

DISCAPAZ: Disability Experiences in the Borderlands

Authors: Y. Velazquez, S. Valderrama BS, C. Thompson, G. Hernandez, **C. Urquidez MPH**, J. Bell Farkas PhD

DISCAPAZ: Disability Experiences in the Borderlands uses artistic and creative expression to document, analyze, and share the unique lived experiences of those who have a disability and live along the Arizona – Sonoran border. There is limited representation of individuals with disabilities living in border regions in media and research. Through inclusive and accessible storytelling, with careful attention to language, format, and multimodal media, this project seeks to amplify diverse experiences of disability while challenging deficit-based frameworks. We engaged community members from Nogales, Arizona and Sonora to co-create multimedia digital stories. Our team conducted interviews with storytellers and their supporters. The qualitative interviews and analysis center the strengths, resilience, and knowledge of individuals and communities. Preliminary findings highlight common themes related to identity, access, care, and resilience, as well as meaningful points of connections across individual stories.



Integrating Heat–Health Education into STEAM Learning in Arizona Schools

Authors: **Cheryl Valdez**

Extreme heat is a public health threat in Arizona: in 2022 there were 1,030 heat-caused or heat-related deaths and 4,325 heat-related hospital visits. Executive Order declaring heat a statewide emergency and prioritizing extreme heat planning and preparedness. Pilot STEAM-based (Science, Technology, Engineering, Arts, and Mathematics) heat–health curriculum delivered in two Arizona summer programs in Summer 2025 (STEPS 2 STEM, n=17; OLEH, n=13). Sessions lasted 1–2 hours and addressed topics such as climate and health impacts, heat safety, and concluded with a hands-on solutions design activity. Students also reviewed local weather trends and completed activity worksheets. Deidentified worksheet reflections were entered into Microsoft Excel and thematically coded to assess baseline knowledge, learning outcomes and inform curriculum refinements. The revised curriculum was also mapped to 13 Arizona high school STEAM standards to support classroom integration.

Participant reflections showed strong awareness of climate–health connections particularly those involving, extreme heat, drought, water scarcity, and wildfire related air quality. Although most students emphasized hydration as their main heat prevention strategy, fewer students mentioned shade, air conditioning, cooling centers, or avoiding peak-heat hour suggesting the need to build more awareness of broader actions to prevent heat related illness. Next steps include development of teacher-ready materials and a Youth Heat–Health Ambassador model and integration of additional hands-on activities to build awareness of community and individual level risk factors and protective actions.



3rd Annual GLOBAL & BORDER HEALTH RESEARCH DAY ABSTRACTS

Thursday, April 23rd, 2026

12:00PM – 3:00PM

COM–T Social Hall

Booklet Editors

**Thomas Brower, McKenna
Dellinger, and Lily Travis**

Research Day Organizers

**Sommer Aldulaimi, MD, FAAFP;
Jerome Koleski, MD;
and Jade Zamora, MBA**



THE UNIVERSITY OF ARIZONA
COLLEGE OF MEDICINE TUCSON

Global & Border Health

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Refugee Care: Theatre of Oppressed and Improvisation as a tool to discuss empathy, cultural competence and diversity in the medical practice

Authors: Giovana Soares, Yumi Shirai, Aurelia Mouzet, Amber Frame, Leora Sapon-Stevin

Background and Objectives: Cultural competence can be defined as the capacity of healthcare systems and professionals to deliver respectful, responsive care aligned with patients' cultural identities, values, and needs. Contributing to reduce health disparities. With the objective to delivery a empathic, cultural appropriate and respectful care for the refugee population we planed a education session for FM residents using Forum Theatre and Image Theatre techniques from Theatre of the Oppressed, and also using Improvisation. The FM residency of UofA in Tucson count with the recent implemented Medical Humanities Track that brought the opportunity to use a creative and multidisciplinary approach to address topics of our Global Health Track. The theatre of Oppress is a form of a popular, community-based education that uses theatre as a tool for social transformation.

Methods: To start the 90-minute session, techniques from Medical Improvisation were introduced to contextualize the history and current usages of improv in the medical field, highlighting the power of "Yes, and" vs. "Yes, but" in clinical conversations.

