Addressing Health and Health Care Needs in the United States-México Border Region: Executive Summary

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Geography and demographics:

- Among the busiest in the world, the border between the United States and México extends approximately 2,000 miles from California to Texas.
- Almost 30% of the estimated 30 million people living in the border region live in rural areas.
- The average median income in the border region is less than $15,000.

Population health issues:

- Diabetes prevalence is greater than 30%, the highest in the nation[1-4].
- Higher rates of poverty coupled with poor infrastructure contribute to health disparities in this highly migratory and immigrant population.
- The HIV incidence rate continues to increase and the death rate from hepatitis is ranks second in the nation; reduction of tuberculosis shows potential for the region.
- Disparities remain for non-communicable diseases and other causes of death (e.g. cancers, diabetes, infant mortality, liver diseases, homicide and accidents).

Health care issues:

- Workforce shortages exist, but are difficult to quantify without a comprehensive database.
- The number of uninsured or under-insured in the border region is higher than national averages.
- A high rate of uninsured or inability to pay for health care, combined with health care provider shortages in many regions, contribute to poorer health outcomes.
- Barriers to care lead to fragmented, rather than coordinated, care.

Systemic challenges

- The average poverty rate along the border is twice as high as the national rate.
- Many border residents live in unincorporated communities known as 'colonias,' that often lack adequate plumbing, electricity, and water treatment facilities.
- Busy, cross-border traffic allows for transmission of communicable disease.
- There are pervasive challenges related to the collection and compilation of health data on both sides of the border, in order to make funding or program decisions.

Recommendations:

1. Increase funding for the U.S.-México Border Health Commission, the HRSA Federal Office of Rural Health Policy, and the HRSA Bureau of Primary Care.
2. Support national and binational policies, programs, and funding designed to address the social determinants of health.
3. Establish stakeholder accountability and ensure participation from rural community members.

4. Increase health surveillance and data collection capabilities.
5. Fund integrated, interprofessional collaborative education that focuses on vulnerable populations and specific health disparities of the region.
6. Increase utilization of culturally and linguistically appropriate services, community health workers (CHWs), health technology, and mobile care points.

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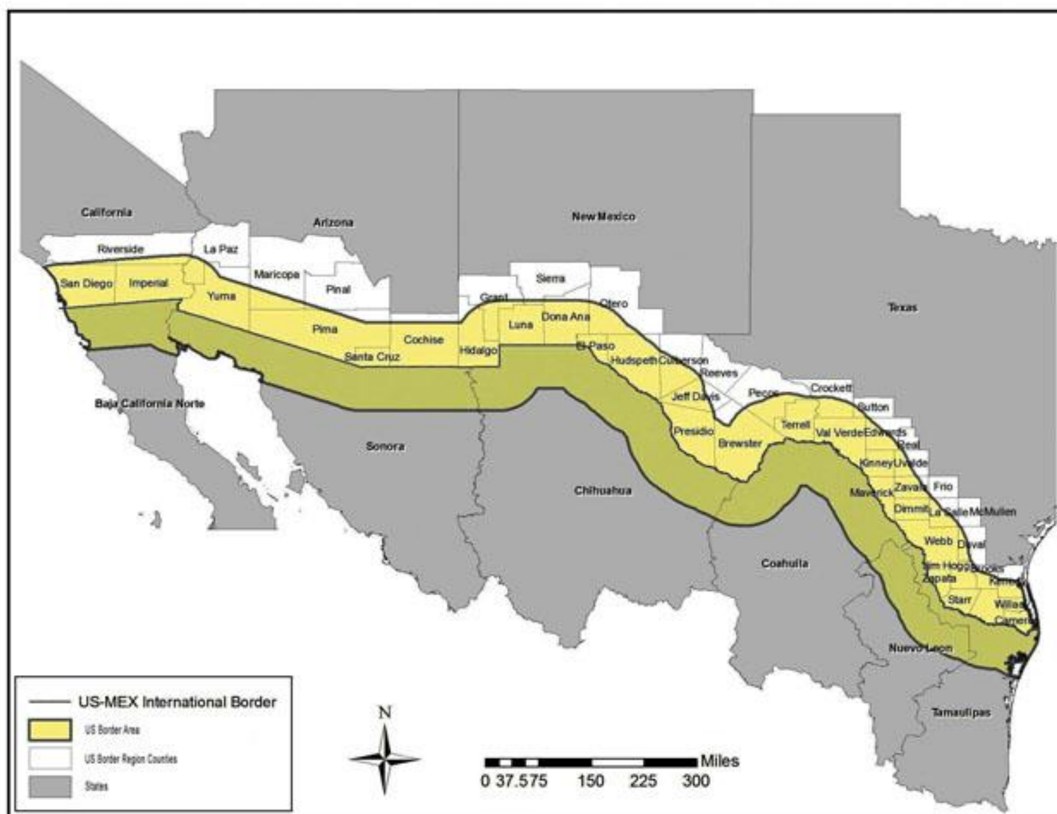
Geographic Boundaries

