

Global Health Annual Report

**Jan 2023 -
Jun 2024**



 **NTNU**

Norwegian University of
Science and Technology

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FOREWORD

Dear colleagues and partners,

Welcome to our annual report, which exceptionally covers an eighteen month period this time, from January 2023 to June 2024. The report highlights key accomplishments of NTNU's inter-faculty global health team, working alongside our national and international partners and collaborators.

At the start of this period, in January 2023, a working group was appointed by faculty and department leaders to suggest strategic priorities and a future structure for global health at NTNU. This led to several consultation workshops and discussion groups in the reporting period, resulting in identification of five strategic goals. These priorities have been communicated to NTNU leaders at all levels, including those overseeing two of NTNU's strategic research areas (TSOs). Our current focus is to consolidate concrete actions to achieve these strategic goals for a strong and active global health research group at NTNU by 2030.

Starting in the fall semester of 2023, tuition fees were introduced in Norway for master students coming from countries outside the EU/EEA. For our master's program in global health, this had a dramatic effect on the number of students who enrolled at the start of the semester. Currently, new intakes to this program have been paused, but we remain hopeful that it can be reopened by the next application round and have been proactively seeking new funding to address the tuition fees.

Despite financial uncertainties affecting Norwegian universities, we have made progress in reinforcing our global collaborations in this reporting period, with significant investments in capacity-strengthening initiatives in Nepal, Malawi, Zambia, Sierra Leone, and other countries. There have been visitors to the Faculty of Medicine and Health Sciences, including defending PhD candidates, from partners institutions in Nepal and Malawi.

As you'll see in this report, we continue to sustain rich, lively, and diverse PhD research activities. We also maintain a strong interdisciplinary approach to key research areas such as equitable access to health services, health systems research, women's and children's health, global surgery, and the management of non-communicable diseases.

With regards to the ongoing war in Ukraine, Gaza and Sudan, we hope this report provides some insights into the important work we are doing and inspires continued efforts towards a common vision of *health for a better world*.

Yours sincerely,



**JENNIFER
INFANTI**



**HÅKON ANGELL
BOLKAN**



**ELIN YLI
DVERGSDAL**



A YEAR IN REVIEW

Key achievements and highlights from January 2023 to June 2024

A YEAR IN NUMBERS



CORE MEMBERS OF NTNU'S
INTER-FACULTY GLOBAL HEALTH
RESEARCH NETWORK PUBLISHED

120 PAPERS

FROM JANUARY 2023 TO JUNE 2024

7 PhD candidates  successfully defended global health theses during this period



PUBLICATION HIGHLIGHTS

Access to services and health systems

Adde, H. A., van Duinen, A. J., Andrews, B. C., Bakker, J., Goyah, K. S., Salvesen, Ø., Sheriff, S., Utam, T., Yaskey, C., Weiser, T. G., & Bolkan, H. A. (2023). Mapping population access to essential surgical care in Liberia using equipment, personnel, and bellwether capability standards. *The British journal of surgery*, 110(2), 169–176.

Shakya, N. R., Shrestha, N., Webb, G., Myezwa, H., Karmacharya, B. M., & Stensdotter, A. K. (2024). Physiotherapy and its service in Nepal: implementation and status reported from facility surveys and official registers. *BMC health services research*, 24(1), 295.

Jiménez-Díaz, G., Aune, A., Elizarrarás-Rivas, J., Gierman, L. M., Keitsch, M., Marcuzzi, A., & Infanti, J. J. (2024). Neonatal jaundice detection in low-resource Mexican settings: possibilities and barriers for innovation with mobile health. *BMC Health Services Research*, 24.

Tikkanen, R. S., Closser, S., Prince, J., Chand, P., & Justice, J. (2024). An anthropological history of Nepal's Female Community Health Volunteer program: gender, policy, and social change. *International Journal for Equity in Health*, 23(1), 70.

Hadders, H. (2024). COVID-19 corpse management in Nepal: handling the deceased at Pashupati electric crematorium during the COVID-19 pandemic. *Mortality*, 1–19

Antimicrobial resistance

Nowbuth AA, Asombang AW, Alaboud K, Souque C, Pather K, Dahu BM, Lotfi S, Mwanza MM, Parmar VS. Gamification as an Educational Tool to Address Antimicrobial Resistance: A Systematic Review. *JAC-Antimicrobial Resistance*. 2023.

Health research methods

Lewin S, Langlois EV, Tunçalp Ö, Portela A. Assessing unConventional Evidence (ACE) tool: development and content of a tool to assess the strengths and limitations of 'unconventional' source materials. *Health Res Policy Sys*. 2024; 22, 2.

PUBLICATION HIGHLIGHTS

Women's health

Chakhame, B. M., Darj, E., Mwapasa, M., Kafulafula, U. K., Maluwa, A., Odland, J. Ø., & Odland, M. L. (2023). Women's perceptions of and experiences with the use of misoprostol for treatment of incomplete abortion in central Malawi: a mixed methods study. *Reproductive Health*, 20(1), 26.

Chalise, P., Manandhar, P., Infanti, J. J., Campbell, J., Henriksen, L., Joshi, S. K., ... & Lukasse, M. (2023). Addressing Domestic Violence in Antenatal Care Environments in Nepal (ADVANCE)–study protocol for a randomized controlled trial evaluating a video intervention on domestic violence among pregnant women. *BMC public health*, 23(1), 1794.

Reppen, K., Henriksen, L., Schei, B., Magnussen, E. B., & Infanti, J. J. (2023). Experiences of childbirth care among immigrant and non-immigrant women: a cross-sectional questionnaire study from a hospital in Norway. *BMC Pregnancy and Childbirth*, 23(1), 394.

