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# Health Issues at the US-Mexican Border

David C. Warner, PhD

With a rapidly growing population, increasing manufacturing activity, and increased interdependence, health issues on the US-Mexican border are demanding greater attention. It is unlikely that any other border in the world separates two nations having such variety in health status, entitlements, and utilization. Binational initiatives in the areas of environmental health and sanitation are clearly needed. Further cooperation between the United States and Mexico in provision of health services is warranted and will probably require enhanced federal funding or subsidies to be successful.

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THE HISPANIC population of the United States is increasingly from Mexico and Central America. In 1987, it was estimated that 11.8 million residents in the United States were of Mexican origin.[1] Current estimates of the population of Mexico approximate 88 million, and projections for 2010 range from 113 to 123 million, depending on assumptions affecting the growth rate.[2] The population of the six nations of Central America was 9.2 million in 1950 and is estimated to grow to 50.8 million by 2010.[3] Although fertility rates have fallen, these projections seem reasonable in the context of the age structure of the population and changes in life expectancy. Not only will these large populations have diverse needs for health services, but with increased integration of North American economies and interests, there will be a mutual interest in improving health status and services.

A correlate of the rapid population growth in Mexico and Central America, and of the Mexican-origin population in the United States, has been increased recognition of the importance of the border between the United States and Mexico. Its rapid growth and changing economic characteristics, as well as its role as a staging area for new migrants to the United States, give the border an importance beyond the numbers of persons who live there at any one time. Increasing numbers of US retirees on the border and an increase in US plants on the Mexican side of the border (*maquiladoras*), employing as many as 250 000 Mexicans, have added to its dynamism.[4] An examination of health issues can demonstrate how citizens, activities, and services on one side of the border relate to and influence those of the other side and, ultimately, both nations. The US-Mexican border is particularly appropriate for such an analysis. It is unlikely that any other binational border has such variety in health status, entitlements, and utilization.

## THE CHANGING BORDER POPULATION AND HEALTH STATUS

Population growth on both sides of the US-Mexican border has been rapid. Before 1900, fewer than 100 000 persons were living in all of the towns and cities on the US side,[5] while the population on the Mexican side was still smaller. Some observers believe that in 1990 the total population of the border is 10 million. (In fact, the east side of Los Angeles, Calif, the west side of San Antonio, Tex, and much of Monterrey, Mexico, are also "border towns" in terms of trade, interaction, and consanguinity.) Indeed, the border should be viewed as a number of transborder metropolitan areas. The Tucson, Ariz–Nogales, Mexico, region, with a population of 1 million, and San Diego, Calif–Tijuana, Mexico, with a current population in excess of 3.5 million, are different from other border metropolitan areas, since both have a larger population on the US side and substantial non-Hispanic populations. In contrast, the binational regions of the lower Rio Grande Valley and El Paso, Tex–Juarez, Mexico, with populations of well over 1 million persons; Laredo, Tex–Nuevo Laredo, Mexico, containing more than 400 000 people; and Mexicali, Mexico–Imperial County, California, with more than 600 000 persons, are all metropolitan areas far larger than most observers realize and have the preponderance of their population in Mexico. Although the Mexican border cities are prosperous relative to other parts of Mexico, the Texas border includes some of the poorest metropolitan counties in the United States.

A number of border residents live in *colonias* or unincorporated settlements on both sides of the border.[6] These communities often lack septic tanks, sewers, or running water, and outdoor privies commonly abut water wells, making most of the water unfit for consumption. On the US side, most of these *colonias* are on the Texas border, where zoning and land use restrictions outside incorporated areas are far less restrictive than those in Arizona and California, and where the water table is more accessible. It was estimated in 1988 that more than 110 000 persons lived in up to 600 of these *colonias* in Texas, with

From the Lyndon B. Johnson School of Public Affairs, University of Texas at Austin.
Reprint requests to Lyndon B. Johnson School of Public Affairs, Drawer Y, University Station, Austin, TX 78713 (Dr Warner).

roughly 80% in the lower Rio Grande Valley and about 20% in Webb (Laredo) and El Paso counties.[7] Since 1985, the total number has increased, with much of the increase in El Paso County. On the Mexican side, such settlements are common and have expanded rapidly to accommodate the growing population.

