

Proceeding Report

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Government of Nepal
NEPAL HEALTH RESEARCH COUNCIL (NHRC)

‘Research for Equity and Development in Federal Context’

Fifth National Summit of Health and Population Scientists

April 10 – 12, 2019

Kathmandu, Nepal

Proceeding Report 2019

Organized by:



Government of Nepal

Nepal Health Research Council



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1. Acknowledgement

We would like to thank all the joining hands to organize the "Fifth National Summit of Health and Population Scientists in Nepal" with the theme "Research for Equity and Development in the Federal Context" held between 10-12 April 2019.



We would like to sincerely thank all the chairs, panelists and moderators of the scientific sessions, presenters, all the delegates, guests, volunteers, media personnel and participants of the summit. Similarly, we would like to express our gratitude to chairs and members of Advisory, Steering, Scientific and Organizing Committee for their technical and managerial inputs and support.

Further, we would like to express our sincere gratitude to all our collaborating partners of the summit: UKAID, NHSSP, WHO, UNICEF, GIZ, Strengthening System for Better Health Activity, GOLDEN COMMUNITY, Ipas Nepal, VSO, Care, Save the Children, One Heart World Wide, CREHPA, Nepal Development Society, TPO Nepal, HERD International, The Leprosy Mission Nepal, Sunaulo Pariwar Nepal and MARIE STOPES INTERNATIONAL.

Finally, we would like to thank all who were involved in this Fifth summit for their huge contribution to make this successful, and look forward to seeing you all and even more people in the next summit.

Prof. Dr. Anjani Kumar Jha
Executive Chairman
Nepal Health Research Council

2. List of Abbreviations

GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HERD	Health Research and Social Development Forum
MoHP	Ministry of Health and Population
NHRC	Nepal Health Research Council
NHSS	Nepal Health Sector Strategy
SDG	Sustainable Development Goal
UHC	Universal Health Coverage
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization
ECD	Early Childhood Development
HMIS	Health Management Information Systems
TOT	Training of Trainers
NHTC	National health training Centre

3. Executive Summary



The Fifth National Summit on Health and Population Scientists in Nepal (10-12 April 2019) was successfully completed by support of more than 1300 participants, 26 invited speakers, 69 oral presentations and 104 poster presentations. The summit was enriched with various Committees such as Advisory Committee of 36 persons, Steering Committee of 28 persons, Scientific Committee of 61 persons and Organizing Committee of 71 persons. On the first day, Pre-Summit conference was held that comprised of two Plenary Sessions, one Panel Discussion, one Symposium and one Interaction. Similarly, on 2nd and 3rd Day there was Inauguration session (by Hon. Dr. Surendra K. Yadav, State Minister, MoHP), Key note address (by Prof. Dr. Balram Bhargava, Director General, ICMR, New Delhi and Secretary, Department of Health Research, Ministry of Health and Family Welfare, Government of India), two Plenary Sessions (on each day), eight Parallel Sessions (4 in each day) and Closing Session (by Hon. Upendra Yadav, Deputy PM & Health Minister). At a glance, total number of Invited speakers were 27 among which 19 speakers were from Nepal, 3 speakers from India, 3 speakers from China, 1 from Germany and 1 from the USA.

There were 69 oral presentations, 26 invited talk and 93 poster presentations in summit covering diverse issues including Communicable and Non-Communicable Diseases; Maternal, Neonatal, Child, Adolescent, Geriatric and Migrant Health; Biomedical and Anti-Microbial Resistance; Ayurveda and Other Traditional Medicine; Environmental and Occupational Health; Mental Health and Substance Abuse; Community Based NCDs Management; Biomedical and Health Information Technology; Health System, Health Economics and Financing; Health Promotion, Technology and Essential Medical Products; Health, Equity and Development; Health Insurance; Sexual and Reproductive Health and Family Planning; Disabilities, Injuries and Critical Care; Nutrition and Food Safety and many

more. These issues are closely related to attainment of comprehensive and ambitious SDGs.

The Collaborative Partners were, MoHP, UK-AID, NHSSP, WHO, UNICEF, GIZ, Strengthening System for Better Health Activity, Golden Community, IPAS Nepal, VSO, Care Nepal, Save the Children, One Heart World Wide, CREPHA, Nepal Development Society, TPO Nepal, HERD International, The Leprosy Mission Nepal, Sunaulo Pariwar Nepal, Marie Stopes International.

In the award session, the best awardees were selected based on the contribution, creativity and innovation. JNHRC Best Paper Award 2018 was given to titled, 'Prevalence of Cardiovascular Risk Factors in Apparently Healthy Urban Adult Population of Kathmandu' to Dr. Om Murti Anil, Outstanding Health Research Award 2018 was given to Dr. Shamshul Ansari, Mrigendra Samjhana Medical Trust Young Health Researcher Award (Medical Doctor) was given to Dr. Pranil Man Singh Pradhan, Mrigendra Samjhana Medical Trust Young Health Research Award (NHRC Staff) was given to Mr. Bihungum Bista, Health Research Life-time Achievement Award was given to Prof. Dr. Shiba Kumar Rai, Best Employee Performance Award of the NHRC was given to Mr. Pradeep Belbase, NHRC's employee near to retirement Award was given to Mr Ram Prasad Pokharel, Best Oral Presentation Award was given to Prof Dr. Nisha Jha and Best Poster Presentation Award was given to Mr. Pushpa Chand Thakuri.

The declaration of the summit was presented at the end of the summit. The session was concluded with remarks from the executive chairperson of Nepal Health Research Council. The overwhelming presence of more than 1300 participants is the reflection of the fact that the summit is a common platform of health professionals to come through latest development in the field of health research.

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4. Background



NHRC is an apex government body to facilitate health research in Nepal. It began to organize an annual summit of health and population scientists since 2015. The main purpose of organizing this annual summit is to give a platform to the health and population scientists in Nepal to promote the evidence based decision making within the context of changing health system from central to federal.

Fifth National Summit of Health and Population Scientists in Nepal was held on 10-12 April, 2019 under the theme of 'Research for Equity and Development in the Federal Context'. The summit focused on research conducted on the national health priority areas of Nepal. Beside the priority areas, this summit also focused on bringing public private partnership in health research promotion and role of digital health and big data for promotion of research, innovation and development. Health and population scientists can have a significant contribution to generate evidences, which in turn provides an insight into the need for quality research in the country within the context of changing health systems. The initial tracking of the available evidences become immense in developing and promoting further actions for successfully organizing a sustainable health system at the federal, provincial and the local governments.

The presentations and discussions made by rich diversity of participants from academia, research institutes, government, I/NGOs and external developmental partners, shed light into future actions for research, policy and practice.

This proceeding report summarizes the key issue discussed during the summit including the future strategic directions. This report serves as a resource for wider community including those in research, policy, and academia and all concerned stakeholders.

5. Pre-summit Conference



5.1 Health, Equity and Development

This session was chaired by Prof. Dr. Pushpa Chaudhury, Secretary of Ministry of Health and Population

Topic	Presenters
Ensuring equity in health and development in federal context	Dr. Devi Prasad Prasain
Social Determinants of Health- from Equity Perspectives	Prof. Madhusudan Subedi
Status of health sector indicators of national and province levels	Dr. Bikash Devkota
Findings from the Nepal Burden of Disease 2017: How they inform evidence-based choices in the path to UHC?	Dr. Meghnath Dhimal and Mr. Achyut Raj Pandey
Assessing poverty and vulnerability in urban area of Nepal: Are current measures fit for purpose?	Dr. Sushil Chandra Baral

The session started with the presentation of Dr. Devi Prasad Prasain on Ensuring equity in health and development in federal context (Annex 1). The presentation was based on analytical model of "Woolf Presentation" to show the link between health, equity and development. In the context of Democratic Federal Republic of Governance of Nepal, the model shows the importance of healthy population and equity to achieve the Development of Nation. This tends to show the appropriate path to achieve Universal Health Coverage.

Key Points of the Presentation:

- Province 2 has higher poverty rate and lower health service coverage.
- Province 3 and Gandaki have the lowest poverty rate and highest service coverage.
- Karnali has the higher poverty rate and lower service coverage.
- Education and wealth affect health care utilization; SLC graduates and richest quintile have nearly 3 times higher health care utilization compared to no education and poorest quintile respectively.
- Newars have 2-3 times higher maternal health care coverage compared to Dalits and Muslims.
- Out of Pocket payment for health services lead to catastrophic payment.
- Primary health care approach can improve both health and economic outcomes.
- Social health insurance has moderate cost coverage but low population coverage.
- Basic health service package has high population coverage but low cost coverage.
- Health Posts and Primary Health Care Centers are pro-poor, but hospitals are pro-rich.

Future Directions

- Balance in population, service and cost coverage is essential to meet UHC.
- Education and Economy of nation need to be strengthening for overall development.
- Equity is to be achieved in every sector of development for it sustainability.

Second presentation of the session was delivered by Prof. Madhusudan Subedi, on the title Social Determinants of Health- from Equity Perspectives (Annex 2). He outlined his speech on the topics of Health Inequalities, Social Determinants of Health, Country Scenario, Equity Issues and lastly what was the Ways Forward for this issue. In his presentation he expressed few queries, such as; has there been distributive justice – in financing, funding, access, responsiveness and quality? Are we on the right track? And the answers were found during his sharing of speech.

Key points of the presentation:

- Health inequalities are systematic differences in health between social groups with the social determinants of health (SDH). The condition of daily life, which in turn are shaped by the unequal distributions of power, money and resources within and between countries.
- The determinants of social inequalities are, exploitation, wealth and income inequality, poverty, oppression, domination, discrimination.
- The country scenario of Nepal with the help of evidences is that there are marked differences among various social class, caste/ethnic groups, regions and provinces in different health indicators.
- In Nepal, the driving inequalities are; economic policy, Crony capitalism, carteling, nexus between political elite and unethical business, corrupt bureaucratic apparatus, and many more.
- So finally, the social determinants of health equality would be, promoting health, reducing health disparities and addressing the social determinants.

Future Directions

- An improvement of equity could come by voice and accountability, government effectiveness, regularity quality, or rule of law
- More formal, explicit, and pragmatic thinking and evidence-based research are needed to propose how and why an intervention can contribute towards health equity in Nepal
- Improve the condition of daily life; tackling the equitable distribution of power, money and resources; measuring and evaluating the problem; increasing the public's awareness of health inequalities
- Close the gaps by taking serious consideration of the political parties, planners and policy makers and also by closing the gap in a generation
- Free health care program, health insurance policy, Insurance Management Information System for handling data management, feedback mechanism for monitoring of quality, enrollment and state responsibility
- Collective action is needed and it is the responsibility and duty of everyone to build a farsighted health policy where all people have a chance at the healthiest life possible

Third presentation of session was delivered by Dr. Bikash Devkota, on the title Status of health sector indicators of national and province levels (Annex 3). He presented on the

current scenario of health system in federal context and the status of NHSS goal level and outcome level indicators. He also touched upon the health financing - planning and budgeting, on the trends of government health expenditure.

Key points of the presentation

- For the FY 2018/19 65.3% of total government budget is focused on health sector.
- Planning to open level 2 trauma center in each province.
- National Migration Health Policy, National Health Financing Strategy, Partnership Guideline in Health, HRH roadmap policies and guidelines are in progress.

Future Directions

- Ensure 24/7 health care including basic emergency surgical services through primary hospital at each local government
- Health Academy and referral hospital in each Province
- Align activities with policy documents across federal, provincial and local level
- Localization and financing SDG

Fourth presentation of the session was delivered by Dr. Meghnath Dhimal and Mr. Achyut Raj Pandey, on the title Findings from the Nepal Burden of Disease 2017: How they inform evidence-based choices in the path to UHC? (Annex 4) Dr. Meghnath Dhimal presented the current scenario of life expectancy, fatal outcomes, Non-fatal outcomes, Disability Adjusted Life Years, overall mortality, cause of death and risk factors in Nepalese population as per the findings of Nepal's Burden of Disease 2017. Following Dr. Dhimal, Mr. Achyut Raj Pandey made his talk focusing on strategies to reach Universal Health Coverage in the country. He further emphasized that Nepal's health spending per capita income is far behind other countries that requires redefinition.

Key points of the presentation

- Ischemic heart disease and COPD are responsible for a great amount of health loss
- Top risk factors attributable to health loss are metabolic factors, smoking, and air pollution related risk factors



- Prioritizing NCDs without deprioritizing Communicable diseases maternal, neonatal and nutritional conditions seem to be the major challenge

Future directions

- Redefining the priority areas might be needed, higher emphasis on cost effective interventions focusing worst off group and expanding coverage
- Economic evaluations to bridge epidemiological research to policy making process would be useful
- High prevalence of NCD among poor need to be addressed.
- Present context of federalism can provide an opportunity for contextualized planning
- Additional efforts to make sure that health is not deprioritized at provincial and local level is needed

The last presentation on the session was delivered by Dr. Sushil Chandra Baral from HERD International (Annex 5). He discussed in his presentation about the feasibility of current measures to assess wealth and poverty in urban areas as well as to develop a composite index of urban poverty that can be easily measured. Study used consumption per capita, income per capita, asset indices, progress out of poverty, deprivation indices, self-defined poor and UN HABITAT slum definition in order to measure wealth and poverty.

Key Points of the Presentation

- Study found a strong but not perfect association between each measure of socio-economic status of poverty.
- The study also revealed strong association between migration and poverty. General migrants are not more likely to be poor than non-migrants. Migrants out of economic necessity are more likely to be both consumption and wealth poor.
- The study classified a household as poor if they fallen into the bottom quintile for both consumption and deprivation. This measure suggested more than one-fourth urban households as poor (a similar level to the multi-dimensional poverty index).
- Younger age of household members, completed secondary/higher education, having a room to rent and owns house were found to have negative association with poverty. On the other hand, characteristics like ever evicted, high proportion of consumption on rice, large household size, high spend on rent and self-defined as poor were to be positively associated with poverty.

Future Directions

- Money and capital measures of poverty assess distinct features of urban poverty. Ignoring one of the dimensions may ignore important aspects of vulnerability.
- A composite index of socioeconomic status can be estimated from the characteristics of households.
- Economic migrants (push, not pull) are particularly vulnerable compared to non-migrants and other migrants. They are likely to lack immediate money resources but also have less physical, human and social capital to assist survival.

5.2 Social Health Insurance in Nepal: Inception, Roll Out and Future Directions

This session was chaired by Mr. Chandra Kumar Ghimire, Secretary, Ministry of Health and Population.

Topic	Presenters
Health Insurance in Nepal: Current status, challenges and way forward	Assoc. Prof. Dr. Satish Deo
Health Insurance in Nepal: Critical Observation	Prof. Dr. Shiva Raj Adhikari

The first presenter in his comprehensive presentation, Prof. Dr. Satish Deo (Annex 6), Board Member of Health Insurance Board shared issues regarding current status, challenges and way forward of health Insurance in Nepal. His presentation covered issues about health, health care system, health insurance system, service utilization process, and current status of health insurance, challenges faced, problems/issues and the various types of issues, health care delivery. Dr. Satish Deo also stressed on the need of better harmonize social health schemes near future.

Key Points of the presentation

- Nation's health care system depends not only on political, economic, technical and medical decision.
- To achieve best health model trilateral model of health care should be achieved (i.e. Insured, Insurer, Hospitals).
- As per constitution of Nepal, every person of Nepal has right to get free fundamental health care, right to get information regarding own health treatment, accessible health services, accessible clean water and cleanliness.
- In order to prevent financial catastrophe, the health financing practice was started at community level in Nepal

Future Directions

- Health insurance have to work in a trilateral coordination fashion instead of bilateral collaboration between insured and insurer.
- Impanel more number of hospitals.
- Need for provision of third party administrator (TPA) for the most effective coordination and claim management.
- Need of better harmonize social health protection scheme in near future

The second presenter Prof. Dr. Shiva Raj Adhikari (Annex 7), shared his critical observation about Health insurance in Nepal and ways to improve the capacity of the health system to increase access to necessary services and to reduce the financial risk when facing illness and accidents. He also shared that effective risk pools allow all participants rather than one individual to share the financial risk of illness.

Key Points of the presentation

- Encourage regressive system not progressive system
- Out of packet payment for health care will increase with due current practices
- Health insurance board focuses district coverage (informal); costly business but it should be made mandatory for formal sector
- Small market and many institutions may lead market failure in health insurance

Future directions

- Aggressive presentation is needed in market to capture formal market
- Mechanism should be established such that all actors go through health insurance board to insure the quality of health care and avoid possible unethical practices
- The national health insurance committee should work as an independent institution
- Capacity development should be encouraged

5.3 Panel Discussion on Health Insurance

Chair: Mr. Chandra Kumar Ghimire

Panelists

- Prof. Dr. Kiran Regmi
- Dr. Guna Nidhi Sharma
- Dr. Devi Prasad Prasain

- Mr. Durga Bahadur Tharu
- Mr. Sagar Dahal
- Dr. Sabitri Sapkota

Moderator: Dr. Sushil Chandra Baral

The session was chaired by Mr. Chandra Kumar Ghimire. He initiated the panel discussion by allocating the time for the discussion which was set for an hour and extra 5 minutes was allocated for the concluding remarks. With this being said, Mr. Ghimire handed the session over to the moderator of the session Dr. Sushil Chandra Baral.

Dr. Sushil Chandra Baral started the session by indicating the purpose of the panel discussion which was to understand whether or not social health insurance in Nepal is the vehicle towards universal health coverage. He also raised a question if it would make any difference to the health of the people that we are trying to uplift quality of life from several of years? Should we go as it is or should we have different models or revised models as we continue to learn the lessons from the field. The moderator asked Mr. Durga Bahadur Tharu, one of the panelists whether they had implemented the health insurance for the people living in Barbardiya municipality or not and if so how this has positively influenced the people to help in utilizing the health services?

With this being said, Mr. Tharu noted that Nepal government has implemented the health insurance policy especially focusing for those citizens who do not have the capacity to bear the health treatment expenditure. In that context, they have enrolled more than 10,000 citizens of Barbardiya in health insurance and he further added that the free health insurance system for under privileged people have really addressed the matter. He also noted the issue regarding the implementation; he mentioned there is only one PHC in his municipality which also refers the patients to hospitals and kohalpur medical college. He also elaborated that the patients go to the medical thinking they will get free medicines from the medical but the service providers there return them back by telling them they don't have the particular medicine which creates a challenge for the poor having to buy those medicines which are free from a private medical from their own pocket.

The moderator mentioned that it is clear in the constitution that basic health services should be provided from the local government and Mr. Tharu replied to this by saying they are providing the basic health services from their side but there are some cases that Primary Health Care cannot treat and have to refer to the hospital, which creates a burden for the poor to face such obstacles. He also added that his main accreditation is to solve those problems faced by the poor.

