Journal of Nonprofit Innovation

Volume 4
Issue 3 *Health*

Article 1

September 2024

# JoNI September 2024 Full Issue

Angie Holzer
*WikiCharities*

Recommended Citation
Holzer, Angie (2024) "JoNI September 2024 Full Issue," *Journal of Nonprofit Innovation*: Vol. 4: Iss. 3, Article 1.
Available at: https://scholarsarchive.byu.edu/joni/vol4/iss3/1

September 2024
Volume 4, Issue 3

# The Journal of Nonprofit Innovation

An Online Journal for Reviews of Academic Research and Thought Papers on Community and Global Issues

Edition: Health

WikiCharities
CONNECT. VALIDATE. COLLABORATE.

JoNI
Journal of Nonprofit Innovation

# Acknowledgments

The Journal for Nonprofit Innovation is a publication of WikiCharities, a 501(c) (3) nonprofit.

info@wikicharities.org
wikicharities.org
Bountiful, Utah USA

All images pulled from Unsplash, Amazon Firefly, and Pexels. AI Image Generator

## TABLE OF CONTENTS

# About JoNI

September2024
Vol 4, Issue 3

Journal of Nonprofit Innovation

## Who We Are

The Journal of Nonprofit Innovation (JoNI) is a publication of WikiCharities, a US-based, 501(c) (3) nonprofit organization dedicated to nonprofit transparency and collaboration in partnership with Brigham Young University (BYU). JoNI is an online journal for academic research summaries and thought papers on community and global issues. We exist to help nonprofit leaders know the latest research and collaborate on their experiences.

## Our Mission

The Journal of Nonprofit Innovation (JoNI) provides a way for nonprofit leaders to stay up to date on the latest research and collaborate, building a more innovative and collaborative nonprofit sector.

## Submissions

For more information on how to get involved or how to submit pieces for upcoming issues, visit us online at journalofnonprofitinnovation.org.

# Latest Research (Summaries)

## Summary 1

# Charting the Course for Inclusive and Equitable Health Innovation in the Wake of the COVID-19 Pandemic

From Gordon, T. M. (2024). Charting the course for inclusive and equitable health innovation in the wake of the COVID-19 pandemic. *The International Journal of Health, Wellness, and Society, 14*(2), pp. 127-150. https://doi.org/10.18848/2156-8960/CGP/v14i02/127-150

### Abstract

"In the US, the COVID-19 pandemic devastated minoritized communities, laying bare centuries of health disparities. In response, government agencies, foundations, nonprofit organizations, and corporations allocated funding for innovative solutions to combat inequality throughout the healthcare landscape. However, this article argues that to achieve sustainable and impactful innovation that helps the US progress toward a more fair, equitable, and effective healthcare system, we must diversify the range of professionals involved in innovation ecosystems, utilize paradigms that allows underserved communities to effectively engage in research to support their health and wellbeing, infuse health equity into innovation ecosystems, and make long-term investments in underserved communities. This article chronicles health disparities in the US., especially during the COVID-19 pandemic, while also discussing the current barriers to inclusive innovation in health equity. Using these barriers as a springboard for a conversation on realizing positive change in the healthcare system, the paper ends by highlighting examples of collaborative, inclusive and potentially impactful initiatives that could address and alleviate the concerns presented at the beginning of the paper."

### Background

The COVID-19 pandemic dramatically exposed longstanding health disparities in the U.S., with minoritized communities experiencing disproportionately severe impacts. This experience highlighted how healthcare systems embed systemic inequities and how global crises can exacerbate them. Historically, innovations in health tend to benefit those who are already in a more privileged position, often neglecting marginalized groups who face the most significant health challenges.

Gordon's research underscores that while the pandemic prompted an influx of funding and innovative solutions to address these disparities, it highlighted significant shortcomings in how these innovations are designed and implemented. The study aims to tackle the issue by emphasizing the need for a more inclusive approach to health innovation. This inclusive approach involves diversifying the range of professionals involved, engaging underserved communities in research, integrating health equity into innovation ecosystems, and committing to long-term investments in these communities.

This focus is crucial as it seeks to address the immediate impacts of the pandemic and create a more equitable framework for future health innovations. By addressing these systemic issues, the research aspires to contribute to a healthcare system that more effectively serves all populations, particularly those historically underserved.

### Method

Gordon's study employs a mixed-methods approach that includes quantitative and qualitative data. The quantitative analysis focused on specific health disparities, such as disparities in vaccine access, rates of severe COVID-19 outcomes, and differences in access to healthcare services among various demographic groups. These disparities were analyzed using statistical methods to compare health outcomes across different socioeconomic and racial groups. Researchers gathered qualitative data through 30 interviews conducted nationwide with key stakeholders in the healthcare sector, including policymakers, technology developers, and community leaders. These interviews provided insights into the barriers to inclusive health innovation and highlighted successful models of community engagement. The study also examined case studies of initiatives that successfully addressed these disparities, offering practical examples of implementing inclusive innovation.

### Takeaways

Gordon's article contains takeaways that combine conclusions drawn from the interviews with insights derived from the data analysis. The recommendations reflect the input from stakeholders and Gordon's interpretation of the findings.

- **Diversify Innovation Ecosystems:** Nonprofits should advocate for and build diverse teams in health innovation projects to ensure they consider a range of perspectives and experiences. This approach leads to more inclusive and effective solutions for all communities.
- **Engage Underserved Communities:** Actively involve underserved communities in health innovation research and development phases. This approach tailors solutions to their specific needs and improves overall health outcomes.
- **Infuse Health Equity into Innovation:** Incorporate health equity principles at every stage of the innovation process. Ensure equitable access to new technologies and address the systemic barriers that prevent marginalized communities from benefiting from health innovations.
- **Make Long-Term Investments:** Invest long-term in underserved communities to build sustainable and impactful health innovation ecosystems. Provide funding, resources, and ongoing engagement to address persistent disparities (Gordon, 2022).

Gordon, T. M. (2024). Charting the course for inclusive and equitable health innovation in the wake of the COVID-19 pandemic. *The International Journal of Health, Wellness, and Society, 14*(2), pp. 127–150. https://doi.org/10.18848/2156-8960/CGP/v14i02/127-150

---

## Summary 2

### Improving Indian Health Service Vaccination Campaigns Across the Full Spectrum of Age, Clinical, and Public Health Settings

From Baker, H. A., Klunk, A., Caiac, A. J., Livermont, T., & Bell, S. (2023). Improving Indian Health Service vaccination campaigns across the full spectrum of age, clinical, and public health settings. *American Journal of Public Health, 113*(8), 849–851. https://www.proquest.com/scholarly-journals/improving-indian-health-service-vaccination/docview/2841551137/se-2

### Background

The Indian Health Service (IHS) is responsible for the health of American Indian/Alaska Native (AI/AN) communities as mandated by treaties, laws, and executive orders. However, suboptimal vaccination rates within these populations present a significant issue. Geographic barriers, historical mistrust, government shutdowns, and supply chain issues complicate vaccination efforts. Additionally, disparities in vaccine coverage stem from federal facilities not aligning with community priorities and values. Historical harms and a lack of trust in the health system exacerbate vaccine hesitancy within these communities. However, the passage of the Indian Self-Determination and Education Assistance Act of 1975 has empowered tribes to manage their health services, leading to successful tribal-led vaccination campaigns, particularly during the COVID-19 pandemic. Building on these efforts, the IHS has introduced the E3 Vaccine Strategy, which aims to offer every recommended vaccine at every encounter. This article explored the primary research question of how to enhance vaccine uptake and coverage within AI/AN communities. The researchers examined the barriers and facilitators to achieving optimal vaccination rates to address this question.

### Methods

The study employs both quantitative and qualitative methods to address the research question of improving vaccine coverage within AI/AN communities. Quantitative data sources include vaccine-preventable hospitalizations among AI/AN children from the 2012 Kid's Inpatient Database (Nickel et al., 2018), human papillomavirus (HPV) prevalence among AI/AN women in the Great Plains (Lee et al., 2019), and rates of vaccine-preventable diseases such as influenza, pneumonia, pertussis, and HPV within AI/AN populations (multiple sources).

The authors derived qualitative data from analyzing Facebook community reactions to a COVID-19 vaccine trial in the Navajo Nation (Calac et al., 2021), conducting interviews and surveys by the Urban Indian Health Institute on attitudes toward COVID-19 vaccination, and examining case studies of tribal-led vaccination efforts during the pandemic, which highlight community values and leadership.

The authors focused their analysis on the challenges faced by the IHS in vaccination efforts, particularly with the newly launched E3 Vaccine Strategy (E3VS), which aims to offer every recommended vaccine to every patient at each encounter. The study discusses structural and sociocultural barriers to vaccine uptake, including historical injustices contributing to vaccine hesitancy, and emphasizes the importance of community-centered messaging and involvement. By integrating quantitative and qualitative data, the research aims to provide a comprehensive understanding of the factors influencing vaccine uptake and coverage in AI/AN communities.

### Takeaways

Nonprofit organizations can be pivotal in effectively enhancing vaccination efforts and overall health outcomes within American Indian/Alaska Native (AI/AN) communities. The researchers identified various challenges and strategies for improvement. Challenges to vaccine coverage within the AI/AN population include persistent distrust in the health system due to historical injustices, geographic and logistical barriers to vaccine distribution in remote AI/AN communities, and underfunding of the IHS, which limits its ability to implement comprehensive vaccination programs.

The following key takeaways provide actionable insights for nonprofit leaders to improve health initiatives in collaboration with the Indian Health Service (IHS) and tribal communities:

- **Community-Centric Approaches:** Nonprofits should prioritize community involvement and culturally relevant messaging in vaccination campaigns, engaging local leaders and elders to ensure the initiatives resonate with community values. During the COVID-19 pandemic, AI/AN vaccine uptake exceeded that of the general population, showcasing the effectiveness of community-led efforts (Baker et al., 2023).
- **Addressing Mistrust:** To combat vaccine hesitancy, nonprofits must recognize historical harms and work towards building trust within AI/AN communities. A recent social media analysis found that 17.5% of comments regarding vaccines reflected negative sentiments tied to historical injustices, highlighting the need for targeted educational initiatives (Baker et al., 2023).
- **Enhanced Representation:** Increasing AI/AN representation in clinical research is crucial for addressing health disparities. The article notes that only 0.048% of participants in US-based clinical cancer trials identified as AI/AN, reinforcing the call for nonprofits to advocate for and support inclusive research practices (Baker et al., 2023).
- **Need for Resources:** Chronic underfunding of the IHS hampers vaccination efforts. As stated in the article, this underfunding will limit the impact of the E3 Vaccine Strategy (Baker et al., 2023). Nonprofits can help by advocating for additional federal funding and forming partnerships to secure financial resources for health initiatives.
- **Integrative Strategies:** Nonprofits should complement the E3 Vaccine Strategy with broader health initiatives, including regular health screenings and preventive care programs. The article suggests that to address HPV-driven cancers effectively, the IHS should integrate vaccination efforts with other preventive measures, such as Papanicolaou tests (Baker et al., 2023). By adopting a holistic approach to health, nonprofits can significantly enhance the overall well-being of AI/AN communities and reduce the burden of preventable diseases.

In conclusion, nonprofit organizations have a vital role in improving health outcomes for AI/AN communities through targeted, culturally sensitive initiatives. By leveraging community engagement, addressing historical mistrust, advocating for representation in research, securing necessary resources, and implementing integrative health strategies, nonprofits can drive meaningful change and enhance vaccine uptake in these underserved populations.

Baker, H. A., Klunk, A., Calac, A. J., Livermont, T., & Bell, S. (2023). Improving Indian Health Service vaccination campaigns across the full spectrum of age, clinical, and public health settings. *American Journal of Public Health, 113*(8), 849–851. https://doi.org/10.2105/AJPH.2023.307349

Calac, A. J., Bardier, C., Cai, M., & Mackey, T. K. (2021). Examining Facebook community reaction to a COVID-19 vaccine trial on the Navajo Nation. *American Journal of Public Health, 111*(8), 1428–1430. https://doi.org/10.2105/AJPH.2021.306202

Lee, N. R., Winer, R. L., Cherne, S., et al. (2019). Human papillomavirus prevalence among American Indian women of the Great Plains. *Journal of Infectious Diseases, 219*(6), 908–915. https://doi.org/10.1093/infdis/jiy600

Nickel, A. J., Puumala, S. E., & Kharbanda, A. B. (2018). Vaccine-preventable hospitalizations among American Indian/Alaska Native children using the 2012 Kid's Inpatient Database. *Vaccine, 36*(7), 945–948. https://doi.org/10.1016/j.vaccine.2017.02.051

---

## Summary 3

## Mental Health Under Occupation: An Analysis of the De-Politicization of the Mental Health Discourse in Palestine and a Call for a Human Rights Approach

From Helbich, M., & Jabr, S. (2022). Mental health under occupation: An analysis of the de-politicization of the mental health discourse in Palestine and a call for a human rights approach. *International Journal of Human Rights in Healthcare, 15*(1), 4–16. https://doi.org/10.1108/IJHRH-01-2021-0015

### Abstract

"This study aims to look at the effects of the Israeli occupation on the mental health of Palestinians and examine the link between political oppression and the occurrence of mental health disorders. It argues that, as human rights violations in Palestine are connected to psychological distress, the root causes of social suffering need to be considered in order not to pathologize Palestinians. The purpose of this paper lies in connecting the mental health discourse with a human rights approach to better understand this connection within the context of political violence. The paper presents the viewpoint and perspectives of the authors on significant mental health issues in Palestine.

"The methodology is based on a literature review of the de-politicization of the mental health discourse and on the theoretical framework of a human rights approach. At the base of this discourse lies the demand for social justice and professional solidarity. The study highlights that to truly understand social suffering in Palestine, it needs to be related to the prevalence of human rights violations, which in turn have a conceivable impact on the mental health well-being of individuals. It advocates for a shift from a de-contextualized, de-politicized and individualistic approach to mental health to acknowledging the importance of the social and political context in which trauma develops. It further illustrates how the adaptation of a human rights approach can strengthen demands of social justice and oppose the victimization of Palestinians. The value of the works lies in putting the prevalence of mental health disorders in Palestine in relation to human rights violations as a consequence of the ongoing Israeli occupation and in highlighting the role that international organizations play in the de-politicization of the mental health discourse (Helbich & Jabr, 2022)."

### Background

The article explores the complex and often overlooked mental health challenges faced by Palestinians living under Israeli occupation. The authors argue that the prevailing mental health discourse tends to be de-politicized and de-contextualized. Many international organizations promote this approach. This discourse frequently isolates mental health issues as purely psychological problems, ignoring the significant impact of the socio-political environment on mental well-being. The article highlights the importance of understanding the historical and political context in which Palestinians live. The Israeli occupation, characterized by military violence, restrictions on movement, and systemic discrimination, creates a backdrop of continuous trauma for the Palestinian population. Helbich and Jabr assert that the prolonged occupation and accompanying political violence are significant factors contributing to the mental health issues faced by Palestinians (Helbich & Jabr, 2022). This reality, they argue, is often ignored by international mental health interventions, which tend to focus on individual-level diagnoses such as post-traumatic stress disorder (PTSD) without addressing the underlying causes of distress. The authors also critique the role of international organizations in perpetuating this de-politicized approach to mental health. They point out that these organizations often prioritize interventions that are easier to fund and implement, such as short-term therapy sessions or medication, rather than engaging in the more complex and politically sensitive work of addressing the structural violence and human rights violations that contribute to mental health issues. Helbich and Jabr emphasize that mental health interventions in Palestine will not be effective unless they consider the broader context of political oppression and social suffering (Helbich & Jabr, 2022).

## Methods

The authors employ a mixed-methods approach, combining clinical experience, a comprehensive literature review, and an analysis based on the human rights framework. This methodology allows them to critically assess the existing mental health interventions in Palestine and propose alternative approaches that are more sensitive to the socio-political context. The authors include detailed case studies from their work in Palestine in the clinical experience section, illustrating how patients' symptoms are linked to specific incidents of political violence, such as home demolitions and military assaults. The literature review incorporates studies that demonstrate the limitations of de-contextualized mental health approaches. The authors used the human rights framework to argue that addressing mental health in Palestine requires a systemic approach, drawing on principles from specific human rights documents or theories.

1. **Clinical Experience:** Drawing from their extensive clinical work in Palestine, the authors provide firsthand insights into Palestinians' mental health challenges. They highlight how the symptoms exhibited by their patients are often directly linked to experiences of political violence, such as home demolitions, imprisonment, and military assaults.
2. **Literature Review:** The article extensively reviews existing literature on mental health in conflict zones, particularly in Palestine. The authors use this review to critique prevailing de-contextualized approaches and support their argument for a more holistic understanding of mental health, including political and social determinants.
3. **Human Rights Framework:** The authors utilize a human rights-based approach to analyze mental health in Palestine. This framework emphasizes the need to address the socio-political determinants of health and advocate for Palestinians' rights to live free from occupation and violence. The authors argue that a human rights approach is crucial for understanding and addressing the mental health needs of Palestinians, as it frames these issues within the broader context of systemic oppression and violence (Helbich & Jabr, 2022).

## Takeaways

The article emphasizes the significant impact of the Israeli occupation on Palestinian mental health. The authors highlight that political violence leads to widespread social suffering, which cannot be treated as isolated psychological disorders. It critiques the de-politicization of mental health by international organizations, arguing that this approach overlooks the socio-political factors behind these issues. The authors advocate for a human rights-based mental health framework, focusing on collective resilience and political advocacy as key treatment components. For nonprofit professionals, the article suggests integrating the socio-political context into mental health support, promoting advocacy, and fostering collective resilience to empower communities.

- **Political Context and Mental Health:** The ongoing Israeli occupation and associated political violence are significant contributors to the mental health issues faced by Palestinians. This violence leads to collective social suffering that cannot be reduced to individual psychological disorders.
- **De-politicization of Mental Health:** International organizations often focus on individual psychological diagnoses, such as PTSD, while neglecting the socio-political factors that cause these mental health issues. This approach leads to the pathologization of Palestinians and obscures the root causes of their suffering.
- **Human Rights Approach:** The authors advocate for a mental health framework that integrates a human rights perspective. This approach emphasizes addressing the socio-political determinants of health, recognizing that political violence deeply affects Palestinians' mental health.
- **Collective Resilience and Political Advocacy:** The article highlights the importance of collective resilience and political advocacy in mental health treatment. By engaging in collective action and political advocacy, Palestinians can regain agency and address the root causes of their suffering.

## Implications for Nonprofit Professionals and Organizations

- **Contextualizing Mental Health:** Nonprofit professionals working in mental health should consider the socio-political context in which their clients live. Understanding the broader context of political violence and social suffering is crucial for providing appropriate support.
- **Advocacy and Human Rights:** Organizations should incorporate a human rights-based approach to mental health, advocating for systemic changes that address the root causes of social suffering.
- **Supporting Collective Resilience:** Nonprofits should support initiatives that foster collective resilience and political advocacy among Palestinians. This approach not only aids in individual recovery but also strengthens community bonds and empowers individuals.

This summary provides a comprehensive overview of the article's key points, offering valuable insights for nonprofit professionals and organizations working in conflict zones or with populations experiencing political violence.

Helbich, M., & Jabr, S. (2022). Mental health under occupation: An analysis of the de-politicization of the mental health discourse in Palestine and a call for a human rights approach. *International Journal of Human Rights in Healthcare, 15*(1), 4–16. https://doi.org/10.1108/IJHRH-01-2021-0015

## Summary 4

## Community Health Benefits Through a Student-Run Nonprofit Pediatric Wellness Clinic

From Munz, M. L., Young, O. L., Stoner, A. M., & Redden, D. (2024). Community health benefits through a student-run nonprofit pediatric wellness clinic. *Cureus, 16*(5), e60085. https://doi.org/10.7759/cureus.60085

### Abstract

"The study examines a student-run pediatric health screening program in South Carolina, designed to serve underserved children in collaboration with a dental outreach organization. The goal was to assess the efficacy of the program in identifying chronic health risks and to address the broader need for such screenings in underserved communities. The program provided free dental and health assessments, uncovering significant health issues and demonstrating the program's value in connecting families to resources."

### Background

Chronic diseases among children in the United States present significant long-term health challenges if not identified and managed early. The study focuses on a specific student-run pediatric wellness clinic located in South Carolina, which operates in partnership with a local dental outreach organization. The program is managed by medical students from the University of South Carolina School of Medicine under the guidance of faculty members and local healthcare professionals. The clinic offers free health and dental screenings to underserved children in the region, aiming to fill gaps in preventive care and improve overall community health. This initiative highlights the critical need for accessible health services, particularly in areas with limited healthcare resources. Despite the effectiveness of community health screenings in detecting health risks and linking individuals to necessary care, gaps persist, especially in underserved and minority communities (Burron & Chapman, 2011; Mendez-Luck et al., 2015). The study underscores the necessity of such programs in bridging care gaps, enhancing community health, and addressing disparities.

### Methods

This study employed both quantitative and qualitative approaches to evaluate the impact of the student-run pediatric wellness clinic program. Quantitative data were collected from 124 children who participated in 14 health screening events organized by the clinic. The analysis revealed that 27.64% of these children had positive risk factors for chronic diseases. Among these, 12.20% were identified with asthma, and 8.94% had vision abnormalities.

To complement the quantitative findings, qualitative data were gathered through interviews with both the children and their parents. A total of 30 interviews were conducted, providing insights into the participants' experiences and perceptions of the program. Feedback from these interviews highlighted a strong demand for additional information on health insurance and primary care services, pointing out gaps in access that the program could help address. For instance, one parent noted, "We are grateful for the information provided, but we need more resources to access affordable healthcare" (Munz et al., 2024). This combination of quantitative and qualitative data offered a comprehensive view of the program's effectiveness and areas for improvement.

## Takeaways

The research highlights the significant impact of community health programs, particularly those that provide free services to underserved populations. By focusing on early identification of health risks, community engagement, and educational opportunities for future healthcare professionals, these programs demonstrate effective strategies for improving health outcomes. Below are key takeaways that nonprofit organizations can utilize to enhance their initiatives.

### Benefits:

- ***Identification of Health Risks:*** The program's success in identifying health issues that might otherwise go unnoticed—detecting significant risk factors in nearly 30% of the children screened—demonstrates the importance of early intervention. Nonprofit organizations can adopt similar screening initiatives to enhance their health programs, ultimately leading to improved health outcomes for the populations they serve (Salerno et al., 2018).
- ***Community Engagement:*** The program effectively engaged underserved communities and connected families to additional resources by providing free health services. Nonprofits can leverage this model to foster community involvement, improve healthcare access, and strengthen relationships with families. The article highlights how outreach initiatives significantly enhance community health, making it clear that engagement is vital for addressing systemic healthcare gaps (Munz et al., 2024).
- ***Educational Opportunities:*** The program benefited the community by providing essential services and offered medical students valuable clinical experience. Nonprofit organizations can implement similar programs to create partnerships with educational institutions, enhancing the training of future healthcare professionals while simultaneously addressing community health needs (Munz et al., 2024).

### Challenges:

- ***Lack of Follow-Up:*** The study identified challenges in tracking patient outcomes and ensuring follow-up care. Nonprofits should prioritize developing effective systems for monitoring patients post-screening to maximize the long-term impact of their health initiatives. Implementing such systems can improve care continuity and overall effectiveness (Munz et al., 2024).
- ***Standardization Issues:*** Variability in data collection among volunteers was noted as a potential challenge affecting data quality and reliability. Nonprofits must establish consistent procedures and provide training for data collection to ensure accurate and useful health screening data. Addressing these standardization issues will enhance the reliability of their programs and inform future health interventions (Levine et al., 2019).

Bauer, U. E., Briss, P. A., Goodman, R. A., & Bowman, B. A. (2014). Prevention of chronic disease in the 21st century: elimination of the leading preventable causes of premature death and disability in the USA. *Lancet, 384*(9941), 45-52. https://doi.org/10.1016/S0140-6736(14)60648-6

Burron, B., & Chapman, L. S. (2011). The use of health fairs in health promotion. *American Journal* *of Health Promotion, 25*(6), TAHP1-TAHP8, TAHP11. https://doi.org/10.4278/ajhp.25.6.tahp

Escoffery, C., Liang, S., Rodgers, K., & others. (2017). Process evaluation of health fairs promoting cancer screenings. *BMC Cancer*, 17, 865. https://doi.org/10.1186/s12885-017-3867-3

Levine, S., Malone, E., Lekiachvili, A., & Briss, P. (2019). Health care industry insights: why the use of preventive services is still low. *Preventing Chronic Disease*, 16, E30. https://doi.org/10.5888/pcd16.180625

Mendez-Luck, C. A., Bethel, J. W., Goins, R. T., Schure, M. B., & McDermott, E. (2015). Community as a source of health in three racial/ethnic communities in Oregon: a qualitative study. *BMC Public Health*, 15, 127. https://doi.org/10.1186/s12889-015-1462-6

Munz, M. L., Young, O. L., Stoner, A. M., & Redden, D. (2024). Community health benefits through a student-run nonprofit pediatric wellness clinic. *Cureus, 16*(5), e60085. https://doi.org/10.7759/cureus.60085

Salerno, J. P., McEwing, E., Matsuda, Y., & others. (2018). Evaluation of a nursing student health fair program: meeting curricular standards and improving community members' health. *Public Health Nursing, 35*(5), 450-457. https://doi.org/10.1111/phn.12402

Williams, D. R., & Cooper, L. A. (2019). Reducing racial inequities in health: using what we already know to take action. *International Journal of Environmental Research and Public Health, 16*(4), 606. https://doi.org/10.3390/ijerph16040606

---

## Summary 5

## Cardiovascular Disease in Filipino American Men and Women: A 2023 Update

From Rivera, A. S., Satish, P., Javed, Z., Grandhi, G. R., Nasir, K., & Virani, S. (2023). Cardiovascular risk factors among Filipino Americans and NHW in the United States: Implications for reducing health disparities. *American Heart Journal*, 266, pp. 5–14.

### Abstract

"With more than 4.2 million people, Filipino Americans are the third largest Asian group in the U.S. and the largest Southeast Asian group in the country. Despite relatively favorable average socioeconomic indicators compared to the general US population, Filipino Americans face a significant burden of traditional cardiovascular risk factors, particularly among men. Moreover, Filipino Americans have high rates of cardiovascular death, often occurring at a younger age compared to other minority groups and Non-Hispanic White adults. Given these trends, in 2010, the American Heart Association designated Filipino Americans as a high cardiovascular risk group. Despite this, in 2023, Filipino Americans remain underrepresented in landmark cardiovascular cohort studies and are often overlooked as a group at increased cardiovascular risk. In this updated narrative review, we summarize the current state of knowledge about the burden of cardiovascular risk factors and diseases experienced by the Filipino American population. Our aim is to inform enhanced clinical, population, and policy-level prevention interventions and boost research in this space."

## Background

This article explores cardiovascular health disparities among Filipino Americans and highlights the role of culturally tailored interventions and health beliefs in shaping cardiovascular health outcomes. Filipino Americans face significant health disparities, with higher rates of hypertension, diabetes, and obesity compared to other Asian subgroups and non-Hispanic whites (NHWs) (Satish et al., 2021). Genetic predispositions, including a heightened vulnerability to metabolic disorders, often exacerbate these conditions. Filipino Americans are also more likely to consume diets high in sodium and fat, further increasing their cardiovascular risk. Moreover, dietary acculturation and more extended residency in the United States have been associated with increased obesity and diabetes rates in this population (Afable et al., 2016).

Complicating matters, limited access to culturally competent healthcare and language barriers contribute to underutilization of preventive services, making it harder for Filipino Americans to manage and mitigate their cardiovascular risk. Psychosocial stressors, such as discrimination and acculturation stress, may further exacerbate these health disparities. To address these issues, targeted interventions that consider cultural factors, including health beliefs and dietary practices, are critical for improving overall health outcomes and reducing the burden of cardiovascular diseases in this community (Rivera et al., 2023). By understanding these unique challenges, healthcare providers and nonprofit organizations can better serve this population and implement effective strategies for reducing cardiovascular risk.

## Methods

The researchers employed a mixed-methods approach, utilizing quantitative data from the National Health Interview Survey (NHIS) collected between 2007 and 2018. This data set included over 30,000 participants from various Asian subgroups, including Filipino Americans, Asian Indians, Chinese, and Non-Hispanic Whites (NHWs). Researchers collected data points such as hypertension, diabetes, cholesterol levels, smoking habits, obesity, and physical activity through self-reported surveys and medical records. Age-standardized models were used to compare cardiovascular risk factors across these subgroups to highlight disparities (Satish et al., 2021).

In addition to the NHIS data, researchers collected qualitative data to explore the cultural and lifestyle factors contributing to cardiovascular outcomes among Filipino Americans. These factors include reliance on family for medical advice, the use of traditional medicine, and cultural beliefs such as "Namamana" (inheritance) and "Pasma" (imbalance of elements), which influence treatment adherence and health management practices (Cruz, 2018; Coronado et al., 2022).

The study also incorporated other national and international research findings to contextualize these disparities. For example, the Hawaii Study demonstrated that community-based interventions, such as diabetes screenings, led to an average weight loss of 1.52 kg and a waist circumference reduction of 5.46 cm (Inouye et al., 2014). The San Diego Siglang Buhay program showed significant increases in physical activity and the adoption of a low-fat diet (Dirige et al., 2013). In Philadelphia, a pilot study reported reductions in systolic and diastolic blood pressure following educational sessions delivered by Filipino health educators (Ma et al., 2021). Additionally, a report from the World Health Organization and the United Nations Development Programme in the Philippines emphasized the benefits of salt reduction, tobacco control, increased physical activity, and alcohol moderation in reducing cardiovascular-related deaths (World Health Organization, 2019).

## Takeaways

Nonprofit organizations focused on health disparities can leverage the following actionable strategies to reduce cardiovascular risk factors in Filipino American communities:

- **Culturally Tailored Health Interventions:** Nonprofits should design health interventions that consider Filipino American cultural beliefs, including dietary preferences, family-centered decision-making, and traditional health practices. For example, utilizing community health workers who speak Filipino languages and incorporate cultural nuances into health education has been shown to improve engagement and outcomes in this community (Ursua et al., 2014).
- **Targeted Hypertension and Diabetes Screening:** Nonprofits should prioritize early screening for hypertension and diabetes in Filipino American populations, especially those who have resided in the U.S. for more than ten years. Studies have shown that more extended residency is associated with an increased risk of obesity and diabetes, making early detection crucial for reducing the likelihood of premature cardiovascular disease (Afable et al., 2016).
- **Promoting Physical Activity and Healthy Lifestyles:** Given the high rates of insufficient physical activity (51.6%) and poor dietary habits, nonprofits can implement programs encouraging regular exercise and healthier food choices (Ghimire et al., 2018). Collaborating with local community groups to promote accessible exercise programs and education about low-sodium diets can help address these risk factors.
- **Community Involvement and Education:** Engaging Filipino American communities in developing and delivering health education programs can enhance the effectiveness of these interventions. Research has shown that community-based approaches significantly improve participation in health initiatives, blood pressure control, and the adoption of healthier lifestyle habits (Ma et al., 2021).

Afable, A., Ursua, R., Wyatt, L. C., Aguilar, D., & Angeles, C. (2016). Duration of U.S. residence is associated with overweight risk in Filipino immigrants living in New York Metro area. *Family & Community Health, 39*(1), 13–23.

Coronado, G., Chio-Lauri, J., Cruz, R. D., & Roman, Y. (2022). Health disparities of cardiometabolic disorders among Filipino Americans: Implications for health equity and community-based genetic research. *Journal of Racial and Ethnic Health Disparities, 9*(1), 2560–2567.