### Mortality Rates

Mortality rates by age for the Texas border counties are lower than those for the rest of Texas and the United States overall (Tables 1 and 2). In fact, the mortality rates for Hispanics are lower in the Texas border counties than for whites alone in the United States for each of these age groups. The substantially better overall mortality rates for the elderly can be explained, in part, by the younger age distribution of permanent residents older than 65 years in Texas border counties than in the United States as a whole.

The mortality rates in Table 2[8] are also understated relative to US rates because each age cohort is weighted toward the younger ages. Life expectancy at birth in Mexico improved from 36.9 in 1930, to 64.9 in 1980, while for the United States it improved from 59.7 to 73.7.[9]

These mortality rates do not reflect the health problems generated by a rapidly increasing population with little change in the public health infrastructure. Some of the most noteworthy problems in personal environmental health along the border include high fertility rates, a disparity in infant mortality rates, communicable diseases, water and air pollution, availability of potable water, and lack of indoor plumbing and electricity. In each case, it is worthwhile to compare the conditions on each side of the border to identify potential area for improvement.

### Fertility Rates

Fertility rates in the border area, although still well above US rates, have declined sharply during the last two decades. In 1986, the rate in San Diego was 78.5 births per 1000 females aged 15 to 44 years,[8] and Pima County, where Tucson is located, has declined to a rate of 73.1 in 1989.[10] The rest of the US border counties declined from a rate of more than 125 in 1970[11] to 1988 rates ranging from 89.1 in Val Verde County (Texas) to 107.3 in Webb County.[12] These rates have also continued to decline in Mexico, which long had high rates. Since the passage of the General Population Law of 1974, fertility rates have declined sharply. Fertility rates have declined from 215 births per 1000 females aged 15 to 44 years in 1974 to a rate of 127 in 1986.[13] Even though the Mexican economy has stagnated, these rates have apparently continued to decline.

It seems that both through government programs[14] and by the development of private programs, access to contraceptives throughout Mexico has become much more routine. Government-sponsored messages concerning family planning have been delivered through the mass media with soap operas, increased efforts have been seen in the organized health sector to promote family planning, and the activities of private organizations have also been noteworthy, as they have developed health promotion programs that feature local community leaders and programs.[15]

Table 1.—Death Rates per 100 000 Persons by Age in the United States (1985), Texas, and Texas Border Area (1985 to 1986)*

| | Age, y | | | |
|---|---|---|---|---|
| | 1-14 | 15-44 | 45-64 | ≥65 |
| United States, all races | 33.8 | 137.3 | 897.3 | 5153.3 |
| Texas, all races | 35.8 | 154.0 | 846.7 | 4749.6 |
| Border area | | | | |
| All races | 30.6 | 119.0 | 705.4 | 4094.7 |
| White | 42.3 | 147.9 | 873.3 | 4282.0 |
| Hispanic | 27.9 | 109.5 | 606.6 | 3901.9 |

*Data from US General Accounting Office.[7]

Table 2.—Death Rates per 100 000 Persons by Age in Mexico and Mexican Border States (1986)*

| | Age, y | | | | | |
|---|---|---|---|---|---|---|
| | 1-4 | 5-14 | 15-24 | 25-44 | 45-64 | ≥65 |
| Mexico | 108.1 | 43.6 | 102.7 | 238.7 | 902.6 | 5144.9 |
| Baja California | 120.1 | 38.1 | 167.4 | 350.2 | 1102.0 | 5575.1 |
| Chihuahua | 165.1 | 33.4 | 144.6 | 241.5 | 785.3 | 4377.8 |
| Tamaulipas | 88.0 | 62.0 | 84.2 | 331.4 | 976.1 | 5084.3 |

*Data from the Pan American Health Organization Field Office.[10]

### Infant Mortality

Infant mortality and numbers of infants with low birth weights are often used as sentinel health events to assess health status. Few newborns have low birth weight among Mexican-Americans on the border or elsewhere.[16] During the last decade, infant mortalities on the US side of the border have been at or below the rate for the non-Hispanic white population in the United States as a whole. This is not to say that all is well once infants survive the first year. Poor nutrition and poverty can cause a number of problems in children and adults not reflected in infant mortality statistics.[17]

On the Mexican side of the border, infant mortalities are significantly higher than in the United States. Nationally they have declined from an estimated 84.7 deaths per 1000 live births during the 1967 through 1971 period to 47 for the period between 1982 and 1987.[18] It is reported that the infant mortality rate in the Mexican border states averaged about 20 deaths per 1000 live births in 1986.[19] A study conducted in Laredo and Nuevo Laredo between 1980 and 1982 illustrates some of the differences. There were 7951 births by residence in Laredo and 15 268 births in Nuevo Laredo by occurrence. But while there were only 75 infant deaths in Laredo during that period, in Nuevo Laredo there were 567 such deaths. Postneonatal deaths, occurring after 30 days of life, were seven times more common in Nuevo Laredo[20] (Table 3).

