



'Health in Sustainable Development Goals: Are We on Track?'

Third National Summit of Health and Population Scientists in Nepal

10-12 April 2017, Kathmandu, Nepal

Proceeding Report



Government of Nepal
Nepal Health Research Council



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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 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: UNFPA, UNICEF, H4L/USAID, GiZ, WHO, One Heart World-Wide, Save the Children, HERD International, Possible, IPAS, Marie Stopes International and PSI for their support to make the summit successful.

We believe that the information, evidence and ideas shared in the event have added to the body of national evidence and these will be translated into actions and the direction would be set for progressing towards SDGs. We also believe that the exchange and sharing of research ideas and expertise have encouraged and motivated young researchers to continue the research culture in areas related to health and population.

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

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

List of Abbreviations

GiZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
H4L	Health for Life
HERD	Health Research and Social Development Forum
MoH	Ministry of Health
NHRC	Nepal Health Research Council
PHAMED	Public Health Administration, Monitoring and Evaluation Division
SDG	Sustainable Development Goal
UHC	Universal Health Coverage
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Executive Summary

The third national summit of health and population scientists on the theme ‘Health in SDGs in Nepal: Are we on track?’ was a platform for researchers and policy makers to come together and discuss about the research evidence and their potential implication in health policy making in Nepal. The theme of the summit aimed to invoke rigorous discussion on health related SDGs, targets, potential sources of the data and evidence gap.

There were 47 oral presentations and 129 poster presentations in the summit covering diverse issues ranging from non-communicable diseases, nutrition, health systems, mental health, biomedical research, sexual and reproductive health, environmental and occupational health. These issues are closely related to attainment of comprehensive and ambitious SDGs. The overwhelming presence of more than 1000 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.

There is global consensus on the need of evidence informed policy making. In this context, summit provided platform for researchers to communicate their research findings. This proceeding report aims to compile key issues discussed during the summit including the future strategic directions. The report is expected to be a resource for wider community including those in research, policy, academia and all concerned stakeholders. Continuation of summit in coming years could contribute further on evidence informed decision making in Nepal.

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1. 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, date falling on its 25th anniversary. The main purpose of initiating organization of annual summit is to give a platform to the health and population researchers in Nepal to join hands towards strengthening evidence informed decision making in Nepal.

This year, the Third National Summit of the Health and Population Scientists in Nepal was organized on 10-12 April, 2017 under the theme of 'Health in Sustainable Development Goals: Are we on Track?'. Health and Population Scientists as a group can contribute immensely to promote evidence informed decision making process and their role can be instrumental to achieve SDGs. Annual gathering and provision of platform for the scientists become phenomenal in sustaining the MDG achievements and to encourage achieving SDGs in the health sector.

2. Pre-summit Conference

2.1 Health related Sustainable Development Goals in Nepal: Meeting the data gaps

The session was jointly chaired by:

- Dr. Kiran Regmi, Chief Specialist, MoH
- Dr. Bhola Ram Shrestha, Chief, Curative Service Division, MoH

In a comprehensive presentation, **Dr. Dipendra Raman Singh**, chief of Public Health Administration Monitoring and Evaluation Division (PHAMED) shared about the indicators of SDG, targets and potential sources of data. Dr. Singh shared that the SDGs are interlinked and no one goal can be achieved in isolation. Dr. Singh also stressed on the need of extra efforts to achieve some targets and need to focus differences based on region, provinces, and ethnicity.

Key Points of the presentation

- There are still data gaps for some indicators which need coordination with different agencies such as Central Bureau of Statistics (CBS), Ministry of Home and Ministry of Health.
- Variation exists in definition of indicators
- Although the SDGs are ambitious, these can be achieved through coordinated efforts.
- Since right based approach has been adopted, no one should die of preventable cause.

Future directions

- Integrated surveys for generating data on multiple indicators can be effective. At the same time efforts need to be dedicated on improving quality, availability and use of data
- Formulate policy briefs from national level surveys and research
- Prepare monitoring and evaluation plan to track the progress on indicators of SDG
- Institutionalize e-recording and reporting
- Capacity building and coordinate with research agencies for online database
- Develop strategies to use academic institutions in meeting the SDGs
- Some issues like Civil Registration and Vital statistics (CRVS) need inter-ministerial coordination.
- Policy briefs should be brought forward to inform policy makers

Mr. Mukti Nath Khanal shared about the potentiality of utilization of Health Management Information System (HMIS) with tracking data on indicators of SDG since HMIS captures the data from both public and private sector. District Health Information System 2 with electronic data recording and reporting has been started from November 2016. Mr. Khanal stated that facilities will be conducting electronic reporting by 2020.

Key Points of the presentation

- The health system should focus on routine information system rather than operational research or large surveys.
- Strengthening HMIS will satisfy the health sector data needs. Use of data can be improved by leveraging Information and Communication Technology (ICT) and open data sharing. HMIS is the heart of health care.
- Different fragmented information systems exist under ministry of health

Future Directions

- Integrate and utilize the different information system of MoH whenever possible
- Revise HMIS to incorporate key indicators of SDG

Dr. Krishna Kumar Aryal, Chief of Research Section at NHRC presented about Burden of Disease (BoD) indicators in SDGs from the Global Burden of Disease (GBD) estimates. Dr. Aryal shared that BoD estimates help us to know what is contributing to the loss through regular estimates of cause and risk factors. The sources of GBD estimates are literature review and crude data sources. According to Dr. Aryal, GBD can act as the source of monitoring the SDGs by fulfilling the data gap. DALYs lost due to different conditions is one of the indicator of NHSS 2015-20 for which GBD estimates can be useful. Similarly; the progress on SDG targets 3.4, 3.5, 3.6 and 3.9 can be tracked from GBD. The current burden of disease is shifted towards NCD; however, efforts are minimal to address.

Key Points of the presentation

- Adequate efforts have not been made on addressing double burden of disease
- GBD estimates could be potential source for indicators requiring DALY calculation
- Total health expenditure is not in par with burden of disease
- GBD would play better role in monitoring SDG progress

Way forward

- Use already available data from different surveys on GBD estimates and conduct integrated surveys where there is data gap
- Take initiative to feed in HMIS data on GBD estimations
- Civil registration and vital statistics system would be crucial for GBD estimations.

2.2 Panel Discussion on Sustainable Development Goals Panelists of the session

- Dr. Kiran Regmi, Chief Specialist, MoH
- Dr. Bal Gopal Baidya, Former NPC Member
- Dr. Suman Aryal, Director General, Central Bureau of Statistics
- Ms. Giulia Vallese, Country Representative, UNFPA/EDP Chair
- Dr. Shiva Raj Adhikari, Associate Professor, Tribhuvan University

Moderator: Mr. Sudip Pokharel

The panel discussion focused on key issues relating to sustainable development goal like experience and lesson learnt from MDGs, defining health system in federal level, potential role of development partners, costing of SDGs and the role of private sector, academia and civil society.

Key points of the session

- SDGs are comprehensive and ambitious and may be demanding in terms of resources.
- Four level of health facilities can be created in federal republic of Nepal: community level, primary, secondary level and tertiary level
- There are many data gaps in SDG. For some indicators, projections have been considered as base which may not exactly represent the real scenario.
- Identifying appropriate data source, ensuring quality of data, coordination with different agencies are the key challenges.
- SDG requires sound birth and death registration system.
- External development partners can help in selected areas like Living Standard Surveys, Gender statistics and Maternal health
- Approximately \$131 per capita expenses have to be made from the public sector alone of which \$87 need to be made directly on health, \$33 on education and \$11 on poverty reduction.
- There can be resource gap in SDG as the aid from donor agencies is declining in recent years
- Government can explore the opportunity of partnership with medical colleges and private sector. Medical colleges can be assigned specific district and can be requested to cater the health needs of those districts
- There is limited collaboration with academia in the field of evidence generation and evidence sharing
- Right to information need to be ensured. Data need to be made available to public
- Need to establish strong surveillance system for selected indicators.
- Government can have a separate forum for information and data management or use the existing one for the same. Collaboration with Central Bureau of statistics and NHRC can be crucial for that purpose.

Way Forward

- Separate platform to coordinate between different data sources tracking the indicators of SDGs, preparing policy briefs for policy makers based on evidence could be beneficial.
- Government should take initiatives to create a self-reliant and viable health system as huge resources are needed for SDG and the assistance from international community is decreasing
- Coordinate with and harmonize the efforts of different sectors like academia, development partners, private sector and civil society to reduce duplication of resources and create synergism in efforts to achieve SDGs
- Services of private and government hospital or health facilities can be complementary. Private sector can be encouraged to deliver services that government health facilities have not been providing.

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

In the first presentation creating the foundation for panel discussion, **Dr. Guna Raj Lohani**, Executive Director of Social Health Security Development Committee, presented the overview of social health insurance (SHI) in Nepal. In his presentation, Dr. Lohani covered key issues like organization structure for implementation of SHI, premium and membership, services covered, reimbursement system and present scenario of social health insurance. Dr. Lohani shared that social security program is a priority of the government and government has the plan for supporting those who cannot afford to pay for social health insurance program through social contribution.

Key issues

- Poor people have not been covered because of the lack of identity card
- Improvement of quality of services is crucial in increasing coverage and reducing drop outs
- Appropriate mechanism for quality monitoring and penalize or compliment health facilities is lacking

In the second presentation, **Dr. Shiva Raj Adhikari**, Associate Professor of health economics at Tribhuvan University presented his critical observation on SHI in Nepal. Dr. Adhikari shared that Nepal can explore alternative financing including health insurance, medical savings as in Singapore. Along with providing free health care, Dr. Adhikari opined that social health insurance can be option for reducing out of pocket payment. Quality, amount of premium, payment mechanism, performance and efficiency of health insurance are crucial issues. Outcome of service utilization is not only health but also labor participation. It can have impact in overall economy through reduction of medical impoverishment. Dr. Adhikari shared that there is a need of system thinking in health insurance. Sharing that health insurance program is a reform rather than simply a program, Dr. Adhikari opined that it has been narrowly defined when it is considered as program. It should be considered outside of the health sector.