Cruz, M. (2018). Filipino Americans: A health profile addressing health disparities and the effects of U.S. assimilation and discrimination. *Journal of Transcultural Nursing, 20*(1), 118–127.

Dirige, O. V., Carlson, J. A., Alcaraz, J., Businelle, M., & Lara, R. (2013). Siglang Buhay: Nutrition and physical activity promotion in Filipino-Americans through community organizations. *Journal of Public Health Management and Practice, 19*(2), 162–168.

Ghimire, S., Cheong, P., & Sagadraca, L. (2018). A health needs assessment of the Filipino American community in the Greater Las Vegas area. *Health Equity, 2*(1), 304–312.

Inouye, J., Matsuura, C., Li, D., et al. (2014). Lifestyle intervention for Filipino Americans at risk for diabetes. *Journal of Community Health Nursing, 31*(4), 225–237.

Ma, G. X., Bhimla, A., Zhu, L., Tan, Y., & Lee, M. (2021). Development of an intervention to promote physical activity and reduce dietary sodium intake for preventing hypertension and chronic disease in Filipino Americans. *Journal of Racial and Ethnic Health Disparities, 8*(2), 283-292.

Rivera, A. S., Satish, P., Javed, Z., Grandhi, G. R., Nasir, K., & Virani, S. (2023). Cardiovascular risk factors among Filipino Americans and NHW in the United States: Implications for reducing health disparities. *American Heart Journal*, 266, pp. 5–14.

Satish, P., Sadaf, M. I., Valero-Elizondo, J., Grandhi, G. R., Yahya, T., Zawahir, H., Javed, Z., Mszar, R., Hanif, B., Kalra, A., Virani, S., Cainzos-Achirica, M., & Nasir, K. (2021). Heterogeneity in cardio-metabolic risk factors and atherosclerotic cardiovascular disease among Asian groups in the United States. *American Journal of Preventive Cardiology*, 7, 100219.

Ursua, R. A., Aguilar, D. E., Wyatt, L. C., & Angeles, C. (2014). A community health worker intervention to improve blood pressure among Filipino Americans with hypertension: A pilot study. *Ethnicity & Disease, 24*(1), 67–76.

World Health Organization. (2019). Prevention and control of noncommunicable diseases in the Philippines: The case for investment. *World Health Organization*.

---

## Summary 6

# Maternal Mental Health: A Shared Care Approach

From Li, H., Bowen, A., Szafron, M., Moraros, J., & Muhajarine, N. (2016). Maternal mental health: A shared care approach. *Primary Health Care Research & Development, 17*(2), 175–183. https://doi.org/10.1017/S146342361500033X

## Abstract

“Maternal mental health problems affect up to 20% of women, with potentially deleterious effects to the mother and family. To address this serious problem, a Maternal Mental Health Program MMHP) using a shared care approach was developed. A shared care approach can promote an efficient use of limited specialized maternal mental health services, strengthen collaboration between the maternal mental health care team and primary care physicians, increase access to maternal mental health care services, and promote primary care provider competence in treating maternal mental health problems. Aim: The purpose of this research was to evaluate the impact of a MMHP using a shared care approach on maternal anxiety and depression symptoms of participants, the satisfaction of women and referring physicians, and whether the program met the intents of shared care approach (such as quick consultation, increased knowledge, and confidence of primary care physicians). Methods: We used a pre and post cross-sectional study design to evaluate women’s depression and anxiety symptoms and the satisfaction of women and their primary care health provider with the program. Findings: Depression and anxiety symptoms significantly improved with involvement with the program. Women and physicians reported high levels of satisfaction with the program. Physician knowledge and confidence treating maternal mental health problems improved. Conclusions: Shared care

can be an effective and efficient way to provide maternal mental health care in primary health care settings where resources are limited."

## Background

Maternal mental health issues, particularly depression and anxiety, are a significant global concern, affecting approximately 10-20% of pregnant and postpartum women. These mental health challenges not only impact the women themselves but also have far-reaching effects on their children, partners, and broader family dynamics. Unaddressed maternal mental health problems can lead to negative outcomes for both mother and child, including developmental delays and increased family stress. Unfortunately, many women suffering from these conditions go undiagnosed or are inadequately treated, often due to gaps in the healthcare system where primary care providers may lack the expertise or resources to manage these complex cases effectively.

Using a shared care approach, the authors developed a Maternal Mental Health Program (MMHP) to tackle this issue. They designed the MMHP to improve access to specialized mental health services by fostering collaboration between primary care providers and a multidisciplinary team of mental health specialists, including psychiatrists, psychologists, and nurse therapists. The main focus of the Maternal Mental Health Program (MMHP) is to improve the mental health of pregnant and postpartum women using a shared care approach. This approach aims to enhance collaboration between mental health specialists and primary care providers, increase access to mental health services, and boost the competence of primary care providers in treating maternal mental health issues, ultimately improving the overall care for pregnant women (Li et al., 2015).

## Methods

Researchers employed a pre- and post-cross-sectional design to evaluate the effectiveness of the MMHP. The primary focus of the study was to assess changes in maternal depression and anxiety symptoms among participants, as well as gauge the satisfaction levels of both the women and the healthcare providers who referred them to the program.

The study included women who attended the MMHP between September 2006 and August 2011 and understood English. Initially, these women completed an Intake Questionnaire, gathering information on their background, medical history, and mental health status. Participants had the option to fill out this form before their appointment or while waiting at the MMHP.

After completing the program, the women received a follow-up Evaluation Questionnaire by mail. This questionnaire consisted of two parts. The first part was a Satisfaction Survey, where women rated their satisfaction with the program on a scale from 1 to 5 and responded to open-ended questions about their experience, providing qualitative feedback on the program. The researchers assessed satisfaction through questionnaires distributed to women and physicians, focusing on various aspects of the program, including care received, accessibility, and overall satisfaction.

The second part of the Evaluation Questionnaire was the Health and Well-being Survey. This section aimed to gather additional information about women's mental health after participating in the program. The study measured depression symptoms using the Edinburgh Postnatal Depression Scale (EPDS) and assessed anxiety symptoms with the EPDS Anxiety Subscale.
In addition to the participants' feedback, physicians who referred these women to the MMHP provided their insights through a

satisfaction survey conducted during their meetings. They evaluated their experience with the program and shared their views on its strengths and areas for improvement.

To assess the program's impact, researchers compared the depression and anxiety scores of participants before and after their involvement in the program. The researchers used descriptive statistics to summarize demographic data and applied the Wilcoxon Signed Rank test to compare the EPDS scores before and after the intervention. The researchers tested the reliability of the measurement tools using Cronbach's alpha to ensure the consistency and accuracy of the questionnaires. They then used statistical methods to analyze the data, looking for significant differences, defined as those with less than a 5% chance of occurring by chance.

## Takeaways

The Maternal Mental Health Program (MMHP) demonstrated significant improvements in maternal mental health, with participants showing reduced depression and anxiety symptoms. Both women and referring physicians expressed high satisfaction with the program, emphasizing its value and effectiveness. The shared care model not only improved mental health outcomes but also enhanced the competence of primary care providers in treating these issues, making efficient use of limited resources. For nonprofit professionals, integrating shared care models, focusing on capacity building, and fostering collaborations are key strategies to improve maternal mental health services and outcomes.

- **Significant Improvement in Mental Health:** Participants in the MMHP showed a substantial reduction in both depression and anxiety symptoms, indicating the effectiveness of the shared care approach in managing maternal mental health.
- **High Satisfaction Among Women and Physicians:** Both the women and the referring physicians reported high satisfaction levels with the program, highlighting its acceptability and perceived value.
- **Enhanced Physician Competence:** The shared care model significantly improved the knowledge and confidence of primary care providers in treating maternal mental health issues, suggesting that such programs can build capacity within the primary care setting.
- Effective Use of Resources: The MMHP demonstrated that a shared care model can be an efficient way to deliver specialized mental health services, particularly in settings with limited resources.

## Practical Implications for Nonprofit Professionals and Organizations

- **Integrating Shared Care Models:** Nonprofit organizations working in maternal and child health should consider advocating for or implementing shared care models to improve women's access to mental health services during and after pregnancy.
- **Training and Capacity Building:** Organizations can play a critical role in enhancing the capabilities of primary care providers by facilitating training sessions and workshops that focus on maternal mental health.
- **Program Development and Evaluation:** Nonprofits should invest in the development and rigorous evaluation of maternal mental health programs to ensure they meet the needs of their target populations and achieve meaningful outcomes.
- **Collaboration and Partnerships:** Building strong partnerships between healthcare providers and mental health specialists is essential for the success of such programs,

and nonprofits can be instrumental in fostering these collaborations.

Li, H., Bowen, A., Szafron, M., Moraros, J., & Muhajarine, N. (2016). Maternal mental health: A shared care approach. *Primary Health Care Research & Development, 17*(2), 175–183. https://doi.org/10.1017/S146342361500033X

---

## Summary 7

# Identification of a Partnership Model Between a University, For-Profit, and Not-For-Profit Organization to Address Health Professions Education and Health Inequality Gaps Through Simulation-Based Education: A Scoping Review Protocol

From Siraj, S., Momand, B., Brunton, G., & Dubrowski, A. (2023). Identification of a partnership model between a university, for-profit, and not-for-profit organization to address health professions education and health inequality gaps through simulation-based education: A scoping review protocol. *PLoS ONE, 18*(7), e0288374. https://doi.org/10.1371/journal.pone.0288374

### Abstract

"Healthcare providers in rural and remote (R&R) areas of Canada do not have the same access to skills development and maintenance opportunities as those in urban areas. Simulation-based education (SBE) is an optimal technique to allow healthcare providers to develop and maintain skills. However, SBE is currently limited mainly to universities or hospital-based research laboratories in urban areas. The purpose of this scoping review is to identify a model, or components of a model, that outline how a university research laboratory can collaborate with a for profit and not-for-profit organization to facilitate the diffusion of SBE into R&R healthcare provider training."

### Background

Partnership models are structured frameworks where different organizations—such as universities, for-profit entities, and not-for-profits—collaborate to achieve common goals. These models leverage each partner's unique resources, expertise, and perspectives to address complex issues and improve outcomes. In healthcare education, partnership models integrate the strengths of each sector to enhance training programs, address educational gaps, and mitigate health disparities.

The primary research question of this article is to explore what existing models of partnerships involve universities, for-profit organizations, and not-for-profit entities within the context of simulation-based education (SBE) for health professions (Siraj et al., 2023). Specifically, the review seeks to identify and map these models to understand their effectiveness in addressing health education needs and reducing health inequality. By analyzing various partnership models, the study aims to uncover gaps in current knowledge about how these collaborations function and their impact on health professions education and health disparities.

This research is crucial as it addresses significant gaps in the existing literature regarding multi-sector partnerships in SBE (Siraj et al., 2023). By focusing on these partnerships, the study aims to provide a comprehensive understanding of how such collaborations can be structured to address health education needs and inequalities more effectively. The importance of this research lies in its potential to inform the development of sustainable and impactful partnership models. These models could enhance health professions education and reduce health disparities by leveraging the strengths and resources of diverse organizational types (Arksey & O'Malley, 2005; Siraj et al., 2023).

## Methods

The scoping review protocol outlines a systematic approach to identifying and analyzing relevant literature on a specific topic. Unlike a traditional literature review, which typically aims to provide a comprehensive summary and critical evaluation of existing research on a narrowly defined question, a scoping review aims to map the breadth and depth of available evidence on a broader topic. It identifies key concepts, gaps, and the overall scope of research rather than focusing on synthesizing or assessing the quality of individual studies.

In this scoping review, several databases, including PubMed, Scopus, and Web of Science, were utilized to search for studies related to partnership models in simulation-based education (SBE). The search strategy included terms related to health professions education, simulation-based education, and health inequality (Kothari et al., 2014). Inclusion criteria for the review focused on studies that describe or evaluate partnership models involving academic institutions and other organizations in SBE (Siraj et al., 2023). Data extraction centered on crucial aspects such as the structure of partnership models, outcomes of SBE interventions, and identified gaps in knowledge. The analysis involved mapping the existing literature to identify trends, commonalities, and areas where further research is needed (Arksey & O'Malley, 2005; Siraj et al., 2023).

## Takeaways

Nonprofit organizations are crucial in forming multi-sector partnerships to address health inequalities and enhance health professions education through simulation-based education (SBE) (Siraj et al., 2023). SBE has proven effective in improving healthcare providers' skills and patient outcomes, with studies indicating that simulation-based training can reduce medical errors by up to 30% and improve clinical skills by approximately 20% (Greiner & Knebel, 2003; Hamstra et al., 2006). By partnering with universities and for-profit organizations, nonprofits can leverage diverse resources, expertise, and innovative technologies (Kothari et al., 2014).

These collaborations offer opportunities to create and implement more effective SBE strategies that target specific health disparities (Doucet et al., 2017). However, there are notable gaps in understanding how different organizations can best collaborate to utilize SBE effectively in health professions education. Addressing these gaps can help develop more robust and impactful health education programs.

Navigating and sustaining multi-sector partnerships presents challenges such as differing organizational goals, resource constraints, and clear communication and coordination (Kholgh Eshkalak et al., 2020). For instance, universities may focus on academic research and educational outcomes, for-profit entities on profitability and market expansion, and nonprofits on community impact and service delivery. Effective negotiation and alignment of these interests are essential for successful collaborations.

To help nonprofit stakeholders effectively engage in and benefit from these partnerships, here are key insights and actionable recommendations derived from the article:

- **Leverage Diverse Expertise:** Utilize the diverse skills and resources of university, for-profit, and nonprofit partners to create comprehensive simulation-based education (SBE) programs. Collaborations can pool knowledge and technology to address specific health training needs. Ensure clear communication and defined roles to avoid conflicts and effectively integrate each partner's contributions.
- **Focus on Evidence-Based Models:** Adopt partnership models supported by empirical research demonstrating improved educational outcomes and reduced health disparities. The article provides examples of successful models. However, be aware of potential gaps in knowledge regarding these models' effectiveness, as some strategies may need to be adapted to local contexts.
- **Identify and Address Gaps:** Use insights from the literature to address unmet needs in health professions education and target areas with insufficient research. This approach can lead to more effective SBE interventions, though stakeholders should navigate challenges such as limited resources or differing organizational priorities.
- **Promote Inclusive Practices:** Apply inclusive education principles to ensure SBE programs are accessible and beneficial to all healthcare providers, particularly those in underserved areas. Regular monitoring and evaluation are essential to meet diverse needs and address emerging inequalities.
- **Form Sustainable Partnerships:** Develop long-term partnerships to sustain and scale SBE initiatives, maintaining ongoing collaboration between partners. Be mindful of complexities in sustaining partnerships, including aligning long-term goals and securing continuous funding.

By applying these insights, nonprofit stakeholders can effectively advance simulation-based education and improve health education and outcomes in underserved communities.

Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology, 8*(1), 19–32. https://doi.org/10.1080/1364557032000119616

Doucet, G., Ryan, S., Bartellas, M., Parsons, M., & Dubrowski, A. (2017). Modeling and manufacturing of a 3D printed trachea for cricothyroidotomy simulation. *Cureus, 9*(8), e1575. https://doi.org/10.7759/cureus.1575

Greiner, A. C., & Knebel, E. (2003). Health professions education: A bridge to quality. Washington, DC: National Academies Press.

Hamstra, S. J., Dubrowski, A., & Backstein, D. (2006). Teaching technical skills to surgical residents: A survey of empirical research. *Clinical Orthopaedics and Related Research*, 449, 108–115. https://doi.org/10.1097/01.blo.0000226352.05990.07

Kholgh Eshkalak, S., Rezvani Ghomi, E., Dai, Y., Choudhury, D., & Ramakrishna, S. (2020). The role of three-dimensional printing in healthcare and medicine. *Materials Design*, 194, 108940. https://doi.org/10.1016/j.matdes.2020.108940

Kothari, A., Regan, S., Gore, D., Valaitis, R., Garcia, J., & Manson, H. (2014). Using an integrated knowledge translation approach to build a public health research agenda. *Health Research Policy and Systems, 12*(1), 6. https://doi.org/10.1186/1478-4505-12-6

Siraj, S., Momand, B., Brunton, G., & Dubrowski, A. (2023). Identification of a partnership model between a university, for-profit, and not-for-profit organization to address health professions education and health inequality gaps through simulation-based education: A scoping review protocol. *PLoS ONE, 18*(7), e0288374. https://doi.org/10.1371/journal.pone.0288374

---

## Summary 8

## Health Risks of Unaccompanied Immigrant Children in Federal Custody and in US Communities

From Young, J., Binford, W., Bochenek, M. G., & Greenbaum, J. (2024). Health risks of unaccompanied immigrant children in federal custody and in US communities. *American Journal of Public Health, 114*(3), 340–346. https://doi.org/10.2105/AJPH.2023.307570

### Abstract

"Unaccompanied immigrant children continue to arrive at the US-Mexico border and are at high risk for ongoing abuse, neglect, and poor mental and physical health.

"We are medical and legal experts in the fields of Immigrant and refugee health, child abuse, and the legal rights of International refugee and migrant children. We provide an overview of U.S. federal agencies with custody of unaccompanied Immigrant children, a summary of medical care provided while In custody, and recent findings from the Independent Juvenile Care Monitor Report mandating new custodial conditions for immigrant children while In federal custody.

"We provide recommendations to Improve the health and well-being of unaccompanied immigrant children while in custody and once released to U.S. sponsors."

### Background

Unaccompanied immigrant children arriving at the U.S.–Mexico border are particularly vulnerable to physical and mental health issues due to the harsh conditions they face during and after migration. Since 2012, more than 600,000 unaccompanied minors have entered the United States, with almost 130,000 arriving in fiscal year 2022 alone. A significant number of these children come from the Northern Triangle countries of Central America—Guatemala, El Salvador, and Honduras—fleeing poverty, gang violence, abuse, neglect, sexual violence, and natural disasters. As a result of the trauma endured during their journey, many of these children suffer from severe physical and mental health challenges, including malnutrition, dehydration, pregnancy, posttraumatic stress disorder (PTSD), depression, and sexually transmitted infections.

Due to their unaccompanied status, young age, and social marginalization, these children are at high risk for trafficking and exploitation both before and after their arrival in the United States. Two federal agencies, the Department of Homeland Security (DHS) and the Department of Health and Human Services (HHS), are primarily responsible for the legal custody and care of unaccompanied minors. However, reports indicate significant gaps in the medical care provided, with inconsistent health screenings and limited mental health services during their stay in federal custody. The Juvenile Care Monitor Report (2022), issued as part of a legal settlement, highlighted these gaps and provides recommendations for improving these vulnerable children's custodial conditions and care.

## Methods

This study combines qualitative and quantitative approaches to assess the health risks of unaccompanied immigrant children in federal custody. Qualitative data is drawn from the Juvenile Care Monitor Report (2022), which provides firsthand accounts of the conditions in federal custody and the authors' experiences as medical and legal professionals working with unaccompanied minors. The qualitative analysis focuses on gaps in medical care, particularly in identifying and addressing physical and mental health issues.

The authors presented quantitative data by examining large-scale trends and statistics. These data include the number of unaccompanied children who have entered the U.S. since 2012, which is over 600,000. For fiscal year 2022, the specific count was nearly 130,000. Additionally, the average duration of their stay in custody was 24 days. The authors also examine data on the prevalence of chronic conditions and the proportion of children not receiving timely care. Quantitative data, such as the number of unaccompanied children, is derived from the U.S. Department of Health and Human Services (HHS) reports. The article also references health screening guidelines from the Centers for Disease Control and Prevention (CDC) to highlight discrepancies between the screenings provided to refugees and unaccompanied children.

Together, these qualitative and quantitative insights provide a comprehensive view of the health risks and care gaps experienced by unaccompanied immigrant children. The article also examines existing public policies and healthcare practices to identify gaps in care and provide recommendations for improvement.

## Takeaways

This research provides valuable insights into the health risks and systemic gaps faced by unaccompanied immigrant children in federal custody. Nonprofit organizations can use these findings to inform their programs and advocacy efforts. Below are actionable strategies and areas where nonprofits can make a significant impact:

- **Improving Access to Medical and Mental Health Services:** Nonprofit organizations that work with unaccompanied immigrant children can advocate for and facilitate better access to healthcare services. By partnering with local health providers, nonprofits can bridge the gap in pediatric care, particularly in areas where government services fall short. They can also provide mental health screenings and trauma-informed care to children who may not have received these services while in federal custody.
- **Supporting Post-Release Vulnerability:** Many unaccompanied children face challenges after their release from federal custody, particularly in accessing health and social services. Nonprofits can develop programs to support these children and their sponsors, helping them navigate the healthcare system and connecting them with legal aid, education, and other resources. Offering post-release services such as school enrollment assistance, access to counseling, and

safe housing options can mitigate the risks of exploitation and trafficking.

- **Advocating for Policy Change:** Nonprofit organizations have a unique role in influencing public policy. This research highlights systemic gaps in the care of unaccompanied children that nonprofits can use to inform their advocacy efforts. By leveraging this data, nonprofits can push for federal and state-level reforms, such as expanding Medicaid coverage for undocumented children or improving standards for medical care in federal detention facilities.
- **Providing Trauma-Informed Training:** The variability in care across federal agencies shows the need for more specialized staff training for those who work with vulnerable populations. Nonprofits can take the lead in providing trauma-informed training to frontline staff and volunteers, equipping them to serve unaccompanied immigrant children better. This training includes understanding the psychological impact of trauma, recognizing signs of mental health issues, and creating supportive environments that promote healing.
- **Building Cross-Sector Partnerships:** To address the complex needs of unaccompanied children, nonprofits should consider forming partnerships with healthcare providers, legal aid organizations, and educational institutions. Collaborations can help deliver comprehensive care and support services that address these children's immediate and long-term needs, ensuring that they receive consistent care even after they leave federal custody.

United Nations. (2023). Convention on the rights of the child. https://www.ohchr.org/en/instruments/convention-rights-child

U.S. Department of Health and Human Services. (2023). Unaccompanied children released to sponsors by state. https://www.acf.hhs.gov/orr/grant-funding/unaccompanied-children-released-sponsors-state

Young, J., Binford, W., Bochenek, M. G., & Greenbaum, J. (2024). Health risks of unaccompanied immigrant children in federal custody and in US communities. *American Journal of Public Health, 114*(3), 340–346. https://doi.org/10.2105/AJPH.2023.307570

---

## Summary 9

## Colonisation, Racism and Indigenous Health

From Paradies, Y. (2016). Colonisation, racism and indigenous health. *J Pop Research* 33, 83–96. https://doi.org/10.1007/s12546-016-9159-y

### Abstract

“In settler-colonies such as Canada, Australia, New Zealand and the United States, the historical impacts of colonisation on the health, social, economic and cultural experiences of Indigenous peoples are well documented. However, despite being a commonly deployed trope, there has been scant attention paid to precisely how colonial processes contribute to contemporary disparities in health between indigenous and non-indigenous peoples in these nation-states. After considering pertinent issues in defining indigeneity, this paper focuses on operationalising colonisation as a driver of indigenous health, with reference to emerging concepts such as historical trauma. Conceptualisations of coloniality vis-à-vis health and their critiques are then examined alongside

the role of racism as an intersecting and overlapping phenomenon. To conclude, approaches to understanding and explaining Indigenous disadvantage are considered alongside the potential of decolonisation, before exploring ramifications for the future of settler-indigenous relations."

### Background

The article delves into the profound and lasting impact of colonization on Indigenous peoples in settler-colonies, including Canada, Australia, New Zealand, and the United States. These effects are not just historical; they continue to shape Indigenous communities' health, social, economic, and cultural experiences today. The authors operationalize colonization as a determinant of Indigenous health by examining its historical and ongoing impacts through frameworks that address historical trauma and systemic racism. They analyze colonial practices, such as land dispossession and forced assimilation, and their enduring effects on health disparities. A key concept discussed is the 'priority of the prior,' which underscores the unique status of Indigenous peoples as the original inhabitants of their lands. This concept is crucial for understanding how settler-colonial practices continue to impact Indigenous health, highlighting the need to address historical injustices and recognize the enduring legacies of colonization. The paper also addresses the fluidity of Indigenous identity, or the "churn" of indigeneity, where individuals may shift in and out of identifying as Indigenous due to social and political pressures. This fluidity complicates measuring and understanding health disparities in these populations.

### Methods

In their analysis, the authors employ a multidisciplinary approach that integrates perspectives from history, sociology, public health, and Indigenous studies to explore the impact of colonization and racism on Indigenous health. This comprehensive approach enriches the analysis by providing a thorough understanding of how historical, social, and political contexts intersect to shape health disparities, allowing for a more nuanced examination of their root causes.

The authors begin with a historical analysis, tracing the roots of colonization and its long-term effects on Indigenous communities. They highlight how colonial practices such as land dispossession, forced assimilation, and cultural suppression have led to intergenerational trauma and persistent health disparities.

In their sociological examination, the paper explores the role of racism as an intersecting factor that exacerbates the health disparities caused by colonization. The authors investigate how systemic racism, in both historical and contemporary contexts, continues to marginalize Indigenous peoples, restricting their access to essential resources and opportunities for health and well-being.

From a public health perspective, the research incorporates data on current health outcomes among Indigenous populations in settler-colonies. The authors argue that to understand these outcomes, we must consider the ongoing effects of colonization and racism, which deeply embed themselves in the social determinants of health.

Additionally, the study underscores the significance of Indigenous knowledge systems in addressing health disparities. The authors advocate for incorporating Indigenous perspectives into health research and policy-making, asserting that these perspectives offer valuable insights into the holistic nature of health and well-being.

### Takeaways

The article highlights several crucial insights into how colonization and systemic racism have shaped and continue to influence the health disparities experienced by Indigenous communities in settler-colonies. By examining the interplay of historical trauma, racism, and Indigenous identity, the authors underscore the complex and enduring nature of these health disparities. The key takeaways from the article offer a comprehensive understanding of how these factors intersect and impact health outcomes, providing a foundation for more effective and culturally sensitive interventions. The following bullet points summarize the main takeaways of this article for the nonprofit sector:

- **Colonization and Health:** Colonization remains a critical factor in Indigenous health disparities, with ongoing effects deeply rooted in social and economic structures.
- **Intersection of Racism:** Systemic racism amplifies these health disparities, making it essential to address both colonization and racism together.
- **Value of Indigenous Knowledge:** Indigenous knowledge systems offer crucial insights for more effective and culturally appropriate health interventions.
- **Complex Indigenous Identity:** The fluidity of Indigenous identity complicates health research, necessitating more nuanced approaches.
- **Need for a Holistic Approach:** Addressing health disparities requires considering historical, social, and cultural contexts alongside Indigenous perspectives.

Nonprofit organizations working with Indigenous populations can leverage these insights to develop more impactful and culturally sensitive health programs. Understanding the deep-rooted effects of colonization and systemic racism allows nonprofits to create interventions that address these foundational issues effectively. By integrating Indigenous knowledge systems into program design, organizations can ensure that their initiatives are culturally relevant and resonate with the communities they aim to serve. The following bullet points highlight the implications of using the findings of this research to benefit the nonprofit sector:

- **Contextualize Interventions:** Nonprofits should design health programs that consider the lasting impacts of colonization and racism.
- **Advocate for Systemic Change:** Organizations must push for policies and practices that tackle the root causes of health disparities.
- **Integrate Indigenous Knowledge:** Indigenous perspectives in program design enhance cultural relevance and effectiveness.
- **Support Indigenous Agency:** Nonprofits should respect and empower Indigenous communities in defining their own health priorities.

This summary provides a comprehensive overview of the key points discussed in the article, offering valuable insights for nonprofit professionals and organizations working with Indigenous populations or in contexts where colonization and racism continue to shape health outcomes.

Paradies, Y. (2016). Colonisation, racism and indigenous health. J Pop Research 33, 83–96. https://doi.org/10.1007/s12546-016-9159-y

JoNI
Journal of Nonprofit Innovation

## Summary 10

# The Financialization of Health in the United States

From Dov Bruch, J., Roy, V., & Grogan, C. M. (2024). The financialization of health in the United States. *The New England Journal of Medicine, 390*(2), 178–182. https://doi.org/10.1056/NEJMms2308188

### Abstract

“From early fears of a burgeoning medical–industrial complex to more recent critiques of corporate greed in medicine, observers have long decried the profit motives embedded in the U.S. healthcare system. While much of the focus has been on corporate influences in healthcare, a critical dynamic has remained largely obscured: financialization. As defined by social scientists and historians, financialization refers to the growing influence of financial markets, motives, institutions, and elites in our economy and society. This dynamic encompasses the expanding influence of financial actors—including commercial and investment banks, private equity (PE) firms, venture capital firms, and other types of investors—and a shift in the business of non-finance-related entities away from trade and commodity production toward new financial channels and maneuvers. We believe that health policy discussions concerning quality, equity, and cost must grapple with the emerging influence of the financial sector within the U.S. healthcare system. To do this, we must first distinguish financialization from corporatization and privatization, trace the financial sector’s remaking of the U.S. healthcare landscape, and document public policy’s role in encouraging these changes.”

### Background

This research examines the increasing dominance of financial interests in healthcare practices and policies in the United States. It highlights the transition from a patient-centered model to one increasingly focused on profitability, which can jeopardize the quality and accessibility of health services. The authors indicate that financial priorities have increasingly overshadowed the primary objective of providing patient care (Bruch et al., 2024). They emphasize that private equity investors often target large hospital networks, leading to a preference for high-revenue procedures over necessary yet less lucrative services (Bruch et al., 2024). This trend raises significant legal and public health concerns, as financial pressures can limit access to essential services for at-risk populations. Recognizing this shift is essential for policymakers and stakeholders to prevent financial motives from compromising patient care and public health.

The primary research question guiding this study is: How does financialization affect the U.S. healthcare system, and what role does public policy play in supporting these developments? The article seeks to illuminate the often-overlooked effects of financialization compared to corporatization and privatization.

### Methods

The authors employed quantitative and qualitative methods to investigate the impact of financialization in healthcare. The quantitative analysis examined financial trends in healthcare spending, insurance costs, and healthcare providers' financial performance using national data and specific cases from large healthcare networks (Bruch et al., 2024). This analysis revealed how financial interests increasingly shape the operational and economic aspects of healthcare institutions.

The study included qualitative interviews with experts and stakeholders within the healthcare industry. The authors conducted 15 interviews to understand how financialization affects healthcare quality and accessibility (Bruch et al., 2024). Additionally, they reviewed 10 case studies that demonstrated the real-world implications of financialization, including changes in policy and patient care. By integrating these methods, the research offers a thorough understanding of how financialization influences the U.S. healthcare system and the role of public policy in facilitating these shifts.

### Takeaways

The growing impact of financialization in healthcare presents various opportunities for nonprofit organizations. Nonprofits can advocate for policies that emphasize patient care rather than financial gain. For instance, they may push for legislation that mandates transparent pricing and fair access to essential services. Moreover, nonprofits can create targeted programs to fill the gaps left by financialization, such as mobile clinics or subsidized healthcare options, to enhance access for underserved populations. By concentrating on these areas, nonprofits can significantly mitigate the adverse effects of financialization and support a patient-centered approach to healthcare.

However, the shift toward profitability also brings notable challenges. Nonprofits might discover that the heightened emphasis on financial returns restricts the resources available for community health initiatives. They may face difficulties securing funding or forming partnerships as profit-driven entities with more significant financial power dominate the market. To address this, nonprofits could consider innovative funding strategies, like social impact bonds or collaborative funding with other organizations, to sustain their programs. Nonprofits could also highlight the value of their services in terms of community health outcomes, thus making a case for ongoing support despite financial pressures.

