Boston Children's Hospital
Global Health Program



2021

Global Health Program

Annual Report

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Letter from the Director

While the COVID-19 pandemic brought much of the world to its knees, what also emerged were stories of strength, resilience, and fortitude. Around the world, healthcare workers together rose against the complex, unrelenting challenges COVID-19 posed; no health system around the world was spared from this fight. For the first time, all of us were fighting the same battle, both for our lives and the lives of our patients. Together, we rose to the challenge and are slowly turning the tide. As pediatric healthcare workers, we care for seriously ill or injured children every day. Sometimes, however, in weird ways, the extraordinary can slowly become ordinary, our days almost summed up with a modest shrug and: "it's just what we do." This has slowly become true with COVID care – slowly, even this humbling, overwhelming moment is beginning to feel more routine as we endure together and begin to settle into the "new normal". However, it is critical that we don't let the extraordinary effort, compassion and care provided by pediatric clinicians around the world every day go unrecognized; this is especially true as we honor the extended "2020-2021: Year of the Nurse" – as deemed by the World Health Organization – and the profound impact of nurses around the world on improving health and wellbeing of children and their communities.

This year, we continued to rise to tackle the challenges prioritized by the WHO and our local partners around the world. Despite gains, we still have a ways to go: tragically, an estimated 5 million children lost their lives this year before reaching their 5th birthday from preventable causes. Over 160 million adolescents are living with a diagnosed mental disorder, 415 million children around the world are living in a conflict zone with significant threats to their health and wellbeing – and the list goes on. We are collaborating with our partners around the globe, including governments, non-governmental organizations, universities, hospitals, and UN agencies, to meet the needs of the world's most vulnerable children with high impact, sustainable solutions. This engagement will only grow in years to come, with your help. We continue to work to secure investment in projects and initiatives with measurable, scalable progress. However, we must do more. With our partners, we must all unwaveringly commit to actions that support children, families, and healthcare workers in advocating for and addressing the most pressing, emergent issues children face.

2021 was marked by enduring, substantial contributions to pediatric care around the world. The pioneering, visionary leadership provided by scientific leaders and bedside providers will have a profound and lasting impact on us all. Pediatric healthcare workers were a beacon of hope, safety, and reassurance in times of darkness; we now are working together to illuminate a path forward for continuing to improve health and well-being. While the challenge is great, the rewards of meeting it can be greater still for every child, family, and community. Please join us in lighting the path forward.

In solidarity,





Michelle Niescierenko MD, MPH

Director Global Health Program
Attending Physician | Division of Emergency Medicine
Assistant Professor Pediatrics & Emergency Medicine
Harvard Medical School

Global Health Strategic Plan

As we continue to grow, we've also been looking inward to make our organization even better. We're committed to strengthening our programming, further building our operational capabilities, and expanding our educational opportunities for global health practitioners. To that end, this past year, we launched an internal strategic planning process during which we set out to craft our strategic roadmap for the next five-years (2021-2026).

We didn't do this in isolation; it was a team effort. We worked closely with stakeholders and leaders from Boston Children's Hospital's global health community. Together, our goals included pinpointing key areas that can be strengthened and expanded and revisiting the guiding principles that steer us as we turn our priorities into action and impact.

At the conclusion of this process, we identified three central cross-cutting areas that serve as the foundation of our strategic plan. Each of these areas is accompanied by clearly defined goals to ensure our unwavering commitment to the BCH Global Health community and our responsiveness to the needs of local and global partners. These three focus areas are:

Ensuring Global Health Equity Accountability in every facet of our programmatic, educational, and research partnerships

Advancing and supporting global health research and project development

Increasing opportunities for global health education and learning for both our BCH community and our global partners

PROJECT

Cluster Randomized Stepped Wedge Trial of a Non-Electric Infant Warmer

Name: **Anne Hansen MD, MPH**
Country: **Rwanda**



Neonatal hypothermia is widely recognized as a ubiquitous but preventable condition for small and sick newborns in low- and middle-income countries, estimated to contribute to 40% of the 2.5 million neonatal deaths annually. Those who survive may suffer stunted brain growth as they use calories to stay warm. Kangaroo Mother Care (KMC) is the optimal treatment, but is not always feasible or a sufficient source of heat. Dr. Hansen and colleagues developed a non-electric, low cost, simple, reusable infant warming mattress to complement KMC. After two successful pilot studies, Dr. Hansen conducted a large-scale trial of the Infant Warmer across 10 rural Rwandan hospitals.