Key Points of the session

- Purchasing part and production part of social health insurance are different. Government facilities are at the same time purchasing and producing health services which prevents the quality negotiation under social health insurance
- Capitation payment for private sector can be one option for producing certain category of services
- Quality, amount of premium, payment mechanism, performance and efficiency of health insurance are crucial issues.
- Price of health services may increase with introduction of social health insurance. So, there is need of having on focus on price and quality of services

Way Forward

- Modality of social health insurance, its objective, premium packages have to be rigorously discussed
- Efforts need to be made on strengthening purchasing capacity and extending district coverage

2.4 Panel Discussion: Social Health Insurance in Nepal: Inception, Roll Out and Future Directions

Panelists of the session

- Dr. Guna Raj Lohani, Executive Director, Social Health Security Development Committee
- Dr. Shiva Raj Adhikari, Associate Professor, Tribhuvan University
- Mr. Chiranjibi Chapagain, Chairman, Insurance Board, Nepal
- Mr. Ashwini Kumar Thakur, Administrator, Rastriya Beema Sansthan
- Ms. Franziska Fuerst, Senior Technical Advisor, GiZ-S2HSP

Moderator: Dr. Sushil Chandra Baral

The panel discussion covered the key issues like health insurance in federal country, purchaser vs. provider coverage, flat provisions in social health insurances (same service and premium in Kathmandu and in remote districts), targeting the poor and, fragmentation and synergies with free health care and others

Key Points of the panel discussion

- People can receive cash less service thereby increasing the access to services. However, complex and advance system can be a big challenge to health service providers.
- Health insurance: Technically specialized insurance product and through collaboration with *Beema Sansthan*, the cost of installation can be reduced through the use of preexisting infrastructure and mechanism
- Insurance never give the justice to social services.
- Social health insurance has been considered to contribute to Universal Health Coverage (UHC). However, the concept of UHC does not go well with the ceiling based service. These issues need to be resolved.

Way forward

- Rigorous discussion need to be carried out on modality of social health insurance resolving the issues like provider and purchaser split, flat provisions of service and premium for all irrespective of local context vs. locally tailored premium and benefit package and creating of autonomous body to look after social health insurance program.
- Appropriate mix of tax based financing and health insurance need to be determined in Nepal context as both have their own strengths and limitations.
- Attempts need to be made on strengthening the quality of services on public health facilities.
- Different Premium rates could be adopted among low, middle and high income group. Similarly, different benefit package can also be designed for a specific community, based on its disease burden and the health needs.

2.5 Informing health decision making in resource poor setting: importance of systematic reviews and evidence synthesis (Workshop in collaboration with Cochrane South Asia)

The session was jointly chaired by:

- Prof. Dr. Sharad Raj Onta, Institute of Medicine, Tribhuvan University
- Prof. Dr. Buddha Basnyat, Former Vice Chairman, NHRC

Keynote Speakers

- Mr. Binay Chalise, Research Associate, NHRC
- Prof. Dr. Paul Garner, Coordinator, Evidence Synthesis for Global Health
- Dr. Samuel Jhonson, Clinical Research Associate, Liverpool School of Tropical Medicine.
- Prof. PrathapTharyan, Director, Cochrane South Asia, CMC Vellore

Prof. Paul Garner, Coordinator highlighted the importance of systematic review on development of medical guidelines and revisions of clinical protocols through synthesis of evidence sharing examples of the Artemisinin combination therapy in treatment of malaria and Zinc in treatment of diarrhea. Prof. Garner stressed on the need of localization of evidence.

Dr. Samuel Jhonson, shared about the findings from systematic review that recommended the use of Xpert MTB/RIF in diagnosis of lymph node tuberculosis. In highlighting the need of evidence made decision making, Dr. Jhonson also shared his experience while working in Cimean Congo Hemorrhagic Fever Guideline.

Prof. Prathap Tharayan shared his experiences in evidence synthesis. He highlighted on how the results of systematic review can help to cope decision dilemma among policy makers. According to Prof. Tharayan, although the process of systematic review is time consuming and painstaking, it is worth going for considering its implication in policy and strength of evidence it brings. He shared that he was happy that initiatives have been taken for establishment of Cochrane branch in Nepal and expressed his commitment to support further.

Mr. Binaya Chalise, shared the initiatives taken by NHRC in establishment of Cochrane branch. Mr. Chalise highlighted the future steps in continuation of Cochrane systematic review activities in Nepal.

Key points of the session

- There is a need of large number of good quality evidence which might be challenging for developing countries like Nepal. Dr. Mahesh Maskey during discussion mentioned that systematic review is not an implicit alternative to good quality research.
- The basic difference between traditional review and systematic review is that the systematic review protocols undergoes peer review process and are published. That can largely overcome the problem of biases. The results generated through systematic review process are of higher quality.
- Interpretation of findings from systematic review can be challenging. Bottom line is that we need to have good quality researches. It is necessary that user of systematic review need to critically evaluate the contextual realism of the findings of systematic reviews.

2.6 Scientific Publication in Nepal: Enhancing the quantity and Quality (talk with the editors-Open discussion)

Panelists of the session

- Prof. Dr. Jay Narayan Shah, President NAME, Editor JNHRC, Chief Editor JPAHS
- Prof. Dr. Ganesh Dangal, Editor JNHRC, Gen Sec NAME, Editor JNSOG
- Dr. Amit Joshi, Editor JNHRC, Executive Editor MJSBH
- Dr. Dipak Shrestha, Editor KUMJ
- Dr. Yogesh Neupane, Chief Editor, Nepalese Journal of ENT & Head & Neck Surgery

Moderator: Dr. Arun Neupane, Editor JNHRC & Editor in Chief JNPS

In the session, participants had opportunity to understand about the publication process and issues with scientific publication in national and international journals. Panelists discussed about manuscript submission process, peer review process, process followed by journals after review and final submission. Panelists also discussed about different publication issues like conflict of interest, retraction of article, choosing between specialty and general journals and the importance of publishing in national journals. Furthermore, panelists discussed about redundant publication, plagiarism, authorship disputes, conflict of interest, author, reviewer and publisher's ethics

Key points of the session

- The number of journals has increased providing more opportunity for researchers to publish their papers.
- With publication of quality papers in national journals, quality of journals need to be made up to the international standard
- Author need to be careful of different scientific misconduct

Way forward

- Researchers need to be encouraged to publish good quality papers in national journals.
- The capacity of national researchers and journals need to be strengthened. There need to be a networking among editors of different national journals.

3. Inauguration Session

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

- Prof. Dr. Anjani Kumar Jha, Chairman, NHRC
- Mr. Gagan Kumar Thapa, Honorable Minister of Health
- Dr. Bhoj Raj Adhikari, Vice chairperson, NHRC
- Mrs. Leilani Lea, Founder and CEO, Barefoot clinic, UK
- Prof. Dr. Prathap Tharyan, Director, Cochrane South Asia, CMC Vellore, India
- Prof. Dr. Paul Garner, Co-ordinator, Evidence Synthesis for Global Health, Liverpool School of Tropical Medicine
- Raunak Khan, Deputy representative of UNICEF
- Ms. Giulia Vallese, Country Rep, UNFPA/EDP Chair
- Kiran Regmi, Acting secretary, Ministry of Health

Honorable Minister of Health, Mr. Gagan Kumar Thapa inaugurated the third national summit of health and population scientists. In his remarks, **Honorable Minister, Mr. Gagan Kumar Thapa** shared about the recent initiatives in health sector. He appreciated the role of NHRC and assured that the contribution of health scientists would be valued greatly. He opined that SDG has envisioned health broadly covering multiple sectors including multiple sectors. Since health has been considered as fundamental human right by constitution of Nepal, he pointed health insurance is state's responsibility. He further added that ministry of health is actively engaged in air pollution, sanitation and hygiene related issues, development of drinking water standards, new taxation of sugary drinks and development of integrated health infrastructures development plan He called for participation and support in the new health campaign "My healthy year 2074: healthy me healthy nation" to be started from 1st Baisakh, 2074.

Finally, minister congratulated NHRC for its support in developing number of policies through generation of evidence and facilitating the policy making process. Sharing that the ministry has realized the importance of evidence for developing effective interventions, he expressed his commitment for increasing resources for NHRC.

On behalf of NHRC, Vice Chairman **Dr. Bhoj Raj Adhikari** thanked Honorable Minister of Health for his attempts in evidence informed practices and his attempts to link health to health research. He opined that Ministry has stood firmly for improvement of health. He shared that four levels of preventions should be linked to health research and health field should be considered holistically. Because of its unique characteristics, Nepal needs its own statistics for health planning and health research should be prioritized. He pointed out the need for analysis of health facility data and extension of NHRC outside valley for enhancement of research capacity and responsible conduct of research.

Mrs. Leilani Lea shared about the research initiatives on assessment of effectiveness of acupuncture in reducing blood pressure. She shared her willingness to work in collaboration with NHRC in future for generation of research evidence that could be useful for the entire population.

Prof. Prathap Tharyan thanked NHRC for taking responsibility for promoting systematic review and meta-analysis in Nepal through establishment of Cochrane Branch. He shared that generating evidence through systematic review and meta-analysis may sometimes be unwelcomed initiative while challenging the existing policies, medical protocol or clinical practices but are needed for improvement of the health sector as a whole. Sharing the importance of research communication, he opined that unless people understand what their health needs are, we are failing on duty.

Prof. Paul Garner shared that Nepal has strong history of collaborative research that have contributed to the scientific community worldwide. Dr. Garner highlighted the importance of pulling together and synthesizing the evidence from multiple researches. He further added that scientific community should work in collaboration rather than competition in generation of scientific evidence.

Ms. Raunak Khan opined that the presence of young researchers and professionals in the summit gives the hope that young generation are in preparation to contribute to evidence. Sharing that SDG is more evidence based compared to MDG, Dr. Khan emphasized the role of NHRC in generation research evidence at national and sub national level.

Dr. Mahesh Kumar Maskey, appreciated the role played by NHRC in raising consciousness on the need of sound evidence through organization of national summit of health and population scientists. Dr. Maskey called upon the scientific community to critically analyze the research evidence and give optimum importance to quality whenever researches are conducted.

Dr. Jos Vandelaer, opined that SDG calls for research driven innovations, and new approaches. SDG also calls for new priorities and new approaches considering equity that demands additional resources and emphasis in evidence generation. Dr. Vandelaer was of the opinion that federalization process can provide an opportunity to do things differently. According to Dr. Vandelaer, summit brings together multiple stakeholders in a platform where they can hear about research in different areas. Dr. Vandelaer shared that summit can contribute significantly to building blocks of SDG.

Ms. Giulia Vallese, congratulated NHRC for rigorous work in conducting the summit. Ms. Vallese shared that the population related researches are underrepresented in the summit and need more emphasis. Ms. Vallese also highlighted the need of policy briefs to facilitate the budgeting process of Ministry of Finance. Ms. Vallese thanked all for their presence and assured that UNFPA would continuously support NHRC in future.