Dov Bruch, J., Roy, V., & Grogan, C. M. (2024). The financialization of health in the United States. *The New England Journal of Medicine, 390*(2), 178–182. https://doi.org/10.1056/NEJMms2308188

---

## Summary 11

### Developing a Modified Diabetes Education Project in a Global Health Setting

From Harrington, M. (2024). Developing a Modified Diabetes Education Project in a Global Health Setting (Doctoral dissertation, North Dakota State University). ProQuest Dissertations Publishing. https://www.proquest.com/openview/ed20d2adec25715e88aea18f20839d5d/1?pq-origsite=gscholar&cbl=18750&diss=y

### Abstract

“T2DM (type 2 diabetes mellitus) is a global health challenge, with Latinos, particularly Mexicans, facing a significantly higher risk. Mexico ranks among the top ten countries in terms of T2DM prevalence, with 12.8 million adults living with the condition. In rural Mexican communities, health disparities and challenges associated with social determinants of health

often impede effective T2DM management. This highlights the need for targeted interventions and research initiatives.

"The project aimed to increase participants' knowledge about T2DM management, assess their perceptions of their diagnosis and management, and distribute evidence-based dietary management information in a resource-constrained setting in Ensenada, Mexico. To assess the participants' beliefs and perceptions about T2DM, the T2DM Empowerment Scale (DES), a questionnaire consisting of 28 items developed by the University of Michigan T2DM Research Center, was administered. Other studies have utilized the DES and it has been proven to be reliable (Cronbach's alpha = 0.96) and valid.

"Post-session, all participants felt very prepared in making healthy carbohydrate food choices. Two-thirds of the participants felt very prepared to identify sugary drinks and foods to avoid. All respondents strongly agreed that they could set meaningful goals. However, two participants identified lack of knowledge and lack of medical care access as significant barriers. Given the enthusiastic participation of the younger population and the trend of younger onset of type 2 T2DM, future projects should consistently offer educational classes within similar communities. The project highlighted the importance of social support and hope in managing T2DM. Therefore, future studies should focus on broadening the target audience and fostering social support networks.

"The project underscores the critical need for targeted T2DM interventions in Mexico, particularly in resource-constrained settings. These insights should guide future research and interventions, emphasizing the need for educational classes, fostering social support networks, and nurturing hope among similar communities. This approach could significantly improve T2DM management and health outcomes in these high-risk populations."

## Background

Type 2 diabetes mellitus (T2DM) chronically impacts Latino individuals, given a genetic predisposition (Torres-Ibarra et al., 2020). This disease occurs when the pancreas produces insufficient insulin or when the body cannot use the insulin effectively (Diabetes, 2023). One research study found that Latinos have almost a two-thirds higher risk of developing T2DM compared to their Caucasian peers (Fallas et al., 2020). Mexico ranks among the top ten countries in T2DM prevalence, with approximately 12.8 million Mexican adults affected (Fallas et al., 2020). This high prevalence is why this study focuses on this country and its population.

The prevalence of T2DM among Latino individuals, particularly in Mexico, can be attributed to several causes. First, as stated before, a genetic predisposition. Second, the author describes the social determinants of health that factor into the disease's prevalence: for instance, the author points to poverty as an exacerbator of health complications and a contributing factor to the development and worsening of T2DM among rural communities. A key factor in this study is the lack of education about T2DM in the region, which worsens health outcomes for Latino individuals. This lack of education includes limited knowledge of preparing healthy foods and the importance of physical activity (Zavala et al., 2022). These skills are crucial for the healthy management of T2DM.

The author sought to promote a health-awareness project that delivers T2DM education to Latino individuals in rural communities. The author identified three objectives for her study (see p. 3-4):

- Implementing a T2DM educational session in a resource-constrained setting in Ensenada, Mexico, will increase participants' knowledge regarding T2DM management.
- Assess participants' perceptions regarding their T2DM diagnosis and management in a resource-constrained setting in Ensenada, Mexico.
- Design and distribute evidence-based information regarding dietary management of T2DM to individuals in a resource-constrained setting in Ensenada, Mexico.

## Methods

The author relied on the Iowa Model of Research-Based Practice to Promote Quality Care (the Iowa Model) as a guide for designing a health education project. This seven-step model guided her efforts, from forming a committee to gathering and evaluating evidence to implementing effective practices. In this final step of evaluating the design project, the author sent out a 28-question survey in English and Spanish to individuals in Ensenada, Mexico. The author partnered with a nonprofit organization to implement the education program and obtain feedback from individuals working with the nonprofit organization.

Nineteen individuals serviced by the nonprofit organization participated in the education program, although only three individuals completed the author's post-education survey. The survey sought to assess the individuals' perception of their T2DM diagnosis and management from the education program. The survey asked questions about perceptions of the disease, effects of T2DM on quality of life, motivations for managing T2DM, setting individual goals, and barriers to achieving said goals.

## Takeaways

### Findings from T2DM Education Program Survey

Following the education program on Type 2 Diabetes Mellitus (T2DM) management in the rural community of Ensenada, Mexico, three survey respondents expressed that they felt well-prepared to

- make healthy eating choices
- develop and pursue health-related goals
- cope with the mental challenges of living with T2DM, and
- make decisions that are right for them.

However, two participants identified lack of knowledge as a barrier to effectively managing their condition, while two others voiced concerns about accessing necessary healthcare and medications.

### Obstacles to T2DM in the Region

- The author cited a lack of education as a significant obstacle to T2DM management in this community, suggesting that, although the program effectively enhanced knowledge, two significant barriers remain: a persistent lack of understanding about T2DM management and limited access to healthcare services, including medications. These challenges are exacerbated by low health literacy rates, with cultural beliefs in the region often associating T2DM with stress rather than diet and exercise (Whittemore et al., 2020).

### Author Recommendations

- The author recommends that future studies focus on offering educational classes, particularly to young adults, and encourages nonprofit organizations to

collaborate in helping adults with T2DM access the knowledge and care needed for effective management.

Torres-Ibarra, L., et al. (2020). Regular consumption of soft drinks is associated with type 2 diabetes incidence in Mexican adults: Findings from a prospective cohort study. *Nutrition Journal, 19*(1). https://doi.org/10.1186/s12937-020-00642-9

Diabetes. (2023). World Health Organization. https://www.who.int/news-room/fact-sheets/detail/diabetes

Fallas, C. R., et al. (2020). Improving self-care management in low-income Latinos with type 2 diabetes using peer-led U.S. conversation maps: A quality improvement project in a free clinic. *Clinical Diabetes, 38*(3), 213–221. https://doi.org/10.2337/cd19-0052

Harrington, M. (2024). Developing a Modified Diabetes Education Project in a Global Health Setting (Doctoral dissertation, North Dakota State University).

Zavala, G. A., Ainscough, T. S., & Jimenez-Moreno, A. C. (2022). Barriers to a healthy diet and physical activity in Mexican adults: Results from the Mexican health and nutrition survey. *Nutrition Bulletin, 47*(3), 298–306. https://doi.org/10.1111/nbu.12568

Whittemore, R., et al. (2020). Development of a diabetes self-management + mhealth program: Tailoring the intervention for a pilot study in a low-income setting in Mexico. *Pilot and Feasibility Studies, 6*(1). https://doi.org/10.1186/s40814-020-0558-7

## Summary 12

# Forced Displacement and Health: Directions for Considering Chronic Health Concerns among Communities Experiencing Forced Displacement

From Suk, A. N. (2024). Forced displacement and health: Directions for considering chronic health concerns among communities experiencing forced displacement (Doctoral dissertation, University of North Carolina at Chapel Hill). ProQuest Dissertations & Theses Global. https://doi.org/10.17615/xdnk-4m75

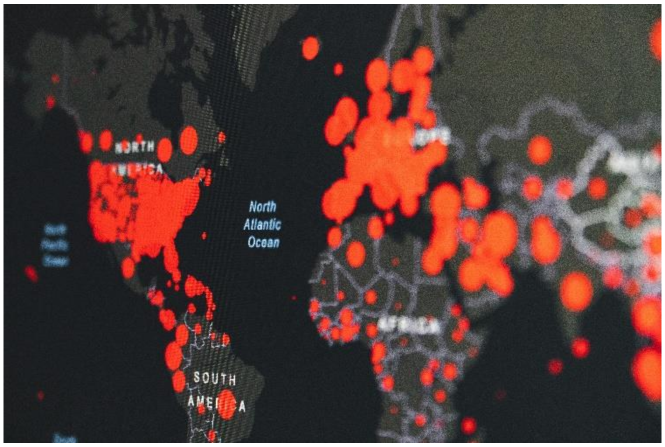
### Abstract

“Forced displacement has myriad long-term impacts on health and well-being. Despite indication of how the physiological and psychosocial stressors of forced displacement may contribute to chronic disease risk, chronic health conditions are under-prioritized in displaced populations. This lack of focus on noncommunicable health conditions is particularly pronounced in research on health concerns among displaced people from Burma living in Thailand. The research in this dissertation approaches questions related to forced displacement and long-term health and well-being, including consideration of noncommunicable diseases (NCDs) and of mental stressors. Paper 1 of this compilation maps the available literature on NCDs and psychosocial health concerns among people from Burma who have experienced displacement and are living in Burma or in Thailand. Using a scoping review methodology, it identifies trends and gaps in the existing literature.

“Paper 2 focuses on the experience of the structural drivers of NCDs in communities on the Thailand-Burma border. Data from in-depth

interviews with border residents working in agriculture and with other stakeholders indicate potential structural factors that contribute to vulnerability to NCDs. This paper encourages further research into how dietary change in this context is contributing to hypertension risk – and how dietary change is linked with processes of land dispossession, displacement, and economic precarity in the border area.

“Paper 3 examines a relationship-based program that matches volunteers with refugee families resettled in the southeastern US. Data from in-depth interviews with current and former volunteers is analyzed in order to understand strengths and challenges of this program model of long-term mutual support. Findings offer insight into the relevance of social support networks rooted in an ethos of mutual aid for the well-being of resettled refugees. All three studies are motivated by the need for attention to structural inequities as drivers of multiple overlapping health concerns, alongside the need for a focus on the priorities of people experiencing displacement.”



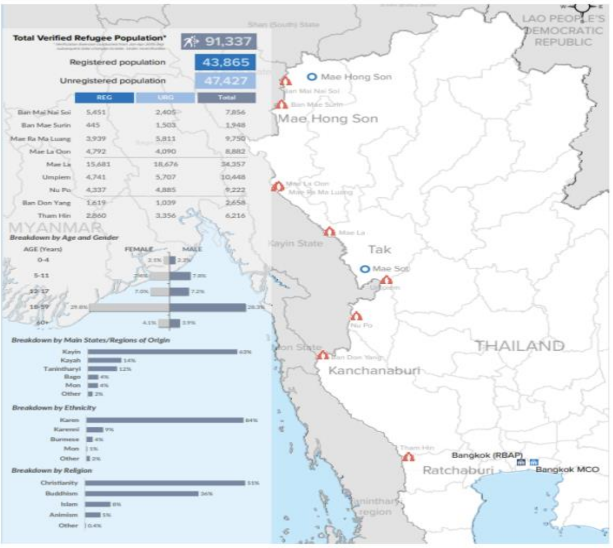
*Note: After carefully reflecting on historical and political forces in this region, the author chooses to use the term "Burma" instead of "Myanmar."*

Forced displacement from one's home and country of origin has several impacts on health and well-being. According to research, individuals experiencing forced displacement are significantly at risk of non-communicable disease (NCD), not just communicable disease or other health challenges (Ngaruiya et al., 2022; Abbas et al., 2018). For example, severe hypertension, changes in diet, and dramatic shifts in lifestyle may increase one's vulnerability to chronic illnesses (Bardenheier et al., 2019). The author anticipates that exploring this risk of non-communicable disease among this population can improve health outcomes for individuals experiencing forced displacement and those who serve them.

The author's goal is to consider the relationship of forced displacement to long-term health and well-being. The author hopes interventions and programs can better alleviate individuals' health experiences by exploring these relationships. The author chose to focus attention on the experiences of individuals on the Thailand-Burma border, given its history of state violence and ethnicity-based conflict. In this region, many displaced individuals live in refugee camps or self-settle in villages, with limited nearby work options. Researchers have found that many displaced individuals describe their time as refugees as a loss of personal efficacy, a lack of control, and uncertainty about the future (Fellmeth et al., 2018). There are nine border camps along the Thailand-Burma border, with an estimated total of 90,000 people (see *Figure 4,* pulled from Suk, 2024).

## Background

*Figure 4: Refugee Camps on the Thailand-Burma Border, June 2023 (Source: UNHCR)*



The author identifies several aims for her academic article:

1. Explore the available literature on NCDs among those living on the Thailand-Burma border.
2. Consider what drives the risk and prevalence of NCDs along the border.
3. Examine a resettlement program in the US that matches refugees with volunteers, considering the strengths and weaknesses of the programs.

## Methods

The author divides her analysis into three "papers" or major sections. The first two consider the health and well-being of individuals experiencing forced displacement along the Thailand-Burma border. The third section considered the work of refugee nonprofit organizations that help refugees settle in the United States.

For two years, the author worked as a researcher in these refugee camps along the Thailand-Burma border in collaboration with the Pattanarak Foundation (PF). During fieldwork, she conducted thirty in-person and remote interviews among staff and refugees from various border communities. The interviews aimed to explore and contextualize NCDs in the region, including contributing factors. The researcher took detailed notes as a PF staff member facilitated the interviews.

## Takeaways

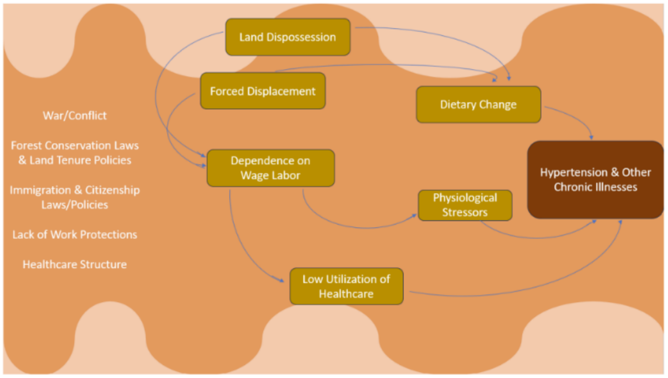
### Author Findings

Based on all three "papers" and their focuses, the author settled on various key themes:

1. While infectious diseases continue to be a concern in border communities, residents and other stakeholders are also increasingly worried about chronic conditions.
2. Structural factors, including dietary changes and work stressors, drive chronic ill health in this context. Respondents identified soreness, lack of sleep, and exposure to harmful agricultural chemicals. Others reported high blood pressure and the onset of diabetes during their time as refugees. One doctor shared in their interview that NCDs were becoming increasingly common in younger refugees in the region; at the same time, the doctor expressed concern that few individuals were getting screened for NCDs due to various factors. Aung et al., 2022 estimated that nearly 28% of migrant workers living in a refugee camp in northern Thailand experienced hypertension–evidence that risk factors for NCDs are high for this population.
3. Border residents face various barriers to accessing the healthcare system in Thailand.

Overall, chronic disease among displaced individuals along the Thailand-Burma border can be linked to many factors, from changes in diet and work to lack of access to healthcare and poverty (see *Figure 8, pulled from Suk, 2024*).

*Figure 8: Structural Vulnerability to Hypertension and Other Chronic Illnesses*



## Takeaways for Nonprofit Professionals

Nonprofit professionals working with displaced individuals can take several steps to provide effective support:

- ***Culturally Sensitive Health Education***
  a. Provide health education that is culturally relevant and linguistically appropriate. Understanding the community's cultural background, beliefs, and practices is essential to delivering education that resonates and is effective.
- ***Build Trust and Community Relationships***
  a. Engage Community Leaders: Partner with trusted community leaders to facilitate outreach and communication. Building trust is critical for effective intervention, especially in displaced communities wary of outside assistance.
  b. Foster Community Involvement: Involve community members in the planning and implementation of programs. This involvement ensures that interventions are relevant and the community feels ownership over the solutions.
- ***Improve Access to Healthcare***
  a. Advocate for Healthcare Access: Work to improve access to healthcare services, including advocating for mobile health clinics or partnerships with local health providers to serve displaced populations.
  b. Address Barriers to Care: Identify and address barriers to accessing healthcare, such as transportation, language, and financial constraints. Providing resources like transportation vouchers or interpreters can make a significant difference.
- ***Provide Mental Health Support***
  a. Promote Resilience: Develop programs that promote resilience and coping strategies, helping individuals and families adapt to new circumstances and maintain their well-being.
- ***Collaborate with Other Organizations***
  a. Partner with Local and International NGOs: Collaborate with other organizations that provide services to displaced populations. Pooling resources and expertise can lead to more comprehensive and effective interventions.
  b. Leverage Resources for Chronic Disease Care: Work with organizations that can provide resources such as medications, health screenings, and long-term care for chronic diseases, ensuring continuity of care for those affected.
- ***Advocate for Policy Changes***
  a. Engage in Policy Advocacy: Advocate for policies that protect the rights of displaced persons and improve access to healthcare and social services. Policy changes can help address systemic issues that contribute to chronic disease and poor health outcomes among displaced populations.
  b. Raise Awareness: Increase awareness among policymakers and the public about the health challenges displaced communities face, particularly the long-term impact of chronic diseases.

Abbas, M., Aloudat, T., Bartolomei, J., Carballo, M., Durieux-Paillard, S., Gabus, L., Jablonka, A., Jackson, Y., Kaojaroen, K., Martinez, E., Mendelson, M., Petrova-Benedict, R., Tsiodras, S., Christie, D., Saam, M., Hargreaves, S., & Pittet, D. (2018). Migrant and refugee populations: A public health and policy perspective on a continuing global crisis. *Antimicrobial Resistance and*

*Infection Control, 7*(113). https://doi.org/10.1186/s13756-018-0379-4

Bardenheier, B. H., Phares, C. R., Simpson, D., & et al. (2019). Trends in chronic diseases reported by refugees originating from Burma resettling to the United States from camps versus urban areas during 2009–2016. *Journal of Immigrant and Minority Health, 21*(2), 246–256. https://doi.org/10.1007/s10903-018-0749-y

Fellmeth, G., Plugge, E. H., Carrara, V., Fazel, M., Oo, M. M., Phichitphadungtham, Y., Pimanpanarak, M., Kerry Wai, N., Mu, O., Charunwatthana, P., Nosten, F., Fitzpatrick, R., & McGready, R. (2018). Migrant perinatal depression study: A prospective cohort study of perinatal depression on the Thai-Myanmar border. *BMJ Open, 8*(1), e017129. https://doi.org/10.1136/bmjopen-2017-017129

Nyaruiya, C., Bernstein, R., Wallace, L., Agrawal, P., Selvam, A., Hersey, D., & Hayward, A. (2022). Systematic review on chronic non-communicable disease in disaster settings. *BMC Public Health, 22*(1). https://doi.org/10.1186/s12889-022-13399-z

# Research and Thought Papers

September 2024
Vol 4, Issue 3

# Thought Paper

COVID-19 and Health Equity: Lessons Learned from the Pandemic

**TITLE**
COVID-19 and Health Equity: Lessons Learned from the Pandemic

—

**AUTHORS**
Erica Jensen
Sumaya Ali
LaKell Archer

—

**TOPICS**
COVID-19, AI, Immigrants and Refugees, Vaccine Distribution, Social Inequalities, Mpox, Education, Public Health

—

## COVID-19 and Health Equity: Lessons Learned from the Pandemic

By Erica Jensen, Sumaya Ali, Lakell Archer, *Student Editorial Board, JoNI*

Health inequities refer to avoidable, unjust differences in health outcomes caused by systemic disadvantages rooted in social, economic, and environmental contexts (Braveman, 2014). Health disparities refer to differences in health outcomes between groups, often measured by prevalence, morbidity, or mortality (Centers for Disease Control and Prevention [CDC], 2020). Health inequalities are measurable differences in health status that may arise from biological, social, or environmental factors (World Health Organization [WHO], 2019). Health inequities, however, are specifically preventable and unjust differences.

The COVID-19 pandemic highlighted these inequities, intensifying pre-existing structural disparities within healthcare and societal systems. The pandemic underscored the urgency of addressing these issues by revealing how systemic factors lead to disparate impacts across various populations (Egede & Walker, 2020). Marginalized groups, particularly racial and ethnic minorities and low-income individuals in predominantly white communities have been significantly affected due to insufficient healthcare access and poor living conditions (Bennett et al., 2021). The pandemic has deepened health inequities globally, highlighting the urgent need to address these issues.

## Health Inequities Prior to the Pandemic

The pandemic has exposed how deeply entrenched health inequities were before COVID-19. These pre-existing disparities are deeply rooted in socioeconomic, racial, and geographic factors, which contributed to the unequal health outcomes experienced during the pandemic. Understanding these foundational drivers of health inequity is crucial to comprehend how the pandemic amplified them. The following sections will explore these factors in detail, starting with the socioeconomic drivers, then racial and ethnic inequities, and concluding with geographic and environmental aspects.

### Socioeconomic Drivers of Health Inequities

Social determinants such as poverty, lack of education, and job insecurity have long contributed to health inequities (Artiga & Hinton, 2021). These factors created disparities in health outcomes even before the COVID-19 pandemic. For example, essential workers, often from lower socioeconomic backgrounds, have been particularly vulnerable. These workers faced increased risks of exposure due to systemic inequities in working conditions and healthcare access (Berkowitz et al., 2021). Additionally, residents in low-income, rural areas, such as those in West Virginia, faced significant barriers to healthcare, leading to higher rates of chronic conditions like diabetes and opioid addiction (Chetty et al., 2016).

### Racial and Ethnic Health Inequities

Systemic racism in healthcare has contributed to poorer health outcomes for Black, Hispanic, and Indigenous populations even before the pandemic (Bailey et al., 2017). For instance, Black Americans have long experienced higher rates of chronic conditions such as hypertension and diabetes due to inequities in healthcare access and systemic discrimination (Williams & Mohammed, 2013). The COVID-19 pandemic exacerbated these pre-existing disparities, with racial and ethnic minorities experiencing disproportionately higher rates of infection and mortality. For instance, Black and Hispanic Americans were nearly three times more likely to be hospitalized and twice as likely to die from COVID-19 compared to White Americans (CDC, 2021). The impact was significant: Hispanic and Black Americans had higher rates of COVID-19 infections and deaths attributed to factors such as crowded living conditions, limited healthcare access, and employment in high-risk jobs (Kendi, 2020).

### Geographic and Environmental Health Inequities

Geographic factors also play a crucial role in health inequities. Rural populations often face inadequate healthcare infrastructure, a situation worsened by the pandemic (Williams & Cooper, 2019). Low-income communities in rural areas like Kentucky and West Virginia have seen some of the highest rates of chronic diseases and COVID-19 mortality due to insufficient access to healthcare services (U.S. Department of Health and Human Services, 2020). Additionally, environmental risks such as overcrowded housing and exposure to pollutants disproportionately affect marginalized communities, further exacerbating health disparities (Schulz & Northridge, 2016). For instance, urban minority communities often face higher levels of pollution, which can lead to respiratory issues and increased vulnerability to diseases like COVID-19 (Bell & Ebisu, 2012).

## Specific Examples of Health Inequities Exposed by COVID-19

Building on our understanding of how the pandemic has intensified health inequities, it is important to examine specific instances where these disparities were particularly evident. While the examples provided here are not comprehensive, they highlight critical aspects of how COVID-19 exacerbated existing inequities. This section will focus on the impacts on marginalized communities, the challenges encountered by immigrants and refugees, and the economic and geographic disparities that have been brought to the forefront by the pandemic.

## Impact on Marginalized Communities

One of the most striking revelations of the pandemic has been its disproportionate impact on racial and ethnic minorities. For instance, Black Americans experienced COVID-19 mortality rates nearly three times higher than those of white Americans (CDC, 2021). This disparity is rooted in longstanding systemic inequities, such as reduced access to quality healthcare and higher prevalence of underlying health conditions (CDC, 2021). Hispanic communities also faced severe consequences, with elevated infection rates and challenges in accessing healthcare services (Kendi, 2020). Indigenous populations, such as the Navajo Nation, were similarly hit hard, struggling with high infection rates due to inadequate healthcare infrastructure and systemic underfunding (National Indian Health Board, 2020).

## Challenges for Immigrants and Refugees

Immigrant and refugee populations encountered additional barriers during the pandemic. Issues such as legal status, language barriers, and fear of seeking medical help due to immigration concerns compounded their vulnerability. These factors contributed to poorer health outcomes and higher risks of COVID-19 exposure and severity (Clark et al., 2021).

## Economic and Geographic Disparities

The economic consequences of the pandemic further exacerbated health inequities. Low-income communities, including rural and urban areas, faced significant challenges. Essential workers, often from lower socioeconomic backgrounds, were at higher risk due to inadequate workplace protections and limited access to healthcare. For example, rural areas experienced severe shortages in healthcare resources, which were exacerbated by the pandemic, leading to higher rates of chronic diseases and COVID-19 mortality (U.S. Department of Health and Human Services, 2020).

Similarly, urban areas with high population densities faced greater exposure risks due to overcrowded living conditions and environmental hazards (Bell & Ebisu, 2012). As a result, both rural and urban communities faced heightened vulnerability, deepening existing disparities in health outcomes during the pandemic.

## How the Pandemic Response Impacted Health Equity

The "pandemic response" refers to the collective actions and policies implemented by governments, public health organizations, and other stakeholders to manage and mitigate the effects of the COVID-19 pandemic. This response has included a wide range of activities, from public health interventions and policy changes to the allocation of resources and the development of medical treatments (World Health Organization [WHO], 2020). Understanding the impact of these responses on health equity involves examining the direct and indirect effects on different populations, particularly how these measures influenced disparities in health outcomes and access to care.

The COVID-19 pandemic response had a multifaceted impact on health equity, manifesting positive and negative effects. Analyzing these impacts involves understanding shifts in public health policy, access to medical resources, and the socioeconomic factors influencing health disparities.

### Positive Impacts

The pandemic response led to several positive outcomes in terms of health equity.

#### *Increased Awareness of Health Inequities*

Expanded telehealth services were implemented broadly across the United States and other high-income countries during the pandemic. Many healthcare providers quickly adapted to virtual platforms to ensure that care could continue despite lockdowns and reduced in-person visits. This shift particularly benefited individuals in rural areas, low-income communities, and those with transportation or mobility challenges, as they could access healthcare remotely. However, the effectiveness of telehealth in bridging health disparities was mixed. While it provided much-needed access to care for some, it also exacerbated disparities for others, particularly those without reliable internet access or digital literacy (Pierce & Steverman, 2021). This digital divide disproportionately affected older adults, low-income households, and racial minorities. While expanding telehealth services provided immediate relief, long-term effectiveness in addressing health inequities requires further evaluation. Initial studies suggest that telehealth increased access for millions of Americans during the pandemic, but the uneven access to technology limited its impact in closing the health equity gap fully. Therefore, while beneficial, telehealth alone did not resolve deep-rooted disparities (Karlin & Vergara, 2022).

#### *Accelerated Development of Health Innovations*

The development of COVID-19 vaccines was remarkably rapid compared to typical vaccine rollouts. Normally, vaccine development can take 10-15 years, given the rigorous clinical trials and approval processes involved. In the case of COVID-19, the Pfizer-BioNTech and Moderna vaccines were developed and authorized for emergency use within approximately 11 months, a record speed. This rapid progress was made possible by unprecedented global collaboration, massive funding initiatives like Operation Warp Speed in the U.S., and mRNA technology, enabling faster production and testing (Slaoui & Hepburn, 2020). The COVID-19 vaccine rollout was several times faster than typical vaccine development timelines. The usual process includes years of exploratory research, preclinical studies, clinical trials (which can take years), regulatory review, and mass production. In contrast, the COVID-19 vaccines compressed these steps by running some processes in parallel, rather than sequentially, without compromising safety standards. However, equitable access to the vaccines, globally and domestically, was a challenge that persisted for months after the first vaccines were made available, despite their rapid development and release.

### *Enhanced Data Collection and Analysis*

The pandemic underscored the need for better health data collection, particularly concerning race, ethnicity, and socioeconomic status. Improved data collection methodologies have since been adopted, providing a clearer picture of health disparities and informing targeted interventions (Hernandez et al., 2022).

## Negative Impacts

However, the pandemic response also had several negative impacts:

### *Exacerbation of Existing Disparities*

The pandemic disproportionately affected marginalized communities, including racial and ethnic minorities and individuals with lower socioeconomic status. These groups experienced higher rates of infection, hospitalization, and mortality, partly due to pre-existing health conditions, inadequate access to healthcare, and structural inequalities (Gonzalez et al., 2021).To illustrate the exacerbation of disparities during the pandemic, New York City offers a clear example. Data from the NYC Department of Health showed that by mid-2020, Hispanic and Black residents had higher COVID-19 death rates—265 and 209 per 100,000, respectively—compared to 135 per 100,000 for white residents. Densely populated neighborhoods, in-person jobs, and reliance on public transportation were all contributing factors. A striking case comes from Elmhurst Hospital in Queens, serving a largely immigrant and low-income community. During the first wave, it was overwhelmed with patients, highlighting the healthcare system's inability to meet the needs of underserved populations. The pandemic sharply magnified these disparities, rooted in structural inequalities (NYC Health, 2020; Rabin, 2020).

### *Economic and Social Disruption*

The economic fallout from the pandemic, including job losses and financial instability, severely impacted low-income populations. This economic strain led to increased food insecurity and housing instability and exacerbated mental health issues, further widening health disparities (Baker et al., 2021).

### *Unequal Vaccine Distribution*

Disparities persisted despite efforts to promote equitable vaccine distribution. Structural issues in vaccine rollout, such as limited access to vaccination sites and hesitancy in underserved communities, contributed to uneven vaccination rates and prolonged vulnerability among disadvantaged groups (Paltiel & Zheng, 2021).

Overall, the COVID-19 pandemic response has advanced efforts to address health inequities and exposed existing disparities. While the pandemic has fostered greater awareness and innovation in public health, particularly for marginalized and low-income communities, it has also underscored systemic issues that contribute to ongoing inequities. The pandemic prompted health professionals and organizations to critically examine their policies and practices, recognizing their role in mitigating or exacerbating these disparities. It is essential to build on these lessons to develop more effective and equitable public health strategies locally and globally.

## Promoting Health Equity in the Future

Communities and nations have the opportunity to build healthy and resilient communities in the post-COVID-19 era. Health equity is both the goal and mechanism of community resilience. Multiple avenues can promote health equity in a post-pandemic space.

First, researchers and institutions can diversify research itself. By including a wider range of demographic groups, such as those outlined by the National Institutes of Health (2020) and echoed by scholars like Andrasik et al. (2021) and Mensah et al. (2024), research can become more representative and applicable to diverse populations. This approach helps ensure that health interventions are designed with the specific needs of various communities in mind, thereby promoting equity.

Second, in the event of future pandemics, organizations must prioritize treatment and interventions for the most vulnerable populations. Vulnerable groups include low-income individuals and those experiencing displacement, who often face disproportionate health risks and limited access to healthcare services (WHO, 2024). Healthcare practices must become more equitable by incorporating measures such as translation services to overcome language barriers, increased opportunities for telehealth to reach remote areas, and the deployment of mobile health clinics to underserved communities to address these disparities. These strategies can enhance access to care and improve health outcomes for marginalized groups.