Bronchitis and pneumonia, noninfectious gastroenteritis, and intestinal infectious diseases accounted for 184 deaths in infants in the postneonatal period in Nuevo Laredo, while only two children in Laredo died of these causes. Differences between the two sides regarding sanitation, quality of the water supply, and availability of adequate pediatric care probably explain much of this difference.

### Infectious Diseases

Communicable diseases are a significant threat to the health of these populations, and differing approaches to immunization and treatment on both sides of the border need to be rectified. Drug-resistant tuberculosis remains a problem on the Mexican side of the border,

Table 3.—Causes of Postneonatal Deaths in Nuevo Laredo and Laredo (1980 to 1982)*

| Cause (*ICD-9* Category)† | Nuevo Laredo No. (%) | Nuevo Laredo Rank | Laredo No. (%) | Laredo Rank |
|---|---|---|---|---|
| Bronchitis and pneumonia (485-486) | 101 (31.4) | 1 | 2 (10.0) | 3.5 |
| Respiratory distress syndrome (769) | 6 (1.9) | 9 | 1 (5.0) | 7 |
| Symptoms, signs, ill-defined conditions (780-799) | 48 (14.9) | 2 | 3 (15.0) | 1.5 |
| Noninfectious gastroenteritis (558) | 43 (13.4) | 3 | 0 (0) | ... |
| Intestinal infectious diseases (001-009) | 40 (12.4) | 4 | 0 (0) | ... |
| Other causes originating in the perinatal period (760-764, 766-768, 770-779)‡ | 5 (1.6) | 10 | 3 (15.0) | 1.5 |
| Congenital anomalies (740-759) | 10 (3.1) | 6 | 1 (5.0) | 7 |
| Immaturity (765) | 2 (0.6) | 16 | 0 (0) | ... |
| Malnutrition of 3rd degree (262) | 17 (5.3) | 5 | 0 (0) | ... |
| Other respiratory diseases (460-484, 487-519)§ | 8 (2.5) | 7 | 2 (10.0) | 3.5 |
| Other endocrine, nutritional, metabolic diseases (240-261, 263-279)‖ | 7 (2.2) | 8 | 1 (5.0) | 7 |
| Burns (800-829) | 3 (0.9) | 12.5 | 0 (0) | ... |
| Meningitis of unspecified cause (322) | 3 (0.9) | 12.5 | 1 (5.0) | 7 |
| Fractures (940-949) | 3 (0.9) | 12.5 | 0 (0) | ... |
| Tuberculosis (010-018) | 3 (0.9) | 12.5 | 0 (0) | ... |
| Other infectious and parasitic diseases (019-139)¶ | 2 (0.6) | 16 | 1 (5.0) | 7 |
| Bacterial meningitis (320) | 2 (0.6) | 16 | 0 (0) | ... |
| Other causes not listed above | 19 (5.9) | ... | 5 (25.0) | ... |
| **Total** | **322 (100)** | ... | **20 (100)** | ... |

*Data from Ortiz.[20]

†*ICD-9* indicates *International Classification of Diseases, Ninth Revision.* Categories were selected before data collection and were selected to focus on infant health issues.

‡Excludes immaturity (765) and respiratory distress syndrome (769), which are presented separately.

§Excludes bronchitis and pneumonia (485 to 486), which is presented separately.

‖Excludes malnutrition of third degree (262), which is presented separately.

