



## Second National Summit of Health and Population Scientists in Nepal

April 11-12, 2016, Kathmandu, Nepal

# Health and Population Research for Achieving Sustainable Development Goals in Nepal

## Proceedings Report

2016



Government of Nepal  
**Nepal Health Research Council**



**Second National Summit of Health and Population Scientists in Nepal**

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*'Health and Population Research for Achieving Sustainable Development Goals in Nepal'*

**Proceeding Report**

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## **Second National Summit of Health and Population Scientists in Nepal**

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## Acknowledgement

On the occasion of 25<sup>th</sup> anniversary of Nepal Health Research Council ( NHRC) , we are glad to organize the Second National Summit of Health and Population Scientists in Nepal with a theme '*Health and Population Research for Achieving Sustainable Development Goals in Nepal*' in the year 2016. The summit was held as a part of Silver Jubilee celebration and continuation to the initiation of such annual gathering from the year 2015.

We would like to express our sincere gratitude to the Government of Nepal, Ministry of Health for their support to host this annual event. We would also like to sincerely acknowledge the enormous contribution of Dr. Krishna P Adhikary, Chairman, NHRC and the chair of the steering committee and the members of the steering committee. Similarly, we would also like to express our gratitude to the scientific committee chair Prof Dr. Jeevan Bahadur Sherchand as well as the members of the scientific committee. We cannot keep ourselves behind to acknowledge the contribution of the NHRC family as the organizing committee members for their continuous effort to make this summit a grand success. Our sincere thanks goes to all the chairs of the scientific sessions, delegates, guests, volunteers and participants of the summit. We would like to express our gratitude to Rooster Logic Pvt Ltd for their support in conference management along with the IT support. We would also like to express our gratitude to all of those who have contributed from their part to make this summit a huge success.

We would like to express our sincere thanks to all our collaborating partners of the summit: WHO Country Office Nepal, GIZ Support to Health Sector Program Nepal, USAID/H4L Project, UNFPA, UNICEF, Save the Children, Ipas Nepal and CBM Nepal for their support to organize this event.

Last but not least, I would like to express my gratitude to all who were involved in this Second National Summit of Health and Population Scientists in Nepal and helped us to make our work successful. Without their support, the summit wouldn't have been possible.

**Dr Khem Bahadur Karki**

Member Secretary (Executive Chief)

Nepal Health Research Council

## Acronyms

BCC	Behavioral Change Communication
BCS	Behavioral Change Strategy
CRCT	Cluster Randomized Controlled Trails
EHR	Electronic Health Record
EWARS	Early Warning and Reporting System
HMIS	Health Management Information System
HRQL	Health Related Quality of Life
IOM	Institute of Medicine
MDG	Millennium Development Goals
MMR	Maternal Mortality Ratio
MoH	Ministry of Health
NCD	Non communicable Disease
NHRC	Nepal Health Research Council
OOP	Out of Pocket Expenditure
PHAMED	Public Health Administration Monitoring and Evaluation Division
S2HSP	Support to the Health Sector Program
SDG	Sustainable Development Goals
UHC	Universal Health Coverage
WHO	World Health Organization

## Executive Summary

On the occasion of 24th anniversary, Nepal Health Research Council (NHRC) started to organize an annual summit of health and population scientists in the year 2015. As a continuation of the Silver Jubilee celebration, NHRC organized the Second National Summit of the Health and Population Scientists in Nepal on 11<sup>th</sup>-12<sup>th</sup> April, 2016 with a theme of '*Health and Population Research for Achieving Sustainable Development Goals in Nepal*'. The summit was preceded by a pre-summit conference on '*Sustainable Development Goals: What Nepal should Aim for*' to discuss specifically on data needs for SDGs and research priorities for universal health coverage.

There were 57 oral presentations, including invited papers that were divided into 2 plenary sessions and 6 parallel sessions namely public health challenges, health systems research, reproductive and sexual health and rights, chronic diseases and health promotion, maternal, neonatal and child health and nutrition parallel session, environmental and occupational health, universal health coverage, emerging and re-emerging infectious diseases. The summit was participated by around 700 participants including health and population scientists of Nepal, executives and officers from Ministry of Health and other ministries, representatives from partner agencies, academicians, and graduates of different health sciences programs.

Health and population scientists were awarded with different categories of awards such as senior researcher award, young researcher award, best paper award (oral), best paper award (poster) and NHRC silver jubilee outstanding researcher award to motivate them to contribute in health research.

In the closing session, declaration of the summit was presented for approval from the participants. The session was concluded with the speech from the chair of scientific committee, chairman of Nepal Health Research Council, representatives from the Ministry of Health, partner agencies and participants.

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# 1. Background

The NHRC began to organize an annual summit of health and population scientists in the year 2015, date falling on its 24<sup>th</sup> anniversary. The main purpose for initiating an annual summit is to provide a platform to the health and population researchers in Nepal, especially the young and early career scientists to join hands towards strengthening evidence based informed decision making in Nepal.

This year, the Second National Summit of the Health and Population Scientists in Nepal was organized on 11<sup>th</sup>-12<sup>th</sup> April, 2016 as a continuum and part of the Silver Jubilee celebration with the theme of '*Health and Population Research for achieving Sustainable Development Goals in Nepal*'. Health and Population Scientists as a group can play vital role to promote evidence informed decision making process as it has been instrumental to achieve many of the goals of Millennium Development Goals (MDGs). Annual gathering and provision of platform for the scientists become phenomenal in sustaining the achievements of MDGs and to encourage achieving SDGs as unfinished agendas of the MDGs in the health sector.

The summit was preceded by pre-summit conference on '*Sustainable Development Goals: What Nepal should Aim for*' to discuss specifically on data needs for SDGs. On the same day, post lunch session was conducted with a theme '*Research Priorities on Universal Health Coverage*' that basically attempted to link health research to the Universal Health Coverage in Nepalese context.

