2025

ANNUAL NEWSLETTER

HHR | HARARGHE HEALTH RESEARCH

HHR | HARARGHE HEALTH RESEARCH

Vision
Evidence based best practice in maternal and child health

Mission
Produce cutting-edge health information for maternal and child health decision making at all levels

Core Values
Credibility, teamwork, respect, confidentiality, honesty, impartiality and accountability.

Content

About HHR

Hararghe Health Research (HHR) is a partnership established between Haramaya University and the London School of Hygine and Tropical Medicine in 2017. It aims to strengthen surveillance capacity, ensure best practice in research and inform public health policy in maternal and child health in Ethiopia. HHR's extensive operations span two Health and Demographic Surveillance Systems (HDSS)- Hararghe HDSS covering Kersa and Haramaya Woreda of East Hararghe Zone of Oromia Regional State and Harari Regional state, and Kilite-Awlaelo in Tigray Regional State; collectively reaching more than 77,527 households. With 169 interdisciplinary professionals, HHR has a state-of-the-art research infrastructure. This includes and ISO/IEC 1589/2022 accredited, CDC-certified for "Methods Performance Verification for Whole Blood Folate by Microbiology Assay", Laboratory Efficiency Assessment Framework (LEAF) Bronze Certification, and Good Clinical Laboratory Practice (GCLP), alongsidae advanced IT systems. Currently, HHR is conducting 10 studies, has secured three new grants, and has successfully completed six studies. Significantly advancing maternal and child health research and evidence-based interventions in Ethiopia. Furthermore, HHR is supporting 11 PhD students and has published several peer-reviewed articles, contributing to advancements in Maternal and child health.

NEWS

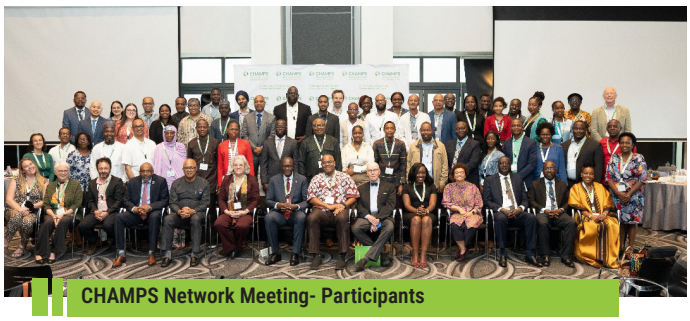
A Decade Of Dedication: Champs-Ethiopia's Impact in Advancing Maternal and Child Health Research

The Hararghe Health Research partnership (HHR) CHAMPS-Ethiopia team participated in the Child Health and Mortality Prevention Surveillance (CHAMPS) Network Annual Meeting in Nairobi, Kenya, from April 28–May 2, 2025, marking a decade of this transformative program of research. The event united researchers, unit leads, and delegates from Ethiopia's Federal Ministry of Health with global partners to reflect on achievements and plan future strategies.

CHAMPS' 10-year impact, key findings, and goals for the next five years were reviewed. Prof. Nega Assefa, Co-Principal Investigator of CHAMPS Ethiopia, delivered a keynote on "10 Years of Success and Impacts of the CHAMPS Network in Ethiopia," highlighting the enrolment of over 38,000 pregnant women in surveillance programs and improved health outcomes. Dr. Lola Madrid, CHAMPS Ethiopia Site Lead, presented initiatives addressing Neural Tube Defects, showcasing CHAMPS' role in tackling health challenges.

CHAMPS Ethiopia remains committed to advancing maternal and child health through integrated interventions and is actively enhancing impact and community engagement driving data-driven solutions for a healthier future.

CHAMPS Network Meeting- Prof. Nega (Right)



CHAMPS Network Meeting- Participants

From evidence generation to measurable Impact: the new phase of CHAMPS

For eight years, CHAMPS Ethiopia has been at the forefront of understanding and combating under-five mortality in Eastern Ethiopia. Since 2017, the CHAMPS team has been conducting rigorous research to understand the causes of child deaths, transforming these insights into actionable information.

CHAMPS has actively translated research into real-world impact. It shares cause-of-death findings directly with families and systematically provides both raw and aggregate data to regional health bureaus, Ethiopian Public Health Institute, Ministry of Health, and other key partners shaping child health policy.

CHAMPS

Child Health and Mortality Prevention Surveillance

CHAMPS Phase III – Focusing on Measurable Change

While CHAMPS' efforts have been extensive, a key challenge has been the lack of systematic documentation to fully measure the impact of its activities. To address this, CHAMPS Phase 3 marks an important strategic shift: the focus is now on measurable change.

This new, expanded approach will establish clear baselines, set precise indicators, and rigorously measure the outcomes of evidence-based interventions. The goal is to tangibly demonstrate the practical difference CHAMPS is making, both locally and nationally.

Phase III is defined by eight core goals aimed at strengthening health systems, specifically:

- Improving Maternal and Child Health service quality.
- Strengthening Antimicrobial Resistance (AMR) surveillance and Infection Prevention and Control (IPC) programs in health facilities.
- Enhancing data dissemination to health authorities to influence policy and planning at the national and international level.

Expanding Our Reach

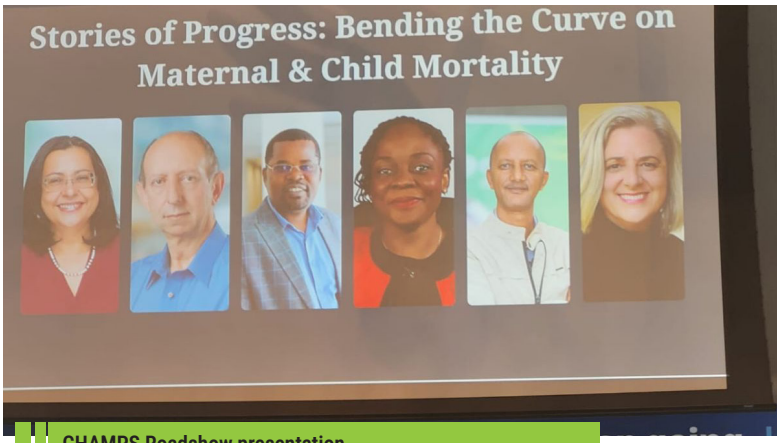
To enhance representativeness and data coverage, CHAMPS is expanding to its research and engagement to two new sites: Kilite-Awlaelo Health and Demographic Surveillance System (HDSS) in northern Ethiopia, and to Arba Minch HDSS in southern Ethiopia.

CHAMPS leadership showcases impact at Gates Foundation roadshow

From September 15 to 17, 2025, CHAMPS leadership participated in a dynamic three-day roadshow at the Gates Foundation (GF) in Seattle, USA, focusing on aligning shared missions and exploring new opportunities for collaboration in global health research.

Led by CHAMPS Director Dr. Cynthia Whitney, the delegation included representatives from various Program Office units. A highlight was Prof. Nega Assefa from CHAMPS-Ethiopia, who presented the innovative SALT Spina Bifida and Anencephaly in Ethiopia, foLate for preVenTion (SALT) project methodology to GF's nutrition work groups, sparking engaging discussions on advancing nutritional health outcomes.

CHAMPS Leadership team



CHAMPS Roadshow presentation

Dr. Cynthia presenting

Joined by Dr. Victor Akelo and Dr. Portia Mutevedzi from CHAMPS Program Office, Prof. Nega shared compelling stories of CHAMPS' transformative impact with over 100 GF staff members. These narratives underscored the program's vital role in driving evidence-based solutions to improve maternal and child health globally.

Prof. Nega sharing success stories from Ethiopia site

Celebrating collaboration and future Impact

CHAMPS Ethiopia joined the Task Force for Global Health reception to celebrate collaboration and future impact in Addis Ababa, Ethiopia – October 29, 2025.
The event, held at Radisson Blu Hotel, brought together key government stakeholders, health experts, and development partners to celebrate impactful contributions in advancing public health across Ethiopia.

During the reception, participants reflected on progress made through collaborative initiatives and discussed innovative strategies to strengthen the country's health sector in the years ahead.

The CHAMPS Ethiopia team presented progress, emphasizing our continued commitment to improving child health outcomes, strengthening robust disease surveillance systems, and ensuring that public health action remains consistently data-driven.

This gathering marks the crucial role of sustained partnership and shared learning in driving progress.

CHAMPS-Ethiopia team

Participants learning about CHAMPS-Ethiopia activities

Sharing knowledge, Empowering health systems

HHR's CHAMPS program organized data-sharing workshops that brought together health officials from Harari regional state and Oromia's East Hararghe Zone health bureaus, respectively.

Participants gained a comprehensive overview of CHAMPS achievements, critical insights from mortality surveillance data and practical interventions under the Data-to-Action framework based on CHAMPS findings. Through lively, evidence-driven discussions, health authorities explored concrete strategies to strengthen policies, prioritize resources, address preventable causes of death, and improve maternal and child health outcomes in the catchment and beyond.