After that, small groups were formed and invited to present a skit resembling a clinical encounter. The attending physician character demonstrated poor communication and cultural skills, causing the patient character to feel pressured, humiliated, or confused. Audience members were then invited to changing roles within the skit, offering new perspectives for cares.

Results: The results were based on the skits participation and on the questions answered at the end of the session. Participants were able to identify opportunities to improve care and to rewrite the skits, transforming the scenarios into more collaborative, culturally appropriate, and respectful encounters. The communication improved to a more positive, supportive, and empathic manner.

Conclusions: As described in the literature, the Theatre of the Oppressed and the Improvisation are great tools for addressing health topics. They can be used in the training of new healthcare providers and create opportunities for changes in practice through a participative and affective approach.



MexZona Needs Assessment

Authors: Fawaz Stipho

Background: Free and student-run border health clinics play a critical role in addressing healthcare access gaps among underserved populations; however, systematic data describing patient needs are often limited. MexZona Border Clinic serves a resource-limited population facing structural, financial, and logistical barriers to care. Leadership transitions and evolving community needs further underscore the importance of a patient-centered needs assessment to guide sustainable, responsive clinic programming.

Objectives:

- 1.To characterize patient-reported barriers to accessing healthcare at MexZona Border Clinic sites.
- 2.To assess gaps in preventive care, medication access, and continuity of care among clinic patients.
- 3.To identify actionable opportunities for clinic-level interventions to improve access and service delivery.

Methods: We propose a cross-sectional, patient-centered needs assessment conducted across MexZona Border Clinic sites, targeting approximately 150 adult patients. An anonymous, voluntary survey will be administered prior to clinical encounters and will assess demographics, healthcare access, transportation, insurance status, preventive screening history, medication access, mental health symptoms, and patient satisfaction. The survey was designed using a quality-improvement and public health framework to capture both barriers to care and modifiable system-level gaps. Descriptive statistics will be used to summarize patient characteristics and reported needs. Findings will be disseminated to clinic leadership and community stakeholders to inform targeted, implementation-focused interventions aimed at improving access, continuity, and sustainability of services.

A Qualitative Study on Greenspace and Health in Tucson

Authors: Ashley Danforth, Maiya Block Ngaybe, Shujuan Li, Chidera Ejike, Rebecca Ramos, **Jack Nguyen MPH**, Jane Thoren, Aspen Kropf, America Ruiz, Noah Ortega, SCORCH

Global surgery is an emerging field within global health that works to ensure that all people have access to safe, timely, and affordable surgical care, regardless of their country of origin. While the field of global surgery is well-intentioned, it is unfortunately rooted in inequity stemming from a broader history of unbalanced, neo-colonial partnerships between high-income countries (HICs) and low- and middle-income countries (LMICs).¹ To address these inequities, the global surgery community has recognized the importance of equitable education, research, and policymaking as critical tools for implementing tangible changes in local communities.² Additionally, recent studies have demonstrated the efficacy of novel educational curricula in instilling the values of equity and bidirectionality in students and trainees.³ As a nonprofit organization committed to global surgery education for medical students and residents, the Global Surgery Student Alliance created the Global Surgery Equity Curriculum (GSEC).

The course was collaboratively developed from January 2021 to January 2026 by medical students, residents, and global surgery experts from multiple institutions in both HIC and LMIC contexts. The GSEC is a five-part, online, open-access educational tool designed for self-directed learning and facilitated discussions. The curriculum equips learners with the knowledge and skills to practice global surgery equitably through decolonization, accessibility, capacity building, equitable engagement, and sustainability. The GSEC represents a powerful educational tool that empowers medical students and residents to serve as equitable members of the global surgery community.



Components of a Disability Navigation Program for Refugees in Pima County

Authors: **Srishti Rajeev**, Le, D, Persio S, Lockwood B, Sommer Aldulaimi MD, Teeple S, Farkas Bell J, Julie Armin PhD

Background: Few disability navigation programs exist for refugees, who experience linguistic, cultural, and systemic barriers that result in poorer health outcomes. This project aims to address such inequities by identifying components of a proposed disability navigation program tailored to refugees in Pima County, Arizona.