## 1.1 Objectives of the Summit

- To bring health and population scientists together to promote evidence informed decision-making process for optimal health and wellbeing of Nepalese people
- To encourage health and population scientists and practitioners for responsible conduct of research on health and development
- To discourse and find out the way forward on emerging health and population agenda for strengthening national health system of Nepal for achieving SDGs.

## 1.2 Sessions

There were 57 oral presentations that were organized into 2 plenary sessions and 6 parallel sessions as listed below:

1. Plenary Session 1: Public Health Challenges
2. Parallel Session 1: Health Systems Research, Reproductive and Sexual Health and Rights
3. Parallel Session 2: Chronic Diseases and Health Promotion
4. Plenary Session 2: Emerging Issues in Health and Way Forward
5. Parallel Session 3: Maternal, Neonatal and Child Health and Nutrition Session
6. Parallel session 4: Environmental and Occupational Health
7. Parallel Session 5: Universal Health Coverage
8. Parallel Session 6: Emerging and Re-Emerging Infectious Diseases

## 1.3 Participants

There were around 700 participants, including health and population scientists, executives and officers of Ministry of Health, graduates and students of various health sciences programs in Nepal.

## 2. Pre-summit Conference

### 2.1 Press Meet

Press Meet was organized before the pre-summit conference. **Dr. Khem B Karki**, Member Secretary of Nepal Health Research Council (NHRC) briefly presented the highlights about the Summit to the representatives from different media houses and participants of the conference. In press meet, Dr. Karki focused the achievement of the first national summit of health and population scientists held on 2015 and briefed about the technical details of the summit. **Prof. Dr. Jeeven Bahadur Serchand**, Chairman of the Scientific Committee, said that it was difficult to select few papers from a large number of good quality papers received by the scientific committee of summit. **Dr. Krishna P Adhikary**, Chairman of NHRC, shared about the activities of the Council. Highlighting the need of a unified information system for evidence informed decision making in Nepal, Dr. Adhikary stated that the council is committed to strive for the same.

### 2.2 Technical sessions

Technical sessions in pre-summit conference were organized into two sessions on Sustainable Development Goals (SDGs) and Universal Health Coverage(UHC) . Session on SDGs was followed by panel discussion focused on role of different sectors on SDGs and ways forward in context of Nepal.

#### 2.2.1 Prelunch Session: Sustainable Development Goals: What Nepal should Aim for

Objective of the prelunch session was to have discourse on SDGs in Nepalese context, identify challenges of SDGs in its implementation and finding solutions and institutionalizing the achievements of Millennium Development Goals. Pre-lunch session on '*Sustainable Development Goals: What Nepal should aim for*' was chaired by:

1. Dr. Jagadish Chandra Pokharel, Former Vice Chair of National Planning Commission
2. Dr. Yagya Bahadur Karki, Former Member (Social Sector) of National Planning Commission

There were 3 presentations on pre-lunch session from senior executives of Government of Nepal representing National Planning Commission and Ministry of Health.

In the first presentation, Honorable Vice Chair of the National Planning Commission (NPC) **Dr. Yuba Raj Khatiwada** summarized about what NPC is doing to meet the targets of SDGs and how 3 goals- 4, 5 and 6, shifted to cover goal 3 in SDGs. According to Dr. Khatiwada, health comes before education getting priority after poverty and malnutrition in Sustainable Development Goals. He presented SDGs as encompassing and ambitious goals. Reviewing a progress on MDGs, Dr. Khatiwada focused previously hidden issues like reproductive health which has been addressed by SDGs. Service includes not only quantity but also quality, so providing service need to address these issues. He also highlighted how working on other goals help to achieve health goals. He also highlighted intra-household differences in resource distribution, food distribution etc. beyond community differences.



In his presentation that focused on Sustainable Development Goals for transformation of Nepal, **Dr. Giridhari Sharma**, consultant, NPC mentioned that SDGs was in discussion since two decades. He highlighted that the number of indicators changed to 239 from 229. According to Dr. Sharma, 1,2,4,5,6,7,10 and 11 complement health. Among 13 targets, he stated that some have been quantified whereas most of others have not been quantified by UN and need to be country specific. He presented comprehensive summary on different indicators. He also highlighted a need to promote medical research.

Presenting SDGs as an ambitious goals, Dr. Sharma expressed that goals are resource intensive and need additional resources. Since the goals are interlinked, achievement or failure in achievement of some goals influences the achievement of other goals. Highlighting lack of baseline data as challenge for implementation of SDG, Dr. Sharma stressed on the need of mainstreaming SDGs in national planning and budgeting process. Dr. Sharma also prioritized on the need of synergistic efforts in achievement of SDGs. Also localization and contextualization of Sustainable Development Goals with consideration of the federal structure as envisioned in constitution of Nepal was cited as another major challenge by Dr. Sharma. Increasing employment rates and income, overcoming social challenges like gender equity and malnutrition, governance were some of other difficulties foreseen by Dr. Sharma in implementation of SDGs in Nepal.

नेपालको रूपान्तरणको लागि दिगो  
विकास लक्ष्यहरू (२०१६-२०३०) स्वास्थ्य  
तथा जनसंख्या वैज्ञानिकहरूको  
दश्रो राष्ट्रिय सम्मेलन

१०-१२ अप्रिल २०१६  
काठमाडौं, नेपाल

Presentation by **Dr. Padam Bahadur Chand**, Chief Specialist of Ministry of Health focused on Sustainable Development Goals 3, its inter-linkages and national situation. Dr. Chand, in his presentation, stated that achieving SDGs is not possible if we work in slow pace. SDGs is not achievable by efforts of health sector only, for e.g. RTA needs quality roads. He also talked about how health sector strategy addressed or

## Sustainable Development Goal 3 and its interlinkages and National Context

**Dr. Padam Bahadur Chand**  
Chief Specialist, MoH

aligned with SDGs. He opined that planning from Kathmandu (central level) might not be effective for betterment of health sector in Mugu. He stated that we have not been able to implement health in act policy but striving for it. Dr. Chand highlighted major sectors in SDGs and how health sector strategies have addressed these diseases. According to Dr. Chand, no targets can be achieved without progressing the other and the Goal 3 itself demands inter-sectoral coordination between different areas like HIV AIDS and waterborne diseases and other communicable diseases, non communicable disease, substance use including narcotics, injuries and violence and early warning, risk reduction and management of national and global health risks.