The border between the United States (U.S.) and México extends approximately 2,000 miles from the Pacific Ocean west of California to the Gulf of México east of Texas. In 1983, the La Paz Agreement between the two countries defined the border region corridor as being 100 kilometers (approximately 63 miles) north or south of the border into each country.[1] The border crosses through four states in the U.S.: California, Arizona, New México, and Texas and six states in México: Baja California, Sonora, Chihuahua, Coahuila, Nuevo Leon, and Tamaulipas. The border also passes through 48 U.S. counties, 80 Mexican municipalities, and 15 pairs of "sister cities."[2,3] On the U.S. side, the border region is also home to 25 Native American Nations, with nearly 1 million Native Americans living in the four border states.[2] See Figure 1 for a detailed map of the border region.

Figure 1: Map of U.S.-México Border Region (Source: United States-México Border Health Commission)[2]



Rural Designations

Nearly 30 percent (29.5%) of residents in the border region live in rural areas, much higher than the national average in the U.S. However, several counties along the border are classified as urban by federal designations (San Diego County and El Paso County, for example). Because counties vary dramatically in their size and shape, this may leave some vulnerable residents of the border region unable to receive assistance through federal rural funding mechanisms.

Demographics of the Border Region

Nearly 15 million people live in counties and municipalities along the border, and more than 30 million people live in the entire border region.[4] The border region population is expected to double by 2045 and will comprise approximately 5 percent of the population of both México and the U.S.[4] The population living along the border is characterized by higher than average migration, moving between counties, states, and across country lines more than residents in other areas of the U.S.[5] The U.S.-México border is among the busiest in the world, with more than forty legal points of entry across its, generating more than 350 million legal border crossings annually, plus an additional 400,000 unauthorized crossings.[3,6,7]

In many U.S. border counties, the majority of residents are of Mexican origin, with percentages as high as 85% in some border counties, including Cameron and El Paso.[4] However, the border region is also home to a large population of Native Americans, with nearly 1 million native people living in the four U.S. border states.[6] The border region is characterized by higher than average poverty, unemployment, and uninsurance, and lower than average median incomes. As of the 2000 Census, the average median income in border counties was less than $15,000 a year.[6] Three of the ten poorest counties in the entire U.S. are located in the border region.[6] The border region is also younger than the U.S. on average, with nearly one-quarter of residents on the U.S. side and 30% on the México side being younger than 15.[8]

Population Health Issues

The U.S.-México border region experiences significant health disparities relative to the rest of the U.S. population. Partly due to the migratory nature of the population, combined with high poverty rates and poor infrastructure, communicable disease rates are higher than average in the border region. For example, the border region ranks second in the U.S. for the hepatitis death rate.[6] And, while the HIV incidence rate decreased nationally between 2005-2010, it increased by 13% in U.S. border states.[9] Similarly, rates of tuberculosis (TB) increased along the northern México border states between 2000-2010, although TB incidence decreased in the U.S. during that time, including in the border region.[9] The latter finding indicates a public health success story in the border region and potential for future successful interventions. The border region also experiences health disparities for non-communicable diseases and causes of death, with higher-than-average rates of some cancers, diabetes, infant mortality, liver diseases, homicide, and motor vehicle accidents.[6,8,9]

Health Care Issues

Because the U.S.-México border region spans two countries and multiple states and municipalities, it comprises various health care systems. However, those systems must address shared epidemiological issues and health crises.[3]

Workforce shortages
Workforce shortages along either side of the border are difficult to precisely ascertain as at this time, given that there are no databases that can accurately capture all of the health care professionals practicing within a specific geographical area. Health Professional Shortage Areas (HPSAs) and Medically Underserved Areas (MUAs) address distance between either providers or facilities, but do not reflect the entire spectrum of available health resources. Behavioral health services are also very limited in many areas. Still, available data indicate that the majority of U.S. border counties qualify as HPSAs, MUAs, or both.[10] Given these qualifications, much of the border region is eligible for participation in the National Health Services Corps (NHSC), designed to incentivize providers to practice in these areas using loan repayments and scholarships.[10]