From Nov 2019 to July 2020, 3179 patients were enrolled, yielding 12,748 encounters; 464 unique infants used the warmer 892 times. The rate of euthermia rose from 51% of encounters pre-intervention to 67% post-intervention. Among the encounters in which the warmer was used, only 11% remained hypothermic. The mortality rate among those who used the warmer was significantly lower than among those who did not. Use of the warmer did not affect hyperthermia rates. There were no safety concerns or instances of incorrect warmer use. In 2021, this research was published; this is the first randomized trial and publication studying a transwarmer mattress designed for and tested in a low resource setting.



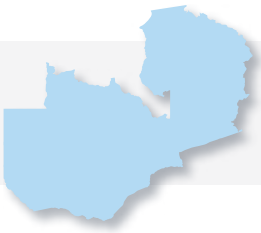
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12,748
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PROJECT
Improving Pediatric Epilepsy Care in Zambia

Name: **Archana Patel MD, MPH**
Country: **Zambia**



Globally, there are over 50 million people with epilepsy, with over 80% living in the developing world. Moreover, the treatment gap in these regions is staggering, ranging over 75%. Children in Zambia with epilepsy face a multitude of challenges, including limited access to medical professionals generally, barriers to accessing care, persistent stigma, limited access to medication, and limited education for first line providers. When this collaboration first began in 2014, the absence of any Zambian child neurologists in a population of nearly 18 million people was glaring. Since then, Dr. Patel has participated in the training of the first two Zambian child neurologists, with whom she maintains continued partnership.

As a part of our ongoing collaboration, we remain committed to providing ample opportunities for additional training to our Zambian colleagues. Beyond the two child neurologists previously mentioned, we are also actively engaged in training over 30 clinical officers, who constitute the primary health force in the country and provide care at smaller, critical access clinics in rural areas. Training for clinical officers includes management of epilepsy and seizures in children.

In an effort to improve geographic access, we conducted these trainings in three different provinces across the country. We then further incorporated advocacy efforts through a **community health worker program that serves 60 children.** BCH neurology also helped establish the ketogenic diet as a viable therapeutic option in the country. This was made possible by leveraging the expertise of a BCH-based epileptologist and dietician, who provided **training to providers and two nutritionists in Zambia**, in addition to providing continued remote support so as to facilitate the expansion of this therapy. Finally, **we support pediatric electroencephalogram (EEG) services by providing necessary materials and remote interpretation of EEGs**, making this service available at the specialist level in Zambia while our Zambian colleagues continue to pursue certification in this skill.





PROJECT

Strengthening Adolescent Health in Guatemala

Name: **Areej Hassan MD, MPH**
Country: **Guatemala**



The year 2021 marks an important milestone for the partnership between physicians San Juan de Dios Hospital, the School of Medicine at Universidad de San Carlos of Guatemala (USAC), and Boston Children's Hospital. Since its inception in 2014, our collaboration has focused on improving adolescent health care in Guatemala through a range of initiatives. Our efforts have included exploring the training and experience of healthcare providers in adolescent medicine by examining health surveillance data using the Sistema Informatico Adolescente. Through these activities, we have gained critical insights into the current state of adolescent health in Guatemala, including the significant gaps in adolescent medicine training for local healthcare providers. To address this issue, we have developed a comprehensive training curriculum that incorporates both expert-identified needs and provider-identified training gaps.

In particular, this proposal, developed in conjunction with USAC, calls for a **two-year training program funded by the Ministry of Health** and represents a major step towards addressing the significant gaps in adolescent medicine training and the strong provider support for the creation of a credentialed fellowship program. Going forward, our immediate priority is to develop training materials that will be accessible via an online platform. This approach will ensure that the program is widely accessible, scalable, and can effectively reach healthcare providers in various locations.



In addition to improving provider training, our partnership has also focused on **enhancing the adolescent health surveillance system in Guatemala**. Our work has revealed large amounts of missing information, particularly with regards to sensitive topics. As a result, we completed a follow-up study with stakeholders to examine these shortcomings and identify ways to improve the system.