The moderator introduced the second panelist, Prof. Dr. Kiran Regmi, who worked as a secretary in the health sector and who is contributing in maintaining the policies focusing on health of the country. The moderator asked Dr. Regmi, on the difficulties in the execution of social health insurance in Jumla? Dr. Regmi reacted to this by referencing that Karnali province is one the greatest as far as geographical boundaries and has populace of 20 Lakh and this itself is a noteworthy challenge. Concerning the management of Insurance, 1 individual handles 1000 populace for registration. As Jumla's populace is dispersed it is

troublesome for one individual to deal with 1000 populace, which is another challenge. Since 2074, they have enlisted 30,000 populaces for the insurance scheme, and among them just 10,000 has taken the services. Another challenge is in terms of enrollment for the premium service, regardless of whether insured will want the renewal of the premium service or not and it was seen in the vast majority of the spots premium was not renewed. She explained that it's a major ordeal for those individuals who are beneath the destitution line to pay for the premium and once they pay they have an inclination that they need to take the service, regardless of whether they are not sick, despite everything they visit the hospital to receive the services.

The moderator asked Dr. Regmi, in her opinion whether the insurance was provided to the populace without giving full information in regards to the scheme? Dr Regmi reacted to this by mentioning, the scheme is comprehended by the informed individuals however in Jumla they are as yet unaware about the knowledge of the scheme which can be seen in the enrollment figure. Another challenge is as far as the accessibility of the health services, regardless of whether it is very much equipped or health providers are available at the facility or not.

Moderator introduced and welcomed Mr. Sagar Dahal another panelist, who works as a health directorate at province 1. Moderator wanted to know Mr. Dahal's opinion on whether the health insurance is a medical insurance or if this idea isn't valid and dynamically moving towards health coverage. Mr. Dahal communicated discussion ought not be centered around whether it is a medical model or health model yet rather the attention ought to be on whether the services are being given or not as indicated by the people groups need. He expounded that insurance board has set a vision of improving the overall health system and this isn't the role of insurance board but instead this goal is engaged for Ministry of Health and Population. Also, suggested that the goal ought to be centered around improving the health of the populace and we don't see the establishment of supporting the poor to have access to health services.

The moderator asked Mr. Dahal, are we implementing the health insurance according to the drafted plan and whether the drafted plan which was prepared earlier is not suitable for the present context? Mr. Dahal replied to this by saying we have to rethink in formulating the objectives and change our strategies. We need to do micro analysis of the root causes and focus on client protection rather than the ministry's objective.

The moderator asked a question to Dr. Guna Nidhi Sharma regarding the relation between Ministry and Social health insurance board and what are the efforts made and the way forward for provider and purchaser's split mechanism? Dr. Guna Nidhi Sharma replied to this by saying Ministry's role is stewardship and leadership and also focusing on the health systems building blocks function and facilitating those functions.

The moderator welcomed Dr. Sabitri Sapkota, who is utilizing new innovative approaches in health care delivery and among the innovative approaches that they are utilizing, one of them being protecting citizen by giving better health care services which is affordable to them and have incorporated the insurance mechanism in the affordability segment. The moderator asked Dr. Sapkota, while executing the model in hospitals overseen by Naya

health what are the challenges and improvement tips? She referenced about situation in Accham and advised they are working with 8 municipalities leading enrollment campaigns and when any patient goes to the hospital with their insurance card, they have separate registration for them to enhance their experience within the hospital and spare their time. The moderator asked Dr. Sapkota about the enrollment rate of the general population, Dr. Sapkota mentioned in regards to the enrollment rate they presently can't seem to perceive how and where this will lead them in future and their present spotlight is on providing quality service to the people. Other thing, to support the enrollment rate, they have locally based staff at the hospital, which encourages the people to go through the enrollment process. They are firmly working with health insurance board, to incorporate open Electronic health referral system with open IMS, so the entire claim reimbursement process and the management will be effective, simpler and quicker. In the event that it is fruitful it will be adaptable not only in this specific hospital but throughout the country.

The moderator mentioned, that there are challenges in terms of implementing any kind of scheme, challenges in terms of enrollment and challenges in terms of managing claim on time. He further added that digitization helps, digitization can be a way forward in terms of managing administration.

After this the moderator invited Mr. Sailesh Kandel from Dhulikhel hospital, who is a service provider and has been part of the implementation of health insurance scheme in the hospital. Moderator asked, scheme has been executed, participatory model has been utilized in the hospital and keeping in mind about the practical implementation, what are the difficulties with respect to enrollment, claim management and what are the impression of the general population regarding the scheme? Mr. Sailesh Kandel reacted to this inquiry by saying the challenge is confronted when individuals come saying they have lot of medical issues and need to seek health services, even when they don't have medical issues and some visit the facility with terminated insurance and when informed that their insurance has lapsed, at that time they mention "regardless of whether not utilized, how might it be lapsed?", this itself is one of the difficulties. They are likewise giving administrations in regards to managing, counseling and enrollment at the facility from different section at the facility for insurance, so patient can profit by this as they don't need to hold up in line to get the services. He likewise included that the insured gets the medicine for half the price compared to that of the market price, which might lead to hospitals in the future to stand against the insurance scheme as they might fear of going in loss.

The moderator cited his experience at Pokhara hospital, where he interacted with the people there and found out that the one's with insurance had to wait more compared to the ones without insurance to receive the service, which demotivates the people to get insurance. With this being said, the moderator asked Mr. Kandel, whether it is because of similar circumstances that they are investing on the additional services such as separate counseling, registration and dealing section? Mr. Kandel replied to this by saying it's not because of that but to save time of the patient so they don't have to wait in line and can get the treatment as fast as possible.

The moderator welcomed another panelist, Dr. Devi Prasad Prasain and inquired as to whether the insurance benefits the rich or the poor fragment of the general public. Dr. Prasain

mentioned, the principle significant thing that should be comprehended is that the bigger the pool, the more the poor will profit by it. He likewise explained that social security scheme is upcoming and in the event that the most vulnerable populace is incorporated into the pool, at that point equity could be accomplished. He further added that if we pick a similar model for the following 4-5 years, the poor will still lack access to health facility and inequity will still be present.

Discussion

Key points of the session

- Nepal government has implemented the health insurance policy especially focusing for those citizens who do not have the capacity to bear the health treatment expenditure.
- Renewal of the premium service is a key challenge.
- Delay factor for insured patients seeking health services is another challenge.
- Absence of awareness with respect to the insurance is present and there is need of doing additional work to raise awareness.
- Economic development and health insurance are interlinked.
- Health services and health insurance ought to go inseparably to achieve the objective of having the health insurance coverage that is foresighted.
- Few hospitals have instilled separate registration section for insured patients to enhance their experience within the hospital and to spare their time.
- It's major ordeal for those individuals who are beneath the destitution line to pay for the premium, have an inclination that they need to take the service, regardless of whether they are sick or not.

Future Direction

- Digitization can be a way forward in assisting in claim reimbursement process and management which will be effective, simpler and quicker.
- The government and insurance board should exchange their emphasis on drawing in the local governments in the implementation process of insurance.
- Locally based staff at the hospitals can help encourage people to go through the enrollment process.
- Rethink in formulating the objectives and change the strategies of insurance board to be centered around improving the health of the populace.
- Strengthening the quality of services in public health services should also be focused as private facilities have better services but charge more for the services.

Conclusion

The moderator ended the discussion session and requested the chair to provide his remarks on the session. Concluding the discussion, the chair referenced valuable information could be taken home from the session. He expressed on the raised issues, such as, maintaining the retention rate, absence of awareness with respect to the insurance and need of doing additionally work to raise awareness, concern about health insurance board and MoHP contrasts, health services and insurance ought to go inseparably to achieve the objective of having the health insurance coverage that we want, another factor which was likewise raised amid the dialogue was in regards to the emphasis on the delay factor for insured patients seeking health services. He also brought up that services are better at the private hospitals and was explained that private hospitals charge more for the services which should be noted.

Concluding his points, Mr. Ghimire thanked all the panelists, moderator and the audience and suggested to take forward the matter further.

5.4 Symposium on community based NCDs management in Nepal

This session was jointly chaired by:

- Prof. Dr. Bhagwan Koirala
- Prof. Dr. Shiv Kumar Rai

There were ten papers presented in this session.

Topic	Presenters
Association between Serum Testosterone level and Erectile Dysfunction among Type 2 Diabetes Mellitus	Dr. Binod Kumar Yadav
Community based management of non-communicable diseases in Nepal(COBIN)	Mr. Dinesh Neupane
Community based management of hypertension in Nepal (COBIN-H)	Mr. Dinesh Neupane
Prevalence and treatment of diabetes in semi-urban area of Pokhara Metropolitan, Nepal	Mr. Liladhar Dhakal
Community Based Intervention for Management of Diabetes	Mr. Tara Ballav Adhikari
Community-based intervention for the cervical cancer-screening uptake in a semi urban area study area of Pokhara Metropolitan, Nepal. COBIN-C	Mr. Aamod Dhoj Shrestha
May Measurement Month- Nepal	Mr. Hari Krishna Bhattarai
Cardio-vascular Risk factors among high altitude inhabitants of Nepal	Ms. Sweta Koirala
Effectiveness of a FCHV Delivered lifestyle intervention in reducing blood glucose among adults with type 2 Diabetes	Mr. Tara Ballav Adhikari
Improving Access to Diabetes Care in primary health care setting in two districts of Nepal	Dr. Chandani Kharel

Dr. Binod Kumar Yadav, first presenter of the session, presented on Association between Serum Testosterone level and Erectile Dysfunction among Type 2 Diabetes Mellitus (Annex 8) with the objective to find out, the association of erectile dysfunction with serum total testosterone level in Type 2 Diabetes Mellitus (T2DM) and also determining the serum levels of total testosterone; assessing the



Erectile Dysfunction Score; determining the association of serum testosterone levels with the duration of T2DM, Glycated Hb (HbA_{1c}) and BMI and lastly determining the cut off level of serum total testosterone for ED among T2DM. Findings of his study showed that lower serum values of testosterone and higher serum values of HbA_{1c} were associated with a higher likelihood of Erectile Dysfunction in Diabetic Patients. He further recommended the importance of addressing glycemic control when attempting to treat erectile dysfunction. He further highlighted that increasing values of Body Mass Index are associated with lower testosterone values, dietary counsel and lifestyle modification that are also equally relevant when addressing erectile dysfunction in patients.

Second presentation of the session was delivered by Mr. Dinesh Neupane, on the title Community based management of non-communicable diseases in Nepal (COBIN) and Community based management of hypertension in Nepal (COBIN-H) (Annex 9). He shared about how his team came up with an idea of establishing COBIN cohort in Nepal. He also showed two minutes' video from his team leader, that addressed the management of non-communicable diseases. Further he talked about completion of 24-hour urine collection study to estimate how much salt Nepalese people were consuming and this was the first study after 1992 in Nepal in community settings. He also came up with the fact that lifestyle intervention led by female community health volunteer is highly cost-effective, low-cost and scalable solution for blood pressure control in Nepal.

The third presenter Mr. Liladhar Dhakal presented a study on Prevalence and treatment of diabetes in semi-urban area of Pokhara Metropolitan, Nepal (Annex 10). The study was conducted to establish the baseline study of COBIN project. His study revealed that around half of the diabetic people were unaware that they have diabetes. He reported that screening in community level might be effective intervention to detect the hidden diabetics and its awareness.

The fourth presenter Mr. Tara Ballav Adhikari, on behalf of Mr. Bishal Gyawali shared about the study entitled Community Based Intervention for Management of Diabetes (Annex 11). The study showed the effectiveness of FCHV delivered lifestyle intervention in reducing

blood glucose among adults with type 2 Diabetes. The reduction in fasting blood glucose from baseline to 12-month follow-up was significantly greater in the intervention group than in the wait-list control group with adjusted mean difference of -1.6 (95% confidence interval -2.1 to -1.0), $p < 0.001$).

The fifth presentation of the session was presented by Mr. Aamod Dhoj Shrestha on Community based intervention for cervical cancer screening uptake in a semi-urban area of Pokhara Metropolitan, Nepal (Annex 12). He shared the study findings which showed that cervical cancer is the major cause of cancer deaths among women in Nepal and screening of cervical cancer using visual inspection with acetic acid is a simple and effective tool for early diagnosis and prevention.

The sixth presentation of this session was presented by Mr. Harikrishna Bhattarai on May Measurement Month- Nepal (Annex 13). He shared that blood pressure is the biggest single contributing risk factor to global death and to the global burden of disease. His study findings depicted that approximately 910.4 million deaths are due to blood pressure each year world widely. He concluded his presentation with a recommendation to emphasize awareness on blood pressure through different social media.

The seventh presenter Ms. Sweta Koirala pointed out the Cardio-vascular Risk factors among high altitude inhabitants of Nepal (Annex 14). The study observed participants suspected of NCDs and there was increasing prevalence of higher HbA1c (=pre-diabetes) for people of 40 years of age and above. It revealed that Hypoxic people had increasing prevalence of higher HbA1c than normoxic people.

On behalf of Mr. Bishal Gyanwali the sharing was done by Mr. Tara Ballav Adhikari, as eighth presenter on Effectiveness of a FCHV Delivered lifestyle intervention in reducing blood glucose among adults with type 2 Diabetes (Annex 15). As per this study, family-based home health education and blood glucose screening delivered by FCHVs can reduce blood glucose among adults with type 2 diabetes in Nepal. It recommended, training and engaging FCHVs in diabetes management may provide an affordable and sustainable approach for diabetes management and the intervention approach is potentially feasible to scale up in Nepal and similar setting elsewhere. There were no specific questions for this session.

The last presenter of this session was Dr. Chandani Kharel. She presented study on Improving Access to Diabetes Care in primary health care setting in two districts of Nepal (Annex 16). She reported that it would be better to integrate NCD PEN package to within the primary health care level. Similarly, she also focused on Multi-sectorial coordination.

Discussion

After the deliberate presentations of all the expert presenters, the Chairs put forward their remarks on Non-Communicable diseases and its increasing trend in Nepal. They emphasized that in the context of Nepal, NCDs have not only been issues of urban or elite but also in rural and poor setting. They further emphasized that NCDs not only deteriorate the health of an individual but also affect the financial and social status of those people who suffer from NCDs.

Key points of the session

- NCDs show Iceberg-Phenomenon in community
- Female Community Health Volunteer-Led Lifestyle Intervention is a Highly Cost-Effective, Low-Cost and Scalable Solution for Blood Pressure Control in Nepal
- This strategy is potentially feasible to scale up in countries with strong network of Community Health Workers. However, mobilizing FCHVs in any kind of study or programme may result in overburden to them which might not generate good finding of the study
- Community people with NCDs are unaware about their health status as a result of which they do not go to health facility or take medicine regularly.
- Community based studies are seen not being able to take the responsibility in connecting community with health facility. It seems as if study is done just for shake of research purpose

Future direction

- Collective effort in holistic manner needs to be made to address the issue of NCDs in Nepal
- Research teams must take the responsibility to connect community and health facility.
- Management of NCDs must be given high priority
- Studies are needed to explore the evidence based strategies for diagnosis and treatment of hypertension from peripheral level health facilities
- Approaches other than mobilizing the FCHVs to make the rural people access to health information should be identified
- Strong support from government from central to the periphery is needed for successful campaign

5.5 Interaction on Cancer Registry and Its Implication

This session was jointly chaired by:

- Dr. Bijay Chandra Acharya
- Dr. Pitamber Dahal

The session started with the presentation by Dr. Atul Budukh, Centre for Cancer Epidemiology, Tata Memorial Centre, Mumbai, India on Cancer Registration (Annex 17). He shared about different types of cancer registries and its role in cancer control. He further shared about future prospects of Population Based Cancer Registry in Nepal.

Key Points of the Presentation

- A population-based cancer registry (PBCR) collects data from many hospitals and non-hospital sources in a defined geographical area and can serve to show incidence for cancer of different sites over time or between population subdivisions.
- A PBCR shows the nature of the cancer burden in a population. The main objective

is to provide the incidence and mortality rate of cancer in a defined population and to provide a framework for assessing and controlling the impact of cancer in the community.

- The objective of a Hospital Based Cancer Registry is to contribute to patient care by providing information on cancer patients, the treatment they receive and its result. The data are mainly used for administrative purpose and for reviewing the clinical performance of a hospital. A cancer registry is often considered an integral part of a hospital cancer care programme.
- Special purpose cancer registry collects information on specific cancers for a specific purpose, e.g., breast cancer registry, cervix cancer registry, retinoblastoma registry, lymphoma registry, gall bladder cancer registry.
- The ongoing PBCR in Nepal has shown increasing trend of Cancer patients
- PBCR helps to learn the pattern of cancer in defined population, monitor changes in incidence and mortality trends in the population, study the survival of cancer patients in a population, plan for the infrastructure for cancer care services, monitor the cancer screening programme in the population and provide platform to study the important causes of cancer in the local situation

The second presentation of this session was delivered by Ms. Ranjeeta Subedi (Annex 18). She shared about establishing population based cancer registry (PBCR) in Nepal and the progress update till date including findings of Interim analysis of Kathmandu valley cancer registry. She highlighted about the importance of PBCR in Nepal. She also emphasized on methodological part of PBCR also she listed the collaborated hospitals of



PBCR. Ms. Subedi also deliberated that the annual report of PBCR will be published in September, 2019.

Ms. Uma Kafle (Annex 19) then presented the overview of activities and progress of population based cancer registry (PBCR) in Nepal. Cancer registry is ongoing in three sites namely. This project collects data from both hospital and by visiting door to door. In this regard, Female Community Health Volunteers (FCHVs) help them to identify and locate the suspected cases using a simplified form containing basic info like name, address, contact no, treating hospital. Community mobilizer of the project then visits the suspected patient's house to do the screening. For hospital end, patient's information is checked thoroughly. After reviewing the address, contact number and possible duplication, data then are transferred to the software.

6. Inauguration Session



In the inaugural session of the summit, following distinguished delegates represented in the dais

- Prof. Dr. Anjani Kumar Jha, Executive Chairperson, NHRC
- Honorable Dr. Surendra Kumar Yadav, State Minister, Ministry of Health and Population
- Prof. Dr. Pushpa Chaudhary, Secretary, Ministry of Health and Population
- Prof. Dr. Balaram Bhargava, Secretary, Department of Health Research, MOH and Family Welfare, India and Director General, ICMR India
- Dr. Sushil Nath Pyakuryal, Chief Specialist, MoHP
- Dr. Rurik Marsden, Head of department for International Development, DFID
- Dr. Md Khurshid Alam Hyder, Acting WHO Representative, WHO Country Office Nepal
- Dr. Paul Rueckert, Chief Technical Advisor, GIZ-S2HSP
- Prof. Dr. Mrigendra Raj Pandey, Emeritus Chairperson, NHRC
- Dr. Gopal Raj Acharya, Past Chairperson, NHRC

- Dr. Mahesh Kumar Maskey, President of Nepal Public Health Foundation
- Dr. Chop Lal Bhusal, Past Chairperson, NHRC
- Dr. Bhoj Raj Adhikari, Vice Chairperson, NHRC
- Prof. Dr. Madhu Dixit Devkota, Executive committee member, NHRC
- Dr. Sandhya Chapagain Acharya, Executive committee member, NHRC
- Dr. Yogesh Neupane, Executive committee member, NHRC
- Dr. Shyam B.K, Executive committee member, NHRC
- Dr. Ramesh Kharel, Representative of Ministry of Health and Population
- Dr. YP Singh, Representative IOM

Dr. Sushil Chandra Baral, Director, HERD International warmly welcomed Chief guest, guests, invitees, delegates and participants and initiated the inaugural session with the Nepali national anthem.