By sharing high-quality evidence to decision-makers, HHR's CHAMPS program is helping to build stronger, more responsive maternal and child health system in Ethiopia.

Data Sharing workshop for Harari Region Health Bureau

The event created an important platform for translating rigorous research findings into action to save lives.

Data Sharing workshop for Harari Region Health Bureau

Data Sharing for East Hararghe Health Bureau

Data Sharing workshop for Harari Region Health Bureau

Sharing evidence to save lives

HHR's team presented its findings during World Pneumonia Day and World Prematurity Day celebrated on December 16 and 17, 2025 respectively.

Addressing the burden of pneumonia during World Pneumonia Day, themed "Integrated Approaches for Child Survival," Dr. Meron Kebede, Clinical Research Scientist, shared CHAMPS findings on causes of death due to pneumonia.

Our data indicated that Lower Respiratory Tract Infections (LRTI) are the second commonest cause of death in infants and fourth most common in neonates. Malnutrition was identified as the primary underlying cause, significantly increasing susceptibility. Notably, 97.2% of these deaths were deemed preventable. Dr. Meron also shared recommendations to reduce this burden, including HHR's ongoing advocacy for the introduction of maternal Respiratory Syncytial Virus (RSV) immunization in Ethiopia.

Dr. Meron presenting CHAMPS findings

Meanwhile, during World Prematurity Day, held under the theme: "Give Preterm Babies a Strong Start for a Hopeful Future!", Dr. Meron presented evidence on preterm birth as a cause of death.

The findings revealed that prematurity is the third most

Dr. Meron presenting CHAMPS findings

common cause of neonatal death overall and the second most common underlying cause. Among maternal factors, multiple gestation was the leading cause of prematurity, followed by maternal hypertension. 98% of these deaths were classified as preventable through strengthened health systems, improved maternal nutrition, family planning utilization, and enhanced community health-seeking behaviour.

World Prematurity Day participants

HHR, through its various initiatives, continues sharing its findings and advocating for evidence-based interventions to improve maternal and child health in Ethiopia.

World Pneumonia Day Participants

World Pneumonia Day Participants

Advocating for preconception care for better maternal and child health outcomes

HHR participated in a high-level advocacy workshop organized by Ministry of Health in Adama, on November 26, 2025.

PPC Workshop participants

The workshop was organized to officially introduce Preconception Care (PPC) to Health Extension Program (HEP) Coordinators across Ethiopia, aiming to integrate PPC into national community-level health service delivery.

Dr. Samrawit presenting HHR findings

Dr. Samrawit Abebaw, HHR's Impact and Engagement Coordinator, presented findings from the CHAMPS, and SALT projects. Her presentation, "Improving maternal and child health: applying available research findings to advocate for preconception care," demonstrated the impact of strong practical application of evidence in advocacy for PCC to improve maternal and child health within the community health framework.

By sharing these insights, HHR continues to play a significant role in advancing preventive approaches. HHR remains committed to sharing evidence to inform national decisions and interventions that improve maternal and child health outcomes.

PPC Workshop participants

Advancing collaborative efforts to improve maternal and child health

Our HHR team had a productive meeting with the Ethiopian Public Health Institute (EPHI), National Data Management Center Directorate (NDMC) team to review progress and explore opportunities for improving collaboration. The discussion focused on leveraging data-driven insights to enhance maternal and child health outcomes across Ethiopia.

HHR team with Dr. Getachew Tollera

HHR team discussing with Dr. Getachew Tollera

Dr. Getachew Tollera, Deputy Director General of EPHI, acknowledged the collaborative efforts of HHR-CHAMPS and EPHI in translating data into action, thereby shaping policies and programs crucial for reducing child mortality in high-burden communities. HHR colleagues and the NDMC team primarily addressed advancing joint initiatives to enhance maternal and child health outcomes across Ethiopia through improved research, robust community engagement, and evidence-based interventions.

Maintaining excellence: HHR laboratory accredited to international standards

The HHR laboratory has secured several prestigious international accreditations and certifications, ensuring the laboratories are positioned as a centre of excellence for advanced health research.

Successful transition to ISO 15189:2022. Following a rigorous follow-up assessment by the Ethiopian Accreditation Service on October 2025, our HHR laboratory has successfully transitioned from ISO 15189:2012 to the newly upgraded ISO 15189:2022 international standard. This accreditation recognizes the laboratory's high-quality management system and its technical competence in providing accurate and reliable results.

Sustainability Excellence: LEAF Bronze Certification. In recognition of our environmental safety efforts, the HHR Laboratory received Laboratory Efficiency Assessment Framework (LEAF) Bronze certification from University College London (UCL). This certification recognizes the HHR Laboratory's actionable steps in reducing carbon footprints, waste, and resource use, aligning our research goals with environmental sustainability.

Good Clinical Laboratory Practice (GCLP): HHR's Laboratory has been accredited to Good Clinical Laboratory Practice (GCLP) Standards, 2012 (ISBN 978-1-904610-21-2). This assures HHR Laboratory's capacity to meet international regulatory requirements for analyzing clinical trial samples. With advanced facilities, systems, and procedures in place, the laboratory ensures the highest standards of quality, reliability, and compliance.

CDC Certification for Folate Testing: The HHR laboratory has been certified for "Method Performance Verification for Whole Blood Folate by Microbiologic Assay", certifying HHR Laboratory's accuracy, precision, and ongoing competence of performing the microbiologic assay for measuring folate levels in blood. These combined achievements from diverse international assessing institutions confirm that the HHR laboratory is ideally positioned to conduct advanced, world-class health research.

CERTIFICATE OF ACCREDITATION

Good Clinical Laboratory Practice

Accreditation #: 11025

Name and address of Laboratory Accredited

Hararghe Health Research Laboratory

College of Health and Medical Science ,
Haramaya University,
Harar, Eastern Region

Scope of work: Microbiology, Molecular Biology, Haematology , Serology

Date of Accreditation
17 October 2025

Category of Accreditation
Full accreditation

The above Laboratory has satisfactorily implemented the requirements set out in the Good Clinical Laboratory Practice (GCLP) standard, 2012, ISBN 978-1-904610-21-2

Date of assessment: **16-17 October 2025**

Expiry date of certificate: **October 2027**

First accreditation: **October 2025**

Approved by: **Jeanette Young**

Signed by:
Jeanette Young
Signer Name: Jeanette Young
Signing Reason: I approve this document
Signing Time: 15/12/2025 | 5:19:43 AM GMT
697E771C138A43ED9C0DE886C9CB235E

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
Division of Laboratory Sciences

Method Performance Verification
(Certification valid to May 2026)

Hararghe Health Research (HHR), Ethiopia

Has participated in

Method Performance Verification for Whole Blood Folate
by Microbiologic Assay
May 2025

Imprecision: Within Range (4.6%) *(acceptability criteria <10.0%)*

Difference from CDC Target: Within Range (95% CI: 1.2%, 5.0%) *(acceptability criteria ±13.9%)*

Ming Zhang -S
Digitally signed by Ming Zhang -S
Date: 2025.06.04 11:18:53 -04'00'

Mindy Zhang, M.D.
Global Micronutrient Laboratory
Lab Chief
U.S. CDC/Nutritional Branch Branch

Christina M. Fischer -S
Digitally signed by Christina M. Fischer -S
Date: 2025.06.03 13:36:36 -04'00'

Christina Fischer, M.S.
Global Micronutrient Laboratory
Program Coordinator
U.S. CDC/Nutritional Branch Branch

HHR hosted training on ultrasound-guided MITS for TB detection

HHR hosted a transformative training on ultrasound guided Minimally Invasive Tissue Sampling (MITS) at Haramaya Hospital. Organized under the Fogarty Fellowship, this hands-on workshop empowered CHAMPS MITS practitioners and DeCoDe manager to improve their skills in TB diagnosis, driving better child health outcomes.

MITS practitioners practicing Ultrasound-guided MITS

Dr. Claudia Wallrauch, Dr. Tom Heller, and Dr. Lisa Ruby, renowned experts from Germany, shared their extensive expertise in ultrasound guided TB detection in pediatric cases.

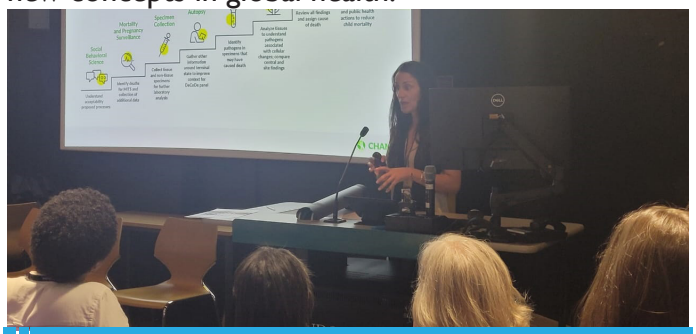
This training strengthens HHR's mission to improve maternal and child health through innovative research and partnerships.