PROJECT

Heart failure e-learning training for low-income countries

Name: **Faraz Alizadeh MD**
Country: **Rwanda**



Dr. Alizadeh has been working in collaboration with Partners in Health (PIH) and NCDi Poverty Network to develop e-learning modules for heart failure training in low-income countries. Currently, most district hospitals that provide decentralized non-communicable disease (NCD) care require frequent in person trainings for NCD providers, which are time intensive and often require the presence of subspecialists, limiting the national upscale of decentralized NCD care. The team has been working to update and convert the existing in person heart failure trainings to a high quality online, self-guided, asynchronous e-learning format. Our training program is targeted towards advanced nurse providers and general physicians at the district hospital level. It currently includes eight modules on core heart failure topics. Furthermore, we are working with OPENPediatricsTM and Med2Lab to trial an online simulator for outpatient heart failure care. With the COVID pandemic, there was significant push within PIH, NCDi Poverty Network, and the Rwanda Ministry of Health to develop high quality e-learning modules for training healthcare workers in remote villages. The Rwanda Ministry of Health has already expressed interest in using the final product for national upscale training of new NCD providers and providing refresher trainings for existing providers. Furthermore, the **NCDi Poverty Network foresees this training program to be used by 23+ countries pledging to decentralize their NCD care aligned with the WHO Package of Essential NCD-interventions model, which addresses severe NCDs through an integrated outpatient service at first-level hospitals.**



PROJECT
Train the Trainer: Helping Babies Breathe

Name: **Kierrah Leger DNP, MS, RN, NE-BC**
Country: **Haiti**



In Haiti, the majority of newborns are delivered at home under the supervision of Skilled Birth Attendants (SBAs). In response, the Ministry of Health has taken a dual approach to improve maternal and newborn health outcomes: encouraging women to give birth in health centers, where they can receive quality care and timely interventions if needed, while also prioritizing the education of Birth Attendants in safe delivery practices. This approach acknowledges the importance of community-based solutions to address maternal and newborn health issues.

To this end, Dr. Leger, a Global Health Nursing Fellow, has partnered with local clinics in Cabaret, Haiti to provide Skilled Birth Attendants training in Helping Babies Breathe (HBB), an evidence-based educational program developed by the American Academy of Pediatrics that teaches newborn resuscitation and care. The skills learned in this course have proven particularly valuable in resource-limited settings where many newborns die each year due to birth asphyxia, or the inability to breathe immediately after birth. As a result of Dr. Leger intervention, 22 providers, 18 community workers, and 289 Skilled Birth Attendants (SBA) have received HBB training to date. Of the 550 deliveries reported by SBA's following the course, 72 required life-saving interventions such as stimulation and oral suctioning that were initiated due to the training received.



22
providers

18
community workers

289
Skilled Birth Attendants (SBA)

Dr. Leger will continue to collaborate with local healthcare providers to provide HBB training, with local nurses providing a refresher course to SBAs every six months to review critical knowledge and lifesaving skills. Due to COVID-19 and political uncertainties in Haiti, the HBB training is not currently expanding to other regions in the country, but the team is looking to add web-based education to enhance the program.





PROJECT

The Ghanaian Pediatric Oncology Nursing Specialist Program: Promoting Nursing Clinical Expertise and Leadership

Name: **Kimberly Shepherd RN, MHA, Collen Nixon MSN, RN, CPHON, NPD-BC, Lisa Morrissey MPH MSN RN NE-BC, Tyonne Hinson, DrPH, MSN, RN, NE-BC, Sonia Nettey MSN FNP-C, CPN-NP, Marilyn Moonan MSN, RN-BC, CPN**
Country: **Ghana**



Children with cancer in low- and middle-income countries face significant challenges and are four times more likely to die of the disease than those in high income countries. Expert nurses are critical to a successful pediatric oncology program, yet few opportunities exist for nurses across Ghana to receive specialized nursing education.