Dr. Bhojraj Adhikari, Vice Chairman, NHRC, welcomed all guests, delegates, participants, invitees, on behalf of NHRC. He gave general introduction of the summit and made announcement on commencement of 29th year of NHRC. He highlighted the emphasis and dedication of NHRC on regulating ethics and different aspects of research, generating evidences for evidence based treatment and policy making. He highlighted NHRC working hand in hand with Ministry of Health and Population for achieving and delivering equity in access to health services. He also stressed that health should be made equitable and approachable for all via multisector approach. He further mentioned the importance of research in finding out the causes of inequity in different context, and the barriers leading the poor and marginalized population devoid of their access to health, to fulfil the gaps in health equity. He thanked everyone for the participation in the summit hoping that the findings highlighted in the event will provide evidences and opportunities to establish health equity in the country.

The welcome speech by **Dr. Bhojraj Adhikari**, was followed by formal inauguration of the program by Honorable Dr. Surendra Kumar Yadav, State Minister, Ministry of Health and Population. Dr. Sushil Chandra Baral highlighted the key findings of Global Burden of Disease Report 2017. He shared that Communicable diseases have been significantly reduced in last two decades. However, there has been an alarming rise in Non-communicable disease in the country. He highlighted that life expectancy of both male and female has increased to 69 and 63 years. Heart diseases and Lower respiratory tract infections are top causes of premature death. The report was formally released by Honorable Dr. Surendra Kumar Yadav, State Minister, Ministry of Health and Population.

Prof. Dr. Balaram Bhargava, Secretary, Department of Health Research, MOH and Family Welfare and DG, ICMR greeted and congratulated NHRC for organizing the program and promoting research in Nepal. He shared the efforts made and success of India in numerous sectors such as health care, Bollywood, cricket, space, vaccine revolution etc. He further mentioned that despite phenomenal success in different sectors, they still need to tackle

Universal Health Coverage and Emergency medical disaster medicine system in India. He emphasized that ICMR translated the vision of Mahatma Gandhi, father of nation India into action via various approaches to health. He further highlighted the works done by ICMR in India and how ICMR and Nepal can work together in future.

Dr. Paul Rueckert, Chief Technical Advisor, GIZ-S2HSP, who was regular attendant of all five national summits of NHRC, appreciated that the program has become better every year. He highlighted that in the context of research for equity and development in the federal context of Nepal, HMIS and information system of Health insurance has huge amount of data that needs to be analyzed. He mentioned that Health insurance program that has been initiated in 42 districts of Nepal vary greatly across these districts and more focus and studies are required to find out the reasons behind decreasing enrollment of people in this scheme. He also emphasized that studies need to be conducted on whether current enrollment approaches in Health insurance program are effective and efficient and what could be better interventions. He also focused on absolute need of operational research in federalizing the health system in Nepal.

Dr. Md Khurshid Alam Hyder, Public Health Administrator and Acting WR, WHO highlighted that high quality research generates critical evidence in promoting health of people. He emphasized that research plays important role in achieving historic achievements of equity in health sector. He addressed that the summit theme research for equity and development in the federal context spots a challenge in Nepalese context. In addition, he further mentioned that there is an important opportunity to set up the federal context, address health equity and move towards Universal Health Coverage. He hoped that the key notes addressed by the experts and presenters will provide opportunity to address the challenging issues, and translate evidence to decision making and policies.

Dr. Rurik Marsden, Head of Department for International Development, DFID Nepal mentioned that DFID is significantly providing technical and financial assistance to help support health outcomes and strengthening the health system in Nepal. He further emphasized the importance of high quality and operationally relevant research to ensure greatest possible development impact and make good decision making for the supporters. He further focused that inequalities in health should be identified and addressed such that evidence can be generated in promoting health of people. He emphasized that as Nepal is moving towards federal context, research plays a vital role in answering important questions about how federalism can work best in Nepal, and how to strengthen co-ordination between local governments to ensure effective and efficient use of resources, for the future development of health services in Nepal.

Prof. Dr. Mrigendra Raj Pandey, Emeritus Chairperson, NHRC, in his remarks opened the books of history to explain how NHRC had been established. He emphasized and beautifully spoke on how a research committee was formed in 1984 BS in a single room, took giant steps to establish itself a focal body for health research in the country. In his talk, he talked how government started to accept research in old days and the concept of research council evolved. He remembered the day the NHRC act 1991, was passed. He valued the step he took and the contribution he gave for establishment of NHRC, as the most important decision he had made in his life. He further took everyone to history pages, explaining how

different problems including budgetary problems were hindrances for working of NHRC. He appreciated the roles of other chairman's of NHRC succeeding him. He valued NHRC role on successfully bringing government to focus or consider research in the country.

Dr. Sushil Nath Pyakuryal, Chief Specialist, MoHP, highlighted that evidences generated from research guides the policy making in the future. He expressed his concern in difficulty in implementing policies in the context of our country. In addition, in regard to the country moving towards federalism, more difficulties are likely to be faced while implementing policies. He reflected the need to focus on challenges to reach accessibility and availability of health care to all. He further highlighted and asked everyone to take changing federal structure of government of Nepal as an opportunity to flourish and establish sound health system, in the country.

Prof. Dr. Pushpa Chaudhary, Secretary, Ministry of Health and Population congratulated NHRC team for successfully organizing the program. She mentioned about new phase of establishing health in a federal context and various difficulties and challenges in implementing policies in federal context of the country. She further shared that the Government of Nepal is moving forward by learning and doing. She emphasized the importance of identifying the needs of the people in the country via research. She further added that health equity is essential to reach the unreached and marginalized group of population and overall development of the country.

Honorable Chief Guest, **Dr. Surendra Kumar Yadav**, State Minister, Ministry of Health and Population in his remarks firstly congratulated NHRC for organizing 5th National Summit on the occasion of its 28th anniversary. He highlighted that despite multiple political changes in the government of last 25 years, Nepal has been able to achieve significant success in the health sector. In the federal context of the country, he mentioned that the structure has been classified into central, provincial and local level which he regards as a huge challenge as well as an opportunity. Lessons need to be learned from other countries. He emphasized on need of research and generation evidence to plan health programs and policies that suits our local context and determine where and how we can best utilize the available resources of the country.

Prof. Dr. Anjani Kumar Jha, Executive Chairperson, NHRC, welcomed everyone for the participation in the summit and making it a successful one. He mentioned that health system in Nepal is on the verge of transforming into provincial structure which is a challenge in itself. He emphasized that health and population scientists plays critical role in generating local evidence and facilitate transformation of the health system to provincial structure, function and contribute in achieving Sustainable Development Goals. He concluded his remarks by giving the commitment to organize such summit in coming days.

7. Plenary Session of the Summit

7.1 Plenary Session I

The session was jointly chaired by: Dr. Mahesh Kumar Maskey and Prof. Dr. Sudha Sharma.

In this session, four plenary lectures were presented. Following are the presented topics with their respective authors:

Topic	Presenter
Equity in Health and Healthcare in Germany	Dr. Ronald Panea
Trends of Health Research and Publications in Nepal	Dr. Meghnath Dhimal and Prof. Dr. Ganesh Dangal
Universal Health Coverage in the SDG era: a quality imperative	Prof. Dong (Roman) Xu
Policy Implications of Nationwide Mental Health Surveys for Developing Countries	Prof. David V. Sheehan

The session began with the presentation of Dr. Roland Panea, on Equity in Health and Healthcare in Germany (Annex 20). His presentation was focused on explaining the federal and state responsibilities in the German Healthcare System along with the administrative division and political system of Germany. He also explained in details about disparities found between (former) East Germany and (former) West Germany in terms of economic, life expectancy, and healthy lifestyle.

Key Points of the Presentation

- ◆ Plethora of different elements are responsible for health
- ◆ Due to the result of unemployment, the health indicators have suffered in Germany
- ◆ West Germany spends 4 times than East Germany in hospital care
- ◆ Investment in infrastructures and jobs have worked for improving healthcare rather than public health intervention
- ◆ There is correlation between life expectancy and education

Future Direction

- ◆ Invest in infrastructures and jobs are essential to uplift healthcare
- ◆ Balancing federal and state responsibilities is much essential
- ◆ Reduce regional socio-economic disparities in the healthcare system



Second presentation of the session was delivered by Dr. Meghnath Dhimal and Prof. Dr. Ganesh Dangal, on the title, Trends of Health Research and Publications in Nepal (Annex 21). They explained the history of Health Research in Nepal and its regulations. They also highlighted on promoting the use of evidence in different arena. Dr. Dhimal presented insight view on NHRC's proposal approval rates and also explained about ongoing research. Dr. Dangal presented about changing scenarios in publication and showed concerns about journal publishing in Nepal.

Key Points of the Presentation

- ◆ Around 3000 Health Research in Nepal
- ◆ In 2018, 718 proposals were approved by ERB of NHRC
- ◆ 42 IRC established in different institutions
- ◆ Mushrooming of sub-standard journal is prevalent
- ◆ Impact zones for research

Future Direction

- ◆ Establishment of more IRC is required
- ◆ Co-ordination with each province for utilizing health budget as well as promoting research in provinces as per their needs

The third session was on Universal Health Coverage in the SDG era: a quality imperative,

by Prof. Dong (Roman) Xu (Annex 22). He talked about the need for expansion of coverage care with minimum quality standard to all people. He gave emphasis on how the quality of care can be measured.

Key Points of the Presentation

- ◆ Fundamental change for quality of care should come from health provider
- ◆ SDG reflects goals indicating epidemiological triad
- ◆ Measuring Quality of care by using standardized patients

Future Direction

- ◆ There is need to expand health coverage to all people
- ◆ Choose valid, reliable, comparable and feasible tools to measure quality of care

Another session was presented by Prof. David V. Sheehan on, Policy Implications of Nationwide Mental Health Surveys for Developing Countries. He explained about how policy has implications on mental health study. In his presentation he focused on keeping the process of conducting mental health survey simple, clear, and easy to follow.

Key Points of the Presentation

- ◆ By 2030, depression disorder will be number one leading cause of disability
- ◆ Mental illness is genetically inherited metabolic disease

Future Direction

- ◆ Reduce the burden of mental health
- ◆ Report key performing indicators

The final presentation was presented by Prof. K. Srinath Reddy on title, Environment and Health: A Mounting Public Health Priority (Annex 24). He explained about how the changing environment is affecting health and mentioned the issue as a big public health problem. He also addressed the effect of climate change on food crop production.

Key Points of the Presentation

- ◆ Sub-Saharan Africa and South Asia are particularly prone to productivity losses from climate change because major staples in these regions are often already grown above their optimum temperature
- ◆ By 2100, 40% of the world's land surface are likely to experience altered climates

Future Direction

- ◆ Enhance diets and food systems in the context of weather shocks and price volatility.

- ◆ diversification of agricultural investments,
- ◆ mitigating climate-related stresses on crop and livestock quality

7.2 Plenary session II

The session was jointly chaired by:

- Prof. Dr. Chop Lal Bhusal, Past Executive Chairperson of NHRC
- Prof. Dr. Jagadish Prasad Agrawal, Dean, IOM

Topic	Presenters
Assessing the health effects of extreme temperatures and development of adaptation strategies to climate change in the Asia Pacific region	Prof. Dr. Cunrui Huang
Implications of population-based cancer registry for cancer prevention and control in low- and middle-income countries	Dr. Atul Budukh
Global progress in maternal, neonatal and child survival, unfinished global agenda and priority research actions	Dr. Ashish K.C

The first presentation of this session was delivered by Dr. Cunrui Huang (Annex 25). Dr. Huang talked about health and environment. He emphasized on the health effects of climate change and also shared the synthesis of research done in Asia-Pacific region. He mentioned that environment is the foundation for human life and help to maintain the ecosystem but human being have changed the world significantly because of their far reaching effects on vital ecosystem services such as provision of sufficient food and their potential for compounding pre-existing socially-mediated threats such as displacement, conflict or civil disturbance. He further mentioned about temperature-related health effects which are most significant source of weather-related public health problems. He notified that certain people and communities are especially vulnerable, including children, the elderly, the sick, and the poor. He also shared some research findings related to climate change.

Key points of the presentation

- Due to human activities and environmental issues climate change has been one of global change that effects the human health and wellbeing in many ways.
- Climate change affects health by three primary exposure pathways: directly through weather variables, indirectly through natural system and pathways heavily mediated through human systems.
- Rising CO₂ and climate change will affect the quality and distribution of food, with subsequent effects on food safety and nutrition.

Future Direction

- Majority of previous analysis have focused on health effects of climate variability and change in high-income countries, so there is need of studies investigating in low and middle income countries.
- There is need of sharing global to local experiences in managing the health risks of climate change and extreme events.
- It is important for Asian countries to assess individual and community factors contributing to vulnerability, and develop adaptation strategies for coping with extreme weather and climate change

Second presentation of session was delivered by Dr. Atul Budukh, on the title Implications of population-based cancer registry for cancer prevention and control in low- and middle-income countries (Annex 26). He gave his excellent sharing on Cancer registry and their role in cancer control in India. At first, he acknowledged the importance of Cancer registries.

Key points of the presentation

- Population Based Cancer Registry (PBCR) is defined as a registry that covers a geographical area showing incidence for cancer over time and the cancer cases should be residents of that area. This registration also shows the burden of cancer and pattern of specific geography.
- In this current year 2018, the cancer burden in Nepal is increasing, for both sexes and all type of cancer cases
- Hospital Based Cancer Registry is another type of cancer registry which includes the process to record information on cancer patients seen in a particular hospital. The data are mainly used for administrative purpose and for reviewing the clinical performance of a hospital to improve their care in current situation or in future
- Other two cancer registrations are, Special Purpose Cancer Registry, where registry is done for special purpose, e.g., breast cancer registry, cervix cancer registry, retinoblastoma registry, lymphoma registry, gall bladder cancer registry and Cancer Atlas Method is collection of data from pathologist who report through internet. This method has many weaknesses so it is least used.
- The method of cancer registration in India (Mansa and Sangrur, PBCR) was started from, Field staff visit to the Hospitals, Cancer Centre, Medical colleges, pathology laboratories, death register office and interaction with community leaders, ANM, Aasha workers, PHC workers, Medical officers (Periodically 6 months). Checking of the discharge card/ Reports available with patients/ Interaction with patient relative

regarding treating hospital/ Noting of hospital case number/ Status updating of the old cancer cases.

Future Direction

- Cancer registration is the way to the development of the infrastructure of care.
- The registry information can be utilized in planning the cancer care services.
- The registration gives the opportunity to know the patterns of cancer from defined population, monitor changes in incidence and mortality trends, the duration of life and providing platform to study more of cancer in the local situation.

Dr. Ashish K.C. presented the session on behalf of Prof. Dr. Joy Lwan (Annex 27). He highlighted his findings on Contextual design choices and partnerships for scaling early child development programs. He shared his findings that partnerships and leadership networks at national level, especially South-South partnerships are a major resource for ECD learning for scaling, but also transition time. Hence, there is a need to select partnerships wisely.

Key points of the presentation

- Partnerships and leadership networks at national level, are a major resource for Early Child Development learning for scaling
- Outcome measurement tools are numerous but use in routine programmes in LMIC is underexplored
- Coverage and quality measurement has gained little attention to date but is fundamental to tracking progress towards scale
- Integrated in routine Health Information Monitoring Systems is crucial

Future directions

- Structured tools for situational analyses and design are needed including clarity on pathways to impact, adaptation based on local data and integration of care of children with disabilities and in humanitarian settings
- Implementation science is essential to drive scale up of Nurturing care, with families at the center
- Improved measurement including tracking of coverage, equity and quality is needed to accelerate and track progress towards ECD related SDGs

8. Parallel Session of the Summit

8.1 Parallel Session I: Non-communicable Diseases

This session was jointly chaired by Prof. Dr. Abhinav Vaidya and Dr. Phanindra Baral. There were seven papers presented in the session related to Non-Communicable Diseases as follows.

Topic	Presenters
Customizing Android-based smartphone apps in chronic disease studies: Collaborations with the industry	Ms. Lijing L. Yan
Prevalence, awareness, treatment and control of hypertension in Nepal: data from nationally representative population-based cross-sectional study	Dr. Suresh Mehata
Nationally representative study on socio-demographic, geographic correlates and trends in tobacco use in Nepal	Dr. Pranil Man Singh Pradhan
Responding to Non-Communicable Diseases: Is Nepal prepared? An analysis of policies on Salt, Sugar and Trans-Fat.	Ms. Minakshi Dahal
Prevalence of Diabetes Mellitus among Tuberculosis Patients and their Quality of Life in Western Region of Nepal	Dr. Dipendra Kumar Yadav
Managing type 2 diabetes in Nepal- an exploratory study with healthcare professionals	Ms. Sujata Sapkota
Work-site Intervention Study to Prevent Diabetes in Nepal: Initial assessment	Mr. Prajwal Pyakurel

Ms. Lijing L. Yan as an invited talk was the first presenter of this session and pointed out about Customizing Android –based smartphone apps in chronic disease studies: Collaborations with the industry (Annex 28). She shared about increasing prevalence of cell phone ownership whether it is smartphone or simple featured phones that present a good opportunity to deal with NCDs. She also told about SINEMA app (system integrated and technology enabled model acquire) which has multiple functions like event diagnosis, blood pressure measuring, record of history, providing health education, reminders as well as send voice messages. This type of app helps people to make clinical decisions. She further emphasized that the government should play leadership in this kind of study that requires society support as well.

The second presenter Dr. Suresh Mehata (Annex 29) pointed out about Prevalence, awareness, treatment and control of hypertension in Nepal from the data of nationally representative population based cross-sectional study. This study showed that 18% (CI: 16.7-19.2) of participants were hypertensive which is high, while its awareness, treatment and control rates are low at entire population level.

Dr. Pranil Man Singh Pradhan (Annex 30), the third presenter of the session highlighted the



current burden of tobacco use in Nepal (attributes to 12 % of death). The study used the NDHS data and showed the trend of tobacco use from 2006 to 2016. The study revealed that the prevalence of tobacco consumption is higher among lower socioeconomic groups and less educated. The study revealed that in both males and females aged ≥ 35 years, the trend of tobacco smoking has been in declining trend, whereas for smokeless tobacco use, the trend for males has been in increasing nature.