Trainees- group picture

HHR's contributions to global health at LSHTM Research Week

LSHTM Ethiopia Interest Group

HHR's team participated in events during the prestigious LSHTM Research Week, on July 2 and 3, 2025, at London School of Hygiene & Tropical Medicine (LSHTM) campus. This annual event brought together leading researchers from across the globe to discuss groundbreaking research, innovative proposals, and new concepts in global health.



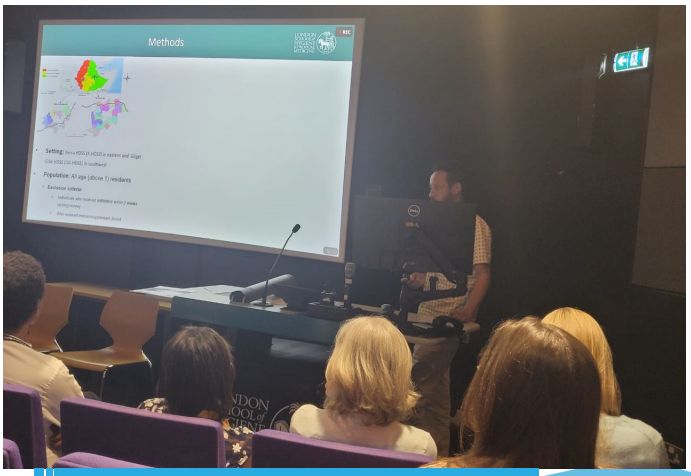
Dr. Lola presenting findings from SALT project

Representing HHR were Prof. Nega Assefa, Dr. Lola Madrid, Yasir Yunus, and Lemma Demisse.

Dr. Lola Madrid and Lemma Demisse delivered compelling presentations, showcasing their latest research findings and contributing to the global health dialogue.

Meanwhile, Prof. Nega enriched a panel discussion focused on maternal and child health research initiatives in Ethiopia, offering valuable insights and perspectives that underscored HHR's commitment to advancing maternal and child health research in the region.

The LSHTM Ethiopia Interest Group convened on July 3, fostering collaboration and strengthening ties among researchers dedicated to Ethiopia's health challenges.



Lemma presenting findings from his PhD study

HHR highlights research and community engagement at university review

HHR participated in Haramaya University's 42nd Annual Research and Community Engagement Review Workshop, which took place from May 28 to 30, 2025, at the university's main campus.

The workshop was convened under the theme, "Advancing Food and Health Systems through Digital Innovations and Research Commercialization." In alignment with this theme, HHR presented its evidence-based community engagement activities focused on improving maternal and child health outcomes in Ethiopia to an audience of community members, stakeholders, and the university community.

Participants visiting HHR exhibition booth

On the scientific day, Mr. Lemma Regassa, delivered a presentation on his work titled, "Meningococcal Carriage and seroprevalence of antibodies against serogroup A in two Health and Demographic Surveillance System sites in Ethiopia."

Participants visiting HHR exhibition booth

Lemma Regassa (PhD student) presenting his findings

In a parallel session, HHR's team participated in an exhibition showcasing our various research activities, community engagement strategies, and their impacts for Haramaya University administrative board, Staff and the wider community.

Participants visiting HHR exhibition booth

HHR team engages in Maternal Immunization Network meeting in South Africa

MIRNA Ethiopia team discussing

HHR's Maternal Immunization Study team participated in the 2nd Annual Maternal Immunization Network in Africa and Asia (MIRNA) meeting, held from February 24-28, 2025, in Johannesburg, South Africa. The 2025 theme was "Country-led pathways to maternal vaccine readiness: preparing for new vaccines." The annual meeting aimed at co-creating an evidence-driven national maternal immunization demand strategy with MIRINA Consortium members from Ethiopia, Pakistan, Kenya, South Africa, Uganda, Bangladesh, Nigeria, Burkina Faso, alongside Ministry of Health representatives from these countries. Representing Ethiopia, seven researchers from HHR and three esteemed representatives from the Federal Ministry of Health attended: Dr. Marriamawit Asfaw- Maternal, Child and Adolescent Health Lead Executive Officer, Zemzem Mohammed- Maternal Health Desk lead, and Yeshiwork Eshetu- from Immunization Desk. The meeting had three parallel sessions focusing on User design for maternal immunization demand strategy, Disease burden, and cost of vaccine and disease.

HHR hosted multi-stakeholder workshop on maternal vaccines

HHR, in collaboration with the Immunization Desk of the Maternal, Child, and Adolescent Health Lead Executive Office at the Federal Ministry of Health and Ethiopian Public Health Institute (EPHI) hosted a Multi-stakeholder consultative workshop from April 7-8, 2025, in Addis Ababa. The workshop, part of the Maternal Immunization Readiness Network in Asia and Africa (MIRNA) project, aimed to support the introduction of maternal RSV and Group B Streptococcus (GBS) vaccines.

Multi-Stakeholder Consultative meeting participants

MIRNA Multi-stakeholder consultative workshop-discussion

MIRIN's Vaccine Demand team shared insights on uptake barriers, followed by group discussions on solutions. On day two, MIRIN's Health Economics team presented cost and impact analysis models for maternal vaccines. Stakeholders collaborated in thematic groups on procurement, program management, training, surveillance, monitoring, and demand creation.

The event brought together representatives from the Ministry of Health, UNICEF, Girl Effect, and Regional Health Bureaus to assess health system readiness, contextualize analysis tools, and identify barriers, enablers, and data needs for vaccine cost and impact analysis. Discussions opened with an overview of HHR and the MIRNA project, emphasizing the global burden of RSV and GBS. Presentations highlighted preliminary findings from the RSV/GBS Burden of Disease Study and introduced the Maternal Immunization Readiness Checklist (MIRC) and Vaccine Trust Indicator (VTI) tools.

MIRNA Multi-stakeholder consultative workshop-discussion

Addressing malnutrition: ARM-CHAMPS shares research findings at global nutrition congress

HHR's ARM-CHAMPS delegation presented research findings at the 23rd International Congress of Nutrition (IUNS-ICN 2025), held from August 24-29, 2025, in Paris. Organized by the International Union of Nutritional Sciences (IUNS) under the theme "Sustainable Food for Global Health," the conference brought over 5,000 participants together, including PhD students, UN delegates, NGO representatives, private researchers and country officials, fostering dynamic discussions on cutting-edge nutrition science.

The ARM-CHAMPS delegation, comprising experts from Emory University, Kenya Medical Research Institute (KEMRI), UC Davis, and HHR, led an important symposium titled Nutrition Across the Lifecycle: Evaluating the Impact of Micro-nutrient Malnutrition on Adverse Pregnancy and Birth Outcomes and Under-5 Mortality. This session, part of "Assessing the Role of Micro-nutrients in Child Health and Mortality Surveillance" Project, highlighted critical insights into addressing global nutrition challenges.

ARM-CHAMPS delegation

Yasir Younis presenting a preliminary finding

Yasir Younis presented preliminary findings on "Usual Intake and Food-Level Patterns and Global Dietary Quality Scores Among Pregnant Women in Kenya and Ethiopia". His work underlined the importance of dietary quality in improving maternal and child health outcomes, sparking meaningful dialogue among global health experts.

VISITS

HHR welcomes Dr. Barbara Mahon from the Gates Foundation

Dr. Barbara Mahon (centre) visiting HHR site activities

HHR hosted Dr. Barbara Mahon, Deputy Director of Surveillance and Epidemiology at the Gates Foundation. During her visit, Dr. Mahon observed on-site hospital and community engagement activities at both Haramaya and Harar sites.

The visit provided a platform to show HHR's multidisciplinary initiatives and commitment to using high-quality evidence to influence policies. Dr. Mahon's insights will further strengthen collaborative efforts to improve maternal and child health outcomes across Ethiopia.

Dr. Barbara Mahon visiting HHR Laboratory

Dr. Barbara Mahon with HHR team

Dr. Lola Madrid Presenting major HHR activities

Strengthening partnerships for maternal and child health

Dr. Claudia Hanson, Docent at Karolinska Institutet, Sweden, and Professor of Implementation Science and Perinatal Epidemiology at LSHTM, visited HHR to explore opport
unities for potential collaborations.

Dr. Claudia Hanson delivering seminar

Dr. Claudia visiting health centres

During her visit, Dr. Hanson toured HHR's research infrastructure and engaged in productive discussions with the management team on fostering international partnerships in maternal and child health research. As part of her visit, Dr. Hanson delivered an enlightening seminar titled "The Underlying Obstetric Causes of Birth Asphyxia," for HHR staff members, sparking engaging discussions on new approaches to addressing maternal and child health challenges.

