



# Eleventh National Summit of Health and Population Scientists in Nepal

"Health, Climate and Population Dynamics: Building Resilient Health Systems for a Sustainable and Equitable Future"

10-12 April 2025

Kathmandu, Nepal

# PROCEEDING REPORT 2025

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**Nepal Health Research Council** 

Ramshah Path, Kathmandu

# Eleventh National Summit of Health and Population Scientists in Nepal

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## **EXECUTIVE SUMMARY**

The Eleventh National Summit of Health and Population Scientists in Nepal was successfully convened by the Nepal Health Research Council (NHRC) with the collective goal of advancing evidence-based health policy and planning in Nepal. The summit reaffirmed the critical role of scientific inquiry in informing national strategies to address emerging health challenges guided by the overarching theme, "Health, Climate and Population Dynamics: Building Resilient Health Systems for a Sustainable and Equitable Future".

Over the course of the summit, participants engaged in in-depth discussions and shared the latest research findings across a range of thematic areas, with a particular emphasis on the intersection of climate change, and health and population dynamics. Climate was prioritised in this year's theme due to its growing and multifaceted impact on health systems, disease patterns, and vulnerable populations. The increasing frequency of extreme weather events, shifting disease vectors, and environmental degradation have placed unprecedented pressure on health service delivery, especially in remote and underserved regions. In response, the summit sought to explore how health systems can anticipate, adapt to, and mitigate the health-related consequences of climate change. The summit underscored the importance of interdisciplinary collaboration and the integration of climate-informed research into national health policy and planning. The plenary sessions, panel discussions, and research presentations served as structured forums for scholarly exchange, critical analysis, and evidence-informed policy dialogue.

The summit witnessed a remarkable level of participation, with approximately 1,200 individuals attending in person and several hundred more joining virtually. This strong presence reflected the growing national and international interest in advancing health research and policy dialogue in Nepal. The summit was formally inaugurated by Honourable Ms. Bidya Bhattarai, Minister of Education, Science, and Technology of the Federal Republic of Nepal. The inaugural session was graced by a distinguished panel of dignitaries and stakeholders from across sectors of health, education, and governance. The inauguration session was attended by special guests Prof. Dr. Shiva Raj Adhikari, Honourable Vice Chair of the National Planning Commission, Prof. R.P. Bichha, Honourable Member, National Planning Commission, Prof. Dr. Anjani Kumar Jha, Vice Chairperson, Medical Education Commission, Government of Nepal, Dr. Bikash Devkota, Secretary, Ministry of Health and Population, and Dr. Pramod Joshi, Executive Chief (Member-Secretary) of NHRC. In addition, the event was attended by Executive Committee Members of NHRC, Vice Chancellors, Rectors, Registrars, and Deans of major academic institutions, Joint-Secretaries, Directors and Division Chiefs of Ministry of Health and Population, renowned international and national guest speakers, researchers, programme managers, journalists, and media professionals.

Nepal's growing commitment to advancing medicine, public health, and health governance stood as a powerful testament throughout the summit. With a remarkable 104 oral

presentations and 118 poster submissions, the event brought together a diverse group of professionals, researchers, policymakers, development partners and students. The topics explored spanned a wide range, from clinical medicine and public health policies to health inequalities, migration, and social development, reflecting the multi-dimensional nature of health systems today. What truly set the summit apart were the panel discussions, which tackled some of Nepal's most pressing and timely health concerns. Critical conversations focused on health insurance, a system that continues to require structural reforms and greater public awareness. Experts highlighted its growing significance as a matter of national policy level discourse in Nepal, stressing the urgent need for inclusive and sustainable coverage models that can effectively serve the country's most vulnerable populations. The discussion around health research governance, recognized as the backbone of an effective health system, was equally vital. Panellists underlined the necessity of establishing strong frameworks and ethical standards to promote clinical research and fellowships within Nepal. At a time when global attention is increasingly turning toward scientific advancement, the summit made a persuasive case for equipping Nepal's medical workforce not just with clinical expertise, but also with the capacity to conduct meaningful research. The discussions challenged the traditional notion that health research should be confined to health professionals alone. Instead, it encouraged a more inclusive, interdisciplinary approach, welcoming contributions from individuals across various fields who are passionate and committed to improving health outcomes. The audience engagement was equally commendable. Participants were not only informed but actively involved, raising questions, offering insights, and contributing to in-depth discussions on national and global health challenges. The energy and enthusiasm in the room signalled a collective readiness to drive change, backed by knowledge, collaboration, and a shared vision for a healthier future.

One of the most uplifting moments of the summit was the recognition of exceptional individuals and teams who have contributed significantly to the field of health research in Nepal. Thirteen distinguished awards were presented across a wide range of categories, each celebrating innovation, dedication, and the spirit of inquiry that fuels progress in healthcare. The awards included: JNHRC Best Research Paper Award, Health Research Award, Young Health Research Award, Mrigendra Samjhana Medical Trust Young Health Researcher Award (Medical Doctor), Mrigendra Samjhana Medical Trust Young Health Researcher Award (NHRC Employee), Health Research Life-time Achievement Award, Best Paper Presentation Award (Poster), Best Paper Presentation Award (Oral), NHRC Best Section Award, NHRC Best Performer Award, Health Journalist Award, Gopal Prasad Acharya Health Research Award, NHRC Lifetime Achievement Award. These honours were awarded based on merit, recognizing creativity, innovation, and impact on health research. Through these recognitions, the summit aimed to convey a strong message: excellence is always acknowledged, dedication is valued, and innovation is indispensable.

The declaration of the summit was presented at its closing, marking a moment of collective commitment towards the shared vision of a healthier Nepal. The event concluded in the esteemed presence of Honourable Minister for Health and Population, Mr. Pradip Paudel, Secretary, Ministry of Health and Population, Mr. Hari Prasad Mainali, Executive Chief

(Member-Secretary) of NHRC, Dr. Pramod Joshi, and Executive Committee Members of NHRC. The Eleventh National Summit of Health and Population Scientists in Nepal did more than just disseminate knowledge; it ignited a movement, a call to action for health professionals, researchers, and citizens alike to take part in shaping the future of health and well-being in Nepal and beyond. The summit concluded with the following key declarations, which encapsulate the collective commitments and outcomes of the event:

- 1. Strengthen and harmonise health research governance through revision of institutional and legislative provisions in a collaborative way in the federal context for promoting responsible conduct of research, and evidence-based policy formulation, planning and effective implementation.
- 2. Increase investment in health, population and environment research to promote quality research for evidence informed decision making.
- 3. Promote human capital in health research by creating conducive environment for young researchers and retention of experienced researchers in the country.
- 4. Strengthen collaboration between researchers, policy makers, academia, scientists, civil society, private sector and community to promote high-quality interdisciplinary research for effective response to existing and emerging health issues and future pandemics through use of new technologies (such as digital, AI) towards strengthening the quality of research.
- 5. Promote interdisciplinary research on wider determinants of health, implementation research and clinical research using one health approach.
- 6. Enhance health research capacity of researchers through regular trainings, fellowships and grants.

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## **BACKGROUND**

The Nepal Health Research Council (NHRC), an autonomous entity under the Government of Nepal, is entrusted with the mandate to promote, coordinate, and regulate health and population-related research nationwide. Since 2015, NHRC has convened the annual National Summit of Health and Population Scientists in Nepal as a prominent platform to disseminate high-quality research findings, foster interdisciplinary collaboration, and advocate for the use of evidence in health policy formulation and strategic planning.

Health research plays a pivotal role in reinforcing health systems, particularly in a country like Nepal where diverse geography, socio-cultural heterogeneity, and limited resources create multifaceted challenges. The generation of context-specific evidence and its effective translation into policies and programmes is essential to improve population health outcomes and ensure equitable access to quality health services.

Despite the acknowledged significance of research, its integration into policy and programme development in Nepal remains limited. The National Health Policy 2019 highlights the imperative to enhance the uptake of evidence in policymaking for both public health advancement and socio-economic development. However, persistent gaps between evidence generation and policy implementation reveal the need for mechanisms that bridge the divide among researchers, implementers, and policymakers.

The Eleventh National Summit of Health and Population Scientists in Nepal, held from 10 to 12 April 2025, was organized under the theme "Health, Climate and Population Dynamics: Building Resilient Health Systems for a Sustainable and Equitable Future." This theme underscored the increasing recognition of the interdependence between health, environmental changes, and demographic shifts. The summit served as a vital forum for presenting innovative research, deliberating on emerging public health challenges, and formulating strategic approaches to enhance health system resilience in the face of global and national crises.

Through the active participation of experts from academia, government institutions, and development partners, the summit sought to facilitate meaningful dialogue, promote evidence-informed decision-making, and strengthen strategic partnerships. These efforts were aimed at advancing sustainable, inclusive, and climate-resilient health systems in Nepal, capable of addressing both current and future public health challenges.

## **OBJECTIVES**

- > To foster meaningful collaboration, innovation, and interdisciplinary dialogue among early-career researchers, seasoned experts, policymakers, and practitioners, with a focus on addressing Nepal's current health and population priorities.
- > To facilitate the systematic exchange and dissemination of research evidence that can inform practical strategies for overcoming emerging health and population challenges at the national and sub-national levels.
- > To underscore the critical role of health research in the formulation of evidenceinformed policies, the design of effective public health programmes, and the strengthening of Nepal's overall health system.
- > To promote a culture of data-driven decision-making by integrating scientific evidence into health governance, planning, and policy development.
- > To support the development of resilient, equitable, and sustainable health systems that can effectively respond to the dynamic challenges posed by climate change, demographic shifts, and health emergencies.

### INAUGURATION SESSION

The inauguration ceremony was held on 10th April 2025, Thursday from 9:00 AM to 10:30 AM. The summit was inaugurated by Hon'ble Ms. Bidya Bhattarai, Minister for Education, Science and Technology. The inaugural session was graced by the following distinguished delegates in the dais:



- Ms. Bidya Bhattarai, Hon'ble Minister for Education, Science and Technology (Chief Guest)
- Prof. Dr. Shiva Raj Adhikari, Hon'ble Vice-Chair, National Planning Commission (Special Guest)
- Prof. R.P. Bichha, Hon'ble Member, National Planning Commission (Special Guest)
- > Prof Dr. Anjani Kumar Jha, Vice Chair, Medical Education Commission (Special Guest)
- > Dr. Bikash Devkota, Secretary, Ministry of Health and Population (Guest)
- > Prof. Dr. Ajit Rayamajhi, Vice -Chairman of NHRC (Session chair)
- > Dr. Pramod Joshi, Member Secretary (Executive Chief), NHRC

The Master of Ceremony, Ms. Sama Thapa, formally welcomed and introduced all the dignitaries present on the dais, along with the participants who attended the summit both in person and virtually through various platforms such as Zoom, YouTube, and Facebook Live. The melodious National Anthem was played in the presence of the Chief guest, special guests, and other distinguished invitees.

The program commenced with a solemn and symbolic lamp lighting ceremony, representing the dispelling of darkness and the illumination of knowledge, innovation, and collective progress. The event was formally inaugurated by Ms. Bidya Bhattarai, Hon'ble Minister for Education, Science and Technology, who graced the occasion as the Chief Guest.