Building on previous partnerships with physician and nurse leaders at Korle Bu Teaching Hospital (KBTH) and Komfo Anokye Teaching Hospital (KATH), nurses from the Boston Children's Hospital (BCH) Global Health Fellowship collaborated with the Ghana College of Nurses and Midwives, local clinical experts, and international partners to create an accredited Pediatric Oncology Nursing Specialist program. The creation of this accredited Pediatric Oncology Nursing Specialist program aligns with the priorities of the 2019 World Health Organization Global Initiative for Childhood Cancer (WHO GICC) workshop in Ghana. Moreover, an accredited specialist training program is critical towards building capacity for delivering best practices in childhood cancer care: the program equips its trainees with the requisite skills and knowledge to spearhead nursing practice, education, and training within their respective institutions. Furthermore, these trainees can then serve as leaders for future cohorts, further supporting the local capacity building, a key goal of the WHO GICC.

Despite the challenges posed by the COVID-19 pandemic, the program has **adapted to a blended curriculum that includes both remote and in-person teaching to ensure that trainees can still receive the necessary education**. Moreover, the curriculum has been integrated into the Center of Excellence in Pediatric Oncology, created in 2018 to improve the diagnosis and treatment of childhood cancer across multiple regions of Ghana.







PROJECT

Low-birthweight infant feeding exploration (LIFE) study in India, Malawi, and Tanzania

Name: **Krysten North MD, MPH**
Country: **India, Malawi, and Tanzania**



In low- and middle-income countries (LMICs), there exists a dearth of information pertaining to the feeding practices and growth patterns of small and premature newborns. This knowledge gap has implications for the suboptimal growth of low-birthweight infants in these regions. To address this issue, our team is undertaking a multifaceted approach that involves qualitative interviews and quantitative data collection on a cohort of hospitalized infants. The aim is to gather data on feeding practices and growth patterns, identify existing challenges, and explore opportunities to improve outcomes. Given that early nutrition plays a crucial role in both brain development and growth, a separate cohort of infants has also been identified for the purpose of collecting data on feeding patterns and growth from birth up to 24 months of age.



By obtaining information from both groups, we hope to **better understand the patterns of feeding and growth among small and premature infants, particularly during the critical first two years of life**. The findings from this study will be instrumental in identifying novel strategies and feeding practices that can optimize the growth and development of low-birthweight infants in low- and middle-income countries.

PROJECT

Pediatric Health Care in Haiti – Sickle Cell Disease Screening and Establishing a School Wellness Center

Name: **Rose Mintor, DNP, RN-BC, CPN, CLSSGB and Natasha Archer MD**
Country: **Haiti**



Significant progress was made in 2021 addressing healthcare challenges in Mirebalais, Haiti, particularly in the areas of sickle cell disease (SCD) care and screening, as well as hearing and vision screening for elementary school students.

In the area of SCD care and screening, a comprehensive needs assessment was conducted to evaluate an established SCD program in Mirebalais, Haiti, which had been facing significant challenges in providing consistent and accurate screening since its inception in 2014. These issues had resulted in inadequate follow-up and care for infants who tested positive for SCD. In order to tackle this challenge, a needs assessment was conducted, and improvements were implemented utilizing the Plan Do Study Act (PDSA) approach. The intervention involved various measures, such as providing laboratory training, nursing care coordination, introducing a shared database, and implementing 360 Evaluation and training of community health workers. The primary objective of the intervention was to enhance the number of newborns screened for SCD, improve follow-up and reduce lost to follow-up rates. The strategy for achieving this goal involves identifying positive patients using a rapid point-of-care sickle cell test, Sickle SCAN, and initiating penicillin treatment before discharge. By leveraging this approach, we aim to reduce mortality rates associated with sickle cell disease by ensuring that infants with the condition receive prompt and effective treatment.

In the area of hearing and vision screening, we provided **hearing and vision screening services with a focus on L'Ecole de Choix, an underserved elementary school in rural Haiti**. With the help of an audiologist at BCH, we purchased an audiometer with minimal maintenance and calibration needs and Rose, a Global Health Program Nursing Fellow, worked with the L'Ecole de Choix nurse to develop a hearing and vision screening process. Additionally, Rose held a first-ever Tête-à-Tête session with Choix female graduates. This session provided a platform for frank conversation around health, puberty, and wellness, with the goal of addressing the specific needs of the community.



PROJECT
OPENPediatrics

Name: **Traci Wolbrink MD, MPH and Jeffrey Burns MD, MPH**
Country: **Global**



During their work in the field of global health, Dr. Burns and Wolbrink were confronted with a stark reality: the loss of numerous young lives that could have been prevented if medical information had been more accessible. To address this issue, a team of distinguished experts in education, technology, public health, and public policy was brought together to help design innovative strategies for the development and dissemination of rigorously peer-reviewed medical information to the widest possible audience. As a result, their shared global health experience led to the creation and mission of OPENPediatrics, a platform that seeks to make reliable and peer-reviewed medical information available to a broader audience.