Social determinants of health

Aronsson, A. E., Vidaurre-Teixidó, P., Jensen, M. R., Solhaug, S., & McNamara, C. (2023). The health consequences of informal employment among female workers and their children: a systematic review. *Globalization and health*, 19(1), 59.

Balaj, M., Henson, C. A., Aronsson, A., Aravkin, A., Beck, K., Degail, C., ... & Gakidou, E. (2024). Effects of education on adult mortality: a global systematic review and meta-analysis. *The Lancet Public Health*.

Besnier, E., Kotzias, V., Hlabana, T., Beck, K., Sieu, C., & Muthengi, K. (2024). Exploring health equity in Lesotho's Child Grants Programme. *Health Policy and Planning*, 39(2), 138-155.

Child health

Nalugya, J. S., Engebretsen, I. M. S., Nakasujja, N., Ndeezi, G., Babirye, J. N., Bakken, V., ... & Skokauskas, N. (2024). Improving alcohol and substance use screening in school-age children: translation, adaptation and psychometric evaluation of the CRAFFT tool for Lumasaaba, Uganda. *Addiction Science & Clinical Practice*, 19.

Sripada, K., (2024) *Nanomaterials and Child Health*, in Etzel, R. and Landrigan P. (Eds.) Textbook of Children's Environmental Health, 2nd Edition

PUBLICATION HIGHLIGHTS

Environmental health

Hansen, S., Xu, S., Huber, S., Alvarez, M. V., & Odland, J. Ø. (2024). Profile of per- and polyfluoroalkyl substances, source appointment, and determinants in Argentinean postpartum women. *Science of The Total Environment*, 915, 170096.

Mwapasa, M., Huber, S., Chakhame, B. M., Maluwa, A., Odland, M. L., Ndhlovu, V., ... & Odland, J. Ø. (2023). Predictors of Maternal Serum Concentrations for Selected Persistent Organic Pollutants (POPs) in Pregnant Women and Associations with Birth Outcomes: A Cross-Sectional Study from Southern Malawi. *International journal of environmental research and public health*, 20(7), 5289.

Living with disabilities

Sinkaberg, R. F. (2024). A deaf researcher in an Indian and Norwegian context— an autoethnographic journey. *Disability & Society*, 1-19.

Pradhan, N., Haugan, G., & Infanti, J. J. (2023). Challenges and forms of coping and support in the daily lives of Nepali mothers of children with intellectual disabilities: A qualitative study. *Disability and the Global South*, Vol.10, No. 2, 2334-2358

Mental health

Rafieian, M., Skokauskas, N., Cheslack-Postava, K., & Hoven, C. W. (2024). The association between intolerance of uncertainty and depressive symptoms during COVID-19 in New York, USA. *Journal of Affective Disorders*, 356, 628-638.

Non-communicable diseases

Shakya P, Shrestha A, Bajracharya M, et al. Effectiveness of a group-based Diabetes Prevention Education Program (DiPEP) in a population with prediabetes: a cluster randomised controlled trial in Nepal. *BMJ Nutrition, Prevention & Health* 2023;6:e000702. doi:10.1136/ bmjnph-2023-000702.

Bhattarai, S., Wagle, D., Shrestha, A., Åsvold, B. O., Skovlund, E., & Sen, A. (2024). Role of Perceived Social Support in Adherence to Antihypertensives and Controlled Hypertension: Findings of a Community Survey from Urban Nepal. *Patient preference and adherence*, 767-777.

CONTRIBUTIONS TO POLICY



Jennifer J. Infanti, associate professor in global health at the Department of Public Health and Nursing, and **Kam Sripada**, manager of the Centre for Digital Life Norway, advocated against the introduction of high tuition fees for non-EU/EEA students, warning about the detrimental effects on Norway's and NTNU's diversity and learning environments. Scan the QR code to read their Op-Ed in Khrono.



Håkon Angell Bolkan, associate professor in global health at the Department of Public Health and Nursing, debated the contribution of development aid to reducing global health inequalities at a panel discussion during Arendalsuka 2023.



Håkon also took part in a podcast episode together with SINTEF to present how he is applying task shifting in Sierra Leone to respond to the shortage of surgeons in the country. Listen to the podcast (in Norwegian) by scanning the QR code.



Roosa Sofia Tikkanen, PhD candidate in global health at NTNU's Centre for Global Health Inequalities Research (CHAIN), provided expert insights into the Women in Global Health's report, Subsidizing global health: Women's unpaid work in health systems. You can read the report by scanning this QR code.



EDUCATION

Summer school in global health in Nepal



Thirteen Norwegian medical students from all Norwegian medical schools participated in a two-week summer school in global health at Dhulikhel Hospital/Kathmandu University in Nepal. They engaged in ward rounds and clinical work, visited a rural health post, and attended lectures on topics such as infectious diseases, maternal and child health, community health, and health systems in developing countries. Finally, they wrote a brief reflection on a relevant topic to earn their study credits.

Master of Science graduates in global health



In May 2023 and May 2024, two cohorts of master's students successfully completed their studies in the program. They produced a diverse range of master thesis projects pertinent to global public health, ranging from exploring e-health initiatives in Somalia to examining the involvement of male partners in maternity care initiatives in the Rohingya refugee camp in Bangladesh.



Additionally, in May 2023, Schyler Bennett, global health program/teaching assistant and graduate, delivered the student speech on behalf of all graduates from the Faculty of Medicine and Health Sciences.