# Welcome Remarks by Dr. Pramod Joshi, Member Secretory (Executive Chief), NHRC

Dr. Pramod Joshi, Member Secretary (Executive Chief) NHRC, extended a formal welcome to all guests, delegates, participants, and invitees on behalf of NHRC. Dr. Joshi emphasised the urgent need to strengthen health systems amid climate change and shifting population dynamics. The National Summit's theme Health, Climate and Population Dynamics: Building Resilient Health



Systems for a Sustainable and Equitable Future highlighted the necessity for an agile, inclusive, and evidence-based health strategies. He reflected on NHRC's journey since 1982 and its evolving role in shaping national health policy through research, ethics, and collaboration. The summit not only fostered innovation and knowledge-sharing but also honoured global contributions to public health. Looking ahead, Dr. Joshi highlighted the organization's ongoing provincial expansions and its embrace of digital innovations such as Artificial Intelligence (AI) to advance decentralised and need based health research. He emphasised that these efforts are crucial to build a sustainable and resilient health future for Nepal. In his address, Dr. Joshi stressed on the urgent need to address the increasingly complex intersections of environmental changes, demographic shifts, and public health challenges.

He highlighted that at a time when climate variability is already altering disease patterns and increasing population vulnerability, demographic shifts are further intensifying the strain on already fragile health systems. Dr. Joshi emphasised the need for resilient, inclusive, and adaptable health systems guided by evidence-based strategies. He noted that the summit offers a vital platform for reflection, dialogue, and collaboration among national and international experts, researchers, and academics.

Reflecting on the journey of NHRC, he noted its origins in 1982 with the Nepal Medical Research Committee and its formal establishment through a parliamentary act in 1991. Since then, NHRC has been a leading institution promoting research that shapes national health policy and practice. Initiated in 2015, the annual National Summit of Health and Population Scientists has evolved into a key platform for evidence-based dialogue, innovation, and partnership-building. He expressed confidence that this edition would be equally impactful in addressing complex health issues and inspiring new strategies. NHRC's global influence has expanded through international collaboration, with researchers from Nepal and abroad helping redefine healthcare priorities. The summit, as he noted, honours their contributions while serving as a launchpad for future innovations and transformative ideas.

Dr. Joshi emphasised NHRC's commitment to research integrity, ethical standards, and support for national policy. He stressed on how ethics remains central to NHRC's operations and is upheld through training, workshops, and oversight by the Ethical Review Board. Looking ahead he highlighted the importance of implementation-oriented research, especially in light of digital advancements and emerging technologies like artificial intelligence, which pose both opportunities and challenges. To promote more inclusive and accessible research, NHRC aims to establish regional branches across all seven provinces, further decentralising and democratising health research in Nepal.

He concluded by stating that health research must now mirror the fast-changing global landscape; from climate impacts to population shifts, and aim to build responsive, equitable, and sustainable systems. Welcoming all participants, he expressed hope that the summit would contribute meaningfully to a healthier and more resilient Nepal through shared insight and collaboration.

# Opening Remarks: Dr. Bikash Devkota, Secretary, Ministry of Health and Population

Dr. Bikash Devkota emphasised the critical role of the Nepal Health Research Council in producing high-quality, evidence-based research to inform national health priorities. He highlighted that the generation of robust scientific evidence is only the first step; its effective integration into various levels of the health system is equally essential for developing impactful and responsive health policies. Dr. Devkota called for strategic action from NHRC, particularly in the area of



human resource management, noting that well-trained and efficiently managed health professionals are fundamental to delivering quality care and strengthening institutional capacity.

He further stressed the value of collaborative efforts, both nationally and internationally, in enhancing the effectiveness and reach of health research. Dr. Devkota praised NHRC for its commendable leadership in advancing qualitative research and translating findings into actionable policies, plans, and programmes. However, he emphasised that these initiatives had to be grounded in a well-structured and periodically reviewed strategic plan to ensure consistency, sustainability, and long-term progress. Such a road-map, he noted, was essential for building a resilient and responsive health system capable of meeting present and future challenges.

# Opening Remarks: Prof. Dr. Anjani Kumar Jha, Vice Chair, Medical Education Commission

Prof. Dr. Anjani Kumar Jha stressed that the principal mandate of the NHRC is to conduct scientific research and provide policy briefs to inform Government for evidence informed decision-making. He highlighted that platforms such as this summit are instrumental in offering researchers emerging the opportunity to present their work and demonstrate their potential. He further emphasised the importance of institutional encouragement, suggesting



that the NHRC should establish mechanisms for recognizing and financially supporting outstanding researchers, thereby fostering a culture of research excellence.

Prof. Jha also articulated that meaningful contributions to the medical field can arise from small-scale studies led by young researchers, whose innovative approaches hold

significant potential for impact. He reiterated the importance of national and international collaboration in strengthening the health system and acknowledged the NHRC's pivotal role in generating quality research and informing evidence-based policies, plans, and programmes. He expressed his conviction that the medical and academic sectors should be guided by a commitment to public service and the advancement of knowledge, rather than by profit-driven motives.

# Opening Remarks: Prof. Dr. R.P. Bichha, Hon'ble Member, National Planning Commission

Prof. Dr. R.P. Bichha addressed that the primary mandate of the National Planning Commission (NPC) is to formulate the national vision, development policies, periodic plans, and sectoral policies for the overall development of the nation. He also elaborated on the need to strengthen coordination between NHRC and NPC in accordance with the NPC's mandate and Terms of Reference (ToR). He stressed that achieving Universal Health Coverage (UHC) is not only an international



obligation but also a constitutional right of every citizen in Nepal. To realize this vision, UHC must be guided by the principles of equity, inclusiveness, and gender sensitivity, with the goal of delivering quality basic healthcare services in every ward of Nepal. However, he acknowledged that full implementation of this vision has yet to be realized and urged researchers and scientists to generate evidence that can be translated into policy to address this gap. He further noted that the second major commitment is to ensure access to secondary and tertiary healthcare services through Nepal's health insurance system. Currently, out-of-pocket expenditure (OOP) in Nepal stands at approximately 55%, which is projected to decrease to below 20% within the next five years. To achieve this target, he called for the generation of robust scientific evidence to support the development of concise policy briefs.

Prof. Bichha also underscored the challenges of building a climate-resilient health system amidst growing threats such as global warming, floods, landslides, erratic rainfall, air pollution, and drought. While commitments were made during COP29 to address these issues, the situation has been further strained by the withdrawal of funding from key donors such as USAID. He highlighted the urgent need for sustaining a consistent and resilient climate-health system through evidence-based policy guidance.

Referring to the recent findings from the Nepal Demographic and Health Survey (NDHS), he expressed concern over the country's growing population. With 64% of the population falling within the productive age group (15–64 years), Nepal is currently experiencing a demographic window of opportunity. However, this population dividend has not been adequately utilized. He urged scientists and researchers to produce scientific evidence that can guide policy formulation to make the most of this opportunity.

He pointed out the rising trend of aging in the population and the associated increase in the dependency ratio, which will pose significant challenges in service provision in the coming years. Additionally, he highlighted the alarming rise in mental health issues, particularly suicide, and called for effective strategies to address this growing concern. Given the resource constraints, he stressed the importance of evidence-based policymaking to address these multifaceted challenges. In particular, he urged the scientific community to propose evidence-backed options for reducing greenhouse gas emissions and guiding national development strategies.

In conclusion, Prof. Bichha expressed his gratitude to the NHRC for the opportunity to speak at the summit and reiterated the importance of continued collaboration among research institutions, policymakers, and the government.

# Opening Remarks: Prof. Dr. Shiva Raj Adhikari, Vice President of National Planning Commission (NPC)

Prof. Dr. Shiva Raj Adhikari expressed his gratitude to the NHRC for organizing the eleventh research conference and providing a platform for researchers to present their work. He highlighted the growing challenges in health, climate change, and population dynamics, emphasizing the need for more research on the interlinkages between these areas. He noted that climate change has a direct impact on public health and called for stronger research on association



mechanisms to guide effective policy-making. He stressed that the National Planning Commission prioritises synergy and trade-offs in policy decisions, where synergy drives positive changes and trade-offs help reduce negative effects. He also mentioned that for the first time, a budgetary plan was developed using an intersectoral approach to address conflicting impacts among sectors like health, agriculture, water, and sanitation.

Furthermore, Prof. Adhikari urged NHRC to ensure that the conference produces measurable outputs that can inform policy processes, especially by identifying the achievements, challenges, and policy-relevant variables. He pointed out the need for innovation and modernization in the health system, stating that the sector has been overly reliant on conventional methods. He criticised the tendency to focus on traditional infrastructure, like increasing hospital beds, instead of investing in health digitalization and new technologies. He encouraged collaboration between NPC and NHRC to transform the health system through innovation and extended his best wishes for the success of the conference.

# Opening Remarks: Ms. Bidya Bhattarai, Hon'ble Minister for Education, Science and Technology

Hon'ble Minister for Education, Science and Technology, Ms. Bidya Bhattarai, commended NHRC for its pivotal role in regulating and advancing health research in Nepal over the past three decades. She emphasised that health policies must be driven by evidence-based research rather than political ideologies, and acknowledged NHRC's significant contributions to strengthening the national health system, especially during the COVID-19 pandemic. She



praised NHRC's efforts in health research regulation, capacity building of researchers, and engagement with both national and international health scientists, describing these efforts as essential, timely, and impactful. She stressed the need for research to address pressing areas such as nutrition, non-communicable diseases (NCDs), mental health, elderly care, disaster prevention, and climate change, with a focus on measuring potential outcomes and impacts. She further appreciated how the summit fostered the exchange of research findings and facilitated connections among researchers and organizations, which is crucial to achieving the health-related Sustainable Development Goals (SDGs) and enhancing service delivery.

In her opening remarks at the conference, Ms. Bhattarai highlighted the importance of the event as a valuable platform for meaningful dialogue among national and international researchers on health systems and policy. She stressed that research and evidence-based findings are vital for effective policy formulation and for reducing the influence of political interests in decision-making. She called for stronger coordination between education, health, and research sectors, aligning with the goals of the National Health Policy 2076 and the 16<sup>th</sup> Plan (2081/82–2085/86), which aim to build an educated, healthy, and self-reliant nation. She recognised federalism's role in improving access to health and education services at the local level, while also urging attention to persistent inequities. She expressed confidence that fostering collaboration among all levels of government and research institutions would pave the way for sustainable development and more effective evidence-based planning.

#### Closing Remarks: Prof. Dr. Ajit Jung Rayamajhi, Vice-Chairman, NHRC

Prof. Dr. Ajit Jung Rayamajhi accentuated the NHRC's unwavering commitment to advancing high-quality research through a multisectoral approach, which is essential for addressing the increasingly complex and interconnected challenges facing the health sector today. He acknowledged that the summit has served as a pivotal platform, offering fresh perspectives and strategic direction not only in the realms of health, climate, and population dynamics but also in broadening the overall understanding and methodology of research itself.

Prof. Rayamajhi emphasised the importance of collaborative engagement among national and international experts, noting that such partnerships are instrumental in strengthening Nepal's health system. He highlighted NHRC's vital role in fostering evidence-based policy formulation and programme implementation, particularly within the evolving context of federalism. He reaffirmed the council's dedication to promoting an intersectoral research framework that supports the development of



a resilient, inclusive, and sustainable health system for the benefit of future generations.

## **DAY I: SCIENTIFIC SESSIONS**

#### Plenary Session I: Building Resilient Health System

Dr. Mahesh Kumar Maskey, Former Executive Chairman of NHRC and Dr. Tanka Prasad Barakoti, Director General of Department of Health Services jointly chaired the first plenary session of the Summit. The session consisted of a keynote speech by Prof. Dr. Shiv Raj Adhikari, Vice Chair of the National Planning Commission, followed by six other invitees.