Third, communities, organizations, and public figures must curb misinformation, which can exacerbate health inequities by spreading fear and confusion. Clear, accurate, and culturally sensitive communication is necessary to provide the public with reliable information and reduce the influence of false claims. Finally, a flexible approach to health interventions is crucial, allowing for feedback and local adaptation rather than implementing a one-size-fits-all model. Organizations and public officials should adapt to smaller communities' needs by seeking feedback and local participation. This adaptability ensures that interventions are effective and culturally relevant, increasing the likelihood of success.

### *Health Equity Interventions: Mpox*

An illustrative example of equitable health interventions is the response to mpox, formerly monkeypox. News coverage recently exposed the severity of mpox in Africa. For example, the Democratic Republic of the Congo (DRC) is experiencing a severe outbreak, with over 14,000 cases and 524 deaths reported since the start of 2024. Neighboring countries such as Burundi, Kenya, Rwanda, and Uganda, where cases were previously rare, also report infections (Lay, 2024). Mpox is an infectious viral disease characterized by fever, chills, aches, blisters, and rash. It has two primary clades: Clade I, historically associated with a higher death rate, and Clade II (Guardian, 2024). The World Health Organization (WHO) recently declared Mpox a public health emergency of international concern, highlighting the risk of rapid spread and the need for targeted, equitable responses (2024).

To address these challenges, the WHO released a strategic plan on August 26, 2024, outlining measures to ensure equitable access to care for communities affected by mpox in Africa. These measures include transparency in vaccine allocation and distribution and prioritizing vulnerable populations at high risk, such as internally displaced people (IDPs) and sex workers (WHO, 2024, p. 9, 12). The plan emphasizes the importance of protecting fundamental human rights, advocating for access to care for all individuals (regardless of their background or circumstances), and combating stigma and discrimination that could hinder access to necessary services (WHO, 2024, p. 13).

The Mpox response underscores the importance of investing in equitable healthcare infrastructure, such as mobile health clinics and telehealth services, to reach underserved populations. It also highlights the need for a coordinated response involving governments, nonprofit organizations, and local communities to ensure that interventions are culturally sensitive and tailored to the needs of different populations. By learning from the mpox response, we can develop strategies that are effective in controlling outbreaks and promoting long-term health equity.

### *Further Application*

The lessons learned from the COVID-19 pandemic and the current response to mpox highlight several future applications for promoting health equity. First, it is essential to strengthen healthcare infrastructure to be more inclusive and accessible. This change includes investing in technology and resources that enable remote care and support for underserved communities. For example, expanding telehealth services and mobile clinics can provide essential care to individuals in rural or hard-to-reach areas, ensuring no one is left behind.

Second, collaboration between governments, nonprofit organizations, and local communities is crucial. These partnerships can facilitate sharing of resources, knowledge, and best practices, leading to more effective and coordinated responses to health crises. By working together, stakeholders can develop and implement strategies tailored to different populations' specific needs, enhancing the overall impact of health interventions.

Third, ongoing education and training for healthcare providers and public health officials are vital. Professionals can better serve diverse populations by staying informed about the latest research, emerging health threats, and culturally sensitive care practices. Training programs should emphasize the importance of cultural competence, empathy, and the need to address social determinants of health, which are key factors in achieving health equity.

## Conclusion

The COVID-19 pandemic has exposed significant health inequities, highlighting the urgent need for more equitable health practices. Promoting health equity requires a comprehensive approach that includes diversifying research participants, prioritizing vulnerable populations, and adopting flexible, culturally sensitive interventions. The mpox response provides a valuable example of how equitable health measures can be implemented effectively. By building healthy, resilient communities and addressing the root causes of health disparities, we can ensure that all individuals can achieve optimal health, regardless of their background or circumstances.

In summary, the lessons learned from the pandemic emphasize the importance of health equity as a foundational principle in public health. We can build a more just and equitable healthcare system by prioritizing vulnerable populations, combating misinformation, and fostering collaboration. These efforts will improve health outcomes for marginalized groups and contribute to the overall resilience and well-being of society.

---

## References

Andrasik, M. P., et al. (2021). Increasing Black, Indigenous, and People of Color participation in clinical trials through community engagement and recruitment goal establishment. *PLoS One, 16*(10). https://doi.org/10.1371/journal.pone.0258858

Artiga, S., & Hinton, E. (2021). Social determinants of health and COVID-19. Kaiser Family Foundation. https://www.kff.org/

Artiga, S., & Kates, J. (2021). Vaccine access for vulnerable communities. Kaiser Family Foundation. https://www.kff.org/

Bailey, Z. D., Krieger, N., Agénor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA. *The Lancet, 389*(10077), 1453-1463.

Baker, S., Farrokhi, F., & Sacks, D. (2021). The COVID-19 pandemic and its impact on economic disparities. *Journal of Economic Perspectives, 35*(4), 1-24.

Bell, M. L., & Ebisu, K. (2012). Environmental inequality in exposures to air pollution in the United States. *International Journal of Environmental Research and Public Health, 9*(4), 1483-1492.

Benfer, E. A., et al. (2021). Eviction, health inequity, and the spread of COVID-19. *Journal of Urban Health, 98*(1), 1-12.

Berkowitz, S. A., et al. (2021). Inequities in frontline worker protections during the COVID-19 pandemic. *Health Affairs, 40*(2), 309-317.

Bennett, J. W., et al. (2021). Marginalized groups, particularly racial and ethnic minorities and low-income individuals in predominantly white communities, have been significantly affected due to insufficient healthcare access and poor living conditions. *Journal of Health Disparities Research and Practice, 14*(3), 45-60.

Braveman, P. (2014). What are health disparities and health equity? We need to be clear. *Public Health Reports, 129*(Suppl 2), 5-8.

Bureau of Labor Statistics. (2021). Labor force statistics from the current population survey. https://www.bls.gov/cps/

Centers for Disease Control and Prevention. (2020). Health disparities. https://www.cdc.gov/

Centers for Disease Control and Prevention. (2021). COVID-19 and racial/ethnic disparities. https://www.cdc.gov/

Chetty, R., Stepner, M., Abraham, S., et al. (2016). The association between income and life expectancy in the United States, 2001-2014. *JAMA, 315*(16), 1750-1766.

Clark, C., et al. (2021). Immigrant health and COVID-19. *Journal of Immigrant and Minority Health, 23*(2), 264-273.

Egede, L. E., & Walker, R. J. (2020). Structural racism, social risk factors, and COVID-19. *New England Journal of Medicine, 383*(12), e77.

Gonzalez, R., Martinez, E., & Williams, D. (2021). The differential impact of COVID-19 on racial and ethnic minorities. *American Journal of Public Health, 111*(6), 1-10.

Hernandez, D., Xie, J., & Bourdillon, N. (2022). Enhancing health equity through improved data collection: Lessons from the COVID-19 pandemic. *Health Affairs, 41*(1), 68-77.

Karlin, M., & Vergara, R. (2022). Telehealth and its role in addressing health inequities during COVID-19. *Telemedicine and e-Health, 28*(5), 543-550.

Kendi, I. X. (2020). The Black Death: COVID-19 and its disproportionate impact on Black Americans. The Atlantic. https://www.theatlantic.com/

Lay, K. (2024, August 20). What is mpox and why has it been declared a global health emergency? The Guardian. https://www.theguardian.com/world/article/2024/aug/20/what-is-mpox

Mensah, G. A., et al. (2024). Community Engagement Alliance (CEAL): A National Institutes of Health program to advance health equity. *American Journal of Public Health, 114*(1), S12-S17. https://www.proquest.com/scholarly-journals/community-engagement-alliance-ceal-national/docview/2917922429/se-2

National Indian Health Board. (2020). Impact of COVID-19 on Indian Country. https://www.nihb.org/

National Institutes of Health. (2020). NIH-Wide Strategic Plan for COVID-19 Research. https://covid19.nih.gov/sites/default/files/2021-05/NIH-Wide-COVID-19-StratPlan_2021_508_1.pdf

NYC Health. (2020). Age-adjusted COVID-19 death rates by race/ethnicity.

Paltiel, A. D., & Zheng, A. (2021). Assessment of SARS-CoV-2 vaccination distribution and equity in the United States. *JAMA Network Open, 4*(10), e2134365.

Pierce, D., & Steverman, M. (2021). Bridging the digital divide: Telehealth during the COVID-19 pandemic. *Health Affairs, 40*(2), 318-325.

Rabin, R. C. (2020). 'It's like a war': Inside an N.Y.C. hospital battling coronavirus. The New York Times.

Ran, R., Liu, J., & Jiang, C. (2021). The role of telehealth in addressing health disparities during the COVID-19 pandemic. *Telemedicine and e-Health, 27*(12), 1375-1381.

Schulz, A. J., & Northridge, M. E. (2016). Social determinants of health: A framework for understanding the roots of health inequities. *Health Education & Behavior, 43*(2), 226-232.

Slaoui, M., & Hepburn, M. (2020). Developing safe and effective COVID-19 vaccines — Operation Warp Speed's strategy and approach. *New England Journal of Medicine*, 383, 1701-1703.

The Guardian. (2024, August 15). Neighboring countries such as Burundi, Kenya, Rwanda, and Uganda, where cases were previously rare, also report infections. The Guardian. https://www.theguardian.com/world/article/2024/aug/15/burundi-kenya-rwanda-uganda-covid-19-infections

U.S. Department of Health and Human Services. (2020). Rural health facts and statistics. https://www.hrsa.gov/

Whitehead, M. (1992). The concepts and principles of equity and health. *Health Promotion International, 7*(3), 217-228.

Williams, D. R., & Cooper, L. A. (2019). COVID-19 and health equity—a new kind of pandemic. *New England Journal of Medicine, 383*(12), 1041-1043.

Williams, D. R., & Mohammed, S. A. (2013). Discrimination and racial disparities in health: Evidence and needed research. *Journal of Behavioral Medicine, 36*(1), 4-32.

World Health Organization. (2019). Health inequalities. https://www.who.int/

World Health Organization. (2020). Pandemic response. https://www.who.int/

World Health Organization. (2024). Vulnerable populations and health equity. https://www.who.int/

Journal of Nonprofit Innovation

September 2024
Vol 4, Issue 3

# Research Overview Paper

Mass Shootings in the United States

**TITLE**
Mass Shootings in the United States

—

**AUTHOR**
Sydney Livingston

—

**TOPICS**
Gun Laws, Gun Control, Mass Shootings

—

## Mass Shootings in the United States

By Sydney Livingston, Student, Brigham Young University

**Context:** The US Federal Bureau of Investigation (FBI) defines a mass shooting as an active shooter targeting people in a populated area (Ray & Chmielewski, 2023). The US Congress further defines a mass killing as an instance with 4 or more fatalities that do not include the perpetrator (Congressional Research Service, 2013). Mass shootings make up around 0.2% of total firearm deaths in the US each year (UC Davis Health, retrieved 2023).

Broader definitions of mass shootings result in higher reports of instances, and different data sources vary in their definition. In reality, public mass shootings are infrequent and make up only a small minority of gun violence instances. Mass shootings have different causes versus general instances of gun violence, and therefore, this brief will look specifically at the circumstances regarding mass shootings.

Guns are the leading cause of death for children and teens in the US, and firearm deaths among children and teens rose almost 30% from 2019 to 2020—a rate over twice as high as the relative population increase (Goldstick, 2022). More than 500 people die every day from instances of gun violence worldwide, 120 of which happen in the US (Amnesty International, retrieved 2023; Everytown, 2022). Additionally, the United States makes up 73% of the world's mass shootings, despite it making up only 4.25% of the world's population (Silva, 2023; TRT World, retrieved 2023.). The first mass shooting that gained significant media coverage in the US was the Columbine school shooting in 1999. School shootings reached an all-time high in 2022, and the US saw a 163% increase in school shootings from 2020 to 2022, and a 1,900% increase from 2010 to 2022 (Modan & Arandel, 2022). There was a 46.3% increase in mass shootings during the COVID-19 pandemic in 2020 (an increase from 417 to 610 incidents), which peaked at 690 incidents in 2021 (BBC, retrieved 2023).

Though citizens of the United States make up less than 5% of the world's population, they make up 46% of the world's civilian-owned guns (Masters, 2022). The US has the largest gun-to-citizens ratio of any country, with 120 guns for every 100 Americans, making it the only country with more guns than people (Fox, 2023). The second highest number of civilian guns per capita is the Falkland Islands, though their gun ownership rate is approximately half as high as the United States' (Mascia, 2023). There are over 78,000 licensed gun dealers in the US, which is more than the populations of 16 US state capitals (Everytown Research, retrieved 2023; Britannica, retrieved 2023). As of 2023, there are approximately 466 million guns in circulation in the US.

The country experienced record-breaking firearm sales during the pandemic, with 64% more sales in 2020 than in 2019 (American Gun Facts, 2023; Rabin, 2023). In fact, the number of firearms purchased in the US from 2020–2022 is high enough to give each baby born in those years 5 firearms each, and some of them would get 6 (De Visé, 2023; Hamilton et al., 2021; CDC, retrieved 2023).In 2020, there were 13.9% more firearm deaths than the previous year, followed by another 7.8% increase in 2021 (Rabin, 2023). The years 2020–2021 introduced 7.5 million first-time gun buyers, and half of this group were female, people of color, and others considered more likely to view the world as dangerous. Since the pandemic, sales slightly declined, and the year 2023 had an average of 1.4 million firearms sold each month—still, almost 250,000 more guns sold each month than the year before the pandemic (Gabriele, 2023). When a mass shooting occurs, gun sales increase in the 30 days following the event and again in December of that same year (Luscombe, 2022).

Most perpetrators of mass shootings are white, 98% of them are male, and they are usually between the ages of 15–25 (Martin & Bowman, 2021; Thrush & Richtel, 2022; Statista, retrieved 2023). School shooters are typically younger and have a median age of 16 (Cox et al., 2023). In at least 46% of incidents where 4 or more people were killed, the target was the shooter's current or past intimate partner (Everytown Research, retrieved 2023). Two-thirds of mass shootings are motivated by domestic violence or have perpetrators with a history of domestic violence (EFSGV, retrieved 2023). Mass murder is rarely done impulsively, and usually occurs after a loss of a relationship or work and takes place after deliberate (and sometimes extensive) planning (Meloy, 2014).

Perpetrators of school shootings specifically are challenging to identify in advance because there is no one profile of a student who will cause violence. The National Association of School Psychologists says that no such profile exists

(Kowalski, 2022). While specific demographics or circumstances may be shared among mass shooters, profiling students as potential shooters could be dangerous because many of them would never commit such an act, and it may overlook students who might.

Black, indigenous, and people of color are disproportionately impacted by mass shootings (Sandy Hook Promise, retrieved 2023). Hispanic students are twice as likely to experience campus gun violence, and black students are 3 times as likely—though the perpetrators are still almost always white (Cox et al., 2023). While black students make up only around 16% of the student population, they make up 33% of the victims of school mass shootings. Fatal school shootings usually occur at wealthier, suburban, or rural schools (GAO, 2020).

## Contributing Factors

### Firearm Access

Access to firearms increases the amount of mass shootings because mass shootings can only occur when the perpetrator has access to a firearm. For example, over 80% of guns used in school shootings were taken from family members (NIJ, retrieved 2023).  A sophomore at Oxford High School in Michigan killed 4 students in a 2021 shooting with a firearm that his father had purchased 4 days prior to the event (Carter, 2021; Johncox & Hutchinson, 2021.). Easy at-home access to guns is a common trend among perpetrators of school shootings specifically. Important to note is that those with risk factors for firearm injury and death are less likely to store their firearms safely (Nordstrom et al., 2007).

Seventy-seven percent of mass shooters used weapons that were acquired legally, only 13% of mass shooters purchased illegal weapons, and the remaining 10% are unknown (Doherty, 2023) The deadliest mass shooting in the United States to date, the Las Vegas 2017 music festival shooting, was perpetrated by someone using legally purchased firearms (Glum, 2017). The shooter even passed a background check at the gun shop where the weapons were purchased and avoided raising any red flags to the owners of the store. A shooting at a supermarket in Buffalo, New York, in 2022 resulted in the loss of 10 lives and was committed by a perpetrator who had also legally purchased the firearms used in the attack (Thrush, 2022; Albert, 2022). The 18-year-old suspect had recently caused an episode at school because of violent threats to classmates. While this forced the suspect to undergo psychological evaluation, the state's red flag laws were not enacted and did not impact the suspect's access to firearms. Firearm access is often achievable for perpetrators, which has caused debate on the impacts of background checks, semi-automatic weapon purchases, and red-flag laws in the United States.

Firearm access varies throughout the US due to an assortment of gun restrictions. While one state might have strict gun laws, its neighboring state could have very few (World Population Review, retrieved 2023). Because of this, gun trafficking—the placing of firearms into illegal markets—often happens when a gun is purchased in a state with relaxed gun laws and then resold in one with strict gun laws (Giffords, retrieved 2023).

### News Coverage of Previous Shootings

Previous instances of violence are frequently used as models for perpetrators of mass shootings. About 20–30% percent of all mass shootings are inspired by previous attacks, and 75% of school shooting perpetrators have been shown to have a fascination with previous school shootings (Peterson& Densley, 2019; Fox, 2015). The 1999 Columbine school shooting resulted in the death of 12 students and 1 teacher (Onion et al., 2023). While this shooting is commonly considered the first of its kind, this perception arises primarily due to its exceptional notoriety and extensive media coverage (Strauss, 2019). For those very reasons, Columbine has been a source of fascination and even inspiration to others looking to recreate a similar kind of incident. The perpetrator of the Sandy Hook Elementary School shooting created a blog as an homage to the Columbine shooting, and a North Carolina shooter vacationed to Columbine with his mother and fantasized about killing any survivors. While these might seem like extreme examples, investigations on perpetrators have shown that nearly half of school shooters since 1999 have used Columbine as their model. Subsequent perpetrators of school shootings since Columbine have even donned trench coats while committing the act, modeled after the Columbine perpetrators' attire.

Interestingly, the Columbine shooters themselves were influenced by the high media coverage that the 1995 Oklahoma City bomber received (Trilling, 2017). While their act was not modeled after a mass shooting, this example demonstrates the "copy-cat phenomenon" or generalized imitation (Mendel & Ivy, 2017). The perpetrator of an Orlando nightclub shooting admitted to being inspired by the Boston Marathon bombing in 2013, an attack that resulted in the death of three individuals and injuring hundreds (CNN, 2013). In another instance, the Parkland, Florida school shooting in 2018 resulted in US media outlets running more than 7,900 online stories about the shooting in the 2 weeks following the event (Siegel, 2018). For perpetrators seeking notoriety due to mass violence, these high levels of media portrayals of previous attacks have historically been incredibly motivating.

## Poor Mental and Emotional State

In order to understand why mass shootings occur, it is critical to understand the perpetrators' condition before the incident. Consistently, researchers find it more helpful to look at mass shootings as a form of violent suicide because the perpetrators commit this act with no intention of coming out alive (Warner, 2022). In instances of mass shootings, perpetrators commonly experience these suicidal feelings as a result of some form of early childhood trauma (45% of all mass shooters experienced this) (Peterson & Densley, 2019). Examples include severe bullying, abuse, or assault. In school shootings, particularly, bullying is a common motivator for the perpetrator who then uses the school setting to end their own lives and the lives of others.

Almost all mass shooters experience a crisis in the time leading up to the incident (Peterson & Densley, 2019). Some negative personal experiences cause the shooter to become angry, and a person or group of people become a target due to their rage. For school shootings, the anger may be a result of bullying; for a workplace shooting, their grievance may develop from the recent loss of a job (Alithari et al., 2019). These dangerous mindsets are not hidden from the world—almost all mass shooters display warning signs. In the case of school shooters, all perpetrators exhibited alarming behaviors, and most of them even discussed their violent plans with someone else before the event. However, there is a lack of standardized protocol for when a person displays warning signs, though schools and local communities may establish their protocol for threat assessment and protocol (San Diego County, 2021).

While challenging life circumstances may cause mental or emotional problems for mass shooting suspects, it is incorrect to assume that all mass shooters have a severe mental illness. This notion comes from a common attribution of bad behavior with mental illness, which are not the same thing and are potentially harmful to confuse with one another (Girgis, 2022). Mass shooters with severe mental illness make up only 5% of incidents. Mass murderers with psychotic illnesses are less likely to use firearms and more likely to use other forms of violence (Stock, 2023). Much higher are rates of non-psychotic psychiatric illness among mass shooters, including depression and anxiety, though only around 25% of shooters experience these (closely matching rates of the general population), and it is incidental in most cases. However, early childhood trauma is much more common among mass shooters, and researchers have found that when a trauma experienced earlier in life goes unaddressed, it can cause anger later in life that may fuel these incidents (Peterson & Densley, 2022). When some kind of history of trauma is paired with a more recent crisis (including suicidality), a violent incident is more likely to follow if the perpetrator adopts radical views from online engagement (Peterson & Densely, 2019). While they may not always become radicalized specifically by others who have committed mass shootings, they might be in online groups that advocate for violence directed at particular groups, such as minorities. For example, the perpetrator of a mass shooting in Buffalo, New York in 2022 that resulted in the death of 10 black people had been a member of several online platforms that promoted racism and violence, and he then live-streamed the attack on Twitch (a US live-streaming service) (Katersky & Hutchinson, 2022; Vogt et al., 2022; Grayson, 2022). When radicalization and mental or emotional struggles are paired with access to a firearm, the results have contributed to many attacks the United States has faced.

## Consequences

### Community Challenges

Social tension from mass shootings is not limited to the community in which they occur. Throughout the nation, there is disagreement about the source of mass shootings and how they should be prevented (CNN, 2018). Families of mass shooting victims have gathered to rally for Congress to outlaw assault rifles. While unity is found among gun violence survivors and victims' families, they face an uphill battle to create change (Osteen & Holland, 2022). Certain groups in the US disagree about how significant the issue is, with 82% of black Americans feeling that gun violence is a very big problem, 58% of Hispanic adults, and only 39% of white adults (Schaeffer, 2021). Around half of American adults feel that stricter gun laws would reduce mass shootings, while the rest feel that those laws would make no difference (42%) or even increase mass shootings (9%).

### Economic Impact

A community's financial burdens from a mass shooting can be severe. Gun violence costs add up to $557 billion each year, including long-term medical care, criminal justice system resources, lost wages, and more (AAMC, retrieved 2023). Firearm injuries are costly to treat, with medical bills costing more than twice as much as other inpatient and emergency hospital visits (Beyer, retrieved 2023). As a response to gun violence, schools implement safety measures that cost $3 billion each year (Morabito, 2022). Communities that have experienced mass shootings also experience decreased business growth (by around 4%) as well as decreases in the growth of prices of homes (Irvin-Erickson, 2017). However, gun manufacturers often see an increase in stock price in the period following a mass shooting. Firearm manufacturer Smith & Wesson saw a 12% stock price increase in the 30 days following the Uvalde, Texas elementary school shooting (Greenwood, 2022). Communities with growing income inequality are also more likely to experience mass shootings than others, which then further exacerbate economic challenges (Kwon & Cabrera, 2019). The average amount each citizen of the US spends on gun violence each year is $1,698—though the cost is half that in states with stricter gun laws and twice as much in states with weaker gun laws (Everytown, 2022).

Mass shootings that specifically affect children can lead to serious economic repercussions in their future. Economic struggles often arise in a child's future due to challenges that develop in the time following a mass shooting. For example, children affected by a mass shooting have higher levels of disengagement at school, lower graduation rates, challenges with reading and math, and even health disparities later in life (Bennett & Norris, 2023). In 2002, there were a series of shootings in Washington DC, known as the DC sniper attacks, and elementary schools in the area experienced a 2–5% decrease in proficiency (measured by students' achievement of required academic benchmarks) (FBI, retrieved 2024.; Beyer, retrieved 2023.; Renaissance, retrieved 2023). A study on schools in Texas that experienced mass shootings found a 12% increase in overall absence rates and a 28% increase in chronic absenteeism, which describes a student who is absent 10% or more of the time (Attendance Works, retrieved 2023). A child who survives a school shooting in grades 10–11 is 10% less likely to attend college and 15% less likely to receive a bachelor's degree by age 26. Black and lower-income students experience these repercussions more than their non-black and wealthier peers.

### Impact on Mental Health

Mental health challenges resulting from mass shootings have impacted US citizens regardless of their proximity to a mass shooting incident. However, those who are closest to them can develop specific and intense mental health challenges (Caron, 2022). Psychiatric disorders increased by 200% for a gun violence survivor in the month following the incident, and child survivors of gun violence experienced a 21% increase in the use of antidepressants in the 2 years following the incident (Beyer, retrieved 2023). The mental and emotional health challenges that develop after a mass shooting are posttraumatic stress disorder (PTSD), self-harm, substance abuse, and major depressive disorders. Most of these will diminish over time for survivors of mass shootings, but some (including PTSD) are long-lasting. Younger children may experience symptoms like headaches and stomach aches and can engage in “traumatic play” where they reenact the incident (sometimes indicating PTSD). Children who live closest to a shooting (2–3 blocks) were more likely to have an emergency room visit for mental health-related reasons in the 2 months following the incident. Reasons for the visit could include self-harm, suicide ideation, or panic attacks.

## Innovative Practices

### Reducing Firearm Death

Mass shootings are unique from other forms of gun violence and make up a small minority of firearm deaths. Because of this, potential solutions for mass shootings should not be understood as equally effective for different forms of gun violence. There are many laws and policies that organizations advocate for in an effort to reduce mass shootings. It is important to note that some of these policies may be specifically helpful for mass shootings rather than general instances of gun violence, including murders or suicides (Kurtzleben, 2016). Many US-based organizations effectively lobby for policies directed at reducing mass shootings, including Everytown for Gun Safety, Brady, Sandy Hook Promise, and Moms Demand Action (Everytown, retrieved 2023; Brady, retrieved 2023; Sandy Hook Promise, retrieved 2023; Moms Demand Action, retrieved 2023). Some organizations advocate for increased gun control in the US, especially concerning high-capacity magazines. These guns allow a mass shooter to fire more rounds without the pause to reload ammunition that would have otherwise allowed victims to defend themselves or find safety (Greenfieldboyce, 2022). Data shows that states that ban high-capacity magazine purchases have fewer casualties in mass shootings and fewer instances of mass shootings overall. Because the primary age for offenders is 18–21, restrictions that prevent younger people from having easy access to firearms would also likely produce a decrease in mass shootings.

One organization that lobbies for effective gun control measures is Sandy Hook Promise. This organization effectively rallies people and resources to promote policies and programs that decrease firearm deaths in the US. Sandy Hook Promise has a program called *Say Something* that educates students on assessing potential gun violence threats. In 2022, one student who was trained in the program saw another student on the bus with a gun in their backpack and reported it to the bus driver (Sandy Hook Promise, 2022). Authorities retrieved the gun paraphernalia from the potential threat who confirmed their intention to kill someone at school that day. Over 18 million people and 23,000 schools in the US have undergone at least one of Sandy Hook Promise’s Know The Signs programs that are provided at no cost to schools. Sandy Hook Promise’s National Crisis Center has received 130,000 tips since their anonymous reporting system’s launch in 2018 that have averted at least 9 credible school shooting threats and hundreds of teen suicides. Sandy Hook Promise has established programs that successfully target mental health, depression, suicide, and bullying, critical risk factors for gun violence. While passing gun control laws can be a lengthy political battle, many organizations promoting gun safety in the US are working effectively to establish programs and policies that reduce firearm deaths.

Many simple safety procedures may be effective practices in reducing firearm death; for example, a shooting at a Jewish School in Memphis in 2023 seems to have been averted when the gunman could not get past the double security doors that were in place at the school (The Guardian, 2023). The lack of data for some gun safety measures does not necessarily mean they are ineffective but are not implemented widely enough for substantive data. While firearm deaths are generally equal to the number of deaths from Sepsis (a life-threatening response from infection), funding for research on firearm deaths is only 0.7% of that of Sepsis (Greenfieldboyce, 2022). Despite limited data, there was a federal ban on assault weapons between 1994–2004 associated with an anticipated 70% decrease in mass shooting deaths if enforced today (DiMaggio et al., 2019). Shootings from 2015–2022 that involved an assault weapon resulted in twice as many deaths in those incidents, further demonstrating that the ban would have been effective had it persisted after 2004 (Everytown, 2023). This demonstrates why work from organizations like Sandy Hook Promise are so essential; small shifts in policy and prevention planning deeply impact overall firearm safety in the United States.