Dr. Kiran Regmi, depicted 21st century as era of knowledge. According to Dr. Regmi, evidence can be very useful in assessing the feasibility of health programs and

choosing appropriate interventions. Dr. Regmi opined that systematic use of evidence can have very important contribution in SDG. Destruction of health infrastructures after devastating earthquake can be utilized as an opportunity to rebuild new infrastructures. According to Dr. Regmi, Ministry of Health is committed on bringing about positive changes in health for which research can play important role.

Prof. Dr. Anjani Kumar Jha thanked all for participating on behalf of organizing committee. Dr. Jha shared that SDG requires enormous resources that demands prioritization. Dr. Jha highlighted the need of large number of researches to generate the baseline value for health related indicators and continuously progress towards achievement of SDGs. According to Dr. Jha, like in case of nutrition, SDGs require intra-household data and NHRC can be potential agency for generation of such evidence. Dr. Jha called for harmonization of different policies in health field and stressed on the need to build consensus on different data sources. According to Dr. Jha, NHRC has the role in simplifying the concept of heavy words like research, data gap, and evidence and so on.

4. Plenary Session of the summit

4.1 Plenary Session I

The session was jointly chaired by Prof. Dr. Madan Prasad Upadhyay and Dr. Padam Bahadur Chand.

Mr. Bhogendra Dotel Chief of PPICD, MoH in his presentation on ‘functional analysis of health services in federal context’ discussed about the current health sector transitioning to federalism. He mentioned that the high level policy and restructuring coordination committee did not propose ministry of health in the federal state. However, efforts are being made to establish MoH in the new federal structure at both federal and provincial level which will also look after population and drinking water sector.

Key issues

1. Regulatory functions will be mainly in federal level and province level while Service delivery management will mainly be from local level.
2. Functional analysis at all levels; institutional arrangements in 481 village health office and 246 municipal health offices are under discussion.
3. MoH is preparing a transitional management plan to address health system issues in the federal context.
4. Deconcentration divisional health office is needed for transitioning health services from provincial to local level.
5. Universities need to be made autonomous. There should be institution as comparable to Center for Disease Control and Prevention to comply with the International Health Regulations.
6. MoH will be seeking feedback to incorporate stakeholder’s issues regarding health system in federal context.

On behalf of UNFPA, **Dr. Yagya Bahadur Karki** presented on ‘Population Situation Analysis (PSA) of Nepal in relation to population and health dynamics’. The presentation was based on analytical work of Population Situation Analysis that draws on Nepal’s demographic transition and resulting population momentum using key demographic variables for the next 15 years (2016-2030) in the context of the proposed federal structure of the country. The PSA intends to inform integration of key population dynamic issues in national development priorities to harness the demographic dividend and realize national SDGs.

Key Points of the presentation

- Health, place and mobility, dignity and human rights, governance & accountability and sustainability were highlighted as five pillars of population and development in reference to ICPD beyond 2014.
- It would be difficult to go ahead with planning without having baseline data on population.

- Presenting data on population has increase, he highlighted how the pace of population increase has changed in past decades moving from high growth rate to relatively lower growth rates
- Presented statistics of the population size and percent change according to provincial level.
- All provinces have mix of caste and no single majority caste.
- Province 6 has smallest population size; however, population growth is high.
- Disaggregated data by province and caste/ethnic were presented for indicators like Contraceptive prevalence rate, total fertility rate, adolescent fertility trends, and deliveries by SBA, neonatal infant and under five mortality rates.
- Twenty seven of 75 districts showed negative growth rate between 2001-2011 inter- censal period.

Future directions

- Economic opportunities need to be increased to retain people at place of birth.
- Births among adolescent mothers need to be reduced.
- Formulation of policies and programs to reduce early age mortality need to be done.
- Universal access to sexual and reproductive health by strengthening implementing mechanisms needs to be ensured.
- Family planning program need to be strengthened.

In his presentation on ‘Harnessing Demographic Dividend: Adolescents and Youths, and the SDGs in Nepal’ **Mr Puskar Raj Silwal** from GIZ-S2HSP shared that demographic dividend is a term increasingly being used to discuss about the economic growth that happens along with the changes in demographic structure of a country’s population. He also dealt about its conceptual framework and further summarized demographic status of Nepal. Mr. Silwal emphasized on development and implementation of appropriate policies to achieve declined fertility, improved child education, healthy adolescents and youths, employed youths and good governance inviting local and foreign investments to be able to grasp the opportunity to harness demographic dividend for economic growth.

Key Points of the presentation

- Demographic dividend is the window of opportunity and health sector is important to harness it.
- With reference to sustainable development goal, there is a need to work for reduction of poverty and equal focus should be on achieving good health, gender equality and quality education for harnessing the demographic dividend.
- Target group should be the adolescents and there should be more precise programs for adolescents besides the ones on reproductive and sexual health.
- There is a need of policy and strategies for reaching the vulnerable ones and focusing on family and parents to achieve the desired status for adolescents and youth.

Future directions

- Adolescents and youths should be targeted in all interventions that should be

implemented synergistically at different levels.

- There should be shift from small and short-lived projects to large scale and sustained programs targeting adolescents and youths.

In his presentation on 'Quality of care in the context of SDGs in Nepal', **Dr. Ashish KC**, Child Health Specialist, UNICEF provided brief background information about quality care citing global data. He further discussed about the quality care framework and structure of standard quality care. Similarly, Dr. KC interlinked quality of care in context of Nepal and its prevailing policy provision.

Key Points of the presentation

- Quality of care information is new concept for Nepal, it needs to be discussed.
- Challenge of ensuring resources of SDGs.
- Nepal Health Sector Strategy has included about the quality of care as one of the outcome.
- Challenge exists on defining quality of care and its measurement.

Future direction

- Adequate investment on quality of care is needed.
- Addressing an issue of data gap on coverage related quality of care indicator.

Dr. Anil Kumar Jha (Dermatologist, Venereologist and Leprologist) presented research paper on 'challenges and innovative concepts for sustaining the health institutions and organizations in country like Nepal'. Dr. Jha shared about the problems and possible solutions related to private sectors in Nepal. He shared the video clips from different districts to highlight the importance of telemedicine in remote districts of Nepal and asserted that poor people have been benefited from it.

Key Points of the presentation

1. Telemedicine could be useful in Nepal and there is no profit motive as people are served free of cost.
2. Documentation and research are important in health organizations. Data are generated from government offices but private health organizations are not covered properly. Government is trying to avoid the importance of private sector.
3. Ethical approval is needed from NHRC and the high processing fee might discourage research.
4. For the private sector to sustain; loan is required from banks. In the current context; generating revenue for the private sector is not easy and taxation on health services could be difficult as you are charged for being sick.

Future direction

1. The government should recognize the role of private sector in improving the health of the population.
2. Innovation like telemedicine service needs to be encouraged.

4.2 Plenary Session II

The session was jointly chaired by Prof. Chop Lal Bhusal and Prof. Sitaram Chaudhary. Session began with the presentation of Mr. Mahendra Shrestha, on “Urban Health Challenges in Nepal: Need for Health Promotion”. According to Dr. Shrestha, although the majority of the world’s population is now living in urban areas and the proportion is growing rapidly, urban health is less focused. Sharing that equity gap is more in urban than rural areas, Mr. Shrestha shared that similar problems might have different solution and might need different approaches in rural and urban areas. Before developing the healthy cities, new initiatives should be developed to integrate and collaborate the health services of urban people. He shared that only 7% of the households are earthquake resilient and 29% of the people had high blood pressure in urban people only in highlighting the importance of urban health. He opined that urban health has been less priority in national health policy and government does not have much program to look after urban health. Recently, urban health promotion centers “JANATA SWASTHYA KENDRA” have been established in Kathmandu Metropolitan city and Budhanilkantha municipality.

Key Points of the presentation

- There are gaps in equity in access to health services and health indicators in urban areas.
- Adolescent and early pregnancies, unsafe abortions and road traffic accidents are in increasing trends.
- Urban population is also at risk of both non-communicable diseases and communicable diseases like HIV and STIs; and vector-borne diseases, mental health problems etc.
- Air pollution in urban areas also need attention as it has been linked not only to respiratory but cardiovascular diseases

Future directions

- Function of *Janata Swasthya Kendra* need to be clearly defined with emphasis on preventive services as clinical services are being delivered through other health facilities too.
- Since urban health is a complex issue, contextualized model has to be developed.

The second presentation of the session was on need of preventive emergency medicine in Nepal by Dr. Ramesh Kumar Maharjan. Dr Maharjan shared that preventive emergency medicine is an emerging area although preventive medicine has been well established since long. He shared its importance in reducing mortality and morbidity due to disaster and emergency. Sharing that 77% of total injuries in Nepal are unintentional injuries with economically active population being the most common victim, he attempted to highlight its linkage with economy of the country.

Key Points of the presentation

- Because of geographically difficult terrain, it might be difficult to develop ideal system of emergency healthcare system. In such scenario, preventive emergency medicine could be potential option
- Ambulance services are not different from general vehicles and are not

equipped with clinical personnel to deliver emergency first aid services needed before reaching health facilities

Future directions

- Training of ambulance driver on basic first aid could be potential option to reduce loss during emergency situation as transportation to health facilities might take long time due to difficulty geographical terrain.
- Basic and advanced first aid training to non-medical personnel at the community level could be option to reduce the loss at local level.

Prof. Dr. Nilambar Jha from BPKIHS presented his paper on ‘addressing the double burden of disease: improving health systems for non-communicable and neglected tropical diseases’. According to Prof. Jha, Communicable diseases including leprosy have been a priority for the Government of Nepal since very long time but NCDs were included in the national policies in recent years and needs attention.

Key Points of the presentation

- Chronic natures of NCDs and NTDs have a burden on the household and individuals due to loss of productivity, the cost of care, disability, and death and have not been adequately prioritized.

Future directions

- The better option could be to improve the health system capacity especially at PHC level that helps to prevent, diagnose and manage NCDs and NTDs.

Mr. Rajaram Pote Shrestha from WHO presented on ‘Climate change and health in Nepal: SDG Perspective’. Climate change-related diseases are in increasing trends and the health risk factors are also in the same trend. Health impacts due to climate change were unfairly distributed. African and Asian countries are more vulnerable by the production of pollutants than the developed countries. Mr. Shrestha shared that 12.6 million deaths of global deaths are linked to climate change attributing almost 23% of all deaths. He shared about vector borne diseases, diarrheal diseases including cholera, malnutrition, cardio-respiratory diseases, psychological stress, extreme weather related health effects, injuries as climate sensitive health risks in Nepal.