Health resource allocation simulation



Master's students, PhD candidates, and teaching staff at NTNU's Faculty of Medicine and Health Sciences participated in a simulation game to understand how health systems operate in the global south and how decisions are made. This simulation was facilitated by Irina Wagner from the Dutch Royal Tropical Institute.

EDUCATION

Health for a better world - increased student mobility in nursing education at NTNU (2021-2025)

Funded by HK-dir, *Health for a Better World*, is a collaboration between NTNU and institutions such as Maseno University and Kanyakoo Self Help Initiative in Kenya, Muhimbili University of Health and Allied Sciences (MUHAS) in Tanzania, and University of Namibia (UNAM) in Namibia. The project aims to contribute to lasting structures and a culture for student mobility in nursing education and increase learning outcomes through facilitating student exchange programs. The project is led by **Wanja Jørgensen** (Department of Public Health and Nursing, Trondheim), **Gerd Elisabeth M. Nordhus** (Department of Health Sciences in Ålesund), and **Beate Holter** (Department of Health Sciences in Gjøvik). **Ninety-two nursing students traveled to Kenya, Tanzania, Namibia, Nepal, and Thailand in the academic year 2023-2024.**

In Kenya, NTNU students organized a free medical camp for the population in the Asembo Bay area, financed through "Spleis" funding. Several hundred people attended the camp.

The project group and teacher team visited the universities in Kenya, Nicaragua, and Tanzania in 2023 and implemented seminars for supervisors from the clinical placements in hospitals and other relevant clinics at the partner universities.

A teacher team has been established at NTNU across campuses to follow up on students during clinical placements during the mobility.

Planning is underway for a visit to NTNU from partner universities in Kenya, Namibia, and Tanzania in 2025.

BONDO SUB-COUNTY HOSPITAL
MATERNITY COMPLEX

Asembo Bay Health Clinic (Kanyakoo)

On Tuesday, 19th March 2024

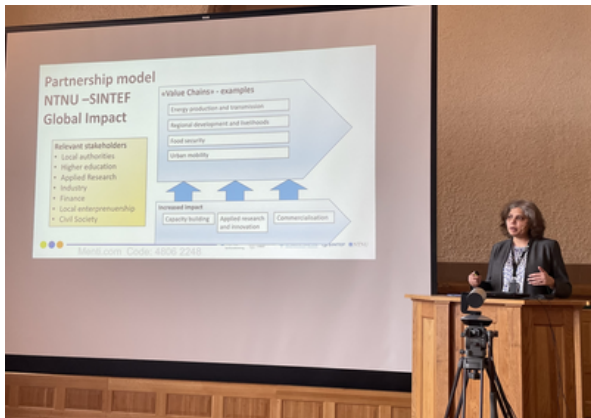
FREE MEDICAL CAMP

Health Check-ups/Tests:

- ✓ HIV Testing & Counseling
- ✓ Laboratory Services
- ✓ Dental Services
- ✓ Family Planning Services
- ✓ Ante Natal Care Services

+254 726 131 357
For More Information

Launch of the new Gemini Center: 'Equitable Partnerships for Global Impact'



The Global Impact Gemini Center, a collaborative initiative between NTNU and SINTEF, was successfully launched in the prestigious Rådssalen at NTNU on Wednesday, April 10th, 2024.

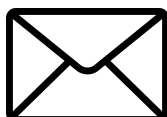
The new Gemini Center aims to establish a joint platform for SINTEF and NTNU that advances transdisciplinary research and innovation to tackle societal challenges through equitable partnerships with institutions in Low- and Middle-Income Countries (LMICs). Additionally, it seeks to better understand how research and innovation can respond to the development and relief nexus priorities among actors focusing on LMICs.

Rolee Aranya, from NTNU's Department of Architecture and Planning, serves as the leader of the Gemini Center, while **Petter Støa**, from SINTEF Energi, is the co-leader. The center is built upon the ongoing process of operationalizing the new Strategic Areas of Research at NTNU and the Strategic Area on Global Sustainable Development at SINTEF.

The launch of the Gemini Center, formally titled "Equitable Partnerships for Global Impact," by SINTEF and NTNU represents a pivotal moment in addressing the urgent call of the 2030 Sustainable Development Agenda and marks the beginning of a journey toward building a more sustainable and equitable world.



You can stay in touch with the new center by email, on Facebook or WhatsApp



global-impact-info@gemini-sentre.ntnu.no



CAPACITY STRENGTHENING

Strengthening Academic Capacity in Physiotherapy Education in Nepal and South Africa

NTNU lead: Ann-Katrin Stensdotter

Collaborators:

Kathmandu University School of Medical Science (KUSMS), Nepal

Kathmandu Medical College (KMC), Nepal

University of the Witwatersrand (Wits), Johannesburg, South Africa



As part of this NORHED II project, a delegation from Wits, NTNU, and external partners inaugurated a new master's program in physical therapy at KUSMS. The 2023 bachelor and master cohorts have been fully filled, and a new group of students will commence in 2024. Three PhD students have been in Nepal collecting data. A pedagogy course for faculty, co-developed by NTNU, Wits, and OsloMet, has been handed over to KUSMS and will be conducted at KUSMS in 2024, with mentoring.

A quality system for the evaluation and development of study programs was piloted in 2023. As part of the Erasmus+ Global project, two faculty members, one from physiotherapy and one from occupational therapy, visited Wits in the fall of 2023.