## References

AAMC. Retrieved August 4, 2023, from https://www.aamc.org/news/cost-surviving-gun-violence-who-pays

Alathari, L., et al. (2019). US Secret Service National Threat Assessment Center. https://www.secretservice.gov/sites/default/files/2020-04/Protecting_Americas_Schools.pdf

Albert, V. (2022). CBS News. https://www.cbsnews.com/news/mass-shooting-tops-buffalo-supermarket/

American Gun Facts. (2023). American Gun Facts. https://americangunfacts.com/gun-ownership-statistics/

Amnesty International. Retrieved May 26, 2023, from https://www.amnesty.org/en/what-we-do/arms-control/gun-violence/

Attendance Works. Retrieved July 7, 2023, from https://www.attendanceworks.org/chronic-absence/the-problem/

BBC. Retrieved May 26, 2023, from https://www.bbc.com/news/world-us-canada-41488081

Bennett, G., & Norris, C. (2023). PBS News Hour. https://www.pbs.org/newshour/show/how-the-trauma-of-mass-shootings-fundamentally-change-american-communities

Beyer, D. Joint Economic Committee Democrats. Retrieved July 7, 2023, from https://www.jec.senate.gov/public/_cache/files/69fcc319-b3c9-46ff-b5a6-8666576075fe/the-economic-toll-of-gun-violence-final.pdf

Brady. Retrieved August 17, 2023, from https://www.bradyunited.org/

Britannica. Retrieved September 2024, from https://www.britannica.com/topic/list-of-state-capitals-in-the-United-States-2119210

Caron, C. (2022). New York Times. https://www.nytimes.com/2022/05/28/well/mind/gun-violence-mental-health.html

Carter, P. (2021). Michigan Medicine. https://www.michiganmedicine.org/health-lab/most-school-shooters-get-guns-home-and-more-weapons-are-there-pandemic

Centers for Disease Control and Prevention. Retrieved August 8, 2023, from https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2022/20220524.htm

CNN Politics. (2018). CNN Politics. https://www.cnn.com/2018/02/21/politics/cnn-town-hall-florida-shooting/index.html

CNN. (2013). CNN. https://edition.cnn.com/2013/04/18/us/boston-marathon-things-we-know

Congressional Research Service. (2013). Congressional Research Service. https://crsreports.congress.gov/product/pdf/R/R43004

Cox, J. W., et al. (2023). Washington Post. https://www.washingtonpost.com/education/interactive/school-shootings-database/

De Visé, D. (2023). The Hill. https://thehill.com/policy/national-security/3960527-americans-bought-almost-60-million-guns-during-the-pandemic/

DiMaggio, C., et al. (2019). *The Journal of Trauma and Acute Care Surgery, 86*(1), 11–9. https://doi.org/10.1097/TA.0000000000002060

Doherty, E. (2023). Axios. https://www.axios.com/2023/03/28/mass-shooting-nashville-guns-legally

Everytown for Gun Safety. Retrieved August 17, 2023, from https://www.everytown.org/

Everytown. (2020). Everytown. https://everytownresearch.org/report/gun-violence-in-america/

Everytown. Retrieved March 2023, from https://everytownresearch.org/mass-shootings-in-america/

Everytown Research. Retrieved July 7, 2023, from https://everytownresearch.org/report/firearms-dealers-and-their-impact/

Everytown for Gun Safety. (2022). Everytown for Gun Safety. https://everytownresearch.org/report/the-economic-cost-of-gun-violence/

FBI. Retrieved September 10, 2024, from https://www.fbi.gov/history/famous-cases/beltway-snipers

Fox, K., et al. (2023). CNN. https://www.cnn.com/2021/11/26/world/us-gun-culture-world-comparison-intl-cmd/index.html

Fox, M. (2015). NBC News. https://www.nbcnews.com/health/health-news/yes-mass-killings-inspire-copycats-study-finds-n386141

Gabriele, R. (2023). Safehome. https://www.safehome.org/data/firearms-guns-statistics/

Giffords Law Center. Retrieved July 15, 2023, https://giffords.org/lawcenter/gun-laws/policy-areas/crime-guns/trafficking-straw-purchasing/

Girgis, R. (2022). Columbia. https://www.columbiapsychiatry.org/news/mass-shootings-and-mental-illness

Glum, J. (2017). Newsweek. https://www.newsweek.com/paddock-las-vegas-shooting-gun-legal-676151

Goldstick, J. E., Cunningham, R. M., & Carter, P. M. (2022). *The New England Journal of Medicine*. https://doi.org/10.1056/NEJMc2201761

Grayson, N. (2022). The Washington Post. https://www.washingtonpost.com/video-games/2022/05/20/twitch-buffalo-shooter-facebook-nypd-interview/

Greenfieldboyce, N. (2022). NPR. https://www.npr.org/sections/health-shots/2022/05/26/1101423558/how-can-mas-shootings-be-prevented-definitive-answers-are-hard-to-come-by

Greenwood, B. (2022). The Conversation. https://theconversation.com/firearm-stocks-spike-after-mass-shootings-as-investors-dismiss-the-chance-of-tightening-gun-laws-184198

Gun Violence Archive. Retrieved June 2, 2023, from https://www.gunviolencearchive.org/reports/mass-shooting

Hamilton, B. E., Martin, J. A., & Osterman, M. J. K. (2021). NVSS. https://www.cdc.gov/nchs/data/vsrr/vsrr012-508.pdf

Hamilton, B. E., Martin, J. A., & Osterman, M. J. K. (2023). NVSS. https://www.cdc.gov/nchs/data/vsrr/vsrr028.pdf

Irvin-Erickson, Y., et al. (2017). Urban Institute. https://www.urban.org/sites/default/files/publication/90666/eigv_brief_0.pdf

Johncox, C., & Hutchinson, D. (2021). Click On Detroit. https://www.clickondetroit.com/news/local/2021/12/05/sunday-read-everything-we-know-about-oxford-high-school-shooting-timeline-charges-evidence-more/

Katersky, A., & Hutchinson, B. (2022). ABC News. https://abcnews.go.com/US/buffalo-mass-shooting-suspect-radicalized-fringe-social-media/story?id=91670651

Kowalski, R. M. (2022). Brown Center Chalkboard. https://www.brookings.edu/blog/brown-center-chalkboard/2022/01/26/school-shootings-what-we-know-about-them-and-what-we-can-do-to-prevent-them/

Kurtzleben, D. (2016). NPR. https://www.npr.org/2016/01/09/462252799/research-suggests-gun-background-checks-work-but-theyre-not-everything

Kwon, R., & Cabrera, J. F. (2019). *BMC Public Health, 19*(1147). https://doi.org/10.1186/s12889-019-7490-x

Luscombe, B. (2022). Time. https://time.com/6185520/mass-shootings-gunmakers/

Martin, M., & Bowman, E. (2021). NPR. https://www.npr.org/2021/03/27/981803154/why-nearly-all-mass-shooters-are-men

Mascia, J. (2023). The Trace. https://www.thetrace.org/2023/03/guns-america-data-atf-total/

Masters, J. (2022). Council on Foreign Relations. https://www.cfr.org/backgrounder/us-gun-policy-global-comparisons

Meindl, J. N., & Ivy, J. W. (2017). American Journal of Public Health, 107(3), 357. https://doi.org/10.2105/AJPH.2016.303637

Meloy, J. R. (2014). Violence and Gender. https://doi.org/10.1089/vio.2014.0012

Modan, N., & Arandel, K. (2022). K-12 Dive. https://www.k12dive.com/news/2022-worst-year-for-school-shootings/639313/

Moms Demand Action. Retrieved August 17, 2023, from https://momsdemandaction.org/

Morabito, C. (2022). CNBC. https://www.cnbc.com/2022/07/06/the-school-security-industry-was-valued-at-3point1-billion-in-2021.html

National Institute of Justice. Retrieved July 11, 2023, from https://nij.ojp.gov/topics/articles/public-mass-shootings-database-amasses-details-half-century-us-mass-shootings

Nordstrom, D., et al. (2001). National Library of Medicine. https://pubmed.ncbi.nlm.nih.gov/11428557/

Onion, A., et al. (2023). History.com. https://www.history.com/topics/1990s/columbine-high-school-shootings

Osteen, O., & Holland, K. (2022). ABC News. https://abcnews.go.com/US/families-mass-shooting-victims-find-solidarity-us-capitol/story?id=90265191

Peterson, J., & Densley, J. (2019). Insider. https://www.businessinsider.com/school-shooters-show-these-signs-of-distress-before-they-open-fire-2019-2

Peterson, J., & Densley, J. (2019). The Conversation. https://theconversation.com/school-shooters-usually-show-these-signs-of-distress-long-before-they-open-fire-our-database-shows-111242

Peterson, J., & Densley, J. (2019). Los Angeles Times. https://www.latimes.com/opinion/story/2019-08-04/el-paso-dayton-gilroy-mass-shooters-data

Peterson, J., & Densley, J. (2022). Big Think. https://bigthink.com/the-present/violence-project-mass-shooting-factors/

Rabin, R. C. (2023). The New York Times. https://www.nytimes.com/2023/06/23/health/gun-violence-psychology.html?campaign_id=190&emc=edit_ufn_20230717&instance_id=97729&nl=from-the-times®i_id=208068474&segment_id=139528&te=1&user_id=9fa81c3356797037e4e007fa115254c2

Ray, M., & Chmielewski, K.(2023). Brittanica. https://www.britannica.com/topic/mass-shooting

Renaissance. Retrieved August 29, 2023, from https://www.renaissance.com/edword/proficiency/#:~:text=Proficiency%20is%20the%20documented%20evidence,do%20meet%20the%20required%20level

Sandy Hook Promise. Retrieved August 17, 2023, from https://www.sandyhookpromise.org/

Sandy Hook Promise. Retrieved June 20, 2023, from https://www.sandyhookpromise.org/blog/gun-violence/ten-gun-violence-facts-about-black-indigenous-and-people-of-color/

Sandy Hook Promise. (2022). Sandy Hook Promise. https://www.sandyhookpromise.org/who-we-are/financials/annual-report/

Schaeffer, K. (2021). Pew Research Center. https://www.pewresearch.org/short-reads/2021/09/13/key-facts-about-americans-and-guns/

Siegel, R. (2018). The Washington Post. https://www.washingtonpost.com/news/wonk/wp/2018/03/02/the-parkland-shooting-is-different-the-news-coverage-proves-it/

Silva, J. R. (2023). International Journal of Comparative and Applied Criminal Justice. https://doi.org/10.1080/01924036.2022.2052126

Statista. Retrieved July 7, 2023, from https://www.statista.com/statistics/476456/mass-shootings-in-the-us-by-shooter-s-race/

Stock, S. (2023). CBS News. https://www.cbsnews.com/detroit/news/a-look-into-the-traits-of-a-mass-shooter/

Strauss, V. (2019). The Washington Post. https://www.washingtonpost.com/education/2019/04/18/school-shootings-didnt-start-columbine-heres-why-that-disaster-became-blueprint-other-killers-created-columbine-generation/?noredirect=on

The Guardian. (2023). The Guardian. https://www.theguardian.com/us-news/2023/jul/31/memphis-police-mass-shooting-averted

The San Diego County District Attorney's Office. (2021). https://www.sandiegocounty.gov/content/dam/sdc/hhsa/programs/bhs/CYF/FINAL-%20Master%20School%20Threat%20Protocol%20revised%20November-2-2021.pdf

Thrush, G. (2022). The New York Times. https://www.nytimes.com/2022/05/16/us/politics/legal-gun-purchase-mass-shooting.html

Thrush, G., & Richtel, M. (2022). New York Times. https://www.nytimes.com/2022/06/02/us/politics/mass-shootings-young-men-guns.html

Trilling, D. (2017). The Journalist's Resource. https://journalistsresource.org/politics-and-government/mass-shooters-suicide-bombers-journalism/

TRT World. Retrieved June 20, 2023, from https://www.trtworld.com/magazine/us-accounted-for-73-percent-of-global-mass-shootings-12787908

UC Davis Health. Retrieved January 11, 2023, from https://health.ucdavis.edu/what-you-can-do/facts.html

Vogt, A., Ruiz, J., & Wagner, M. (2022). CNN. https://www.cnn.com/us/live-news/buffalo-supermarket-mass-shooting/h_a91977d2e5023d7786018e78902731ee

Warner, M. (2022). Politico. https://www.politico.com/news/magazine/2022/05/27/stopping-mass-shooters-q-a-00035762

World Population Review. Retrieved July 132, 2023, from https://worldpopulationreview.com/state-rankings/gun-laws-by-state

Journal of Nonprofit Innovation

September 2024
Vol 4, Issue 3

# Thought Paper

Ideas for Professional Development in the Nonprofit Sector

**TITLE**
Ideas for Professional Development in the Nonprofit Sector

—

**AUTHOR**
Elise Kieffer, PhD

—

**TOPICS**
Professional Development; Community Engagement; Capacity Building

—

## Ideas for Professional Development in the Nonprofit Sector

By Elise Lael Kieffer, PhD, Nonprofit Leadership Studies, Murray State University

## Abstract

Nonprofit organizations are frequently born out of need, passion, or personal experience. Although that can be sufficient to birth an organization, the requisite skills required to manage, administrate, and lead the organization long-term are sometimes lacking. Because both financial and human resources are stretched within the nonprofit sector, ideas that promote human resource development without overtaxing organizations financially are worth consideration. Maximizing the value of community partners and inter-sector collaboration serves to open opportunities for whole communities to improve their nonprofit sector's performance and capacity. This article presents a suggested format for a professional development program for nonprofit staff and volunteers that was conceived in rural, West Kentucky, and has been successfully executed and replicated in communities across the region.

The vast majority of nonprofit organizations are founded through the passionate labor of a small group of highly motivated and activated individuals. Their fervent desire to pursue their mission drives them into a cause that develops and grows until the nonprofit organization is formed. For many of those individuals, the cause that motivates them is the catalyst and the fact that they have not been trained to run an organization matters little in their eagerness to make a difference or affect change. Many nonprofit organizations are born in this manner. Need drives creation and the mission serves as inspiration (Backer, Bleeg, and Groves, 2004).

The passion that drives the ambition to make an impact in our individual areas of concern can birth an organization and can even help it grow at the beginning, but along the way, these inspired leaders often struggle far more than necessary because the passion that drove them to start the organization did not bring with it the requisite skills to run the organization. The initial energy that motivated them will eventually diminish as inspired leaders become exhausted in their labor, and without a stable organizational foundation, the organization might flounder, or even fail (Carman and Nesbit, 2013). This is, too often, the case in the nonprofit sector.

The nonprofit and nongovernmental sector serves the critical role of filling in the gaps in service and opportunity that are unfulfilled by the public sector and either unfulfilled or unobtainable through the private sector. Community arts organizations are a wonderful example of this dynamic in action. The government often provides minimal arts access, and that is primarily offered through public school systems. Those who live in geographic areas of convenience, or with money to spend on arts enrichment might be able to pay for private arts education and enrichment opportunities. Nonprofit community arts organizations are able to fill the gap in service by thriving in rural or lower income spaces, providing opportunities to those who otherwise might not be able to experience that access. Within our space of service and mission, we can meet needs in a way uniquely our own, if only we have the tools and knowledge necessary to do so.

This thought paper presents one option for a professional development program for nonprofit professionals working in rural communities. This program serves to facilitate the training of nonprofit employees and volunteers in critical leadership and management education. The Academy of Nonprofit Development and Leadership (ANDL) was formed through partnerships with the Nonprofit Resource Center and Center for Adult and Regional Education at Murray State University in Murray, Kentucky, U.S. The curriculum was developed by Nonprofit Leadership faculty, local nonprofit leaders, and professional leadership consultants.

Through this educational opportunity, nonprofit leaders, board members, and aspiring nonprofit directors come together in a cohort of peers to learn both foundational and advanced theories, strategies, and direct applications that can improve their organizations. Leadership, fundraising, marketing, collaboration, volunteer management, and programming are just a sample of the topics covered in the program. ANDL equips nonprofits to be successful and sustainable and fully engaged with their service populations, and broader community.

Participants in the inaugural program in Hopkinsville, Kentucky expressed great appreciation for the value of the program and its potential to improve their organizations. Other communities across the Western portion of the state expressed interest in bringing ANDL to their own towns and it has since been replicated in different communities every academic year. As of spring 2024 ANDL had also been hosted in Madisonville, Paducah, and Murray. The 2024/25 program returns to Hopkinsville and Paducah for a second cohort. Each community has experienced higher enrollment that the one before, offering an indication that the program's value is being shared across the network of nonprofit organizations in the region. As of this writing, over 100 nonprofit organizations have participated in the program.

The framework for this program model is a potentially useful resource for those considering avenues for nonprofit practitioner training in their own communities. As this model has been successfully replicated in diverse communities across the West Kentucky region, it is reasonable to consider it might be worth exploring for those in other regions. Particularly in rural communities with limited access to higher education, programs like this can be uniquely valuable.

Walters (2020) identified a series of problems confronting rural America, including but not limited to poverty, rising crime, poor health networks, and poorly funded education. The nonprofit sector is critical in rural communities, providing services or access to services unmet by the public and private sectors. Walters explored whether the current capacity of these organizations enables them to continue meeting the needs of their constituencies. The study concluded that knowledge in rural organizations is limited with regard to "knowledge of and engagement in strategic planning, succession planning, human resources processes, staff training, legal compliance and monitoring, program evaluation, and internal and external communications processes with stakeholders" (p. 85). Research around the current realities and challenges facing rural communities supports Walters conclusions (Kieffer and Socolof, 2024; Clinger, Handley, and Eaton, 2023).

One identified means of increasing the capacity of nonprofit organizations is training (Backer, Bleeg, and Groves, 2004). However, often the organizations most in need of training are also the least able to financially support their managers pursuit of the necessary education (Kapucu, Healy, and Arslan, 2011). Rural nonprofits often face challenges when trying to hire qualified employees, so programs that train existing employees are worth pursuing. Insufficient staffing, training, and technology are all identified as particular challenges for rural organizations (Arneal, 2015).

Kieffer (2020) concluded that many nonprofit arts organizations are operated by people with specialized training in various art forms but lacking administrative or managerial experience or education. This phenomenon occurs across the nonprofit sector, not merely within the arts and culture. (Remember the passionate spark first mentioned). To confront this experiential deficit, Kieffer suggested the advancement of professional development opportunities for on-the-job nonprofit leaders to acquire the specific administrative knowledge required to successfully lead their organizations. Because of the important gaps filled by rural nonprofits, the program described below was designed to strengthen the infrastructure of organizations serving one particular community in Western Kentucky.

## The Program

In addition to the Nonprofit Leadership Studies program for undergraduate and graduate students, Murray State University also houses a Nonprofit Resource Center (NRC). The NRC was created specifically to bring the theories and research of NLS professors and instructors into practice out in the community. The NRC serves as a repository of information, guidance, and other professional development services to regional nonprofit organizations. The connection between these two entities was designed to train future nonprofit leaders, while simultaneously supporting the current sector with knowledgeable technical assistance. The NRC strives to strengthen both the university and the surrounding community nonprofit sector by serving as a sort of conduit for symbiosis.

As in many other locales, in the Western Kentucky region nonprofit leaders play a vital role. Despite their communities reliance on program offerings, nonprofit executives often face the challenges of inadequate funding, lack of volunteers, and limited professional development opportunities. ANDL was designed to provide a practical solution to this dilemma. The eight seminars focused on critical issues for nonprofit leaders, including program development, financial management, support resources, communications, marketing, and more. At the conclusion of the year, participants received a Certificate in Nonprofit Leadership and Continuing Education credits (CEU's).

## Replication

The program's first iteration in Hopkinsville (HANDL) prompted directors of other Murray State regional campuses to bring the program into their communities, as well. In each community there is required buy-in at the community, organizational, and individual level. Local community is required to commit to the underwriting costs that primarily support payments for instructors and educational supplies for participants. This can be done through one large donation or many smaller gifts, but the intention is that the local community recognizes the value of professional development for their nonprofit sector and supports them through financial investment in the program.

At the organizational level, a nominal tuition fee is required. This fee can be paid by the individual, and a few scholarships are made available, but the purpose of the fee is to ensure organizational support of their employee-participant in the program for the year-long commitment. Finally, the individual participant is required to pay a small registration fee. This is specifically intended to ensure that each participant is personally invested in the program and committed to its completion. Through these methods, there is strategic commitment to the ANDL program from community, organization, and individual. In the three communities where this program has concluded, these methods have been successful and well-received.

## Curriculum

The ANDL curriculum follows priorities set by the Nonprofit Academic Centers Council and was informed by nonprofit management educators, practitioners, and consultants.

***Seminar 1 – "Your Nonprofit Organization."*** This session clarifies purpose, mission, and goals. Participants establish a clear understanding of their organization's unique place within their community. The content of the session focused on effective leadership strategies in nonprofit organizational development, and creative methods for strengthening the impact on the organization's mission. It set the stage for upcoming sessions that examined structure, governance, and strategic planning.

***Seminar 2 – "Strategic Leadership: Beyond Business as Usual."*** This session emphasized organizational strategy as a mission-critical necessity to achieve organizational success. It taught participants how to strategically lead in order to successfully bring together diverse stakeholder groups, capable of developing and implementing robust strategies that are equal to the magnitude of the problems they are trying to solve. In this session, students learned leadership characteristics, along with personal and organizational tactics and tools to inspire progress, engage collaborators, adapt to changes, and advance their nonprofit's vision.

***Seminar 3 – "Funding and Financial Sustainability."*** This session emphasized the creative and leading role that funding plays in organizational effectiveness and served to build a working appreciation for financial management functions, and establish an interconnected and collaborative strategy for fund development, financial management, and long-term sustainability. The content of the session included the fundamentals of financial management and development, including quality practices and proven strategies for fundraising and financial sustainability.

***Seminar 4 – "Engaging the Nonprofit Sector Support Resources and Infrastructure."*** This session explored the nonprofit sector's support resources, specifically highlighting those available to the current cohort of students. They identified those that most align with organizational needs and challenges and were equipped to continue this independently following the completion of the session. Students mapped their local nonprofit sector infrastructure and support systems, built a plan of action and schedule for engaging support resources and infrastructure. Participants were guided on distributing responsibility to key stakeholders for exploring and connecting with available opportunities. This session's content focused on understanding the organization's potential place in the larger system and strategies for engaging and capitalizing on available resources.

***Seminar 5 – "Communications, Marketing, and Branding."*** In this session students developed a quality understanding of the key elements of effective communication. They examined the different framing and applications of communication, explored examples of effective and ineffective applications, designed a customized marketing strategy for their organizations, considered the role of branding in their organization's work, and developed a plan of work for integrating those lessons into the organization's ongoing strategic plan. The content of the session served to improve understanding of the range of effective communication methods, the basis for the selection of most appropriate methods, and strategies for accomplishing information goals. The session demonstrated the need for an integrated set of communications activities that help improve public understanding and appreciation, engage participants, demonstrate results, and garner support.

***Seminar 6 – "Broadening Your Circle of Support and Capacity."*** This session worked participants through mapping the people and organizations that support the organization's constituents and are dedicated to their mission. Participants developed strategies to build or strengthen relationships and formal connections across their maps. They were exposed to the value of creating of a formal network of kindred spirits to promote collaboration and support for their mission. They were enabled to identify starting points for cooperative efforts that might enhance the mission of their organizations. The content of the session focused on claiming the public space, being valued as a community resource, and owning the right to be engaged in leadership roles across the community on activities that relate to their organization's mission.

***Seminar 7 – "Strengthening and Motivating Volunteers and Staff."*** Students broadened their understanding of quality practice in nonprofit volunteer and staff development. They explored the emerging commitment to "peer-owned and led" human resource engagement, practiced a range of team building methods, and established a set of next steps to take toward stronger engagement and commitment with staff and volunteers. Finally, participants identified methods of assessing their progress. The content of the session included needs analysis practices and the development of human resource structures, effective strategies for management and supervision, and the roles of leadership in organizational, board, and individual performance assessment.

***Seminar 8 – "Effective Organization and Program Delivery."*** In this session, students studied quality practices of organizational and program evaluation. They created a customized logic model to guide evaluation and assessment, increased understanding of comprehensive organizational development strategies, established a plan of action for implementing a strategic planning process customized to the organization, and practiced the art of identifying priorities and articulating goals that align with the mission. Students were invited to commit to the application of the lessons learned throughout the certification sessions. The content of the final session included basic program development approaches that ensure collective alignment with organizational mission and strategies. The focus was on the identification of guiding principles and impact indicators that advance the mission and upon which programs are developed and evaluated (HANDL, 2021).

## Participant Feedback

Participants of the program in each of the communities provided feedback on individual sessions, as well as on the program as a whole. Their responses were overwhelmingly positive.

"This program provided an extended foundation to many non-profit principles that I already knew and gave me insight in how to grow the organization."

In addition to the curricular knowledge that is built into the program, the networking that inevitably results from participating in a 9-month program has proven to be one of the greatest values for participating organizations. "I appreciated the opportunity to build relationships with other nonprofit practitioners in our community. . . The comradery among students--the partnerships--the bonds we developed. They are all so valuable to me."

As the program continues, organizations return but with different individual participants. This can be interpreted as an endorsement of the quality of the offering and the perceived value it brings. One participant succinctly said, "This program is an asset."

## Conclusion

There is much about the nonprofit sector that is not all that dissimilar from any other business. We need to be able to balance our budgets, work with people, feed our resource engine, things any other business manager would have to do. What makes us unique, and what must absolutely define every choice, every conversation, every interaction, is our mission.

It is the final recommendation that this program be replicated and repeated in other communities. The ANDL program succeeds because it relies on partnerships between the university, the community, and the regional community foundation. The facilitators of this specific program successfully replicate it in communities across Western Kentucky every academic year. The request from our region has been that the program continue in each community on a rotation. By seeking such partnerships, this program could provide necessary training to nonprofit leaders in other communities and regions, further increasing the capacity of the nonprofit sector in those communities.

## References

Arneal, L. (2015). Report: Rural-based organizations receive fewer grants than urban NPOs. Retrieved from http://nonprofithub.org/grant-writing/report-rural-based-organizations-receive-fewer-grants-than-urban-npos/

Backer, T., Bleeg, J., & Groves, K. (2004). The expanding universe: New directions in nonprofit capacity building. *Alliance for Nonprofit Management.* Retrieved from http://www.valleynonprofitresources.org/pdfs/expanding_uni verse.pdf

Carman, J. G., & Nesbit, R. (2013). Founding new nonprofit organizations: Syndrome or symptom? *Nonprofit and Voluntary Sector Quarterly*, *42*(3), 603–621. https://doi.org/10.1177/0899764012459255

Kapucu, N., Healy, B. F, & Arslan, T. (2011). Survival of the fittest: capacity building for small nonprofit organizations*. Evaluation and Program Planning, 34*(3), 236-245. https://doi.org/10.1016/j.evalprogplan.2011.03.005

Kieffer, E. L. (2020) *Exploring relationships between arts administrators in Appalachian Kentucky and Tennessee and their state arts agencies: a qualitative Narrative inquiry* (Publication No. 28152724) [Doctoral dissertation, Florida State University]. ProQuest Dissertations Publishing.

Walters, J. E. (2020). Organizational capacity of nonprofit organizations in rural areas of the United States: A scoping review, *Human Service Organizations: Management, Leadership & Governance, 44*(:1), pp. 63-91, https://doi.org/10.1080/23303131.2019.1696909

Journal of Nonprofit Innovation

September 2024
Vol 4, Issue 3

# Research Overview Paper

Addressing Adolescent Suicide in South Korea

**TITLE**
Addressing Adolescent Suicide in South Korea

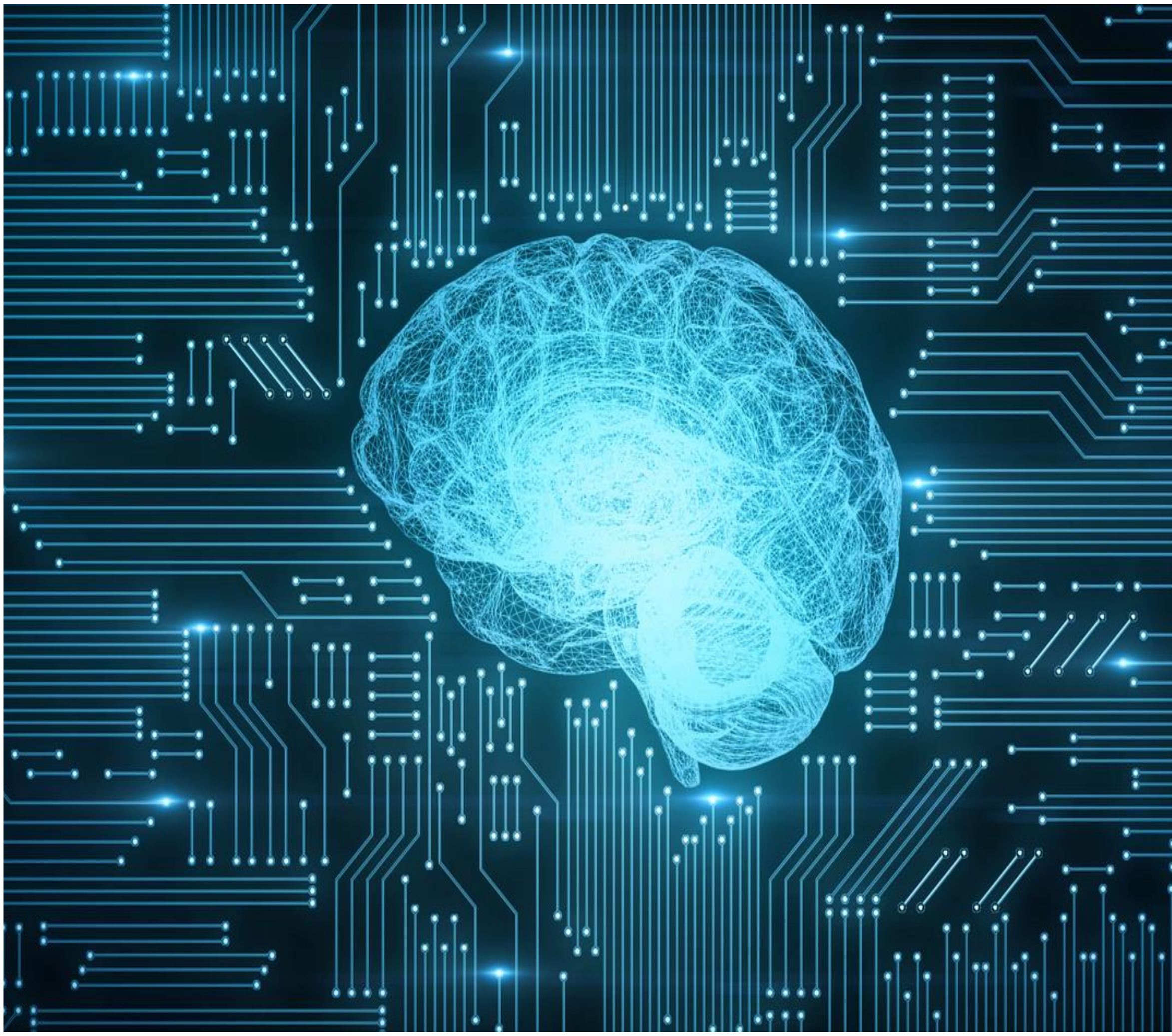
—

**AUTHOR**
Alyssa Kang

—

**TOPICS**
Suicide, South Korea, Adolescent, Mental Health

—



## Addressing Adolescent Suicide in South Korea

By Alyssa Kang

**Summary:** Suicide is a prevalent issue that widely affects all demographics in South Korea. In 2019, South Korea was ranked 12th highest in suicide rates globally, with 21.2 deaths per 100,000 people (World Health Organization, n.d.). This rate was also highest among all Asian countries and countries within the Organization for Economic Co-operation and Development (OECD) (Donnelly et al., 2021; World Health Organization, n.d.). Among South Korean adolescents, suicide has been the leading cause of death since 2011, with a rate of 7 deaths per 100,000 people in 2021 (Statista, 2022b).

For Korean adolescents, the rate of suicide is twice the amount of deaths by unintentional injury (2nd leading cause) and three times the amount of deaths by cancer (3rd leading cause) (Jo et al., 2022). Between males and females, male adolescents have shown higher rates of suicide than their female counterparts (Lee, Park, Choi, & Park, 2022; Vizhub, n.d.). In 2019, the average suicide rate for males was about 2.4 and 1.84 for females (Lee, Park, Choi, & Park, 2022). However, statistics show that suicidal ideation is almost twice as high for females than for males. Among middle and high school students in 2021, the rate of suicidal ideation was 9.5% for boys and 16.1% for girls (Statista, 2022c). Whereas Korean male adolescents tend to display more externalized problems, such as impulse control and risk taking, which lead to more completed suicides, females tend to display more internalized problems, such as depressive symptoms or social exclusion, leading to more ideation (Lee, Park, Choi, & Park, 2022).

South Korean adolescents vary in their methods of attempting suicide. Research shows that jumping from high places was found to be the most common used method resulting in completed suicides, accounting for 56% of suicides among 10–19-year-olds in 2019 for both girls and boys (Song, Hong, et al., 2021; Jung, Lee, et al., 2019). Although jumping was the most common method for suicide attempts, hangings tended to be the most lethal method of suicide used by youth (Song, Hong, et al., 2021; Jung, Lee, et al., 2019). Many adolescents also use other less lethal methods to attempt suicide, including cutting and drug intoxication, which often do not result in death (Park, Kim, et al., 2015).

Depression is also a factor that influences adolescent suicides and is a high predictor for attempts and ideation (Kwon, Song, et al., 2016). In 2018, a nationwide study of adolescent students reported that about 17.6% of suicides were related to psychiatric disorders, such as depression (Liu, 2020). Within the country, the overall prevalence of suicide attempts in adolescents is 5.2%, but having depression increases the likelihood of an adolescent attempting suicide 8 times (Park, 2008). This research reveals that depression correlates to higher rates of suicide. In a study of 106 depressed participants, 47.2% of the adolescents had attempted suicide (Kwon, Song, et al., 2016). Another study found that rates of suicide attempts for Korean adolescents categorized in the depressed and potentially depressed groups were 5.4 and 2.4 times higher than the non-depression group, respectively (Bee et al, 2022).