Objectives:

1. Identify needs and barriers faced by refugee-serving caseworkers, agencies, and providers, as well as opportunities for shared dialogue.
2. Evaluate the impact of targeted training on knowledge and application of disability navigation strategies.
3. Develop a refugee-focused disability navigation model grounded in mutual learning between refugee-serving and disability service systems.

Methods: Faculty and fellows partnered with Encircle Families and the International Rescue Committee (IRC) to co-develop training materials. Four training sessions were planned with IRC staff, disability organizations, and refugee clients, covering eligibility and navigation processes with the Division of Developmental Disabilities

(DDD) and Arizona Long-Term Care System (ALTCS). Evaluation includes retrospective post-test surveys and 30-, 60-, and 90-day follow-up interviews. Quantitative and qualitative data will be analyzed descriptively.

Results (Preliminary): Feedback from the first training (n=8) demonstrated substantial improvements in self-rated disability system navigation knowledge across all measured domains. Mean knowledge scores increased from 2.37 pre-training to 3.47 post-training (+1.1) on a 4-point scale. The largest gains were in understanding DDD/ALTCS system interaction (+1.5), identifying appropriate agency contacts (+1.38), and understanding roles of DDD support coordinators (+1.38). Suggested improvements included additional time and information on agency-provided interpreter services.

Implications: Community-engaged, culturally informed interventions may improve equitable access to disability services for refugee populations.

A NOTE FROM THE PROGRAM DIRECTORS

Dear Students, Residents, Faculty, and Colleagues,

It is our great pleasure to welcome you to Global Health Research Day, hosted by Global Health Programs at the University of Arizona College of Medicine-Tucson. Today's event brings together learners, faculty, and partners from across Arizona Health Sciences to celebrate the outstanding scholarly work being conducted in global, border, and community health. This gathering reflects our shared commitment to improving health equity both locally and globally. We are grateful to each of you for the dedication, curiosity, and compassion that you bring to this work.

Today's presentations represent more than research projects, they reflect a deep commitment to serving communities, advancing knowledge, and addressing some of the most complex health challenges of our time. Through partnerships with local and international communities, your work demonstrates the power of collaboration, innovation, and perseverance in improving care for underserved and resource-limited populations both locally and globally. Global Health Programs at UACOM-T strive to expose learners to high-quality, evidence-based, interdisciplinary clinical and public health practice delivered under the resource constraints often encountered in low-resource settings, preparing future physicians and health professionals to provide thoughtful, adaptable, and compassionate care wherever the need exists.

Global Health Research Day is designed not only to showcase these accomplishments, but also to foster collaboration, mentorship, and community among students, residents, faculty and partners who share a passion for global and border health. By bringing together diverse perspectives from across Arizona Health Sciences, this event strives to encourage interdisciplinary learning and inspire continued innovation in clinical care, public health, and research. Today's gathering reflects the spirit of Global Health Programs based on partnership and service. We believe that meaningful and lasting change comes through shared knowledge and collective effort.

On Behalf of Arizona Health Sciences, Global Health Programs wants to recognize the significant time, energy, and heart that goes into your scholarly work. Your presence here as presenters and learners reflects an important investment in your professional development and in the future of global and border health. The work you are doing today will help shape the care we provide tomorrow. Thank you to our presenters, mentors, faculty, and student leaders whose enthusiasm and dedication make this event possible.

Drs. Aldulaimi and Koleski



KEYNOTE SPEAKER



Climate Health and Global Implications **Brian Drummond, MD, FAAEM**

Brian Drummond, MD, FAAEM, is a Clinical Professor of Emergency Medicine at the University of Arizona College of Medicine–Tucson and an emergency physician at Banner University Medical Center. His work focuses on the intersection of climate change, environmental exposures, and human health, with particular attention to extreme heat, health equity, and sustainable healthcare systems. Dr. Drummond is a co-founder of Arizona Health Professionals for Climate Action, where he works to advance clinician education, research, and advocacy related to climate and public health. Through his clinical teaching, research collaborations, and public engagement, he emphasizes practical, evidence-based approaches to addressing climate-related health risks in emergency and global health settings.