Key Points of the presentation

- The burden of disease due to climate change are unfairly distributed with developing countries like Nepal bearing more burden although they have very less contribution on causes of climate change

Future directions

- Appropriate policy should be adopted for overcoming the effects climate change into integrating and establishing close linkage between health and climate change related initiatives.

5. Parallel sessions of the summit

5.1 Parallel Session I: Non-communicable disease

The session was jointly chaired by: Prof. Dr. Rajendra Koju and Prof. Dr. Sanjib Kumar Sharma

In this session 6 paper papers related with non-communicable diseases were presented. Following are the presented topics with their respective authors:

Topic	Presenter
Barriers to treatment and control of hypertension among hypertensive participants: A community based cross-sectional mixed method study in municipalities of Kathmandu, Nepal	Dr. Raja Ram Dhungana
Prevalence of Hypertension and its Associated Risk Factors in Sub Urban Area of Central Nepal	Ms. Rashmi Devkota
Total Cardiovascular Risk for Next 10 years Among Rural Population of Nepal using WHO/ISH Risk Prediction Chart	Dr. Mahesh Kumar Khanal
Quality of Life in Patients with Chronic Obstructive Pulmonary Disease in Chitwan, Nepal: A Mixed Method Study	Assoc. Prof. Kalpana Sharma
High time to zoom out the gaps: Under-recognized burden of elder mistreatment, community based, cross -sectional study from rural eastern Nepal	Mr. Uday Narayan Yadav
Non Communicable Diseases and Injury in Nepal: Present Context & Future Directions	Prof. Bhagawan Koirala

Dr. Rajaram Dhungana, in the first paper of the session shared about barriers to treatment and control of hypertension among hypertensive participants in municipalities of Kathmandu. He shared that people with pre-hypertensive stage are high in number and salt consumption and BMI are probable factor affecting hypertension.

Ms. Rashmi Devkota shared about associated Risk Factors in Sub Urban Area of Central Nepal. Mr. Devkota's study revealed that the high prevalence of hypertension and its association with several factors indicate the necessity for timely detection, treatment and control of hypertension using various strategies.

Another paper by **Dr. Mahesh Kumar Khanal** covered issue of total cardiovascular risk for next 10 years among rural population of Nepal using WHO/ISH risk prediction chart. Study revealed that large proportion of Nepalese population are at moderate and high risk of CVD and also suggested that total risk factor approach could be better for CVD.

Ms. Kalpana Sharma in her paper titled 'quality of life in patients with chronic obstructive pulmonary disease in Chitwan, Nepal: A Mixed Method Study' explained that Quality of Life (QoL) of majority of COPD patients were moderately impaired

in all aspects and exposure to passive smoking, higher dyspnea score, and financial difficulties in treatment had negatively affected QoL of life of COPD patients.

Similarly, **Mr. Uday Narayan Yadav** in paper brought to light the issue burden of elder mistreatment that is very often neglected and ignored. Study depicted that elderly mistreatment are prevailing in our society and dependency to care taker, family income etc. were potential factors affecting elderly mistreatment.

On last part of this session, in an invited paper, **Dr. Abha Shrestha**, on behalf of Dr. Bhagawan Koirala shared about non-communicable diseases and injuries in Nepal. This paper highlighted scenario of non-communicable diseases in Nepal and suggested way forward dealing with service delivery and research surveillance.

Key issues of the session

1. Large number of people are at pre-hypertensive stage.
2. Misbelief about the hypertensive drugs, inadequate counseling by physicians has acted as barrier for treatment of hypertension.
3. Quality of life of majority of COPD patients is moderately impaired.
4. NCD management needs to focus on service delivery and research surveillance.

Future direction

- Continuous and co-ordinated effort is necessary to prevent and manage NCDs. Government should take initiative for making coordinated efforts in programs and research related to NCDs.

5.2 Parallel Session II: Nutrition, Maternal, Neonatal & Child Health

The session was jointly chaired by:

- Prof. Dr. Ramesh Kant Adhikari
- Prof. Dr. Pushpa Chaudhary

Six papers were presented in this session. The brief description of the papers presented along with the author name is given below:

Title	Presenter
Dietary Diversity and Nutritional Status of Pregnant Women Attending Antenatal Care in Western Regional Hospital, Pokhara, Kaski, Nepal.	Mr. Nishant Lama
Factors Affecting Health Seeking Behaviors for Common Childhood Illnesses among Rural Mothers in Chitwan	Ms. Dipa Sigdel
Group compared to Individual antenatal care: A cluster-controlled trial in rural Nepal	Mr. Poshan Thapa
Breast cancer in Nepal: A review	Mr. Biwesh Ojha
Status of Maternal & Perinatal Death Surveillance and Response Implementation in Nepal	Dr Pooja Pradhan
Maternal and Neonatal morbidity and mortality in Khotang, Taplejung, Panchthar and Tehrathum districts	Dr. Nastu Sharma

Mr. Nishant Lama shared about dietary diversity and nutritional status of pregnant women attending antenatal care in western regional hospital. Study revealed that education, husband occupation, ethnicity and food security was associated with dietary diversity. The study showed that increase in dietary diversity increased nutritional status.

Ms. Dipa Sigdel in her study on ‘factors affecting health seeking behaviors for common childhood illnesses among rural mothers in Chitwan’ shared that health seeking behavior for childhood illness was low among mothers. Mother’s age, education, occupation, place of delivery, household income, decision making, perceived severity of illness, availability of health facility, and perceived affordable treatment costs were associated with health seeking behavior and these factors should be considered for the promotion of appropriate health seeking behavior among mothers for addressing childhood illness.

Mr. Poshan Thapa compared the effectiveness of individual antenatal care. The study revealed that group counseling is acceptable and feasible among pregnant women and is based on peer learning for which trust has to be maintained among women. Group counseling can thus be used as an alternative to individual ANC to improve maternal health outcomes.

Mr. Biwesh Ojha presented review article on breast cancer in Nepal which stressed on the need of a national guideline for prevention and treatment of breast cancer in Nepal. Similarly, according to Mr. Ojha, the focus should also be on strengthening the hospital based registry and establishing the population based cancer registry.

Dr. Pooja Pradhan in her presentation on ‘Status of Maternal & Perinatal Death Surveillance and Response Implementation (MPDSR) in Nepal’, Dr. Pradhan mentioned that MPDSR improves the quality of care provided to pregnant women by identifying gaps in health services that contributed to maternal death. The MPDSR findings done in Nepal showed that the women died more due to direct cause and during pregnancy period. MPDSR has been a priority of the government and supported by WHO and partners. However, it is challenged with delay and incomplete recording and reporting.

Dr. Nastu Sharma shared research findings on Maternal and Neonatal morbidity and mortality in four districts in Eastern Nepal. The study findings showed higher deaths than reported from HMIS. MMR was highest in Taplejung and lowest in Khotang. Similarly, NMR and IMR were also highest in Taplejung and lowest in Panchthar. Dr. Sharma stressed on the need of awareness raising activities to the community for early decision making to seek health care is necessary since many deaths occurred on the way to health facility. Dr. Sharma also mentioned that the present district health system includes only the reporting of deaths from health facilities and this there is a need of strengthening of surveillance to incorporate deaths outside of the health facility.

Key points of the session

1. Life cycle approach should be considered while promoting dietary intake

2. We still need to promote Health seeking behavior among mothers for childhood illness in some district through awareness raising activities and other initiatives.
3. Group counseling can be an alternative to individual ANC counseling that has been practiced in Nepal.
4. Cancer can be appropriate strategy to deal with scarce evidence in different cancers
5. MPDSR can be used as a tool for health system strengthening with focus on improving maternal and child health.
6. Deaths outside of the health facility need to be incorporated in the current surveillance.

5.3 Parallel Session III: Environmental and Occupational Health; Infectious and Tropical Diseases

The session was jointly chaired by:

1. Dr. Garib Das Thakur
2. Mr. Chudamani Bhandari

Six papers were presented in this session. The brief description of the findings presented in this session is as under:

Title	Presenter
Awareness of Occupational Hazards and Use of Safety Measures among Automobile Repair Artisans in Kathmandu Metropolitan City	Mr. Grish Paudel
Do immune disturbances caused by soil-transmitted helminth co-infection trigger leprosy reactions?	Ms. Ruby Thapa
Factors associated with prevalent Hepatitis C and HIV/HCV co-infection among people who inject drug in Nepal	Dr. Sampurna Kakchapati
Indoor pollution and respiratory health	Prof. Annalisa Cogo
Prevalence of Pulmonary Tuberculosis among Male Inmates in the Largest Prison of Eastern Nepal	Dr. Gambhir Shrestha
Study on Work-related Musculoskeletal Symptoms among Traffic Police in Kathmandu Valley	Dr. Leela Paudel

Mr. Grish Paudel through his research paper raised the issue of Occupational hazards among automobile repair artisans in Kathmandu Metropolitan City. Study revealed that only two out of five workers used personal protective and nearly three out of five had adequate knowledge about occupational hazards. Those with higher educational status, pre-service education and training were more likely to have awareness regarding occupational hazards. Similarly, those who were aware of occupational hazards were three times more likely to practice safety measures than who were not aware. The study recommended that awareness raising interventions and prior training to work is necessary to promote the health of the workers.

Next presentation of the session by **Ms. Ruby Thapa** attempted to seek answer if soil-transmitted helminthes co-infection trigger leprosy reactions' Study revealed that leprosy patients have higher susceptibility to helminthes infection and need

to be dewormed as the findings showed that 77% of leprosy patients did not know if they had taken deworming tablets and 55% of leprosy patients had one or more helminthes.

In third presentation of the session, **Dr. Sampurna Kakchapati** shared about Hepatitis C and HIV/HCV co-infection among people who inject drug which is often ignored but important. Dr. Kakchapati revealed that the prevalence of HCV and HIV was 28.8% and 6.2% respectively among PWID. Similarly, the prevalence of co-infection was 4.1%. HCV prevalence was higher in Eastern Terai and among those with longer duration of drug use and injecting drugs and presence of HIV. Thus, there is a need of public health interventions to prevent HCV transmission.

Prof. Annalisa Cogo in her presentation attempted to relate indoor pollution with respiratory health. Prof. Cogo shared that the prevalence of COPD was 18% among more than 40 years of age and 20% among more than 50 years of age. Exposure of longer duration to indoor pollution was associated with respiratory impairments. Thus, there is a need of improving indoor ventilation to reduce COPD.

Dr. Gambhir Shrestha in his presentation on ‘prevalence of Pulmonary Tuberculosis among male inmates in the largest prison of eastern Nepal’ mentioned that 51% of the male inmates had past history of TB. The prevalence of pulmonary TB was 1840 per 1 lakh population which was 8.7 times higher than the general population suggesting active transmission in prison setting. The findings recommend for diagnosis, treatment and prevention efforts to be concentrated in the prison.