S.N.	Presenters	Topics
1.	Prof. Dr. Shiva Raj Adhikari	Using Resources Wisely in Health Sector
2.	Dr. Puspa Raj Pant	Empowering communities to strengthen health care systems in the face of emerging health and financial challenges
3.	Prof. Wei Ma	Impact of Climate Change and Extreme Weather Events on the transmission Risk of Dengue Fever in China
4.	Dr. Nishant Sagar	Bihar Health System Digitalization (BHAVYA)
5.	Dr. Guna Nidhi Sharma	Investing in Resilience: Nepal's Health Financing Landscape in a Changing Global Context
6.	Prof. Vibhu Paudyal	Non-medical prescribing to widen access to medicines and mitigate health inequalities: International experiences
7.	Mr. Ravi Kant Mishra	From Constitutional Provision to Implementation: An Assessment of Basic Health Care Services in Nepal Using Demographic Health Survey Data

#### **Key points**

- Misallocation, underutilisation, and fragmented systems lead to ineffective interventions and wasted public resources. Budgeting should be driven by sectoral priorities, emphasizing both equity and efficiency (maximized outcomes).
- High out-of-pocket expenditure (OOP) costs indicate weak financial protection and push vulnerable populations into poverty. The inverse relationship between health status and financial risk protection must be addressed by strengthening public health financing and reducing direct costs for citizens.

- Empowered community groups demonstrated their capacity to influence local health policy, particularly by advocating for improved road safety measures, proving that local voices, when organized and informed, can contribute meaningfully to public health governance.
- WHO has identified climate change as a primary driver for the global spread of dengue fever. Additionally, climate scenarios predict varying risks attributed to hydrological conditions and changing mosquito distributions, with significant risk areas projected in South, East, and Central China under different Representative Concentration Pathway (RCP) scenarios, ultimately linking climate and hydrological factors to dengue fever incidence.
- The BHAVYA initiative under the Mukhyamantri Digital Health Yojana represents a transformative step toward digitalizing Bihar's health system by integrating multiple health facilities and legacy applications into a unified, patient-centric digital ecosystem designed to enhance service delivery, accountability, and accessibility.
- Without investments in health, education, employment, and governance, the potential of the demographic dividend can turn into a peril.

#### **Future Direction**

- Implement transparent, priority-based budgeting systems that minimize waste, ensure efficient spending, and strengthen institutional practices against political or administrative disruptions.
- Develop or strengthen insurance systems and public subsidies to reduce OOP payments, enhance access, and improve health outcomes, especially for vulnerable populations.
- Strengthening collaboration between communities and local governments is essential to build responsive health systems, establishing structured communication channels will ensure that grassroots insights effectively inform policies and interventions.
- Expanding field and laboratory studies to provide empirical evidence supporting theoretical models of dengue transmission under climate change is necessary. Developing interdisciplinary coupling models that integrate climate, socio-economic, ecological, and health policy factors to simulate future dengue dynamics is needed.
- Accelerate the expansion of integrated digital health platforms like BHAVYA across states and regions, ensuring interoperability with existing systems and enabling real-time data analytics for improved health governance and evidence-based policymaking. Invest in climate-resilient healthcare infrastructure by building predictive systems to monitor climate-sensitive health risks (e.g., heatwaves and vector-borne diseases) and strengthen healthcare providers' capacity to respond effectively to environmental and public health emergencies.
- Effective implementation of the provisions outlined in the National Health Financing Strategy is necessary to ensure that the cost of BHS per individual is based on population, geography and disease burden.

#### Plenary Session II: Health Policy and System Research

Plenary Session II was jointly chaired by Prof. Dr. Chop Lal Bhusal, former Executive Chairman of NHRC and Dr. Krishna Paudel, Chief of Policy Planning and Monitoring Division, Ministry of Health and Population, Government of Nepal. The session featured an invited talk by Prof. Padam Simkhada, followed by three invited oral paper presentations.



S.N.	Presenter	Торіс
1.	Prof. Dr. Padam Simkhada (Invited Talk)	Strengthening Evidence Informed Health Policymaking in Nepal: The Critical Role of Evidence Synthesis
2.	Prof. Dr. NK Arora (Invited Talk)	Life Course and Adult Immunization-Country Experience and leads for Implementation
3.	Prof. Dr. Jens Seeberg (Invited Talk)	Antimicrobial Resistance and Occupational Health
4.	Dr. Kaushik Chattopadhyay (Invited Talk)	Diabetes Management by Ayurvedic Practitioners in Nepal: A Feasibility Cluster Randomized Trial Comparing Clinical Guideline to Usual Practice and an Associated Qualitative Study

#### **Key Points**

- Evidence synthesis is vital for Nepal, as it enables the development of health policies based on the best available global and national research. This process supports informed, transparent, and impactful decision-making, contributing to stronger health governance and systems.
- Antibiotics have become an integral part of health infrastructure, influencing both access and constraints in healthcare delivery.
- Antimicrobial Resistance (AMR) tends to rise in low-income contexts and is more prevalent among migrant workers than among resident populations and occupational environments as an often-overlooked contributor to AMR.
- Other major drivers include weak governance, corruption, under-resourced health systems, and low public health expenditure. On the other hand, higher education levels were found to significantly reduce the risk of AMR.

#### **Future Directions**

■ There is an urgent need to build a stronger bridge between research and health policy in Nepal. A key recommendation is the establishment of a National Evidence Synthesis

Centre. Although the number of primary research studies in the country is growing, there remains a lack of structured efforts to synthesize these findings and develop accessible policy briefs.

- Tackling AMR requires robust data collection at both national and sub-national levels. As AMR is a multifactorial and complex issue that spans multiple sectors and stakeholders, a coordinated multidisciplinary approach is essential for developing sustainable solutions. Improving working conditions and reducing work-related illnesses can also play a crucial role in mitigating the drivers of AMR.
- The summit emphasised the importance of continued collaboration between academic institutions, government agencies, and healthcare practitioners to ensure that research translates into actionable policies that strengthen Nepal's health system.

#### Parallel Session I: Non- Communicable Disease (NCD)

Prof. Dr. Bhagwan Koirala, former Board Member of NHRC and Dr. Chandra Bhal Jha, Director, Epidemiology and Disease Control Division, Department of Health Services, Ministry of Health and Population jointly chaired the first parallel session. The session comprised of a three invited talk presentation followed by seven oral paper presentations.



S.N.	Presenters	Topics
1.	Dr. Binod Yadav (Invited Talk)	Vitamin D and Human Health: Insights from Local Studies in Nepalese Population
2.	Dr. Mahendra Bhatt (Invited Talk)	Bio-banking and National Health Security
3.	Ms. Evelyne Kestelyn (Invited Talk)	Considerations to building a sustainable and equitable roadmap for clinical trial conduct
4.	Mr. Arjun Poudel	Awareness and compliance with tobacco control policies among retailers nearby school in Arghakhanchi district of Nepal: A mixed method study
5.	Mr. Pashupati Pokharel	Spectrum of Overweight and Obesity among School Going Population of Nepal: A Meta-analysis
6.	Mr. Rajendra Dev Bhatta	Dietary Salt Intake in Suburban Community of Nepal: Findings from a 24-Hour Urinary Sodium Excretion
7.	Ms. Sanchita Subedi	Prevalence and predictors of glycemic control among diabetic patients in Lalitpur: A hospital based cross sectional study

S.N.	Presenters	Topics
8.	Mr. Suman Sapkota	Age-Sex Distribution of Overweight and Obesity in School- Aged Children and Its Predictors: Insights from a Multi-country Study with a Focus on Nepal
9.	Ms. Sushmita Ghimire	Effectiveness of the awareness programme on Non Communicable Disease among Future Female Nursing professionals of Nepal
10.	Ms. Ashraya Acharya	Linking community to public primary health center for management of hypertension: An implementation study of an integrated digital health application in rural Nepal

#### **Key points**

- Highly non-compliance with the provisions that sale of loose/ stick cigarettes and sale to minors aged below 18 years.
- Being unaware of tobacco control rules, frequent violations of most of the provisions by retailers, and poor implementation of enforced legislation were the core insights from the study.
- The prevalence of overweight/obesity was higher in urban areas compared to rural areas.
- Compared to previous years' overweight/obesity was in rising trend after 2019.
- Prevalence of uncontrolled diabetes varies significantly, ranging from 49% to 78% across different countries.
- Poor glycaemic control increases risk of hospitalization, progression of complications and cost of diabetes also.
- The average daily salt intake in suburban Nepali community is nearly double than the recommended daily intake.
- Individual with both low physical activity and poor dietary habits has higher risk of developing overweight/obesity.
- Integrating government NCD programmes into the PCL nursing curriculum can provide future healthcare providers with practical knowledge and better prepare them to promote health at the community level.

#### **Future Direction**

- The retailers have to be informed and empowered on legal provisions of tobacco control which may leads to compliance and save the lives of millions of minors; those are as the future of the country.
- Tobacco control-specific inspection and market monitoring have to be expanded and strengthened as per federal context, focusing on retail groceries and eateries close to school.

- To address this issue, school curricula should emphasise healthy eating habits, physical activity, and educate young individuals about the long-term consequences of overweight and obesity in adulthood.
- This research opens door for key stakeholders for conducting nationwide studies focusing on non-communicable diseases in young population of Nepal.
- This highlights the need for targeted interventions to improve long-term glycemic control and reduce the risk of diabetes-related complications particularly for rural residents and individuals with uncontrolled blood pressure.

#### Parallel Session II: Reproductive, Maternal, Neonatal and Child Health (RMNCAH)

Dr. Bibek Kumar Lal, Director of Family Welfare Division, Department of Health Services, Ministry of Health and Dr. Mahesh Puri, Sexual and Reproductive Health and Rights expert jointly chaired the second parallel session of the Summit. The session comprised of ten oral paper presentations.



S.N.	Presenters	Topics
1.	Ms. Hira Niroula (Invited Talk)	Community Health nurses delivered community base bundled RMNCH intervention in Nepal: Early insights from implementation research
2.	Ms. Sara Elizabeth Baumann	A realist synthesis of menstrual seclusion interventions in Nepal: How programmes work, for whom, in which contexts, and why?
3.	Ms. Aarti Chaudhary	Socio-economic and demographic determinants of pregnancy pressure among married women in Nepal: An analysis of autonomy and ethnic disparities
4.	Mr. Amrit Lamichhane	Trends and Causes of Mortality in PLHIV at Makawanpur ART Center, Hetauda Hospital
5.	Ms. Chetana Pokharel	Menstrual knowledge, hygiene management practices and hygiene needs among the school adolescent girls of Gokarneshwor Municipality, Kathmandu District

S.N.	Presenters	Topics
6.	Ms. Deepesha Shilpakar	Measuring age interaction with pesticide exposure during pregnancy and low birth weight: A hospital based retroperspective cohort study in Chitwan, Nepal
7.	Ms. Shristi Thapa	Facilitators and Barriers to Human papilloma virus (HPV) Vaccine Uptake among Adolescent Girls in Kathmandu District: A Mixed-method study
8.	Ms. Sujata Adhikari	Delivery Care Practices and Associated Barriers Among Women in Soru Rural Municipality, Nepal
9.	Mr. Khem Narayan Pokhrel	Equity Gaps in Determinants of Neonatal Mortality in Nepal: Insights from NDHS 2016 and 2022 Analysis
10	Ms. Sandhya Niroula	Correlates of never testing for HIV among men who have sex with men in Nepal

#### **Key Points**

- Community health nurses provide community-based, longitudinal health services using a continuum of care approach through mobile platforms, in coordination with Female Community Health Volunteers (FCHVs) and local health facilities.
- The pressure to conceive is deeply rooted in cultural, familial, and societal expectations.
- A significant proportion of adolescents still exhibit inadequate knowledge and poor menstrual hygiene practices.
- Stigma and discrimination remain major barriers to mental well-being and healthcare access for People Living with HIV/AIDS (PLHIV), often resulting in deaths due to non-HIV-related causes, particularly suicide.
- The risk of low birth weight was found to be 48% higher in young women exposed to pesticides during pregnancy compared to those not exposed.
- Vaccine awareness campaigns through mass media, school-based health education programmes, and parental education have been effective in reducing misconceptions about the Human Papillomavirus (HPV) vaccine in communities.
- A considerable proportion (42%) of deliveries still occur at home, primarily due to the inaccessibility of nearby health facilities.
- Higher neonatal deaths in Nepal were observed among mothers with low or no education and those who experienced early marriage. Women's involvement in decision-making, deliveries assisted by Skilled Birth Attendants (SBAs), and proper postnatal care were positively associated with reduced neonatal mortality (NDHS, 2022).