EVENT AGENDA

12:00PM – 12:30PM	LUNCH
12:30PM – 1:15PM	KEYNOTE SPEAKER
1:15PM – 2:30PM	POSTER SHOWCASE
2:30PM – 3:00PM	AWARDS: BEST IN CATEGORY (STUDENT, RESIDENT, FACULTY, OVERALL)



Integrating Heat-Health Education and Youth Voices in addressing Extreme Heat

Authors: Harini Arumugam Gandhimathi, Cheryl Valdez, Mona Arora MD

Extreme heat is a public health threat in Arizona. In 2022, there were 359 heat-caused deaths and 671 heat-related deaths in the state. In response, the Governor's Executive Order 2023-16 established extreme heat planning and preparedness as a statewide priority. Heat-related illness is largely preventable with education being a critical tool for promoting protective behaviors and supporting community resilience. There is growing need to meaningfully engage youth as partners in climate and health action. While there are established climate and health curriculum guidelines for health professional students, comparable curriculum-based guidance is largely absent for K-12 education. To address this gap, we piloted STEAM-based heat-health curriculum delivered in 2 Arizona summer programs in Summer 2025. Lessons were 1–2 hours, covering topics such as climate and health impacts and factors driving heat risk and vulnerability. Curriculum content was mapped to Arizona high school STEAM standards to support classroom adoption.

Feedback and evaluation from these pilots, including student reflections, facilitator observations, and brief post-session surveys, directly informed revisions to lesson structure and activities used in the curriculum. We also gathered additional input through a youth session at the Southern Arizona Heat Summit, where participants shared priorities, preferred engagement formats, and ideas for school and community-level action. Collectively, this feedback shaped the development of the Youth Heat Education and Action Together (HEAT) Ambassador Program, including its curriculum sequence, interactive activities, and implementation approach. This poster presents pilot feedback findings, the resulting curriculum, and the proposed design and planned implementation of the program.



A Reflective Piece on Diagnostic Infrastructure and Its Limitations in Rural Peru

Authors: Lauren Heathcock BS, Lily Travis BA

Rapid turnaround for pathology diagnostic results is necessary for adequate patient care. In northern Peru, Hospital Oncológico de Trujillo IREN-NORTE functions as the regional referral center for pathology and cancer diagnostics, serving surrounding towns and provinces that lack specialized pathology services. Because diagnostic care is centralized, a substantial strain is placed on pathologists, who are already in short supply in low- and middle-income countries, where there is approximately one pathologist per 1,000,000 people. The limited number of specialists must process high volumes of specimens from across northern Peru, contributing to delays in diagnosis and treatment initiation.

Regional data reflect these challenges, with studies from Latin America demonstrating that low-income countries have significantly longer access intervals, with a median of 6.5 months. The longest diagnostic intervals in the region include hematological cancers at 71 days, genitourinary cancers at 58 days, and gastrointestinal cancers at 57 days.

In the summer of 2025, first-year medical students from the University of Arizona, College of Medicine – Tucson, worked within the Pathology Department at IREN-NORTE and gained firsthand insight into these barriers. Physicians and laboratory staff identified infrastructure limitations, including workforce shortages and a lack of adequate supplies, as the primary barriers to timely diagnosis.

Although specific data on turnaround diagnostic time at IREN-NORTE is limited, firsthand accounts reflect broader systemic gaps in diagnostic capacity. These findings underscore persistent structural inequities in access to timely pathology services in northern Peru and highlight the need for targeted investment in laboratory infrastructure and workforce expansion.

