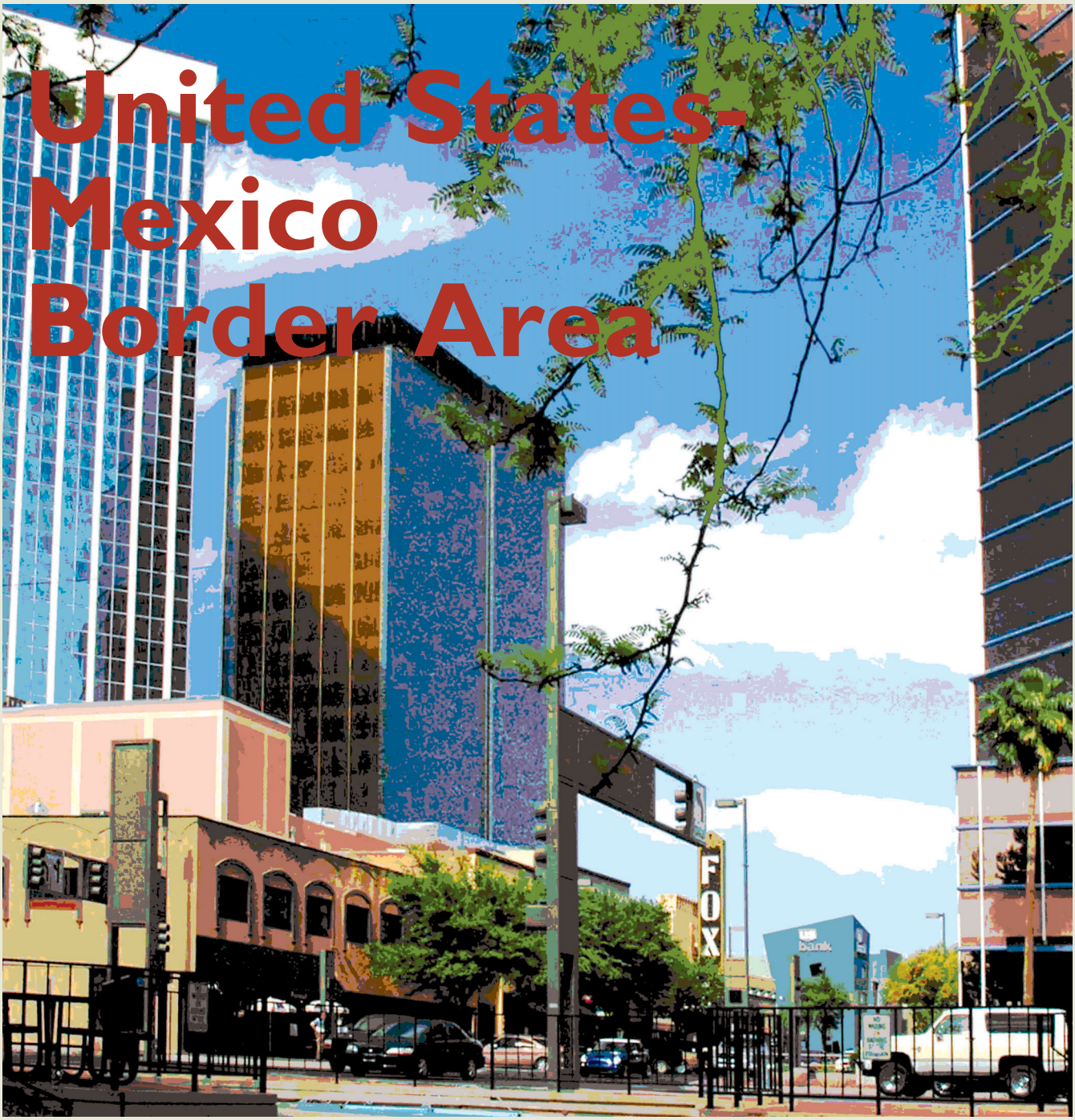
United States-Mexico Border Area



The United States-Mexico border extends for 3,141 km, stretching from the Gulf of Mexico to the Pacific Ocean. The 1983 La Paz Agreement—signed by the federal governments of both countries to protect, improve, and conserve the environment along the border—defines the "border area" as the land within 100 km on either side of the international boundary. It includes 48 counties in 4 U.S. states and 94 municipalities in 6 Mexican states. The U.S.–Mexico border area represents a binational, geopolitical system based on strong social, economic, cultural, and environmental connections, governed by different laws, policies, and cultures.

