounter difficulty referring their patients under managed care if they are excluded from provider networks (ibid). There are two FQHCs in the Tri-County area and one FQHC Look Alike participating in the LoneSTAR pilot. These sites are paid a supplemental reimbursement in addition to the payments under the managed care plan which in total provide them 100% cost reimbursement (ibid, 135).

THE IMPORTANCE OF EASILY ACCESSIBLE PRIMARY CARE

As the previous figures illustrate, Texas has a shortage of primary care health professionals available to Medicaid recipients in many areas of the state both urban and rural. The circumstances vary between an adequate supply but refusal to accept Medicaid patients to a lack of sheer numbers of health care professionals. When you add increasing Medicaid eligibility to the equation you add more pressure to an already inadequate and convoluted system. The result of these factors are inappropriate utilization of emergency rooms and outpatient hospital services for treatment which could be more economically provided by an office/ clinic based doctor or nurse with the same results. According to the Texas Poll conducted April 1995, 5.5% of the respondents who took their children to the ER were did so for routine check-ups or for immunization. Medicaid recipients who use an office based physician as their regular source of primary care have almost 50% more total visits than those who use a hospital based physician (Cohen, 289). This can be attributed to the fact that office-based physicians generally see patients for more preventative services or for care not requiring resource intensive equipment. Those who use office-

based physicians are also less likely to be admitted to the hospital than those who use hospital-based physicians (Cohen, 289). With the differential between a hospital visit and a doctor visit, more doctor visits can be financed for the same amount of money and better health outcomes result (ibid, 290).

EMERGENCY ROOM USE STATISTICS

According to the 1989 Special Texas Census ten percent of uninsured children, compared to two percent of insured children use emergency rooms as their primary source of health care. Uninsured children are also four times more likely to have no usual source of medical care. Fifty-four percent of uninsured children did not visit a medical professional for one year in comparison to twenty-nine percent of insured children. The National Association of Community Health Centers estimates that our current system of public health clinics, public hospitals, federally subsidized community and migrant health centers and other publicly funded programs treat less that 1/4 of the 43 million people nationally who cannot obtain health care because they lack insurance, live in a MUA, or do not have a nearby doctor who accepts Medicaid (TX SHCC, 53). According to the Special Texas Census 1989, it is estimated that in 1992, 94.6% of Texans had a regular health provider and 5.4% did not.

The breakdown of the sources for regular health care was estimated for 1992 as follows: 79.2% used a doctors office, 6.4% used outpatient clinics, 3.6% used clinics or health center, and 3.4% used the emergency room. Of Texans without medical insurance it was estimated that 55.8% consider a physician's office their regular health care source, 6.7% use outpatient clinics, 7.8% use the emergency room, 11.1% use the local clinic, 2.6% use other sources and 15% have no usual source of medical care (ibid, 59-60).

Nationally, between 1985 and 1990, emergency department (ED) caseloads grew dramatically. In 1990, 43% of ED patients had illnesses or injuries categorized as nonurgent conditions (GAO, 4). Many of these patients could have been treated more effectively and less expensively in another setting. Medicaid patients represented the largest increases; uninsured persons also contributed to ED caseload growth over the 6 year period (GAO, 3). During the same period there was only minimal growth in ED visits by patients with private insurance. Since private insurance often reimburses at or above costs, this disproportionate growth may create financial problems for hospitals unable to absorb or offset losses due

to below cost reimbursement and unreimbursed care (ibid). Most of the people (88%) went to EDs although there were alternative sources of nonurgent care in the area, and the reason given 40% of the time was lack of a primary care provider (GAO, 5). Thirty-seven percent of patients without a primary care provider were uninsured or enrolled in the Medicaid program and unable to find a provider willing to treat them (ibid).