Authorship Equity in National Global Surgery Student Working Groups: A Perspective
Authors: Zachary Elwell MD

Low- and middle-income countries (LMICs) are disproportionately affected by surgical pathologies. However, most authors of current global surgery publications are not from LMICs, and high-income country authors are overrepresented in lead and senior author positions. Several nonprofit organizations – including the Global Surgery Student Alliance (GSSA) – have championed novel models for equitable research partnerships to address these disparities. While progress has been made, further advances may be achieved by engaging medical students, residents, and trainees early in their education and career development. Multiple studies in the medical education literature have demonstrated the impact of early exposure to research on the careers of future physicians. Applying these trends to equitable research practices, we anticipate that early exposure to equitable research partnerships will produce a greater number of future global surgeons who will continue to engage in equitable authorship practices. To achieve this goal, we developed the GSSA Authorship Equity Guidelines (AEGs) to educate and empower medical students and trainees to become equitable partners in global surgery research.



The GSSA AEGs are a novel research framework that emphasizes the principles of equity, bidirectionality, and sustainability to equip medical students and trainees to serve as equitable partners in the global surgery community.

The Global Surgery Equity Curriculum: A Digital, Open Access Course on the Equitable Practice of Global Surgery
Authors: Zachary Elwell MD

Global surgery is an emerging field within global health that works to ensure that all people have access to safe, timely, and affordable surgical care, regardless of their country of origin. While the field of global surgery is well-intentioned, it is unfortunately rooted in inequity stemming from a broader history of unbalanced, neo-colonial partnerships between high-income countries (HICs) and low- and middle-income countries (LMICs).¹ To address these inequities, the global surgery community has recognized the importance of equitable education, research, and policymaking as critical tools for implementing tangible changes in local communities.² Additionally, recent studies have demonstrated the efficacy of novel educational curricula in instilling the values of equity and bidirectionality in students and trainees.³ As a nonprofit organization committed to global surgery education for medical students and residents, the Global Surgery Student Alliance created the Global Surgery Equity Curriculum (GSEC).

The course was collaboratively developed from January 2021 to January 2026 by medical students, residents, and global surgery experts from multiple institutions in both HIC and LMIC contexts. The GSEC is a five-part, online, open-access educational tool designed for self-directed learning and facilitated discussions. The curriculum equips learners with the knowledge and skills to practice global surgery equitably through decolonization, accessibility, capacity building, equitable engagement, and sustainability. The GSEC represents a powerful educational tool that empowers medical students and residents to serve as equitable members of the global surgery community.

Dialects Matter: A Systematic Review of Multi-Dialect Arabic Interpreter Use in Healthcare Settings
Authors: Zeyad Abbker

Arab Americans are a fast growing minority in the U.S., yet one-third of Arabic-speaking individuals report limited English proficiency (Moslimani, 2023). Roughly 4% of U.S. physicians speak Arabic, and even fewer can interpret its major dialects (Doximity, 2017). Despite growing need, U.S. healthcare systems largely rely on interpreters trained in Modern Standard Arabic, which many patients, especially refugees and individuals with lower literacy, do not speak fluently. No prior studies address the gap in dialect-specific interpreter needs and its effects on healthcare outcomes among Arabic-speaking Americans. A structured literature review of PubMed (2000–2025) was performed using predefined search terms related to Arabic-speaking populations, healthcare communication, and interpretation services. Articles were screened according to inclusion criteria requiring English language, full text, peer-reviewed studies focused on language barriers in clinical settings.

15 articles met the criteria and were analyzed thematically. Dialect familiarity and interpreter competence emerged as core determinants of communication quality, care navigation, and informed consent. Patients frequently reported inaccurate translation, dialect mismatches, confidentiality concerns, and interpreters lacking medical or cultural proficiency (Hadziabdic et al., 2014). Studies evaluating dialect-tailored tools demonstrated improved comprehension, patient engagement, and health decision-making. Evidence across international and U.S. contexts shows that dialect-responsive, professionally trained, and culturally competent interpretation is essential for equitable care in Arabic-speaking populations. Current U.S. reliance on generic “Arabic language” services fails to meet patient needs. Health systems should expand training in major dialect groups, develop culturally grounded educational tools, and evaluate cost-effectiveness of dialect matched interpretation models.