¶Excludes intestinal infectious diseases (001 to 009) and tuberculosis (010 to 018), which are presented separately.

and it is vital that screening and treatment remain available to all persons on both sides of the border. Stray dogs are common on the Mexican side, and canine rabies is also more prevalent. Sexually transmitted diseases on the border have long been a problem, not only due to the cross-border use of red light districts, but also because contact tracing is much more difficult. Of the 1502 cases of the acquired immunodeficiency syndrome reported in Mexico through mid-1988, roughly 20% were thought to come from the six Mexican border states.[21,22]

Another health problem on the US-Mexican border is dengue fever. Indigenous dengue transmission was documented in south Texas in 1980, where of the 63 cases, at least 27 were identified in patients who had not traveled outside the United States before onset of the disease.[23] In 1986, 10 of the 17 confirmed cases in Texas were indigenous.[24] All other cases reported in the United States during the 1980s were imported cases. However, persistent large-scale outbreaks of dengue in Mexico make this area more at risk. The impact of a wide outbreak on the United States is greater since the *Aedes aegypti* mosquito is now found in the far southeastern United States and on the California-Mexico border as well as in South Texas.[25] There are significant health risks in the absence of adequate protective measures and eradication programs.

## Environmental Health

With regard to sanitation and water supply, the cities on the Mexican side have had to cope with particularly rapid growth. In Ciudad Juarez, for example, in 1981, roughly 67% of the 650 000 residents had private water taps inside of their house, 23% had private outside taps, 5% depended on a communal tap, and 5% used water in street barrels delivered by city trucks.[26] On the US side, some relief may come through $100 million in authority to issue bonds to finance water supply, water quality, and flood control in the *colonias*, which was approved by Texas voters in November 1989.

Another concern is the water and air pollution that affects many persons on both sides of the border. Daily, 12 million gallons of raw sewage flows into the Tijuana River, which flows into the United States from Mexico.[27] Users of well water in rural areas in San Diego County, California, have noted increased contamination. Contaminants from the *maquiladoras* in Mexico flow in surface water or underground aquifers,[28] and in Nuevo Laredo, residents draw their water downstream from raw sewage discharges.[27] Air pollution in El Paso–Juarez has been a continuing problem, and discharges from a smelter on the El Paso side have been cited as a cause of high blood lead levels in both Juarez and El Paso.[29] More recently, El Paso has remained below Environmental Protection Agency standards for ozone and carbon monoxide,[30] due largely to the much older vehicular fleet in Juarez, the lack of emission controls, and the poor quality of gasoline used. El Paso and Juarez were also below Environmental Protection Agency ambient air standards for total suspended particulates. Unpaved streets and open burning appear to be the principal sources of suspended particulate matter in El Paso–Juarez.[31]

A further concern is illegal dumping of hazardous waste from one country to the other. By law, any hazardous wastes generated from processing materials imported into Mexico should be returned to the country of origin, a policy established by the passage of a comprehensive environmental and ecologic protection law in Mexico in 1988 (*Ley General del Equilibrio Ecologico y la Proteccion al Ambiente*, 1988). This law, passed in conjunction with the third annex to the 1983 La Paz agreement, obligates the two countries to work together to enforce their laws on transboundary hazardous waste shipments and seems to have created a significant hazardous waste disposal problem for communities on the US side of the border.[32]

In addition to these environmental quality issues, the adequacy of water remains a serious problem for a region that is rapidly increasing in population while all of the available water has essentially been allocated.[33]

Several binational entities have been established to address some of the environmental and public health issues on the US-Mexico border.

1. The US-Mexico Border Health Association is a membership organization whose secretariat is maintained by the El Paso office of the Pan American Health Organization (US headquarters). All of the commissioners of health

from the four US and six Mexican border states are involved, and active binational health councils are in place for most of the major twin cities.

2. The Environmental Protection Agency and the Secretariat of Urban Development and Ecology (the Mexican counterpart of Environmental Protection Agency) are obligated to cooperate as mandated by the August 1983 La Paz agreement. The agreement is carried out by subagreements, negotiated by the two agencies, which have so far concluded four annexes.

3. The International Boundary and Water Commission has existed since 1889 and has been delegated authority by the two national governments to mediate boundary and water conflicts along the US-Mexico border. In the 1970s, International Boundary and Water Commission Minute No. 261 was negotiated, which provided "bilateral procedures for dealing with border sanitation." Programs in 1980 were concluded for Arizona and California border communities.[26] The Rio Grande Pollution Correction Act (PL 100-465), which was signed in October 1988, gives the US Secretary of State, through the International Boundary and Water Commission, the authority to conclude agreements with the Mexican Ministry of Foreign Relations, which will be advisory to their respective governments.[27]

A number of advocates believe that these institutions are inadequate and that the United States and Mexico should establish a permanent US-Mexico Border Health and Environmental Commission. In general, they expect that such an organization could resolve environmental and water issues, provide rabies control and immunizations, and even help assure more comprehensive pediatric care.