#### **Future Direction**

- The government should work to eliminate barriers and raise community awareness through mobile platform initiatives based on the continuum of care approach.
- Policymakers must focus on empowering women, promoting reproductive rights, and challenging traditional norms that perpetuate early and pressured childbearing.
- Collective efforts from families, schools, and local governments are required to create an enabling environment through awareness programmes, school-based health education, adequate menstrual hygiene facilities, and open dialogue.
- The government needs to strengthen transportation infrastructure and promote institutional delivery awareness by ensuring the availability and retention of skilled health workers and essential medical equipment at health facilities.
- An integrated healthcare model that includes mental health services, social inclusion, and counselling psychology is essential to reduce indirect causes of death among PLHIV.
- Health education focused on preventive measures is critical to protect pregnant women, particularly those working in chemical and agricultural sectors, from harmful environmental exposures.
- A large-scale, nationwide study should be conducted to assess vaccine awareness, coverage, and the barriers and enablers influencing acceptance of new vaccines.
- Expanding integrated home-based care, promoting deliveries attended by SBAs, and enhancing women's education will contribute significantly to achieving sustainable goals for reducing neonatal mortality rates.

#### Parallel Session III: Digital Health, Mental Health and Well-being

Dr. Roshan Pokhrel, former secretary of Ministry of Health and Population chaired the parallel session of the summit in Hall C. The session comprised of invited talks by Dr. Bishal Bhandari and Mr. Ramesh Subedi respectively, followed by eight oral paper presentations.



S.N	Presenters	Topics
1.	Dr. Bishal Bhandari (Invited Talk)	AI: Transforming Global Health, one Algorithm at a time
2.	Mr. Ramesh Subedi (Invited Talk)	National Digital Health Blueprint
3.	Mr. Khim Bahadur Khadka	Insights and Challenges from the Initial Implementation of Digital Health Initiatives in Gandaki Province, Nepal
4.	Ms. Sulata Karki	Digital literacy and factors associated with digital technology use among auxiliary nurse midwives in Nepal
5.	Dr. Kamal Gautam/ Mohan Prasad Pudasaini	Mobile Based Ecological Momentary Assessment and Machine Learning for Predicting Suicidal Ideation Among Gay, Bisexual, and Other Men who Have Sex with Men
6.	Ms. Dikshya Adhikari	Burnout and its' associated factors among health workers: A hospital-based cross-sectional study from Pokhara
7.	Ms. Sajani Basan	Quality of life, stress and its coping strategies among the parents of children with autism spectrum disorder in Kathmandu valley: A mixed method study
8.	Mr. Prakash Pant	Preliminary Impact of Multi-Component Family Intervention to Lower Depression and Address Intimate Partner Violence (MILAP) Among Young Married Women
9.	Mr. Dogendra Tumsa	Suicide Prevalence in Nepal: Evidence from the 2021 Census
10.	Mr. Arabind Joshi	Prevalence Of Burnout and Its Associated Factors Among Doctors in Nepal

#### **Key points**

- Artificial Intelligence (AI) serves as a catalyst for global health equity by expanding access to care, strengthening epidemic response, improving mental health support, and optimising nutrition. Its transformative potential helps bridge healthcare gaps, especially in underserved populations, by enabling timely, efficient, and data-driven health interventions.
- Digital health offers vast opportunities to enhance the quality of health services and patient care by making health systems more efficient, sustainable, and capable of

delivering affordable, equitable care. It plays a crucial role in strengthening service delivery in the digital era. The Global Digital Health Strategy underscores the importance of classifying health data as sensitive personal information, requiring robust safety and security standards for its protection.

- Digital tools like EMR, e-HMIS, PRTS, and FHP are transforming healthcare delivery by improving service access, quality, and record systems, though challenges persist in digital literacy, infrastructure, and sustainability.
- The use of digital health technologies by Auxiliary Nurse Midwives (ANMs) is not only dependent on the availability of technology but also significantly influenced by factors such as their age, education level, confidence, motivation, and familiarity with technology (socio-demographic and psychosocial factors). There is a need for consistent and hands-on use of digital tools in their daily work, skill development programmes to build their digital literacy, and tailored training that addresses the specific needs and challenges of different groups of ANMs based on their backgrounds.
- Mobile-based Ecological Momentary Assessments (EMAs) can predict suicidal ideation and should be expanded as part of suicide prevention strategies.
- Parents of children with autism spectrum disorder (ASD) face various psychosocial burdens and struggles that affect their quality of life.
- The Multi-Component Family Intervention (MILAP) significantly reduced moderate depression among young married women, with the percentage of women scoring PHQ-9 > 9 (indicating moderate depression) decreasing from 46% at baseline to 13% at the 6-month follow-up.
- The 2021 census data revealed that suicide death rates per 100,000 people differ across Nepal's ecological regions, with the Mountain region having the highest rate (24.04), followed by the Hill region (19.98), and the Terai region having the lowest rate (16.25).
- A high prevalence of burnout was found among doctors in Nepal, particularly among those under 35 years of age (75.5%) and males (75.8%), with rates exceeding those in neighbouring countries. Job dissatisfaction was identified as the strongest factor contributing to overall burnout across all domains of the Copenhagen Burnout Inventory (CBI).

#### **Future Direction**

- Leverage AI to overcome healthcare barriers in underserved communities by expanding AI-driven solutions tailored to local needs and integrating them into health systems to improve equity and outcomes.
- Ensure effective planning, piloting, capacity building, and system maintenance to support the long-term success and scalability of digital health innovations.
- Strengthen data privacy, digital infrastructure, and equitable access while aligning national efforts with the Global Digital Health Strategy to enhance routine healthcare delivery.

- Empower healthcare providers with targeted training to optimise the use of digital technologies and improve patient care.
- Integrate and scale mobile-based EMAs within national suicide prevention programmes for early detection and timely intervention.
- Address high burnout rates among healthcare workers through comprehensive action plans focusing on job satisfaction and root cause analysis.
- Implement policy-level interventions, including financial support, specialised education, and awareness programmes, to support families affected by ASD.
- Expand MILAP through randomised controlled trials to validate its effectiveness in reducing depression, intimate partner violence, and PTSD among young married women.
- Strengthen mental health research and incorporate mental health programmes into schools and workplaces to tackle the high suicide rates in Nepal.
- Collaborate among medical councils, associations, academic institutions, and government bodies to develop strategies that improve doctors' job satisfaction and reduce burnout.

## **DAY II: SCIENTIFIC SESSIONS**

#### **Plenary Session III: Health Research Governance**

The panel discussion under the theme Health Research Governance was chaired by Prof. Dr. Ramesh Kant Adhikari former Chair of Ethical Review Board of NHRC and Prof. Dr. Arati Shah, Chair of Ethical Review Board of NHRC. The moderator for the session was Dr. Khem B Karki, former Executive Chief of NHRC. The distinguished panellists for the session were Prof. Dr. Rajeev Shrestha, Register, KU; Prof. Dr Prakash Ghimire, Professor, TU; Dr. Krishna Paudel, Chief, Policy



Planning and Monitoring Division, MOHP; Dr. UN Yadav, International Researcher from Australia; Dr. Sabitri Sapkota, Executive Director, Possible and Dr. Rajendra BC, Consultant, NHRC.

#### **Key Points**

- NHRC needs to focus on periodically update the guidelines to reflect evolving ethical standards and respect for autonomy, ensuring a clear and effective pathway for health research governance.
- Research should be driven by national health priorities, designed for real-world implementation, and aimed at informing policy, with global collaboration enhancing its effectiveness and reach.
- Community-based research should recognize communities as co-authors, ensuring their knowledge is valued, fostering inclusivity and ownership, and enhancing the acceptance of research at policy and governance levels.
- Nepal's flexible approach to research governance can sometimes compromise standard research practices, particularly in areas such as data ownership and ethical oversight. To uphold ethical values and ensure transparency, there is a need to strengthen national guidelines, promoting accountability both at the governmental level and within the community.
- Ethical practice and researcher satisfaction are essential for innovation and safeguarding participant dignity.
- Research should be strategically aligned with national policy-making for greater impact.
- Researchers must be trained and supported to produce collaborative, evidence-based outcomes.

#### **Future Direction**

- Periodic revision of research guidelines to align with evolving ethical standards and strengthen respect for autonomy, ensuring a clear and effective framework for health research governance.
- Promote research that is aligned with national health priorities and designed for practical implementation, while strengthening global collaborations to enhance policy impact and improve population well-being.
- Advance community-based research by recognising communities as co-creators of knowledge, ensuring inclusivity, shared ownership, and greater acceptance of research outcomes at both policy and governance levels.
- Strengthen research impact by aligning it with national policy-making through systematic categorisation and by equipping researchers with the necessary training to produce collaborative, policy-relevant evidence.
- Foster a research culture that values personal ethics and researcher well-being, recognizing that ethical integrity and personal fulfilment are essential for meaningful innovation and the respectful treatment of research participants.
- Align research strategically with national policy-making by fostering a collaborative, evidence-generating approach, supported by structured researcher training to ensure meaningful contributions to informed decisions and sustainable development.

#### **Parallel Session IV: Infectious Disease and Epidemic Preparedness**

Prof. Dr. Jeevan B. Sherchand former member of Ethical Review Board NHRC and Dr. Ranjan Bhatt, Director, National Public Health Laboratory jointly chaired this parallel session. The session comprised of an invited talk by Dr. Basu Dev Pandey followed by nine oral paper presentations.



S.N	Presenters	Topics
1.	Dr. Basu Dev Pandey (Invited Talk)	Advancing the fight against Dengue: The development of an effective vaccine
2.	Ms.Samikshya Singh	Mapping Nepal's Infectious Disease Surveillance: Systems, Stakeholders, and Challenges
3.	Dr. Ram Hari Chapagain	Parental motivations and perceived barriers to participating in paediatric vaccine clinical trials: Findings from the OCV-S trial in Nepal

S.N	Presenters	Topics
4.	Mr. Binod Aryal	Serum Zinc levels in Leprosy patients with ENL Reaction, Non Reaction Controls and Healthy Controls: A comparative study
5.	Prof. Dr. Nisha Jha	Knowledge, attitude and practice towards antimicrobial resistance and anti-microbial adherence among female community health volunteers before and after an educational intervention
6.	Mr. Amrullah Siddiki	Molecular Docking and pharmacokinetic studies of Punica granatum peel phytocompounds to explore potential antibacterial Activity
7.	Mr. Krishus Nepal	Surveillance of Drug Resistance in Recurrent Leprosy cases using Mouse Foot Pad (MFP) Assay
8.	Mr. Suraj Parajuli	Policy Analysis of Antimicrobial Resistance in Nepal: Challenges Gaps, and Recommendation
9.	Dr. Mahesh Shah	Clinical profile of Leprosy in Children Under 10 years in Nepal: A 29- Year Review
10.	Dr. Prabhat Adhikari	Avoid Fluoroquinolones as Empiric Therapy, Reserve for Tuberculosis

# **Key Points**

- Innovative control activities and an effective vaccine are essential to achieve zero dengue deaths by 2030.
- Challenges in dengue vaccine development include the existence of four DENV serotypes, the need for a tetravalent formulation, and the lack of validated animal models for immune response and disease experience.
- The Vaccine Development and Research Centre is working on developing a dengue vaccine by targeting infectious diseases and establishing an mRNA vaccine platform.
- Key disease surveillance systems in Nepal include EWARS, SORMAS, One Health and Zoonotic Diseases Surveillance, AMR Surveillance, Vector and Entomological Surveillance, Influenza Surveillance, and Vaccine-Preventable Disease (VPD) Surveillance.
- Despite multiple surveillance systems, there is limited evidence on stakeholder engagement and interaction among these systems, hindering comprehensive monitoring and response.
- Paediatric vaccine clinical trials are crucial for evaluating and ensuring the safety and efficacy of new vaccines for children.