In the fifth presentation of the session, Ms. Minakshi Dahal shared about Responding to Non-Communicable Diseases: Is Nepal Prepared? An analysis of policies on salt, sugar and trans-fat (Annex 31). She mentioned that this study was focused on understanding on the process of how the permission of the policy agenda for NCD control and the challenges, successes in implementation for addressing competent determinants of NCDs are very limited. The paper aims to identify the policy documents which consist of actions on NCDs and salt, sugar, trans fat, analyze the content of relevant policies with focus on salt, sugar and trans fat and compare the policy content text with diet related best buys.

The sixth presenter, Dr. Dipendra Kumar Yadav shared about the Prevalence of Diabetes Mellitus among TB patients and their quality of life in western region of Nepal (Annex 32). The study estimated that the overall prevalence of Diabetes mellitus among TB patient was high which may indicate emerging threat of TBDM co-morbidity in Nepal. This study recommends to establish screening program for DM detection to all TB case cases at every DOTS Centre. Co-morbidity of DM affects the overall quality of life of patients, so development and implementation of control and management both disease conditions are necessary.

Ms. Sujata Sapkota was the seventh presenter of the session who discussed about Managing type 2 diabetes in Nepal in an exploratory study with health care professionals (Annex 33). The study aimed to explore the views of healthcare professionals on diabetes care, and the factors influencing their daily diabetes care practices in Nepal. She mentioned that the key challenges were shortage of quality healthcare facilities and workforce, daily burden of patient care, inconsistency in care provision and lack of inter-professional collaboration. She further recommended that diabetes management must shift from episodic care to a comprehensive model of integrative medical care to achieve effective diabetes outcomes.

The last presenter of the session, Dr. Prajwal Pyakurel highlighted about the Initial assessment of work site intervention study to prevent Diabetes in Nepal (Annex 34). The primary outcome assessing program effectiveness will be a composite of achieving two or more cardio metabolic risk goals. The study selected the worksite because worksite is a natural environment for social support where employees spend most of their waking hours, have access to adult population and will be able to follow-up. The study focused on different components of the lifestyle intervention at the individual and worksite environment levels.

Discussion

After the deliberate presentations of all the expert presenters, the Chairs put forward their remarks on Non-Communicable diseases and related issues that needs to be addressed in the context of Nepal. They further emphasized that equity is one of the most essential components to be practiced not only for development of nation but also for the achieving better health of citizens. They also pointed out that in recent days, the Government of Nepal is giving higher priority to NCDs and Mental health issues.

Key Points of the presentation

- Prevalence of HTN is an alarming situation in the community
- The prevalence of COPD/CVD are on increasing trend which is due to passive smoking and air pollution.
- People are concerned with curative services rather than adopting healthy diet and physical activity
- Effective interventions are to be implemented in working place so that working population might have lesser risk of developing NCDs (Diet, Physical Activities, Working Environment)

Future Directions

- Health policies formulated by the Government of Nepal need to be effectively implemented
- Diet and physical activities need to be focused to control NCDs

- Holistic approach and collaboration with various line agencies is important initiatives to tackle NCDs
- Reduction in intake of simple sugar among high risk group and promotion of low salt diet in school premises and work places are some key approaches
- National level survey should consider important variables in future to account the number of people exposed to passive smoking.
- Greater vigilance on implementation of Tobacco Product Control and Regulatory Act 2010 is needed

8.2 Parallel session II: Maternal Health

The session was jointly chaired by Prof. Dr. Madhu Dixit Devkota and Dr. Chet Raj Pant. There were six papers in total presented for this session.

Topic	Presenters
Status of Implementing Community Based Maternal Death Surveillance in Nepal	Mr. Sharad Kumar Sharma
Self-Applied Technique of Quality Health (SATHI) tool: Advocacy for improved maternal health services in Nepal	Mr. Santa Kumar Dangol
Prevalence and determinants of contraceptive use and unmet need among poor, hard to reach and marginalized populations in nine districts of Nepal	Mr. Sanjeev Kumar Sahani
Status and determinants of Maternal and Neonatal deaths in Nuwakot, Ramechhap and Solukhumbu districts of Nepal'	Mr. Liladhar Dhakal
Determinants of Institutional delivery in Nepal: Evidence from Nepal Demographic and Health survey 2016	Ms. Jasmine Maskey
Can satisfied client testimonials influence a woman's FP choice? Measuring the effect of a video library on LARC uptake	Ms. Sneha Shah

Mr. Sharad Kumar Sharma, in the first paper of the session shared about Status of implementing community based maternal death surveillance (MDSR) in Nepal (Annex 35). He shared that since the maternal mortality rate (MMR) is high in Nepal, to reduce maternal death rate, MDSR has been implemented in two forms i.e. Standard hospital MDSR form and Community level MDSR form.

The second presenter Mr. Santa Kumar Dangol, in his paper Self-applied technique of quality health (SATH) tool: Advocacy for improved maternal health services in Nepal (Annex 36) explained the tool as a participatory technique that enables community members to map the population out of reach with the maternal health services, identify and assess community health challenges, focusing on maternal and child health, seek resources as a preparedness to minimize the potential risk for maternal and neonatal health, and advocate for access and quality improvement for the available services.

Mr. Sanjeev Kumar Sahani, the third presenter of the session, presented on Prevalence

and determinants of contraceptive use and unmet need among poor, hard to reach and marginalized populations in nine districts of Nepal (Annex 37). His findings showed that the contraceptive self-efficacy was inversely proportional to contraceptive unmet need. He further highlighted that higher contraceptive self-efficacy was associated with greater likelihood of contraceptive use; years of schooling; spousal communication and low contraceptive unmet need. He concluded his presentation by emphasizing on need of context-specific program interventions and encouragement of spousal communication, male involvement in family planning and need for improving contraceptive self-efficacy among women.

Mr. Liladhar Dhakal, the fourth presenter of the session, presented on Status and determinants of Maternal and Neonatal deaths in Nuwakot, Ramechhap and Solukhumbu districts of Nepal (Annex 38). His findings showed that major maternal deaths occurred in transit from home to health facility, which indicates need of strengthen referral mechanism that needs to be in place. Among the three districts Solukhumbu had the higher number of maternal deaths.

The Fifth presenter of the session Ms. Jasmine Maskey, presented on Determinants of Institutional delivery in Nepal: Evidence from Nepal Demographic and Health survey 2016 (Annex 39). Study revealed that interventions for increasing institutional delivery could be based on some of the positive influencers i.e. education, completing four ANC visit. The marginalized in terms of geography, ethnicity and wealth are less likely to have institutional birth.

Ms. Sneha Shah, the last presenter of the session, in her research entitled Can satisfied client testimonials influence a woman's FP choice? Measuring the effect of a video library on LARC uptake (Annex 40), attempted to examine the impact of a video library on uptake of Family planning and Long Acting Reversible Contraception (LARC) among women. Her main findings showed that testimonials from peer group seem to be important for LARC uptake among women. It was also found that uneducated rather than educated women are using LARC.

Discussion

After the deliberate presentations of all the expert presenters, the Chairs put forward their remarks on Maternal health and related issues that needs to be addressed in the context of Nepal.

Key points of the session

- Antenatal care visit focused more than Postnatal care visit which might be a gap behind maternal mortality rate
- There is good correspondence between Maternal Death Rate and Verbal Autopsy
- The marginalized in terms of geography, ethnicity, wealth, and education are less likely to have institutional birth

Future directions

- Postpartum care visit should also be given more importance and focus to decrease Maternal mortality rate
- Initiatives to reach unreached pregnant women and mothers specially in remote areas
- Further research is needed on larger sample size to explore efficiency of verbal autopsy to access maternal death etiologies
- Advocacy with local development offices for increasing accessibility to health services through construction of road
- Need to act on broader social determinants of health aiming at reducing equity gaps that exist among different subgroups

8.3 Parallel session III: Communicable Diseases

This session was jointly chaired by Prof. Dr. Jeevan Bahadur Sherchand and Prof. Dr. Prakash Ghimire. There were five papers presented in the session related to communicable diseases.

Topic	Presenter
Challenges for managing emerging viral diseases and eliminating vector-borne diseases in Nepal (Invited talk)	Mr. Basu Dev Pandey
Can Nepal reach 90-90-90 target in Children with HIV/AIDS (Invited talk)	Mr. Laxman Shrestha
Human immunodeficiency virus (HIV) and hepatitis B virus co-infection among visited patients at anti retro virus treatment (ART) centre of Seti zonal hospital in province-7, Nepal	Mr. Ram Prashad Ojha
Molecular evidence supporting expansion of kala-azar towards non-program districts of Nepal	Mr. Kishor Pandey
Risk factors of seasonal hyperacute panuveitis (SHAPU)	Mr. Ranju Kharel (Sitaula)

The first presenter Dr. Basu Dev Pandey presented a study Challenges for managing emerging viral diseases and eliminating vector-borne diseases in Nepal (Annex 41). He shared his study findings that showed that Dengue is the youngest vector borne diseases reported in Nepal and has become the second largest cause of febrile illnesses. Expansion of vector-borne diseases to higher altitude is becoming a serious problem and raising the concerns about the vector adaptation poses' challenges on elimination. Various vector-borne diseases are co-circulating in Nepal, thus, an integrated vector management system with enhanced surveillance (diagnosis and reporting) and more research is needed in the Nepal.

Mr. Laxman Shrestha, the second presenter of the session, shared his study titled Can Nepal reach 90-90-90 target in Children with HIV/AIDS (Annex 42) and started his dialogue by discussing cases of HIV affected children and remarking that there is tremendous changes

happening and what is the situation of the dream to achieve 90-90-90 target in Nepal. His planning was to achieve- 75% reduction of new infections between 2010 and 2020 (leading to 90% reduction by 2020); achieving the 90-90-90 treatment targets by 2020 and the 95-95-95 targets by 2030; achieving zero discrimination by 2020; eliminating new infections among children by 2020. The key priority actions which was taken, were massive scale up of HIV testing among pregnant women (reached at least up to birthing center); Early DNA-PCR test among exposed baby for early detection of HIV among infant; scale up treatment centers; strengthening of timely monitoring; follow-up and treatment modifications as required in ART centers across the country. He finished with a note that, all the HIV affected cases are grown up now and having a productive life but there are still many gaps.

The third presenter Dr. Ram Prasad Ojha suggested about HIV and Hepatitis B virus co-infection among visited patients at anti retro virus treatment (ART) centre of Seti zonal hospital in province -7, Nepal (Annex 43). The study showed 5% prevalence of HIV HBV co-infection among HIV positive individuals. HIV viral load was significantly higher in HIV HBV co- infected than in HIV mono- infected. The study recommended to do further research on HIV and Hepatitis B co- infection using advance lab technology to detect Hepatitis B in patients visiting the study site.

The fourth presenter Mr. Kishore Pandey shared about Molecular evidence supporting expansion of kala-azar towards non- program districts of Nepal (Annex 44). He provided information on Kala-azar and highlighted the situation of Nepal. His study mainly aimed to molecular identification and confirmation of *Leishmania* species by employing a molecular approach in kala-azar suspected patients' samples. His study confirmed that the cases of kala-azar are expanding in non-program districts including hilly and mountain region of Nepal.

Final presenter of the session, Dr. Ranju Kharel pointed out on Risk factors of seasonal hyperacute panuveitis (SHAPU) (Annex 45). She said that SHAPU occurs seasonally in odd years, basically among the children. This is onetime disease and occurs in one eye. It does not have episode of re occurrence but once it happens it takes away vision. It occurs suddenly with red eye with dramatic loss of vision. This disease is reported only from Nepal. White moths are risk factors of Shapu. It can cause permanent blindness and SHAPU is a disease of Public Health significance. Hence, Public awareness and early referral is necessary.

Discussion

Parallel session III

After the deliberate presentations of all the expert presenters, the Chairs put forward their remarks on Communicable diseases such as viral diseases, vector-borne diseases and other communicable diseases that are showing increasing trend in Nepal. They further highlighted that some diseases that are confined in lower belt of Nepal are further flourishing in hilly and mountainous regions these days which can emerge to be a public health concern.

Key Points of the Presentation

- Kalazar, Dengue and Malaria along with other viral diseases and vector- borne diseases are expanding over mountains and higher altitude. Thus, in the present context cases of those diseases are not only problem of Terai region but also of Hilly and Mountain regions.
- SHAPU, a seasonal hyper acute panuveitis is only found in Nepal. The causative agent or factor is yet unknown.

Future directions

- Kala-azar and other vector borne diseases is expanding over mountains so we need to strengthen surveillance or diagnostic system Comprehensive approach is necessary to control viral and vector-borne diseases in Nepal
- An integrated vector management system with enhanced surveillance (diagnosis and reporting) and more research is needed in the Nepal
- Need to know sub- clinical cases of malaria or challenges of vector control

8.4 Parallel Session IV: Child and Adolescent Health

The session was jointly chaired by Dr. Padam Bahadur Chand and Ms. Durga Khadka Mishra. There were five papers in total presented for this session.

Topic	Presenter
Hypoxic Ischemic Encephalopathy -Incidence and Associated Risk Factors from a Multicentric study in Nepal	Dr. Prajwal Paudel
Effect of skill drills on neonatal ventilation performance in a simulated setting – hospital based observation study in Nepal	Mr. Abhishek Gurung
Nutritional assessment of school going adolescents and its determinants in eastern development region of Nepal	Mr. Tika K. Kafle
Acute Gastroenteritis associated with Rotavirus A among children less than 5 years of age in tertiary care hospitals	Ms. Sony Shrestha
Age appropriate vaccination and its contributing factors among under five years children in Nepal	Mr. Kanchan Thapa

Dr. Prajwal Paudel, the first presenter of the session, presented on Hypoxic Ischemic Encephalopathy -Incidence and Associated Risk Factors from a Multicentric study in Nepal (Annex 46). His findings depicted that incidence of HIE was high in Nepal with the value of 7 per 1000 live births. Maternal age above 35 years was accounted for highest incidence of HIE. His study also revealed that spontaneous vaginal delivery, neonate weighing between 2500-4000 grams and gestational age between 37-41 weeks were some leading causes of HIE. Significant predictors of HIE included nulliparity, induction with amniotomy, instrumental

vaginal delivery, caesarean section, malposition, fetal distress, severe anemia during pregnancy, birth weight less than 2,000 grams and gestational age greater than 42 weeks. The researcher concluded by highlighting an immediate need to develop strategies to either prevent or manage the risk factors to reduce the incidence of HIE.

The second presenter of the session Mr. Abhishek Gurung, presented his research entitled Effect of skill drills on neonatal ventilation performance in a simulated setting – hospital based observation study in Nepal (Annex 47). The study findings depicted that participants who had conducted 6-10 drills had three-fold more chance of accurately performing better than those who did less skill drills. He further emphasized that optimal dose of simulated drills and feedback is required to maintain the neonatal resuscitation skills in simulated settings for short term period. Finally, he concluded his presentation by emphasizing the need of improving quality of neonatal resuscitation in the clinical and simulated settings via implementation of quality improvement interventions.

The third presenter Ms. Tika K kafle presented about Nutritional assessment of school going adolescents and its determinants in Easter Development Region of Nepal (Annex 48). Overall findings of the study indicated that prevalence of iron deficiency anemia and malnutrition was found to be very high. She further recommended that policy should be formulated to encourage health food habits and discourage regular consumption of junk foods to the children and adolescents.

In the fourth presentation of the session, Ms. Sony Shrestha presented on Acute gastroenteritis associated with Rotavirus among children less than 5 years of age in tertiary care hospitals (Annex 49). The study showed that rotavirus infection occurred throughout the year, but the prevalence was higher during winter season. The study also portrayed that highest rate of rotavirus diarrhea was found in children between 0-11 months.

The final presenter Mr. Kanchan Thapa shared his explorative study findings under "child and adolescent health" session. His presentation was about Age appropriate vaccination and its contributing factors among children aged less than five years in the context of Nepal (Annex 50). His study findings identified BCG vaccine as the least given on time whereas DPT1 and Poilo2 as the timeliest given vaccine in Nepal. Study also found differences in vaccination in terms of ecological zones, places of residence, provinces and socio-demographic strata. Study identified ANC Visit, source of information and working status of mother as the most important contributing factors for age appropriate vaccination. The study recommended for taking consideration of social determinants and RED strategy for designing public health interventions like vaccination program.

Discussion

After the deliberate presentations of all the expert presenters, the Chairs put forward their remarks on Child and Adolescent health and merging issues related to it. They highlighted

that very limited researches are present in the areas of adolescents' nutrition. Hence, large scale research is essential to dig out the real problems of adolescents', especially in girl adolescents' in Nepal and in developing countries.

Key points of the session

- The most important contributor for age appropriateness are ANC Visit, source of information and working status of mother
- The highest rate of Rotavirus diarrhoea was found in children between 0-11 months followed by 12-23 months
- The infection of rotavirus was found higher rate in hospitalized children 34% (261/770) compared to non-hospitalized children 14%
- Male sex, Hill and Mountain ecological belt and mother's education were positively associated with normal Hemoglobin status but age was negatively associated

Future directions

- Improving quality of neonatal resuscitation in the clinical and simulated settings requires implementation of quality improvement interventions
- Consideration of social determinants for designing public health interventions
- Policy should be formulated to encourage healthy food habit and discourage regular consumption of junk foods to the children and adolescents
- School based nutritional interventions should be carried out to provide the most effective and efficient way to reach adolescents' nutrition

8.5 Parallel Session V: Mental Health

The session was chaired by Prof. Dr. Saroj Prasad Ojha and Dr. Dipendra Raman Singh. There were four papers presented in this session.

Topic	Presenters
Effectiveness of mental health services provided by trained primary health care workers in Nepal: Outcomes at community, facility and individual levels	Mr. Nagendra Luitel
Prevalence of self-stigma and its effect on self-esteem among Psychiatric patients in a Teaching Hospital	Ms. Shanta Maharjan
Reliability and validity of the translated Nepali version of the geriatric depression scale (GDS-15)	Mr. Ajay Risal
Depression in Patients with Epilepsy: A Single Centered Hospital Based Study	Mr. Shiv Kumar Sah

The first presenter of the session, Mr. Nagendra Luitel presented on Effectiveness of mental health services provided by trained primary health care workers in Nepal: outcomes at

community, facility and individual levels (Annex 51). In his presentation, he highlighted with the points that a feasible, acceptable and effective holistic approach is needed at community, health facility and health organization level; and intervention packages and training alone doesn't work. Regular supervision and quality control are needed. Demand-side interventions like Community detection tool (CIDT) are vital.

The second presenter Ms. Shanta Maharjan presented her paper entitled Prevalence of Self-stigma and its effect on Self-esteem among Psychiatric patients in a Teaching hospital (Annex 52). The objectives of the study were to find out the prevalence of self-stigma among psychiatric patients in a teaching hospital, similarly, to assess the factors associated with self-stigma among psychiatric patients in a teaching hospital and to examine the relationship between self-stigma and self-esteem among psychiatric patients in a teaching hospital. The findings of her study reflected that more than half of psychiatric patients had self-stigma. She further mentioned that patients with mood disorders and schizophrenia had high self-stigma and self-stigma and self-esteem had strong negative relationship.