Various studies have differing reasons as the causes of lackluster participation in Medicaid: low reimbursement, complicated paperwork, economic factors, undesirability of the Medicaid population as clients, educational biases etc., but all agree that the problem does exist. Shortages of health care providers lead to inadequate access to care, poor continuity of care, neglect of preventative measures and improper utilization of emergency department (University of Houston, 11). The problems are most profound in rural areas and inner city neighborhoods. As a result, rural residents are generally in poorer health than urban residents and have a greater number of acute and chronic conditions (ibid, 12.) Urban residents face polluted water and air, and communicable diseases such as tuberculosis and AIDS. Under such conditions, physicians are not likely to establish their practices in these areas. People who wait weeks to receive an appointment at a public clinic or who cannot navigate the complex social service system are left with the choice of using the emergency room or receiving no care at all. Overutilization of emergency rooms wastes valuable resources since it is often much more costly to provide care in this setting and due preventative health care provided is minimal (ibid, 18). Children who use the emergency room as their source of routine health care are much less likely to have had a physical exam in the past year and do not receive the benefits of continuity of care since they are unlikely to see the same physician regularly (ibid). This modus operandi for delivering health care has placed the United States in an unenviable position regarding our child health statistics, especially in comparison to other industrialized countries such as Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom. They all had lower infant mortality rates that the United States (Miller, 14) and all of the previous except the United Kingdom had a lower percentage of low birth weight babies (the UK's was equal to the US's) (Miller, 16).

The following is a comparison between the U.S. and 6 other countries: Canada, United Kingdom, Sweden, Germany, France, and Japan.

The health care systems of Canada and the United Kingdom are monopolistic systems. Sweden is a decentralized system and Germany, France and Japan are quasi-public. In all of these countries private health insurance is not the predominant means of accessing care (Chaulk, 8). In the U.S. the health care system is very competitive and relies predominantly on private health insurance. None of these countries, except the U.S., contain any significant percentage of uninsured children or women of childbearing age. In 1991 the per capita spending of these other countries was substantially less than the U.S.'s. The closest in spending per capita was Canada and the U.S. spent about 50% more per capita than Canada on health care and about 175% more than the U.K. (ibid). In the U.S. 33 % of physicians are primary care doctors in contrast with the other countries which have 53-63% primary care doctors. In all six countries, prenatal care is "comprehensive, accessible, and either free or accompanied by financial assistance" (Chaulk, 9). Public prenatal clinics are generally the providers of maternity services and prenatal care for women in these countries. In Japan, prenatal care is not routinely included in a health insurance benefit package since comprehensive maternity services are provided through public programs. It is only complications arising during pregnancy that are covered by insurance (ibid).

Many of the six countries use outreach programs for high-risk women and for postpartum care. In Sweden, France and Germany, home visiting nurses usually provide this service. In the U.K. and Japan community midwives and nurses provide these services. It is use of these programs which may explain the lower infant mortality rates and lower percentages of LBW babies in these countries (Chaulk, 11). There are also incentives given to encourage prenatal care which are "comprehensive, financially generous, and extend for relatively long periods of time" (Chaulk, 12). In Germany and Japan, women are offered monetary compensation and maternity bonuses to obtain early prenatal care and help to offset medical expenses (ibid).

In all six countries there are numerous locations to obtain preventative care for children. France has an extensive school program which provides screens for hearing, vision and physical exams. School health services are coordinated with other school services to provide comprehensive health care including

health education, and nutrition counseling (Chaulk, 13). Sweden offers a system of child health centers that provide health and developmental screenings, and immunizations for preschool children. School health programs continue these screening along with health education directed at alcohol and tobacco use (ibid). In the U.K. most pediatric care is provided through the general practitioners under the British National Health Service. The doctors receive annual bonuses for high immunization rates among their pediatric patients. Utilization of well child exams is estimated to be over 95% for infants under age 1 and 70% for children ages 1-5, and home visiting services provide preventive health care and health promotion at home to high risk children or children with no easy access to a physician (ibid). Germany provides most pediatric care through private rather than public health clinics. Infants receive a predetermined number of free comprehensive examinations and immunizations are also free. Home visiting is available in exceptional circumstances (Chaulk, 15). Canada provides comprehensive pediatric services in its universal health system and some communities have special programs directed at high risk perinatal care (ibid). All of these countries offer comprehensive perinatal services and preventative services without financial access barriers, spend less per capita than the U.S. and as a result avoid the factors that cause adverse natal outcomes. In comparison, Texas had 55 counties that provided neither family planning, pre-natal services or deliveries for Medicaid recipients between November 1993 and January 1994 (TDH 1993-1994).