- The primary barriers to continuing the Oral Cholera Vaccine-Simplified (OCV-S) trial are fears of possible side effects (42.8%), lack of time (28.7%), and perceived difficulty of study procedures (23.8%). Nonetheless, the majority of participants (91.9%) did not consider discontinuing the trial.
- Key motivations for participation in the OCV-S trial include desire for improved child health (56.2%), intention to prevent cholera (13.6%), and encouragement from friends, family, and neighbours.
- Zinc deficiency may contribute to immune dysregulation observed in Erythema Nodosum Leprosum (ENL), highlighting the potential benefit of zinc supplementation as part of therapeutic intervention.
- The burden of AMR is significant in developing, low, and middle-income countries like Nepal.
- Community engagement is essential to understanding AMR and implementing prevention strategies.
- Drug potentials from Punica granatum peel were studied using molecular docking targeting D-alanine-D-alanine ligase (3N8D) from gram-positive bacteria and DNA gyrase (4Z2D) from gram-negative bacteria. Compounds such as granatin A, quercitrin, astragalin, and cymaroside showed strong binding affinity with both targets.
- The Mouse Foot Pad Assay, although time-consuming, remains a critical phenotypic tool for AMR surveillance in unculturable bacteria like Mycobacterium leprae.
- Combining phenotypic and genotypic methods, such as sequencing and Genotype LepraeDR, strengthens early resistance diagnosis and contributes to improved leprosy case management.
- Enforcement of prescription-only antimicrobial dispensing, updating outdated drug regulations, community education and awareness, and integrating AMR education into school curricula are necessary.
- Multisector collaboration within the One Health framework, strong political will, and effective governance are imperative for translating AMR policy into action.
- Leprosy in children under 10 remains a public health concern even after the national elimination declaration.
- Use of fluoroquinolones (FQ) may initially improve pneumonia but can ultimately worsen the condition and contribute to the development of fluoroquinolone-resistant tuberculosis (FQ-resistant TB) due to incomplete treatment.

#### **Future Direction**

■ Urgent action is needed in mosquito control, case management preparedness, and effective vaccines. Nepal has an opportunity to collaborate on vaccine development for zero dengue-related deaths by 2030.

- The Pandemic Preparedness Toolkit could be one of the platform, where National Statistics Office (NSO) and MoHP can collaborate together for pandemic preparedness and response.
- To enhance future trials, it is important to provide detailed and specific information about the trial to participants to address concerns comprehensively.
- Zinc deficiency is significantly associated with ENL in leprosy patients, potentially contributing to immune dysregulation. Zinc supplementation may serve as a therapeutic intervention, but further studies are needed to confirm its clinical benefits.
- FCHVs engagement in the community can add to the awareness towards AMR.
- Granatin A, quercitrin, astragalin and cymaroside compounds can be examined in more detail for in vitro research, which is a valuable tool for developing new medications for the treatment of bacterial infections.
- Strengthening AMR surveillance for both New and Retreatment cases of Leprosy is crucial for achieving Zero Transmission and **Zero Disability.**
- While AMR policies have been formulated, their effective implementation requires adequate resources. Raising awareness at the local level is crucial, alongside prioritizing research and development.
- Household transmission of Leprosy in Children Under 10 years is a major factor, requiring enhanced contact screening strategies.
- Looking ahead, if fluoroquinolone (FQ) resistance leads to the emergence of multidrugresistant tuberculosis (MDR-TB), it poses a serious threat to treatment efficacy, as we risk losing one of our most effective therapeutic options—fluoroquinolones. This underscores the urgent need for strengthened surveillance, rational antibiotic use, and the development of alternative treatment strategies.

# **Parallel Session V: Health Policy and System Research**

Dr. Laxmi Raj Pathak, former Chief of Policy Planning and International Cooperation Division of Ministry of Health and Population and Dr. Sushil Chandra Baral, Director, HERD International jointly chaired this parallel session. The session featured an invited talk by Ms. Amshu Dhakal, followed by nine oral presentations focused on health policy and systems research.



S.N	Presenters	Topics
1.	Ms. Amshu Dhakal (Invited Talk)	Performance of Health Facility Operation and Management Committees (HFOMCs) in Nepal: A Self-Evaluation Study
2.	Ms. Simrin Kafle	Catastrophic Health Expenditures: Evaluating the Effectiveness of Nepal's National Health Insurance Programme Using Propensity Score Matching and Doubly Robust Estimation
3.	Mr. Pratik Khanal	Impoverishment impact of cancer in Nepal: A cross-sectional study from two public tertiary cancer hospitals
4.	Mr. Gaj Bahadur Gurung	Economic impact (Out-of-pocket and catastrophic health expense) of the National Health Insurance scheme in Nepal: A quantitative study
5.	Ms. Milima Singh Dangol	Utilization of Printed Health Education Materials on Family Planning, Safe Motherhood and New Born Care in Nepal
6.	Mr. Shreeman Sharma	The influence of news media on health policy making in Nepal: Insights from journalists and policymakers
7.	Mr. Bipul Lamichhane	People's voice survey in Nepal: Service users' satisfaction and trust in the health system
8.	Ms. Pratikshya Dhungana	Implementation and Assessment of Facilitation Support for Improving Health Insurance Coverage in Achham
9.	Mr. Prakash Adhikari	Job satisfaction among local-level health workers following federalization in Nepal
10.	Ms. Dhanush Bishwokarma	Job Satisfaction among School Health Nurses Working in Bagmati Province

# **Key points**

- News media, when based on credible sources like government reports, play a key role in raising public awareness and supporting health policies. The collaboration between journalists and policymakers has influenced actions, as seen in the Tobacco Control Act and local dengue control efforts.
- Health Insurance programme shows promises but faces challenges like staff turnover, logistical issues, and communication gaps. It requires better logistics, reduced financial barriers, streamlined referrals, and improved service delivery to sustain it.

- The overall job satisfaction was found to be notably lower among health workers serving at local level. It highlights significant challenges and critical areas for improvement within the system. It also underscores the need for further investigation and targeted action to address the underlying factors contributing to dissatisfaction among health workers.
- Despite of the strong coordination and inclusiveness in context of the federalisation, weak governance practices such as irregular meetings, poor transparency and lack of follow-up on action plans undermine Health Facility Operation and Management Committees' (HFOMCs) effectiveness.
- The households who are in the poor wealth quintile are least enrolled in the health insurance programme. 9.8% of the enrolled households experienced the Catastrophic Health Expenditure (CHE) last year. 4% of the enrolled households suffered from CHE, although their health expenditures were below Rs. 1,00,000. The exclusion of basic medicines and referral transport services in the programme are the major driving forces for CHE.
- Cancer treatment pushed one-fourth of households below the poverty line. Cancer care is financed mainly through household income/savings or at a relational level. Existing social health protection schemes are insufficient to ensure financial protection.
- The printed health education materials are inadequate and there is a lack of communication and coordination about the availability of health education materials.

#### **Future direction**

- Efforts should focus on enhancing media capacity through targeted training programmes, fostering collaboration between health experts and journalists, and addressing resource gaps to ensure accurate, impactful health reporting that can effectively inform and influence policy decisions.
- Strengthening healthcare service delivery and exploring innovative solutions to improve logistics is crucial to ensure the health insurance programme's sustainability and expansion.
- Prioritising the alignment of roles with individuals' qualifications, along with ensuring clear pathways for career advancement especially in underserved regions can significantly enhance job satisfaction and retention. This strategy is key to improving service delivery and fostering a more resilient and sustainable health workforce.
- There is an urgent need for attention to prioritise strengthening and sensitizing HFOMCs on each local level health planning.
- National Health Insurance Programme provides much less effectiveness against catastrophic health expenditure. It needs to expand its coverage based on income so that the poor also get enrolled in the insurance programme and receive the health care needs. The government should make strategies to mitigate adverse selection and create balance so that it provides financial sustainability to the programme.

- Fragmented cancer subsidies and treatment schemes should be integrated with focus on low-income households and essential cancer interventions should be prioritised in the national health benefit package.
- There are major gaps in the availability, accessibility, and use of printed health education resources in Nepal. A holistic approach including improved distribution channels, budget allocation, digital innovations, and stakeholder engagement is required to address this.

# Parallel Session VI: Health Care, Emergency Medicine and Trauma Care

Dr. Kedar Narsingh KC, former President of Nepal Medical Association and Dr. Dipendra R Singh, former Additional Secretary of the Ministry of Health and Population jointly chaired this parallel session, which featured ten oral presentations focusing on areas such as telemedicine, community resilience, rehabilitation, and supply chain management.



S.N.	Presenters	Topics	
1	Dr. Raba Thapa	Impact of live and cloud based Tele-Ophthalmology System on Referral Patterns and Disease Identification at Community Eye Centers in Nepal	
2	Mr. Ranjan Shah	Perceived barriers to cataract surgery among individuals aged 50 and older in Nepal: A population-based cross-sectional survey	
3	Mr. Prawej Ansari	Punica granatum Peel Extract Stimulates Insulin Secretion from Clonal Pancreatic BRIN-BD11 $\beta$ -cells and Improves Glucose Homeostasis in High-Fat-Fed Diet-Induced Obese Mice	
4	Mr. Bishnu Prasad Dulal	Road Traffic Accident Mortality in Nepal	
5	Mr. Kanchan Thapa	Community Resilience and Disaster Response: Insights from Jajarkot and Rukum West, Nepal for 2023 Earthquake	
6	Dr. Brish B Shahi	Rehabilitation Service Needs and Referral Systems: A Pathway to Primary Health Care Integration in Karnali Province, Nepal	
7	Mr. Amrit Bist	General health service readiness, its facilitators and barriers among the primary level public health facilities of Baitadi: A sequential explanatory mixed method study	

S.N.	Presenters	Topics
8	Ms. Suyasha Koirala	Investigating the sustainability of cooperatives in the context of leprosy and the work of leprosy mission in Nepal: a qualitative study
9	Mr. Arun Gautam	Telemedicine for Chronic disease care during the COVID-19 pandemic in Nepal: A Retrospective Study
10	Mr. Dirghayu KC	Assessment of Supply Chain Management System of Prioritised Neglected Tropical Disease's Drugs and Diagnostics during COVID-19 in Nepal

### **Key Points**

- Tele-ophthalmology has proven effective in remote areas for detecting both anterior and posterior segment eye diseases, ensuring timely referrals and reducing blindness.
- A population-based survey on cataract surgery revealed a 1.05% prevalence of blindness among individuals aged 50+, with higher rates in Lumbini and Madhesh provinces. Blindness prevalence is higher among females across all provinces.
- Punica granatum (pomegranate) peel extract shows potential in improving glucose metabolism, insulin secretion, and beta-cell health in obese mice, likely due to its anthocyanin content and suggesting promise for future diabetes treatment research.
- Road traffic accident (RTA) mortality in Nepal is a significant public health concern, with over ten deaths daily. The mortality rate is 13.1 per hundred thousand with higher risk in the Terai region, among adolescents, adults, and males.
- A study from Jajarkot and Rukum West (2023 Earthquake) highlighted community satisfaction with disaster response efforts, particularly praising the effective role of local police.
- Research on primary health care integration in Karnali Province found that while awareness of rehabilitation and referral services is high, readiness to provide such services remains low among participants.
- A health facility readiness assessment in Baitadi showed low service readiness (Score: 0.66), with major gaps in basic amenities, diagnostics, and essential medicines at the primary care level.
- A study on the sustainability of leprosy cooperatives revealed a reliance on external support, indicating that without municipal backing, some cooperatives face operational and financial difficulties.
- Aretrospective study on telemedicine during COVID-19 showed high patient satisfaction and adherence to medical advice regardless of age, health status, or communication medium, affirming telemedicine's value in chronic disease management.