Funded by: NORAD (NORHED II) and ERASMUS + global



CAPACITY STRENGTHENING

Investing in Global Health Competencies through Postgraduate Education

NTNU lead: Jennifer Infanti

Collaborators:

Kathmandu University School of Medical Sciences (KUSMS), Nepal
Dhulkhel, & Kathmandu Medical College (KMC), Nepal

This three-year mobility project was funded in 2023, with **Jennifer Infanti** (Department of Public Health and Nursing, NTNU) serving as the Principal Investigator (PI), alongside co-applicants **Ann-Katrin Stensdotter** (Department of Neuromedicine and Movement Science, NTNU), Biraj Karmacharya (KUSMS), and Sunil Kumar Joshi (KMC). The project aims to enhance global health competencies in postgraduate education through longstanding collaborations between NTNU, KUSMS, and KMC. Incoming students from KUSMS and KMC master's programs will experience global public health teaching and learning methods at NTNU. Outgoing NTNU staff will collaborate with partners at KUSMS and KMC to develop elective courses in research methodology for bilateral student engagement, and explore strategies for creating more accessible and inclusive educational opportunities and learning environments at NTNU.

Funded by: Erasmus+ Global Mobility

Maternal and Neonatal Health in Malawi - MNHM

NTNU lead: Håkon Bolkan

Collaborators:

Malawi University of Science and Technology (MUST),
Kamuzu University of Health Sciences (KUHeS), Malawi
University of Zambia, School of Nursing (UNZA-SoN), ZAMBIA



Funded by: NORAD (NORHED II)

The project aims to strengthen the capacity to develop and implement training programs in nursing, midwifery, medical microbiology, and obstetric ultrasound and to conduct world-class research at universities in Malawi and Zambia. Six PhD candidates from MUST, three PhDs and two postdocs from UNZA-SoN, and one postdoc from KUHeS have received scholarships under the project.

CAPACITY STRENGTHENING

Cochrane People, Health Systems and Public Health Thematic Group

NTNU lead: *Simon Lewin*

Collaborators:

La Trobe University, Australia

University of Newcastle, Australia

University of Oxford, UK



Co-led by NTNU, this Cochrane Thematic Group aims to advance evidence syntheses addressing complex issues within health systems and public health globally, employing a person-centered approach. Since its successful launch in 2023, the Thematic Group has established a regular newsletter and webinar series and contributed scientific insights to several Cochrane reviews.

Additionally, the Thematic Group has co-hosted training events, such as a workshop on utilizing qualitative evidence in guidelines for staff at WHO Headquarters, and engaged in discussions regarding Cochrane's new scientific strategy.

You can follow the activities and updates of the Thematic Group on the group's [Linkedin Page](#) or by subscribing to the newsletter (scan the QR code to learn more).



CAPACITY STRENGTHENING

CapaCare, surgical training in Sierra Leone and Liberia

NTNU lead: Håkon Bolkan

Collaborators:

United Nations Population Fund, Sierra Leone

Norwegian Agency for Development Cooperation, Norway

Masanga Hospital, Sierra Leone

Ministry of Health and Sanitation, Sierra Leone

School of Clinical Sciences Makeni, Sierra Leone

Liberian College for Physicians and Surgeons, Liberia

Dutch Society of Surgeons (NVvH), Netherlands

Lifebox, USA



In 2023, NTNU and CapaCare concluded the third nationwide assessment of surgical activity in Sierra Leone, with the first two assessments conducted in 2012 and 2018. Having in-depth data on all operations performed in the country over a decade provides us with a unique opportunity to evaluate the impact of our activities.

Graduates of the CapaCare program performed 55% of all operations in governmental hospitals and more than half of all operations outside the Western Area in 2023. Emergency obstetric care is the field where CapaCare graduates have had the largest impact over the last decade. In 2023, 57% of all caesarean sections in Sierra Leone were performed by graduates of the CapaCare program. Although the national caesarean section rate has almost tripled over the last decade, it remains far below recommended levels. We strongly believe that the strengthening of emergency obstetric care by CapaCare graduates has contributed to reducing Sierra Leone's maternal mortality ratio from 837 to 443 in the last decade.



CAPACITY STRENGTHENING

Global Evidence - Local Adaptation (GELA)

NTNU lead: *Simon Lewin*

Collaborators:

South African Medical Research Council (SAMRC), South Africa

Centre for Evidence Based Health-Care at Stellenbosch University, South Africa

Western Norway University of Applied Sciences, Norway

Stiftelsen MAGIC Evidence Ecosystem Foundation, Norway

Cochrane Nigeria, University of Calabar Teaching Hospital, Nigeria

Kamuzu University of Health Sciences (KUHeS), Malawi

Cochrane, UK



Started in 2022, GELA is supporting the production of evidence-informed guidelines for newborn and child health in three countries: Malawi, Nigeria, and South Africa. NTNU researchers **Simon Lewin** and **Elodie Besnier** (Department of Health Sciences in Ålesund) are collaborating with colleagues in these countries to produce systematic reviews to support these guidelines and to package this evidence for decision-making. The team is also evaluating the best ways to support stakeholders in using evidence to inform guideline decisions, including exploring options for packaging this evidence.



In 2023-2024, **Simon** and **Elodie** supported the identification, appraisal, and/or development of qualitative evidence addressing priority topics on newborn and child health identified by the guideline development panels in each of the three countries. In 2024, they traveled to Malawi to support the development of a new clinical guideline on enteral

feeding in critically ill children. Further to this visit, they traveled to South Africa to begin data collection for the evaluation of the GELA project. Together with researchers from the SAMRC and Stellenbosch university, they interviewed guideline panel members on how best to present qualitative evidence to inform the development of new child health guidelines.