The federally-funded Rural Health Information Hub (RHIhub) website notes that community health workers (CHWs) are also instrumental in addressing workforce needs in the border region, acting as a liaison between communities and providers. However, even with these programs and provider models, the health care workforce has been unable to keep pace with the population growth and health care needs in the border region.[10] Additionally, to most appropriately meet the needs of border region residents, it is imperative to develop a workforce capable of providing culturally and linguistically appropriate health services (CLAS), including addressing a current shortage in the Latino health care workforce and Spanish-speaking providers.[11]

Uninsurance
Adults along the U.S.-México border are less likely to have health insurance coverage than their respective non-border county peers (recent estimates of insurance rates for border counties: 82.6% vs. other counties: 84.7%).[12] The uninsured population along the U.S.-México border comprises a diverse group that includes people who cannot afford private health insurance; who work in small businesses that do not offer insurance; who are eligible, but not enrolled in government-sponsored programs, such as Medicaid or the Children's Health Insurance Plan (CHIP); and recent immigrants, both authorized and undocumented.

Access to care
U.S.-México border residents face multiple barriers to accessing care, including the aforementioned workforce shortages and uninsurance rate. More generally, financial issues, above and beyond insurance, as well as structural barriers to care, such as transportation, present barriers to care for border residents, which are associated with poorer health outcomes.[13] Multiple federal programs, including Health Center Program grantees, such as rural health centers (RHCs) and federally-qualified health centers (FQHCs) provide a valuable safety net to help border residents on the U.S. side access primary and preventive care. Mobile clinics, telemedicine, and community health workers are all instrumental in filling in gaps in care for rural border residents.[11]

Still, barriers in accessing care remain and the growing and diverse border region population is unable to be fully served by the current system. In addition to financial barriers and access to health services,

language and health literacy issues, cultural differences, lack of infrastructure (such as transportation), and distrust of both the formal medical system and U.S. government can all present barriers to accessing timely, appropriate care.[10] Further, recent comments made by the current White House Administration regarding immigration stemming from the U.S.-México border could be construed as anti-immigrant and have left many in those communities feeling vulnerable. Those comments, when combined with targeted efforts by U.S. Immigration and Customs Enforcement (ICE) officials to enforce existing U.S. immigration law, can create new barriers to care, as those individuals may feel exposed and as a result neglect either needed or ongoing care. In total, the current political climate has led to increased fear, stress, and avoidance of formal health systems by immigrants to the U.S.[14] To both improve and protect the health of all residents of the border region, safeguards must be put in place to shield individuals seeking medical care from contact with law enforcement based solely upon immigration status.

Despite the aforementioned issues, through the attention brought to bear on the health crisis along the border and the work performed by numerous cross-border organizations, access to care has improved in some areas of the border over the past several decades. For example, the University of Texas and Texas Tech Health Science Centers have each added medical school locations along the border, and those programs have increased volume of personnel in all support services and educational programs. However, services in the very rural areas are still lacking due to dwindling resources, and the difficulty in both recruiting and retaining staff. In Arizona for example, 98% of the state is considered rural, yet 80-90% of the state's health care workforce works in urban Arizona.[15]

Discontinuity in care

As a result of limited access to care, many border residents may receive care only in emergency situations, rather than receive continuity of care by primary care physician at a health care home. Additionally, between medical, optical, dental and pharmaceutical needs, many residents on both sides of the border access care in more than one country, yet currently there exists no health record system that is fully effective or functional on a bi-national basis, making it difficult to track health and provide preventive screenings, health maintenance, and control chronic conditions over time.

Factors Contributing to Health and Health Care Crisis

Poverty

U.S. counties that border México have an average poverty rate that is about twice as high as the national average. Of the 23 counties that directly border México (not all of those in the border region), the average poverty rate is 28.3%, as opposed to the national poverty rate of 14.3%. Note that across the border in México, poverty is defined as living on less than 1,243 pesos per month in rural areas, and on less than 2,542 pesos in non-rural areas, which when annualized in dollars, equates to living on less than $921 or $1,855 per year respectively. Also of note is that México's national poverty rate is 46.2%.[16,17]

Infrastructure

For purposes of this paper, there must be a distinction between chartered cities and towns located along the border, and the infrastructure problems that are associated with the health care crisis along the border. Many small border towns suffer perpetually from budget shortfalls and issues with funding. Issues are even more severe in unincorporated "colonias'' that have sprung up in the last three decades on both sides of the border. In the U.S., colonias can be found in all four border states. Texas alone has

over 2,294 colonias in which over 400,000 Texans can be living at any one time. Colonias are typically located on very rural land and the houses contained within often lack adequate electricity, plumbing, and other amenities. The two biggest contributors to poorer health in colonias are limited access to clean water, and very rudimentary sewage systems, which makes wastewater a significant problem. Residents in a colonias suffer much higher incidence of Hepatitis, salmonellosis, dysentery, and cholera.[18]

Cross-border traffic
The U.S.-México border is the busiest and most widely travelled in the world. Through the official ports of entry, several million cars, trucks, and busses pass each year. In addition to shopping, travel, and daily work, the several thousand manufacturing plants located on both sides of the border fuel this massive amount of traffic.[9] Such cross-border traffic introduces opportunities for sharing of information, personnel, and resources, but also of communicable disease.