The third presenter Mr. Ajay Risal shared on Reliability and validity of the translated Nepali version of the Geriatric Depression Scale (GDS- 15) (Annex 53). The objective of the study was to test and establish reliability and validity of a Nepali-translated version of GDS-15. The researchers claimed their endeavor to enhance the pool of locally adapted psychiatric inventories in Nepal was reasonably successful. Reliability of GDS-15 Nepali version assessed through the internal consistency was adequate (Cronbach's alpha= 0.79). Best balance of Se and Sp were reached at a cut-off point of 5/6 (86.3% and 74.5%). The tool could be used for screening geriatric depression in epidemiological population-based studies and diagnosing geriatric depression in primary health care settings.

The final presenter of the session, Mr. Shiv Kumar Sah shared his study on titled, Depression in Patients with Epilepsy: A Single Centered Hospital Based Study (Annex 54) with the objective of finding out the frequency of depressive disorder and factors associated with it, the prevalence of depression according to patient's demographic distribution and the association and various risk factors influencing depression in epileptic patients. His study demonstrated that, Depression is prevalent in a substantial proportion of Patients with epilepsy visiting the hospital in Nepal. Drug frequency and duration of seizure attack appear to be risk factors for depression in the Nepalese setting. And, no association was noted between depression and either demographic factors such as age and gender or other types of seizures, duration of illness. He included few suggestions as well, for routine screening for depression among patients with epilepsy attending the outpatient clinic and a comprehensive and multidisciplinary epilepsy care program involving psychiatry unit. He also acknowledged that there is need for further hospital and community-based large-scale studies with longitudinal designs.

Discussion

After the deliberate presentations of all the expert presenters, the Chairs put forward their remarks on Mental health issues mentioning the reasons why mental health is still an unexplored issue and the possible ways to fight this problem. They highlighted that issues of Mental health are increasing day by day and further attention is necessary in this field. The distinguished presenters shared their views and research findings on effectiveness of mental health services, social stigma around mental health issues, depression measurement and epileptic patients with depression. Participants raised some important issues including complex dynamics about how the issue of mental health is neglected from policy level to implementation level, societal perception and mental health as a neglected issue.

Key points of the session

- Self –esteem enhancement program can decrease self- stigma
- Geriatric Depression Scale tool can be used in all areas of Nepal with the help of trained field workers, using local based people for using GDS.
- It is essential to emphasis our studies on diagnosis and identification of depression, loneliness and other forms of mental health issues
- Depression is a highly stigmatized issue that requires further research specially related to awareness among service providers
- Major donor entities have separate funding calls for mental health only. So, there are enough scopes to work on it.

Future directions

- Focus should be given in designing specific type of illness to have clearer picture about self- stigma
- Self-stigma can be minimized if we change attitude, learn to respect people with mental illness and preserve their dignity
- Budget allocation should be done for mental health by ministry of health
- Community based treatment should be increased rather than treatment by experts in hospital
- Awareness and advocacy should be done at municipality and vdc level for budget allocation in mental health

8.6 Parallel session VI: Biomedical and Health Information Technology

The session was chaired by Prof. Dr. Nilambar Jha and Prof. Dr. Prakash Ghimire. There were four papers presented in this session

Topic	Presenter
Prevalence of the Metabolic Syndrome and its determinants among Nepalese adults: Findings from a nationally representative cross-sectional study	Dr. Suresh Mehata
Screening of albendazole quality in Nepal using a paper analytical device	Mr. Basant Giri
Evaluation of oral potentially malignant disorders with auto florescence, reflectance spectroscopy and vital staining and their correlation with histopathology – a hospital based prospective study	Ms. Deepa Sharma
Comparative evaluation of ELISA and Immunofluorescence assay for the diagnosis of Acute Scrub Typhus in central Nepal	Mr. Rajendra Gautam

The first presenter Dr. Suresh Mehata, presented his paper on Prevalence of the Metabolic Syndrome and its determinants among Nepalese adults: Findings from a nationally representative cross-sectional study (Annex 55). In his presentation, he shared his study findings that showed that most predominant components of Metabolic Syndrome were Low HDL cholesterol (71%) followed by high blood pressure (26%) and raised triglycerides (25%). He further shared that high prevalence of abdominal obesity and low HDL cholesterol were seen in female participants whereas raised triglycerides, fasting blood sugar and high blood pressure was seen in male participants.

The second presenter Mr. Basant Giri, presented on Screening of albendazole quality in Nepal using a paper analytical device (Annex 56). The study revealed that the major contributing factors for substandard and falsified medical products are due to constraint access, poor governance and weak technical capacity. Paper Analytical Device (PAD) that was used for drug quality assurance in the study revealed it is a method which is a method that can quickly, easily and reliably screen the quality of albendazole. It was also found that the albendazole content from Southeastern part were significantly different from Central, South and Southwestern part of Nepal.

The third presenter Ms. Deepa Sharma presented her paper on Evaluation of oral potentially malignant disorders with auto florescence, reflectance spectroscopy and vital staining and their correlation with histopathology – a hospital based prospective study (Annex 57). Main findings from her study showed that oral epithelial dysplasia grade is an important marker for risk of malignant progression. The study also portrayed that male are frequently affected than their female counterparts by OPMDs.

The final presenter Mr. Rajendra Gautam shared study findings of a hospital based

Comparative evaluation study of ELISA and Immunofluorescence assay for the diagnosis of Acute Scrub Typhus in central Nepal (Annex 58). Study revealed fever as the most common clinical characteristic followed by nausea with thrombocytopenia among patients. A total suspected scrub typhus cases of 1585, 358 (22.6%) were IgM ELISA positive. Among these population, 294 were also positive by IgM IFA. The currently recognized gold standard test is indirect immunofluorescence assay (IFA), in which the test was carried out among 1585 samples and found 350 (22.08%) were positive by IgM IFA where as one-fifth were positive by IgM ELISA which was not significant difference. The study findings indicated that the overall sensitivity of the IgM ELISA test was 84.0% and specificity was 94.8%. Researcher concluded saying ELISA test as a comparatively cheaper and easy to perform method, which can be used in resource limited countries like Nepal. He further added that, although IgM IFA is considered the gold standard test for the diagnosis of scrub typhus cases, it is expensive, requires trained personal and fluorescent microscope.

Discussion

After the deliberate presentations of all the expert presenters, the Chairs put forward their remarks on Biomedical and Health Information Technology. They thanked the presenters for bringing up some really important issues related to the field. The distinguished presenters shared their views and research findings on different dynamics of metabolic syndrome, quality measures of Albendazole, oral potentially malignant disorders and diagnostic aspects of Acute Scrub Typhus. Participants raised some important issues including the acceptability and scalability of drug screening in government and policy end; rationale of using old data to show disease trend since life is changing faster and differences in drug quality.

Key points of the session

- Most predominant components of Metabolic Syndrome were Low HDL cholesterol (71%) followed by high blood pressure (26%) and raised triglycerides (25%)
- Drug quality assessing device is not commercially available yet. It is still under demonstration
- Prevalence of Acute Scrub Typhus has been documented by few researchers in different parts of Nepal. Further attempts are needed to get an overall idea about Nepal. This was done initially by EDCD. Unfortunately, there is no recent report on this.
- For some diseases, there is no recent data available. In that case, data from for instance 5 years back is still helpful to get an idea. In addition, sometimes it helps to penetrate the issue within broad spectrum of health and policy
- It was supposed that HDL and LDL had association with serum cholesterol. But, a recent meta-analysis showed that, it has no relationship with HDL

- There are many modern appliances available in the market for early diagnosis of oral cancer. Few methods are very easy to use by the help of any healthcare staff in the rural areas

Future directions

- Screening and intervening in right time will definitely help in prevention of oral cancer and the burden of this disease.
- Since there are fewer studies done in OPMDs using Identafi®, additional research on a larger sample size selected more systematically is needed before extrapolating the results to the general population
- For many emerging diseases, Nepal still doesn't have up-to-date and countrywide data. Hence, further research needs to be done to get an overall picture of health status

8.7 Parallel session VII: Health system, Health Economics and Financing

The session was chaired by: Dr. Badri Raj Pande and Mr. Deepak Karki. There were six presentations presented in this session.

Topic	Presenters
Translating evidence into decisions for complex health interventions in complex setting	Mr. Deepak Paudel
Enrollment in government health insurance in the first piloted district of Nepal	Mr. Deepak Raj Paudel
Knowledge, attitude and practice on eye health services in Nepal	Mr. Sailesh Kumar Mishra
Is active case finding a cost effective strategy to reduce catastrophic costs for tuberculosis treatment in Nepal? A cross sectional analytical study	Ms. Kritika Dixit
Health policies and legislations in Nepal- what we already have and what is the need for new formulation and amendments in federal context?	Mr. Sujan Katuwal
Community Health Worker National Pilot in Achham and Dolakha: an interim analysis of a type 2 hybrid effectiveness-implementation study	Ms. Aparna Tiwari

Mr. Deepak Paudel (Annex 59) was the first presenter of this session. He presented a framework on the basis of his engagement on its process. He highlighted the nature of complex interventions and system as many public health interventions are complex. He also said that it is really difficult to conceptualize translating evidence into action. He introduced about “GRADE criteria”, which could help guidelines panel or other decision making bodies to make evidence into action or decision. On the discussion part he clarified that quantity of

evidence is the part of quality of evidence. He further focused on generating evidence before decision making and suggests to change the present practice.

Mr. Deepak Raj Paudel (Annex 60) was second presenter. He said that this study was focused on endorsement behavioral model of health in which there is three important component enabling, predisposing, and need factors are major factors he also elaborated that healthcare expenditure or out of pocket expenditure of Nepalese people is high. He further highlighted that 55% of expenditure is done by people itself. He further added that first piloted district was Kailali in 2016, April where as in other district it was done after three months which showed that poor and less educated groups are less benefitted by health insurance program

The third presenter Mr. Sailesh Kumar Mishra presented on Knowledge, attitude and practice on eye health services in Nepal (Annex 61). The objectives of the study were the present survey was designed to identify KAP of the public in relation to eye health, similarly, to assess their knowledge of eye health status and eye health seeking behavior and then to plan awareness raising activities toward achieving the goal of Vision 2020: The Right to Sight. He introduced about the development of eye care services in Nepal so far. He concluded that Information, education and communication materials should focus not only on common diseases like cataract and trachoma but also on emerging problems like diabetes and hypertension to create awareness about their potential to cause blindness and to sensitize people regarding prevention. Knowledge about different types of eye diseases was found to be inadequate and there is a need to strengthen eye care services in Nepal. There is a need of more awareness programs in the rural areas of the country though several community outreach activities have been ongoing. There should be an effective eye health awareness programs for timely prevention of different eye diseases in Nepal.

Ms. Kritika Dixit shared about Is active case finding a cost effective strategy to reduce catastrophic costs for tuberculosis treatment in Nepal? A cross sectional analytical study (Annex 62). The objective of the study was to compare costs incurred by patients with TB diagnosed through active and passive case finding (ACF and PCF) and measure prevalence of catastrophic costs. She stressed that implementing ACF would reduce the direct costs and that would in turn reduce the catastrophic costs which would further strengthen the social protection policies.

Mr. Sujan Katuwal (Annex 63) was the fifth presenter of this session. He emphasized that appraisal of existing health policies and legislation will help provincial and local governments understand priorities and focus of federal government. He further mentioned that needs for adaptation at provincial and local levels should be identified as well.

The final presenter of the session Ms. Aparna Tiwari presented her study titled, Community Health Worker National Pilot in Achham and Dolakha: an interim analysis of a type 2 hybrid

effectiveness-implementation study (Annex 64) with the objective of achieving the impact of the intervention using community Health Workers (CHWs) as a national pilot on population-level health outcomes: institutional birth rate (IBR), under-two mortality rate (U2MR), and postpartum contraceptive prevalence (PPCPR) rate and finally the implementation process of the integrated Reproductive, Maternal, Newborn, and Child Health (RMNCH) intervention using CHWs as a national pilot. Her Integrated intervention included continuous surveillance, Home-based antenatal and postnatal care, Under-2 care, Group Antenatal care, Patient-centered contraceptive counseling. During her dialogue she concluded that, there was improved indicators, in post-implementation of the intervention than at baseline in Sanfebagar hub and preliminary data from Sanfebagar hub suggest a promising CHWs National Pilot for integrated RMNCH care.

Discussion

After the deliberate presentations of all the expert presenters, the Chairs put forward their remarks on Health system, Health Economics and Financing.

Key points of the session

- Most of the policies and documents are focused on service delivery but referral systems, health financing and research are relatively neglected.
- Need for clarity on approaches to development and/or adaptation of similar policies and documents at provincial and local levels
- Implement the health insurance program differently based on the income level, to ensure equally obsessed health care

Future Direction

- There must be design of costed implementation and M&E plans for each of the major health strategies, towards smooth implementation and progress monitoring
- To limit the policies and guiding documents to a manageable number there must be development of a comprehensive policy with sub- sectoral guidelines.
- Policy maker need to implement the health insurance program differently based on the income level, to ensure equally obsessed health care.
- Policy maker focusing on health should not neglect the fact that, education is health intervention and higher prevalence in making household leads to out of household enrolled
- Generate evidence before decision making and to change the present practice.
- There should be an effective eye health awareness programs for timely prevention of different eye diseases in Nepal

8.8 Parallel session VIII: Health promotion, technology and essential medical products

The session was jointly chaired by Dr. Sushil Nath Pyakuryal and Prof. Dr. Paras Kumar Pokharel. There were five papers presented for this session.

Topic	Presenter
Effectiveness of training to Government health workers and FCHVs on the detection and referral to rehabilitation care of selected impairments in children Under 5 in Jajarkot, Nepal	Mr. Chudamani Bhandari
Anxiety and Depression among LGBT in Kathmandu valley	Ms. Kabita Thapa
Evaluation of dispensing practices of antibiotics at community pharmacies in Kathmandu and Lalitpur districts, Nepal'	Dr. Nisha Jha
Are we ready to respond: Disaster preparedness of primary health care System in Nepal?	Mr. Kiriti Ray
Effect of ABCA1-R219K Variant Polymorphism in Serum Lipid Parameter in Patients under Statin Therapy Visiting Manmohan Cardiothoracic Vascular and Transplant Center, Nepal	Ms. Sapana Ghimire

The first presenter of the session Mr. Chudamani Bhandari presented his paper on Effectiveness of a training to Government health workers and FCHVs on the detection and referral to rehabilitation care of selected impairments in children Under 5 in Jajarkot, Nepal (Annex 65). His findings showed that training approach is more effective for early detection compared to camps as cases identified in camps are detected late leading to higher cost treatment with less chance of recovery. Identification/detection is the smaller part of the rehabilitation services and integration of it in the health system is very crucial.

The second presenter Ms. Kabita Thapa, presented her paper entitled Anxiety and Depression among LGBT in Kathmandu valley (Annex 66). In her presentation, she emphasized that assessing depression and Anxiety in LGBT people might help to determine the status of mental health of LGBT people and identify mental health issues in them. She further highlighted that LGBT people are sexually minor and vulnerable populations who are at greater risk to mental health problems like depression and anxiety. Her study further showed that experience of abuse and discrimination, suicidal attempts, community tolerance, employment status and drinking alcohol were found factors predicting depression and anxiety.

The third presenter Dr. Nisha Jha, in her paper titled Evaluation of dispensing practices of antibiotics at community pharmacies in Kathmandu and Lalitpur districts, Nepal (Annex 67) shared about the irrational use of antibiotics because of easily accessible and cheaper option to treat medical issues. She also revealed that there are many unregistered pharmacies and antibiotics dispensed without a prescription is also high found in the area studied

The fourth presenter Mr. Kiriti Ray (Annex 68) presented study findings focusing the disaster preparedness of primary health care system in Nepal conducted in three Ecological zones

(Mountains, Hills, Terai). The study found that in case of an emergency scenario, health facilities in urban areas had to face significantly more pressure compared to those in rural areas. Likewise, pressure was more on health facilities located in terai region. Primary health care centres (PHCCs) were observed to have more pressure compared to health posts (HPs). In terms of existing plan and capacity, analysis showed that very few (9.59%) among the total surveyed had disaster management plans. Study also revealed that, among the total available health workforce (Doctors, Nurses, Paramedics, Support staffs), only 5.24% received disaster management trainings of different durations. Mr. Kriti concluded that with a call for an urgent need to have disaster management plans and practice for the PHC health facilities.

Ms. Sapana Ghimire presented the last paper of the session on, Effect of ABCA1-R219K Variant Polymorphism in Serum Lipid Parameter in Patients under Statin Therapy Visiting Manmohan Cardiothoracic Vascular and Transplant Center, Nepal (Annex 69). She explained about the prevalence and compared the effect of R219K polymorphism. She concluded that the K allele is associated with better improvement in several lipid parameters indicating its positive effect on action of atorvastatin.

Discussion

After the deliberate presentations of all the expert presenters, the Chairs put forward their remarks on Health promotion, technology and essential medical products by offering thanks to the presenters and all the audiences, especially who raised important issues for further clarifications from presenters. During the session, the distinguished presenters shared their views and research findings on rehabilitation of children with impairment, anxiety and depression among LGBT community, dispensing practice of antibiotics, disaster preparedness of primary healthcare centers and effect of ABCA1-R219K variant polymorphism in serum lipid parameter. Few key issues were raised from the audiences including the challenges of conducting research among LGBT people, dosage of drugs, dispensing methods from community pharmacies, rationale behind suggesting specific antibiotics etc.

Key points of the session

- Many interested researchers and students cannot choose LGBT issue as a research topic because of its sensitive nature. One of the major challenges in this regard is maybe some pre-conceptions about them
- There is no system in place to regulate dispensing of antibiotics by pharmacists in rural areas
- It is better to prescribe medicines based on individual's genetic parameter. However, there is no evidence available in Nepal in this regard. Some of the reasons behind this are lack of proper technologies and adequate funding

- Government of Nepal has included rehabilitation services in the basic health package
- Three basic pillars (basic health service package, social health insurance and emergency preparedness & management) have been established under Universal Health Services

Future directions

- Incorporation of impairment wise data in HMIS
- Develop early detection TOT manual to be endorsed by NHTC and trained NHTC trainers
- Enforcement of pillars like preventive, promotive, curative, rehabilitative and palliative care can improve the overall health scenario.



9. Poster Presentations of the summit

The fifth National summit of health and population Scientists in Nepal provided a platform for advancing health research through scientific dissemination of research evidences generated by the researchers and scientists. In this context, Nepal Health Research Council invited the health and population scientists to submit abstracts of their research for poster presentation in the summit according to prescribed format on 10 January 2019.

NHRC received 277 abstracts from the researchers. The received abstracts were sent to the reviewers for review. They were reviewed using an evaluation criteria and the abstracts were selected based on some pre-defined criteria, such as- clinical/ public health significance, methodological relevance, scientific rigor, visual and aesthetic value of the poster, presentation skills (dealing with the questions) and overall clarity. 104 abstracts were selected for poster presentation based on evaluation scores and called for poster presentation. Out of 104, 93 presenters presented their posters in the summit which was divided into the following 11 themes.