Funded by: EDCTP 2

RESEARCH

POCT-BRA - Implementing point-of-care tests to reduce antibiotics for the treatment of vaginal discharge in Nepal

NTNU lead: *Risa AM Lonnee-Hoffmann*

Collaborators:

Dhulikhel Hospital, Kathmandu University School of Medical Science (KUSMS), Nepal

During 2023-2024, the POCT-BRA project included a master thesis project under the MSc global health at NTNU, examining perceptions surrounding abnormal vaginal discharge and antibiotic treatment among Nepalis. This work resulted in the development of an educational tool (a leaflet and video) that the project is now assessing in a randomized controlled trial (RCT).



Funded by: Research council of Norway

With a successful pilot implemented with 20 participants in November 2023, and all test instruments and cartridges arriving in Nepal in March 2024, the RCT has commenced in spring 2024. The project has appointed four research assistants, one research coordinator, and one PhD candidate.

NeuroTox - Environmental contaminants can affect a child's development already in the womb



NTNU lead: *Kam Sripada*

Collaborators:

Folkehelseinstituttet, Norway

University of North Carolina - Chapel Hill, USA

After launching the NeuroTox-CHAIN partnership several years earlier, MSc global health student **Julia Jackman** (NTNU MSc Global Health) became the first NTNU student to conduct research using this dataset.

Her thesis, which she defended in June 2023, focused on birth outcomes related to prenatal exposure to PFAS chemicals in light of socioeconomic disparities. The topic is equally relevant in Norway as it is around the world.

Funded by: Research council of Norway

Childrens Lung Study in Dhulikhel (C-LUNG)

NTNU lead: Kari Risnes

Collaborators:

Dhulikhel Hospital, Kathmandu University School of Medical Science (KUSMS), Nepal



C-lung started in 2024 with the ambition to improve outcomes in early childhood lower respiratory infections (cLRTI) and to develop affordable prevention of childhood asthma and chronic lung disease in Nepal. In 2024, the project team initiated a clinical study and included 200 patients. NFR funding (GLOBVAC) is secured for the period 2024-28. In the coming years, the project aims to recruit three PhD candidates and one postdoc.

Funded by: Research council of Norway, GLOBVAC

Integrating Persuasive Educational Intervention in Health Education to Reduce Antimicrobial Resistance (AMR)

NTNU LEADS: Anya A. Nowbuth, Vikram P. Singh, Akwi W. Asombang, Aslak Steinsbekk

Collaborators:

St. Olavs Hospital, Norway

This project started in 2023. A significant factor contributing to the spread of AMR is the lack of knowledge about the use of antibiotics. Studies have found that the use of games shows promising results in improving students' knowledge about health and may be used to enhance knowledge about AMR. A playful educational support will be developed to make the health problem of bacterial resistance and the action of antibiotics more understandable among young people, who will be leaders in medicine, veterinary science, and agriculture in the near future.

Funded by: NTNU Health's Innovative solutions for more sustainable healthcare

Addressing Domestic Violence in Antenatal Care Environments phase 2 (ADVANCE 2)

NTNU leads: *Berit Schei, Jennifer Infanti*

Collaborators:

Kathmandu Medical College (KMC), Nepal

Kathmandu University School of Medical Sciences (KUSMS), Nepal

University of South-Eastern Norway, Norway

Oslo Metropolitan University, Norway

Linneaus University, Sweden

Johns Hopkins University School of Nursing, USA



The ADVANCE 2 (2020-2025) project aims to reduce domestic violence during pregnancy in Nepal, a major contributor to poor pregnancy outcomes. In 2023-2024, the team validated the Nepalese Abuse Assessment Screen (N-AAS), a culturally-sensitive screening tool in Nepalese language, for identifying women experiencing domestic violence. The validation study manuscript has been accepted for publication.

Additionally, the team developed a safety-promoting intervention that is being tested in a randomized controlled trial compared to standard antenatal care to improve women's disclosure of and support seeking for domestic violence. A process evaluation of the clinical trial implementation is ongoing to better understand contextual factors influencing women's ability to obtain help from the intervention. The project's two PhD candidates, Pratibha Chalise (Dhulikhel Hospital-KUSMS) and Pratibha Manandhar (KMC), have recently completed their PhD coursework in Norway during 10-month stays in Trondheim. PhD supervisor and co-investigator **Jennifer Infanti** (NTNU Department of Public Health and Nursing) spent January 2024 in Kathmandu, collaborating with research assistants and postdoctoral researcher Poonam Rishal.

*Funded by: FRIPRO
research programme,
Research Council of Norway*



mHEALTH-INNOVATE: exploring healthcare workers' informal and innovative uses of mobile phone messaging in LMICs

NTNU lead: Simon Lewin

Collaborators:

Makerere University, Uganda; Norwegian Institute of Public Health, Norway

Western Norway University of Applied Sciences, Norway

University of Oslo, Norway

Healthcare Information for all (HIFA) online forums, UK

World Health Organization (WHO), Switzerland

Johns Hopkins Bloomberg School of Public Health, USA

Healthcare workers in many countries utilize their mobile phones in informal and unregulated ways to address the challenges they encounter in their day-to-day work. This project aims to explore what we can learn from these informal solutions to strengthen health systems in low- and lower-middle-income countries. The first part of the project involves a Cochrane qualitative evidence synthesis on the views, experiences, and practices of healthcare workers, managers, and other professionals regarding their informal uses of mobile devices to support their work. This synthesis will be published shortly.

Fieldwork to explore informal use is ongoing in Uganda and will commence in India in 2025. We are collaborating with the Ministry of Health in Uganda to plan a policy dialogue for the end of this year to discuss the emerging findings from this setting.