The 1983 La Paz Agreement signed by the governments of Mexico and the United States defines the border area and addresses environmental protection, improvement, and conservation issues.

The United States–Mexico Border Health Commission limited its program to the 44 U.S. counties and 80 Mexican municipalities that have most of their population within 100 km of the border. It is an extremely active area with extraordinarily heavy movement back and forth across the international border, which deeply affects the population's health status and quality of life.

Selected basic indicators, United States–Mexico border, 2010.[a,b]

Indicator	Value	
	Mexico	United States
Population (millions)	7.5	7.4
Poverty rate (%)	21.1–39.4	15.8–20.4
Education (%)	70–75[c]	72–93[d]
Life expectancy at birth (years)	76–77	77–81
General mortality rate (per 1,000 population)	4.6–6.3	6.1–7.4
Infant mortality rate (per 1,000 live births)	10.6–13.4	5.1–6.3
Maternal mortality rate (per 100,000 live births)	30–63	8–22
Physicians per 1,000 population	1.5–2.0	2.2–2.6
Hospital beds per 1,000 population	0.6–1.0	1.9–2.5
DPT3 immunization coverage (%)	94–99	84–88
Births attended by trained health personnel (%)	97.4	99.5

[a] Ranges show the lowest and highest expression of the indicator for states in the border.
[b] Figures are for 2010 or the most recent available year.
[c] Six years or more of schooling.
[d] Nine years or more of schooling.

MAIN ACHIEVEMENTS

Health Determinants and Inequalities

In 2009, the per capita gross domestic product (GDP) for the states on the Mexican side of the border area ranged from US$ 7,501 (Baja California) to US$ 13,481 (Nuevo León), while for states on the U.S. side, it ranged from US$ 39,123 (New Mexico) to US$ 50,871 (California). San Diego, California, which is located in the border area, is one of the richest U.S. cities (annual GDP per capita of US$ 51,035), while McAllen, Texas, is one of the poorest (US$ 15,818).

In 2005–2009, the unemployment rate in the U.S. border states (people 16 years old or older outside the workforce) ranged from 6.8% to 7.9%. In 2010, on the Mexican side, the unemployment rate (people 14 years old or older outside the workforce) ranged from 5.9% to 8.7%.

In 2009, the education level on the U.S. side (measured in years of schooling) ranged from 6.8% of the population with fewer than 9 years of education and 22.1% with four-year university degrees in San Diego, California, to 27.6% of the population with fewer than 9 years of schooling and only 10% with university degrees in Brownsville, Texas. Educational attainment is more homogeneous along the Mexican side of the border, albeit lower than along the U.S. side: in 2010, 25% to 30% of the population on the Mexican side had completed 6 years of schooling and nearly 10% had professional degrees.

The Environment and Human Security

Access to drinking water and sanitation services has significantly improved in the urban areas on the Mexican side of the border. In 2010, access to drinking water ranged from 78% of households (Nogales, Sonora) to more than 95% (Tijuana and Mexicali in Baja California, among other cities). Access to sewage services ranged from 84% (Reynosa and Río Bravo in Tamaulipas) to more than 95% (Naco, Nogales, and Agua Prieta in Sonora, among others). More than 98% of households in cities on the U.S. side of the border have access to piped drinking water and treated wastewater services. Access to these services remains a challenge in rural *colonias* along the border.

Severe natural disasters affecting the border area in the 2006–2010 period included Hurricane Dolly (2008), which caused US$ 1.2 billion in losses on the U.S. side, and a 2010 earthquake in the Mexicali Valley. The earthquake destroyed the Mexicali-Tijuana highway, collapsed public buildings and homes, and forced the partial evacuation of 17 hospitals on both sides of the border.