Dr. Leela Paudel attempted to depict the work-related musculoskeletal symptoms among traffic police in Kathmandu valley. Dr. Paudel revealed that any Musculoskeletal Symptoms was 69.3% with common site being low back and those with age equal to and more than 30 years were more likely to have Musculoskeletal Symptoms. Duration of working hours; years worked and alcohol was significantly associated with Work-related Musculoskeletal Symptoms. Thus, there is a need of interventions to improve the quality of life of the traffic police including periodic examination.

Key points of the session

1. Issue of occupational safety need to be paid attention
2. Co-infection of Leprosies’ and Helminthiasis need to be focused with the clear need of deworming among people affected with leprosy.
3. Appropriate strategies are needed for prevention of transmission of both HIV and HCV among people who inject drugs
4. Tuberculosis program should also cover issues of prison inmates.
5. Musculoskeletal symptoms of traffic police deserve attention as it affects their quality of life.

5.4 Parallel Session IV: Mental Health

The session was jointly chaired by Prof. Saroj Prasad Ojha and Mr. Mohammad Daud. There were a total of six oral presentations in the parallel session in first parallel session on mental health. Presentations covered diverse issues in mental health like depression, anxiety, and psychosis and treatment gap.

Title	Presenter
Anxiety and depression in Nepal: Prevalence, comorbidity and associations	Dr. Ajay Risal
Development, evaluation and scale up of a mental health care plan (MHCP) in Nepal	Mr. Nagendra Prasad Luitel
Developing a Scalable Training Model in Global Mental Health: Pilot Study of a Video-assisted Training Program for Generalist Clinicians in Rural Nepal	Ms. Pragya Rimal
Perception of service users and caregivers on mental health care services in Nepal	Ms. Ruja Pokhrel
The prevalence of primary headache disorders in Nepal: a nationwide population-based study.	Mr. Kedar Manandhar
Treatment gap and barriers for mental health care: a cross sectional community survey in Nepal	Ms. Dristy Gurung

In the first presentation, **Dr. Ajay Risal** explained about how stressors in a young person's life can increase the risk of mental health problems like depression, anxiety and co morbidity. Similarly, he suggested need of the prevention of depression, anxiety and suicide are a public health challenge and of utmost importance for Nepal.

Mr. Nagendra Luitel highlighted the issue of mental health stating despite of its huge burden. Likewise, traditional and religious healers form a major part of the mental health service provider in Nepal.

Ms. Pragya Rimal shared with the audience her presentation entitled 'developing a scalable training model in global mental health: pilot study of a video-assisted training program for generalist clinicians in rural Nepal'. She suggested that task sharing approach is a need for specialist training programs and the second is send to larger area to train like the traditional training. Participant's knowledge was increased after post test which shows the significant change in the community.

Ms. Ruja Pokhrel presented evaluation research about perception of service users and caregivers on mental health care services. In his presentation he explained that mental health trained health personnel had contributed in increasing positive perception. During presentation he had also pointed various challenges for receiving the services. On endnote he had stressed on need of awareness on part of mental health.

Mr. Kedar Manandhar in his presentation on prevalence of primary headache disorders in Nepal mentioned that primary headache disorders are often ignored. The study revealed that headache attributed problem is increasing and very neglected in Nepal. Migraine was associated to altitude higher than 1000 meters.

Ms. Dristy Gurung shared about treatment gap and barriers for mental health care. On her presentation she presented that larger percentage of people involving in agriculture was depressed in comparison to other occupation. Similarly, she shared that higher treatment gap was on depression and AUD. As an endnote she explained about importance of role of the adequate treatment of underlying disorders, through medication and psychotherapy.

Key points of the session

1. There is a need of comprehensive national level survey on mental health.
2. Government has not adequately addressed issues of mental health. The mental health programs can be incorporated in primary health facilities.
3. Effective community based training program on mental health need to be assessed and scaled up if proven effective
4. Stigma and discrimination reduction, maintenance of privacy and confidentiality should be focused while providing mental health services.
5. Primary headache disorders need to be focused and diagnosis need to be improved.

5.5 Parallel Session V: Health System Research

The session was jointly chaired by Dr. Laxmi Raj Pathak and Dr. Baburam Marasini.

In this session six papers were presented on the issues of health system research. The following are the papers with their name.

Title	Presenters
An Assessment of Community-based Education in Institute of Medicine, Tribhuvan University, Kathmandu, Nepal	Mr. Bishnu Prasad Choulagai
An Operational research to increase compliance with medical abortion and enhance uptake	Ms. Pragya Gartoulla
On-site Clinical and Management Mentoring: An Approach to Improve Quality of Emergency Maternal and New born Care Services in Nepal	Ms. Tulasa Bharati
Antibiogram and Plasmid Profiling of Beta-Lactamases Producing Escherichia coli Isolated from UTI Suspected Pediatric Patients	Mr. Bimal Pradhan
Effect of support contacts on improving provider performance for safe abortion services	Dr. Suresh Mehata

In the first presentation of the session on health system research, **Mr. Bishnu Prasad Choulagai** shared about Community-based Education (CBE) in Institute of Medicine. CBE aims to produce graduates with necessary skills to deal with the priority health needs of the community are in line with the curricula of the MBBS and BPH program. The CBE needs improvement in the operational aspects (coordination with stakeholders, logistic issues) to facilitate smooth implementation of field activities.

In the second presentation, **Dr. Pragya Gartoulla** covered issue of compliance to medical abortion and uptake of post abortion family planning Study revealed huge impact of Health interventions on increased MA compliance on dose and route.

On behalf of Ms. Tulasa Bharati, **Mr. Pushkar Raj Silwal** presented paper that assessed on-site clinical and management mentoring to improve quality of emergency maternal and new born care services in Nepal. Mr. Silwal shared findings that on-site mentoring approach improves clinical competency of the maternity care providers as it not only imparts skills/competency based on the gap but also improves confidence of the health workers. Onsite mentoring provides a unique opportunity for the maternity staffs to improve their skills thereby quality of care at their own setting given that essential equipment and other logistics that are prerequisite for delivery of services should be available.

In last presentation of the session, **Mr. Bimal Pradhan** shared about antibiogram and plasmid profiling of Beta-lactamases producing Escherichia coli isolated from UTI suspected pediatric patients. E. coli accounted for highest isolation (76.15%) in the study. He shared that there was no noticeable relation between antibiotic resistance pattern and plasmid profile. UTI infection is common in any parts of the urinary system.

In the last presentation of the session, **Dr. Suresh Mehata** presented about the effect of support contacts on improving provider performance for safe abortion service. Dr. Mehata shared that post-training provider support is needed to move providers toward higher performance across components. He stressed that there is needed of more information on whether it is need-based support that makes a difference or if sufficient scheduled support contacts (e.g., quarterly) would achieve the same effects.

Key points of the session

- Identifying teaching community and teaching districts could be helpful in improvement of the program
- Efforts to dispel and dismantle the myths and barriers related to hypertension treatment and control may be required reduce the consequences of uncontrolled hypertension.
- Both population-wise and high-risk approaches are required to minimize CVD burden in the future as Nepalese rural population is at moderate and high CVD risk

5.6 Parallel Session VI: Sexual & Reproductive Health, and Adolescent Health

The session was jointly chaired by Dr. Dibyashree Malla and Dr. Naresh Pratap KC.

In this session six papers were presented on the issues of health system research. The following are the papers with their name.

Title	Presenter
Awareness of sexually transmitted infections and perceived barriers in seeking reproductive health services among youths in the Kathmandu valley	Dr. Laxmi Tamang
Body Mass Index and Health Related Quality of Life among Adolescents in Government Schools of Pokhara	Ms. Bidhya Banstola

Fear of side-effects and pressures to have children influencing family planning use in Nepal	Dr. Sharada Pd. Wasti
Medical Abortion Drug Dispensing Practices of Private Sector Chemists in Nepal	Ms. Sushma Rajbansi
Does coaching and visiting providers increase access to LARC in rural settings? Learning's from an evaluation of pilot intervention in Nepal	Ms. Shophika Regmi
Scoping Review and Preliminary Mapping of Menstrual Health and Management in Nepal	Dr. Lhamo Yangchen Sherpa

Dr. Laxmi Tamang presented her research paper on awareness of sexually transmitted infections and perceived barriers in seeking reproductive health services among youths. Dr. Tamang shared that sex, age, education level, and main source of SRH information were significantly associated with youth's knowledge of STI. Major barriers for seeking SRH services were perception of shame feeling, fear, and poor quality of care. The study showed that youths prefer obtaining user friendly RH services.

Ms. Bidhya Banstola shared her findings from study that assessed body mass index and health related quality of life among adolescents in government schools. There is an inverse relationship between BMI and HRQOL. Adolescents with higher BMI scored lower school functioning. Routine measurement of HRQOL and Body Mass Screening in school population might be effective in measuring the impact of BMI on HRQOL.

Dr. Sharada Pd. Wasti assessed the role of fear of side-effects and pressures to have children on use of family planning. Dr. Wasti shared that religious and cultural factors including son preference influence the use of FP services. Furthermore, Dr. Wasti added that fear of side-effects, myths, and misconceptions limit the uptake of modern FP services.

Ms. Sushma Rajbansi shared about the dispensing practices of abortion drug by private sector chemists. She shared that for first trimester pregnancy, Mipriest (22%), MTP Kit (17%), Medabon (5%) and Pregno-Kit (1.3%) were recommended brands by chemists.

Dr. Lhamo Yangchen Sherpa, shared findings from a scoping review on menstrual hygiene management (MHM). No integrated approach from health, education and WASH sectors relating to menstrual health and management, lack of policies focusing MHM and absence of comprehensive package on MHM in school curriculum were identified as key problems in Menstrual hygiene management

Key Points of the session

- Sex education broadened to include STIs has to be incorporated in school curriculum.
- Tailored FP solutions should be cognizant of gender roles, privacy concerns for women, and utilize strategies aimed at improving education around fertility awareness and FP methods

5.7 Parallel Session VII: Health Care and Biomedical Research

The session was jointly chaired by Dr. Bhoj Raj Adhikari and Dr. Gentle Sunder Shrestha.

In this session, six papers were presented on the issues of health system research. The following are the papers with their name.