There are also proportionately higher rates of suicide among adolescents with specific characteristics. Those who struggle with problematic internet use are at higher risk for suicide due to increased ideation and were shown to be 5.82 times more likely to have suicidality than non-problematic users (Park, Kim, Lee, & Kim, 2012; Lee, Park, Han, et al., 2016). Because internet use predicted depressive symptoms and suicidal ideation, those who display these behaviors were more at risk of attempting (Park, Kim, Lee, & Kim, 2012). Individuals of low socioeconomic status have also been shown to be at risk for suicide. Within Korea in 2016, 17% of adolescents who committed suicide came from very low socioeconomic status (Im et al., 2017). A study revealed that 25.8% of adolescents who had suicidal ideation perceived their socioeconomic status as low, compared to 16–17% who perceived their status as high (Kang, Hyun, Choi, et al., 2015). Additionally, stress stemming from a low income, unemployment, financial difficulties, poor working conditions, and extended shifts were risk factors for suicide (Raschke et al., 2022). Many studies also identified substance abuse as a risk factor; adolescents who used drugs were 4.6 times at higher risk for suicidal behavior than those without substance abuse risks (Park & Kim, 2016; Kong & Kim, 2016).

## Contributing Factors

### Cultural Influence and Stigma

Cultural upbringing and stigma towards mental health negatively affect how Korean adolescents handle suicidal ideations and increase the rate of suicide attempts. Because of the collective nature of Korean society, the idea of reaching out for help may cause individuals to forgo receiving treatment to preserve their or their families' reputations and minimize, tolerate, or suppress difficult emotions (An et al., 2022). Research shows that only 1 in 4 Korean adolescents seek professional treatment, while the remaining 3 are more likely to try and fix their problems independently without support (Do et al., 2019).

Korean culture is also widely centered on perfectionist expectations in behavior and lifestyle, which contributes to a "success or failure" mentality for many adolescents. This negative labeling can make many struggling mentally feel "socially failed" or "useless members of society" (Donnelly et al., 2021). This feeling, as well as the expectation to conform to social norms, is a key contributor to suicide stigma (An et al., 2022). Because of this, adolescents withhold information for fear of not meeting cultural standards. A lack of information prevents parents, teachers, peers, and medical professionals from recognizing their suicidal ideation and intervening in possible attempts (Liu, 2020; Beteta, 2020; Kim, Hong, & Hong, 2020; Kim & Lee, 2023). Studies found that 70% of Korean adolescent students who committed suicide did not show any unusual emotional or behavioral characteristics at school, and teachers found it challenging to detect suicidal ideation in students because they observed the students to be mentally healthy (Lee, Lee & Hong, 2020). Other studies observed the difficulties associated with the belief that admitting a mental illness was shameful. Because many adolescents refrain from engaging in help-seeking behaviors with family, friends, and teachers, they are at a greater risk of suicidal ideation (Liu, 2020; Kwak & Ickovics, 2019).

One source showed that having a mental disorder is a risk factor for suicidal ideation, which leads to suicide attempts (Lee, Kim, & Lee, 2018). Because Koreans generally hold a stigmatized view of mental health, many with mental illness are not diagnosed (An et al., 2022; Beteta, 2020). This underdiagnosis can prevent struggling adolescents from receiving treatment, increasing their risk for suicide (Kwak & Ickovics, 2019). A study found that only 15–23% of individuals in Korea received treatment for mental disorders. To compare, about 44% of people receive treatment in Western states (Roh, Kim, et al., 2016). Among the 17.6% of adolescent suicides caused by psychological disorders, primarily depression, only 11–22% of those individuals received psychiatric treatment (Liu, 2020). This relative lack of treatment increases suicidal ideation and attempts (Kwak & Ickovics, 2019).

## Academic Stress

Because of pressures and expectations on students regarding grades, futures, and overall academic success, suicidal ideation and attempts correlate to academic stress. A nationwide study found that academic stress primarily contributed to suicide, accounting for 12% of adolescent suicide deaths (Liu, 2020), and a study revealed that as of 2020, 27% of adolescents in Korea experienced suicidal ideation, 40% reported that it was due to academic stress (Jo et al., 2022).

This stress consists of immense competitive pressure and expectations influenced by Korean culture (Park, Im, & Ratcliff, 2014) and are placed on adolescents starting at a young age (Jo et al., 2022). In 2022, 20.3% of middle school and high school students in South Korea had suicidal ideation because of anxiety about their futures and careers (Statista, 2022a). A study observed a statistically significant link between grade pressure, depression, and suicidal risk among Korean adolescents (Song, 2016). One study also reported that 26.7% of adolescents who perceived their academic performance as poor had suicidal ideation within the past year, 9.2% had attempted suicide compared to those who perceived theirs as excellent (16.2% and 3.8%, respectively) (Kang, Hyun, Choi, et al., 2015).

Research has also shown that among children who attended four or more hours of tutoring each day, 30% had clinically significant elevations of depressive symptoms. They also were 3 times more likely to show symptoms of depression than children who spent less than 4 hours per day in tutoring (Phosaly et al., 2019). As the duration of studying increases and leisure time decreases, rates and severity of depression increase (Lee & Bae, 2015), which can be a significant risk factor for suicide.

### Bullying and Discrimination

Bullying is another risk factor influencing Korean adolescents' likelihood of suicidal ideation and attempts. Researchers reported that Korean adolescent students who experienced school bullying were twice as likely to report suicidal ideation and 40% more likely to suffer from depression from those experiences than those not bullied. Adolescents who experienced physical bullying (hitting) were 3.05 times more likely to attempt suicide than those not bullied. Similarly, victims of cyberbullying were found to be 2.94 times more likely to attempt suicide than those not bullied. Whether in traditional forms or online, bullying can greatly influence Korean adolescents and their mental state, leading to suicidal ideation and suicide attempts (Roh, Yoon, et al., 2015).

Cyberbullying, suicidal ideation, and suicidal attempts have become more prevalent in recent generations because of increased internet use. In a national sample of over 7,000 Korean Children and Youth Rights Study students of the 17.7% of cyberbullied adolescents, 28.4% had suicidal ideation in the past 12 months. Additional research showed that suicidal ideation increases with cyberbullying severity—35% of students suffering from low levels of cyberbullying had suicidal ideation, and 52.4% had suicidal ideation with high levels of cyberbullying (Lee, Choi, Kim, & Park, 2021). This shows that the presence and intensity of cyberbullying increases risk for adolescent suicidal ideation and attempts.

### Family Structure and Conflict

Family structure plays a significant role in influencing the mental state of an adolescent, which can influence the presence of suicidal ideation. Korean adolescents who live in restructured families (families with stepparents) or with single or divorced parents tend to have a greater risk for suicide. In 2018, single-parent families made up 10.9% of all families in Korea (Park & Lee, 2020). Studies show that adolescents in homes with single parents, stepparents, or orphaned were 4%, 14%, and 23% more likely to experience suicidal ideation than those with both-parent families, respectively. Researchers also found that those who were orphaned or had stepparents were 36% more likely to attempt suicide than those with both biological parents (Lee, Park, Han, et al., 2016). This may be due to the emotional strain on children, as shifting family structures can lead to tenuous relationships between children and parents (Bong et al., 2021).

## Consequences

### Risk for Future Attempts

Having a history of suicide attempts or a form of non-suicidal self-injury was found to be a key risk factor for future suicides. Of students who attempted suicide or died by suicide in Korea, 28.4% had a history of self-harm, and 29.1% had previously attempted suicide (Song, Hong, Kim, et al., 2021). Other studies showed that 41.5% of adolescent attempters had a history of suicide attempts when visiting the emergency room (Lee, Bang, Min, et al., 2021). This data reveals that adolescents who have attempted in the past have a likelihood to attempt suicide multiple times, increasing the chance of death (Lee, Bang, Min, et al., 2021). These increased rates also correlate to the observation that adolescents can be more impulsive and emotionally unstable than adults, causing them to attempt suicide more unexpectedly (Lee, Kim, & Lee, 2019).

### Effect on Family

After a suicide, family members of suicide victims are often affected immediately and personally. Because of the traumatic events of a suicide, family members and close friends of the suicide victim are often referred to as suicide survivors (Lee, Choi, & Kim, 2017). Survivors deal with the incident's aftermath and experience emotional effects such as grief, anger, and hopelessness (E. Lee, 2022). A study identified that Korean families that experienced the death of a teenage suicide victim were emotionally disturbed and socially isolated during bereavement (E. Lee, 2022). Because adolescents have less experience with mourning the death of people they know, the effects of suicide on a child survivor within the family can include grief and negative psychological (depression, post-traumatic stress) and emotional effects (shame and guilt) that can increase the risk of suicide later (Kim, Hong, & Hong, 2020).

Family members also experience a higher risk for mental illness. A study compared 272 suicide survivors to 5,200 individuals from the general population of Korea and found that the presence of major depressive disorder was 9 times higher among suicide survivors, and suicide attempts were 6 times higher (Jang, Lee, Seo, et al., 2020). This increase in mental illness can also put family members at higher risk for suicide. A study showed that compared to bereaved families of non-suicide deaths in Korea, the risk of suicide in suicide-bereaved families was 3 times higher. This same study found that the risk of suicide was second highest in mothers of a suicide victim, following a spouse of a suicide victim. This study, however, did not identify the age range of the children and was not specific to adolescent age (Jang, Park, Kim, et al., 2022).

### Effects on Community and Society

Suicide also impacts the society surrounding the victim because the negative effects of suicide involve the communities of those individuals and the economy. A single suicide affects about 60 people on average, including family, close friends, and coworkers; as such, the average Korean has a 21.8% chance of being exposed to suicide over their lifetime (Jang, Lee, Seo, et al., 2022). Based on the rate of adolescent suicides, this means that there are approximately 34,000 survivors from adolescent suicide in Korea each year (8.15 million adolescents in Korea) / (100,000) x (7 adolescent suicides per 100,000) x (60 suicide survivors per suicide) = 34,230 suicide survivors by adolescents). Research found that childhood suicide survivors who lost a friend to suicide had persistent symptoms of depression and suicidal ideation up to eight months after their death. Additionally, 27.3% of these individuals were reported to be at risk for high levels of depression (Kim, Hong, & Hong, 2020). Data has also shown that suicide in communities contributes to adolescent depression, which can increase suicidal risk (Table 4 Two-Level Multilevel Logistic Regression Analysis of Individual- and Community-Level Factors Associated with Adolescent Depression).

Other studies explored the bereavement process of teachers of adolescent suicide victims. They found that teachers experienced conflicting feelings about handling the suicide because of personal and professional factors. Though they did experience shock and grief from the incidents, the sociocultural beliefs placing negative perceptions on suicide resulted in a rejection of those suicides (Kim, 2019). Schools in Korea also tend to keep silent about student suicides for fear of shame or blame (Kim, 2019; Liu, 2020), making it difficult for teachers to grieve due to lack of time and pressure to conform with their organization (Kim, 2019). This study also found that teachers who were suicide survivors experienced a renewed perception of their role in suicide prevention as teachers to help students.

Suicide also has a significant impact on the economy. An analysis showed that the total social loss from suicides in Korea equals about $5.9 billion. This loss occurs because those who have lost their lives to suicide can no longer contribute to the economy, resulting in a decline in economic productivity (Garg & Kothari, 2018). Many investments made by parents towards their child's education and healthcare are lost when their child commits suicide. Studies show that Korean parents spend between 15–30% of their family budget on private education for their children (Jarvis 2020). As a result, a suicidal act is a financial burden left on the individual's family, which is often a negative return on investments made by parents for their children (Garg & Kothari, 2018).

## Innovative Solutions

### Mental Health Services

South Korea has many mental health services for adolescents targeted for suicide prevention. These services include counseling (Jo et al., 2022), psychotherapy, school-based programs (Kong & Kim, 2016), and medical care. Because of the wide range of stressors contributing to Korean adolescents' mental health (many of which are predictors of suicide), more adolescents have sought counseling services within the past few years. In 2018, 5 million Korean adolescent students sought counseling services due to psychological difficulties (Jo et al., 2022).

### Impact

Many studies have suggested that referral to specialized mental health institutions through schools can help promote mental health and reduce the risk of suicide. A study showed that suicide risk for adolescents who experience suicide attempts or self-injury decreases when they consult with specialized mental health institutions through school-based services (Kim, Hong, & Hong, 2020). Korean adolescents reported fewer negative emotions and psychological difficulties related to depression and anxiety after receiving these counseling intervention treatments. They also reported fewer difficulties with school and family and better interpersonal relationships with peers and teachers (Jo et al., 2022).

### Gaps

There have been positive effects for Korean adolescents through this intervention; however, many of these services are limited and require more research on mental health, suicide, and evidence-based interventions (Kwak & Ickovics, 2019). Because social stigmas towards mental health persist, many adolescents shy away from seeking help, which delays mental health care and increases the risk of suicide ideation and attempts (Kwak & Ickovics, 2019). A lack of governmental support for these services also limits their effectiveness and development. Although their government's budget for mental care-related fields doubled from $18 million in 2010 to $43 million in 2014, it only accounted for less than 3% of the country's healthcare expenditures, which is significantly lower than the World Health Organization's (WHO) recommendation of 15–50% (Liu, 2020).

Multiple studies have proposed revisions to current mental health methods, emphasizing the need for school-based programs that can help students learn to identify mental illness symptoms like depression and suicide, build positive thinking skills, and create connections between struggling students and healthcare professionals (Kong & Kim, 2016; Kwak & Ickovics, 2019; Park, Im, & Ratcliff, 2014; Roh, Yoon, et al., 2015). Research suggests that implementing programs that collaborate between schools, parents, communities, and governments and include long-term goals and guidelines can have a greater impact on preventing suicide risk in adolescents and will fill in gaps that are currently present in available programs (Liu, 2020; Kong & Kim, 2016; Park, Na, Kwon, et al., 2020).

## Nonprofit Spotlight(s)

### Gatekeeper Training

Although efforts are still ongoing, Korea has focused on training "gatekeepers" to detect early signs of suicide in adolescents (Park, Na, Kwon, et al., 2020; Na, Park, Kwon, et al., 2020). Gatekeepers are individuals within a community such as teachers, counselors, or peers that are in the position to identify individuals at risk for suicide and refer them to treatment or supporting services (Burnette et al., 2015). In 2011, the non-governmental organization, "Korea Association for Suicide Prevention" (KASP), developed the Standardized Suicide Prevention Program for Gatekeeper Intervention under the support of the Life Insurance Philanthropy Foundation (Park, Na, Kwon, et al., 2020). This program included "Suicide CARE", which is a program that focuses on training individuals to detect and respond to early warning signs of suicide risk by emphasizing careful observation, active listening, risk evaluation, and referral to experts towards at-risk persons (Park, Na, Kwon, et al., 2020). This program was able to provide suicide prevention training to 1.2 million individuals in Korea by 2019 (Paik, 2014). Research showed that the referral rate for these types of programs was about 81.2% in 2017 and have shown to mitigate the risk of suicide death of survivors by 4.59 times, while those not referred are 1.87 times at higher risk of death by suicide (Kim, Hong, & Hong, 2020).

KASP also partnered with AstraZeneca to promote "safeTALK", which is another program that focused on training young peer supporters as gatekeepers, helping them to engage with other adolescents to identify and respond to suicide risks (AstraZeneca, n.d.). Through their efforts, they reached 88,000 young people about mental health and suicide awareness, trained 1,794 young gatekeeper peers and 782 teachers about risks, and involved 1,732 additional parents, teachers, politicians and community leaders in the program (AstraZeneca, n.d.). However, because available research is limited, the ongoing impact of these efforts are yet to be determined.

## References

An, S., Choi, S., & Yoon, Y. (2022). Social stigma of suicide in South Korea: A cultural perspective. *Death Studies*, 47(3), 259–267. https://doi.org/10.1080/07481187.2022.2051096

AstraZeneca. (n.d.). *Young health programme: Korea*. AstraZeneca. https://www.yhp.astrazeneca.com/programmes/korea.html

Bee, S. M., Lee, S. A., & Lee, S.-H. (2022). Prediction by data mining of suicide attempts in Korean adolescents: A national study. *Neuropsychiatric Disease and Treatment*, 11, 2367–2375. https://www.tandfonline.com/doi/citedby/10.2147/NDT.S91111?scroll=top&needAccess=true&role=tab

Beteta, S. (2020). Mental health crisis in South Korea. *College of East Asian Studies, Wesleyan University*. http://ceas.research.wesleyan.edu/files/2021/02/Shirley-Beteta-Mental-Health-Crisis-in-South-Korea.pdf

Bong, S. H., Won, G. H., & Choi, T. Y. (2021). Effects of cognitive-behavioral therapy based music therapy in Korean adolescents with smartphone and internet addiction. *Psychiatry Investigation*, 18(2), 110–117. https://doi.org/10.30773/pi.2020.0155

Burnette, C., Ramchand, R., & Ayer, L. (2015). Gatekeeper Training for Suicide Prevention. *Rand Health Quarterly*, 5(1), 16.

Donnelly, H.K., Richardson, D., & Solberg, S.V. (2021). Understanding somatic symptoms associated with South Korean adolescent suicidal ideation, depression, and social anxiety. *Behavioral Sciences*, 11(11), 151. https://doi.org/10.3390/bs11110151

Do, R., Oh, S., & Kim, J. (2019). Adolescents' attitudes and intentions toward help-seeking and computer-based treatment for depression. *Psychiatry Investigation*, 16(10), 728–736. https://doi.org/10.30773/pi.2019.07.17.4

Garg, D., & Kothari, R. (2018). The economic effect of suicide on South Korea. *International Journal for Advance Research and Development*, 3(2), 7–10. https://www.ijarnd.com/manuscripts/v3i2/V3I2-1143.pdf.

Im, Y., Oh, W.-O., & Suk, M. (2017). Risk factors for suicide ideation among adolescents: Five-year national data analysis. *Archives of Psychiatric Nursing*, 31(3), 282–286. https://doi.org/10.1016/j.apnu.2017.01.001

Jang, J., Lee, G., Seo, J., Na, E. J., Park, J. Y., & Jeon, H. J. (2020). Suicidal attempts, insomnia, and major depressive disorder among family members of suicide victims in South Korea. *Journal of Affective Disorders*, 272(1), 423–431. https://doi.org/10.1016/j.jad.2020.04.021

Jang, J., Park, S. Y., Kim, Y. Y., Kim, E. J., Lee, G., Seo, J., ... & Jeon, H. J. (2022). Risks of suicide among family members of suicide victims: A nationwide sample of South Korea. *Frontiers in psychiatry*, *13*, 995834. https://doi.org/10.3389/fpsyt.2022.995834

Jarvis, J. A. (2020). Too much of a good thing: Social capital and academic stress in South Korea. *Social Sciences*, 9(11), 187. https://doi.org/10.3390/socsci9110187.

Jo, H., Kim, N., & Yoon, E. (2022). Introducing Korean Adolescent Counselling Systems: Implications For Future Directions. *Counselling and Psychotherapy Research*, 22(1), 74-82. https://doi.org/10.1002/capr.12486.

Jung, S., Lee, D., Park, S., Lee, K., Kweon, Y. S., Lee, E. J., ... & Hong, H. J. (2019). Gender differences in Korean adolescents who died by suicide based on teacher reports. *Child and adolescent psychiatry and mental health*, *13*, 1-6. https://doi.org/10.1186/s13034-019-0274-3.

Kang, E. H., Hyun, M. K., Choi, S. M., Kim, J. M., Kim, G. M., & Woo, J. M. (2015). Twelve-month prevalence and predictors of self-reported suicidal ideation and suicide attempt among Korean adolescents in a web-based nationwide survey. *Australian & New Zealand Journal of Psychiatry*, *49*(1), 47-53.https://doi.org/10.1177/0004867414540752

Kim, J. E. (2019). Korean teachers' bereavement experience following student suicide. *Crisis*, 40(4), 2151–2396. https://doi.org/10.1027/0227-5910/a000578.

Kim, J., Hong, S. H., & Hong, H. J. (2020). The impact of referral to mental health services on suicide death risk in adolescent suicide survivors. *Journal of the Korean Academy of Child and Adolescent Psychiatry*, *31*(4), 177–184. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7584284/

Kim, S. J., & Lee, J. (2023). Introduction of child and adolescent mental health services in Korea and their role during the COVID-19 pandemic: Focusing on the Ministry of Education policy. *Journal of the Korean Academy of Child and Adolescent Psychiatry*, 34(1), 4–14. https://doi.org/10.5765/jkacap.220034

Kong, J. W., & Kim, J. W. (2016). A review of school-based suicide prevention interventions in South Korea, 1995–2015. *Children and Youth Services Review*, 69, 193–200. https://doi.org/10.1016/j.childyouth.2016.08.007

Kwak, C. W., & Ickovics, J. R. (2019). Adolescent suicide in South Korea: Risk factors and proposed multi-dimensional solution. *National Library of Medicine*, 43, 150–153. https://doi.org/10.1016/j.ajp.2019.05.027

Kwon, A., Song, J., Yook, K. H., Jon, D. I., Jung, M. H., Hong, N., & Hong, H. J. (2016). Predictors of suicide attempts in clinically depressed Korean adolescents. *Clinical psychopharmacology and neuroscience*, *14*(4), 383. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5083937/.

Lee, D., Kim, J., & Lee, K. W. (2018). The impact of psychological problems and adverse life events on suicidal ideation among adolescents using nationwide data of a school-based mental health screening test in Korea. *European Child & Adolescent Psychiatry*, 27(2), 1361–1372. https://doi.org/10.1007/s00787-018-1130-3

Lee, E. (2022). Experiences of bereaved families by suicide in South Korea: A phenomenological study. *International Journal of Environmental Research and Public Health*, 19(5), 2969. https://doi.org/10.3390/ijerph19052969

Lee, E., Choi, K., & Kim, S. (2017). Family conflict and forgiveness among survivors of suicide. *Journal of Loss and Trauma*, 22(8), 689–697. https://doi.org/10.1080/15325024.2017.1388344

Lee, J., Bang, Y. S., Min, S., Ahn, J. S., Kim, H., Cha, Y. S., ... & Kim, M. H. (2019). Characteristics of adolescents who visit the emergency department following suicide attempts: comparison study between adolescents and adults. *BMC psychiatry*, *19*, 1-9. https://doi.org/10.1186/s12888-019-2213-5

Lee, J., Choi, Y., Kim, S., & Park, J. (2021). A social-ecological approach to understanding the relationship between cyberbullying victimization and suicidal ideation in South Korean adolescents: The moderating effect of school connectedness. *International Journal of Environmental Research and Public Health*, 18(20), 10623. https://doi.org/10.3390/ijerph182010623

Lee, J., Kim, K., & Lee, M. (2019). Development of a suicide index model in general adolescents using the South Korea 2012–2016 national representative survey data. *Scientific Reports*, 9(1), 1846. https://doi.org/10.1038/s41598-019-38886-z

Lee, J.-Y., & Bae, S.-M. (2015). Intra-personal and extra-personal predictors of suicide attempts of South Korean adolescents. *School Psychology International*, 36(4), 398–414. https://doi.org/10.1177/0143034315592755

Lee, K. W., Lee, D., & Hong, H. J. (2020). Text mining analysis of teachers' reports on student suicide in South Korea. *European Child and Adolescent Psychiatry*, 29(4), 453–465. https://doi.org/10.1007/s00787-019-01361-1

Lee, M.-S., Park, J.-S., Choi, J.-S., & Park, S.-J. (2022). Characteristics of Korean children and adolescents who die by suicide based on teachers' reports. *Environmental Research and Public Health*, 19(11), 6812. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9180601/

Lee, S. Y., Park, E. C., Han, K. T., Kim, S. J., Chun, S. Y., & Park, S. (2016). The association of level of internet use with suicidal ideation and suicide attempts in South Korean adolescents: a focus on family structure and household economic status. *The Canadian Journal of Psychiatry*, *61*(4), 243-251. https://doi.org/10.1177/0706743716635550

Liu, J. (2020). Need to establish a new adolescent suicide prevention programme in South Korea. *General Psychiatry*, 33(4), 1–7. https://doi.org/10.1136/gpsych-2020-100200

Na, K.-S., Park, S.-C., Kwon, S.-J., Kim, M., Kim, H.-J., Baik, M., Seol, J., An, E. J., Lee, S. M., Lee, E.-J., Lim, M., Cho, S. J., Kim, G. H., Kim, N., Jeon, H. J., Paik, J.-W., Oh, K. S., & Lee, H.-Y. (2020). Contents of the Standardized Suicide Prevention Program for Gatekeeper Intervention in Korea, Version 2.0. *Psychiatry Investigation*, 17(11), 1149–1157. https://doi.org/10.30773/pi.2020.0271

Paik, J. W., Jo, S. J., Lee, S., Ong, J. Y., & Park, J. I. (2014). The effect of Korean standardized suicide prevention program on intervention by gatekeepers. *Journal of Korean Neuropsychiatric Association*, *53*(6), 358-363.

Park, B., Im, J. S., & Ratcliff, K. S. (2014). Rising youth suicide and the changing cultural context in South Korea. *PubMed*, 35(2), 102–109. https://doi.org/10.1027/0227-5910/a000237

Park, E. (2008). The influencing factors on suicide attempt among adolescents in South Korea. *Journal of Academic Nursing*, 38(3), 465–473. https://synapse.koreamed.org/upload/synapsedata/pdfdata/0006jkan/jkan-38-465.pdf

Park, H., & Lee, K.-S. (2020). The association of family structure with health behavior, mental health, and perceived academic achievement among adolescents: A 2018 Korean nationally representative survey. *BMC Public Health*, 20, 510. https://doi.org/10.1186/s12889-020-08655-z

Park, S.-C., Na, K.-S., Kwon, S.-J., Kim, M., Kim, H.-J., Baik, M., Seol, J., An, E. J., Lee, S. M., Lee, E.-J., Lim, M., Cho, S. J., Kim, G. H., Kim, N., Jeon, H. J., Paik, J.-W., Oh, K. S., & Lee, H.-Y. (2020). "Suicide CARE" (Standardized Suicide Prevention Program for Gatekeeper Intervention in Korea): An Update. *Psychiatry Investigation*, 17(9), 911–924. https://doi.org/10.30773/pi.2020.0166

Park, S., Kim, J., Lee, S., & Kim, Y. (2012). The association between problematic internet use and depression, suicidal ideation and bipolar disorder symptoms in Korean adolescents. *Australian & New Zealand Journal of Psychiatry*, 47(2), 153–159. https://doi.org/10.1177/0004867412463613

Park, S., Kim, J. W., Kim, B. N., Bae, J. H., Shin, M. S., Yoo, H. J., & Cho, S. C. (2015). Clinical characteristics and precipitating factors of adolescent suicide attempters admitted for psychiatric inpatient care in South Korea. *Psychiatry investigation*, *12*(1), 29. https://doi.org/10.4306/pi.2015.12.1.29.

Park, S., & Kim, Y. (2016). Prevalence, correlates, and associated psychological problems of substance use in Korean adolescents. *BMC Public Health*, 16(79). https://doi.org/10.1186/s12889-016-2731-8

Phosaly, L., Olympia, D., & Goldman, S. (2019). Educational and psychological risk factors for South Korean children and adolescents. *International Journal of School & Educational Psychology*, *7*(2), 113–122. https://doi.org/10.1080/21683603.2019.1578709.

Raschke, N., Kim, H., & Choi, M. (2022). Socioeconomic factors associated with suicidal behaviors in South Korea: Systematic review on the current state of evidence. *BMC Public Health*, 22(1), 129. https://doi.org/10.1186/s12889-022-12498-1

Roh, B. R., Yoon, Y., Kwon, A., Oh, S., Lee, S. I., Ha, K., ... & Hong, H. J. (2015). The structure of co-occurring bullying experiences and associations with suicidal behaviors in Korean adolescents. *PloS one*, *10*(11), e0143517. https://doi.org/10.1371/journal.pone.0143517

Roh, S., Kim, H., Lee, H., & Kim, J. (2016). Mental health services and R&D in South Korea. *International Journal of Mental Health Systems*, 10(45). https://doi.org/10.1186/s13033-016-0077-3

Song, J. (2016). Data mining of web-based documents on social networking sites that included suicide-related words among Korean adolescents. *Elsevier*, 59(6), 668–673. https://doi.org/10.1016/j.jadohealth.2016.07.025

Song, J., Hong, S. H., Kim, J., Chang, S., Yook, K. H., & Hong, H. J. (2021). Comparison of suicide attempts and suicide deaths by jumping from a high place in Korean children and adolescents. *International journal of environmental research and public health*, *18*(18), 9513. https://doi.org/10.3390/ijerph18189513.

Statista.com. (2022a). Main reasons for suicidal thoughts among middle and high school students in South Korea as of July 2022. Retrieved July 3, 2023, from https://www.statista.com/statistics/1267593/south-korea-reasons-for-suicidal-thoughts-among-adolescents/

Statista. (2022b). Number of suicide deaths in South Korea from 2010 to 2021, by age group. Retrieved April 2022, from https://www.statista.com/statistics/789375/south-korea-suicide-death-rate-by-age-group/

Statista. (2022c). Share of middle and high school students with suicidal thoughts in South Korea from 2011 to 2021, by gender. Retrieved April 2022, from https://www.statista.com/statistics/1267462/south-korea-suicidal-thoughts-among-adolescents-by-gender/

“Table 4 Two-Level Multilevel Logistic Regression Analysis of Individual- and Community-Level Factors Associated with Adolescent Depression,” Child Indicators Research. Accessed July 3, 2023, https://link.springer.com/article/10.1007/s12187-014-9259-1/tables/4.