Senior health economist Ranju Baral joins HHR for MIRNA project

Dr. Ranju Baral, a distinguished Senior Health Economist, visited HHR to support the Maternal Immunization Readiness Network in Africa & Asia (MIRNA) initiative.

Dr. Ranju Baral

During her stay, Dr. Ranju provided intensive mentorship to MIRNA's health economics team, focusing on enhancing their analytical and technical capabilities. Her expertise was instrumental in advancing analysis tools and running sophisticated simulations with collected data.

This collaboration is a significant step in translating complex research into actionable economic insights. Dr. Ranju's support strengthens the team's ability to develop successful maternal immunization strategies across Africa and Asia.

Dr. Ranju with HHR team

Dr. Ranju visiting HHR Laboratory

High-Level parliamentary delegation visited HHR activities

Members of the Standing Committee on Human Resources Development and Technology Affairs of the Federal Democratic Republic of Ethiopia (FDRE) House of People's Representatives (HoPR), led by Dr. Negri Lencho, visited HHR to conduct a comprehensive tour of HHR's facilities and research activities. They were briefed on HHR's multidisciplinary studies and toured our world-class research infrastructure, including our recently internationally- accredited laboratory and advanced IT infrastructure.

The Standing Committee recognized HHR's efforts to generate high-quality evidence to inform policy changes and interventions to advance maternal and child health in Ethiopia.

Dr. Negri Lencho visiting HHR Laboratory

HoPR delegation with HHR and Haramaya University team

TESTIMONIES AND STORIES

Finding answers and embracing hope

Shkuri Shafi sitting in front of her house

Shukri Shafi, a young mother from the small village of Barento, Ethiopia, knew the profound weight of community grief. For too long, an unknown illness had claimed children in her community, and one night, that sorrow knocked on her own door. Her little daughter, suffering and crying continuously, passed away quietly in her sleep, leaving a void and an overwhelming confusion in her wake. Shukri was consumed by questions: what had happened to her precious child?

In her darkest hour, local Afosha (community-based organization) leaders reached out. They introduced Shukri and her husband to the CHAMPS program, an initiative focused on studying the causes of child deaths to find lasting preventative solutions. Shukri's heart was broken, but her desperate need for understanding—to ensure this loss never happened again—drove her decision. The CHAMPS team arrived, listened with respect, obtained the family's consent, respectfully took a sample from her daughter's body and provided support for the burial.

A few weeks later, the team returned with answers. They explained clearly that her daughter had passed away from a bacterial infection. Crucially, they translated this information into actionable health advice, teaching Shukri about the importance of hygiene, sanitation, and nutritional support to protect her family from preventable illnesses.

Shukri explains the impact: "The pain of not knowing why my child, who went to sleep in my arms, never woke up, was unbearable. CHAMPS gave me the answers I desperately needed, even though consenting to the testing was one of the hardest things I've ever done. Now, with four healthy children, I apply the invaluable advice CHAMPS gave me on nutrition, health, and growth from conception onward. CHAMPS solved my mystery and taught me how to raise healthy children."

Thanks to the knowledge she gained, Shukri has successfully navigated motherhood, learning to protect her family from waterborne diseases and prioritize a nutritious diet. By choosing to seek understanding, she has transformed her family's future, giving her children a healthier chance at life.

Shikuri with her neighbours

A story of hope and a life saved

Muslima holding her baby

Muslima Ahmed, a young mother from Kersa district of Ethiopia, carried a heavy burden of grief. At just 22, she had endured two devastating stillbirths, both linked to severe pre-eclampsia. Her losses brought immense sorrow and painful community stigma. Desperate for answers after her second stillbirth, Muslima and her family consented to participate in CHAMPS. The CHAMPS team identified the cause of death, communicated cause of Death results, and linked Muslima to the local health center for maternal follow-ups.

Muslima's third pregnancy was a new beginning. She diligently followed every medical recommendation, attending antenatal care (ANC) appointments at the CHAMPS-supported facility. This center, equipped with an ultrasound machine and staffed by professionals trained through CHAMPS' health professionals mentorship programs, provided rigorous support. This time, there were no signs of severe pre-eclampsia, and hope filled her family.

As labor began, fear gripped Muslima. Despite the common practice of home delivery, her family, recalling the health education provided by CHAMPS, insisted she travel to the health center. She arrived in the second stage of labor. The delivery quickly turned dire: the baby was born severely asphyxiated, and the room fell silent. In that critical moment, a midwife, trained through CHAMPS' continuous professional mentorship, intervened. With calm expertise, she immediately began neonatal resuscitation.

Seconds stretched into an eternity until a powerful cry pierced the silence. The baby breathed, alive and strong. Tears of relief replaced fear as Muslima held her healthy newborn.

The timely, evidence-based intervention made the difference between loss and life. Muslima's story is a powerful testament to the impact of the comprehensive CHAMPS model—from diagnosis and policy guidance to infrastructure support and staff mentorship—in transforming maternal and child health outcomes in Eastern Ethiopia.

Bridging faith and science for child health

Shek Yakin Aliyi, Religious Leader

I began working with the CHAMPS project team when they launched the Haramaya site four years ago. At that time, I was the head of Haramaya Woreda Islamic Affairs Council. I used to strongly believe that all child deaths in our area are ultimately Allah's will and unquestionable. Since the CHAMPS project started working scientifically within the community, it has been effective in identifying the causes of death, which is crucial for our efforts.

Shek Yakin Aliyi

I believe this approach is the right one. While I have concerns that transporting the deceased could violate the sanctity of the body, I accepted this process based on the Fatwa (Islamic ethical guidelines) issued by our Ulama. The procedures involved do not break bones or cut the body, which allows for the identification of the causes of death and helps ensure healthier babies in the future. The most important lesson I've learned is that our religion and science can coexist positively. As a religious leader, it is our responsibility to share the information about the causes of death provided by the CHAMPS project as members of the Community Advisory Board (CAB). We must educate the community based on our religious teachings. By doing so, we can help reduce child deaths and pave the way for better child health in the future.

Pastor Tesfa Hunduma, Religious Leader

Pastor Tesfa Hunduma

Initially, I viewed the CHAMPS project with skepticism, as my faith and culture taught me to accept a child's death as an unquestionable act of fate rather than a subject for scientific study. However, after attending awareness training, I realized that understanding preventable causes of death is a powerful way to honor life, shifting my role from one of silent mourning to proactive health advocacy. I now serve as a bridge between my congregation and science, using church gatherings and community meetings to dispel rumors and explain how this research empowers families with life-saving knowledge. By collaborating with the Community Advisory Board, I have seen hope replace grief in our community, and I am dedicated to ensuring that every child is protected not just by faith, but by the life-saving partnership of science and dedicated care.

From a single room to a world-class laboratory

HHR's growth in less than a decade is a testament to the power of a clear vision and relentless dedication. The HHR Laboratory is a leading part of HHR's state-of-the art research infrastructure.

The HHR Laboratory, now a premier diagnostic and research center, began in mid-2016 as a modest ambition shared by a small team of eight staff. Among them was Dadi Marami, an Assistant Professor and HHR's Diagnostic and Research Manager, who helped transform a single room—formerly a student teaching skills lab—into the sophisticated facility that exists today.

Dadi Marami, Diagnostic and Research Manager, HHR Laboratory

Building from the ground up

In the early days, there was no dedicated research laboratory. The founding team had to renovate their small space step-by-step, taking on the roles of planners, construction guides, and equipment installers. Establishing a world-class facility from zero was a monumental task that required drafting over 250 Standard Operating Procedures (SOPs) and training staff in Good Clinical and Laboratory Practice (GCLP). While early work focused on limited microbiological tests and Minimally Invasive Tissue Sampling (MITS), the vision was always to build an internationally recognized infrastructure for disease surveillance and maternal and child health research.\

A legacy of excellence

The laboratory's journey is marked by prestigious milestones that confirm its maturity. A defining "big win" occurred in December 2023, when the lab achieved ISO 15189:2012 accreditation, a global standard for technical competence. The excellence continued through 2025 with several international certifications:

- ISO 15189:2022 Upgrade: Strengthening the quality management system further.
- CDC Folate Certification: Achieving recognition from the CDC in Atlanta for blood folate analysis in May 2025.
- GCLP and LEAF Accreditations: Earning international GCLP accreditation and a Bronze "LEAF" award for laboratory efficiency by late 2025.

Today, the lab is a powerhouse of advanced technology, featuring Real-Time PCR systems, automated microbial detection like the MicroScan WalkAway, and ultra-low temperature freezers.