Title	Presenter
Awareness and Stigma Regarding Eye Donation among Community People living in Butwal-6, Laxminagar	Ms. Pratikshya Gautam
Biofilm Production And Antimicrobial Resistance Among Uropathogens In Pediatric Cases: a Hospital Based Study	Mr. Dhiraj Shrestha
RIPASA Score versus Alvarado Score to Diagnose Acute Appendicitis	Dr. Uttam Pachya
Novel Gene Mutation and Altered Physiology Associated with the Vancomycin Resistance (AMR) Mechanism in Staphylococcus aureus.	Dr. Santosh Dulal
Informational Support, Anxiety and Satisfaction with Care among Family Caregivers of Patients Admitted in Critical Care Units of BPKIHS	Ms. Rosy Chaudhary
Association Between the Specific UGT1A1 promoter mutation, v c. -3279T>G, and Gilbert's Syndrome in Nepalese Population	Mr. Balram Gautam

In the first presentation of the session, Ms. Pratikshya Gautam shared about awareness and stigma regarding eye donation among community people. In her presentation, Ms. Gautam shared that eye donation is still a social stigma like that the person may be born blind in next birth. Besides the social stigma, she emphasizes the almost half of the respondents were willing to donate eyes. Lack of awareness about eye donation and misconception and social stigma results the uncertainty of eye donation service extension and strengthen.

Mr. Dhiraj Shrestha shared findings from a Hospital Based Study 'on biofilm production and antimicrobial resistance among uropathogens in pediatric cases' His research revealed that any types and parts of UTI infection were two times more prone to UTI problems among women. The rising spread of antibiotic-resistant imposes massive challenges to health systems, societies, and affected people. He presented the current health care system and services, diagnostics, and treatments proving to be inadequate for research and development.

Medical Generalist Dr. Uttam Pachya compared RIPASA score versus Alvarado score in diagnosis acute appendicitis. Compared to Alvarado scale RIPASA score was found to be more convenient and have better diagnostic accuracy to Diagnose Acute Appendicitis than Alvarado score. He also shared that timely diagnosis based on clinical history and examination of acute appendicitis is crucial to timely treatment. Delay appendectomy to increase diagnosis accuracy, increase risk of appendicular perforation and sepsis, increasing mortality and morbidity.

Dr. Santosh Dulal in his presentation on ‘novel gene mutation and altered physiology associated with the vancomycin Resistance (AMR) mechanism in *Staphylococcus aureus*’ shared that community acquired infections by multiple antimicrobial resistances *Staphylococcus aureus* are the major public health concerns in Nepal. Although researchers have only scratched the surface of microbial biodiversity, the information gained has already resulted in an effort to understand the association of the apt mutation within VISA mechanisms.

Ms. Rosy Chaudhary shared her research on Informational Support, Anxiety and Satisfaction with Care among Family Caregivers of Patients Admitted in Critical Care Units of BPKIHS. She mentioned receiving information related to patients in Critical Care Unit (CCU) is the most important needs of the family members of such patients. Delivering honest, intelligible and effective information raises specific challenges but also enhance their satisfaction with care. Informational support was found to be significantly associated with educational status of family caregivers.

In his presentation on ‘association between the Specific UGT1A1 promoter mutation, c.-3279T>G, and Gilbert’s syndrome in Nepalese population’, Mr. Balram Gautam shared that the Gilbert’s Syndrome as a result of an inherited gene mutation, which showed up with high rate of occurrence of homozygous mutation. Gilbert’s syndrome usually does not get diagnosed in the clinical setting. Using of other drugs may cause liver damage. So, appropriate consultation with hematologist is essential.

Key Points of the session

- Easily accessible health institution with health expertise for voluntary contribution of eye donation
- Appropriate health awareness programs with the support of health workers, keholders, experts, lawyers, etc. were the possibilities for mass awareness regarding eye donation.
- Holistic approach with regular surveillances and monitoring is needed for joint action of resistance patterns.
- Urgent action is needed to effective management of UTI in children.
- Newly diagnosis tools RIPASA score may be the extensive and more sensitivity and specificity tools to accurately diagnosis of Acute Appendicitis
- To tackle the growing threat of resistant microbes in public health, routine surveillance of antimicrobial resistance (AMR) is essential
- Knowledge about the stress and anxiety influence the family supportive role.
- Avoiding other medicines in the name of Gilbert’s Syndrome is essential.

5.8 Parallel Session VIII: Systematic Review

The session was jointly chaired by Dr. Mahesh Kumar Maskey and Prof. Bhagwan Koirala

In this session six papers were presented on the issues of health system research. The following are the papers with their name.

Title	Presenter
Challenges and Opportunities for Universal Health Coverage (UHC) in Nepal: systematic review	Dr. Chhabi Lal Ranabhat
Factors Affecting Hospital Efficiency and Productivity: A Scoping Review	Mr. Pushkar Raj Silwal
Interventions for improving quality of life of HIV infected people receiving antiretroviral therapy: a systematic review and meta-analysis	Dr. Dharma Nand Bhatta
Nutrition interventions for children aged less than 5 years following natural disasters: a systematic review	Dr. Pranil Man Singh Pradhan
Supplies Disruption and Its Impact upon Health Sector in Nepal: Findings from a Media Monitoring Study	Mr. Sudeep Uprety
Evidence Synthesis and Systematic Review for Health Decision Making	Prof. Prathap Tharyan

Dr. Chhabi Lal Ranabhat shared about the challenges and opportunities for Universal Health Coverage (UHC) in Nepal. Dr. Ranabhat shared that there is a gross inequality in health of Nepal in terms of various factors like geography, gender and economic status and opined that from UHC perspective is important to reduce poverty and improve equity. UHC is important to improve equity. In the context where constitution of Nepal has recognized health as fundamental right of every citizen, Dr. Ranabhat shared that this can be used as opportunity towards achievement of UHC. He also shared that the coverage of health insurance is small, new enrollment is very poor and renewal of health insurance membership is not as expected.

Mr. Pushkar Raj Silwal, shared about the factors that affect hospital efficiency and productivity According to Mr. Silwal, health systems in both developed and developing countries are under pressure to ensure higher effectiveness and efficiency of health care systems, particularly for hospitals. Sharing the synthesis of evidence from 49 different studies, stand-alone policies to increase salary and incentives to human resource may not increase efficiency and productivity in the long run. It should be tailored with other comprehensive measures.

Dr. Dharma Nand Bhatta presented paper that covered different interventions that could improve quality of life of HIV infected people receiving antiretroviral therapy. Dr. Bhatta shared that available evidence suggests that existing social and behavioral interventions improve some domains of quality of life.

Dr. Pranil Man Singh Pradhan shared about the nutritional interventions for children aged less than 5 years following natural disasters. The study revealed that integrated nutrition interventions using locally available health resources may yield the best results. However, Dr. Pradhan shared that sound evidence on the most effective interventions is still lacking

Mr. Sudeep Uprety, shared findings from media monitoring study on impact upon health sector caused by the disruption of regular supplies coming from India. Lack of essential medical and health supplies, public having a hard time in medical treatment, health facilities finding difficulty in regularizing services, routine government health

programmes such as national Vitamin A, campaigns being hampered, global concerns by international agencies regarding the halting of the health services, government efforts to handle this difficult situation were key issues that appeared in medias during the study.

In the last presentation of the session, invited presenter **Prof. Prathap Tharyan** shared about the role of evidence synthesis and systematic review on health decision making. He opined that although local evidence are desirable they may not always be available or be reliable, and global evidence is a good starting point. According to Tharayan, evidence is useful in clarifying the problem and framing options for interventions based on a balance of benefits versus harms. However, Dr. Tharayn shared that the global evidence can be assessed for applicability.

Key Points of the session

- Population coverage, service extension with quality and financial protection are major break through to achieve the UHC.
- Government stewardship, support of stakeholders, contribution of experts and lawmakers and mass participation of people only speed up the path of UHC in Nepal.
- Policy reforms like hospital payment system, mandatory insurance etc. should be analyzed carefully from the perspectives of efficiency and productivity before taking decisions
- Necessity to develop a comprehensive health emergency management response plan in crisis situations for better preparedness
- A separate Crisis Knowledge Management Unit also required consolidating and validating news/stories reported and informing response units immediately for prompt actions
- Medline, Google scholar, Pubmed, Scopus, The Cochrane library and Google are the common searching tools for systematic review

6. Closing Session of the Summit

In the closing session of the summit, Vice Chairman of the Council, **Dr. Bhoj Raj Adhikari** read out the declaration of summit. Participants were requested for feedback in the summit declaration. Summit declaration was finalized after incorporating the feedback from the participants. Through the summit declaration, organizer, partners and participants of the Third National Summit of Health and Population Scientists declared their commitment to: generate and synthesize, place social health security of the population at the center while taking actions, explore and address social determinants of health, encourage policy makers to translate evidence into desirable actions to serve the needs of the population.

6.1 Distribution of best oral and poster presenters

Separate evaluation criteria for oral and poster presentations were prepared beforehand and distributed to evaluators for the evaluation during the presentations. For oral presentation, the evaluation sheet contained score for separate categories such as clinical/public health significance, methodology and scientific rigor, structure and visual slides, presentation skills, time management, and overall impression. Similarly, for poster presentation, the evaluation sheet had categories on clinical/public health significance, methodology and scientific rigor, content and clarity of information presented, visual and aesthetic value of the poster and overall impression. The evaluators could provide maximum of 5 marks in each category, in which 5 reflected the best and 1 was the worst score. The evaluation was done by two different evaluators for the impartial evaluation and calculated the average. The on site evaluation carried 60% of the total marks and 40% was from double blinded peer review during the selection process.

Best oral presenters awarded in the summit

SN	Name	Abstract Title
1	Dr. Pragya Gartoulla	An operational research to increase compliance with medical abortion and enhance uptake
2	Dr. Pranil Man Singh Pradhan	Nutrition interventions for children aged less than 5 years following natural disasters: a systematic review
3	Dr. Gambhir Shrestha	Prevalence of pulmonary tuberculosis among male inmates in the largest prison of Eastern Nepal

Best Paper Presenters awarded in the summit

SN	Name	Abstract Title
1	Ms. Shraddha Acharya	Depression literacy among higher secondary students in Kathmandu district: a cross- sectional study
2	Mrs. Ruby Thapa	Leprosy in children: A 20 year retrospective case review in Nepal
3	Ms. Shijan Acharya	Access to and utilization of sexual and reproductive health services by school adolescents of Kathmandu Metropolitan City

6.2 Closing Remarks

On behalf of NHRC, Prof. Dr. Anjani Kumar Jha delivered the closing remarks. Prof Jha thanked all the participants, NHRC family, scientific committee, steering committee for successful completion of the summit. He also thanked collaborators of the summit for their support.