RECOMMENDATIONS

Children's' health services in Texas are supplied by a confusing array of private health professionals, clinics and public health programs. Essential care is made difficult to obtain by a scarcity of providers in rural and inner-city areas and generally low participation in the Medicaid program statewide. Public programs, Rural Health Clinics, Federally Qualified Health Clinics and similar entities attempt to fill the gaps but are still not sufficient. Managed care initiatives strive to contain costs as well as improve delivery and continuity of care. None of these endeavors will make significant improvements in the availability and cohesiveness of care unless there are a sufficient number of primary care providers available, who are willing to treat Medicaid patients without excessive limitations, and who are

appropriately dispersed throughout the state. The following are some recommendations to promote this goal.

Improve the ability of nurse practitioners and physician assistants to provide health care. Give nurse practitioners and physician assistants in urban areas the same prescriptive authority as those in underserved rural areas. Allow higher and direct reimbursement for their services and make necessary changes to allow physician assistants to practice independently of a physician in their areas of specialty. Create a partnership between independent NPs and PAs with physicians to whom they can refer their patients when necessary.

Increase Medicaid reimbursement for primary care and preventative services under specified conditions. Create a system that encourages doctors to participate in the Medicaid program by giving a type of "disproportionate share" payment or higher reimbursement to those whose practices are at least 30% Medicaid patients. Increase reimbursement to all doctors for primary care services and preventative services such as EPSDT. Provide incentives for doctors and other health care professionals to relocate to underserved urban areas such as subsidies for office space, support personnel, or automated billing to accommodate larger practices. Create a mandate that all primary care physicians must keep their practices open to Medicaid patients up to a minimum of 5% of their total practice.

Increase the supply of primary care physicians and other primary health care providers in underserved areas. Provide educational incentives such a loan forgiveness or tuition scholarships to medical students who agree to practice in a primary care specialty in underserved areas, especially rural areas. Increase the number of medical school slots for students originating from underserved areas. Medical students from rural backgrounds are four times more likely to select a rural practice, and the majority choose primary care (University of Houston, 40). Promote the Texas Outstanding Rural Scholars Program which matches physicians willing to practice in rural areas with community sponsors who will pay one half of education costs while the state pays the other half (TX Academy of Family Physicians, 8). Increase medical students exposure to community health settings by requiring service and education in community clinics (TX SHCC, 77). Increase the capacity and number of advanced practice nurse programs

Centralize public health care and primary care in urban areas. Offices to apply for Medicaid or other medical assistance programs and related public programs such as WIC should be co-located with public health care clinics that provide perinatal and children's' services. Where this is not possible, utilize the "Integrated Eligibility" process where needy persons can apply for several related services in one location at one time. This will increase visibility of the programs and insure that proper referrals are made in a timely manner. Offering easy access clinics which are open outside of normal office hours will help reduce inappropriate use of emergency rooms and improve the quality and continuity of care received. This will also reduce the need for duplicative programs.

Increase accountability in the health care system. Physicians and health care providers should be responsible for assuring that their patients receive appropriate care, including immunizations and other preventative services. Case-management should be used to assure that persons who receive Medicaid are directed to providers in their area who accept Medicaid and recipients should have one regular provider to coordinate care. Studies should be performed to track the health status of various communities so that proper adjustments in health care delivery can be undertaken and informed decision can be made regarding the efficacy of various programs.

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