Immigration policy
Authorized immigrants from México have hovered at around 5.6 million for the last decade. In order to secure any type of legal residency in the U.S., all applicants must submit to a thorough medical exam administered by a provider that is on the U.S. government's list of approved providers. These exams test for communicable diseases, mental disorders, and drug/alcohol problems. Rhetoric around immigration and immigration policy at the national level can lead to fear, stress, and avoidance of the health care system, as mentioned earlier.[14]

Cultural issues
While difficult to quantify with data there do also exist distinct cultural disconnects with those residents of the border that identify predominantly with either the U.S. or México. This may create barriers to connecting individuals from the Mexican side with resources or to collecting data on the U.S. side of the border region. Two other cultural factors affecting certain populations along the border are self-treatment or use of alternative providers. Historically, many residents in this region have either treated themselves or sought out alternative treatment practitioners, such as curanderas. One contributing factor for this may be a lack of CLAS among formal health services along the border.[11] Indeed, research indicates that use of complementary and alternative medicine remains relatively high among U.S.-México border region residents,[19,20] which may make it difficult to accurately track overall health care use. There may exist some opportunities to encourage those alternative providers to recommend that patients also seek primary care services from qualified providers through either free training or some type of referral incentive.

Public Policy Implications

There are myriad reasons that the National Rural Health Association, other rural health governmental and advocacy organizations, and local, state, and national policy-makers should seek practical and sustainable policy solutions to address rural health issues in the U.S.-México border region. Health disparities within the region and between the region and other rural areas of the U.S. lead to costs to society in terms of lost productivity, greater health care needs, and increased morbidity and mortality.[21] Additionally, the high rates of communicable diseases, which are exacerbated by poor sanitation and infrastructure, as highlighted above, put neighboring areas of the border region at risk. For these reasons, we have a moral and economic imperative to design effective public policy solutions and to

address policies that are not currently working as intended to improve and protect the health and well-being of rural residents of the border region.

Blueprint for Addressing Needs

The challenges of improving the living conditions of all residents of the border will require stakeholders to collaborate, establish common, measurable goals, and to explore outcomes of the many programs, practices, and policies that have been launched. With technology, culturally-appropriate approaches, and the engagement of existing structural and human resources, improvements can be made that will impact overall quality of life and population health.

Recommendations

Given the multiple and complex issues facing the U.S.-México border, addressing health and health care disparities there will require a multi-faceted approach. Below we list several practical recommendations, each of which will measurably improve health and well-being for rural residents along the border. Our recommendations include:

1. Increase funding for the U.S.-México Border Health Commission, the HRSA Federal Office of Rural Health Policy, and the HRSA Bureau of Primary Care.
2. Support national and binational policies, programs, and funding designed to address the social determinants of health.
3. Establish stakeholder accountability and ensure participation from rural community members.
4. Increase health surveillance and data collection capabilities.
5. Fund integrated, interprofessional collaborative education that focuses on vulnerable populations and specific health disparities of the region.
6. Increase utilization of culturally and linguistically appropriate services, community health workers (CHWs), health technology, and mobile care points.

References

1. Woodward D, Durall R. *United States-México Border Area, as Delineated by a Shared-Water Resources Perspective*.; 1996. https://www.cerc.usgs.gov/fcc/docs/fact_sheets/fact_1/doi_us-mx_border_fcc_fact_sheet_1.html. Accessed September 29, 2017.
2. United States - México Border Health Commission. Border Region. http://www.borderhealth.org/border_region.php. Accessed September 29, 2017.
3. Centers for Disease Control and Prevention. About the Border Region | US México Health. https://www.cdc.gov/usmexicohealth/about-border-region.html. Published 2013. Accessed September 29, 2017.
4. Wilson CE, Lee E, Lara-Valencia F, et al. *The State of the Border Report*.; 2013. https://www.wilsoncenter.org/sites/default/files/mexico_state_of_border_0.pdf. Accessed September 29, 2017.
5. Housing Assistance Council. *Housing in the Border Colonias*.; 2013. http://www.ruralhome.org. Accessed September 29, 2017.
6. United States-México Border Health Commission. *The United States-México Border Region at a Glance*.; 2012. https://web.archive.org/web/20120915105245/http://www.nmsu.edu/~bec/BEC/Readings/10.USMBHC-TheBorderAtAGlance.pdf. Accessed September 29, 2017.