Science with a Human Face

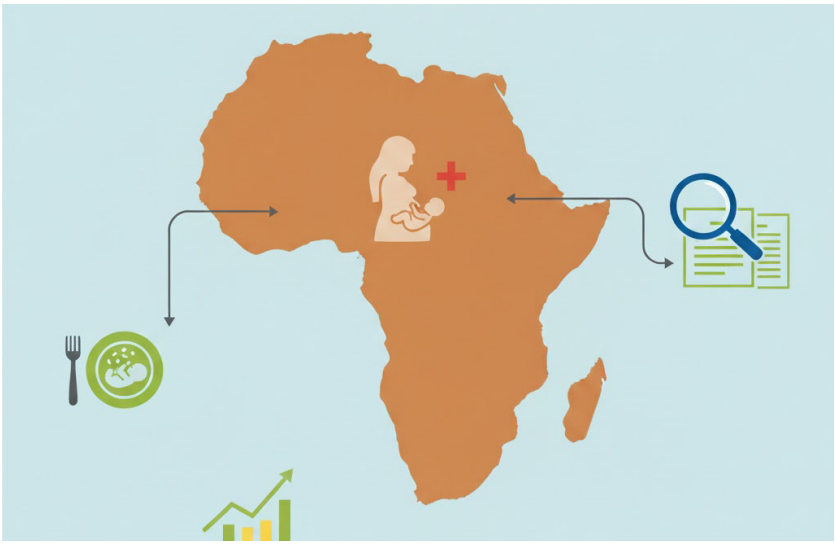
Despite the high-tech equipment, the HHR lab team remains deeply rooted in the "human story". Dadi Marami emphasizes that every sample represents a child or a mother. By working closely with field workers and clinicians, the lab team ensures that every test result translates into meaningful action for families.

Now expanding into Northern Ethiopia and launching its first clinical trials, HHR has evolved from a single project into a trusted partnership managing over 16 initiatives. This growth embodies the "Spirit of HHR", a culture that is Purposeful; every study is anchored in improving maternal and child health, Collaborative in its partnerships with communities, local research institutes and global institutions, and Transformative in its ability to turn evidence into life-saving action.

NEW STUDIES

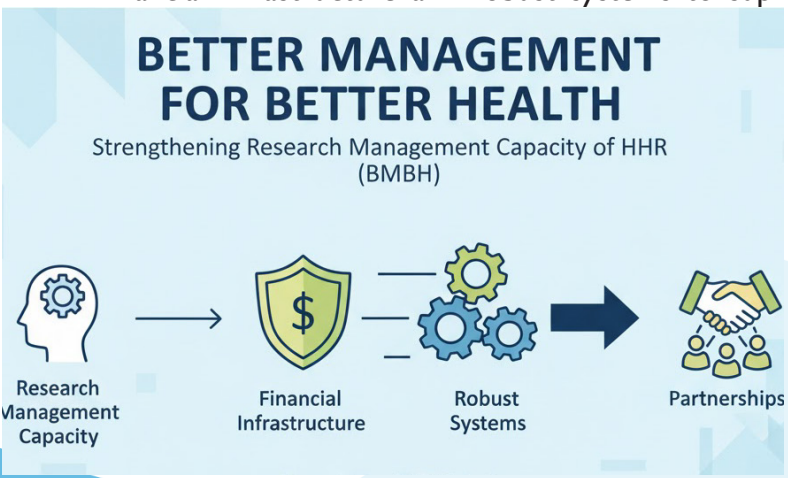
Nutrition, late fetal and neonatal mortality in the African context

This study explores why many Sub- Saharan African (SSA) populations stand out globally in terms of both their levels and age patterns of mortality during the late fetal and neonatal periods. Prospective data will be collected from populations in three SSA countries; Ethiopia, Gambia, and Guinea-Bissau. Results will have implications for other low-income countries, including other SSA countries, which are characterized by a high burden of stillbirths and neonatal mortality as well as large data gaps in their stillbirth and neonatal mortality information.



Better Management for Better for Better Health (BMBH) – strengthening research management capacity of HHR

The BMBH project aims to strengthen the research management capacity of HHR Ethiopia by developing financial infrastructure and robust systems to support partnerships. The project focuses on creating finance-related Standard Operating Procedures, preparing for Good Financial Grants Practice accreditation, reviewing HHR's funding portfolio, recommending future governance strategies and promoting knowledge exchange between Ethiopia and the UK. BMBH is structured in four phases: planning, needs assessment, implementation, and finalization.



Appraising the Critical Role of prognostic Biomarkers in the Assessment and Triage of sick African newborns (ACROBAT-Newborns)

The ACROBAT-Newborns project focuses on improving the care of vulnerable newborns by evaluating the effectiveness of X-TREM, a diagnostic tool designed to measure soluble Triggering Receptor Expressed on Myeloid cells-1 (sTREM) levels. By assessing sick neonates across neonatal, maternity, and emergency wards, the study aims to determine how accurately a baseline X-TREM test can predict critical outcomes such as the need for escalated care, mortality, or invasive bacterial disease over periods ranging from 48 hours to 90 days. Beyond predicting adverse events and hospital readmissions, ACROBAT-Newborns will also validate the technical precision of X-TREM by comparing its results against current gold-standard laboratory techniques. Ultimately, this research seeks to provide clinicians with a reliable, early-warning system to better manage and protect neonatal health.

COMPLETED STUDIES

Assessing the Role of Micronutrient status in pregnant women (ARM-CHAMPS)

ARM-CHAMPS team

Assessing the Role of Micronutrient (ARM) status in pregnant women — a prospective cohort study designed to examine the relationship between maternal micronutrient levels and pregnancy outcomes has been completed.

Conducted between April 2024 and July 2025, the study enrolled 1,000 pregnant women and conducted a dietary survey of 200 women in two key sites in Eastern Ethiopia: Kersa and Harar. Participants were followed throughout their pregnancy, enabling the collection of detailed longitudinal data.

In addition to meeting its primary research objectives, ARM CHAMPS also contributed to improved pregnancy surveillance enrolment, enhancing the capacity for maternal health monitoring in the study areas. The collected data will be triangulated with pregnancy surveillance data to assess maternal and neonatal outcomes, providing a comprehensive understanding of the role of micronutrient status during pregnancy.

Biological samples collected during the study have been shipped to specialized laboratories equipped to analyse micronutrient levels, ensuring high-quality and accurate assessment. Preliminary results were presented at the 23rd International Congress of Nutrition (IUNS-ICN) in August 2025, Paris.

Spina Bifida and Anencephaly in Ethiopia, foLate for prevenTion (SALT)

The Spina Bifida and Anencephaly in Ethiopia, foLate for prevenTion (SALT) Project successfully concluded its two-year term (June 2023–May 2025), achieving all primary objectives. The project focused on intensive Neural Tube Defect (NTD) surveillance in Kersa Health and Demographic Surveillance System (HDSS) and patient care at Hiwot Fana Comprehensive Specialized Hospital (HFCSH).

SALT assessed the burden of folic acid deficiency among women of reproductive age by developing the capacity to measure serum and red blood cell folate concentrations at the HHR Laboratory. It also assessed community perception, beliefs and practices around NTDs and explored the feasibility and acceptability of salt fortification through qualitative study.

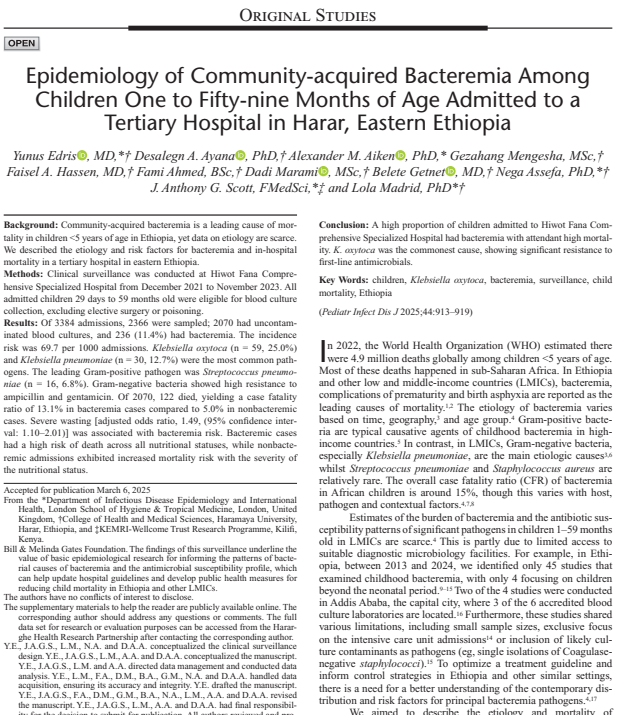
Besides, a major achievement was the establishment of a Centre of Excellence (CoE) in Paediatric Neurosurgery collaborating with Reach Another Foundation at HFCSH. This CoE provides specialized care for children with spina bifida and hydrocephalus. To further support access to care, the project constructed a waiting home for families traveling from rural areas. Beyond clinical infrastructure, SALT focused on sustainability through community engagement. The team conducted health outreach campaigns and raise awareness on NTD prevention, distributed folic acid to high-risk women, and upgraded laboratory capabilities.