According to Dr. Chand, attainment of SDGs demands integrated approach, multi-sectorial involvement – focusing on sustainable national health development, decentralization of planning and budgeting, addressing local needs, public and private partnership while strengthening regulatory and stewardship capacity, better evidence in decision making and regular monitoring progress.

The third presentation of the session was made by **Dr. GD Thakur**, Chief of Public Health Administration, Monitoring and Evaluation Division of Ministry of Health, presented on '*Sustainable Development Goals (SDGs) Health Data Requirements: Current Situation, Gaps and Challenges*'. Dr. Thakur stressed health as a precondition for and outcome of policies to promote sustainable development. Result framework, midterm review and regular performance review were pointed out by Dr. Thakur as three tools to monitor health sector performance. He also encouraged other to work at micro-level

### Sustainable Development Goals (SDGs) Health Data Requirements: Current Situation, Gaps & Challenges



Ministry of Health  
Public Health Administration, Monitoring &  
Evaluation Division

**Dr. G D Thakur**  
Chief, PHAMED, MoH

for equity and shared his idea that equity is addressed by designing targeted interventions.

Talking about data gaps, Dr. Thakur shared about the low coverage of birth and death registration system and low coverage of service statistics from tertiary level public hospitals and private health facilities in Health Management Information System (HMIS). Dr. Thakur also said that disaggregation of data is needed for monitoring equity of the SDGs indicators. National capacity building for research and surveys, strengthening of routine information systems with better data quality and strengthening of surveillances – e.g., MPDSR, EWARS were among key challenges foreseen by Dr. Thakur in implementation of SDGs in Nepal. Dr. Thakur recommended alignment of routine MISs and surveys for effective monitoring of SDGs and NHSS indicators, improvement of quality, availability and use of data, formulation of policy briefs from national level surveys and research, development M&E plan for NHSS 2015-2020 and SDG, institutionalize e-recording and reporting including Electronic Health Record (EHR) and develop inter operability among data sources and establish Central databank and web-portal as key strategies for achievement of SDGs.

**Dr. Yagya Bahadur Karki**, the chair of the session, highlighted main issues raised by presenters after completion of presentations.

In discussion following presentations, participants showed their serious concern on need to address NCDs, equity, diverse micro level issues on environment health. **Dr. Rita Thapa**, Public Health Expert, stressed on the need to focus on non communicable disease control as the control could be quite expensive when the disease is already diagnosed. **Dr. Suresh Mehata**, Research advisor Ipass Nepal expressed his view over the differences on health indicators at grassroots level although the country is progressing in general in most of health related indicators. Answering to concern raised by Dr. Mehata, **Dr. Yuba Raj Khatiwada** highlighted a need of disaggregated data and shared that there is plan to address such issues. He also highlighted a need to move to sub-national level, federal and local level for equity and decentralized planning. Although SDGs is resource intensive, he highlighted that partnership refers shared responsibility. **Prof. Dr. Madhu Dixit Devkota**, IOM opined that the SDGs are resource intensive and raised concern over the plan from government sector to address that. Answering to the concern, **Dr. Padam Bahadur Chand** highlighted NCDs, communicable disease, and disaster as triple burden. According to Dr. Chand, balancing limited resource to unlimited need is a major challenge. He showed his concern on universal health coverage as a tool for SDGs and pointed out the need for health sector decentralization.

**Dr. Jagadish Chandra Pokharel**, the chair of the session, stressed for localization of SDGs. Dr. Pokharel opined that MDGs could not be localized where as SDGs need to be translated to comply with the local context.

### 2.2.2 Panel Discussion

The prelunch session on Sustainable Development Goals was followed by panel discussions that highly distinguished delegates including government executives, academicians, researchers, representatives of partner agencies as panelist. The panel discussion was moderated by **Prof. Dr. Madhu Dixit Devkota**, Head of Department of Community Medicine and Public Health, IOM.

#### List of panelists was as follows:

- Dr. Pushpa Chaudhary, Director General, Department of Health Services, Ministry of Health
- Dr. Iqbal Anwar, icddr,b Bangladesh
- Dr. Ashish KC, Child Health Specialist, UNICEF
- Prof. Dr. Sharad Onta, Assistant Dean, Institute of Medicine, Tribhuvan University
- Dr. Yagya Bahadur Karki, Former NPC Member
- Dr. Khem B Karki, Member Secretary, Nepal Health Research Council
- Dr. Paul Rueckert, Chief Technical Advisor, S2HSP GIZ
- Dr. Shiva Raj Adhikari, Health Economist
- Dr. Akjemal Magtymova, Technical Officer, WHO Country Office Nepal
- Dr. Manav Bhattarai, Health Specialist, World Bank

Sharing on the concept of *Health for All*, **Dr. Pushpa Chaudhary** opined that basic health services come under the responsibility of the State. According to Dr. Chaudhary, people evaluate presence of the government based on the services they received and may not understand in reality what Sustainable Development Goals or Millennium Development Goals actually mean. Sharing about the health service delivery system of Nepal, Dr. Chaudhary attempted to make it clear how it links with attainment of SDGs and MDGs in Nepal. She highlighted learnings from MDGs as strengths and stated that all health goals were achieved. She said that health relates to life and it might not translate to the concept of value for money.