OPENPediatrics' primary objective is to promote **access to medical knowledge through a variety of mediums, including videos, courses, simulators, and other multimedia formats**. The platform aims to facilitate the sharing of best practices and enhance the capacity of clinicians who care for sick children worldwide. Ultimately, OPENPediatrics aims to narrow the healthcare disparities worldwide caused by a lack of information. By transforming the conventional apprenticeship model of medical education and extending the classroom beyond institutional boundaries, OPENPediatrics provides a novel, peer-reviewed, and global open-access platform for knowledge exchange in pediatric care. The platform continues to advance its educational offerings using cutting-edge technology to promote the accessibility of its content worldwide.



PROJECT

Assessing Prevalence, Caregiver Knowledge, and Patient Retention Rates of Children Diagnosed with Sickle Cell Disease at Bwera Hospital, Uganda

Name: **Kara Montbleau, MD**
Country: **Uganda**





The Global Health Pathway within the Boston Combined Residency Program is dedicated to providing aspiring global pediatricians with the requisite experience and mentorship to excel in the field of global health. Through participation in various global health initiatives, including taking on large-scale projects and building local relationships, pediatricians-in-training are equipped with the tools and knowledge necessary to address critical health challenges.

One such example is **Dr. Montbleau work focused on addressing the high burden of sickle cell disease among children in Uganda's Kasese district**. In Uganda, sickle cell disease remains a significant issue, with limited access to comprehensive care and a high prevalence rate. To address this challenge, a team of collaborators from BCH and Bwera Hospital are working to design a study to improve diagnostic capacity and outpatient services for children living with sickle cell disease. The project also focuses on providing education to caregivers, healthcare workers, and the community to improve awareness and understanding of the disease.

PROJECT

Attending to Burnout & Secondary Traumatic Stress in a Pediatric Hospital

Name: **Emma Cardeli PhD**
Country: **Lao People's Democratic Republic**



The BCH Global Health Program has partnered with Lao Friends Hospital for Children (LFHC) since it opened in February 2015. LFHC was launched with the intent of establishing a locally sustainable hospital by and for the Lao people. Since its opening as an outpatient clinic, LFHC has grown rapidly into a multi-department, international-standard pediatric hospital. Boston Children's Hospital has partnered with LFHC to support this growth in many different ways, including when Emma Cardeli, PhD, a Clinical Psychologist from Boston Children's, was invited to conduct a needs assessment to enhance LFHC's understanding of programmatic and clinical stressors in addition to resilience levers. Dr. Cardeli developed a framework for a multi-tiered, program for hospital staff that takes into account culturally specific needs. With **Dr. Cardeli's consultation, multi-level interventions have been delivered throughout the hospital in accordance with this framework with the goal of creating an organizational culture that encourages collaboration and compassion at the staff and patient level. Dr. Cardeli will continue to work with LFHC to build capacity for a multi-tiered, wellness program that includes resources for staff struggling with mental health needs.**



PROJECT

Bihar Emergency Care Response and Didactics (BE PREPARED): Strengthening emergency care systems in Bihar State, India

Name: **Michelle Niescierenko MD, MPH, Alexis Schmid DNP, RN, CPNP and David Mills, MD, MPH**
Country: **India**



In partnership with CARE India and the Ministry of Health in Bihar State, Boston Children's Global Health Program is leading an emergency care mentorship program aimed at strengthening emergency care services for children, adolescents, and adults. The educational-based program utilizes a mentorship model to train physicians and nurses in emergency care topics. Physicians and nurses are taught through real time, bedside teaching, case discussion, and simulation.

