

Arizona–Sonora binational data sharing: the missing piece to the cervical cancer puzzle

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In the USA, women of Hispanic ethnicity are 40% more likely to be diagnosed with cervical cancer and 30% more likely to die from it compared to their non-Hispanic White counterparts.¹ The Arizona Cancer Registry reports age adjusted incidence and mortality rates for cervical cancer of 9.1 and 3.4 per 100 000, respectively, representing the highest rates among all other US racial and ethnic subpopulations.² Underserved communities in southern Arizona, including south Tucson (78.5%) and the US–Mexico border towns of San Luis (98.7%), Douglas (82.36%), Rio Rico (85.3%), and Nogales (95%), have an overwhelming majority of Hispanic residents whose disenfranchisement and dissatisfaction with the US healthcare system have contributed to growing rates of transnational US–Mexico medical travel, often referred to as medical tourism.

In the context of cervical cancer prevention, access to healthcare in Mexico for Hispanic women residing in the US is critical, because immigrant women who cross the border seeking medical care are more than twice as likely to receive a Pap smear than immigrant women who do not engage in medical tourism.³ However, transnational healthcare is not without challenges. Preventative or screening services and cancers, both diagnosed and treated in Mexico, may go unnoticed by US state and national level surveillance systems, potentially fostering the misallocation of resources for research and initiatives seeking to address inequities and improve care.

Residents on both sides of the border belong in the same epidemiological unit due to an historical symbiotic relationship reinforced by decades of transnational mobility and shared long standing cultural practices, commercialism, politics, risk exposures, and status as medically underserved cross border regional entities.^{4,5} However, to what extent are efforts being made to treat these populations as such by harmonizing independent surveillance and healthcare data? Could strengthening these

efforts provide an opportunity to generate much needed empirical research quantifying Arizona–Sonora medical tourism for cancer related services, and its potential impact on state and national level surveillance data? If such efforts are deemed worthwhile, one strategy we propose is the development of a binational data sharing coalition, comprised of key stakeholders, including US and Mexican healthcare providers, research institutions, and state/city governments (Figure 1).

As a joint force, the coalition could provide the appropriate resources to identify if, and to what extent, underreporting of cervical cancer cases is occurring to ensure state and national estimates of cervical cancer burden are accurate. However, what challenges, legal or otherwise, may be encountered with binational sharing of public health information? Does the benefit to both communities offered by this border linkage outweigh the costs and effort?

Realistically, this approach could be applied across cancer sites; however, it seems judicious to begin with a disproportionately

affecting cancer in which preventative and diagnostic practices are of particular relevance in the medical tourism observed in this region. While the short term focus of the coalition would be to assess potential underreporting of US cervical cancer cases due to Arizona–Sonora transnational medical travel, binational partnerships could also lay the groundwork for future efforts to facilitate the exchange of health information across other US–Mexico borders, streamline binational patient care, and address barriers to binational research.

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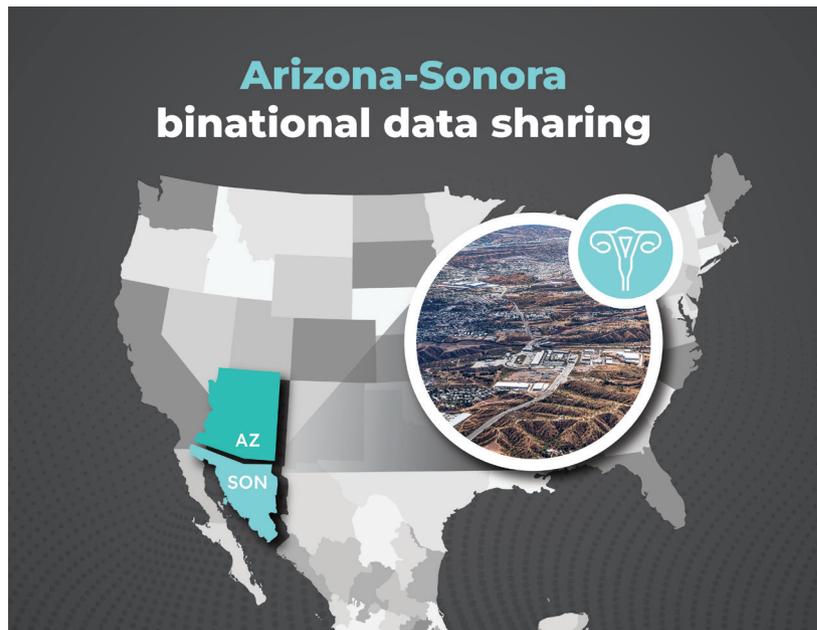


Figure 1 The border region between Arizona, US, and Sonora, Mexico, known as Ambos Nogales (Nogales Arizona and Nogales, Sonora).

Corners of the world

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REFERENCES

- 1 Howlader N, Noone A, Krapcho M. *SEER Cancer Statistics Review, 1975-2018*;

National Cancer Institute: Bethesda, MD, USA, 2021.

- 2 Arizona Department of Health Services, Arizona cancer data 2010-2015. Available: azdhs.gov/preparedness/public-health-statistics/cancer-registry
- 3 Jang SH, Meischke H, LK K. The impact of medical tourism on cervical cancer screening among immigrant women in the US. *BMC Women's Health* 2021;21:1–9.
- 4 Weinberg M, Waterman S, Lucas CA, *et al.* The U.S.-Mexico border infectious disease surveillance project: establishing bi-national border surveillance. *Emerg Infect Dis* 2003;9:97–102.
- 5 Robinson KL, Ernst KC, Johnson BL, *et al.* Health status of southern Arizona border counties: a healthy border 2010 midterm review. *Rev Panam Salud Publica* 2010;28:344–52.