**Dr. Iqbal Anwar** from Bangladesh talked about how developing countries can achieve SDGs. He shared on how maternal health strategies shifted since 1987 to reach a health facility. According to Dr. Anwar, lack of skilled human resource is still a challenge in the implementation of health programs. Indicating the need of regulation and systematic management, Dr. Anwar also raised concern over the mushrooming a number of private health institutions. He highlighted money and management as key challenges for achieving SDGs.

**Dr. Ashish KC** highlighted the need of evidence based policy formulation in relation to achievement of Sustainable Development Goals in Nepal. According to Dr. KC, with technical

and financial support of donor and partner agencies, and coordinated efforts in health sector, we have been successful in the sector like safe motherhood and child health services. Services are yet to reach the most vulnerable and marginalized population. Although we have information on what works, we lack information on how it works. Stating that we have resource constraints and have never understood local market barrier, Dr. KC realized the need of consideration of contextual factors in implementation of health programs.

**Prof. Dr. Sharad Onta** highlighted the role of academic institution on achievement on SDGs. According to him there can be multiple roles of academic institutions ranging from production of different categories of health personnel to providing evidence based suggestion for policy formulator and implements. Human resource need to be produced in coordination with demand. Raising concern over the quality of human resource produced, Dr. Onta concluded that quality depends on curriculum and teaching practices of academic institutions as health personnel in market come from multiple countries with diverse curriculums. Although some projections can be made on demand of human resource in the government health institutions, doing so in private health facilities is problematic.

**Dr. Yagya Bahadur Karki** presented on policy environment for implementation of SDGs in Nepal. Highlighted that health policy and population policy were implemented before SDGs and need some revision to accommodate issues raised in sustainable development goals in Nepal. He highlighted challenges in reducing MMR <70 and early age death to zero. He opined that upcoming policies need to be based and will be based on sustainable development goals.

**Dr. Khem B Karki** shared about the role of research for SDGs. Highlighting need of evidence for informed decision making, Dr. Karki stressed on responsible conduct of research. Sharing about the challenges Dr. Karki pointed that grassroots level health workers reporting data in routine health information system should be credible for assuring quality of data. Dr. Karki opined that Nepal Health Research Council can play pivotal role in it.

**Dr. Paul Rueckert** talked about improved information technology and communication in SDGs. He expressed commitment to provide technical expertise needed for development of information technology and communication in achieving SDGs in Nepal. He opined that SDGs provide opportunity to switch to information technology. He opined that indicators may require not only annual but monthly or daily review. Talking about on e-health strategy, he raised concern on its implementation.

**Dr. Shiva Raj Adhikari** talked about social protection and security and its role in SDGs. He pointed out that it's not only collection but fund raising is equally important. According to Dr. Adhikari, we have few options for fund collection. He opined that improving efficiency through inter-linkage of different sector is needed.

**Dr. Akjemal Magtymova** shared about technical assistance of donor agencies and partners

to Nepal in context of SDGs. She shared that in 2002, there was competition among partners/donors but later attempts were made for effectiveness and harmonization. She also recalled about the Paris Declaration about aid effectiveness and pointed out that that focuses on multi-sectorality and opined that health is everybody's business.

**Dr. Manav Bhattarai**, talked about how harmonization can be achieved and duplication can be reduced by increasing the efficiency of the use or limited resources. Pointing out that 25% budget comes from donor and partner organizations, he opined that we may need to be dependent on donor in future too. He pointed that decision making process need to be state owned. According to Dr. Bhattarai working for SDGs is daunting task. He also highlighted the need of holistic approach in health program integrating and harmonizing the efforts of different sectors and organizations. He opined for need of more resources to meet the target of SDGs but the fiscal space is very narrow.

In the discussion session following panel discussion, **Dr. Rita Thapa**, Public Health Expert, sharing about her experience while working for integration of maternal and child health services, highlighted the challenges faced in earlier days while integrating health services. Presenting Female Community Health Volunteer program as one of the successful program, she urged for appropriate strategy formulation and implementation to achieve SDGs in Nepal.

**Dr. Buddha Basnyat**, Vice Chairman of NHRC, opined that implementation of UHC should be started from earthquake affected districts and questioned why it has not been done. Dr. Ashish KC informed that earthquake affected districts have been prioritized for implementing UHC.

**Dr. Pushpa Chaudhary** presented optimistic picture of health service delivery in Nepal. According to Dr. Chaudhary, basic health services have now been defined in a better way. She stated that insurance scheme stagnated for decades are now in progress at least in some districts.

**Mr. Raj Kumar Mahato** questioned how marginalized community can be reached if resource is allocated at central level. Answering to this question, **Dr. Manav Bhattarai** said that decentralization and federal structure will mobilize resource to the local level.

**Dr. B.D. Chataut** shared that a lot of resource flow has been allocated for earthquake victims. He opined that co-ordination through MOF, NPC or prime ministries could be the better options.

**Dr. Mahesh Puri** talked about accountability and questioned how we can make accountable system. Answering to Dr. Puri, Dr. Pushpa Chaudhary opined that system is reflection of society and every single person need to be accountable.

**Dr. Akjemal Magtymova** opined that donor agencies have their own mandate that is evolving over years and stated that World Health Organization (WHO) does not want to impose its priorities.

Answering to question on whether the policy need to be based on evidence or experience, **Dr. Khem B Karki** opined that decisions are not practical. He pointed out that at least 2% of health budget should be allocated for conducting health research.

Answering to question concern raised by **Mr. Baburam Acharya** on decreasing grants from international community, **Dr. Shiva Adhikari** opined that we need sustainable plan and sustainable resource for sustainable development. According to Dr. Adhikari government capacity need to be extended.