The ability to respond effectively to emergency and life-threatening conditions in district hospitals in India has been limited and was particularly affected by the COVID-19 pandemic of 2021. **The Ministry of Health and CARE India have identified strengthening of emergency care systems in district hospitals in Bihar State as a priority for 2022. The partnership team launched a 9-month emergency care mentorship program in emergency departments in 5 district hospitals in Bihar State, India. The mentorship program will run through June of 2022.**



PROJECT

Cohort study to measure COVID-19 vaccine effectiveness among health workers in Albania

Name: **Shela Sridhar MD, MPH, Julia Rubin-Smith MD, MSPH, CTropMed, and Alexis Schmid DNP, RN, CPNP**
Country: **Albania**



In partnership with World Health Organization-Europe branch, three BCH Global Health faculty provided technical assistance in Albania to WHO and the Albanian Institute of Public Health (IPH), an agency of the Ministry of Health, to launch the "Cohort study to measure COVID-19 vaccine effectiveness among health workers in Albania" (COVEAL). This study provided essential information on the real-world effectiveness of newly developed COVID-19 vaccines in curbing the pandemic by targeting occupationally at-risk healthcare workers. The data collected also provided a more complete epidemiologic picture of the pandemic in Albania, as well as providing some insight into predictors of both vaccination and infection in this high risk group.

The BCH Global Health Program worked closely with both the World Health Organization-Europe branch and the Albanian Institute of Public Health (IPH) on various aspects of the COVEAL study, including protocol development, logistics, and technical advising. In addition, an organizational feedback system was created using IPH data analysts to monitor data on a daily basis and provide real-time feedback to data collectors, ensuring the accuracy and reliability of the data collected.

The study protocol developed for COVEAL was considered a model for other countries to replicate in their own healthcare settings. As a result, the protocol was used to expand the study to other countries, including Georgia. **This allowed for the collection of data on vaccine effectiveness and the epidemiology of the pandemic across a broader geographic area, providing a more comprehensive understanding of the real-world impact of COVID-19 vaccines on healthcare workers.**



PROJECT

Multi-sectoral collaboration at Komfo Anokye Teaching Hospital to support Adolescents and Young Adults with Chronic Disease Aging into Adulthood

Name: **Leah Ratner MD, MS and Colleen Huysman MSW, LICSW**
Country: **Ghana**



Despite the disruptions caused by the pandemic, the partnership between Boston Children's Hospital and Komfo Anokye Teaching Hospital (KATH) in Kumasi, Ghana has continued to flourish.

Championed by stakeholders in the Directorates of Child Health and Internal Medicine, there has been continued recognition of the importance of adolescent-responsive care, specifically for adolescents and young adults with chronic diseases. Additionally, 2021 brought new collaboration with KATH's Department of Psychiatry and BCH Social work to support training around preventive mental health provision for adolescents and young adults with chronic disease. **The team looks forward to several disease-specific mental health programming starting in 2022, specifically with continued emphasis on collective care and healing justice with this population.**



PROJECT

Pediatric workforce development in Liberia

Name: **Michelle Niescierenko MD, MPH**
Country: **Liberia**



Now in its 12th year of partnership, JFK Medical Center in Monrovia, Liberia and Boston Children's Hospital continue to work together to build the pediatric workforce in Liberia. This year, four more pediatricians have completed their residency, bringing the total number of pediatricians in the country to 15. Supported by BCH, three of these pediatricians are currently conducting their required research to become Residency Program faculty members – working towards the ultimate goal of a fully Liberian-run residency program; their research is focused on addressing some of the most critical health issues faced by their patients, such as birth asphyxia treatment, local treatment of malnutrition and anemia.

In addition to training pediatricians, the partnership is committed to enhancing the skills of nurses and midwives in newborn resuscitation and neonatal care at JFK Medical Center. Several of the nurses and midwives who participated in the program have now gone on to become master trainers, allowing the partnership to expand its impact to 10 maternity referral clinics in the community, thereby improving neonatal birth outcomes in more locations.

Looking ahead, we are excited to welcome seven new residents to the pediatric training program this year, bringing the program closer to its goal of achieving sustainability, as well as adding ten additional referral clinics to the neonatal outcomes, introducing ultrasound training for the pediatric department, and continuing to collaborate on research to identify new solutions for improving health outcomes for children in Liberia.







PROJECT

Guatemala: Identifying factors that hinder neonatal survival among Maya Kaqchikel communities in Guatemala: a mixed methods study

Name: **Anahí Venzor Strader MD, MMSc**
Country: **Guatemala**



In collaboration with Wuqu' Kawoq, an NGO renowned for its over 15 years of dedicated service in delivering culturally and linguistically appropriate community-based healthcare to Indigenous populations in Guatemala, Dr. Venzor Strader is conducting critical research to enhance neonatal health within rural Indigenous communities in the region. This project employs an explanatory sequential mixed methods approach, with the primary objective of investigating and understanding the sociodemographic, obstetrical, geographic, and social factors contributing to the alarmingly high neonatal mortality rates in these underserved areas.