Funded by: Research council of Norway, GLOBVAC



Holding Aid Accountable: Relational Humanitarianism in Protracted Crisis (AidAccount)

NTNU lead: *Hilde Refstie*

Collaborators:

Peace Research Institute Oslo (PRIO), Norway

Centre for Lebanese Studies, Lebanon

Makerere University, Uganda

Centre for Migration Research and Development, Sri Lanka

Rako Research and Communication Centre, Somalia



Led by PRIO, AidAccount aimed to map, document, and analyze the moral and social dimensions of accountability as understood and practiced by civic and professional humanitarian aid providers in protracted crises in Uganda, Somalia, and Sri Lanka. The project successfully concluded in May 2024. During the closing conference, PhD candidate **Emmanuel Viga** (Department of Geography) presented the findings of his research in a keynote address on the role of community and refugee-led organizations in humanitarian efforts in Uganda.



Funded by: Research council of Norway

Creating a Global Social Burden of Disease Database

NTNU lead: *Mirza Balaj*

Collaborators:

Institute of Health Metrics and Evaluation, USA

The Centre for Global Health Inequalities Research (CHAIN) is collaborating with the Institute for Health Metrics and Evaluation (IHME) to incorporate socioeconomic indicators into the Global Burden of Disease (GBD) study. The GBD study quantifies levels and trends in health, making this data publicly available. Following an initial study in 2021 exploring the links between parental education and child mortality, CHAIN and IHME published the results of a new study in 2024 linking education to lower adult mortality. These results were featured in English-speaking media outlets, including The Guardian, Forbes, and Time Magazine.

Spotlight on doctoral research

Strengthening of surgical training in Liberia

Juul Marlies Bakker

Collaborators:

CapaCare Liberia, Liberia

Liberia College of Physicians and Surgeons, Liberia



As part of her PhD-project, in 2023-2024 **Juul Bakker** performed two studies in Liberia, namely: 1. Evaluation of 10 years postgraduate medical education in Liberia. 2. Surgical training needs assessment in Liberia (mixed methods). Research is performed in collaboration with national partners and the NGO CapaCare that is involved in surgical training in Sierra Leone and Liberia. Results from the evaluation were presented at the annual WACS (West-African College of Surgeons) conference in Sierra Leone.

Reforming Community-Based Health Care Workforce Policy in Nepal: Current Challenges and Opportunities in the Context of Federalization

Roosa Sofia Tikkanen

Collaborators:

Dhulikhel Hospital, Kathmandu University School of Medical Sciences, Nepal

Norwegian Institute of Public Health, Norway



This collaborative project was launched in March 2023 when **Roosa Tikkanen** (NTNU Centre for Global Health Inequalities Research, PhD candidate and project lead for Norway) arrived in Nepal to commence fieldwork. Data collection was completed between March and June 2023 in collaboration with Dhulikhel Hospital's Community Health team. To support the project, Roosa was awarded a Small Project Grant (Småforsk - 115,000 NOK) by the NTNU Institute of Sociology and Political Science in conjunction with **Terje A. Eikemo** (CHAIN, PhD main supervisor).

Health service innovation of neonatal jaundice detection by mHealth technology in low-income settings: user-centered implementation project in Mexico



Gabriela Jimenez Diaz

Collaborators:

Picterus AS, Norway

Instituto Mexicano del Seguro Social, Mexico

This project explores the feasibility of implementing the Picterus mHealth app to improve the health outcomes of newborns with neonatal jaundice in low-income settings of Mexico.

In 2023-2024, **Gabriela Jimenez Diaz** (NTNU Department of Public Health and Nursing) validated the app among 175 babies and conducted a feasibility randomized controlled trial (RCT) among over 500 participants in the rural hospital of Tlacolula, Oaxaca. The results of her qualitative study on current practices in neonatal jaundice management in rural and urban Mexican hospitals were published in May 2024.

Cluster randomised trial to evaluate comprehensive approach to hypertension management in Nepal

Sanju Bhattarai

Collaborators:

Institute for Implementation Science and Health (IISH), Nepal



Effective control of hypertension remains challenging in low and lower-middle-income countries. In this PhD project supervised by **Abhijit Sen** (Department of Public Health and Nursing), **Sanju Bhattarai** (Department of Public Health and Nursing) tested the effectiveness of comprehensive approaches to hypertension management, including six home visits by community health workers together with regular follow-up by a trained healthcare provider, on blood pressure levels in urban Nepal. The team implemented a cluster randomized controlled trial in 10 public health facilities of Budhanilakantha municipality, Kathmandu. The RCT recruited 1 252 adults with hypertension. The study concluded that community health workers facilitated home support and routine follow-up care by healthcare providers achieved a modest reduction in blood pressure in urban Nepal. The article presenting these findings has been submitted for publication.



Physiotherapy as an integral part in the Nepal health system

Nishchal Ratna Shakya

Collaborators:

Kathmandu University School of Medical Science (KUSMS), Nepal

This project highlights the status of physiotherapy services in low- and middle-income countries, specifically focusing on Nepal. The research aims to identify barriers and facilitators for physiotherapy services, assess the implementation and status of physiotherapy in Nepal, and gather patients' recommendations evidence-based data. His findings revealed significant challenges in the provision of physiotherapy services in Nepal, including lack of awareness and knowledge about physiotherapy at all system levels, disparities in resource distribution between urban and rural areas, and the need for improving availability, affordability, services, equipment and counseling for patients. **Nishchal Shakya** (Faculty of Medicine and Health Sciences) has already published one article from his PhD project and two more are under review. He is planning to submit his thesis in fall 2024.