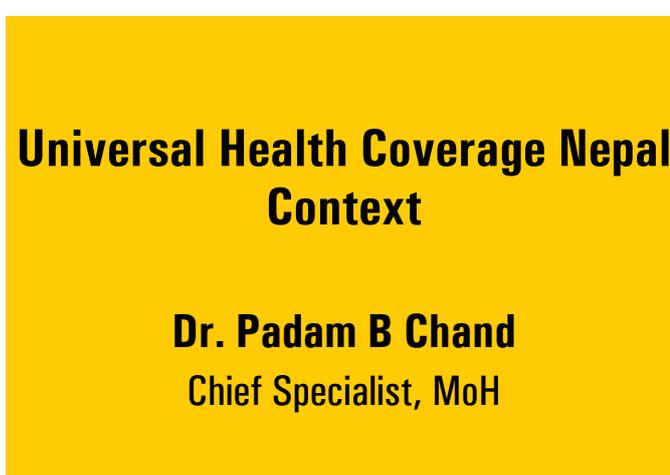
### 2.2.3 Post-lunch Session: Universal Health Coverage Session

The post lunch included three presentations on universal health coverage. The session was moderated by **Dr. Khem B Karki**, Member Secretary, NHRC

The first presentation in post-lunch session on universal health coverage, was made by **Dr. Atul Dahal**, National Professional Officer, WHO presenting on behalf of WHO representative **Dr. Akjemal Magtymova**, opined that

WHO *World Health Report 2010* laid foundation to UHC and shared that MDGs brought about many success but was targeted intervention. Pointing out on recent knowledge updates, he said that we have learnt about medical impoverishment, catastrophic expenditure and these need to be addressed. Dr. Atul pointed out that UHC is a tool for SDGs and can address these issues.

**Dr. Padam B Chand**, Chief Specialist, MoH talked about Nepal's coverage and progress towards UHC. He opined that UHC means highest attainable standard of health without financial hardship. Dr. Chand pointed that UHC is not an end as previously supposed, and presented as a tool that permits prioritization he presented diversity as greatest challenge. He also pointed out that health is not the domain of country and need multi country collaboration.



**Dr. Shiva Raj Adhikari**, Health Economist, presented UHC from two perspective as an end and means. According to Dr. Adhikari, Universal health coverage (UHC) involves adequate access to quality healthcare, equitable access to quality healthcare and financial risk protection. According to him, Universal Health Coverage indicators should allow for continuous assessment of progress in all settings and should

## Research Priorities on Universal Health Coverage

Dr. Shiva Raj Adhikari

reflect the wide range of outputs and populations that a health system is concerned with. He opined that they must be independent of health system design and valid across all health systems and contexts. Sharing that some people have deeper coverage of health services than other, Dr. Adhikari shared his understanding that UHC is also all about extending coverage to 'uncovered' groups. Dr. Adhikari emphasized population coverage, service coverage, and financial coverage as three important indicators of coverage. He also pointed out risk of misuse of indicators. He presented research priorities based on different level with reference to *Tanahashi* model.

In discussion session following the presentation, **Prof. Madhusudan Subedi** pointed out need to go beyond number to qualitative research for better reaching to marginalized population.

**Mr. Arjun Thapa** opined that recent data on household expenditure on health has raised question on effectiveness of free health care.

As a moderator, **Dr. Khem B Karki** summarized the key points in presentations.

### 3. Inaugural Session

In the inaugural session, **Dr. Khem B Karki**, Member Secretary of NHRC welcomed participants to the summit on behalf of Nepal Health Research Council. Dr. Karki highlighted how NHRC worked despite resource constraint. He presented the figures about the numbers of scientist trained, research ethically cleared from the council, and research conducted by the council itself to reflect the development process of research activities in Nepal. According to Dr. Karki, Nepal has not been able to allocate 2% of health budget to health research despite its commitment in international conventions.

**Dr. Senendra Raj Upreti**, Acting Secretary of Ministry of Health, accepted the fact that there is insufficient resources in the health research and expressed his commitment for increasing the allocation of the budget. Dr. Upreti highly appreciated the work of Council that has been carried out despite resources constraints. He also highlighted the need of evidence in decision making process and requested to share the result of the summit with the Ministry of Health.

**Honorable Dr. Yuba Raj Khatiwada**, Vice Chair of National Planning Commission, in his speech highlighted the need of evidence and requested to provide evidence in cost effective intervention. According to Dr. Khatiwada, it would be of interest in planning process to know what works for a better outcome. Expressing his concern about catastrophic health expenditure due to some unexpected diseases or health conditions, he opined that people should not be pushed below poverty line due to health expenditure. He also opined that community based organizations, cooperatives and other organizations too, need to work for better result in health sector. Pointing towards hospitals with research centers in their name, he opined that research firms should conduct the research responsibly. He also expressed his commitment and desire to work together in the sector of public health, population management with concerned stakeholders. He ended his speech wishing for the success of the summit.

**Honorable Health Minister Mr. Ram Janam Chaudhary** expressed his understanding that there is a huge scope of health research in the health sector and said that the researches has become more crucial than in the past. He shared his experiences of his visit to other countries where animal are provided with antibiotic and growth hormones. He also highlighted the need of research in quality of food product. He opined that NHRC should collaborate with NARC for such research activities. He stressed on the need to encourage and motivate young scientists in health research. During the budget formulation process, he expressed his commitment to discuss on about allocation of resources to health research and wanted this information to flow to NPC through the member present as speaker in the summit. He also requested to share the outcomes of summit with Ministry of Health.

**Dr. Mrigendra Raj Pandey**, Emeritus Chairman, NHRC, was honored with the certificate of Emeritus Chairman of the Council by the **Right Honorable President Bidya Devi Bhandari**. At the mean time, **Dr. Buddha Basnyat**, Vice Chairman, NHRC, presented the souvenir of NHRC to the President.