The study will primarily utilize secondary data analysis, drawing from the valuable resources of the Global Maternal and Newborn Registry. Additionally, qualitative insights will be gathered through semi-structured interviews involving mothers, midwives, nurses, and pediatricians, following the necessary approval from the Institutional Review Board (IRB).

Data collection is scheduled to occur between July and November 2022, after which a comprehensive analysis will be conducted, culminating in the composition of a thesis detailing the findings and recommendations. This project represents a crucial step in the ongoing efforts to address and ameliorate the neonatal health challenges faced by Indigenous communities in rural Guatemala.



PROJECT

Improving nutrition of Raramuri children living in remote villages of the Sierra Tarahumara of Chihuahua, Mexico

Name: **Anahí Venzor Strader MD, MMSc**
Country: **Mexico**



Acute and chronic malnutrition pose significant health challenges for Indigenous communities in Mexico, and the situation has been exacerbated by the droughts of 2019. In particular, subsistence farmers have experienced worsened food insecurity, leading to an increase in the rate of acute malnutrition among their children. To address this critical issue, Dr. Venzor Strader collaborated with the Hospital Misión Tarahumara (HMT) in Samachique, Mexico.

HMT's community outreach team had established relationships with remote communities in la Sierra and was keen to provide nutritional support to children through the delivery of a nutritional corn-based mix. The nutritional formula was developed by a physician with decades of experience in the area and has been used locally to treat acute and chronic malnutrition with significant improvement.

As part of a pilot study to grow this locally sourced solution, we evaluated the nutritional status of 42 children in three different remote villages. We then trained three community outreach workers to teach families how to use the formula and feed their children. **Funds were raised to purchase 90 kg of formula, and about 10 kg of it was delivered to six different families in one village. The head of each household was trained in their Raramuri language on how to prepare the formula and administer it appropriately, depending on the age of the child**. The HMT community outreach team plans to continue delivering the formula to more families in other villages and they look forward to expanding the program and replicating it in more communities. **This initiative promises to alleviate the nutritional crisis faced by Indigenous communities in Mexico, and its success underscores the importance of collaboration and community engagement in addressing health disparities.**





PROJECT

The Intersection of Public Health, Schools, & Pediatric Healthcare Institutions during the COVID-19 pandemic

Collaborators: **Himali Bhatt MD, MA, MPH, Alexis Schmid DNP, RN, CPNP, Michelle Niescierenko MD, MPH, Lisa Morrissey MPH MSN RN NE-BC, Djenny Lobo Lopes DNP, MSN, RN, Arlene Swan-Mahoney RN, MHA, Ellen Moy-Maneikis RN, BSN, NCSN**

During the 2020-2021 academic year, school health faced the unprecedented challenge of how to safely reopen during the COVID-19 pandemic. The Boston Public School (BPS) nurses were tasked with the enormous role of keeping students and staff safe in their building, providing health advice to students and their families, and staying up-to-date with the rapidly evolving COVID-19 guidance. To support these nurses, the BCH Global Health team (comprised of physicians and nurses) created a nursing-tailored curriculum on infection prevention and safe practices, as well as offered educational workshops, developed protocols, and created safe spaces in small group sessions to problem-solve and review concerns. We used an iterative process to tailor programming to the immediate challenges faced by the school nurses, priorities of school health leadership, and up-to-date COVID data to plan and develop weekly session materials.

The program achieved its planned objectives of:

1. Offering educational workshops to guide the knowledge and skills necessary for school nurses to serve as resources to school staff

2. Adapting the provision of routine school health to incorporate safe, timely care of children with symptoms concerning for COVID-19

3. Offering weekly small group sessions as a forum to network, review concerns, and develop problem-solving strategies for the nurses. Additional accomplishments include the creation of an BPS school nurse-led COVID-19 management group that allowed this program to become self-sustaining by the end of the school year. This program also demonstrated that a partnership between schools and large healthcare institutions can promote health outside of the clinical setting and improve health equity and prevention.

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