S.No	Theme	Number of abstracts
1.	Adolescent, Neonatal, Child and Geriatric Health	14
2.	Biomedical, AMR, Ayurveda and Other Traditional Medicine	5
3.	Communicable Diseases	11
4.	Environmental and Occupational Health	6
5.	Essential medical products	3
6.	Health system, Health economics and Financing, Health policy and Health Workforce	9
7.	Maternal Health, Sexual and Reproductive health and Family Planning	11
8.	Mental Health and Substance Abuse	13
9.	NCD, Disabilities, Injuries and Critical Care	15
10	Nutrition and Food Safety	6

Theme 1: Adolescent, Neonatal, Child and Geriatric Health and Migrant health

Key points of the presentation

- Public awareness and provision of basic sustainable sanitation at school is necessary to promote menstrual hygiene practices among adolescents



- Self-esteem is associated with gender, income and marital status of older adults in Mandan, Deupur municipality. Likewise, increase in age also increases the level of stress and the psychological domain that affect the mental health of older adults
- The patterns of Screen Media Use (SMU) among the respondents were found to be substantially different on a school day and on a holiday
- Screen media influences ill health, practical measures maintaining a balance between time spent on media based and non-media based activities, along with reduction of media influenced dietary habits can be adopted at both household and school environments
- Internet addiction was a prevalent public health issue, having multiple risk factors and varied patterns of Internet use among older adolescents in Dharan
- Adolescents with internet addiction were more prone to suffer from poor sleep quality and unhealthy practices in selected schools of Kirtipur municipality
- The municipality and schools should prepare plan to aware the adolescent students on use of internet and promote health behaviors
- Education, religion and parity, mother's knowledge, attitudes, their subjective norms and perceived behavior control were associated with breastfeeding intention among pregnant mothers visiting two health facilities of Pokhara metropolitan

- More than two third of mothers had poor awareness towards childhood immunization and poor practices in Gaur Municipality, Rautahat District
- The major reason for incomplete immunization was illiteracy and religion of mothers and lacking in proper availability of vaccines in health facilities
- Obesity was seen among 1/5th of the adolescents of selected schools of Inaruwa municipality
- Need to emphasize on school-based programs of primordial intervention including awareness programs
- Cold application prior to intravenous cannulation was effective in reducing pain in children of age group 4-14 years admitted in pediatric emergency and pediatric wards of BPKIHS.
- Neonatal care practice was found poor among one fifth of the participant infant's mothers in Shuklagandaki Municipality, Tanahun District
- Cultural and traditional belief had no influence on neonatal care practices in Shuklagandaki Municipality, Tanahun District and large scale study should be conducted on this topic
- The factors such as alcohol consumption and the adjustment problems during the stay of Nepalese labour migrants in Qatar were found to be significant predictors of the migrants suffering from several health problems
- Bullying behavior was found to be associated with gender, ethnicity, smoking behavior, alcohol consumption and happiness, affecting both mental and physical health of 9th and 10th grade students of both public and private schools in Madhyapur Thimi Municipality.
- Punishment from teachers, overburden of homework, and over-expectation of parents were the major causes of academic stress among very young adolescents in Chitwan district of Nepal
- Dependence of elderly population on daily activities and cost as barriers for the utilization of health care services was remarkably high among elderly population in Pokhara metropolitan city
- More than half of elderly were illiterate and had to depend on their son's decision to utilize health services in Pokhara metropolitan city. Hence, social support services to maintain their socio-economic independence, informal education and awareness on non-communicable diseases targeting the senior citizens is required

Theme 2: Biomedical, Anti-Microbial Resistance, Ayurveda and Other Traditional Medicine

Key points of the presentation

- *E. coli* and *Klebsiella* species were predominant cause of pediatric urinary tract infection in children and higher susceptibility was observed against aminoglycosides and nitrofurans making these drugs suitable in emergency at Siddhi Memorial Hospital, Bhaktapur, Nepal
- Comparative IC₅₀ value of alpha-amylase inhibition assay suggested that *Trigonella foenum* (Methi), *Asparagus officinalis* (Kurilo), *Ocimum basilicum* (Tulsi), *Calendula officinalis* (Chalandula), *Cannabis sativus* (Ganja), showed high potential whereas *Asperagus officinalis*, *Hordeum vulgare* (Jamara), *Cannabis sativus*, *Ocimum basilicum*, and *Chalandula officinalis* showed highest alpha-glucosidase inhibiting potential in an in-vitro analysis on anti-diabetic properties of most prevalent indigenous medicinal herbs of Nepal.
- Hence, most of these indigenous herbal plants showed dose-dependent anti-diabetic potency and possessed the ability to help people regain their prosperous health highlighting their role as herbal medicinal plants
- Methanolic Extract of *M. esculenta* small branches and stem bark showed potent DPPH free radical scavenging activity. Hence, *M. esculenta* was found to have therapeutic potential for improving glycemic control in diabetic subjects
- Multi Drug Resistant *Acinetobacter baumannii* causes variety of infections in hospitalized patients among which MBL, ESBL and AmpC producing isolates are common in Tribhuvan University Teaching Hospital (TUTH), Nepal. Most of them were resistant to all first line antibiotics but were sensitive to only last resort antibiotics i.e. polymyxin B and colistin sulfate

Theme 3: Communicable Diseases

Key points of the presentations

- Majority of the people have inadequate knowledge and positive attitude about pulmonary tuberculosis in ward no. 7 of Butwal sub-metropolitan of Rupandehi district.
- Public health interventions should take into account the physical, psychological, social, environmental, level of independence and spiritual health to improve Health-Related Quality of Life (HRQOL) since all quality of life domains significantly differed with gender. In addition, gender also contributes in detrimental delays in diagnosis and treatment.
- Acridine orange was a better alternative to Gram stain in the rapid detection of bacterial

pathogens in Cerebro Spinal Fluid in the setting where fluorescent microscope is available, in selected hospitals of Kathmandu.

- A medical chart review of all admissions (267) at Anandaban Hospital for leprosy ulcer treatment demonstrated that developing an ulcer has an impact on affected person's physical, psychological and social well-being.
- Community-based symptom screening and testing by the community health volunteer network was shown to be feasible and effective in increasing trend TB case detection including Multidrug resistant TB (MDR TB) in Dhanusha, Mohattari, Makwanpur and Chitwan
- In-vitro methods revealed that high percentage of Staphylococcus aureus (MRSA) isolated from clinical specimens have the ability to produce biofilm in a selected hospital located at Lalitpur district of Nepal.

Theme 4: Environmental and Occupational Health (including climate change, indoor air pollution)

Key points of the presentations

- Although hospital wastage is considered as one of the major sources for polluting hospital environment; hospital visitors had poor understanding and awareness regarding this issue among hospital attendants and community people of Kathmandu valley
- Traffic police in Kathmandu valley had both physical and mental health problems associated with air pollution.
- The reason of higher number of health hazard faced by health workers were due to lack of availability of Personal Protective Equipment and poor knowledge and practices on standard precaution which need to be improved by providing both basic and refresher training and also by making availability of PPE throughout the year.
- Commercial tomato farmers of Kaski district who use pesticides face various health hazards due to inadequate knowledge of pesticide health effects and absence of personal protective equipment's.

Theme 5: Essential medical products

Key points of the presentations

- Allopathic drug including antibiotics was the common medicine used for self-medication in surrounding communities of Birat Medical College.
- Dried *F. auriculata* fruit mucilage can be used along with hydroxypropyl methyl cellulose K4M (HPMC K4M) as a matrix forming polymer for formulating diclofenac potassium transdermal drug delivery system.

- On job training for physicians and nurses can improve their knowledge, attitude and practice significantly towards pharmacovigilance and adverse drug reactions.

Theme 6: Health system, Health economics and Financing, Health policy and Health Workforce

Key points of the presentations

- Affordability and cultural barrier are few of the key barriers behind the higher rate of health treatment from traditional healer than the practice of healthcare from health center among tharu married women of selected municipalities of Bara district of Nepal.
- Oral health care added a financial burden to the family forcing them towards catastrophe among households of Sunsari district.
- Health insurance helps to increase the health service utilization rate and decrease out-of-pocket expenditures
- Healthcare related news published in the online portal and social media mostly lacked proper investigation, which created chaos among the public and further distorted the doctor-patient relationship.
- Though the evidences and policy analysis documents were considered in the policy formulation, political influence and finance played major roles in setting policy agendas. Involving policymakers since the beginning of research process, targeted dissemination, publication of one pager policy brief in Nepali and policymaker's periodic interactions with researchers may solve this problem.
- Workplace security, equipped health facility and suitable places for living combined with financial incentives can attract and retain skilled births attendants in rural areas.
- Age, educational status, marital status, type of valve replaced and duration after valve replacement surgery had significant impact on the Health related quality of life (HRQOL) of patients who had undergone aortic, mitral or both valve replacement surgery at Shahid Gangalal National Heart Centre

Theme 7: Maternal Health Sexual and Reproductive Health and Family Planning

Key points of the presentations

- Knowledge and attitude regarding family planning among Muslim men of Mahottari District was moderate; age and occupation of the respondents were found to be associated with attitude.
- Hypothyroidism was found to be more common in pregnant women attending Patan Academy of Health Science for ANC (Ante Natal Care) visit; routine test in every third trimester was found to diagnose and minimize it.

- Cultural values and beliefs were the most perceived barriers by women for male involvement in ANC care in hospitals of Nepalgunj, Banke.
- Knowledge regarding cervical cancer was not satisfactory in the community; major barriers were inadequate site and program of screening in Banke district.
- Gay, Bisexual and Transgender in Kathmandu valley were found to have sound knowledge about condom and were also found to have satisfactory utilization practice during intercourse.
- Compliance to IFA supplement was low in Kapilvastu district where educational status of mother, frequency of ANC, ANC start time, age at first pregnancy and health education about the iron and folic acid supplementation were factors associated with.
- Menstrual hygiene practice was found to be poor and the stigma, misconducts and misbeliefs were found to be factors associated with school absenteeism during menstrual cycle among rural adolescent girls of Kalikot.
- Nepal and India had lower access and higher inequalities in utilization of SBAs at delivery and institutional delivery in comparison to Sri Lanka.
- Expectant fathers were found to have inadequate knowledge regarding antenatal care in a tertiary level hospital of Nepal.
- A case report showed that Metformin caused reduction in weight which was beneficial in the management of HAIR-AN syndrome.
- Audio visual programme on Maternal and Newborn Health was found to be effective in enhancing the knowledge of MNCH of community people in Khotang district of Nepal.

Theme 8: Mental Health and Substance abuse

- Global Mental Health Assessment Tool Primary Care Version (GMHAT/PC) was found to have good sensitivity, excellent specificity and good level of agreement. It was found to be feasible in Nepal and could be used in different health care setting of Nepal.
- Help seeking behavior regarding mental illness was found to be associated with both beliefs towards mental illness and willingness to seek help among Undergraduate Students of Lalitpur district.
- Sleep quality was weakly and negatively correlated with domains of quality of life of nursing students of Kathmandu.
- Caregivers experienced severe burden while caring their mentally ill relatives and problem focused strategies were adopted by most of the caregivers.

- Counseling programs were to be developed and implemented so that hostel students might verbalize their feelings.
- Family members of cancer patients were found to develop stress at B.P. Koirala Memorial Cancer Hospital, Bharatpur; institutional and community-based counseling centers could be mean of management of stress of those caregivers.
- One third of hypertensive patients was found to develop depression in OPD of Pokhara Metropolitan where screening and awareness programmes along with other early intervention for were found to be effective in management of depression in hypertensive patients.
- More than two-third elderly population visiting to hospital was found to have anxiety where Individual/ group counseling and support programs were found to reduce the anxiety and its consequences among elderly population.
- One-third smokers were prepared for tobacco cessation, HSI dependency was found to be a public health problem in Shuklagandaki Municipality.
- The students who were mentally ill were found to engage in poor health behaviors where specific mental health training was to be implemented to enhance students' skills in self-coping of anxiety and prevention of mental health disorders.
- Anxiety and depression were common among patients of Coronary Artery disease where counseling services, monitoring could be effective mean of management attending a Cardiac center in Kathmandu.
- Prompt attention and appropriate interventions were required to prevent deterioration of mental health and improve quality of life among dementia among senior citizens living in the functional old age homes of Kathmandu valley.
- Community people had inadequate knowledge regarding mental illness; similarly, there were negative attitudes of people toward mental illness in Kageshwori Manahara Municipality of Nepal

Theme 9: Non-Communicable Diseases, Disabilities, Injuries and Critical Care

Key points of the presentations

- Coronary artery disease is decreasing in many developed countries, but is increasing in developing and transitional countries, partly as a result of increasing longevity, urbanization, and lifestyle changes.
- Cardiac self-efficacy and health behavior are correlated, it depended on age, academic qualification, Body Mass Index, intake of green leafy vegetables, hyperlipidemia and cardiac knowledge at selected tertiary heart centers in Nepal.

- Health promotion is core, most cost-effective and efficient strategy to improve health, health literacy, empowerment, quality of life, social justice and reduce health inequality and poverty.
- In Bharatpur metropolitan city, five health promoting behaviors (i.e. Physical activity, healthy food habit, smoke and smokeless tobacco use, alcohol consumption and regular health checkup) associated on three fifth of adolescent with an average level of health promoting behavior whereas, one fifth had a good level of health promoting behavior and one fifth had poor level.
- The promotion of a physically active lifestyle might help address the increasing burden of non-communicable diseases in Nepal.
- Majority of Nepalese men and women are meeting the recommended levels of physical activity, for their nature of jobs, whilst they do not engage in any leisure-time physical activity.
- There is urgent need for promotion of leisure-time physical activity in Nepalese adults.
- Nepal is currently experiencing significant lifestyle changes that include urbanization and migration which presents large health challenges.
- In Dharan-17 of Nepal, age, occupation, snacks and vegetable consumption, eating in hotel, leisure time were the significant predictors of overweight and obesity.
- Special attention needed from policy makers while developing strategies to reduce the burden of overweight and obesity.
- The cardiovascular diseases, myocardial infarction and angina have high morbidity and mortality worldwide.
- In Devchuli Municipality of Nawalpur District of Nepal, smoking and alcohol consumption were seen significantly associated with rose angina in the adult population and also myocardial infarction.
- Individual and community-based behavior change intervention program would be the way out to overcome the problem.
- Health promoting lifestyle behaviors are considered as the important determinants of both individual's positive health and quality of life (QOL).
- In Mahalaxmi municipality of Lalitpur district there was relatively low HPLP in majority of the participants and nearly half of the participants had their QOL score less than the average score.
- Female community Health Volunteers (FCHVs) can be effectively utilized in hypertension

management program in low- and middle-income countries.

- In Kirtipur Municipality most of the FCHVs have high level of interest and readiness for hypertension prevention, control and management in community settings but had moderately adequate awareness for which training programs will be effective.
- In hearing world, a deaf person have to face more difficulties following their self-esteem.
- In special school deaf students have normal level of self-esteem and emotional focused engagement. Counseling and awareness program is effective for coping strategies.
- Cost, transportation and gender responsive eye health service are the major barriers of service utilization by female.
- The available eye health services are within expectation of participants except gender friendliness, cause for few female it was difficult in service accessibility.
- Medication administration error reporting has been accepted as a basic attempt for the improvement of patient safety.
- In Teaching Hospital, Kathmandu fear and administrative response related barrier is present.
- It is necessary to establish communicative environment in inpatient unit.
- Deaths that occur away from health facilities may not be recorded and the cause of death not identified.
- Lack of such data at population level is one of the major barriers to planning and implementing health services for injury prevention.
- The model developed and employed within a study may inform future methods to explore the epidemiology of fatal injury across rural Nepal, and to inform health policies and services.
- Oral mucoceles, were the most common benign lesions of the minor salivary gland and most of the treatment options available are invasive.
- Combination therapy can be a less invasive alternative to treat mucoceles.
- Use of tobacco among youth, is quite high in the South East Asian Region including Nepal.
- The prevalence of smoking and smokeless tobacco was high among engineering students of Tribhuvan University in Kathmandu valley and anti-smoking campaign should be launched.

- The UN General Assembly has declared 2011 to 2020 as the “Decade of Action for Road Safety”.
- Public health students of Kathmandu, the female students have less knowledge and riskier behavior as compared to male students. Also, students with good knowledge had good behavior.
- Individual’s self-perception plays a vital role in understanding attitude towards disability.
- In Bhaktapur municipality 35.4% of the studied employed disable population have positive attitude to their own disability and focused on the employment opportunities
- Health literacy is a set of skills that include basic, functional, comprehensive, and critical and numeracy skills
- In Kathmandu Model Hospital, it was found that the participants did not know the normal blood glucose level and medicine they were taking regularly
- It is important to enhance the health literacy on diabetes during emergencies and minimize diabetes related complications
- Hypertension kills nearly 8 million people every year, worldwide.
- It is important to enhance the knowledge on health to take prompt action during emergencies and the complications of Hypertension

Theme 10: Nutrition and Food Safety

Key points of the presentations

- Inequalities in many low-and middle-income countries (LMICs) are higher in terms of underweight among poorer and overweight among richer quintile households
- The wealth and urban/rural inequalities persist in nutrition posing challenges in nutrition among Nepalese.
- It is an alarming call for policy direction as the urban population is changing rapidly in their dietary habits.
- Diet of an adolescent should include nutrient required to meet the physical and cognitive development.
- School and community based nutritional health program can have good prospect for prevention of adult onset of nutrition related diseases in future.
- Healthy dietary habits and food choices are strongly associated with nutritional knowledge.

- In Baglung District, Nepal majority of the sports people were poorly aware about nutrition and had poor dietary habits
- Nutritional education should be provided along with training, to increase nutritional awareness and health status.
- Malnutrition in under five years' children is a major public health problem, especially in rural Nepal.
- Severe stunting was major nutritional consequence for children in Mugu, Nepal.
- More than half of the Nepalese households faced some level of food insecurity in the year round.
- In Jaya-Prithivi municipality of Bajhang district community based food security program can prevent household food insecurity in hill community
- In Nepal, compliance to recommended complementary feeding practice has been shown to be low despite adoption of high impact policies and guidelines.
- Timely initiation complementary feeding overcame the malnutrition in Nepal.
- In urban slums of Kathmandu valley, Nepal stunting and underweight had high prevalence and wasting was a serious public health problem.
- Both underweight and stunting were significantly associated with socio-economic status of the family and ethnicity.
- Underweight was significantly associated with age of child and stunting was significantly associated educational status of mother, age of child and perceived weight at birth.