Accelerator-Enabled Expansion of Trainee-Led Community Diabetes Care in a Federally Designated Border-Region Primary Care Shortage Area
Authors: Rod Bravo MPH

Background: Southern Arizona represents a convergence of chronic disease burden and structural health system constraint. Approximately 11% of Arizona adults live with diagnosed diabetes, with disproportionate impact among Hispanic/Latino populations in Pima County. All Arizona counties are federally designated Primary Care Health Professional Shortage Areas (HPSAs), reflecting workforce deficits that limit timely longitudinal care (HRSA). In a high-mobility border region, shortages heighten risk for fragmented diabetes management and delayed intervention.

Methods: The Diabetes Mellitus (DM) CUP Clinic was launched within Banner University Medical Center at UA COMT to provide no-cost, bilingual, longitudinal diabetes care. Development was accelerated through competitive, first-place funding (\$19,621.38) via the Scholars Equity Network (SEN) Pay It Forward Accelerator, a community-vote-based national competition supporting locally embedded health equity projects, grandfathered by the Bill & Melinda Gates Foundation. Funding enabled procurement of diagnostic equipment,

clinical supplies, and continuity infrastructure within a shortage-designated region. The trainee-led, faculty-supervised model delivers screening, medication access, glucose monitoring, and culturally responsive education. Student-run clinics contribute meaningfully to care in underserved settings (Simpson & Long, 2007). The structure reflects a cross-sector “collective impact” framework aligning academic, private health system, and community stakeholders (Kania & Kramer, 2011).

Results: Accelerator capital strengthened diagnostic capacity and operational readiness. The clinic is structured to scale toward approximately 600 unique patients annually as capacity grows. Outcomes and metrics tracked include insurance coding and accelerator outcomes to be nationally distributed via SEN.

Conclusion: In border regions constrained by workforce shortages, accelerator capital combined with structured trainee involvement may expand chronic disease capacity within academic safety-net systems.

Cancer Prevention Landscape in Arizona and Peru

Authors: Thomas Brower BS BA, Rina S. Fox PhD MPH

Background: Substantial disparities in cancer outcomes persist between high- and low-income countries. Many high-income countries have reduced cancer mortality through population-based screening while low-income countries face higher mortality relative to incidence.

Objectives: This cross-sectional, descriptive study compares cancer screening guidelines, screening adherence rates, and mortality-incidence ratios for common cancers in Tucson, Arizona, USA and Trujillo, La Libertad, Peru.

Methods: Screening guidelines were sourced from the United States Preventive Services Taskforce (USPSTF) for Tucson and the Ministry of Health for Trujillo. Screening adherence was defined as the percentage of the eligible population completing recommended screening per current guidelines for cancers with published guidelines. Adherence and age-standardized incidence and mortality data were captured from publicly available online government resources. Mortality-incidence ratios for each cancer type were calculated by dividing mortality by incidence.

Results: Relative to USPSTF guidelines, Peru recommends a narrower age range for cervical cancer screening and clinical breast exams in place of mammography. For colorectal cancer, Peru is currently piloting a screening program but, unlike the USA, does not yet have population-based guidelines. Regarding adherence, rates were higher in Tucson for all cancer types with available data. For example, Tucson exhibited higher cervical cancer screening adherence (78.5% vs. 43.6%) and mammography rates (63.2% vs. 8.4%) relative to Trujillo. Mortality-incidence ratios were higher for all cancer types in Trujillo.

Conclusions: Results highlight the importance of cancer screening interventions in reducing mortality and promoting better cancer outcomes in international contexts.



Strengthening Extreme Heat Resilience in Rural and Tribal Arizona Communities

Authors: Shunrang Chin MPH

Extreme heat is a growing public health crisis in Arizona. Rising temperatures have brought longer heat waves and increasing numbers of days above 100°F. Following 30 consecutive days of excessive heat warnings in some counties, Governor Hobbs declared a statewide emergency in August 2023 to support heat relief efforts. Extreme heat affects communities across Arizona in diverse ways, with no two communities experiencing impacts similarly. Risks are intensified in rural and Tribal communities due to geographic isolation, limited infrastructure, and reduced access to essential services, requiring tailored approaches rather than one-size-fits-all. Effective heat preparedness and response efforts should incorporate lived experiences and local expertise and leverage distinct geographies, governance structures, and cultural strengths.