■ An assessment of the supply chain system for neglected tropical disease (NTD) drugs found strong e-LMIS systems at federal and provincial levels, but discrepancies and gaps persist at the district level.

#### **Future Direction**

- Tele-ophthalmology service is effective modality of eye care service in remote areas for quality eye care. Scaling of the service in remote and rural areas will support for reducing the blindness.
- Addressing key barriers is very important to improve cataract surgical coverage. Raising eye health awareness is necessary to reduce fear, to highlight service availability and importance of good vision.
- Clinical trials are necessary to confirm EEPG's safety and effectiveness as a dietary supplement for diabetes. Additionally, it is also important to explore if EEPG's components can be developed into novel oral diabetes medications.
- A collaborative plan among different levels of government is urgently needed to prevent early-life deaths due to road traffic accidents and to reduce RTA-related mortality among the aging population.
- Enhancing disaster awareness at the local level and implementing targeted communication strategies can further strengthen trust and understanding of the police's role in public health crises.
- Timely addressing of health system challenges is essential for the effective integration of rehabilitation services. Capacity development of health workers, especially those serving in remote areas, is also needed.
- Investing in dedicated buildings, essential equipment, and improved transportation facilities will enhance the service readiness and service delivery, while ensuring timely procurement processes and budget allocations can mitigate supply chain inefficiencies.
- Recognition through incentives and awards can motivate staff and municipalities to sustain high performance, ultimately improving general health service readiness.
- Increased in 3 P's, Power, Property and Prestige of leprosy-affected people and other marginalized people. Sustainability of the cooperative varied. Support is required to maintain the cooperative status for good and improve the status for bad.
- Telemedicine should be a part of a national strategy for disaster preparedness in low-middle income countries like Nepal.
- There is need of resilient and well-coordinated supply chain management system, supported by adequate resources, training, and infrastructure to maintain health care services during crises.

# Parallel Session VII: Environmental Health, Occupational Health and Climate Change

Dr. Bhim Prasad Sapkota, Chief of Health Coordination Division, Ministry of Health and Population and Dr. Hari Prasad Dhakal, Expert jointly chaired this parallel session, which included five invited talks and five oral presentations primarily focused on climate change, environmental health, and occupational health.



S.N.	Presenters	Topics	
1.	Mr. Raja Ram Pote Shrestha (Invited talk)	Building Climate Resilient Health System in Nepal-Achievements and way forward	
2.	Mr. Mahesh Prasad Joshi (Invited Talk)	Integrating Occupational Health and Safety services in Primary Healthcare System: Lesson learned from informal waste workers and farmers programme in Nepal	
3.	Mr. Sandeep KC (Invited Talk)	Healthy City Movement in Nepal: An Experience from Dhulikhel Municipality	
4.	Dr. Rakesh Ghimire (Invited Talk)	Strengthening Toxicology Services in Nepal: Addressing the Burden of Poisoning through Posin Information Centre and Advocacy in Pesticide Regulation	
5.	Mr. Aamod Dhoj Shrestha	Climate adaptation interventions to improve maternal and perinatal health in low- and middle-income countries: findings from a scoping review	
6.	Mr. Jay P Jha	Seasonal variation in sympathetic autonomic activity in young adults	
7.	Mr. Ganesh Dhungana	Climate Resilience through Women's Leadership in Nepal's Koshi Province	
8.	Mr. Samip Khatri	Musculoskeletal Disorders and Other Occupational Health Outcomes Among The Sanitation Workers In Nepal: A Community Based Cross-Sectional Survey Exploring the Risk Factors, Knowledge And Practice	
9.	Ms. Jyoti Lamichhane	Occupational Health Risks and Safety Awareness among Welders in Bhaktapur, Nepal	

### **Key points**

- Nepal's drafted NDC 3.0 includes health sector targets to manage healthcare waste, strengthen climate-sensitive disease surveillance, and reduce disease burden from air pollution.
- The Health National Adaptation Plan (H-NAP) aims to integrate climate change issues into health programmes and enhance adaptive capacity at local levels.
- Collaboration among government agencies, industry associations, and health organizations is essential to improve working environments and health resilience.
- Occupational Health Safety should be integrated into primary health care, supporting "Health in All Policies" and addressing informal sector worker needs.
- Dhulikhel has achieved 96.1% health insurance coverage and received the WHO Healthy City Award 2024.
- There is a significant lack of clinical toxicologists and specialized training in Nepal, with the Poison Information Centre (PIC) at TUTH playing a crucial role in toxicology services.
- Climate change has a direct impact on maternal and perinatal outcomes, such as preterm birth and stillbirth, especially in LMICs.
- Seasonal variations influence blood pressure and sympathetic reactivity, with winter associated with higher baseline blood pressure and lower stress response.
- Musculoskeletal disorders (MSDs) are prevalent among sanitation workers, particularly in high-risk job roles like waste picking, and are influenced by age, ethnicity, and education level.
- There are significant gaps in occupational safety practices in Nepal's small-scale welding industries, with a need for better training, PPE usage, and regulatory enforcement.

#### **Future Direction**

- Prioritise full implementation of the Health National Adaptation Plan (H-NAP) 2023-2030 by aligning local and provincial health strategies with national climate targets and scaling up climate-resilient infrastructure.
- Integrate preventive and promotive occupational health and safety (OHS) services into primary health care, focusing on informal sector workers and establishing a national framework for training, data integration, and enforcement.
- Conduct longitudinal and community-based research to better understand the health impacts of climate change, especially on maternal, perinatal, and cardiovascular health, and develop locally adapted interventions.
- Expand toxicology services by establishing specialised training programmes, enhancing the reach and capacity of Poison Information Centres, and strengthening regulation of hazardous substances.

■ Support municipalities in adopting innovative, inclusive health initiatives by promoting digital health tools, community participation, and climate-smart urban health planning.

# Parallel Session VIII: Health Inequalities and Social Development

Prof. Madhusudan Subedi, Professor of Medical Sociology, Patan Academy of Health Sciences and Ms. Sangeeta Shrestha, Chief Nursing Administrator jointly chaired this parallel session. The session comprised of ten oral presentation highlighting the existing health inequalities and social development in Nepal.



S.N	Presenters	Topics	
1.	Ms. Preju Kandel	Role of commercial determinants of health in use of alcohol in Nepal: An exploratory qualitative study	
2.	Mr. Achyut Raj Pandey	Poverty and intersecting inequities in access to health services: insights from nationally representative surveys	
3.	Ms. Sitashma Mainali	Urban health and equity in Nepal: Analyzing social determinants, disease prevalence, and health outcomes	
4.	Ms. Barsha Rijal	Participatory Approaches to Assess Living Conditions, access to health care services and Governance in Nepal's Informal Settlements	
5.	Ms. Situ KC	Life in Nepal's Informal Settlements: A Photovoice Study on Health, Equity and Resilience	
6.	Mr. Parash Mani Sapkota	Determinants of wealth-based inequality in mental health: a decomposition analysis of Nepal Demographic and Health Survey 2022	
7.	Mr. Jhabindra Bhandari	Health and illness narratives: A scoping review from anthropological perspectives	
8.	Mr. Sujan Karki	Trends and Inequalities in Institutional Deliveries in Nepal: Evidence from 1996 to 2022 Nepal Demographic and Health Surveys	

S.N	Presenters	Topics
9.	Ms. Dikshya Chhetri	Development of Affordable Biomedical Solutions for Rural Nepal
10.	Mr. Sampurna Kakchapati	Co-designing urban health data hub: A multi-phase approach for digital transformation in an urban municipality of Nepal

#### **Key points**

- Intersection of province, urban-rural setting and poverty status showed that inequities have become more severe when more than one form of marginalisation co-occurs. Despite policy commitment, half of the population in rural settings of four provinces cannot reach health facilities within thirty minutes.
- Anxiety and depression are more prevalent in poorer households, with urban areas showing the highest inequality.
- Health and illness are shaped by social, cultural, biological, and historical factors. Social differences and boundaries influence access to healthcare, while local understandings of health and healing are determined by the historical and social positions within communities.
- Inequality in access to institutional deliveries remains a major issue in Nepal. Significant disparities exist in the utilisation of healthcare facilities during childbirth, particularly across different wealth quintiles and caste/ethnic groups.
- Lack of data harmonization and a centralised system leads to inefficiencies and duplicated efforts.

#### **Future direction**

- Drawing inference based on only one factor could lead to misleading conclusions. A blanket approach of setting up infrastructure and expanding it may not be useful from an equity perspective.
- Public health researcher should incorporate participatory approaches to identify the real needs of the marginalized population and inform policymakers to ensure equitable and sustainable urban development.
- Targeted and context-specific policies should be formulated to address mental health disparities, especially in urban areas. These strategies must emphasise gender-sensitive approaches and guarantee equitable access to mental health resources.
- The scope and relevance of Critical Medical Anthropology should be explored in terms of its significant contributions to health systems governance research.
- Enhancing collaboration between the public and private sectors will be crucial to advancing accessibility and reinforcing the overall healthcare system.

# **Parallel Session IX: Nutrition and Food Security**

Mr. Hemraj Subedi, Board Member of NHRC (Joint Secretary, National Planning Commission) and Mr. Lila Bikram Thapa, Chief Nutrition jointly chaired this parallel session. The session comprised of an invited talk by Ms. Leela Khanal followed by six oral paper presentations focusing on nutrient intake and food insecurity issues in Nepal.



S.N.	Presenters	Topics
1.	Ms. Leela Khanal (Invited Talk)	Altitude and Anemia Prevalence: A socio-geographic analysis from three districts of Nepal-
2.	Ms. Kusha Gurung	Antibiotic Resistance Profiles of Lactic acid bacteria (LABs) and Bacillus spp isolated from traditional fermented foods and beverages in Nepal
3.	Mr. Rudra Neupane	Children's nutritional status and maternal knowledge and feeding practices on childhood nutrition in selected Rural Municipalities in Mugu district
4.	Ms. Anjita Khadka	Food Insecurity Among People living in Informal Settlements of Nepal: Insights from Kathmandu and Pokhara Valley
5.	Ms. Neha Malla	Effect of Adolescent-Led School-Based Intervention for Improving Adolescents' Nutrition in Selected Schools of Sarlahi District: a Mixed Methods Study
6.	Ms. Anusha Acharya	Nutritional Knowledge and Dietary Adherence among Hypertensive Patients in Lalitpur
7.	Ms. Arya Gautam	Ecological factors that drive microbial communities in culturally diverse fermented foods

# **Key Points**

- Altitude correction has a huge impact on the diagnosis and management of anaemia.
- Multi-sectoral collaboration, targeted support programmes and policy advocacy are needed to address food insecurity in urban informal settlements.
- There was a positive effect of the intervention on iron-folic acid distribution and awareness about deworming, and reducing consumption of unhealthy food.

- Traditional fermented foods are host to a diverse group of bacteria and fungi- many of their roles are not fully understood.
- Gaps remain in complementary feeding and dietary diversity, emphasizing the need for further targeted interventions in non-intervention areas.