In the press meet following the closing session, Dr. Jha briefed journalists about the summit, major activities, and key issues discussed during the three days summit.

7. Recommendations from the summit

7.1 Program Recommendation

- Initiatives should be taken to promote the innovative concepts like telemedicine, emergency preventive medicine to ensure the availability of services in remote areas and prevent deaths in emergency situations
- Government should take steps to ensure equity in access and utilization of health services as the progress in health indicators has not been uniform across different socioeconomic strata.
- Appropriate policy should be adopted for overcoming the effects climate change integrating and establishing close linkage between health and climate change related initiatives
- Initiatives need to be taken for continuous improvement in social health insurance model and its working procedure through rigorous discussion of multiple stakeholders
- Separate platform to coordinate between different data sources tracking the indicators of SDGs, preparing policy briefs for policy makers based on evidence could be beneficial.
- Establishing and regularizing Civil Registration and Vital statistics (CRVS) through inter-ministerial coordination.
- To tackle the growing threat of resistant microbes in public health, routine surveillance of antimicrobial resistance (AMR) is essential

7.2 Research Recommendations

- Integrated surveys for generating data on multiple indicators can be effective. At the same time efforts need to be dedicated on improving quality, availability and use of data
- Allocation of adequate resources for health research as per the international commitment for the generation, synthesis and use of evidence
- Explore opportunities for integration of SDG related indicators in Health Management Information System and strengthen routine information system to support health decision making
- There is a need of comprehensive national level survey on mental health although fragmented and small scale studies exist.
- Issues like co-infection of Leprosies and Helminthiasis, HIV and HCV comorbidity, comorbidity of NTD and NCD, musculoskeletal symptoms need to be further investigated in larger samples with sound methodology.
- Along with primary research, initiatives should be taken for synthesizing evidence through systematic reviews
- Explore potential options for using GBD data for calculation of DALYs.

Annex

Declaration

Third National Summit of Health and Population Scientists in Nepal

'Health in Sustainable Development Goals: Are We on Track?'

Nepal Health Research Council

April 10-12, 2017, Kathmandu, Nepal

Internalizing right to health as a fundamental human right enshrined in the constitution of Nepal, acknowledging social justice and equity in health, realizing the right time to initiate action for achieving health related Sustainable Development Goals (SDG) and recognizing partnerships as strategic approach for achieving SDG's we the organizer, partners and participants of the **Third National Summit of Health and Population Scientists** declare our commitment to:

1. generate and synthesize evidence required for planning and monitoring the progress of SDG;
2. place social health security of the population at the center while taking actions based on evidence;
3. explore and address social determinants of health as cause of inequalities, disparities and social injustice in health;
4. Encourage policy makers to translate evidence into desirable actions to serve the needs of the population.

Appreciating the role of academia, research organizations, government and non-government organization, professional and civil society organizations, External Development partners and independent researchers in promotion of research culture together with the responsibility for utilizing the evidence into meaningful actions, we urge for;

1. allocation of adequate resources for health research as per the international commitment to create enabling environment for the generation, synthesis and use of evidence;
2. multi-sectoral collaboration and cooperation to foster participation, engagement and initiating evidence based actions;
3. Strengthen routine information system to support health decision making.

Third National Summit of Health and Population Scientists in Nepal

'Health in Sustainable Development Goals: Are we on Track?'

April 10-12, 2017

Kathmandu, Nepal

Program Schedule

Day I, 10 April 2017, Monday		
07:00-08:30	Registration/Breakfast	
08:30-09:30	Health related Sustainable Development Goals in Nepal: Meeting the data gaps	<i>Chairs: Dr. Kiran Regmi, Chief Specialist, MoH / Dr Bhola Ram Shrestha, Chief, Curative Service Division, MoH</i>
08:30-08:50	Health in SDGs: Indicators and their sources	Dr. Dipendra Raman Singh, Chief, PHAMED, MoH
08:50-09:05	Strengthening Health Management Information System (HMIS) in Nepal: A Move towards Measuring SDGs	Mr. Mukti Nath Khanal, Chief, HMIS, Management Division
09:05-09:15	Burden of Disease (BoD) Indicators in SDGs from the GBD estimates	Dr. Krishna Kumar Aryal, Chief, Research Section, NHRC
09:15-09:30	Discussion followed by Chairs' Remarks	
09:30-10:30	Panel Discussion on SDGs	
	Panelists <ul style="list-style-type: none"> • Dr. Kiran Regmi, Chief Specialist, MoH • Dr. Bal Gopal Baidya, Former NPC Member • Dr. Suman Aryal, Director General, Central Bureau of Statistics • Ms. Giulia Vallese, Country Rep, UNFPA/EDP Chair • Dr. Shiva Raj Adhikari, Associate Prof , Tribhuvan University 	Moderator: Mr. Sudip Pokhrel
10:30-11:00	Tea break	

11:00-13:00	Social Health Insurance in Nepal: Inception, Roll Out and Futur Directions	
11:00-11:15	Presentation 1: Social Health Insurance in Nepal: An Overview	Dr. Guna Raj Lohani, Executive Director, Social Health Security Development Committee
11:15-11:30	Presentation 2: Social Health Insurance in Nepal: Critical observation	Dr. Shiva Raj Adhikari, Asso Professor, Tribhuvan University
11:30-13:00	Panel Discussion: <ul style="list-style-type: none"> • Dr. Guna Raj Lohani, Executive Director, Social Health Security Development Committee • Dr. Shiva Raj Adhikari, Asso Professor, Tribhuvan University • Mr. Chiranjibi Chapagain, Chairman, Insurance Board, Nepal • Mr. Ashwini Kumar Thakur, Administrator, Rastriya Beema Sansthan • Ms. Franziska Fuerst, Senior Technical Advisor, GiZ-S2HSP 	
13:00-14:00	Lunch	
14:00-15:30	Informing health decision making in resource poor settings: Importance of Systematic Reviews and Evidence Synthesis (Workshop in collaboration with Cochrane South Asia)	Chairs: Prof. Sharad Raj Onta / Prof. Buddha Basnyat
	Presentation from NHRC - Cochrane Activities in Nepal: A Ways Forward , Binaya Chalise, Research Associate, NHRC Keynote Speakers: <ul style="list-style-type: none"> • Prof. Paul Garner, Co-ordinator, Evidence Synthesis for Global Health, Liverpool School of Tropical Medicine • Prof. Prathap Tharyan, Director, Cochrane South Asia, CMC Vellore, India 	Moderator: Dr. Krishna K Aryal

15:30-16:00	Tea break	
16:00-17:30	Medical Manuscript Writing: Are we on track?	<i>(Talk to the Editors - Panel Discussion)</i>
	<p>Panelists:</p> <ul style="list-style-type: none"> • Prof. Jay N Shah (President NAME, Editor JNHRC, Chief Editor JPAHS) • Prof. Ganesh Dangal (Editor JNHRC, Gen Sec NAME, Editor JNSOG) • Dr. Amit Joshi (Editor JNHRC, Executive Editor MJSBH) • Dr. Dipak Shrestha (Editor KUMJ) • Dr. Yogesh Neupane (Chief Editor, Nepalese Journal of ENT & Head & Neck Surgery) 	Moderator: Dr. Arun Neopane (Editor JNHRC & Editor in Chief JNPS)
Day II, 11 April 2017, Tuesday		
08:00-09:00	Registration/Breakfast	
09:00-11:00	Plenary Session I Chairs: Prof. Madan Prasad Upadhyay / Dr. Padam Bahadur Chand	
09:00-09:30	Functional Analysis of Health Services in Federal Context	Mr. Bhogendra Dotel, Chief, PPICD, MoH
09:30-09:50	Population Situation Analysis of Nepal in Relation to Population and Health Dynamics	Dr. Yagya Bahadur Karki, UNFPA
09:50-10:05	Harnessing Demographic Dividend: Adolescents and Youths, and the SDGs in Nepal	Mr. Pushkar Raj Silwal, GiZ-S2HSP
10:05-10:20	Quality of care in the context of SDGs in Nepal	Dr. Ashish KC, Child Health Specialist
10:20-10:35	Challenges and Innovative Concepts for Sustaining the Health Institutions and Organizations in Country Like Nepal	Dr. Anil Kumar Jha, Dermatologist, Venereologist and Leprologist

10:35-11:00	Discussion followed by Chairs Remarks			
11:00-11:45	Tea Break / Poster Presentation			
11:45-13:15	Parallel Session I: Non Communicable Diseases Chairs: Prof. Rajendra Koju / Prof. Sanjib Kumar Sharma		Parallel Session II: Nutrition, Maternal, Neonatal & Child Health Chairs: Prof. Ramesh Kant Adhikari/ Prof. Pushpa Chaudhary	
11:45-11:55	Barriers to treatment and control of hypertension among hypertensive participants: A community based cross-sectional mixed method study in municipalities of Kathmandu, Nepal	Dr. Raja Ram Dhungana	Dietary Diversity and Nutritional Status of Pregnant Women Attending Antenatal Care in Western Regional Hospital, Pokhara, Kaski, Nepal.	Mr. Nishant Lama
11:55-12:05	Prevalence of Hypertension and its Associated Risk Factors in Sub Urban Area of Central Nepal	Ms. Rashmi Devkota	Factors Affecting Health Seeking Behaviors for Common Childhood Illnesses among Rural Mothers in Chitwan	Ms. Dipa Sigdel
12:05-12:15	Total Cardiovascular Risk for Next 10 years Among Rural Population of Nepal using WHO/ISH Risk Prediction Chart	Dr. Mahesh Kumar Khanal	Group compared to Individual antenatal care: A cluster-controlled trial in rural Nepal	Mr. Poshan Thapa
12:15-12:25	Quality of Life in Patients with Chronic Obstructive Pulmonary Disease in Chitwan, Nepal: A Mixed Method Study	Assoc. Prof. Kalpana Sharma	Breast cancer in Nepal: A review	Mr. Biwesh Ojha
12:25-12:35	High time to zoom out the gaps: Under-recognized burden of elder mistreatment, community based, cross-sectional study from rural eastern Nepal	Mr. Uday Narayan Yadav	Status of Maternal & Perinatal Death Surveillance and Response Implementation in Nepal	Dr Pooja Pradhan