Although the SALT project has concluded, NTD surveillance and follow-up activities continue at Hiwot Fana Specialized Comprehensive Hospital.

SALT team

PUBLICATIONS

The HHR team publishes its findings in reputable journals. Here are the articles published in 2025.



ORIGINAL STUDIES

OPEN

Epidemiology of Community-acquired Bacteremia Among Children One to Fifty-nine Months of Age Admitted to a Tertiary Hospital in Harar, Eastern Ethiopia

Yunus Edris, MD,† Desalegn A. Ayana, PhD,† Alexander M. Aiken, PhD,* Gezahang Mengesha, MSc,† Faisel A. Hassen, MD,† Fami Ahmed, BSc,† Dadi Marami, MSc,† Belete Getnet, MD,† Nega Assefa, PhD,*† J. Anthony G. Scott, FMedSci,*‡ and Lola Madrid, PhD*†*

Background: Community-acquired bacteremia is a leading cause of mortality in children <5 years of age in Ethiopia, yet data on etiology are scarce. We described the etiology and risk factors for bacteremia and in-hospital mortality in a tertiary hospital in eastern Ethiopia.

Methods: Clinical surveillance was conducted at Hiwot Fana Comprehensive Specialized Hospital from December 2021 to November 2023. All admitted children 29 days to 59 months old were eligible for blood culture collection, excluding elective surgery or poisoning.

Results: Of 3384 admissions, 2366 were sampled; 2070 had uncontaminated blood cultures, and 236 (11.4%) had bacteremia. The incidence risk was 69.7 per 1000 admissions. *Klebsiella oxytoca* (n = 59, 25.0%) and *Klebsiella pneumoniae* (n = 30, 12.7%) were the most common pathogens. The leading Gram-positive pathogen was *Streptococcus pneumoniae* (n = 16, 6.8%). Gram-negative bacteria showed high resistance to ampicillin and gentamicin. Of 2070, 122 died, yielding a case fatality ratio of 13.1% in bacteremia cases compared to 5.0% in nonbacteremic cases. Severe wasting [adjusted odds ratio, 1.49, (95% confidence interval: 1.10–2.01)] was associated with bacteremia risk. Bacteremic cases had a high risk of death across all nutritional statuses, while nonbacteremic admissions exhibited increased mortality risk with the severity of the nutritional status.

Conclusion: A high proportion of children admitted to Hiwot Fana Comprehensive Specialized Hospital had bacteremia with attendant high mortality. *K. oxytoca* was the commonest cause, showing significant resistance to first-line antimicrobials.

Key Words: children, *Klebsiella oxytoca*, bacteremia, surveillance, child mortality, Ethiopia

(*Pediatr Infect Dis J* 2025;44:913–919)

Accepted for publication March 6, 2025

From the *Department of Infectious Disease Epidemiology and International Health, London School of Hygiene & Tropical Medicine, London, United Kingdom, †College of Health and Medical Sciences, Haramaya University, Harar, Ethiopia, and ‡KEMRI-Wellcome Trust Research Programme, Kilifi, Kenya.

Bill & Melinda Gates Foundation. The findings of this surveillance underline the value of basic epidemiological research for informing the patterns of bacterial causes of bacteremia and the antimicrobial susceptibility profile, which can help update hospital guidelines and develop public health measures for reducing child mortality in Ethiopia and other LMICs.

The authors have no conflicts of interest to disclose.

The supplementary materials to help the reader are publicly available online. The corresponding author should address any questions or comments. The full data set for research or evaluation purposes can be accessed from the Hararghe Health Research Partnership after contacting the corresponding author.

Y.E., J.A.G.S., L.M., N.A. and D.A.A. conceptualized the clinical surveillance design. Y.E., J.A.G.S., L.M., A.A. and D.A.A. conceptualized the manuscript. Y.E., J.A.G.S., L.M. and A.A. directed data management and conducted data analysis. Y.E., L.M., F.A., D.M., B.A., G.M., N.A. and D.A.A. handled data acquisition, ensuring its accuracy and integrity. Y.E. drafted the manuscript. Y.E., J.A.G.S., F.A., D.M., G.M., B.A., N.A., L.M., A.A. and D.A.A. revised the manuscript. Y.E., J.A.G.S., L.M., A.A. and D.A.A. had final responsibility for the decision to submit for publication. All authors reviewed and approved the final manuscript.

In 2022, the World Health Organization (WHO) estimated there were 4.9 million deaths globally among children <5 years of age. Most of these deaths happened in sub-Saharan Africa. In Ethiopia and other low and middle-income countries (LMICs), bacteremia, complications of prematurity and birth asphyxia are reported as the leading causes of mortality.[1,2] The etiology of bacteremia varies based on time, geography,[3] and age group.[4] Gram-positive bacteria are typical causative agents of childhood bacteremia in high-income countries.[5] In contrast, in LMICs, Gram-negative bacteria, especially *Klebsiella pneumoniae*, are the main etiologic causes[3,6] whilst *Streptococcus pneumoniae* and *Staphylococcus aureus* are relatively rare. The overall case fatality ratio (CFR) of bacteremia in African children is around 15%, though this varies with host, pathogen and contextual factors.[4,7,8]

Estimates of the burden of bacteremia and the antibiotic susceptibility patterns of significant pathogens in children 1–59 months old in LMICs are scarce.[4] This is partly due to limited access to suitable diagnostic microbiology facilities. For example, in Ethiopia, between 2013 and 2024, we identified only 45 studies that examined childhood bacteremia, with only 4 focusing on children beyond the neonatal period.[9–12] Two of the 4 studies were conducted in Addis Ababa, the capital city, where 3 of the 6 accredited blood culture laboratories are located.[10] Furthermore, these studies shared various limitations, including small sample sizes, exclusive focus on the intensive care unit admissions[14] or inclusion of likely culture contaminants as pathogens (eg, single isolations of Coagulase-negative *staphylococci*).[13] To optimize a treatment guideline and inform control strategies in Ethiopia and other similar settings, there is a need for a better understanding of the contemporary distribution and risk factors for principal bacteremia pathogens.[4,17]

We aimed to describe the etiology and mortality of

Epidemiology of Community-acquired Bacteremia Among Children One to Fifty-nine Months of Age Admitted to a Tertiary Hospital in Harar, Eastern Ethiopia. doi: 10.1097/INF.0000000000004842

OPEN

Household cooking fuel use and risk of adverse birth outcomes: a prospective follow-up study in eastern Ethiopia

Haymanot Mezmur[1✉], Maleda Tefera[1], Mohamed Jemal[2], Bersabeh Mekasha Kassaye[3] & Nega Assefa[1,2,3]

Evidence indicates that pregnant women's exposure to polluted air adversely affects the growing fetus leading to adverse birth outcomes including preterm birth, low birth weight, and stillbirth. There is a lack of evidence on the effects of air pollution and adverse birth outcomes in Ethiopia. This study examined the relationship between cooking fuel use and adverse pregnancy-related outcomes. The paper used data from pregnancy surveillance in Child Health and Mortality Prevention Surveillance in eastern Ethiopia form July 2021 to June 2023. A total of 15,778 women whose pregnancy outcomes were known were included in this analysis. Data were collected using Research Data Capture (Redcap) and analyzed using STATA 17. Self-reported fuel use for cooking was classified as "clean" (petroleum, biogas, and electricity) and "polluting (firewood, charcoal, crop residue, sawdust, and straw/shrubs/grass). A modified Poisson regression model was used to examine the association between adverse birth outcomes (preterm birth, stillbirth, low birth weight) and cooking fuel use. Women using polluting cooking fuel had higher rates of stillbirth (3.1%), preterm delivery (6.1%), and low birth weight (10.5%) compared to those using clean fuel (1.9%, 2.8%, and 8.3%, respectively). Utilization of polluting fuel had a significant effect on the occurrence of preterm birth Adjusted risk ratio (ARR): 2.16, 95% Confidence Intervals (CI): 1.16, 2.89), stillbirth (ARR: 1.50, 95% CI: 1.09, 2.06), and low birth weight (ARR: 1.23, 95% CI: 1.06, 1.43) respectively. The findings indicated that using polluting fuel during pregnancy has a strong association with adverse pregnancy outcomes. It is essential to provide education during ANC regarding the dangers of using polluting fuels and methods to reduce excessive exposure to them.