Clinical decision making for Caesarean Deliveries in a task-sharing context in Sierra Leone

Josien Westendorp

Collaborators:

Capa Care



From November 2022 to June 2023, one of our global health NTNU PhD students, **Josien Westendorp** (Department of Public Health and Nursing), resided with her family of four in Masanga, Sierra Leone. Her project focuses on clinical decision-making for caesarean deliveries in the task-sharing (CapaCare project) context. The COVID-19 pandemic forced her to postpone her data collection, but now she was happy to resume! This project is financially supported by Helse Midt-Norge utenlandstipend and the Lærdal Foundation. With the assistance of local research assistants and NTNU students, she recently completed quantitative data collection in the 10 busiest rural governmental hospitals in Sierra Leone. Qualitative data collection is planned for the autumn of 2024. We eagerly await the results!

ENGAGEMENT EVENTS

GLOBAL HEALTH DAY 2023



How can we make a difference in low- to middle-income countries? How can we have an impact on society? These are some questions that were addressed during the 2023 Global Health Day Conference - '*Leaving no one behind*,' organized by the Faculty of Medicine and Health Sciences, NTNU, in collaboration with St. Olavs Hospital and SINTEF.

The target audience included healthcare providers, researchers, and students from all over the world. The first session focused on global surgery and explored the challenges and opportunities to deliver safe, high-quality surgical and anesthesia care in low- and middle-income countries where the healthcare workforce is limited.

The afternoon session addressed those who lag behind in the work to reach the Sustainable Development Goals (SDGs). You can read the summary of the day prepared by NTNU's global health master students by scanning the QR code.



LEADING MINDS 2024



Kam Sripada (NTNU Centre for Digital Life Norway) was invited to present at Leading Minds, a future-informed conference series established by UNICEF Innocenti. The 2024 Leading Minds conference addressed climate change and was part of a wider journey of global engagement around climate that spans COP, Davos, the UN Summit of the Future and other key moments in 2024.

ENGAGEMENT EVENTS

Nordic Network on Global Health: Network meeting and seminar on decolonizing global health

The Nordic Network on Global Health convened in Oslo for a two-day event on February 22-23, featuring a meeting of this Nordplus-funded consortium and a seminar focused on decolonizing global health education, moderated by Bernadette Kumar and Carmeliza Rosario.



The seminar comprised interactive sessions and discussions informed by preliminary findings from the Nordic Network's ongoing five-country student project, where 11 institutions, including NTNU (led by **Jennifer Infanti**, NTNU Department of Public Health and Nursing), conducted focus group discussions with past or current global health students. During the seminar, participants discussed and made plans to review curricula across institutions with a decolonization lens.

Launch of the new Cochrane thematic group in Norway

NTNU hosted the Norway launch in October 2023 of the new Cochrane People, Health Systems and Public Health Thematic Group. Attended by research, decision makers and other stakeholders from Norway and internationally, the launch heard how the Thematic Group aims to generate evidence to address health systems and public health priorities at the community, systems, and individual level. "At NTNU, we are particularly interested in how the Thematic Group can work with partners in LMICs to identify priority areas for new systematic reviews, to support knowledge translation and to strengthen capacity to do and use systematic reviews." **Simon Lewin** (NTNU Department of Health Sciences in Ålesund), Thematic Group leader at NTNU, said.

Speakers included Prof Angela Oyo-Ita from the University of Calabar, Nigeria and Björn Gustafsson, Vice CEO and Medical Director of the Central Norway Regional Health Authority.



ENGAGEMENT EVENTS

Assessment of oral diseases using dental X-ray images utilizing deep learning techniques

During this event, a series of talks focused on global dental health issues and various approaches to address them. **Abhijit Sen** from NTNU's Department of Public Health and Nursing presented on AI approaches to classify caries and radiographic bone loss using dental X-ray images. The algorithm developed as part of this project aims to create an AI-based decision support tool for dental professionals in clinical settings.



Global health strategic workshop 2024

In February 2024, global health researchers and educators at NTNU gathered for a workshop on how to consolidate and strengthen global health initiatives at NTNU by 2030 and beyond, with the aim of ensuring groundbreaking research and strong education programs. Led by **Håkon Bolkan** and **Elodie Besnier** (NTNU Department of Public Health and Nursing), and moderated by Knut Østby, an expert international development negotiator, participants discussed priorities and key actions for the coming years. The discussions were informed by presentations from **Marius Widerøe** (Director of NTNU Strategic Research Area: Health and Life Science), **Karoline Daugstad** (Director of NTNU Strategic Research Area: Community), and **Ayeshat Tolulope Ibitoye** (EU Adviser at the NTNU Faculty of Medicine and Health Sciences grant office).

BUILDING PARTNERSHIPS

CHAIN visits UNICEF Innocenti



In May 2023, CHAIN colleagues and global health researchers from NTNU gathered at the UNICEF Innocenti offices in Florence, Italy. During the two-day meeting, participants presented their work in the fields of inequalities related to child health and climate change. The meeting also explored collaboration opportunities and how to incorporate research results into policy making processes.

Transdisciplinary collaboration: Medical student visit from Kathmandu Medical College, Nepal

Situ Manandhar, a medical student specializing in community medicine at Kathmandu Medical College (KMC), under the guidance of supervisor Sunil Kumar Joshi, came to NTNU for a five-week visit, hosted by a grant led by **Martina Keitsch** (NTNU Department of Design), *Transdisciplinary Education for a Sustainable Society (SAMAJ)*. **Jennifer Infanti** (Department of Public Health and Nursing) was the NTNU co-host.



Situ is conducting a comparative cross-sectional study titled "Health Status of People Living Near the Okharpauwa Dumping Site." During her stay at NTNU, Situ immersed herself in NTNU's research environments, engaging in brainstorming sessions, attending epidemiology lectures, and delivering a lecture to master students in global health.