## HEALTH SYSTEMS, ENTITLEMENTS, AND CROSS-BORDER UTILIZATION

On both the US and the Mexican sides of the border, there are several tiers of entitlement for care, and there is a great deal of cross-border utilization of the health system for a variety of motives. These complex interactions will be best described by examining each system and utilization by the persons covered by these systems, in turn.

### The US Side

On the US side of the border, the medical care system has many of the characteristics of the US system as a whole, with the exception that in most of the cities and several of the states the entitlements are seriously limited. In particular, El Paso is the only large city on the US side with a comprehensive public hospital (Thomason Hospital), which serves as a hospital of last resort for the poor. Texas, in 1990, expanded Medicaid coverage to pregnant women and children under age 6 years up to 133% of poverty as required by the Omnibus Budget Reconciliation Act amendments of 1989. This provision should enhance the services available to many and partially reduce some of the fiscal strain faced by Texas hospitals and local governments.

Many of the poor in the lower Rio Grande Valley have access to federally funded migrant health centers for their ambulatory care, but there remains a major gap in paying for hospital care. The executive director of a community health center recently stated in an interview:

> There is no indigent facility [in Brownsville, Tex], which is another incomprehensible nightmare. We have only two for-profit hospitals in a town with such a high rate of poverty. But we haven't come up with a solution yet. It would take a whole lot of money and a commitment from the community, the counties, and the state officials to get a city or county hospital. The county spent $2.3 million last year on the indigent, and that was just the tip of the iceberg.[34]

In many cases, persons without insurance coverage seek alternatives. In 1980, of the births occurring in Texas border counties, 6215 of the 28 645 births to persons giving a Texas residence were out of a hospital, while 2660 of the 4216 listing a Mexico residence were out of a hospital.[35]

Also a recent survey, which focused on poor residents of the lower Rio Grande Valley, showed that more than one fourth of low-income respondents went to Mexico for pharmaceuticals annually, and 15% had received medical services and 10% had received dental services in Mexico in the previous year.[36] The principal attraction seems to be lower cost rather than cultural appropriateness or exotic cures (*New York Times*. October 17, 1988:1, 9). Also, in some cases, physicians on the US side will refer patients to Mexican laboratories, where ultrasound may cost $20 compared with $150 on the US side.[37] Another interesting alternative program, developed by the Brownsville Community Health Center, was a binational program called PROFAX to provide vasectomies and tubal ligations in Mexico for American-resident patients. The cost is $3 to $5 in Mexico and is used by people who cannot afford a hospital or clinic on the US side and who do not qualify for Planned Parenthood programs.[84] As another example of cross-border utilization, a survey of 462 health service providers in Hermosillo Sonora, Mexico, found that 40% of the dentists and 34.5% of the medical care providers served some US citizens.[88]

An irony related to the lack of public hospitals along much of the border is that the State Legalization Impact Assistance Grants only reimburse public entities for health, education, and human services given to newly legalized immigrants under the Immigration Reform and Control Act of 1986. Consequently, most of the counties along the border may have limited claims on these funds, as the services may currently be provided primarily by nonpublic entities.

### The Mexican Side

Although in theory Mexico has a national health system, in fact there are many gaps in access similar to those in the United States. Persons with a high income have access to private facilities and practitioners on a nearly international basis. The broad middle class, which includes government workers, employees of large firms, members of unions, and residents of certain communal agricultural communities, generally have access to the Social Security (Instituto Mexicano de Segura Social) or government employee (Instituto de Seguridad y Servicios Sociales Para los Trabajadores del Estado) clinics and hospitals. Chan et al[11] estimated that roughly 40% of the population in the 12 principal Mexican *municipios* on the border were covered by one of these two institutions in 1980.

The balance of the population is, in principle, covered by the Health and Welfare Ministry (or, more particularly, Servicios Coordinado de Salud Publica en los Estados). In urban areas, the Health and Welfare Ministry maintains health clinics, often staffed by recent medical school graduates doing their *pasante* year as a prerequisite to entering a residency or becoming fully licensed. In some urban areas, however, the clinics may be distant from the newer and economically disadvantaged barrios. Rural areas are likely to be served by a *promotora* or a nurse. Hospital access for those who are poor and not covered by Instituto Mexicano de Segura Social and Instituto de Seguridad y Servicios Sociales Para los Trabajadores del Estado is often limited to local civil hospitals, which may not be well staffed or funded.