In the six largest Mexican border cities, the number of homicides linked to organized crime increased from 390 in 2007 to 3,585 in 2010. To cope with this situation in Ciudad Juárez, the federal government launched a violence prevention program in 2010 called *Todos Somos Juárez, Reconstruyamos la Ciudad* ("We Are All Juárez, Let's

Projects to Promote Health Services Along the U.S.–Mexico Border

The Mexican and U.S. health care systems have put in place various programs and projects to promote health services along the border. For example, Binational Health Week and Border Binational Health Week promote public health care, outreach, and immunization services every October, reaching vulnerable groups throughout the border area.

The Ventanillas de Salud program (health stations) at the Mexican consulates in the United States provides clinical and health outreach services to low-income and migrant Hispanic families who are unfamiliar with the U.S. health system. The program started in 2002 in San Diego and Los Angeles and has spread to all 50 Mexican consulates in the United States.

Rebuild the City"), investing more than US$ 300 million and conducting more than 160 social interventions.

Health Conditions and Trends

Infant mortality rates fell steadily from 1958 to 2008 in the U.S. border states. In 2008, rates were 10% to 15% lower than in 2002, ranging from 5.1 per 1,000 live births (California and New Mexico) to 6.3 per 1,000 live births (Arizona). On the Mexican side, infant mortality in 2008 was approximately double that in the United States (10.6 per 1,000 live births in Nuevo León, and 13.4 in Chihuahua), but below the national average in Mexico.

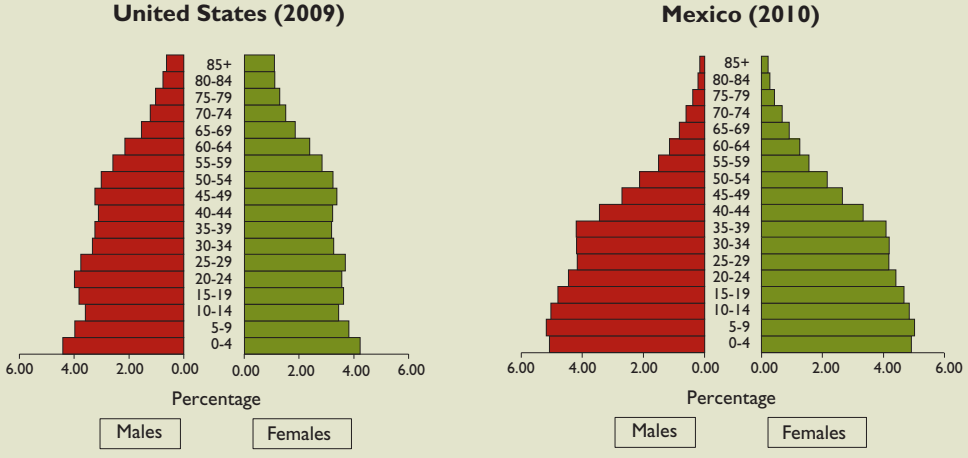
From 2006 to 2010, the number of cases and deaths related to West Nile virus in the U.S. border states fell by almost half. On the Mexican side only one case was reported in 2010. The Mexican states with the highest risk of dengue are Nuevo León (12,464 cases in 2010, 141 of dengue hemorrhagic fever), Sonora (3,588 and 191), and Tamaulipas (1,361 and 186). Since 2006, all cases of dengue reported on the U.S. side have been imported. In 2007, the incidence of acute hepatitis A on the U.S. side ranged from 0.6 per 100,000 population (New Mexico) to 2.4 per 100,000 population (Arizona), and for hepatitis B, from 0.7 (New Mexico) to 3.1 (Texas). From 2006 to 2010, 13,553 cases of hepatitis A were reported in the six Mexican border states (with the highest levels in Sonora, at 162 per 100,000 population) and 557 cases of hepatitis B (most common in Tamaulipas, with 4 per 100,000 population).

In 2009, the incidence of tuberculosis in California was 6.7 cases per 100,000 population, which was 13% lower than in 2005. Among the Mexican states, Baja California reported 38.3 cases per 100,000 population in 2007.

In 2009, on the U.S. side of the border, the state of California reported the highest number of new cases of HIV (29,939) and AIDS (138,013; 89% were men). In 2007, on the Mexican side, the numbers of new cases of HIV ranged from 12 (Coahuila) to 91 (Tamaulipas). The new cases of AIDS in 2007 ranged from 5 (Coahuila) to 85 (Baja California), with mortality rates from 3.1 deaths per 100,000 (Coahuila) to 9.5 per 100,000 (Baja California).