#### **Future Direction**

- Explore culturally and medically feasible effective ways of iron supplementation targeting entire family.
- Better regulations and safety measures are needed in Nepal to address antimicrobial resistance.
- Capacitating and engaging adolescents as change-agents of their communities can lead to improvement in adolescent nutrition.
- Implement strategies to enhance understanding of hypertension, DASH diet, along with boosting self-efficacy, that could be beneficial for improving the health of hypertensive patients.
- Metagenomics sequencing of a large and diverse group of fermented foods coupled with culturing experiments will enable identification of specific microbes who can be utilized to prepare fermented foods with optimal flavour, design, and health benefits.
- Strengthening community nutrition programmes and improving food security are essential for sustainable improvements in child nutrition in rural Nepal.

# Panel Discussion: Promoting Clinical Research and Fellowships in Nepal

The panel discussion under the theme Promoting Clinical Research and Fellowships in Nepal was chaired by Prof. Dr. Bhupendra Basnet, Vice Chansellor NAMS and moderated by Prof. Dr. Mohan Raj Sharma, Dean IOM. The distinguished panellists for the session were Prof. Dr. Ajit Rayamajhi, Vice Chairman NHRC, Prof. Dr. Sujan Babu Marahatta, Director MEC, Prof. Dr. Manoj Humagain, Dean



KUSMS, Prof. Dr. Sudha Basnet, IOM, Dr. Anil Bikram Karki, President NMA.

#### **Key points**

- Early exposure to research orientation is crucial and should begin at the undergraduate level.
- Teaching students how to generate evidence through research enhances their analytical and critical thinking skills.
- Translating research into innovation is vital for addressing real-world health challenges.

- The Medical Education Commission (MEC) is working to integrate knowledge generation and innovation in postgraduate programmes.
- Ensuring the quality of medical education and research in universities is a major concern.
- Aligning the production of medical professionals with the quantitative needs of the country is essential.
- Strengthening the research capacity of faculty is a priority.
- A shift in mindset towards greater research orientation among medical professionals is needed.
- Enhancing the capacity to secure national and international research grants is crucial.
- Concerns are raised about the quality and standards of some local medical journals.
- Efforts are underway to address legal and regulatory aspects related to health and research.
- The need to consider research and development in the pharmacy sector is brought up.

#### **Future Direction**

- Establishing independent research units in all academic institutions to support structured and continuous research activities is essential.
- Fostering a strong research culture among students and faculty through dedicated mentorship, strategic guidance, and robust institutional support is key to driving academic excellence, innovation, and evidence-based practice.
- Integrating evidence-generation and research methodology training into the undergraduate curriculum will help cultivate critical thinking, enhance analytical skills, and prepare students for evidence-based decision-making in healthcare and public health.
- Emphasising the importance of translating research findings into innovative, context-specific solutions is essential for effectively addressing real-world health challenges and improving health outcomes.
- Incorporating grant writing and proposal development into academic courses is crucial for enhancing students' funding capabilities, fostering research sustainability, and empowering future researchers to secure resources for impactful studies.
- Enhance and expand research fellowship programmes, ensuring they provide meaningful research training and potentially linking them to clinical career pathways.
- Explore various avenues to increase funding for medical research, potentially through government initiatives, collaborations, and international grants.

# **DAY III: SCIENTIFIC SESSIONS**

# **Plenary Session IV: Health Insurance**

The session was jointly chaired by Dr. Raghu Kafle, Director of Health Insurance Board and Dr. Saroj Sharma, Chief Consultant, NAMS. The discussion under the theme Health Insurance was moderated by Dr. Suresh Tiwari, Country Director, Oxford Policy Management (OPM) Nepal. The esteemed panellists included Prof. Dr. Sharad Onta, Former Executive Chief, NHRC, Dr. Mukti Ram Shrestha, Board Member, Health Insurance



Board, Dr. Subash Acharya, and Ms. Roshani Tui Tui, Chief Nursing Administrator, MoHP.

# **Key Points**

- Nepal's health insurance system is fundamentally weak because basic healthcare services were not adequately prepared before launching it; the model is market-oriented but should shift toward a public welfare model to ensure sustainability.
- Although improvements have been made since 2015, Nepal's health insurance faces a major financial gap, with state subsidies needed to cover expenses; efforts are underway to raise coverage amounts and strengthen resources.
- One of the major tertiary hospitals of Nepal "Tribhuvan University, Teaching Hospital" implemented a 10% co-payment system for health insurance, but faces challenges like mismanagement and instability in service valuation (science relative value system).
- Major operational challenges come from user errors, hospital mismanagement, and weak accountability; strengthening monitoring, technical systems, and public awareness are critical for smoother insurance claim processing.
- Health insurance is designed for social health security (cost-sharing and risk-pooling), not full funding; strict adherence to insurance regulations and stronger operational efficiency are needed to move toward Universal Health Coverage.
- The success of health insurance in Nepal is heavily dependent on the availability and reliability of promised services. The current lack of preparedness in basic healthcare services presents a significant barrier to the effectiveness of the insurance system.
- A significant issue in health insurance is the lack of accountability in the claims process such as incomplete documentation and processing. Service providers must ensure that claims are processed smoothly and that hospitals and insurance officers are held accountable for errors and delays.

#### **Future direction**

- Health insurance is essential to uphold healthcare as a constitutional right, but political commitment, full population coverage, and strong participation from public and private sectors are urgently needed for real success.
- Emphasise that health insurance on the principles of social health security, including cost-sharing and risk-pooling, rather than fully funding healthcare. The system must aim at equitable access to healthcare for all.
- Nepal should move from a market-based to a public welfare model of health insurance to ensure services are focused on public need rather than profit.
- The government must close the funding gap by increasing premium contributions or subsidies and gradually raise the insurance coverage amount to meet real healthcare costs.
- Teaching hospitals and service providers need to stabilise pricing systems like the "science relative value" model and improve internal management to better handle insurance processes.
- Stronger political will is needed to prioritise full population coverage, ensuring that health insurance reaches all citizens, especially vulnerable groups.
- Improving user education, strengthening accountability of hospital staff, and upgrading technical systems like real-time claims and API integration will reduce errors and delays.
- Strict enforcement of health insurance regulations and improvements in operational efficiency are critical to building a more reliable and sustainable insurance system.
- Focused programmes must extend insurance services to the 53% of rural and underserved areas still left out, advancing the goal of Universal Health Coverage.
- A major priority should be improving the financial sustainability of the health insurance system. This could involve increasing premium rates, introducing new revenue streams, and securing more state subsidies to ensure the system can meet the growing demand for healthcare.
- Clear and enforceable regulations should be introduced for service providers and insurance administrators to ensure that the system is standardized, fair, and transparent. These regulations should be regularly updated to address emerging challenges.

# Parallel session X: Migration and Health

The session was jointly chaired by Mr. Jhabindra Prasad Pandey, Under-Secretary Ministry of Health and Population and Mr. Ram Chandra Silwal, Country Director, Green Tara Nepal. The session featured insightful invited presentations, followed by two oral paper presentations, exploring critical issues at the intersection of migration and health.



S.N	Presenters	Topics	
1.	Dr. Prakash Buddhathoki (Invited Talk)	Health Emergency and Disaster Management	
2.	Mr. Obindra Chand (Invited Talk)	Exploring Migration Health Research Priorities in Nepal using CHNRI Initiative	
3.	Mr. Pratik Adhikari (Invited Talk)	Ensuring Well-being Beyond Borders: Policies on Migrant Health in Nepal	
4.	Ms. Susmita Nepal	International Labour migration, remittance and health care expenditures in selected municipalities of Koshi Province	
5.	Dr. Shraddha Manandhar	Exploring physical health of wives of international labour migrants who remain behind in Nepal: A mixed-methods study	

## **Key Points**

- The Health Emergency Operation Center (HEOC) should serve as the central command unit guiding the Ministry of Health and Population (MoHP) and the Department of Health Services (DoHS). It should ensure that health facilities have contingency plans, conduct regular emergency drills, establish an Emergency Medical Team (EMT) Coordination Cell, and build disaster-resilient storage for emergency supplies.
- Labour migration from South Asia, particularly from Nepal is largely low-skilled and directed towards Gulf countries. However, migration health remains a neglected area despite increasing health issues, deaths, and disabilities among migrant workers.
- Although Nepal has adopted several international conventions related to migration, the sharp increase in labour migration to Gulf and Southeast Asian countries continues

to challenge effective migrant health policy implementation. Issues include limited insurance coverage, high occupational hazards, and persistent social stigma.

- Migration and remittances contribute significantly to poverty reduction and improvements in health and education outcomes. Remittance inflows positively influence access to healthcare services and encourage regular health check-ups among recipient households.
- In Nepal, 2.19 million individuals are international migrants, coming from 23.33% of all households. In low- and middle-income countries (LMICs) like Nepal, maledominated migration often leaves women behind, increasing their vulnerability to NCDs, stress, insomnia, hypertension, and infertility.

#### **Future Direction**

- Develop a comprehensive, Multisectoral health emergency management plan that includes specific HEOC protocols, standard operating procedures (SOPs) for emergency medical team deployment, and enhanced workforce capacity through training and inter-agency collaboration.
- Preliminary findings in Nepal underscore the urgent need for stronger evidence, robust policy frameworks, and improved infrastructure concerning migrant health. This includes better government mechanisms for recording and reporting deaths, injuries, and disabilities among migrant workers.
- Strengthen collaboration among key stakeholders, expand health insurance coverage, raise public awareness, and negotiate international agreements to improve healthcare access for migrants and their families.
- While secondary data exists on healthcare expenditures among remittance-receiving households in Nepal, there is a lack of primary and qualitative research. Wealthier households are more likely to utilise private healthcare services, and individuals with higher education levels are more inclined to enroll in health insurance, regardless of their migration status.

# Parallel Session XI: Aging and Geriatric Health

Prof. Dr. Lochana Shrestha, Professor of Community Medicine at NAIHS-COM and Ms. Hira Niroula, Director, Nursing and Social Welfare Division jointly chaired this session which comprised of five oral presentations focusing on healthy aging and policies related to geriatric health in Nepal.



S.N	Presenters	Topics
1.	Ms. Sital Gautam	What is known about the spirituality in older adults living in residential care facilities? An Integrative review
2.	Mr. Sudarshan Paudel	Lived Experiences of Caregivers of Dementia Patients in Nepal
3.	Ms. Anjana Thapa	Barriers and Opportunities in Nepal's Aged Care: From Policy to Practice
4.	Ms. Jene Shrestha	A qualitative exploration of dementia care in Nepal
5.	Mr. Ramesh Sharma Poudel	The Silent Crisis: Unpacking Public Health Issues for Older Adults in Nepal

# **Key points**

- Geriatric health issues included high prevalence of age-related diseases and complication, resident or medication safety issues, mental health issues, nutrition issues, low health literacy, geriatric healthcare services and utilisation, social isolation and loneliness.
- Older adults faced significant public health challenges in aged care homes and in the community making it a silent crisis.
- Dementia is not just a normal part of aging. There is a lot to do in this domain in the community, health care facilities and policy level- early awareness, timely diagnosis, and community support can transform care and improve lives.
- Government and healthcare workers have some level of awareness regarding dementia but the level of preparation and support remains low as there is lack of geriatric training and career opportunities in Nepal for health care providers.
- Additionally, families are left without proper support and the absence of such centers complicates the care of patients with dementia, especially when there is no younger family member to provide care due to migration.
- There is a weak implementation of aged care policy in Nepal. Thus, strengthening support through education, resources, and formal support systems for caregivers is crucial for improving quality of care.

#### **Future Direction**

■ Holistic approach should be used while caring for older adults living in Residential Care Facilities (RCF). Maintaining spirituality in residents at home cares should be the prime focus of nurses and caregivers working in RCF since it has been directly linked to the overall wellbeing of older adults.