Utilization by Mexicans of health services in the United States takes place on at least three levels. First, there are the wealthy who pay in full on a fee-for-service basis for their physicians and hospital care. Second, there is utiliza-

tion by those who, although they live in Mexico, have some entitlement to care in the United States, whether by employment or other status. Finally, there are those who seek to receive care in the United States because of desire to have a child who is a US citizen, to find adequate care, or to respond to an emergency.

A recent study of 660 households in Tijuana found that during the previous 6 months, 40% had used health services in Mexico, while 2.8% had used services in the United States. About half of these persons were lawful residents or US citizens entitled to use public facilities or clinics.[39] Most of the visits to the US health system (91%) were to private facilities. Recent surveys of US physicians on the Arizona and Texas borders have shown that Mexican nationals use many primary and specialist providers on the US side of the border.[40,41] It does not appear that current residents of Mexico are a major burden to US facilities, although there are individual examples of patients for whom, as a matter of decency, expensive courses of treatment have been provided.

## SOME PROPOSED SOLUTIONS AND THE ROAD AHEAD

Many of the problems on the border could be solved unilaterally if both countries set themselves to the task of improving the environment, providing access to basic health care, and strengthening public health activities. A barrier to this approach is that, for both countries, such initiatives are constrained by an unwillingness or inability to make changes in their nations as a whole.

In 1978, a report written by United States and Mexican public health officials spelled out potential joint programs in communicable disease control, health services provision, environmental sanitation, and systems development, planning, and evaluation.[42] The Border Health Initiative that was to develop from this activity was not really forthcoming. In part, this may have been because of the difficulty in coordination between the two nations. Also, a shift in the US leadership in 1980 and the peso devaluation in Mexico beginning in 1982 may have contributed to a change in focus.

A second initiative came from the American Academy of Pediatrics. Members of the academy from Mexico and the United States and the academy's Committee on Community Health Services sponsored a study of maternal and child health on the US-Mexican border. Results of this study, which detailed conditions on both sides of the border, were published in 1987.[11] Although a number of dedicated pediatricians have continued to develop programs with Mexico and on the border, ongoing binational professional cooperation in development of a plan for improved child care on both sides of the border has not emerged. The advantage of a nongovernmental binational professional group being included in this kind of advocacy is that it can avoid many of the more nationalistic and bureaucratic roadblocks to progress.

A third set of initiatives have been developed by the Pan American Health Organization in El Paso, and especially by the binational councils—or local affiliates—of the US-Mexico Border Health Association. These have proved to be useful groups for the coordination of policy on public health activities and for improved communication and standards between local health departments across the border. A natural extension of some of these activities might be an exchange program of personnel between these same departments, perhaps with salaries supplemented by a foundation or other grant. In this way US workers could maintain their salaries, and Mexican professionals could afford to live or work on the US side. Improved immunization programs, collection of vital statistics, and programs of prenatal and well-child care would be some reasonable short-term goals from such collaboration.

Finally, an emerging consideration is the potentially enhanced role of universities in providing personal health services on one or both sides of the border. Texas Tech Medical School, in its training program in El Paso at Thomason Hospital; the University of Arizona, with its many border programs and student exchange relationship with various hospitals in Sonora, Mexico; the University of California at San Diego Medical School and its hospital; and the multitude of programs conducted by the University of Texas Medical Schools in the lower Rio Grande Valley[43] are all examples of institutional responses to some of the personal health service needs on the border. These activities are a consequence of foundation, state, and federal funds rather than simply local tax dollars. There is little doubt that a great deal of charitable care can be funded under the mantle of medical education. There is even the possibility that services could be developed on both sides of the border with these US medical schools working in association with medical schools on the Mexican side. Collaboration between and among researchers has already begun and has increased the probability that productive binational clinical collaboration could take place.

Nevertheless, even with the development of these highly productive collaborative efforts, some extranational entity is needed to address, among other needs, those of the environment, sanitation, and safe drinking water. Since many of the solutions will be costly, the funding mechanisms will also require some sophistication and commitment on the part of the cooperating governments. In fact, improvement of border health may be one of the preconditions for the further integration of the Mexican and US economies. With the increasing importance of the border to both the United States and Mexico, it would appear that further initiatives will certainly be undertaken.

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