### **Right Honorable President Bidya Devi Bhandari**

Right Honorable President raised her concern on equitable access to health services and shared that constitution has such provision. According to the President, there are special provisions for women and children related to the health services. She appreciated the role played by NHRC in development and regulation of health research activities in Nepal since its establishment. Raising concern about the accessibility of services in remote areas, she opined that we need to be careful to improve accessibility in remote areas. She said that NHRC should be more active for prevention of diseases. Sharing her understanding about the effectiveness of traditional medical practices of Nepal and herbal medicine, she highlighted for conducting scientific study in such field to establish them in international community. She also suggested working at optimum level for knowledge generation within the country. Highlighting about visiting abroad for simple to complicated health treatment, she opined that it should come to end. Even though MMR is improving in the country, many women are still dying in rural areas due to lack of access to basic health services. She also expressed her concern on expensive health services and requested to work on that as well. She requested to contribute to sustainable development through research activities.

**Dr. Krishna PAdhikary**, Chairperson of NHRC, appreciative the participation of all participants for their presence in the program and concluded the inaugural session.



## 4. Plenary and Parallel Sessions

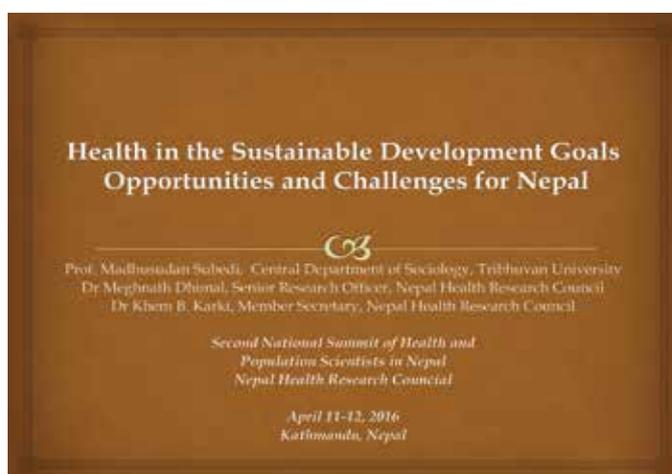
### 4.1 Plenary Session 1: Public Health Challenges

The second day of the summit began with plenary session in which distinguished personalities of health system in Nepal shared their ideas and understanding on the theme of '*Public Health challenges in Nepal*'. There were six presentations in the session.

The session was chaired jointly by:

- **Dr. Senendra Raj Upreti**, Acting Secretary of Ministry of Health.
- **Prof. Dr. Pradeep Vaidya**, Professor of IOM

The first presentation of the session was made by **Prof. Madhusudan Subedi**, Central Department of Sociology, TU. He briefed about the summary of the activities of the pre-summit conference which was followed by presentation on opportunities and challenges for Nepal in achieving sustainable development goals. According to Prof. Subedi, economic growth, social inclusion and environmental sustainability were three



key interrelated elements of sustainable development. Prof. Subedi also presented about people, prosperity, peace, partnership and planet as five areas of critical importance for SDGs. He highlighted the disparity and lack of access to health services in Nepal. He said that material living conditions, quality of life, expansion of international cooperation, bringing about policy and institutional coherence and multi-stakeholder partnership as key challenges in context of Nepal. Greater degree of coordination, more focus on illness prevention and promotion of wellbeing, putting people rather than disease in centre and operational approach were foreseen by Prof. Subedi as way forward for achieving SDGs in Nepal.

Sharing an example of how children playing outside moved inside house to hide during earthquake, **Dr. Karki** highlighted how message developed at international level may not be applicable in to the Nepalese Context. With the example from Haiti earthquake, Dr. Karki highlighted the importance of registration system and quality monitoring. According to Dr. Karki, April earthquake was Nepal's first experience in responding to a major disaster in eight decades coordinating multiple foreign medical teams and other international volunteers.

Presenting findings from mixed method research on effectiveness of foreign medical teams' response in post earthquake scenario, Dr. Karki presented about the type of injuries, mechanism of injuries and service provided from health facilities. Lack of adequate preplanning, overloading of health facilities, and damage of health facilities causing inadequacy of space were major challenges faced by health workers in

dealing with post earthquake health problems. Language barrier was the most common problem faced while working with foreign medical team according to foreign health workers. Regular coordination meeting that facilitated the harmonized response of different medical teams was the major strength in the government's response to post earthquake scenario.

Answering the question of **Dr. BD Chataut's** concern on dual registration of foreign medical team in MOHP and WHO, Dr. Karki shared that some team had directly approached WHO before MOHP and later got registered. He opined that through registration system, it was possible to check the potential of foreign medical team and assign appropriate task to them.

While dealing about community development for day to day emergency to disaster response in Nepal, **Dr. Ramesh Maharjan**, Associate Professor, IOM, in third presentation of the session shared that traditional practices which are not scientific are also being practiced in Nepal which are often not practical as well. According to Dr. Maharjan, Nepal is a disaster prone country with geographical difficulties to make ideal

system of Emergency Healthcare System to face day to day emergency healthcare to disaster. According to Dr. Maharjan, despite difficulties willingness of the community people can change challenges. Sharing findings from an ongoing study in earthquake affected 15 districts of Nepal which involved training community people with advanced First Aid Training, Dr. Maharjan summarized that is a great challenge to train community lay person to be Community First Aider who can tackle day to day emergency to disaster in their community.

## Foreign Medical Team's Response in Nepal Earthquake 2015

**Dr. Khem B Karki**  
Nepal Health Council



In the fourth presentation of the session **Dr. Alvaro Alonso-Garbayo**, focused on improving Health Workforce Performance through Action Research. Dr. Alonso-Garbayo highlighted health workforce as central element of health system since achieving all health related targets are dependent on strong workforce. Since the context in which interventions are to be launched vary from one place to another, Dr. Alonso Garbayo



opined that it should be based on local evidences. Through appropriate management, action research strengthens the health workforce. Dr. Alonso- Garbayo also shared that infant mortality rate, maternal mortality ratio and child mortality ratio decreased when the density of health workforce per population increased. Highlighting the deficit of health personnel, Dr. Alonso-Garbayo pointed out that Nepal has only 11.2 health personnel for 10,000 populations where as the international standard is 23. Availability, accessibility, acceptability, service utilization and quality are highlighted as major factors under effective coverage.