To better understand heat-related preparedness gaps and opportunities, the Southwest Center for Outreach and Resilience in Climate and Health, in partnership with the Arizona Center for Rural Health, the Arizona Department of Health Services, and rural partners, convened six listening sessions between June and October 2025.

Sessions engaged 90 participants from 64 organizations involved in heat preparedness and response across rural and Tribal Arizona, including health departments, Tribal governments and health services, community health centers, hospitals, non-profits, education institutions, and others who are involved in heat risk management.

Across sessions, participants emphasized the need for flexible, long-term funding; localized, community-informed data systems; formalized Tribal data sovereignty; culturally appropriate, multi-channel communication; and coordinated heat response policies. Together, these priorities offer a roadmap for addressing heat risk through a community-centered, “heat in all policies” approach.

Long Term Corneal Flattening After Corneal Crosslinking in Patients with Progressive Keratoconus presented

Authors: Max Coffeen MD

Purpose: We evaluate the long-term visual, refractive, and keratometric outcomes after corneal crosslinking (CXL) in patients with progressive keratoconus (KC) and the incidence of an extreme corneal flattening effect.

Settings: Oftalmosalud Institute of Eyes, Lima, Perú.

Design: Retrospective cohort study.

Methods: Forty-five eyes that underwent CXL with epithelial removal between June 2006 and September 2011. Data analysis was performed at preoperative evaluation, 1 year postoperatively, and at least 10 years or more postoperatively. Outcome measures included uncorrected distance visual acuity (UDVA), corrected distance visual acuity (CDVA), and Scheimpflug (Pentacam) analysis. Progression was defined by an increase in steep keratometry (Ks) of 1.5D or greater between 2 examinations. Extreme flattening effect was defined as a decrease in K values equal to or greater than 5 diopters (D).

Results: Mean follow-up time was 11 ± 1.07 years (range 10–13 years). There was a significant improvement in Ks, UCVA, CDVA, and spherical equivalent at the last visit. The overall rate of progression was 2.22% (1/45). Extreme flattening was observed in 15.5% (7/45) of the eyes, and this was associated with a loss of CDVA in 4.44% (2/45) of the eyes. One eye with corneal flattening of 11.5 D lost 7 lines of CDVA and required corneal transplantation.

Conclusion: CXL is a safe and effective procedure to stop the progression of KC with a good overall long-term success rate. Extreme corneal flattening may be more common than commonly recognized, and severe corneal flattening associated with a decrease in CDVA may occur.



Migrant Deaths in the El Paso Sector: Examining Geographic Disparities in Mortality and Recovery

Authors: Lauren Cruz MD, Hanna Ramos, Caitlin Draper

The El Paso Sector (New Mexico and West Texas) accounts for hundreds of border-crossing deaths, yet there is little research on migrant mortality in this region. Using a dataset of migrant deaths from 2008–2024 in the El Paso Sector compiled by No More Deaths, we seek to identify geographic trends in decedent demographics, cause of death, and decomposition severity. Data was obtained from medical investigator offices and justice of the peace precincts via public records requests. Analysis was performed using chi-square goodness-of-fit tests and binary logistic regression. Of 526 decedents, 65% were male (p<0.001). Deaths were unevenly distributed across age groups ($\chi^2=143.04$, p<0.001), with most deaths occurring in migrants aged 18–25 and 26–35 years. Distribution of migrant deaths across counties was notably uneven ($\chi^2=1164.73$, p<0.001), with most deaths occurring in Doña Ana and El Paso counties.

Decomposition severity differed between counties ($\chi^2=125.67$, p<0.001, Cramer’s V=0.279), with higher odds of advanced decomposition in Hidalgo County (OR=2.7) and lower odds in El Paso County (OR=0.066). Analysis also revealed geographic variation in cause of death, with markedly higher odds of drowning (OR=63.14) and trauma-related deaths (OR=4.38) in El Paso County. These findings suggest geography-dependent delays in decedent recovery and inter-county differences in life-threatening hazards faced by migrants. Future analyses will include temporal and multivariate modeling to further elucidate migrant mortality and decedent recovery patterns.