Vizhub. (n.d.). GBD results. Retrieved February 13, 2023, from http://ghdx.healthdata.org/gbd-results-tool

World Health Organization. (n.d.). Mental health, suicide rate estimates, age-standardized estimates by country. Retrieved June 28, 2023, from https://apps.who.int/gho/data/node.main.MHSUICIDEASDR?lang=en

**Journal of Nonprofit Innovation**

September 2024
Vol 4, Issue 3

# Thought Paper

Impacts of Climate Change in the United States

**TITLE**
Impacts of Climate Change in the United States

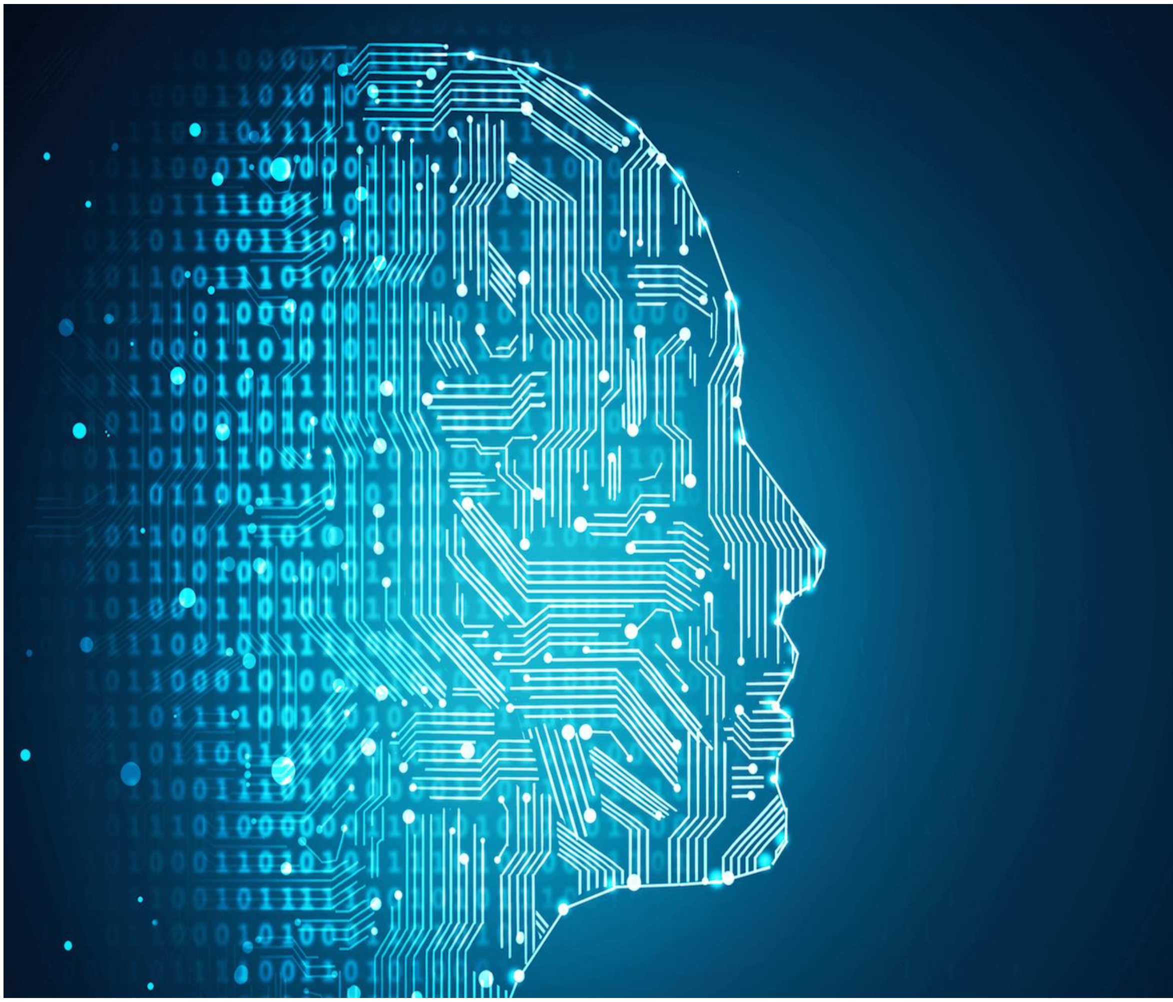
—

**AUTHOR**
Nathan Thompson

—

**TOPICS**
Climate Change,
Environmental Justice,
Climate Solutions

—



## Impacts of Climate Change in the United States

By Nathan Thompson, Brigham Young University

## Abstract

Climate change, a shift in long-term climate patterns primarily driven by anthropogenic factors, poses a super wicked problem impacting every sector and region globally, including the United States. This paper explores the scientific basis of climate change, its contributing factors, and the myriad consequences on terrestrial and aquatic systems, as well as mental health. Notably, the emission of greenhouse gases from fossil fuels and agricultural activities is the primary cause, exacerbated by ideological division and psychological distance. The U.S. has seen some progress with a 7% decrease in emissions over the past 30 years and a growing shift toward renewable energy. However, significant challenges remain due to continued reliance on fossil fuels and consumerism.

Terrestrial consequences include desertification and increased wildfire frequency, while aquatic consequences involve flooding, sea level rise, and intensified hurricanes. Socially, climate change contributes to significant mental health challenges such as increasing anxiety and stress among the population. Addressing climate change necessitates electrifying everything, transitioning to renewable energy, and drawing down existing greenhouse gases. Insights from South Australia's transition to renewable energy provide a model for the U.S., though significant policy and behavioral changes are required. Despite progress, the complexity of climate change as a "super wicked problem" underscores the need for immediate, sustained, and coordinated global action to mitigate its effects and ensure environmental justice.

## Introduction

While every country both contributes to and feels the effects of climate change, the United States' heavy influence and high rates of contribution make this problem even more acute domestically. Climate change is primarily driven by human emission of greenhouse gases through the burning of fossil fuels and from mass-scale agriculture. Because climate change can be a polarizing issue, passing legislation to slow the harmful contributing factors has proven difficult. The effects of climate change have worsened in the past few decades, with increased instances of wildfires and extreme shifts in weather patterns. These negative consequences disproportionately affect vulnerable people groups including ethnic minorities and people with lower levels of income. In order to avoid the detrimental aftereffects of climate change like mental health challenges, floods, and food insecurity, solutions have emerged including shifting the US power dependence to electrical sources rather than fossil fuels; this shift towards electrification has been successful in other countries. This shift of dependence ultimately starts with policy change.

## Context

### Q: What is climate change?

A: To understand the impacts of climate change on people living in the United States and around the world, it is important to differentiate between climate and weather. Climate involves long-term trends in temperature patterns in a general area (May, 2017). Weather, conversely, comprises localized, short-term atmospheric patterns (May, 2017). Climate change is a shift in climate patterns (United Nations, n.d.).

### Q: How is climate change measured?

A: The most basic measurements of climate change are global temperature and greenhouse gas concentration in the atmosphere. Scientists generally measure temperature compared to 1850 because this is when the Industrial Revolution began, and factories started emitting greenhouse gases (Abram et al., 2016). The global average temperature has risen around 1.2°C (~2°F) (Carbon Brief Staff, 2021).

In 1850, CO2 levels were around 280 ppm (parts per million) (Mulhern, 2020). Today, CO2 levels in the atmosphere are around 419 ppm (NOAA, n.d.). The rate of change has nearly doubled over the past 50 years, causing the warming that used to take 100 years to only take fifty (NASA, 2007).

### Q: Who is responsible for climate change?

A: Climate change is primarily driven by countries and corporations that consume large quantities of fossil fuels (Hyman, 2020). However, individuals also play a role in contributing to the climate crisis. Each person is responsible for and impacted by climate change in the United States and worldwide. This brief will look at those who are most impacted and the most responsible industries. In their most recent assessment report, the Intergovernmental Panel on Climate Change (IPCC) ran an analysis comparing all of the possible causes of the increase in temperature. They concluded that human-generated emissions are the reason for this warming (Carbon Brief Staff, 2021). They reported in 2021, "It is unequivocal that human influence has warmed the atmosphere, ocean, and land." (Intergovernmental Panel on Climate Change, 2021) Humans emit greenhouse gases by burning fossil fuels and from mass-scale agriculture (United Nations, n.d.). Climate change impacts every country, including the United States. Because the United States is one of the major contributors to global climate change, having produced over 20% of global emissions since 1850 (more than any other country), it is critical to understand how this crisis affects those living there (Evans, 2021).

### Q: How long have we known about this issue?

A: Scientists have known about climate change for over 150 years. In 1856, Eunice Foote was the first scientist to demonstrate the warming effect of CO2 (Foote, 1856). Foote concluded that if there were higher concentrations of these warming gases in the atmosphere—CO2 being one of the specific gases she worked with—the Earth could experience higher temperatures.

## Contributing Factors

### Greenhouse Gases

The emission of greenhouse gases is the primary cause of climate change in the United States and worldwide. These gases are produced by fossil fuels, agriculture production, and ecological disturbances such as deforestation and wetland destruction. Over the past 30 years, the United States has seen a decrease in greenhouse gas emissions of around 3% (EPA, 2024). In addition, per capita usage has decreased by 18% (Ritchie, Roser, and Rosado, 2020). This means that, on balance, the United States has been increasing the efficiency of vehicles, buildings, and agriculture while still scaling production to meet a growing population. While this is a positive change, the consequences of climate change will continue to worsen if more substantial preventative measures are not taken (IPCC, 2023).

Fossil fuels are commonly used across all economic sectors, emitting greenhouse gases that contribute to climate change. Fortunately, the reliance on fossil fuels in the United States is decreasing as renewable energy becomes more prevalent in energy generation (Abbott et al., 2021). In addition to burning fossil fuels, agriculture in the United States accounts for 11% of all greenhouse gases (EPA, 2015). In 2020, 53% of US agriculture's greenhouse gas emissions came from crop cultivation, 40% from livestock, and 6% from fuel combustion (EPA, 2020).

Land-use change is a major problem in the United States, with around half of the land used for agriculture (USDA, 2019). The other major change in land use is urbanization, which has increased by over 11% over the past two decades (Bounoua, et al., 2018). This land-use change, in combination with shifts in rainfall patterns due to climate change (Bartels, Black, and Keim, 2020), has led to a 16% decrease in tree cover since 2000 (Global Forest Watch, n.d.). Since 1990, land-use change and deforestation have contributed around 44% of global carbon emissions since 1850 (Friedlingstein et al., 2022). As humans degrade the land through cutting down trees and poor farming practices—such as over-tilling, failing to rotate crops, and overgrazing—greenhouse gases are released back into the atmosphere. In addition, as vegetation decreases, the quantity of gases being actively sequestered also declines.

### Social Resistance

#### *Ideological Division*

Social resistance to climate change plays a major role in preventing the United States from solving this issue because of ideological division and psychological distance. Especially in the United States, there is a large political divide between those who believe in climate change and those who do not (Kennedy, 2020, Chu and Yang, 2018). Belief in climate change is important because it leads to greater support for policies that would begin to solve the problem (Bergquist et al., 2022). According to a study done by the

Yale Program on Climate Change Communication, nearly three-quarters of Democrats felt that climate change is one of several important issues when deciding how to vote, while less than a quarter of Republicans felt the same way (Leiserowitz et al., 2022). This division exacerbates the climate crisis by making it more difficult to pass effective policies that would begin to resolve the issue (Lazarus, 2009).

### *Psychological Distance and Super Wicked Problems*

The problem of climate change is unique because of a concept known as psychological distance. In the context of climate change, psychological distance suggests that the farther removed an individual is from a climate-related event, the less motivated they will be to act (McDonald, Chai, and Newell, 2015). Psychological distance has four important aspects: spatial, social, temporal, and hypothetical. Spatial deals with distance, temporal distance is related to time, social distance deals with relationships (being in or out of a group), and hypothetical distance is the certainty of an event happening at some point (Kamarck, 2019). Regarding climate change for people in the United States, psychological distance contributes to why individuals, corporations, and governments are often reluctant to reduce their carbon emissions.

Climate change is one of the core “Planetary Boundaries” at the heart of all other environmental issues (Steffen et al., 2015). The planetary boundaries are a framework that defines a safe space for human existence based on nine environmental boundaries. Climate change, specifically relating to global temperature and greenhouse gases, is one of these boundaries and is connected to each of the others If the climate changes, so will ocean acidification, freshwater use, and so on. With climate change especially, it is difficult to determine the “point of no return”. However, in 2015, these researchers proposed that the zone of uncertainty lies between 350 and 450 parts per million (ppm) of carbon dioxide (Steffen et al., 2015). For perspective, current atmospheric CO2 levels are around 417 ppm globally and increasing at around 2–3 ppm per year (Lindsey, 2022). At this rate, the CO2 in the atmosphere will reach its upper limit within 11–16.5 years.

Climate change is difficult to mitigate because it is very challenging to determine jurisdiction and accountability (Kamarck, 2019). It can be hard to comprehend how burning fossil fuels in one country can impact people on the other side of the world, which leads to inaction in solving the problem (Kamarck 2019). Climate change is sometimes considered the largest market failure the world has ever seen (Paavola, 2011). This is caused, in part, by what economists call the “free-rider” problem. The United States has a low Environmental Performance Index score, according to researchers from the Yale Center for Environmental Law and Policy, ranking 20 out of 22 wealthy democracies in the Global West (Wolf et al., 2022). This means that the US has done very little to combat environmental problems such as climate change while contributing more than any other country by a wide margin.

Because of this and other factors, climate change is considered a “super wicked problem” (Lazarus, 2009). Many feedback loops continue to make climate change worse. This means that the longer it takes to address climate change, the harder it will be to fix it. The consequences of climate change compound with each other and worsen the problem exponentially (Lazarus, 2009).

## Consumerism

Consumerism has led to climate change because of greater energy use and waste production. Plastic, cement, and concrete contribute to the climate crisis in significant ways (Timperley, 2020, Gregory et al., 2021). Combined, these materials are responsible for around 3% of annual emissions (Nicholson et al., 2021). In addition to these physical materials, food waste is the largest type of waste in the world and contributes an additional 2% to the United States’ annual emissions (Conrad, 2020, Venkat, 2012). Nearly one-third of all food is thrown out, or about 1 pound of food waste daily per American (Conrad, 2020).

## Consequences

### Terrestrial Consequences

#### *Desertification*

Terrestrial consequences such as deforestation, food insecurity, and fires result from climate change in America because of increased heat and shifts in precipitation patterns. Climate change affects life both on land and in the water. On land, one of the primary changes is desertification (Ostberg et al., 2013). Around the world, over one-third of the land has been impacted by desertification, including much of the agricultural land in the United States (Montgomery, 2022). Nearly 40% of the US is arid or semi-arid and thus highly susceptible to desertification (McClure, 1998). Desertification limits the land that can be effectively farmed and generates dust pollution (Paul and Rashid, 2017). Desertification, along with rising temperatures, harms food security. Warmer temperatures limit the types of plants that can be grown and promotes the spread of invasive species (Easterling et al., 2017). In addition, increased levels of carbon in the atmosphere are limiting the nutritional value of crops grown, further contributing to food insecurity (Ebi and Loladze, 2019). Technology may be able to help offset this loss, but it is expected that crop yields will continue to decline in the coming decades (USDA, n.d., Jägermeyr et al., 2021, Hsiang et al., 2013).

#### *Fires*

In the western United States, climate change has doubled the number of large fires over the past 30 years (Whener et al., 2017). Additionally, the area burned each year has increased eightfold over that same time (Parks and Abatzoglou, 2020). Fires are increasing in frequency and magnitude for a few primary reasons. First, there is less water later in the year. By 2050, there is expected to be a 25% decrease in precipitation in the western United States, especially snowfall (Siirila-Woodburn et al., 2021). In many parts of the western United States, there is less rain during the summer, meaning that forests and grasslands are drier and more prone to fires (Whener et al., 2017). In addition to less rain in the west, the snow is melting earlier, causing foliage to grow more quickly early in the year. The problem with this is that by the end of the summer, more tall, dry plant material is available for wildfires (Siirila-Woodburn et al., 2021).

### Aquatic Consequences

#### *Flooding*

Aquatic consequences such as flooding, sea level rise, and tropical storms are consequences of climate change because warmer air can hold more moisture and therefore makes storms more intense (UCAR Center for Science Education, 2018). Climate change has caused an increase in flooding because of increased precipitation in parts of the United States. There has been a 20% increase in extreme 100-year flooding events throughout the United States (Swain et al., 2020). It is estimated that there has been and will continue to be at least a 7% increase in extreme precipitation per degree C (Wobus et al., 2019). Over the next 80 years, this will result in flood damages up to $7 billion (Wobus et al., 2017).

#### *Sea Level Rising*

Sea levels are rising faster along the coast of the contiguous United States than global sea rising rates. By 2100, sea level rise could displace between 4.2–13.1 million up to $289 billion per year by the year 2100 (Haer et al., 2013). The combination of human migration and GDP loss in the US creates problems for the future. By 2050, the United States coastline could experience a foot of sea level rise (Sweet et al., 2022). Around 39% of the US population lives in coastal counties, meaning that flooding from higher sea levels would result in millions of domestic refugees (Hayhoe, 2018). Around 20% of people impacted by sea-level rise in the United States are among the most socially vulnerable (Martinich et al., 2013). This is an example of distributive environmental justice which explains how inequalities in socio-economic and cultural status generally reflect the distribution of environmental risks (Venn, 2019). Vulnerable populations are more likely to be located in areas impacted by natural disasters related to climate change. It is estimated that 99% of the most socially disadvantaged people in the United States live in areas that will likely be unprotected from climate related disasters (Venn, 2019).

#### *Tropical Storms and Hurricanes*

In addition to the sea level rising, hurricanes are a serious environmental hazard directly linked to climate change. Climate change is attributed to increasing the frequency of the most intense categories of hurricanes (Dinan, 2017). In the United States, it is estimated that tropical storms will increase by up to 11% in intensity by the end of the century (Knutson et al., 2010). The reason for this is three-pronged. First, warmer air can hold more moisture resulting in heavier rains as the Earth continues to warm. Second, the warmer water causes wind speeds to increase. Finally, higher sea levels and the destruction of barrier habitats result in more destructive storm surges as the water is pushed up further on the land (UCAR Center for Climate Education, n.d.). Hundreds of people have their lives ended early each year in the US because of hurricanes (Williams et al., 2022). Climate change has already exacerbated previously existing hurricane damages. During the 2017 hurricane season, there were 6 major storms of category 3 or higher. This was double the average number of yearly intense storms from 1979 to 2017 (Gramling, 2018). Distributive environmental justice is also an issue with hurricanes. For example, according to Brodie et al., in the case of Hurricane Katrina, "more than 90% [of the evacuees] were African American, and approximately 6 in 10 had household incomes below $20,000 in 2004" (2006)

### Social Consequence

#### *Mental Health*

Climate change also results in major mental health challenges. In the United States, nearly 60% of Americans are concerned by the looming presence of climate change (Goldberg et al., 2020). There is a growing sense of impending doom that is afflicting people across the country, especially among young adults. Nearly half of young adults experience anxiety from climate change that impacts their daily lives (Bethune, 2020). Warmer temperatures from climate change also contribute to adverse mental impacts. Studies have shown that increased heat has a strong positive correlation with increased aggressive behavior such as crime or domestic violence (Anderson, 2001). Increased heat can also lead to greater psychological stress and possibly suicidal behavior (Padhy et al., 2015).

## Practices

### Electrifying Everything

To restore the climate to Holocene-like conditions and address the consequences of climate change, two major things must happen. First, greenhouse gas emissions must be cut by implementing a large-scale roll-out of renewable energy and the electrification of appliances, vehicles, and buildings (Griffith, Fraser, and Calisch, 2020). Second, the current greenhouse gases in the atmosphere must be drawn down and sequestered (Project Drawdown, 2020).

Looking at sources of renewable energy, solar, and wind are the cheapest forms of energy in the United States right now (Kennedy, 2021). The price of solar has dropped 91%, and the price of wind energy has dropped 71% since 2009. Transitioning away from fossil fuels is both feasible and critical for mitigating the effects of climate change in America and the world (Abbott et al., 2022).228 The effort to "electrify everything" will require a tripling in current electricity generation and a better-connected electrical grid system (Griffeth, Fraser, Calisch, 2020). This would allow Americans to access renewable energy at any time, rain or shine. Transitioning to renewable energy and decarbonizing America brings with it a plethora of benefits. Most immediately, this change will eliminate all domestic air pollution related to climate change. This could save over 350,000 lives annually in the United States (Vohra et al., 2021). In addition, this will cut down about one-fifth of all emissions output worldwide (Griffith, Fraser, Calisch, 2020).

Fortunately, a few organizations are leading the charge (forgive the pun) in providing a framework for electrifying our grid. The main group is called Electrifying America and they have been pushing boundaries for several years in this field. In 2021, they released a handbook that acts as a guide for the country to move towards full electrification. Their golden rule is that every appliance that is replaced from here on out should be electric (Griffeth, Fraser, Calisch, 2020). Something interesting about Rewiring America's proposal is that it doesn't involve significantly changing our living habits or lowering our standard of living. In fact, it has the potential to improve the quality of life for many people as electricity costs will be cheaper.

While individuals need to participate, this transition can only be accomplished by policy changes. In 2022 the United States passed "the most significant climate legislation in US history" (EPA, n.d.). This act provides funding and tax credits for organizations and individuals to purchase electric appliances and vehicles and to transition to renewable energy. Policies like this are only passed after members of Congress receive pressure from their constituents. Organizations such as the Sierra Club, the Wilderness Society, and The Nature Conservancy often share petitions or letter-writing campaigns to help citizens use their voices to request change from lawmakers (The Wilderness Society, n.d., The Nature Conservancy, n.d., Sierra Club, n.d.). At the center of all of these initiatives is communication. Change starts with people talking about issues that are important to them. Dr. Katharine Hayhoe, the chief scientist for The Nature Conservancy and one of the leading voices on climate change invites everyone to start talking more about the effects of climate change. Most importantly, however, Dr. Hayhoe encourages that these conversations must be focused on hope for a better world (2021). Fear and guilt are not effective motivators for personal action; rather, they will end up pushing people away from acting (Stern, 2012). By focusing on how climate change is personally meaningful in people's lives, the psychological distance that often prevents individuals from caring can be reduced (McDonald, Chai, and Newell, 2015).

### *Insights from the South Australian Region*

In the United States, there are not any current examples of complete electrification or decarbonization. However, the country of South Australia offers insight into the process and rewards of moving to green energy. In 2020, the country was generating over 60% of its energy from wind and solar sources (Baum and McGreevy, 2021). This came after being completely dependent on fossil fuels less than two decades ago. Because of this transition, energy prices have dropped to around 3.6c/kWh during the day (Baum and McGreevy, 2021). This drop in prices is especially meaningful for low-income families because electricity now takes up a smaller percentage of their monthly bills. When looking at projections for eliminating fossil fuels over the next 50 years, there are incredible savings in terms of human life and economic gain. It is estimated that limiting warming to 2°C would "prevent roughly 4.5 million premature deaths, about 1.4 million hospitalizations and emergency room visits, ~300 million lost workdays, about 1.7 million incidences of dementia, and about 440 million tons of crop losses in the United States" (Shindell et al., 2021).

### *Gaps*

Even after eliminating all greenhouse gas emissions, the negative effects of climate change would not immediately be resolved; it takes a very long time for these gases to be drawn back to Earth (Abbott et al., 2022). This is accomplished over time by supporting Earth's natural "sinks," or places that naturally sequester these gases. Sinks include places like forests, freshwater streams and lakes, and the ocean (Project Drawdown, 2020). There are also no countries that have transitioned 100% to green energy sources, making it difficult to determine what the full impact of decarbonizing America would be. Additionally, even when emissions are eliminated in the United States, the issue of climate change will still not disappear. Every other country would need to follow suit in decarbonizing their economy. Fortunately, because the United States is considered a world leader, it is possible that other nations would follow its example (Podesta and Stern, 2020)

Unfortunately, the United States has usually not been the first to take charge of international matters regarding the environment. In 1997, the Kyoto Protocol was presented to members of the United Nations. Representatives from the United States initially signed the agreement but never ratified it and eventually withdrew their signatures (Maizland, 2023). This protocol required participating countries to lower their emissions by 5% of their 1990 levels. The next international climate treaty came in 2015 with the Paris Agreement. This required participating countries to set their own goals to reduce a certain percentage of emissions and to report on progress made every five years. The goal was to prevent Earth from warming over 2°C above 1850 temperatures. President Donald Trump withdrew the United States from this agreement for a time until President Joe Biden reentered the Paris Agreement during the first few months of his presidency (Maizland, 2023). There are no incentives for countries to keep their commitments which have put most countries lagging behind what they committed to do. One study suggests that even if all countries met their goals, it would only limit warming to 2.9°C which is significantly warmer than what is hoped for (Maizland, 2023).

## Conclusion

While climate change is certainly a global issue, it is critical to understand it's impacts in the United States because its high levels of greenhouse gas emissions and global influence. The difficulty in passing climate legislation in the U.S. is compounded by the polarizing nature of the issue, despite the increasingly severe consequences seen in more frequent wildfires, extreme weather patterns, and disproportionate impacts on vulnerable populations. Addressing these challenges requires a focus on reducing fossil fuel dependence, with electrification emerging as a promising solution. Successful examples from other countries show that a shift towards renewable energy is possible, but meaningful progress hinges on decisive policy action. By embracing these changes, the U.S. can take a leadership role in mitigating climate change, protecting its most vulnerable citizens, and fostering a sustainable future.

## References

Abbott, B.W. et al. (2021, December 30). *Clean Electrification of the US Economy*. Plant and Wildlife Sciences. https://pws.byu.edu/clean-electrification.

Abbott, B.W., Abrahamian, C., Newbold, N., Smith, P., Merritt , M., Sayedi, S. S., et al. (2023). Accelerating the renewable energy revolution to get back to the Holocene. *Earth's Future*, *11*, e2023EF003639. https://doi.org/10.1029/2023EF003639

Abram, N.J. et al. (2016). Early Onset of Industrial-Era Warming across the Oceans and Continents, *Nature, 536*(7617)*,* 411–418. https://doi.org/10.1038/nature19082.

Anderson, C. A. (2001). Heat and violence. *Current Directions in Psychological Science, 10*(1), 33–38. https://doi.org/10.1111/1467-8721.00109

Bartels, R.J., Black, A.W., Keim, B.D. (2020). Trends in Precipitation Days in the United States. *International Journal of Climatology, 40*(2),1038–1048. https://doi.org/10.1002/joc.6254.

Baum, F., & McGreevy, M. (2021, February 24). *Against the odds, South Australia is a renewable energy powerhouse. How on earth did they do it?*. The Conversation. http://theconversation.com/against-the-odds-south-australia-is-a-renewable-energy-powerhousehow-on-earth-did-they-do-it-153789

Bergquist, P. et al. (2022). Information about the Human Causes of Global Warming Influences Causal Attribution, Concern, and Policy Support Related to Global Warming. *Thinking & Reasoning 28*(3), 465–486. https://doi.org/10.1080/13546783.2022.2030407.

Bethune, S. (2020, February 6). *Majority of US adults believe climate change is most important issue today*. American Psychological Association. https://www-apa-org.byu.idm.oclc.org/news/press/releases/2020/02/climate-change

Bounoua, L. et al. (2018). Mapping Urbanization in the United States from 2001 to 2011. *Applied Geography, 90*, 123–133. https://doi.org/10.1016/j.apgeog.2017.12.002.

Brodie, M., Weltzien, E., Altman, D., Blendon, R. J., & Benson, J. M. (2006). Experiences of Hurricane Katrina evacuees in Houston shelters: Implications for future planning. *American Journal of Public Health, 96*(8), 1402–1408. https://doi.org/10.2105/AJPH.2005.084475

Carbon Brief Staff. (2021, August 9). *In-Depth Q&A: The IPCC's Sixth Assessment Report on Climate Science*. Carbon Brief. https://www.carbonbrief.org/in-depth-qa-the-ipccs-sixth-assessment-report-on-climate-science.

Center for Climate and Energy Solutions. *Wildfires and Climate Change*. Center for Climate and Energy Solutions, accessed October 18, 2022, https://www.c2es.org/content/wildfires-and-climate-change/.

Chu, H., Yang, J.Z. (2018). Taking Climate Change Here and Now—Mitigating Ideological Polarization with Psychological Distance. *Global Environmental Change, 53*, 174–81. https://doi.org/10.1016/j.gloenvcha.2018.09.013.

Conrad, Z. (2020). Daily Cost of Consumer Food Wasted, Inedible, and Consumed in the United States, 2001–2016. *Nutrition Journal, 19*(1), 35. https://doi.org/10.1186/s12937-020-00552-w.

Dinan, T. (2017). Projected increases in hurricane damage in the United States: The role of climate change and coastal development. *Ecological Economics, 138*, 186–198. https://doi.org/10.1016/j.ecolecon.2017.03.034

Denchak, M. (2021, February 19). *Paris climate agreement: Everything you need to know.* Natural Resources Defense Council. https://www.nrdc.org/stories/paris-climate-agreement-everything-you-need-know

Easterling, D.R., Kunkel, K.E., Arnold, J.R., Knutson, T., LeGrande, A.N., Leung, L.R., Vose, R.S., Waliser, D.E., & Wehner M.F. (2017) Precipitation change in the United States. In Wuebbles, D.J., Fahey, D.W., Hibbard, K.A., Dokken, D.J., Stewart, B.C., & Maycock, T.K. (Eds.), *Climate Science Special Report*: *Fourth National Climate Assessment*, (Vol. I) (pp. 207-230). U.S. Global Change Research Program, Washington, DC, USA, doi: 10.7930/J0H993CC.

Ebi, K.L., & Loladze, I. (2019). Elevated Atmospheric $CO_2$ Concentrations and Climate Change Will Affect Our Food's Quality and Quantity. *The Lancet Planetary Health, 3*(7), e283–e284. https://doi.org/10.1016/S2542-5196(19)30108-1.

EPA. (2015, December 29). *Sources of Greenhouse Gas Emissions*. U.S. Environmental Protection Agency. https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions.

EPA. (2020). *US EPA's Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2020*. U.S. Environmental Protection Agency. https://cfpub.epa.gov/ghgdata/inventoryexplorer/#agriculture/entiresector/allgas/category/current.

Environmental Protection Agency. (2024, April 11*). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022*. U.S. Environmental Protection Agency. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2022.

Evans, S. (2021, October 5). *Analysis: Which Countries Are Historically Responsible for Climate Change?*. Carbon Brief. https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change/

Friedlingstein, P., O'Sullivan, M., Jones, M. W., Andrew, R. M., Gregor, L., Hauck, J., Le Quéré, C., Luijkx, I. T., Olsen, A., Peters, G. P., Peters, W., Pongratz, J., Schwingshackl, C., Sitch, S., Canadell, J. G., Ciais, P., Jackson, R. B., Alin, S. R., Alkama, R., … Zheng, B. (2022). Global Carbon Budget 2022. *Earth System Science Data, 14(11),* 4811–4900. https://doi.org/10.5194/essd-14-4811-2022.

Foote, E. (1856). Circumstances Affecting the Heat of the Sun's Rays, *The American Journal of Science and Arts, 2*(72), 382–383. https://royalsocietypublishing.org/doi/10.1098/rsnr.2018.0066.

Global Forest Watch. *United States Deforestation Rates and Statistics*. accessed October 12, 2023. https://www.globalforestwatch.org/dashboards/country/USA.

Goldberg, M., Gustafson, A., Rosenthal, S. A., Kotcher, J. E., & Maibach, E. W. (2020, January 16). *For the first time, the alarmed are now the largest of global warming's six Americas*. Yale Program on Climate Change Communication. https://climatecommunication.yale.edu/publications/for-the-first-time-the-alarmed-are-now-the-largest-of-global-warmings-six-americas/

Gramling, C. (2022, September 28). *Warm tropical Atlantic waters juiced the 2017 hurricane season.* ScienceNews. https://www.sciencenews.org/article/warm-tropical-atlantic-waters-juiced-2017-hurricane-season

Gregory, J., AzariJafari, H., Vahidi, E., Guo, F., Ulm, F., Kirchain, R. (2021). The Role of Concrete in Life Cycle Greenhouse Gas Emissions of US Buildings and Pavements. *Proceedings of the National Academy of Sciences, 118*(37). https://doi.org/10.1073/pnas.2021936118.

Griffith, S., Fraser, L., & Calisch, S. (2020, July). *Rewiring America handbook: A guide to winning the climate fight*. Rewiring America. https://www.rewiringamerica.org/policy/rewiring-america-handbook

Haer T. et al. (2013). Relative Sea-Level Rise and the Conterminous United States: Consequences of Potential Land Inundation in Terms of Population at Risk and GDP Loss. *Global Environmental Change, 23*(6), 1627–1636. https://doi.org/10.1016/j.gloenvcha.2013.09.005.

Hayhoe, K., Wuebbles, D. J., Easterling, D. R., Fahey, D. W., Doherty, S., Kossin, J., Sweet, W., Vose, R., & Wehner, M. (2018). Our changing climate. In D. R. Reidmiller, C. W. Avery, D. R. Easterling, K. E. Kunkel, K. L. M. Lewis, T. K. Maycock, & B. C. Stewart (Eds.), *Impacts, risks, and adaptation in the United States: Fourth National Climate Assessment, Volume II* (pp. 72–144). U.S. Global Change Research Program. https://doi.org/10.7930/NCA4.2018.CH2

Hayhoe, K. (2021). *Saving us: A climate scientist's case for hope and healing in a divided world*. One Signal Publishers.

Hsiang, S., Lobell, D., Roberts, M., Schlenker, W. (2013). Climate and Crop Yields in Australia, Brazil, China, Europe and the United States. https://doi.org/10.2139/ssrn.2977571.