Heart disease and malignant neoplasms were the two leading causes of death on both sides. Deaths from heart disease ranged from 163 to 169 per 100,000 on the U.S. side (2007) and from 78 to 112 on the Mexican side (2008). In turn, cancer deaths ranged from 151 to 164 per 100,000 on the U.S. side (2007) and 53 to 77 on the Mexican side (2008). The third leading cause of death on the Mexican side was diabetes (45–87 per 100,000), while on the U.S. side external causes (injuries and violent acts) ranked third (32–68 deaths per 100,000).

Population structure, by age and sex, United States–Mexico border.



Health Policies, the Health System, and Social Protection

U.S. health services along the border are mainly provided by nonprofit institutions and private entities. In 2008–2009, private insurance coverage ranged from 44% (New Mexico) to 53% (California). Medicare coverage (public insurance for people over 65 years of age) was 9% to 12%,

while Medicaid (for low-income and disabled people) was 15% to 19%. The U.S. indigenous population has coverage through the public Indian Health Service. Reforms made in the 2010 Patient Protection and Affordable Care Act aim at expanding health insurance coverage.

On the Mexican side, the uninsured population in 2009 ranged from 20% (Nuevo León) to 28% (Baja California). In 2002, Popular Insurance (*Seguro Popular*) was established to provide health service coverage through voluntary enrollment for people not affiliated with the country's social security plan. Between 2002 and 2009, more than 2 million Mexican families living in the border area enrolled in this system.

KNOWLEDGE, TECHNOLOGY, AND INFORMATION

The project *Frontera Collaboration* ("Border Collaboration"), submitted by the Border Virtual Health Library institutions, brings together members of the National Network of Libraries of Medicine of the U.S. border states to promote evidence-based practices for professionals in rural clinics and in community health centers and improve their access to information and scientific data.

Important advances have been made along the border in information technology infrastructure and in setting standards to harmonize information systems and increase interoperability. In the border area, collaboration in the Early Warning Infectious Disease Surveillance (EWIDS) project and in the Border Infectious Disease Surveillance (BIDS) program during the 2009 H1N1 flu pandemic enabled the exchange of surveillance data, distribution of laboratory materials, availability of trained technical personnel, and training of public health personnel.

MAIN CHALLENGES AND PROSPECTS

Each side of the border is at a different level of economic development. In addition, considerable economic differences are seen between states and cities on the U.S. border.

The border area has a limited water supply, and it is estimated that water will become increasingly scarce there in the next 50 years due to climate change. Sanitation conditions on the Mexican side have generally improved since 2005, but access to drinking water and sewerage system coverage in rural areas continue to be inadequate.

Health challenges continue along the border due to insufficient vaccination coverage, limited access to health services, a shortage of primary care providers on the U.S. side, the precarious health situation of the indigenous populations, adolescent pregnancy, tuberculosis, and public health emergencies.

Chronic, noncommunicable diseases represent the greatest burden of morbidity and mortality on both sides of the border. Malignant neoplasms continue to be among the most common causes of death in the four U.S. and six Mexican border states. There is a high incidence of breast cancer in California (122 cases per 100,000 population).

In addition, since 2008 violence has increased along the Mexican side of the border, mainly associated with national policies against organized crime and drug trafficking.

The growing investments in physical infrastructure, made as a result of security concerns in the U.S.–Mexico border area, can benefit the health and development of the area. It is also expected that the U.S. health sector reform and the Popular Insurance system in Mexico will help to expand access to health care throughout the border area.

Strategies such as Healthy Border 2020, an initiative of the United States–Mexico Border Health Commission, and the Border 2020 Environmental Program, administered by Mexico's Ministry of Environment and Natural Resources (SEMARNAT) and the U.S. Environmental Protection Agency (EPA), will establish important benchmarks to improve health and quality of life along the entire length of the border.

Increased investments in health education, including the establishment of schools of medicine and public health in the border area, will create the necessary opportunities for young professionals to remain and work in the area.