BUILDING PARTNERSHIPS

NTNU showcasing research at the Global Health Norway conference 2023



NTNU's global health research was presented at the Global Health Norway conference in Oslo on November 16th. **Håkon Bolkan** (NTNU Department of Public Health and Nursing) presented his work on improving access to surgical care in Sierra Leone. **Terje A. Eikemo** (NTNU Department of Sociology and Political Science) presented CHAIN's work in inequalities in COVID 19 mortality. The conference was co-organized by the Sustainable Health Unit, Centre of Global Health at the University of Oslo and the Norwegian Institute of Public Health on behalf of Global Health Norway. The conference theme was, "Inequity and health system strengthening".

Kathmandu Medical College visiting NTNU



On October 24 and 25, 2023, **Ratindra Nath Shrestha**, the Head of KMC, and **Sunil Kumar Joshi**, Head of the Department of Community Medicine at KMC, visited NTNU's Faculty of Medicine and Health Sciences. During the visit, collaborative initiatives were discussed in follow-up to the signing of a renewed Memorandum of Understanding (MoU) between KMC and the MH Faculty in Nepal, November 2022.

The guests also met with the RCN-funded ADVANCE research project team on violence against women and the NORAD -funded NORHED II academic capacity building project on physiotherapy education. On NTNU's 13th annual Global Health Day 2023, they gave presentations on the persistent barriers to accessing essential healthcare in Nepal.

BUILDING PARTNERSHIPS

Norway-South African delegation visits Nepal



As part of a NORHED II project, a delegation from University of the Witwatersrand (Wits), NTNU, and partners visited Kathmandu University School of Medical Sciences (KUSMS) and Kathmandu Medical College (KMC) in Nepal in spring 2023. The team collaborated on curriculum development with the faculty at KUSMS for Nepal's inaugural master's program in physiotherapy.

Additionally, at KMC, the team co-taught with the faculty for the newly launched bachelor's program in physiotherapy. During this visit, three NORHED PhD students received supervision from NTNU supervisors, OUS/UiO, Wits, and local co-supervisors. The delegation also held meetings with key figures including the Kathmandu University hospital director, the Dean at KUSMS, and the Dean and Rector at KMC.

Guest lectures

In November 2023, **Archana Shrestha**, associate professor, executive director for the Institute of Implementation Science and Health and research director for translational research at Kathmandu University School of Medical Sciences (Nepal), visited NTNU and gave a lecture titled, "Nepal Pioneer Worksite Intervention to Lower Cardiometabolic Risk Factors."

In February 2024, **Soorej Jose Puthooppambil**, associate professor at the Department of Women's and Children's Health, Uppsala University (Sweden), visited NTNU and gave an open lecture on the significance of migrant health.

In May 2024, **Alikhan Mohideen** from the University of Peradeniya, Sri Lanka, visited the Department of Geography at NTNU and gave a public guest lecture on the protracted displacement of Muslims in northern Sri Lanka.

In June 2024, **Sunila Shakya**, assistant professor at the Department of Obstetrics and Gynecology, Kathmandu University School of Medical Sciences, and gynecologist at Dhulikhel Hospital (Nepal), visited NTNU and gave a guest lecture, "Cervical Cancer Prevention in Nepal: Opportunities and Challenges".

NEW DOCTORS

Seven global health PhD candidates successfully defended their theses between January 2023 and June 2024



November 2023

**Pushpanjali
Shakya**

Group-based lifestyle intervention to prevent type 2 diabetes in individuals with prediabetes in Nepal



January 2024

**Mphatso
Mwapasa**

Environmental and dietary exposure to persistent toxic substances (PTS) and trace elements in pregnancy and birth outcomes



March 2024

**Bertha
Chakhame**

The use of misoprostol in the management of incomplete abortion in selected health facilities in Malawi



March 2024

**Håvard
Askim Adde**

Understanding the present to better build the future. A nationwide evaluation of the surgical environment, its workforce, operative output, geospatial accessibility, and associated economic value in Liberia



June 2024

**Chandra
Mandil Yogal**

Obesity, diabetes and hypovitaminosis D among women in a rural district of Nepal: Prevalence and risk factors. A population-based study

NEW DOCTORS



June 2024

Emmanuel Viga

Civic humanitarianism, relational aid and accountability among South Sudanese refugees in Uganda - Rethinking and enriching the humanitarian lexicon



June 2024

Anders Aune

Innovation of a Smartphone-Based System to Improve Detection of Neonatal Jaundice



CELEBRATIONS

First prize for poster at the NTNU Global Health Day 2023

Gabriela Jimenez Diaz



Best PhD student presentation prize at the Norway-Nepal Global Health Conference 2023

Roosa Sofia Tikkanen



EUPHANxt fellowship recipient at the European Public Health Conference 2023.

AMR education grant recipient from the Infectious Diseases Society of America (IDSA), antimicrobial stewardship curriculum 2023.

Anya A. Nowbuth



Best presentation award at the 57th annual meeting of the Scandinavian Society for the Study of Diabetes 2023

Pushpanjali Shakya



NTNU award for Research dissemination 2023

Kam Sripada



STAY IN TOUCH

Keep up-to-date with global health research and events!

At NTNU



NTNU Global Health
monthly seminars



Global Health
Trondheim



Students for
Global Health



Global Health Activities
Innsida channel



Global Impact- Gemini
Center

& Beyond



Nordic Network for Global
Health monthly webinars



Global Health
Norway



Norwegian Chapter of
Women in Global Health



Norwegian Forum for
Global Health Research

ACKNOWLEDGEMENTS

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Thank you for your continued support
in promoting
health for a better world