10. Closing Session of the Summit



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

1. Honorable Mr. Upendra Yadav, Deputy Prime Minister and Minister for Health and Population, Ministry of Health and Population
2. Prof. Dr. Anjani Kumar Jha, Executive Chairman, NHRC
3. Dr. Bhojraj Adhikari, Vice- Chairman, NHRC
4. Dr. Bansidhar Mishra, Former Minister of State, Ministry of Health and Population
5. Prof. Dr. Balaram Bhargava, Secretary, Department of Health Research, MOH&FW and DG, ICMR
6. Dr. Sushil Nath Pyakuryal, Chief Specialist, Ministry of Health and Population, Nepal
7. Dr. Jos Vandelaer, EDP Chair and WHO Representative to Nepal

Vice-Chairman of NHRC **Dr. Bhoj Raj Adhikari** announced the Declaration of summit. He emphasized health as a fundamental right enshrined in "Constitution of Nepal". He told that development is not possible without equity. He also focused that equity has evolved from Alma-Ata 1978, it has not been satisfactorily practiced in Nepal. He highlighted that Ministry of Health and Population had initiated practice of positive discrimination for equity in overall health and development of the nation. He also felt that the need of one province may not be similar with the need of other province which need to be identified and addressed accordingly.

Dr. Jos Vandelaer, EDP Chair and WHO Representative to Nepal emphasized that decisions were to be made according to evidence. He emphasized that Evidences are generated from the research. He also pointed that Health Research was to be conducted to find out the gap in health status of Nepal and address the issue through policy formulation and implementation. He reported that Summit helped to share experience and generate evidence. He appreciated the summit and expressed his congratulations to the NHCR. He also said that he will be looking for the next summit the next year.

On behalf of participants, **Mr. Sagar Dahal**, Senior Public Health Administrator, Health Directorate Province 1, emphasized that research and development are synonym according to International History. He told that culture of conducting health research is to be developed in Nepal. He emphasized role of NHRC as a moderator and facilitator to conduct health research along with effective monitoring and supervision. He focused to generate a strong evidence and for the strong foundation of the federal Nepal through health research.

On behalf of participants, **Dr. Jhabindra Bhandari** highly appreciated the summit and said that it was stimulating attempt for health policy formulators. He emphasized that summit provides opportunity to share and learn among health and population scientists. He focused on climate change and its negative impacts on human health. He praised NHRC as it tends to set the roadmap for better health policy formulation.

On behalf of participants, **Ms. Kabita Aryal**, one of the participants highly appreciated the knowledge gained and success of the summit. She focused on health as a fundamental right guaranteed by constitution. She further emphasized that key findings of the presentations of the summit will be useful to guide policy makers formulate rules, regulations and policies related to health.

Prof. Dr. Balaram Bharghav highly appreciated the summit and expressed his congratulations to the NHRC for its grand success. He declared MOU between NHRC and ICMR. He also expressed his commitment for necessary support and collaboration between NHRC and ICMR whenever needed. He emphasized that the findings of summit must also suggest the appropriate way to address the identified gaps.

Dr. Sushil Nath Pyakuryal told that evidence collected from summit will help MOHP to formulate new policies and even revise the existing policies as per the change and federal context of Nepal. He pointed that till the day only quantitative study are being done which need to be shifted toward qualitative and operational study. He focused that Antimicrobial resistance (AMR or AR) was burning issue of Nepal which need to be addressed through NHRC conducting and facilitating the study. He also pointed that in Federal Context. He reported that seven province had different health issues, for which different types of study according to their necessity is to be done. He emphasized on multisectoral approach to address the health issues of federal republic Nepal. He also suggested to conduct study

for Ayurveda which could address NCDs. Overall, Dr. Pyakuryal focused on collaboration, cooperation and comprehensive approach for overall development of Nepal in Federal context.

Dr. Banshidhar Mishra shared that health is a fundamental right enshrined in constitution. We must establish a research culture in new federal system of Nepal. He also emphasized on linking bridge between the research institutes and policymakers. He realized that it was quite difficult to implement the formulated policies; which need to be done effectively in coming days. He also emphasized on finding gaps and its solution through capacity enhancement.

Honorable **Upendra Yadav**, Deputy Prime Minister and Minister for Health and Population highly appreciated the grand success of the summit and expressed his congratulations to NHRC. He also extended his congratulations to all the participants and investigators of the study. He emphasized that NCD had been one of the major issues of Nepal, which need to be addressed. He emphasized that to find the gap, evidence is to be developed and to develop study is to be conducted. He also emphasized that quality education is solution for all the issues including health issue. He pointed that research is only mean to establish evidence and hence formulation of health-related policies in federal context of Nepal. He acknowledged the declaration of the summit. He also appreciated NHRC and its effort for overall development of Nepal to achieve slogan of "Prosperous Nepal and Happy Nepali".

Award Ceremony

The awards in the summit were presented in the following categories





Award	Name
Mrigendra Samjhana Medical Trut Award	Dr. Pranil Man Singh Pradhan
Best Paper Award JNHRC 2018	Dr. Om Murti Anil
Outstanding Health Research Award	Dr. Shamsul Ansari
Mrigendra Samjhana Medical Trust Young Health Research Award	Mr. Bihungum Bista
Near to Retirement Award (NHRC Employee)	Mr. Ram Prasad Pokharel
Best Employee of NHRC	Mr. Pradip Belbase
Health Research Life-time Achieved Award	Prof. Dr. Shiva Kumar Rai
Best oral presentation	Dr. Nisha Jha
Best poster presentation	Ms. Pushpa Chand Thakuri

Closing Remarks



Prof. Dr. Anjani Kumar Jha expressed his congratulations to all the participants of NHRC. He appreciated the active participation of all participants. He emphasized that for development of federal Nepal, policy makers must acknowledge the concrete findings of the summit. He pointed that culture of conducting research seem to be flourished in recent days. He also emphasized that NHRC conducted those important research studies which was in the priority area, interest of MoHP, essential need of the country. He reported that NHRC conducted those researches in minimal resources to fulfill the commitment made by GoN. He also focused that NHRC is equally responsible on monitoring and supervision of studies being conducted within Nepal. He emphasized that study must be conducted all over the Nepal and reach the unreached population. He also provided his commitment to actively assist in "Prosperous Nepal and Happy Nepali" through NHRC.

The session was facilitated by Dr. Sushil Chandra Baral. He summarized the whole session and read out the Declaration of Summit with detail explanation. Participants were requested for the feedback in the summit declaration and were finalized.

Annex I

Summit Declaration

Declaration of Fifth National Summit of Health and Population Scientists in Nepal
“Research for Equity and Development in the Federal Context”
10-12 April 2019, Kathmandu, Nepal

National Summit of Health and Population Scientists in Nepal has become a strategic platform for advancing health research through scientific dissemination of research evidence and advancing collaboration and cooperation amongst various institutions, researchers, and scientists. This has progressively led to advancement of research culture in health sector towards evidence informed policies and practices. Building on this foundation, opportunities need to be explored for making all levels of government accountable for evidence informed policy formulation in the federal context.

In this context, we, the delegates, representing the Ministry of Health and Population, Nepal Health Research Council, professional councils and associations, academic institutions, bi-lateral and multilateral agencies, civil societies, non-government organizations, private sectors, and individual researchers and scientists, collectively commit to the following declarations:

1. Continue to strengthen quality of research and translation of knowledge into policy and practice towards equity in health and development.
2. Advancing interdisciplinary and multisectoral health research diplomacy with the federal, provincial and local governments for accountable leadership for health and development.
3. Facilitate implementation/operational research in national health programmes to generate evidence that is contextually tailored and feasible to scale up.
4. Continue to advocate for effective implementation of the international and national commitments made by the country for allocating adequate resources in health research.
5. Strengthen partnership with national and international stakeholders for research collaboration. Continue to promote research networking and alliances among academia, research institutions, private sectors and researchers.
6. Continue to strengthen mechanisms to promote research capabilities of young researchers and scientists by increasing availability of research grants and capacity building opportunities

Annex II Schedule of Summit

Schedule for Fifth National Summit of Health & Population Scientists in Nepal

‘Research for Equity and Development in the Federal Context’

April 10-12, 2019

Kathmandu, Nepal

Program Schedule

Day I, 10 April 2019, Wednesday		
08:00 – 09:00	Registration/Breakfast	
Session 1	Health, Equity and Development	Chair: Prof. Dr. Pushpa Chaudhary
09:00 – 09:20	Ensuring equity in health and development in the federal context	Dr. Devi Prasad Prasain
09:20 – 09:40	Social determinants of health- from equity perspective	Prof. Madhusudan Subedi
09:40 – 10:00	Status of health sector indicators of national and province levels	Dr. Bikash Devkota/Dr. Guna Nidhi Sharma
10:00 – 10:40	Findings from the Nepal Burden of Disease 2017: How they inform evidence-based choices in the path to UHC	Dr. Meghnath Dhimal and Mr. Achyut Raj Pandey
10:40 – 11:00	Assessing poverty and vulnerability in urban area of Nepal: Are current measures fit for purpose?	Dr. Sushil Chandra Baral
11:00 – 11:20	Discussion followed by Chairs Remarks	
11:20 – 11:50	Tea break	
Session 2	Social Health Insurance in Nepal: Inception, Roll Out and Future Directions (Two Presentations followed by Panel Discussion)	Chair: Mr. Chandra Kumar Ghimire
11:50 – 12:10	Health Insurance in Nepal: Current status, challenges and way forward	Assoc. Prof. Dr. Satish Deo
12:10 – 12:30	Health Insurance in Nepal: Critical observation	Prof. Dr. Shiva Raj Adhikari
12:30 – 13:30	Panel Discussion on Health Insurance	
	Panelists: <ul style="list-style-type: none"> • Prof. Dr. Kiran Regmi • Dr. Guna Nidhi Sharma • Dr. Devi Prasad Prasain • Mr. Durga Bahadur Tharu • Mr. Sagar Dahal • Dr. Sabitri Sapkota 	
	Moderator: Dr. Sushil Chandra Baral	

13:30 – 14:30	Lunch	
14:30 – 16:30	Symposium on community based NCDs management in Nepal Chairs: Prof. Dr. Bhagwan Koirala and Prof. Dr. Shiv Kumar Rai	Interaction on Cancer Registry and Its Implication Chairs: Dr. Bijay Chandra Acharya and Dr. Pitamber Dahal
	<p>Serum Testosterone level and Erectile Dysfunction among Type 2 Diabetes Mellitus (Binod Kumar Yadav)</p> <p>Community-based management of non-communicable diseases in Nepal (COBIN) and Community-based intervention for management of diabetes in Nepal (Dinesh Neupane)</p> <p>Community-Based Management of Chronic Obstructive Pulmonary Disease in Nepal: Study Protocol for A Cluster Randomized Control Trial (Tara Ballav Adhikari)</p> <p>Prevalence and treatment practice of diabetes in a semi-urban area of Pokhara Metropolitan, Nepal (Liladhar Dhakal)</p> <p>Community-based intervention for cervical cancer screening uptake in a semi-urban area of Pokhara Metropolitan, Nepal (Aamod Dhoj Shrestha)</p> <p>May Measurement Month- Nepal (Harikrishna Bhattarai)</p> <p>Cardiovascular Risk Factors among high altitude inhabitants of Nepal (Sweta Koirala)</p> <p>Effectiveness of a female community health volunteer-delivered lifestyle intervention in reducing blood glucose among adults with type 2 diabetes: an open-label, cluster-randomized controlled trial (Tara Ballav Adhikari)</p> <p>Improving Access to Diabetes Care in primary health care setting in two districts of Nepal (Chandani Kharel)</p>	
16:30-17:00	Closing of Pre-summit Conference	
Day II, 11 April 2019, Thursday		
08:00 – 09:00	Registration/Breakfast	

09:00 – 10:30	Inauguration Session			
	Welcome Address-Dr. Bhoj Raj Adhikari, Vice-Chairperson, NHRC			
	Remarks- Dr. Paul Rueckert, Chief Technical Advisor, S2HSP, GiZ			
	Remarks- Dr. Rurik Marsden, Head of DFID Nepal			
	Remarks- Dr. Md Khurshid Alam Hyder, Acting WHO Representative to Nepal			
	Remarks- Dr. Sushil Nath Pyakuryal, Chief Specialist, MOHP, Nepal			
	Remarks/Keynote address of special Guest- Prof. Dr. Balaram Bhargava, Secretary, Department of Health Research, MOH&FW and DG, ICMR			
	Remarks- Prof. Dr. Pushpa Chaudhary, Secretary, MOHP			
	Remarks of Chief Guest- Hon'ble Dr. Surendra Kumar Yadav, State Minister for Health and Population			
	Closing Remarks - Prof. Dr. Anjani Kumar Jha, Executive Chairperson, NHRC			
	Mrigendra Samjhana Medical Trust Oration – Prof. K Srinath Reddy			
10:30 – 13:30	Plenary Session I			
	Chairs: Dr. Mahesh Kumar Maskey and Prof. Dr. Sudha Sharma			
10:30 – 11:00	Equity in Health and Healthcare in Germany		Dr. Ronald Panea	
11:00 – 11:30	Trends of Health Research and Publications in Nepal		Dr. Meghnath Dhimal and Prof. Dr. Ganesh Dangal	
11:30 – 12:00	Environment And Health: A Mounting Multi-Dimensional Threat To Public Health		Prof. K Srinath Reddy	
12:00 – 12:30	Policy Implications of Nationwide Mental health Surveys for Developing Countries		Prof. David V. Sheehan	
12:30 – 13:00	Universal health coverage in the SDG era: a quality imperative		Prof. Dong (Roman) Xu	
13:00 – 13:30	Discussion followed by Chairs Remarks			
13:30 – 14:30	Lunch/Poster Presentation			
14:30 – 16:00	Parallel Session I: Non Communicable Diseases		Parallel Session II: Maternal Health	
	Chairs: Prof. Dr. Abhinav Vaidya and Dr. Phanindra Baral		Chairs: Prof. Dr. Madhu Dixit Devkota and Dr. Chet Raj Pant	
14:30 – 14:45	Customizing Android-based smartphone apps in chronic disease studies: Collaborations with the industry (Invited Talk)	Lijing L. Yan	Status of Implementing Community Based Maternal Death Surveillance in Nepal (Invited talk)	Sharad Kumar Sharma
14:45 – 15:00	Prevalence, awareness, treatment and control of hypertension in Nepal: data from nationally representative population-based cross-sectional study	Suresh Mehata	Self-Applied Technique of Quality Health (SATH) tool: Advocacy for improved maternal health services in Nepal (Invited talk)	Santa Kumar Dangol

15:00 – 15:15	Nationally representative study on socio-demographic, geographic correlates and trends in tobacco use in Nepal	Pranil Man Singh Pradhan	Prevalence and determinants of contraceptive use and unmet need among poor, hard to reach and marginalized populations in nine districts in Nepal (Invited Talk)	Sanjeev Kumar Sahani
15:15 – 15:30	Responding to Non-Communicable Diseases: Is Nepal Prepared? An Analysis of Policies on Salt, Sugar and trans-fat	Minakshi Dahal	Status and Determinants of Maternal and Neonatal Deaths in Nuwakot, Ramechhap and Solukhumbu Districts of Nepal	Liladhar Dhakar
15:30 – 15:45	Prevalence of Diabetes Mellitus among Tuberculosis Patients and their Quality of Life in Western Region of Nepal	Dipendra Kumar Yadav	Determinants of Institutional Delivery in Nepal: Evidence from Nepal Demographic and Health Survey 2016	Jasmine Maskey
15:45 – 16:00	Managing type 2 diabetes in Nepal- an exploratory study with healthcare professionals	Sujata Sapkota	Can satisfied client testimonials influence a woman's FP choice? Measuring the effect of a video library on LARC uptake	Sneha Shah
16:00 – 16:15	Work-site Intervention Study to Prevent Diabetes in Nepal: Initial assessment	Prajwal Pyakurel		
16:15 – 16:30	Discussion followed by Chairs Remarks			
16:30 – 17:00	Tea break/Poster presentation			
17:00 – 17:45	Parallel Session III: Communicable Diseases Chairs: Prof. Dr. Jeevan Bahadur Sherchand and Dr. Prakash Ghimire		Parallel Session IV: Child and Adolescent Health Chairs: Dr. Padam Bahadur Chand and Ms. Durga Khadka Mishra	
17:00 – 17:15	Challenges for managing emerging viral diseases and eliminating vector-borne diseases in Nepal (Invited talk)	Basu Dev Pandey	Hypoxic Ischemic Encephalopathy –Incidence and associated Risk Factors from a Multicentric study in Nepal (Invited talk)	Prajwal Poudel
17:15 – 17:30	Can Nepal reach 90-90-90 target in Children with HIV/AIDS (Invited talk)	Laxman Shrestha	Effect of skill drills on neonatal ventilation performance in a simulated setting – a hospital based observation study in Nepal (Invited talk)	Abhishek Gurung

17:30 – 17:45	Human immunodeficiency virus (HIV) and hepatitis B virus co-infection among visited patients at anti retro virus treatment (ART) centre of Seti zonal hospital in province-7, Nepal	Ram Prashad Ojha	Nutritional Assessment of School going Adolescents and its Determinants in Eastern Development Region of Nepal	Tika K. Kafle
17:45 – 18:00	Molecular evidence supporting expansion of kala-azar towards non-program districts of Nepal	Kishor Pandey	Acute Gastroenteritis associated with Rotavirus A among children less than 5years of age in tertiary care hospitals	Sony Shrestha
18:00 – 18:15	Risk factors of seasonal hyperacute panuveitis (SHAPU)	Ranju Kharel (Sitaula)	Age appropriate vaccination and its contributing factors among under five years children in Nepal	Kanchan Thapa
18:15 – 18:30	Discussion followed by Chairs Remarks			
18:30 – 20:30	Reception Dinner with Cultural Programme			
Day III, 12 April 2019, Friday				
07:30 – 08:30	Registration/Breakfast			
08:30–10:40	Plenary Session 2 Chairs: Prof. Dr. Chop Lal Bhusal and Prof. Dr. Jagadish Prasad Agrawal			
08:30 – 09:00	Implications of population based cancer registry for cancer prevention and control in low and middle income countries		Dr. Atul Budukh	
09:00 – 09:30	Assessing the health effects of extreme temperatures and development of adaptation strategies to climate change in the Asia-Pacific region		Prof. Dr. Cunrui Huang	
09:30 – 10:00	Global progress in maternal, neonatal and child survival, unfinished global agenda and priority research actions		Prof. Dr. Joy Lwan	
10:00 – 10:30	Discussion followed by Chairs Remarks			
10:30 – 11:00	Tea Break and Poster Presentation			
11:00 – 12:00	Parallel Session V: Mental Health Chairs: Prof. Dr. Saroj Prasad Ojha and Dr. GD Thakur		Parallel Session VI: Biomedical and Health Information Technology Chairs: Prof. Dr. Nilambar Jha and Prof. Dr. Prakash Ghimire	