Keywords Cooking fuel, Preterm birth, Stillbirth, Low birth weight, Adverse pregnancy outcomes

Abbreviations

CI	Confidence interval
CO	Carbon monoxide
HAP	Household air pollution

Household cooking fuel use and risk of adverse birth outcomes: a prospective follow-up study in eastern Ethiopia. | https://doi.org/10.1038/s41598-025-07382-y

Research

Making sense of the unexpected: neural tube defects in Ethiopia

Markus Roos Breines[1,3] · Mohammed Aliyi[2] · Kidist Asnake[2] · Nega Assefa[2] · Berhanu Damise[2] · Ketema Degefa[2] · Gurmu Feyissa[2] · Getahun Wakwaya[2] · Lola Madrid[3]

Received: 9 November 2024 / Accepted: 21 March 2025
Published online: 19 June 2025

Abstract
Neural tube defects are severe birth defects with visible and devastating malformations in babies, and can lead to death before, during or soon after birth. Neural tube defects are preventable, and in many countries there has been an increasing 'responsibilization' of pregnant women in terms of taking folic acid before and during pregnancy to avoid these malformations in their babies. In low-income countries, many women are not in positions to plan pregnancies, access appropriate information and allocate scarce resources to avoid neural tube defects. Lack of compliance with biomedical management strategies remains a challenge in many places, and, in this paper, we turn the attention to local perspectives on neural tube defects in eastern Ethiopia, where there are high number of cases. Drawing on interviews and focus group discussions with mothers, community members, health workers and traditional birth attendants, we explore why the malformations of babies lead to stigma of their families and demonstrate how local forms of responsibilization impact the families of the babies born with neural tube defects.

Keywords Neural tube defects (NTDs) · Responsibilization · Spina bifida · Hydrocephaly · Anencephaly

1 Introduction

Neural tube defects (NTDs) remain common in many low- and middle-income countries. NTDs are visible birth defects with well-known biomedical causes that can be devastating, traumatizing, and stigmatizing for families. NTDs can take different forms, such as spina bifida, anencephaly, craniorachischisis (a combination of anencephaly with a contiguous bony defect of the cervical spine), and myelomeningocele. Hydrocephalus can also be a manifestation of NTDs (but not all hydrocephalus cases are caused by NTDs) [1, 2]. NTDs can result in severe disability or death, but are largely preventable through the periconceptional intake of folic acid in the form of tablets [3] or through food fortification [4, 5]. Such insights into the causes and prevention are, however, rarely available to parents and local communities in rural areas of low-income countries. With limited access to health care and education, people may understand the causes of NTDs very differently from biomedical perspectives [6], which combined with stigma towards those who give birth to children with such malformations can be a source of resistance against interventions. Despite the role of social and cultural dimensions, it is the biomedical aspects of NTDs that have been at the center of much research. This paper shifts the attention to people's experiences of NTDs in Ethiopia.

✉ Markus Roos Breines, mrb@fafo.no; Mohammed Aliyi, mahamedaliyi@gmail.com; Kidist Asnake, kidistzoe@gmail.com; Nega Assefa, negaassefa@yahoo.com; Berhanu Damise, damiseberhanu@gmail.com; Ketema Degefa, degefaketema30@gmail.com; Gurmu Feyissa, gfeyissa0514@gmail.com; Getahun Wakwaya, hundafu2012@gmail.com; Lola Madrid, lola.madrid-castillo@lshtm.ac.uk | [1]Fafo Foundation, Oslo, Norway. [2]Haramaya University, Harar, Ethiopia. [3]London School of Hygiene and Tropical Medicine, London, UK.

Discover Social Science and Health (2025) 5:91 | https://doi.org/10.1007/s44155-025-00193-6

Discover

Making sense of the unexpected: neural tube defects in Ethiopia," moves beyond the purely biomedical perspective by exploring the local realities, cultural beliefs, and socio-economic factors that contribute to the burden of neural tube defects in Eastern Ethiopia. | https://doi.org/10.1007/s44155-025-00193-6

PhotoVoice and metaphors: narrating experiences of gender-based violence. South African Geographical Journal, 1–18. https://doi.org/10.1080/03736245.2025.2487001

PhotoVoice and metaphors: narrating experiences of gender-based violence

Markus Roos Breines[a], Ketema Degefa[b] and Getahun Wakwaya[b]

[a]Department of Migration, Integration and Skills, Fafo Institute for Applied Social Science, Oslo, Norway; [b]College of Health and Medical Sciences, Haramaya University, Harar, Ethiopia

ABSTRACT
Gender-based violence impacts the lives of many women. There has been growing attention to its physical, mental and social consequences and how gender-based violence can be prevented. Still, many people who have been exposed to it struggle to articulate their experiences because it is challenging to share the impact of gender-based violence with others. In this paper, we portray photos taken through PhotoVoice in Ethiopia and engage with the research participants' explanations of these photos to deepen the understanding of how they used metaphors to narrate their experiences of gender-based violence and its impact on their lives. Drawing on an interpretative phenomenological approach, the paper shows how participants used urban materialities to create metaphors to communicate their needs for protection and repair, and how these intersected with local notions of what it means to be a woman. Through the use of PhotoVoice as a method to place research participants at the centre, we illustrate how photos can facilitate the creation of metaphors to narrate experiences of gender-based violence.

ARTICLE HISTORY
Received 16 July 2024
Accepted 17 March 2025

KEYWORDS
Gender-based violence; PhotoVoice; phenomenology; materiality; metaphors; Ethiopia

COMMUNITY ENGAGEMENT AND PARTNERSHIP

HHR strengthens frontline maternal and newborn care

Through its Impact and Engagement initiative, HHR is systematically closing the gap between medical theory and life-saving practice.

This year, our efforts focused on three key pillars:

- Empowering the Next Generation: We equipped midwifery graduates from Haramaya University and Harar Health Science College with intensive pre-service training in Neonatal Resuscitation and Infection Prevention and Control (IPC), ensuring they enter the workforce with the confidence to save lives from day one.
- Strengthening Maternal and Child healthcare through mentorship program: To ensure every mother and newborn receives the highest quality of care, HHR facilitated a mentorship program at local health facilities in the catchment. Driven by a baseline assessment of local needs, the program

Mentorship program participants

- provided healthcare workers with intensive, hands-on training in critical, lifesaving skills, including:
- Emergency Obstetric Care: Managing hemorrhages and hypertensive disorders.
- Neonatal Resuscitation: Vital techniques to save newborns in their first golden moments.
- Capacity Building: Strengthening the local health system from the inside out.

This mentorship and practical training provided a capacity building platform for healthcare facilities and providers, enabling them to deliver improved care for their communities.

- Clinical Excellence: Over 45 healthcare providers across local health centers received advanced training and mentorship in managing obstetric emergencies, including postpartum hemorrhage and hypertensive disorders.
- Safer Environments: To reduce infection risks for newborns and mothers, HHR supplied essential IPC materials to local health facilities and led intensive cleaning campaigns in critical units such as Neonate Intensive Care Unit (NICU) and Labor Wards.

By combining hands-on mentorship with facility support, HHR is building a resilient, highly skilled workforce dedicated to the safety and survival of every mother and child in our community.

IPC material donation to local health facilities

Empowering healing through Social Support Groups

The loss of a child is an unbearable pain, often leaving families—particularly mothers—trapped in a cycle of isolation and grief. Through our Social Support Groups (SSGs), we are transforming how communities process loss and look toward the future.

In 2025, we reached 640 families, who participated in the MITS (Minimally Invasive Tissue Sampling) procedure. Having received scientific answers about why their children passed, these parents are now finding emotional refuge in one another.

"The SSG is more than a meeting; it's a safe haven where we share experiences, break the silence of grief, and foster a sense of community that ensures no parent walks this path alone." Braved parent, Kersa

A Holistic Approach to Resilience We recognize that healing requires both emotional and practical strength. In addition to psychosocial support, SSG members participate in life-changing training, including:

- Nutrition-Sensitive Agriculture: Building food security at home.
- Maternal Health Education: Focusing on antenatal and postnatal follow-ups to protect future pregnancies.
- Preventative Care: Turning the lessons learned from MITS into healthier behaviors for the whole community.

By addressing both the heart and the home, HHR is empowering these families to turn their grief into a foundation for a healthier, more resilient future.

SSG Members Discussing

Empowering communities through participatory community engagement

At HHR, we believe real change begins with trust. Our community engagement approach goes beyond research- it is about building trust, listening to voices, and grassroots collaboration to bridge the gap between science and community.

Going beyond traditional research, HHR uses Theatre for Development (TfD) where actors from local community perform selected topics based on our research findings to promote awareness and behavioural change on maternal and child health.

By weaving local narratives into compelling performances, we dismantle misconceptions and reinforce the safety of lifesaving interventions such as ANC follow-ups and vaccines. Through the active participation of lead mothers, youth, and local leaders, we aren't just sharing information—we are building a culturally resonant health system where evidence-based care leads to a healthier future for every family.