7. Taylor A. On the Border. *Atl*. September 2016. https://www.theatlantic.com/photo/2016/09/on-the-border/502277/. Accessed September 29, 2017.
8. Pan American Health Organization. *Health in the Americas, 2012*.; 2012. http://www.paho.org/salud-en-las-americas-2012/index.php?option=com_docman&view=download&category_slug=hia-2012-country-chapters-22&alias=153-us-mexico-border-153&Itemid=125&lang=en. Accessed October 10, 2017.
9. U.S.-México Border Health Commission. *Healthy Border 2020: A Prevention & Health Promotion Initiative*. El Paso, TX; 2010. http://www.borderhealth.org/files/res_2805.pdf. Accessed September 29, 2017.
10. Rural Health Information Hub. Rural Border Health Introduction - Rural Health Information Hub. https://www.ruralhealthinfo.org/topics/border-health. Published 2017. Accessed October 10, 2017.
11. Casey RP, Vilchis H, Derksen D. *Health Coverage and Access to Care in the United States-México Border Region: Implications of the Affordable Care Act (ACA) | Arizona Center for Rural Health*. Tucson, AZ; 2017. http://crh.arizona.edu/blog/health-coverage-and-access-care-united-states-mexico-border-region-implications-affordable-care. Accessed February 7, 2018.
12. Brock Martin A, Torres M, Vyavaharkar M, Chen Z, Towne S, Probst J. *Rural Border Health Chartbook*.; 2013. http://rhr.sph.sc.edu/report/SCRHRC Rural Border Health.pdf. Accessed October 11, 2017.
13. de Heer HD, Balcázar HG, Morera OF, et al. Barriers to care and comorbidities along the U.S.-México border. *Public Health Rep*. 2013;128(6):480-488. doi:10.1177/003335491312800607.
14. Page KR, Polk S. Chilling Effect? Post-Election Health Care Use by Undocumented and Mixed-Status Families. *N Engl J Med*. 2017;376(12):e20. doi:10.1056/NEJMp1700829.
15. Tabor J, Eng HJ. *Arizona Rural Health Workforce Trend Analysis, 2007-2010.*; 2012. https://crh.arizona.edu/sites/default/files/u25/AZ_Workforce_Trend_Analysis_2007-10_0.pdf. Accessed October 10, 2017.
16. Joseph D. Average Poverty Rate Is Twice as High for U.S. Counties Bordering México as for Rest of U.S. https://www.cnsnews.com/news/article/average-poverty-rate-twice-high-us-counties-bordering-mexico-rest-us. Published 2010. Accessed October 10, 2017.
17. Reuters. México poverty rate hit 46.2% last year as 2 million more join ranks of poor | The Japan Times. Reuters. https://www.japantimes.co.jp/news/2015/07/24/world/social-issues-world/mexico-poverty-rate-hit-46-2-last-year-2-million-join-ranks-poor/#.Wd5YlGhSzIW. Published 2015. Accessed October 11, 2017.
18. Federal Reserve Bank of Dallas. *Colonias: Texas Colonias: A Thumbnail Sketch of The... - Google Scholar*. Dallas, TX; 1995. https://scholar.google.com/scholar?cluster=8752552528485032858&hl=en&as_sdt=5,24&sciodt=0,24. Accessed October 10, 2017.
19. Shedlin MG, Anastasi JK, Decena CU, Rivera JO, Beltran O, Smith K. Use of complementary and alternative medicines and supplements by Mexican-origin patients in a U.S.-México border HIV clinic. *J Assoc Nurses AIDS Care*. 2013;24(5):396-410. doi:10.1016/j.jana.2012.07.001.
20. Rivera JO, Ortiz M, Lawson ME, Verma KM. Evaluation of the Use of Complementary and Alternative Medicine in the Largest United States–México Border City. *Pharmacotherapy*. 2002;22(2):256-264. doi:10.1592/phco.22.3.256.33543.
21. LaVeist TA, Gaskin D, Richard P. Estimating the Economic Burden of Racial Health Inequalities in the United States. *Int J Heal Serv*. 2011;41(2):231-238. doi:10.2190/HS.41.2.c.