Answering to **Mr. Pratik Khanal's**, student of MPH, IOM , question on the problem faced and action taken in other countries that Nepal could learn from, Dr. Alonso-Garbayo shared about how staffs absenteeism was tackled through attendance book and uninformed supervision visit.

Highlighting the importance of evidence translation, **Dr. Meghnath Dhimal** expressed his opinion that knowledge derived from research may not be useful unless it is put into practice and discussed about the gap between evidence and practices. Qualitative study that involved key informant interview of policy makers and researchers had identified generation of new information, addressing practical challenges, forming base for policy or



guideline and catering the interest of donor were the reasons for doing research. Stakeholders/ experts consultation was identified as measures used by policy makers to pull evidences while organization of workshop was identified as most common exchange effort. Instability in leadership, limited opportunity of contact and negotiation between researchers and policy makers and poor research reading culture were highlighted as key challenges.

In the discussion session following presentation, **Mr. Ram Charitra Shah**, CEPHED shared about difficulties that he faced while attempting to translate his findings on lead into program and policies.

In context where low birth weight (< 2500 g) is affecting many newborns in South Asia and compromises child survival, infant growth, educational performance and economic prospects, **Dr. DS Manandhar**, President, Mother and Infant Research Activities shared the results of cluster randomized controlled trial (cRCT) that assessed the impact on birth weight and child weight-for-age Z-score of an enhanced nutrition



behavior change strategy (BCS) for pregnant women through women's groups, with and without unconditional transfers of food or cash. Only the 78g increase in the BCS plus food arm was significant compared with control. When the children were followed up at average age of 9 months study found no significant differences in child Z-scores for weight-for-age, height-for-age and weight-for-length, postnatal maternal Body Mass Index and Mid-Upper Arm Circumference, complementary feeding behavior, child morbidity or gestational age at birth.

## 4.2 Parallel Session 1: Health Systems Research, Reproductive and Sexual Health and Rights

Total of eight papers were presented in first parallel session on health system research, reproductive and sexual health and rights. Presentations covered diverse issues in health like maternal health, HIV and AIDS, contraception and safe abortion services, tuberculosis, anemia etc. Equity and efficiency also emerged as theme in some presentations. Methodology used for research paper used in this session was also diverse where qualitative as well as quantitative studies including cross-sectional studies, longitudinal studies and quasi experimental studies were used. The session was jointly chaired by:

- **Dr. Kiran Regmi**, Chief Specialist ,Ministry of Health.
- **Prof. Dr. Ram Sharan Pathak**,Professor, Department of Population Studies , TU

As an invited speaker of the session, **Dr. Meera Thapa Upadhyay**, WHO, Country office Nepal, in her presentation on '*Maternal Death Surveillance and Response: Technical Guidance and Information for Action to Prevent Maternal Deaths Information for Action to Prevent Maternal Death*' discussed about progress in reduction of maternal mortality ratio, level and

causes of maternal mortality, progress in implementation of maternal death surveillance and response. She opined that bureaucratic barriers make health service difficult to obtain. Gradual scaling up to 75 districts and strengthening of MPDSR were ways forward seen by Dr. Upadhyay.

## Maternal Death Surveillance and Response: Technical Guidance and Information for Action to Prevent Maternal Deaths

Dr. Meera Thapa Upadhyay  
WHO Nepal



A wide range of biological, economic, and socio-cultural factors have increase vulnerability of women to HIV infections. In this context, **Mr. Uddhav Sigdel**, Lecturer, TU, presented research paper on '*Factors affecting women's HIV/AIDS behaviors in Nepal*'. The paper was based on analysis of NDHS, 2011 and qualitative data with 31 in-depth interviews. Language, IPV and media exposure factors were affected in condom use with most recent partner. Based on findings from quantitative and qualitative data, Mr. Sigdel shared his conclusion that the strategic approach to HIV/AIDS risk reduction among general population via HIV prevention of high-risk group is not adequate to address the safe sexual behaviors of women. There is essential need to revisit and review policy, strategy and programs for general women.

## Factors Affecting Women's HIV/AIDS Behaviours in Nepal

**Uddhav Sigdel**

Lecturer, T.U. and Ph.D. Scholar

Answering to question of **Mr. Achyut Acharya**, on whether study considered individuals with single partners as HIV is also seen among them, Mr. Sigdel opined that as condom use in most recent sex was included in study covers those having single partners as well.

Sharing findings from study involving data from both the qualitative and quantitative techniques, **Mr. Parash Prasad Phuyal**, shared that Client-Oriented, Provider-Efficient( COPE) was found effective in encouraging health facility staff to find their own solution by mobilizing the local resources

“Client-Oriented, Provider-Efficient”  
(COPE)  
approach in improving quality of care  
of safe abortion service

Parash Prasad Phuyal<sup>1</sup>, Mukta Shah<sup>1</sup>, Deeb Shrestha Dangol<sup>1</sup>, Ram Bahadur Shrestha<sup>2</sup>, Dirgha Raj Shrestha<sup>1</sup>, Suresh Mehata<sup>1</sup>

<sup>1</sup>Ipas Nepal  
<sup>2</sup>SOLID Nepal

11 April 2016



thus bringing changes that lead to betterment in facility infrastructure, infection prevention practices, commodity supply and overall management of Safe Abortion Service. However, according to Mr. Phuyal, major challenge remains in ensuring continuous effort and ownership from health care staff to sustain the practice over a long run. Answering to question of **Mr. Achyut Acharya**, on whether the study addressed perspective of clients, Mr. Phuyal shared that the study had covered clients' perspective and 90% were satisfied.