Community actors performing TfD

A home away from home: investing in maternal and child survival

For 26-year-old Fetiya Jemal, pregnancy has historically been a journey of heartbreak. Despite being pregnant ten times, Fetiya has only one living child. "In my previous pregnancies, I delivered every eight months, but I lost all my babies," she shares. Like many in the Jeba Water Kebele, Fetiya previously delivered at home, far from the lifesaving interventions of a health facility.

Today, Fetiya's story is changing. She is currently staying at one of the three newly renovated and furnished Maternity Waiting Rooms (MWRs) recently handed over by HHR's CHAMPS-Pregnancy Surveillance section at Finkile, Langhe, and Watar Health Centers.

Fetiya at Maternity waiting room

Bridging the Gap Between Home and Hospital

For mothers living in remote villages, the distance to a health center is often the biggest barrier to a safe birth. MWRs solve this by providing a secure, supportive environment where expectant mothers can stay as their due date approaches.

"The waiting room has important facilities like mattresses, blankets, and cooking utensils," Fetiya explains. "The medical staff visit me every morning, and they provide us with the support we need while we wait."

By removing the stress of travel and the isolation of home delivery, the MWRs ensure that mothers like Fetiya are already "inside the system" when labor begins. Ibsa Jemal, a Midwife at Weter health center noted, "A mother will suffer at home before coming here; if she stays in the waiting room, her problems are identified early, and she can wait for her delivery in peace."

Fetiya and her relatives at MWR

Investing in Every Life

The impact is clear. By providing a comfortable environment, these rooms have significantly increased institutional delivery rates.

"The Maternity Waiting Room is a bridge between the village and the hospital. In the past, mothers would return to remote homes due to uncomfortable conditions, only to face complications far from help. Now, with a functional, furnished space, we identify risks early. We aren't just waiting for labor; we are actively preventing mortality." — Ibsa Jemal, a Midwife at Weter health center.

For Fetiya, the support has been a lifeline. With HHR's help in covering medical costs, providing ultrasounds, and ensuring a safe place to stay, she has reached full term. "I can see the differences," she says, looking forward to a future where her next child comes home and stays home.

Maternity Waiting Room inauguration-Weter

UPCOMING

ECHILIBRIST Study: A new chapter for maternal and child health research in Eastern Ethiopia

HHR is launching the first clinical trial at Haramaya University Hiwot Fana Comprehensive Specialized Hospital. The Enhancing Children's Lives with Biomarkers for Risk Stratification and Triage (EChiLiBRiST) trial aims to bring critical shifts on how physicians identify and treat critically ill children in resource-limited settings. This clinical trial introduces two groundbreaking innovations; first, it uses a biomarker called sTREM-1, measured from a small blood sample, to objectively identify children at high risk of death or serious complications; enabling healthcare workers to prioritize care based on actual biological need rather than subjective assessment. Second, for children identified as moderate or high risk, the trial tests whether L-citrulline, a naturally occurring amino acid, can improve outcomes.

The trial, implemented in Ethiopia and Mozambique, is expected to transform the management of severe childhood infections across Africa by moving from subjective assessment to objective, biomarker-guided care, ensuring the sickest children receive the intensive treatment they need while avoiding unnecessary interventions in those at lower risk.

HHR HARARGHE HEALTH RESEARCH

Since 2017

Child Health and Mortality Prevention Surveillance-Since 2017

1575 Minimally Invasive Tissue Sampling
1431 cases Cause of Death results shared with families

Pregnancy Surveillance-Since 2021

43, 764 pregnant women enrolled
37, 274 pregnant women accessed Ultrasound Service **14** Ultrasound equipment with well trained staff for rural health facilities

HHR Laboratory Since 2017

- Performed over 90,000 research and diagnostic tests across 18 studies—processing diverse specimens through advanced microbiology, molecular diagnostics (RT-qPCR and TAC), and clinical chemistry
- Provided more than **7300** histopathological diagnosis services for patients admitted in Hiwot Fana Specialized Comprehensive Hospital.
- 34,000 Covid 19- tests

Spina Bifida and Anencephaly in Ethiopia, foLate for prevenTion (SALT) 2023- 2025

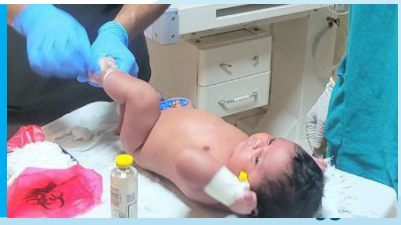
216 NTD follow-up
463 Women of Reproductive age enrolled for Folate test
178 Mothers under Surveillance

Assessing the Role of Micronutrient Status in Pregnant Women (ARM CHAMPS) 2024- 2025

Enrolled 1000 pregnant women

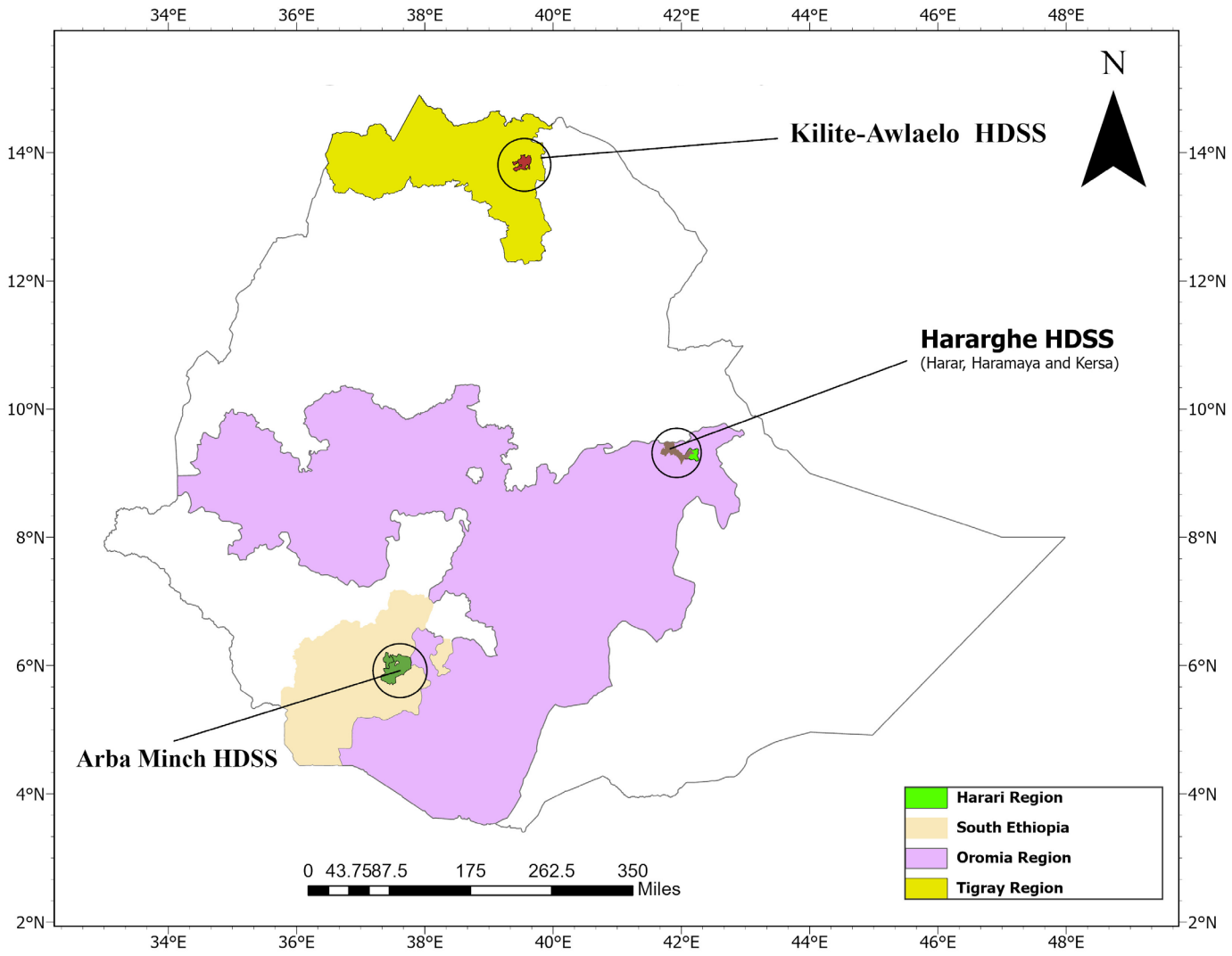
Invasive Bacterial Disease study (IBD) Since 2022

9239 blood culture tests for < 5 children admitted in Hiwot Fana Specialized Comprehensive Hospital



HHR | HARARGHE HEALTH RESEARCH

Study Sites



Prepared by:
Mastewal Derara

Edited by:
Prof. Nega Assefa (PhD)
Shirine Voller (DrPH)
Yenenesh Tilahun

Address

Haramaya University
College of Health and Medical Sciences
Harar, Ethiopia

Visit US