Hyman, E. (2020, January 2). *Who's Really Responsible for Climate Change?,* Harvard Political Review. https://harvardpolitics.com/climate-change-responsibility/.

Intergovernmental Panel on Climate Change (IPCC). (2023a). Summary for Policymakers. In *Climate Change 2021 – The Physical Science Basis: Working*

*Group I Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 3–32). frontmatter, Cambridge: Cambridge University Press.

Intergovernmental Panel on Climate Change. (2023b). *Urgent Climate Action Can Secure a Liveable Future for All.* IPCC. https://www.ipcc.ch/2023/03/20/press-release-ar6-synthesis-report/.

Jägermeyr, J., Müller, C, Ruane, A.C., Elliott, J., Balkovic, J., Castillo, O., Faye, B., Foster, I., Folberth, C., Franke, J.A., Fuchs, K., Guarin, J.R., Heinke, J., Hoogenboom, G., Iizumi, T., Jain, A.K., Kelly, D., Khabarov, N., & Lange, S. (2021). Climate Impacts on Global Agriculture Emerge Earlier in New Generation of Climate and Crop Models. *Nature Food, 2*(11), 873–885. https://doi.org/10.1038/s43016-021-00400-y.

Kamarck E., (2019, September 23). *The Challenging Politics of Climate Change.* Brookings. https://www.brookings.edu/research/the-challenging-politics-of-climate-change/.

Kennedy, B. (2020, April 16). *US Concern about Climate Change Is Rising, but Mainly among Democrats*. Pew Research Center. https://www.pewresearch.org/fact-tank/2020/04/16/u-s-concern-about-climate-change-is-rising-but-mainly-among-democrats/.

Kennedy, D. (2021, October 1). Can solar power save our economy (and our planet) from climate catastrophe? [Video]. YouTube. https://www.youtube.com/watch?v=Cpck4H5YoTI

Knutson, T. R., & others. (2010). Tropical cyclones and climate change. *Nature Geoscience, 3*(3), 157–163. https://doi.org/10.1038/ngeo779

Lazarus, R.J. (2009). Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future. *Cornell Law Review, 94(5)*, 1153–1234. https://scholarship.law.georgetown.edu/facpub/159/.

Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Carman, J., Lee, S., Verner, M., Ballew, M., Ansah, P., Badullovich, N., Myers, T., Goldberg, M., & Marlon, J. (2023). *Climate Change in the American Mind: Politics & Policy, December 2022*. Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.

Lindsey, R. (2022, June 23). *Climate Change: Atmospheric Carbon Dioxide*. Climate.gov. http://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide.

Maizland, L. (2023, December 5). *Global climate agreements: Successes and failures*. Council on Foreign Relations. https://www.cfr.org/backgrounder/paris-global-climate-change-agreements

May, S. (2017, August 7). *What Is Climate Change?.* NASA. http://www.nasa.gov/audience/forstudents/k-4/stories/nasa-knows/what-is-climate-change-k4.html

Martinich, J., & others. (2013). Risks of sea level rise to disadvantaged communities in the United States. *Mitigation and Adaptation Strategies for Global Change, 18(*2), 169–185. https://doi.org/10.1007/s11027-011-9356-0

McClure, B.C. (1998). Policies Related to Combating Desertification in the United States of America. *Land Degradation & Development, 9*(5), 383–392. https://doi.org/10.1002/(SICI)1099-145X(199809/10)9:53.0.CO;2-A

McDonald, R.I., Chai, H.Y., & Newell, B.R. (2015). Personal Experience and the 'Psychological Distance' of Climate Change: An Integrative Review. *Journal of Environmental Psychology, 44*, 109–118. https://doi.org/10.1016/j.jenvp.2015.10.003.

Montgomery, D.R. (2021, September 02). *Desertification Is Turning the Earth Barren—But a Solution Is Still Within Reach*. The Guardian. https://www.theguardian.com/commentisfree/2021/sep/02/desertification-barren-solution-famineagriculture.

Mulhern, O. (2020, August 12). *A Graphical History of Atmospheric* $CO_2$ *Levels Over Time*. Earth.org. https://earth.org/data_visualization/a-brief-history-of-co2/.

National Air and Space Association. (2007, November 5). *Earth is Cooling…No It's Warming.* NASA Earth Observatory. https://earthobservatory.nasa.gov/features/GISSTemperature/giss_temperature2.php

Nicholson, S.R., Rorrer, N.A., Carpenter, A.C., Beckham, G.T. (2021). Manufacturing Energy and Greenhouse Gas Emissions Associated with Plastics Consumption, *Joule, 5*(3), (673–686. https://doi.org/10.1016/j.joule.2020.12.027.

NOAA US Department of Commerce. *Trends in* $CO_2$, $CH_4$, $N_2O$, $SF_6$. Global Monitoring Laboratory - Carbon Cycle Greenhouse Gases. accessed February 15, 2023. https://gml.noaa.gov/ccgg/trends/mlo.html.

Ostberg, S., Lucht W., Schaphoff S., Gerten D. (2013). Critical Impacts of Global Warming on Land Ecosystems. *Earth System Dynamics, 4*( 2), 347–357. https://doi.org/10.5194/esd-4-347-2013.

Paavola, J. (2011, January). *Climate Change: The Ultimate 'Tragedy of the Commons'?.* Sustainability Research Institute. https://www.researchgate.net/publication/265098322_Climate_change_the_ultimate_'tragedy_of_the_commons'.

Padhy, S. K., Sarkar, S., Panigrahi, M., & Paul, S. (2015). Mental health effects of climate change. *Indian Journal of Occupational and Environmental Medicine, 19*(1), 3–7. https://doi.org/10.4103/0019-5278.156997

Parks S.A. & Abatzoglou, J. T. (2020). Warmer and Drier Fire Seasons Contribute to Increases in Area Burned at High Severity in Western US Forests From 1985 to 2017. *Geophysical Research Letters, 47*(22), e2020GL089858. https://doi.org/10.1029/2020GL089858.

Paul B.K & Rashid H. (2017). Chapter Six - Land Use Change and Coastal Management, In Paul B.K., & Rashid H. (Eds.), *Climatic Hazards in Coastal Bangladesh* (pp. 183–207). Butterworth-Heinemann. https://doi.org/10.1016/B978-0-12-805276-1.00006-5.

Podesta, J., & Stern, T. (2022, April 13). *A foreign policy for the climate*. Foreign Affairs. https://www.foreignaffairs.com/articles/united-states/2020-04-13/foreign-policy-climate

Project Drawdown. (2020). *The Drawdown Review.* https://drawdown.org/drawdown-review

Ritchie, H., Roser, M., and Rosado, P. (2020, May 11). *CO₂ and Greenhouse Gas Emissions*. Our World in Data. https://ourworldindata.org/greenhouse-gas-emissions.

Shindell, D., Lee, Y., & Faluvegi, G. (2021). Temporal and spatial distribution of health, labor, and crop benefits of climate change mitigation in the United States. *Proceedings of the National Academy of Sciences, 118(*46), e2104061118. https://doi.org/10.1073/pnas.2104061118

Sierra Club. (2022). *The Sierra Club*. https://www.sierraclub.org/home

Siirila-Woodburn, E.R. et al. (2021). A Low-to-No Snow Future and Its Impacts on Water Resources in the Western United States. *Nature Reviews Earth & Environment, 2*(11), 800–819. https://doi.org/10.1038/s43017-021-00219-y.

Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Biggs, R., Carpenter, S. R., de Vries, W., de Wit, C. A., Folke, C., Gerten, D., Heinke, J., Mace, G. M., Persson, L. M., Ramanathan, V., Reyers, B., & Sörlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. *Science*, *347*(6223), 1259855. https://doi.org/10.1126/science.1259855

Stern, P. C. (2012). Fear and hope in climate messages. *Nature Climate Change, 2*(8), 572–573. https://doi.org/10.1038/nclimate1610

Swain D.L. et al. (2020). Increased Flood Exposure Due to Climate Change and Population Growth in the United States. *Earth's Future, 8*(11), e2020EF001778. https://doi.org/10.1029/2020EF001778.

Sweet, W. V., Hamlington, B. D., Kopp, R. E., Weaver, C. P., Barnard, P. L., Bekaert, D., Brooks, W., Craghan, M., Dusek, G., Frederikse, T., Garner, G., Genz, A. S., Krasting, J. P., Larour, E., Marcy, D., Marra, J. J., Obeysekera, J., Osler, M., Pendleton, M., ... Zuzak, C. (2022). *Global and regional sea level rise scenarios for the United States: Updated mean projections and extreme water level probabilities along U.S. coastlines.* NOAA Technical Report NOS 01. National Oceanic and Atmospheric Administration, National Ocean Service. https://oceanservice.noaa.gov/hazards/sealevelrise/noaa-nostechrpt01-global-regional-SLR-scenarios-US.pdf

The Nature Conservancy. (2022). *Homepage*. https://www.nature.org/en-us/

The Wilderness Society. (2022). *Homepage*. https://www.wilderness.org/

Timperley, J. (2020, September 13). Q*&A: Why Cement Emissions Matter for Climate Change*. Carbon Brief. https://www.carbonbrief.org/qa-why-cement-emissions-matter-for-climate-change/.

U.S. Environmental Protection Agency. (2022). *The inflation reduction act*. https://www.epa.gov/green-power-markets

United Nation.*, What Is Climate Change?*. Climate Action. accessed September 28, 2022. https://www.un.org/en/climatechange/what-is-climate-change.

USDA. (2019, August 20). *Major Land Uses*. Economic Research Service. U.S. Department of Agriculture. https://www.ers.usda.gov/topics/farm-economy/land-use-land-value-tenure/major-land-uses/.

U.S. Department of Agriculture. *Biotechnology and Climate Change*. USDA. accessed April 7, 2023. https://www.usda.gov/topics/biotechnology/climate-change.

University Corporation for Atmospheric Research. *Hurricanes and Climate Change*. (2018). UCAR Center for Science Education. https://scied.ucar.edu/learning-zone/climate-change-impacts/hurricanes-and-climate-change

Venkat, K. (2012). The Climate Change and Economic Impacts of Food Waste in the United States. *International Journal on Food System Dynamics, 2*(4), 431–446. https://doi.org/10.22004/ag.econ.144840.

Venn, A. (2019). Social justice and climate change. In T. M. Letcher (Ed.), *Managing global warming* (pp. 711–728). Academic Press. https://doi.org/10.1016/B978-0-12-814104-5.00024-7

Vohra, K., Vodonos, A., Schwartz, J., Marais, E. A., Sulprizio, M. P., & Mickley, L. J. (2021). Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem. *Environmental Research, 195*, 110754. https://doi.org/10.1016/j.envres.2021.110754

Wehner, M.F., J.R. Arnold, T. Knutson, K.E. Kunkel, & A.N. LeGrande, 2017: Droughts, floods, and wildfires. In: *Climate Science Special Report: Fourth National Climate Assessment, Volume I* [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 231-256, doi: 10.7930/J0CJ8BNN.

# University Spotlights

# 50 Universities:
# Public Health Technologies

In the rapidly evolving landscape of public health, universities across the world are playing a pivotal role in driving innovative solutions to address global health challenges. From tackling infectious diseases and chronic illnesses to improving healthcare access in underserved regions, academic institutions are at the forefront of technological advancements that aim to enhance population health. This list highlights 50 universities (in no particular order), each with specialized departments focused on public health, and showcases the innovative tools they have developed to address pressing health issues.

These institutions are leading breakthroughs in areas such as digital health, wearable technologies, AI-driven diagnostics, and low-cost medical devices. Many of these innovations aim to improve healthcare delivery and accessibility, particularly in low-resource settings. By leveraging cutting-edge research and interdisciplinary collaboration, these universities are not only transforming the way public health problems are addressed but also shaping the future of healthcare on a global scale. From AI-powered disease surveillance systems to mobile health apps that empower patients, their contributions are critical in building a healthier world.

## 1 – Harvard University

**Department**: Harvard T.H. Chan School of Public Health
**Website**: http://www.hsph.harvard.edu/
**Overview**: Harvard focuses on global public health innovation, including advancements in data science, infectious disease research, and healthcare systems.
**Innovative Tools**: Harvard developed the Global Health Delivery Project, a database and case studies for designing scalable health programs and interventions.

## 2 – University of Oxford

**Department**: Oxford Big Data Institute
**Website**: https://www.bdi.ox.ac.uk/
**Overview**: Oxford specializes in using big data and AI to address epidemiological challenges and improve global public health outcomes.
**Innovative Tools**: Oxford developed the ChAdOx1 COVID-19 vaccine (AstraZeneca), a major tool in combating the global COVID-19 pandemic.

## 3 – Stanford University

**Department**: Stanford Center for Innovation in Global Health
**Website**: https://globalhealth.stanford.edu/
**Overview**: Stanford works on digital health solutions, pandemic preparedness, and improving healthcare delivery in low-resource settings.
**Innovative Tools**: Stanford created the Digital Medical Epidemiology Network, which uses online data and social media for real-time public health surveillance.

## 4 – Johns Hopkins University

**Department**: Bloomberg School of Public Health
**Website**: https://publichealth.jhu.edu/
**Overview**: Johns Hopkins leads in pandemic response, public health surveillance systems, and health equity research.
**Innovative Tools:** Developed the COVID-19 Dashboard, a critical tool for tracking global pandemic data in real-time.

## 5 – Massachusetts Institute of Technology (MIT)

**Department**: MIT Institute for Medical Engineering and Science
**Website**: https://imes.mit.edu/
**Overview**: MIT focuses on the development of medical devices, computational health systems, and biomedical technologies to improve public health.
**Innovative Tools:** Developed AI-driven diagnostic tools, such as rapid COVID-19 testing

kits and portable devices for real-time health monitoring.

## 6 – Imperial College London

**Department**: School of Public Health
**Website**: https://www.imperial.ac.uk/school-public-health/
**Overview**: Imperial works on vaccine development, disease modeling, and health policy innovations to tackle global health challenges.
**Innovative Tools**: Developed the REACT (Real-time Assessment of Community Transmission) study, using home-based testing to track COVID-19 infection rates.

## 7 – University of California, Berkeley

**Department**: Berkeley Public Health
**Website**: https://publichealth.berkeley.edu/
**Overview**: Berkeley focuses on social determinants of health, climate change impacts on health, and global health technology innovations.
**Innovative Tools:** Developed the CLIMET initiative, which analyzes the effects of climate change on public health, particularly for vulnerable populations.

## 8 – University of Toronto

**Department**: Dalla Lana School of Public Health
**Website**: https://www.dlsph.utoronto.ca/
**Overview**: Toronto leads in digital health technologies, data-driven health research, and health policy to improve population health.
**Innovative Tools:** Developed AI-driven health tools through the Vector Institute for AI, focusing on early disease detection and predictive analytics.

## 9 – Karolinska Institute

**Department**: Department of Global Public Health
**Website**: https://ki.se/en/gph
**Overview**: Karolinska is a leader in public health genomics, digital epidemiology, and vaccine technologies.
**Innovative Tools:** Developed Epidemic Intelligence Tools for real-time prediction and control of infectious diseases.

## 10 – London School of Hygiene & Tropical Medicine

**Department**: Department of Infectious Disease Epidemiology
**Website**: https://www.lshtm.ac.uk/
**Overview**: LSHTM is a leader in infectious disease research, global disease outbreak response, and health systems strengthening in low-income countries.
**Innovative Tools:** Developed MODIS, a mobile-based diagnostic tool to detect infectious diseases in remote and resource-limited settings.

## 11 – University of Melbourne

**Department**: Melbourne School of Population and Global Health
**Website**: https://mspgh.unimelb.edu.au/
**Overview**: Melbourne focuses on global health technologies, environmental health, and indigenous health innovations.
**Innovative Tools**: Developed the Healthy Urban Microbiome Initiative (HUMI) to study how urban environments influence microbial exposure and health outcomes.

## 12 – National University of Singapore (NUS)

**Department**: NUS Saw Swee Hock School of Public Health
**Website**: https://sph.nus.edu.sg/
**Overview**: NUS leads in health informatics, AI in healthcare, and public health initiatives focused on Southeast Asia.
**Innovative Tools**: Developed digital health passports, enabling secure health data storage for travel and disease prevention during the COVID-19 pandemic.

## 13 – University of Washington

**Department**: Institute for Health Metrics and Evaluation (IHME)
**Website**: https://www.healthdata.org/
**Overview**: Washington is a leader in global health data analysis, disease burden assessment, and public health interventions.
**Innovative Tools:** Created the Global Burden of Disease (GBD) tool, the most comprehensive effort to measure epidemiological trends globally.

## 14 – McGill University

**Department**: Institute for Health and Social Policy
**Website**: https://www.mcgill.ca/medhealthsci/
**Overview**: McGill innovates in policy-driven health research, social determinants of health, and population-level health interventions.
**Innovative Tools**: Developed PAHO-WHO’s Health Equity Measurement Toolkit to monitor disparities in public health across populations.

## 15 – University of Copenhagen

**Department**: Department of Public Health
**Website**: https://publichealth.ku.dk/
**Overview**: Copenhagen focuses on health systems research, global health governance, and innovative health technologies for public health.
**Innovative Tools**: Developed mHealth Intervention Tools, which use mobile technologies to promote behavior change and prevent diseases.

## 16 – ETH Zurich

**Department**: Department of Health Sciences and Technology
**Website**: https://hest.ethz.ch/
**Overview**: ETH Zurich conducts cutting-edge research in biomedical engineering, health technology, and diagnostic tools for public health.
**Innovative Tools:** Created a portable, low-cost diagnostic lab for rapid pathogen detection, improving public health monitoring in remote areas.

## 17 – University of Sydney

**Department**: Sydney School of Public Health
**Website**: https://www.sydney.edu.au/medicine-health/schools/sydney-school-of-public-health.html
**Overview**: Sydney focuses on indigenous health, digital health systems, and public health policy for equity and improved health outcomes.
**Innovative Tools:** Developed the Western Sydney Diabetes Program, using predictive analytics and community engagement to reduce diabetes prevalence in high-risk populations.

## 18 – University of Cambridge

**Department**: Cambridge Institute of Public Health
**Website**: https://www.cph.cam.ac.uk/
**Overview**: Cambridge innovates in public health genomics, aging research, and the use of big data for epidemiological studies.
**Innovative Tools:** Developed iGEM, a synthetic biology competition that fosters innovative health solutions, including low-cost diagnostic tools.

## 19 – University of Edinburgh

**Department**: Usher Institute
**Website**: https://www.ed.ac.uk/usher
**Overview**: Edinburgh specializes in digital health, health data science, and technology-enabled public health interventions.
**Innovative Tools**: Developed the Global Health Data Science Platform, using AI and big data to monitor and predict public health trends.

## 20 – University of Queensland

**Department**: School of Public Health
**Website**: https://public-health.uq.edu.au/
**Overview**: Queensland focuses on global health systems, vaccine technologies, and environmental health.
**Innovative Tools**: Developed the Zika App, which provides real-time tracking of Zika virus outbreaks and offers essential health information dissemination.

## 21 – Tsinghua University

**Department**: School of Medicine
**Website**: http://www.med.tsinghua.edu.cn/
**Overview**: Tsinghua engages in public health technology innovations, health data analytics, and AI-driven health interventions.
**Innovative Tools:** Developed an AI-driven platform integrating wearable health monitoring devices for early disease detection and health management.

## 22 – Peking University

**Department**: School of Public Health
**Website**: https://sph.pku.edu.cn/
**Overview**: Peking University researches health policy, disease control technologies, and global health governance.
**Innovative Tools:** Developed a Disease Surveillance System that uses AI and big data to monitor infectious disease outbreaks and provide early warnings.

## 23 – Monash University

**Department**: School of Public Health and Preventive Medicine
**Website**: https://www.monash.edu/medicine/sphpm
**Overview**: Monash innovates in disease prevention technologies, health data analytics, and personalized health interventions.
**Innovative Tools:** Developed REMiND, a mobile health platform that supports healthcare workers in low-resource settings to improve maternal and newborn health outcomes.

## 24 – University of Hong Kong

**Department**: School of Public Health
**Website**: https://sph.hku.hk/
**Overview**: HKU specializes in health systems research, infectious disease control, and innovative public health surveillance technologies.
**Innovative Tools:** Created the HKU-Pasteur Research Pole, which developed advanced diagnostic tests for infectious diseases such as SARS and H5N1 avian influenza.

## 25 – University of Cape Town

**Department**: School of Public Health and Family Medicine
**Website**: https://health.uct.ac.za/school-public-health
**Overview**: UCT focuses on health equity, infectious disease research, and community-based health interventions in sub-Saharan Africa.
**Innovative Tools:** Developed the Groote Schuur Mobile Diagnostic Unit, a portable health diagnostic system that delivers healthcare services to rural areas in South Africa.

## 26 – Columbia University

**Department**: Mailman School of Public Health
**Website**: http://www.publichealth.columbia.edu/
**Overview**: Columbia University's Mailman School of Public Health is renowned for its interdisciplinary research and global health programs focused on tackling health inequities.
**Innovative Tools**: Developed the Health Impact Assessment Tool, which evaluates the potential health effects of proposed policies and projects to inform decision-making.

## 27 – University of Michigan

**Department**: School of Public Health
**Website**: https://sph.umich.edu/
**Overview**: Michigan's School of Public Health excels in epidemiology, environmental health sciences, and health policy, contributing significantly to public health advancements.
**Innovative Tools**: Developed the MyVoice platform, a mobile-based survey tool for gathering youth opinions on health-related topics to inform policy.

## 28 – Emory University

**Department**: Rollins School of Public Health
**Website**: https://www.sph.emory.edu/
**Overview**: Emory University's Rollins School of Public Health is a leader in public health education and research, particularly in global health, infectious diseases, and epidemiology.
**Innovative Tools**: Developed the CARE Tool (Community Assessment and Response

Evaluation), which helps identify community needs during public health emergencies.

## 29 – Yale University

**Department**: Yale School of Public Health
**Website**: https://publichealth.yale.edu/
**Overview**: Yale's School of Public Health is known for its research in epidemiology, chronic disease prevention, and global health.
**Innovative Tools**: Developed the HUMAnN (Harmonized Unifying Model of Ancestry Networks), which integrates genetic data for better public health interventions in diverse populations.

## 30 – University of North Carolina at Chapel Hill

**Department**: Gillings School of Global Public Health
**Website**: https://sph.unc.edu/
**Overview**: UNC's Gillings School is a top-ranked public health school with a focus on health behavior, environmental health, and health policy.
**Innovative Tools**: Developed WaterSHED, a sanitation and hygiene improvement tool aimed at reducing waterborne diseases in low-resource settings.

## 31 – University of Pittsburgh

**Department**: Graduate School of Public Health
**Website**: https://www.publichealth.pitt.edu/
**Overview**: Pitt Public Health is a leader in public health research, education, and practice, particularly in infectious diseases and health policy.
**Innovative Tools**: Created the FRED (Framework for Reconstructing Epidemic Dynamics), a simulation tool for modeling the spread of infectious diseases.

## 32 – Boston University

**Department**: School of Public Health
**Website**: https://www.bu.edu/sph/
**Overview**: BU School of Public Health focuses on improving the health of populations through research in urban health, global health, and social determinants of health.
**Innovative Tools**: Developed the PHX (Public Health Exchange), an online platform connecting public health students with community-based public health projects.

## 33 – University of Minnesota

**Department**: School of Public Health
**Website**: https://www.sph.umn.edu/
**Overview**: The University of Minnesota's School of Public Health is known for its work in epidemiology, biostatistics, and environmental health sciences.
**Innovative Tools**: Developed the MDH Syndromic Surveillance System, which tracks and analyzes health data to detect and respond to potential outbreaks.

## 34 – University of California, Los Angeles (UCLA)

**Department**: Fielding School of Public Health
**Website**: https://ph.ucla.edu/
**Overview**: UCLA Fielding School of Public Health is a global leader in public health research, with a focus on environmental health, health policy, and community health sciences.
**Innovative Tools**: Developed the California Health Interview Survey (CHIS), the nation's largest state health survey, providing vital data on public health trends.

## 35 – University of Southern California (USC)

**Department**: Keck School of Medicine, Department of Population and Public Health Sciences
**Website**: https://pphs.usc.edu/
**Overview**: USC's Department of Population and Public Health Sciences focuses on health behavior research, epidemiology, and health policy.
**Innovative Tools**: Created the GeoHealth Hub, a platform that integrates geographic information system (GIS) data for studying health disparities in Los Angeles.

## 36 – University of Glasgow

**Department**: Institute of Health and Wellbeing
**Website**:
https://www.gla.ac.uk/schools/healthwellbeing/aboutus/
**Overview**: The University of Glasgow's Institute of Health and Wellbeing conducts research on mental health, social determinants of health, and public health policy.
**Innovative Tools**: Developed the Healthy Ageing in Scotland (HAGIS) study, which provides data on aging and health outcomes to improve elderly care.

## 37 – University of Warwick

**Department**: Warwick Medical School, Division of Health Sciences
**Website**:
https://warwick.ac.uk/fac/sci/med/research/hscience
**Overview**: Warwick Medical School's Division of Health Sciences focuses on health services research, public health interventions, and clinical trials.
**Innovative Tools**: Developed the Warwick Model of Mental Health Services, a framework for improving community-based mental health services.

## 38 – University of Bristol

**Department**: Population Health Sciences
**Website**: http://www.bristol.ac.uk/population-health-sciences/
**Overview**: Bristol's Population Health Sciences department conducts research on epidemiology, health economics, and social medicine.
**Innovative Tools**: Developed the Children of the 90s study, a long-term health study providing insights into health and development across the lifespan.

## 39 – University of Birmingham

**Department**: Institute of Applied Health Research
**Website**:
https://www.birmingham.ac.uk/research/applied-health/index.aspx
**Overview**: The University of Birmingham's Institute of Applied Health Research focuses on improving healthcare delivery and outcomes through applied research.
**Innovative Tools**: Developed the Birmingham Symptom-specific Overlap Questionnaire (BISQ), a tool for diagnosing and managing overlapping health conditions.

## 40 – University of Liverpool

**Department**: Institute of Population Health
**Website**: https://www.liverpool.ac.uk/population-health/
**Overview**: Liverpool's Institute of Population Health conducts research on infectious diseases, health inequalities, and health systems.
**Innovative Tools**: Developed the Liverpool Epidemic Intelligence Platform, a digital tool for monitoring and predicting disease outbreaks in real-time.

## 41 – University of Manchester

**Department**: Division of Population Health, Health Services Research, and Primary Care
**Website**:
https://academic.oup.com/ije/article/44/3/827/632531
**Overview**: The University of Manchester focuses on primary care, health services research, and public health informatics.
**Innovative Tools**: Developed the Clinical Practice Research Datalink (CPRD), a large database for public health research and policy development.

## 42 – University of Nottingham

**Department**: School of Medicine, Division of Epidemiology and Public Health
**Website**:
https://www.nottingham.ac.uk/medicine/research/research-areas/public-health-and-epidemiology/index.aspx

**Overview**: Nottingham's Division of Epidemiology and Public Health is known for its work on tobacco control, epidemiology, and health inequalities.
**Innovative Tools**: Developed the UK Electronic Cigarette Research Forum, providing data and policy advice on e-cigarette use and public health.

## 43 – University of Edinburgh

**Department**: Centre for Global Health Research
**Website**: https://www.ed.ac.uk/global-health/research
**Overview**: Edinburgh's Centre for Global Health Research focuses on improving health outcomes in low- and middle-income countries through research and education.
**Innovative Tools**: Developed the SURGE (Surgical Research and Global Health Equity) tool, which aims to improve surgical outcomes and access in resource-limited settings.

## 44 – Erasmus University Rotterdam

**Department**: Erasmus MC, Department of Public Health
**Website**: https://www.erasmusmc.nl/en/public-health
**Overview**: Erasmus MC's Department of Public Health focuses on health systems research, public health policy, and epidemiology.
**Innovative Tools**: Developed the Healthy Ageing Scorecard, a tool for assessing health and well-being among older adults across Europe.

## 45 – Utrecht University

**Department**: Faculty of Medicine, Department of Public Health
**Website**:
https://www.uu.nl/en/organisation/faculty-of-medicine-umc-utrecht
**Overview**: Utrecht's Department of Public Health focuses on epidemiology, environmental health, and health systems research.
**Innovative Tools**: Developed the IRAS Exposure and Health Platform, which assesses environmental exposures and their impact on public health.

## 46 – University of Groningen

**Department**: University Medical Center Groningen, Department of Health Sciences
**Website**:
https://www.rug.nl/research/gradschool-medical-sciences/
**Overview**: Groningen's Department of Health Sciences is known for its work on health aging, lifestyle interventions, and healthcare delivery.
**Innovative Tools**: Developed the Lifelines Cohort Study, a multi-generational study tracking the health of over 165,000 participants to understand chronic diseases.

## 47 – University of Oslo

**Department**: Department of Community Medicine and Global Health
**Website**:
https://www.med.uio.no/helsam/english/
**Overview**: The University of Oslo's Department of Community Medicine and Global Health focuses on global health, epidemiology, and health policy.
**Innovative Tools**: Developed the Global Health Preparedness Scorecard, which evaluates countries' capacities to respond to global health emergencies.

## 48 – Karlsruhe Institute of Technology (KIT)

**Department**: Institute of Public Health
**Website**: https://www.kit.edu/english/
**Overview**: KIT's Institute of Public Health is engaged in research on environmental health, public health informatics, and sustainable health technologies.
**Innovative Tools**: Developed the eHealth Toolkit, a set of digital tools for managing chronic diseases and promoting healthy lifestyles through telehealth solutions.

## 49 – University of Zurich

**Department**: Institute of Social and Preventive Medicine
**Website**:
https://www.ebpi.uzh.ch/en.html

**Overview**: Zurich's Institute of Social and Preventive Medicine focuses on epidemiology, social medicine, and public health policy.
**Innovative Tools**: Developed the Swiss Health Observatory, a comprehensive platform providing data on public health trends and determinants in Switzerland.

## 50 – Heidelberg University

**Department**: Heidelberg Institute of Global Health
**Website**: https://www.klinikum.uni-heidelberg.de/en/hospital/heidelberg-institute-of-global-health
**Overview**: Heidelberg University's Institute of Global Health is dedicated to improving global health through research, education, and policy advocacy.
**Innovative Tools**: Developed the SMART Health Facilities Tool, which assesses and improves the quality of healthcare services in low- and middle-income countries.

# Submissions

## Call for Submissions

We are currently accepting articles, research papers, thought papers, and potential nonprofit spotlights for our journal. All submissions should be sent through our ScholarsArchive portal. Links can be found on our official website, www.journalofnonprofitinnovation.org/submissions.

*Latest Research (Summaries)*

We are looking for articles that use innovative thinking and approaches to community and global issues. Have you done research in a specific area? Are you an expert in a certain field? We want to hear from you!

*Research & Thought Papers*

We are looking for thought pieces from nonprofit leaders that have first-hand experience with community and global issues. Share your experiences and give us your thoughts on a specific topic!

*Nonprofit & Partnership Spotlights*

Is your nonprofit doing noteworthy things that you want others to know about? Spotlight your nonprofit in our journal! Note: To spotlight your nonprofit, you must be WikiCharities validated.

---

## Upcoming Issues

- Access to Education
- Partnerships & Collaboration
- Human Rights Violations & Social Injustice
- Pracademics
- Access to Clean Water & Sanitation

## Submission Deadlines

Visit our website for up-to-date information on deadlines.
www.journalofnonprofitinnovation.org