11:00 – 11:15	Effectiveness of mental health services provided by trained primary health care workers in Nepal: Outcomes at community, facility and individual levels (Invited talk).	Kamal Gautam/ Nagendra Luitel	Prevalence of the Metabolic Syndrome and its determinants among Nepalese adults: Findings from a nationally representative cross-sectional study	Suresh Mehata
11:15 – 11:30	Prevalence of Self-stigma and its Effect on Self-esteem among Psychiatric Patients in a Teaching Hospital	Shanta Maharjan	Screening of albendazole quality in Nepal using a paper analytical device	Basant Giri
11:30 – 11:45	Reliability and validity of the translated Nepali version of the Geriatric Depression Scale (GDS-15)	Ajay Risal	Evaluation of oral potentially malignant disorders with autofluorescence, reflectance spectroscopy and vital staining and their correlation with histopathology – a hospital based prospective study	Deepa Sharma
11:45 – 12:00	Depression in Patients with Epilepsy: A Hospital Based Cross-sectional Study.	Shiv Kumar Sah	Comparative evaluation of ELISA and Immunofluorescence assay for the diagnosis of Acute Scrub Typhus in central Nepal.	Rajendra Gautam
12:00 – 12:30	Discussion followed by Chairs Remarks			
12:30 – 13:30	Lunch/Poster presentation			
13:30 – 15:35	Parallel Session VII: Health System, Health Economics and Financing Chairs: Dr. Badri Raj Pande and Mr. Deepak Karki		Parallel Session VIII: Health Promotion, Technology and Essential Medical Products Chairs: Dr. Sushil Nath Pyakuryal and Prof. Dr. Paras Kumar Pokharel	
13:30 – 13:45	Translating evidence into decisions for complex health interventions in complex setting (Invited talk)	Deepak Paudel	Effectiveness of a Training to Government Health Workers and FCHVs on the Detection and Referral to Rehabilitation Care of Selected Impairments in Children Under 5 in Jajarkot, Nepal	Chudamani Bhandari

13:45 – 14:00	Enrollment in Government Health Insurance in the First Piloted District of Nepal	Deepak Raj Paudel	Anxiety and depression Among LGBT in Kathmandu Valley	Kabita Thapa
14:00 – 14:15	Knowledge, attitude and practice on eye health services in Nepal	Sailesh Kumar Mishra	Evaluation of dispensing practices of antibiotics at community pharmacies in Kathmandu and Lalitpur districts, Nepal	Nisha Jha
14:15 – 14:30	Is active case finding a cost effective strategy to reduce catastrophic costs for tuberculosis treatment in Nepal?: A cross-sectional analytical study	Kritika Dixit		
14:30 – 14:45	Health policies and legislations in Nepal– what we already have & what is the need for new formulation & amendments in federal context?	Sujan Katuwal	Are we ready to respond: Disaster preparedness of primary health care System in Nepal?	Kiriti Ray
14:45 – 15:00	Community Health Worker National Pilot in Achham and Dolakha: an interim analysis of a type 2 hybrid effectiveness-implementation study	Aparna Tiwari	Effect of ABCA1-R219K variant polymorphism in serum lipid parameter in patients under statin therapy visiting Manmohan Cardiothoracic Vascular and Transplant Center, Nepal	Sapana Ghimire
15:00 – 15:30	Discussion followed by Chairs Remarks			
15:30 – 16:30	Award Presentations & Closing Session			
16:30 – 17:00	Tea Break			
17:00 – 17:30	Press Meet (Closed Programme)			

Annex III

Evaluation survey of Fifth National Summit of Health and Population Scientists in Nepal

Background

As part of the fifth national summit of health and population scientists on the theme “Research for Equity and Development in the Federal Context”, Nepal Healthy Research Council undertook a participant survey after completion of the summit. The main objective of the survey was to assess the perception of the participants about the overall quality of the summit. The survey was conducted after the completion of the conference to get the information on the characteristics of participants who participated in the program such as highest qualification, representing organization or institute; and type of participants such as paying participants, invited participants, invitee for chairing the sessions, oral presenters, poster presenters, organizers, volunteers and others. The survey further aimed to get the information about the perceptions of the participants regarding the overall quality of the pre-summit conference, plenary sessions, parallel sessions

Methodology

The survey was conducted among all the participants who participated in the study. The questionnaire was sent via email to all the participants. Out of 480 participants, 291 participants who participated in the summit answered the questions that mostly included five rating scales. The data was analyzed using three parameters such as Very Good, Good and Satisfactory where Excellent and Very Good was represented as Very Good; and Satisfactory and Poor was represented as Satisfactory. Similarly, data was also analyzed using three parameters such as Significantly, Moderately and Unimportantly where Very Significantly and Significantly was represented as Significantly and Unimportantly and Not at all was represented as Unimportantly. In similar lines, Very relevant and relevant was represented as Relevant Participants were asked to answer questions about overall quality of pre-summit conference, structure and format of the sessions held during Pre-summit conference, overall quality of plenary and parallel sessions; and poster presentations held during the National summit, structure and format of the sessions held during the National Summit; and overall organization and management of the National Summit as shown in the Appendix A.

Results

Among 291 participants who responded to the Evaluation questionnaire, more than three quarter of the participants were from Educational/academic institutions/colleges and majority of the participants i.e. 85. 6% had their highest qualifications of Bachelor’s and Master’s

Degree. Similarly, only half the number of participants participated in the Summit by paying the registration fee whereas the other half included invited oral and poster presenters, invited participants, invited persons for chairing the sessions; and participants on behalf of organizer and volunteers.

The participants were asked about their perception regarding the content of the National summit as shown in table 1 below. According to the result, 60.8% of the 288 participants responded that the summit significantly increased their awareness of research for equity and development in the federal context. Similarly, almost three quarter of the 286 participants had expected to use the information presented during the national summit in their work and 87.5% of 285 participants felt that the theme chosen for the national summit was relevant. A dichotomous question was asked to the participants inquiring their expectations about relevancy of the information and analysis obtained through the national summit to the policymakers in Nepal. The result showed that 96.2% of the 286 participants agreed that the information and analysis obtained through the national summit are relevant to the policymakers in Nepal. Similarly, 59.3% of the 285 participants evaluated the content of the whole National summit as very good. The participants were asked to mention three major topics of the oral and poster presentation presented in the national summit which was relevant to their highest interest. The three commonest topics of oral presentation mentioned by the participants were Cancer registries and their role in cancer control, Risk Factors of Seasonal Hyperacute Panuveitis (SHAPU) , Assessing the health effects of extreme temperatures and development of adaptation strategies to climate change in the Asia-Pacific region. The three most common topics of poster presentation mentioned by the participants were Menstrual Hygiene Practice among Adolescent Girls in the Selected Public Schools, Lalitpur, Attitude towards disability among person with physical disability in relation to income generation activities in Bhaktapur Municipality; and Dietary Practices and Its Associated Factors among Secondary Level Students of Private Schools in Pokhara Metropolitan.

Table 1: Participant’s responses regarding the content of the National summit

SN	Evaluation questions regarding the content of the national summit	Responses from the Participants		
		Significantly/ relevant/Very good	Moderately/ Good	Unimportantly/ Satisfactory
		%	%	%
1	Increasing awareness in research for equity & development in the federal context (N=288)	60.8	38.2	1
2	Expectation for using the information presented during the summit (N=286)	69.5	29.4	1
3	Relevance of the chosen summit theme (285)	87.5	12.3	0.4
4	Content of the national summit as a whole (N=285)	59.3	33	7.8

The participants were also asked about the overall quality of the pre-summit conference (Table 2) and the National summit (Table 3, 3.1, 3.2). The findings of the study depicted that approximately half the number of participants who responded to the Evaluation questionnaire rated overall quality of speakers and discussions held during both pre-summit conference and the National summit as very good. However, more participants felt that the overall quality of chairs in handling the sessions were better in Pre-summit conference in comparison to the chairs in handling the sessions during the National summit. The findings of the study also showed that greater number of participants felt that overall quality of speakers and discussion held during plenary session of the summit was better in comparison to overall quality of speakers and discussion held during parallel session. In similar line, more participants rated overall quality of oral presentations more than that for poster presentations. On the contrary, the findings depicted that more than a quarter of the 273 participants responded that overall quality of interactions held during poster presentation was only satisfactory.

Table 2: Participants' responses on overall quality of the sessions held during pre-summit

SN	Evaluation questions regarding overall quality of the sessions held during pre-summit	Responses from the Participants		
		Very good	Good	Satisfactory
		%	%	%
1	Quality of speakers during pre-summit session(N=280)	54.2	40	5.8
2	Quality of discussion held during pre-summit session(N=278)	48.5	41	10.4
3	Quality of chairs in handling pre-summit session(N=278)	64	30.2	5.8
4	Quality of panel discussion held during pre-summit session(N=277)	58.1	35	6.8
5	Quality of moderators in handling panel discussion(N=277)	61.3	32.5	6.1

Table 2.1: Participants' responses on structure and format of the sessions held during pre-summit

SN	Evaluation questions regarding structure and format of pre-summit	Responses from the Participants		
		Very good	Good	Satisfactory
		%	%	%
1	Structure and format of pre-summit conference (N=278)	57.9	33.5	8.7
2	Structure and format of panel discussion held during pre-summit sessions(N=279)	54.5	36.9	8.6

Table 3: Participants' responses on overall quality of the plenary sessions held during National summit

SN	Evaluation questions regarding overall quality of the plenary sessions held during National summit	Responses from the Participants		
		Very good	Good	Satisfactory
		%sum	%	%sum
1	Quality of speakers during plenary session(N=284)	55.6	40.5	3.9
2	Quality of discussion held during plenary session(N=284)	49.3	42.3	8.5
3	Quality of chairs in handling plenary session(N=285)	55.1	38.6	6.3

Table 3.1: Participants' responses on overall quality of the parallel sessions held during National summit

SN	Evaluation questions regarding overall quality of the parallel sessions held during National summit	Responses from the Participants		
		Very good	Good	Satisfactory
		%	%	%
1	Quality of speakers during parallel session (N=283)	43.8	47.3	8.9
2	Quality of discussion held during parallel session (N=284)	44.7	41.9	13.4
3	Quality of chairs in handling parallel session (N=284)	53.5	38	8.4

Table 3.2: Participants' responses on overall quality of the poster presentations held during National summit

SN	Evaluation questions regarding overall quality of the poster presentations held during National summit	Responses from the Participants		
		Very good	Good	Satisfactory
		%	%	%
1	Quality of posters during poster presentation(N=275)	42.6	44.4	13.1
2	Quality of interactions held during poster presentation(N=273)	30.8	41.4	27.8

The participants were asked about their perception on structure and format of the sessions held during the pre-summit conference (Table 2.1) and the National Summit (Table 3.3). According to the results, the comparison between the responses of the participants on the structure and format of the sessions showed that greater number of participants rated the structure and format of the sessions held during the pre-summit conference such as number of sessions, symposium, number of speakers, length of speeches, time allocated for discussion, representation by sector/institution, number of panellists as very good compared to the participant's response on structure and format of the sessions held during the National Summit. In similar line, among the sessions held during the National Summit 46.7% of the 285 and 46.5% of the 286 participants rated the structure and format of plenary sessions and inaugural session as very good respectively. Similarly, more participants gave neutral

rating that is Good for the structure and format of the parallel sessions and the closing sessions held during the National summit. It is noteworthy to mention that nearly a quarter of 251 participants felt that the structure and format of the closing sessions held during National summit was only satisfactory.

Table 3.3: Participants' responses on the structure and format of the sessions held during National summit

SN	Evaluation questions regarding the structure and format of the sessions held during National summit	Responses from the Participants		
		Very good %	Good %	Satisfactory %
1	Structure and format of the inaugural session(N=286)	46.5	36.7	16.7
2	Structure and format of the plenary sessions(N=285)	46.7	42.8	10.5
3	Structure and format of the parallel sessions(N=283)	43.8	45.6	10.6
4	Structure and format of the closing session(N=251)	42.7	44.2	23.1

Table 4: Participants' responses on overall organization and management of National summit

SN	Evaluation questions regarding overall organization and management of National summit	Responses from the Participants		
		Very good %	Good %	Satisfactory %
1	The quality of bags, background documents and materials provided in the National summit(N=282)	51.8	29.8	18.4
2	Overall organization of the National summit(N=283)	73.5	20.8	5.7
3	Overall management of meals during the National Summit(N=284)	74.6	20.1	5.3
4	overall management of the reception dinner with cultural program organized during the national summit(N=268)	71.7	22.4	6

The survey asked the participant's opinion regarding overall organization and management of the National summit (Table 4). Nearly three quarters of the participants rated the overall organization such as location, facilities; and support from organizers; overall management of meals such as breakfast, tea/coffee and lunch; and overall management of the reception dinner with cultural program organized during the National summit as very good. Whereas only half the number of participants rated the overall quality of bags, background documents and materials provided in the National summit as very good.

The final content of the questionnaire asked the participants to recommend possible future theme for the National summit as well as frequency of the future National summit to be organized. 92.8% of 276 participants recommended that the National summit needs to be organized every year. The possible future themes for the National Summit recommended by the participants are mentioned in the table below.

Table 5: Participant's recommendation for themes of the National Summit

S.No	Recommended themes for the National Summit
1	Indigenous group as well as poverty should also be included, Indigenous group especially Chepang community
2	Is universal health coverage achievable in Nepal?, Universal health coverage for quality of life of people.
3	Promotion of Health system research in Federal System
4	Health system research in Federal System
5	Research for equitable development
6	Research for healthy people and healthy nation.
7	Healthy environment, healthy life
8	Stewardship on health, stepping towards health promotion and education
9	Role of nutrition in NCD during pregnancy and adolescent
10	Research for evidence to make policy developing
11	NDCS lets magnify through public health perspective/approach
12	Encouraging academics researchers for the conduction of quality research. Climate change and public health.
13	Strengthening the equational development in federal context
14	Public health should be addressed rather than medical curative
15	Essence of public health research in 21st century
16	Health preventive ,promotion and protection related
17	Public health as a fundamental for health promotion in federal context
18	Role of academic institution for National policy uptake
19	Nutrition health strategic approach, multisector coordination health
20	Mental health, interventional type study
21	Challenges for management of free health services to the GON in the context of seven state due to poor country
22	Muti-sectoral coordination for health promotion. To build health plan in content of adult participation
23	Quality of healthcare services ;graving concern
24	Health and equity
25	Research for improving the quality of life
26	Research for healthy and prosperous nation building
27	Health for all
28	New knowledge for quality health care

29	Addressing NCDS, Mental health for reducing burden of health problems in near future.
30	Women empowerment (gender equity),Inclusion
31	Research on mental and social health establishing a better future
32	Environmental health and chemical safety
33	Cancer registry is important
34	National summit is lacking to include the radiology
35	Anti-microbial resistance
36	Accessible and affordable health care with dignity
37	Research for researchers and nation
38	Elimination of tropical disease in Nepal
39	Climate change, universal health coverage at country and province level
40	To motivate researchers of national level.
41	Reproductive health
42	Research for challenges in implementation of health intervention in local level.
43	Research for equity and development in local context
44	Research for improvement and development of road to decrease the increasing road traffic accident
45	Research for disaster management and preparedness and disaster prone areas identification in Nepal.
46	Research for NCDS and hormonal disease conditions and way forward climate change and policy implication
47	Research for equity and development in local context
48	FCHV in Preventing NCD
49	Community participation in health promotion.
50	Research for studying sustainable development goals research for universal health coverage
51	Improving mental health by strengthening social health.
52	Data driven development
53	NCDS a major public health problem
54	Research for burden of NCDS
55	Research focus on evidence based practice to improve medical practice
56	Research for holistic development
57	Public health entrepreneurship
58	Empowering rural context exploring challenges, opportunities for health in federal context
59	Improving the QOL in future perspectives.

60	Unmanaged developmental works in Nepal and its implications on health of Nepalese people.
61	Research on social determinants of health and its policy implication
62	Research to reach sustainable development goal 2030
63	Research for correlation between different diseases with mental health
64	Health care services opportunity and challenges
65	Global equity
66	Accessibility of equity health for all
67	research and development of Ayurveda's
68	Research for the social determinants of health
69	Public health and its scope and threats in health research
70	Public health and its scope and threats in health research
71	Research for change
72	Burden of diseases focused on senior citizen
73	Geriatric issues, Issues of intellectually disabled
74	environmental health impact of climate change in public health in context of Nepal, SEA
75	Research for achieving UHC
76	Disability and accessibility
77	Importance of management of hospital waste and practice trend in Nepal
78	Research for minimization for NCDS
79	Research for prevention for NCDS
80	Research for the development of policy making
81	Research implications for the improvement of health system efficiency of federal provincial and local level
82	nutrition health and maternal health
83	nutrition and maternal health
84	Health in 21st century in the impact of global environment.
85	Research for sustainable development of nation
86	Prevention and control strategies for emerging challenges in public health
87	Nepal burden of disease
88	Research for health and sustainable development at provincial level
89	NCDS and way forwarded
90	Along with the problems, status ,challenges there should be based on solving measures as well as mitigation measures

91	summit for strengthening the governmental support and services in health.
92	Equity in health services
93	Why Nepal is underachieving in research and development in grassroots level
94	Research for a cause not for promotion of position
95	Research with the era of evidence based medicine in Nepal
96	Encourage research and increase development for sustainability
97	Translational medicine and precision medicine
98	SDG/ UHC in context of federalism and its challenges opportunities
99	Integration of health profession to delivery of quality health services
100	Research a way for policy of country
101	Health care delivery in federal context
102	Creating healthy people
103	Since we are moving towards SDGS, factor theme might be on SDG
104	Research for effective and efficient health service
105	Research for equity and development in the provincial context
106	Health of marginalized group people
107	Bridging the gap health policy and practices
108	NCD related topic
109	Towards strengthening health service delivery system
110	Health research better health
111	Geospatial analysis in medical sector
112	strengthening the research with motivation and collaboration in province context
113	More improvement and awareness in public Health
114	To encourage Policy Makers and also helps to improve health condition and give its status
115	Establishing Universal Health Coverage
116	Innovative Research from young and student researchers
117	Identifying and Addressing Burden of disease
118	Equity and equality reach to everywhere, everyone
119	Universal Health Coverage and Mental Healthy Related Topic will be better
120	Universal Health Coverage related theme will be better
121	Health for everyone, everywhere
122	Young minds in research

123	Research for sustainable development
124	Human Resource for health
125	Research for quality Health
126	Amalgamation of Molecular research and public health
127	Non communicable disease the future pandemic
128	Health economics and climate change
129	Research for development
130	Use and sustainability of the resources
131	Antimicrobial resistance and its prevention strategies
132	Research for equity

Conclusion

The findings of the study indicated that overall quality of pre-summit conference and the national summit was very good. Majority of the participants had their highest qualifications of Bachelor's and Master's Degree and represented Educational/academic institutions/ colleges. Nearly half the number of participants who responded to the survey evaluated overall quality of speakers and discussions held during both pre-summit conference and the National summit as very good. However, the results depicted that greater number of participants rated plenary sessions of the National summit better than parallel sessions. Similarly, participants rated overall quality of oral presentations more than that for poster presentations. Greater number of participants rated the structure and format of the sessions held during the pre-summit conference in comparison to the sessions of the National Summit. Majority of the participants recommended that the National summit should be conducted every year.

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