- A government support system through financial provision to people taking care of severe dementia is necessary.
- As the aging population grows, it is crucial to preserve the values of familial respect and care in line with developing sustainable, professional support structures. So, Nepal must act now to balance cultural traditions with modern aged care systems.
- There is need to strengthen healthcare systems for geriatric care, strengthen coordination between different levels of government, enhance access to geriatric care and promote a community-based support system.

# Parallel session XII: Essential Medicine and Pharmaceutical Products

The session was jointly chaired by Mr. Narayan Dhakal, Director General, Department of Health Services and Mr. Prajwal Jung Pandey, Chairperson, Pharmacy Council. The session began with an invited talk by Prof. Dr. Mary Ott, followed by four insightful oral presentations addressing key issues in the field.



S.N.	Presenters	Topics
1.	Prof. Dr Mary Ott (Invited Talk)	Ethics in research with children and Adolescents
2.	Mr. Lok Raj Pant	Predictors and Drug-Related Problems in Chronic Obstructive Pulmonary Disease Patients at a Primary Hospital in Western Nepal
3.	Mr. Hem Sundar Shakya	Systematic Review of Evidence Based Practice of Forecasting and Procurement of Essential Drugs and Medicines (Paracetamol and Iron Tablets) in Public Health Logistics System
4.	Mr. Ayush Rauniyar	Treatment Practices, Cost of Treatment and its Implications in the Management of Hypertension at Shree Birendra Hospital
5.	Mr. Rohit Agrawal	Unlocking Insights into Medication Utilization Patterns in Nepalese Healthcare: A Meta- Analysis and Systematic Review Using WHO Prescribing Indicators

# **Key points**

- Patients with COPD often have multiple comorbid conditions, leading to the use of several medications (polypharmacy), which increases the risk of adverse drug reactions and interactions. Monitoring and minimising unnecessary medications are critical to reducing these drug-related problems.
- In research involving children and adolescents, informed consent must be obtained from legal guardians while also seeking assent from the minors in an age-appropriate manner. This dual process ensures respect for the autonomy and comprehension levels of young participants.
- Public sector supply chains in low-resource settings often face challenges like inaccurate demand forecasting and delayed procurement, resulting in frequent stock outs of essential medicines such as paracetamol and iron tablets. Strengthening data-driven forecasting models can improve medicine availability and reduce supply interruptions.
- Studies in Nepal have shown a tendency toward irrational prescribing, particularly the overuse of antibiotics and injectable medications without strong clinical justification. This pattern contributes to antimicrobial resistance and increased healthcare costs, underscoring the need for stricter prescribing guidelines.

#### **Future Direction**

- Research involving vulnerable populations should be thoughtfully designed to address their specific health needs and priorities. Their inclusion must be ethically sound and scientifically justified.
- Integration of clinical pharmacists into multidisciplinary healthcare teams is pivotal to routinely review medications, optimise pharmacotherapy, and provide education to both patients and healthcare providers.
- In order to enhance prescribing practices, ongoing training programmes for healthcare professionals on rational drug use need to be implemented, awareness about antimicrobial resistance should be raised, and the use of generic medications by aligning with the national Essential Medicines List needs to be encouraged.

# AWARD PRESENTATIONS AND CLOSING

# **SESSION**

Mrigendra Samjhana Medical Trust oration award was presented by Prof. Dr. Mrigendra Raj Pandey and Dr. Pramod Joshi to Prof. Dr. Ananda Ballav Joshi. The remaining awards were presented jointly by Rt. Honourable Mr. Pradip Poudel, Mr. Hari Prasad Mainali and Dr. Pramod Joshi.



List of the various awards and the awardees is as follows:

S.N.	Awardee and Title	Awardee
1.	JNHRC Best Research Paper Award	Mr. Dilip Kumar Yadav
	Maternal and Neonatal factors associated with neonatal mortality's prospective follow up study in selected hospitals of Nepal.	
2.	Health Research Award	Dr. Pawan Sharma
3.	Young Health Research Award	Dr. Sangam Shah
4.	Mrigendra Samjhana Medical Trust Young Health Researcher Award (Medical Doctor)	Dr. Rakesh Ghimire
5.	Mrigendra Samjhana Medical Trust Young Health Researcher Award (NHRC Employee)	Mr. Sudip Paudel
6.	Health Research Life-time Achievement Award	Dr. Buddha Basnet
7.	Best Paper Presentation Award (Poster)	Ms. Trishna Rai
8.	Best Paper Presentation Award (Oral)	Ms. Sushmita Nepal
9.	NHRC Best Section Award	Research Section
10.	NHRC Best Performer Award	Mr. SP Bhattarai
11.	Health Journalist Award	Ms. Pabitra Sunar
12.	Gopal Prasad Acharya Health Research Award	Dr. Sajjad Ahmed Khan
13	NHRC Lifetime Achievement Award	Mr. Puka Lal Ghising Mr. Lal Bahadur Ghising

In the formal closing session of the summit, following distinguished delegates represented the Dais.

- 1. Mr. Hari Prasad Mainali, Secretary, Ministry of Health and Population, Government of Nepal (Guest)
- 2. Rt. Honourable Mr. Pradip Paudel, Minister of Health and Population, Government of Nepal (Chief Guest)
- 3. Dr. Pramod Joshi, Executive Chief and Member Secretary, NHRC (Chair of the Session)

Mr. Hari Prasad Mainali Secretary, Ministry of Health and Population, Government of Nepal, expressed his sincere gratitude to the NHRC for successfully organising the Eleventh National Summit. He reflected on the shifting dynamics of Nepal's population and highlighted the growing urgency of evaluating whether our development efforts, health institutions, and infrastructure are adequately aligned with these demographic changes. He emphasised that migration trends, including the increasing crowding of urban areas and the outflow of people abroad, pose significant challenges to effective planning. These changes call for a critical reassessment of national health policies and programmes, to ensure they are truly responsive to the evolving needs of the population. Mr. Mainali noted that deeper discussions and conclusive evaluations are essential in determining whether we are genuinely moving in the right direction. He brought attention to the pressing contemporary issues such as air pollution, climate change, and shifting dietary habits, pointing out that while per capita income and some development indicators have improved, these alone do not guarantee well-being. He posed vital questions: Are we truly fulfilling the constitutional right to health? Are our efforts in the health sector sufficient? He urged that such reflections are crucial to shaping the future of health policy in Nepal and praised the summit for sparking valuable insights and dialogue in this regard.

Mr. Pradip Paudel, Honourable Minister for Health and Population, began his address by congratulating the Executive Chief of NHRC, senior health experts, delegates from partner organizations, healthcare professionals, and members of the media. He acknowledged a longstanding challenge: research has not been given the priority it deserves in Nepal. He stressed that while NHRC has existed for many years, questions still remain about the scope, impact, and outcomes of the research conducted. He emphasised that systemic change cannot be driven by one institution alone, rather, it requires a nationwide commitment to strengthening the research ecosystem. Among the urgent health threats, he identified were infectious disease outbreaks, now occurring with increasing frequency and the growing health impacts of climate change. Although climate change is a global phenomenon, Mr. Paudel underscored the importance of locally driven research to understand its region-specific effects on public health. He also pointed out a notable gap in research on traditional medicine, particularly Ayurveda, which remains underexplored despite its cultural significance. According to him, universities and academic institutions have not been adequately engaged in this area, and he called for better policies, stronger systems, and institutional support to advance health research at the national level. Importantly, he announced a key decision made during the summit: the establishment of research centers in all seven provinces, with implementation beginning in the upcoming year. This decentralised approach aims to ensure more regionally relevant research and broaden access to evidence-based health policy development. In closing, Mr. Paudel emphasised the need for government support in guiding research efforts, identifying priority research areas, and promoting solutions grounded in evidence. He reaffirmed the government's commitment to fostering a culture of research and innovation, asserting that only through strategic, problem-focused research can Nepal truly address its most pressing health challenges.

# **Key Points**

- There have been increasing concerns about the fulfilment of basic constitutional rights, particularly the right to health, despite improvements in income and development indicators.
- Population trends, such as urban migration and international outflow, are putting increasing pressure on health systems and infrastructure.
- Health policies and programmes must reflect real population needs, not just surfacelevel development statistics.
- Emerging public health challenges must be highlighted including air pollution, climate change, and changing dietary habits.
- The under-prioritisation of research in Nepal, despite the longstanding presence of the Nepal Health Research Council must be addressed.
- Insufficient local research on climate change's health impacts and traditional medicine like Ayurveda needs urgent attention.
- The limited involvement of academic institutions and universities in national research highlights an urgent need for immediate action.
- Isolated efforts are inadequate; a comprehensive national commitment to research and innovation is essential.

## **Future Direction**

- Establishment of health research centers in all seven provinces, with work beginning next year, to decentralise and strengthen Nepal's research infrastructure.
- Increased government support for researchers, including funding, institutional backing, and guidance in identifying priority research areas.
- Development of a more organized, systemic, and collaborative approach to national health research, involving government, academic institutions, and other stakeholders.
- Promotion of research that is locally relevant, culturally rooted, and focused on practical, evidence-based solutions to real-world health challenges.
- Integration of traditional knowledge systems, such as Ayurveda, into modern research agendas to leverage Nepal's unique cultural assets.
- Strengthened policy frameworks to ensure research translates into action, contributing directly to health system improvement and equitable health outcomes.

# **CLOSING REMARKS**

Pramod Joshi, Executive Dr. (Member Secretary), NHRC, expressed his heartfelt gratitude to all attendees, the chief guest, and invited guests for their contributions to the successful completion of the three-day programme. He highlighted that the conference, held under the core theme "Health, Climate, Population Dynamics: Building Resilient Health Systems for a Sustainable and Equitable Future," brought together national and international experts for in-



depth discussions on a range of pressing issues. These included the impact of climate change on health systems, improvements in healthcare services, population dynamics, health insurance frameworks, regulation of health research, access to healthcare, the migration of skilled health professionals, and the integration of information technology into health services.

Dr. Joshi further emphasised that the path to effective solutions lies in open dialogue, collective effort, and unity; achieving consensus through well-established processes and methodologies that help address ideological differences. He stated that only through such transformative approaches can meaningful progress be achieved.

In conclusion, he extended his sincere thanks to all the guests, dignitaries, delegates, and national and international participants for their presence and valuable insights and warmly invited everyone to attend next year's summit.

# **ANNEX-I: DECLARATION**

# Declaration of 11<sup>th</sup> National Summit of Health and Population Scientists in Nepal

"Health, Climate, and Population Dynamics: Building Resilient Health Systems for a Sustainable and Equitable Future"

## 10-12 April 2025

Resilient Health System is the foundation for achieving sustainable and equitable future. The Eleventh National Summit of Health and Population Scientists addresses nexus between health, climate and population dynamics for addressing wider determinates of health and calls for interdisciplinary research through integrating several disciplines of research to inform health policy, planning and practices. Considering global concerns such as climate change, emerging challenges in population dynamics and health, unresolved disparity, generating relevant, high-quality evidence has become more critical than ever before. In this context, we all delegates collectively commit to the following declaration:

- 1. Strengthen and harmonise health research governance through revision of institutional and legislative provisions in a collaborative way in the Federal Context for promoting responsible conduct of research, and evidence-based policy formulation, planning and effective implementation.
- 2. Increase investment in health, population and environment research to promote quality research for evidence informed decision making.
- 3. Promote human capital in health research by creating conducive environment for young researchers and retention of experienced researchers in the country.
- 4. Strengthen collaboration between researchers, policy makers, academia, scientists, civil society, private sector and community to promote high-quality interdisciplinary research for effective response to existing and emerging health issues and future pandemics through use of new technologies (such as digital, AI) towards strengthening the quality of research.
- 5. Promote interdisciplinary research on wider determinants of health, implementation research and clinical research using one health approach.
- 6. Enhance health research capacity of researchers through regular trainings, fellowships and grants.

# **ANNEX-II: SUMMIT PICTURES**













































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