12:35-12:45	Non Communicable Diseases and Injury in Nepal: Present Context & Future Directions	Prof. Bhagawan Koirala	Maternal and Neonatal morbidity and mortality in Khotang, Taplejung, Panchthar and Tehrathum districts	Dr. Nastu Sharma
12:45-13:15	Discussion followed by Chairs Remarks			
13:15-14:15	Lunch			
14:15-15:45	Parallel Session III: Environmental & Occupational Health; Infectious & Tropical Diseases		Parallel Session IV: Mental Health	Chairs: Prof. Saroj Prasad Ojha/Mr. Mohammad Daud
14:15-14:25	Awareness of Occupational Hazards and Use of Safety Measures among Automobile Repair Artisans in Kathmandu Metropolitan City	Mr. Grish Paudel	Anxiety and depression in Nepal: Prevalence, comorbidity and associations	Dr. Ajay Risal
14:15-14:25	Awareness of Occupational Hazards and Use of Safety Measures among Automobile Repair Artisans in Kathmandu Metropolitan City	Mr. Grish Paudel	Anxiety and depression in Nepal: Prevalence, comorbidity and associations	Dr. Ajay Risal
14:25-14:35	Do immune disturbances caused by soil-transmitted helminth co-infection trigger leprosy reactions?	Ms. Ruby Thapa	Development, evaluation and scale up of a mental health care plan (MHCP) in Nepal	Mr. Nagendra Prasad Luitel
14:35-14:45	Factors associated with prevalent Hepatitis C and HIV/HCV co-infection among people who inject drug in Nepal	Dr. Sampurna Kakchapati	Developing a Scalable Training Model in Global Mental Health: Pilot Study of a Video-assisted Training Program for Generalist Clinicians in Rural Nepal	Ms. Pragya Rimal

14:45-14:55	Indoor pollution and respiratory health	Prof. Annalisa Cogo	Perception of service users and caregivers on mental health care services in Nepal	Ms. Ruja Pokhrel
14:55-15:05	Prevalence of Pulmonary Tuberculosis among Male Inmates in the Largest Prison of Eastern Nepal	Dr. Gambhir Shrestha	The prevalence of primary headache disorders in Nepal: a nationwide population-based study.	Mr. Kedar Manandhar
15:05-15:15	Study on Work-related Musculoskeletal Symptoms among Traffic Police in Kathmandu Valley	Dr. Leela Paudel	Treatment gap and barriers for mental health care: a cross sectional community survey in Nepal	Ms. Dristy Gurung
15:15-15:45	Chairs Remarks			
15:45-16:30	Tea Break / Poster Presentation			
16:30-18:00	Inaugural Session			
18:00-20:30	Reception Dinner with Cultural Programme			
Day III, 12 April 2017, Wednesday				
07:30-08:30	Breakfast			
08:30-10:30	Plenary Session 2 Chairs: Prof. Chop Lal Bhusal/Prof. Sitaram Chaudhary			
08:30-08:45	Urban Health Challenges in Nepal: Need for Health Promotion		Mr. Mahendra Shrestha, Chief, District Public Health Office, Kathmandu	
08:45-09:00	Need of Preventive Emergency Medicine in Nepal		Dr. Ramesh Kumar Maharjan, Associate Professor, IOM, Tribhuvan University	
09:00-09:15	Addressing the double burden of disease: improving health systems for Non communicable and Neglected Tropical Diseases		Prof. Nilambar Jha, BP Koirala Institute of Health Sciences	

09:15-09:30	Snake antivenom for Nepal - challenges and opportunities to secure critical supply of an essential drug	Dr. Ulrich Kuch, Head, Department of Tropical Medicine and Public Health, Goethe University, Germany	
09:30-09:45	Climate change and health in Nepal: SDG Perspective	Mr. Rajaram Pote Shrestha, National Professional Officer, WHO	
09:45-10:15	Discussion followed by Chairs Remarks		
10:15-11:00	Tea Break and Poster Presentation		
11:00-12:15	Parallel Session V: Health System Research Chairs: Dr. Laxmi Raj Pathak/ Dr. Baburam Marasini\	Parallel Session VI: Sexual & Reproductive Health, and Adolescent Health Chairs: Dr. Dibyashree Malla / Dr. Naresh Pratap KC	
11:00-11:10	An Assessment of Community-based Education in Institute of Medicine, Tribhuvan University, Kathmandu, Nepal	Mr. Bishnu Prasad Choulagai	Awareness of sexually transmitted infections and perceived barriers in seeking reproductive health services among youths in the Kathmandu valley Dr. Laxmi Tamang
11:10-11:20	An Operational research to increase compliance with medical abortion and enhance uptake	Ms. Pragya Gartoulla	Body Mass Index and Health Related Quality of Life among Adolescents in Government Schools of Pokhara Ms. Bidhya Banstola
11:20-11:30	On-site Clinical and Management Mentoring: An Approach to Improve Quality of Emergency Maternal and New born Care Services in Nepal	Ms. Tulasa Bharati	Fear of side-effects and pressures to have children influencing family planning use in Nepal Dr. Sharada Pd. Wasti
11:30-11:40	Antibiogram and Plasmid Profiling of Beta-Lactamases Producing Escherichia coli Isolated from UTI Suspected Pediatric Patients	Mr. Bimal Pradhan	Medical Abortion Drug Dispensing Practices of Private Sector Chemists in Nepal Ms. Sushma Rajbansi

11:40-11:50	Effect of support contacts on improving provider performance for safe abortion services	Dr. Suresh Mehata	Does coaching and visiting providers increase access to LARC in rural settings? Learning's from an evaluation of pilot intervention in Nepal	Ms. Shophika Regmi
11:50-12:00			Scoping Review and Preliminary Mapping of Menstrual Health and Management in Nepal	Dr. Lhamo Yangchen Sherpa
12:00-12:15	Discussion followed by Chairs Remarks			
12:15-12:45	Tea break			
12:45-14:00	Parallel Session VII: Health Care and Biomedical Research Chairs: Dr. Bhoj Raj Adhikari / Dr. Gentle Sunder Shrestha		Parallel Session VIII: Systematic Review Chairs: Dr. Mahesh Kumar Maskey / Prof. Bhagawan Koirala	
12:45-12:55	Awareness and Stigma Regarding Eye Donation among Community People living in Butwal-6, Laxminagar	Ms. Pratikshya Gautam	Challenges and Opportunities for Universal Health Coverage (UHC) in Nepal: systematic review	Dr. Chhabi Lal Ranabhat
12:55-13:05	Biofilm Production And Antimicrobial Resistance Among Uropathogens In Pediatric Cases: a Hospital Based Study	Mr. Dhiraj Shrestha	Factors Affecting Hospital Efficiency and Productivity: A Scoping Review	Mr. Pushkar Raj Silwal

13:05-13:15	RIPASA Score versus Alvarado Score to Diagnose Acute Appendicitis	Dr. Uttam Pachya	Interventions for improving quality of life of HIV infected people receiving antiretroviral therapy: a systematic review and meta-analysis	Dr. Dharma Nand Bhatta
13:15-13:25	Novel Gene Mutation and Altered Physiology Associated with the Vancomycin Resistance (AMR) Mechanism in Staphylococcus aureus.	Dr. Santosh Dulal	Nutrition interventions for children aged less than 5 years following natural disasters: a systematic review	Dr. Pranil Man Singh Pradhan
13:25-13:35	Informational Support, Anxiety and Satisfaction with Care among Family Caregivers of Patients Admitted in Critical Care Units of BPKIHS	Ms. Rosy Chaudhary	Supplies Disruption and Its Impact upon Health Sector in Nepal: Findings from a Media Monitoring Study	Mr. Sudeep Uprety
13:35-13:45	Association Between the Specific UGT1A1 promoter mutation, c. -3279T>G, and Gilbert's Syndrome in Nepalese Population	Mr. Balram Gautam	Evidence Synthesis and Systematic Review for Health Decision Making	Prof. Prathap Tharyan
13:45-14:00	Discussion followed by Chairs Remarks			
14:00-15:00	Lunch			
15:00-16:00	Award Presentations & Closing Session			
16:00-16:30	Tea			
16:30-17:30	Press Meet (Closed Session)			

Posters presented in the summit

Theme 1: Non-Communicable Diseases		
2.1.1	Cardiovascular risk factors and prediabetes condition in obese/overweight children in selected school of Lalitpur district	Dr. Achyut Raj Karki
2.1.3	Anthropometric Risk Factors Of Cardiovascular Disease In Adult Population Of Dharan Municipality, Eastern Nepal: Gender And Age Differences	Dr. Sandip Shah
2.1.4	Parental factors and children's body mass index: A cross-sectional study among primary level children in private schools of Kathmandu metropolitan city	Ms. Smriti Pant
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2.1.12	Knowledge regarding Rheumatic Heart Disease among Mothers of Ward 5 and 6 of Narayansthan VDC of Baglung District	Ms. Bizee Maharjan
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2.2.2	Junk food prevention education package intervention among students of Kageswori Manohara municipality, Kathmandu district, Nepal	Mr. Basanta Chalise
2.2.3	Nutritional status and anaemia among 6 -59 months children in Tharu community of Duruwa VDC, Dang	Mr. Basudev Bhattarai
2.2.4	Knowledge and practice of food hygiene among food handlers of private secondary school canteen In Kathmandu district	Mr. Bishwo Shrestha

2.2.5	Prevalence and pattern of anemia among women in Nepal: a population-based, multi-level modelling approach	Mr. Mausam Budhathoki
2.2.6	Nutritional status of disabled children in government's special school for disabled in Kathmandu District	Mr. Prabin Shrestha
2.2.7	Factors associated with infant feeding practices at Ratnanagar municipality in Chitwan district	Mr. Shankuk Bhatta
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2.3.6	Effect of exposure to petrol vapour on small and large pulmonary airways in petrol pump workers	Dr. Tapas Pramanik
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2.3.10	Knowledge and perception on the consequences of climate change and its adaptation measures among the people of Dhikurpokhari VDC of Kaski District	Mr. Rabindra Bhandari
2.3.11	Knowledge and practice on HIV/AIDS among barbers and beauticians of Kathmandu metropolitan city	Ms. Aachal Shrestha
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2.4.10	Help-seeking intention and its predictors among undergraduate students during emotional distress in Kathmandu district	Ms. Shristi Rijal

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2.5.16	Bacteriological profile of surgical site infection and their antimicrobial susceptibility pattern among pediatric patients	Mr. Prabin Karki
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2.5.18	Molecular characterization of ESBL producing Escherichia coli causing urinary tract infection	Mr. Roshan Pandit
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2.5.20	Comparison of rapid biochemical assay (leukocyte esterase and nitrate reductase) with culture for the diagnosis of UTI	Mr. Sumesh Shreekhanda Shrestha
2.5.21	Antifungal susceptibility testing of dermatophytes by agar based disk diffusion assay in tertiary care hospital in Nepal	Mr. Sundar Khadka
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