In fourth presentation of the session, **Dr. Suresh Mehata**, opined that post-abortion contraceptives play a vital role in preventing unintended pregnancies providing counseling and contraceptives as per client's choices is important part of comprehensive abortion care. Study had revealed that Post-abortion Long Acting Reversible Contraceptive (LARC) use was lower among clients residing in Mountain districts, Muslims, clients who received services at primary level health facilities, clients who received PAC services, clients undergoing medical procedures and second trimester abortion clients. This study use client's data collected from July 2011 to December 2015 from 393 health facilities of 31 districts. The study involved the use log book data and was based on 63,804 clients who had had abortion services during the period in order to assess prevalence and distribution of LARC use.

**Ms. Binjwala Shrestha**, Assistant Professor, IOM, TU, shared findings on Knowledge on uterine prolapsed among married women of reproductive age Nepal from a cross-sectional descriptive study in 25 districts involving 4,693 married women aged 15–49 years. According to Ms. Shrestha, the knowledge related with urban/rural setting, age group, and education level, whereas satisfactory

### *Health Seeking in Tuberculosis: a frustrating undertaking in rural Nepal*

*Assoc. Prof. Ulla- Britt Engelbrektsson, University  
of Gothenburg, Sweden  
Prof. Madhusudan Subedi, Central Department  
of Sociology, Tribhuvan University, Nepal*

### **Post-abortion Long Acting Reversible Contraceptive (LARC) use in Nepal: trend and determinants**

Suresh Mehata  
Deeb Shrestha Dangol  
Meena Shrestha  
Mukta Shah  
Sagun Shakya  
Dirgha Raj Shrestha

### **Knowledge on uterine prolapse among married women of reproductive age Nepal**

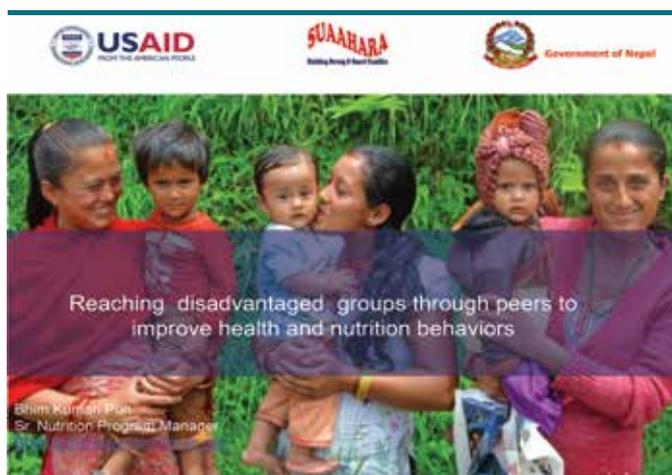
**Binjwala Shrestha PhD**  
Assistant Professor  
Institute of Medicine  
Department of Community Medicine and Public Health

Ref: Shrestha B, Devkota B, Khadka BB, Choulagai B, Pahari DP, Onta S, Petzold M, Krettek A.. International Journal of Women's Health 2014, 6:771-779

knowledge associated with geography, caste/ethnic group, and age group. She suggested that uterine prolapsed related health promotion programs should focus women from all caste/ethnic groups, age groups, and education levels, including urban and rural communities.

**Associate Prof. Ulla-Britt Engelbrektsson**, University of Gothenburg, Sweden shared his findings on Health Seeking in Tuberculosis based from longitudinal, in-depth community studies. The study revealed that most health-seeking processes within the 2005 as well as within the 2012-14 cohort were long, painful, and costly and that in spite of a widespread knowledge of the most common signs and symptoms of TB and of most patients being closely associated with persons presently or previously on anti-TB treatment.

**Ms. Bhim Kumari Pun**, shared findings from a quasi-experimental study on effect of mobilizing peer facilitator on improving the health and nutrition behaviors of women and children of disadvantage group VDCs. The overall findings revealed that there was significant improvement on the level of practice on maternal and child nutrition among the women of PF intervention area. Level of practice on nutrition was



also higher among the women who had ever met PF than those who had never met them. The rate of improvement due to PF exposure in the intervention area was found to be higher even in a short period of one year indicating that the intervention has further added value to nutrition indicators concluding that the program is promising and scalable.

Presenting findings from a descriptive, cross-sectional study conducted in Dang, Banke, and Bardiya **Mr. Purushottam Dhakal**, shared that the prevalence of anemia among pregnant was 28.3% while it was 37.6% among normal women. According to Mr. Dhakal, 2.4% of the participants had suffered from sickle cell anemia among which 94.7% sickle cell carrier being from Tharu. Based from his findings, Mr. Dhakal suggested that approach focused on socio-demographic diversity, reproductive history factors, presence of chronic illness, dietary diversity could be integrated to combat with the high prevalence of anemia.

**Anemia among the women  
of mid-western Terai**

**Purushottam Dhakal**  
Nepal Health Research Council

### 4.3 Parallel Session 2: Chronic Diseases and Health Promotion

The second session of the summit on chronic disease and health promotion had eight presentations covering diverse health issues like NCDs in general, mental health, psychosocial needs, depression, physical functional activity and determinants, utility of ischemia modified albumin, type II diabetes, physical functional activities and quality of life. The session was jointly chaired by:

- **Dr. Baburam Marasini**, Director of EDCD
- **Prof. Dr. Sanjib K Sharma**, Professor of BPKIHS

Presentations of parallel session on chronic diseases and health promotion began with **Dr. Khem B Karki's** presentation titled '*Non-communicable diseases (NCDs) in Nepal way forward*'. In his presentation, Dr. Karki presented about the present status of non-communicable diseases and its related factors. Similarly, he further mentioned about currently formulated plan and policies for prevention and control of NCDs in Nepal. On same frame, he relates SDGs and NCDs. At the end of his presentation, Dr. Karki, mentioned effective implementation of NCDs multi-sectoral action plan with budget allocation, promotion of alternative medicine / health lifestyle / food habits and integration in primary health care system.

#### Non Communicable Diseases in Nepal Way Forward

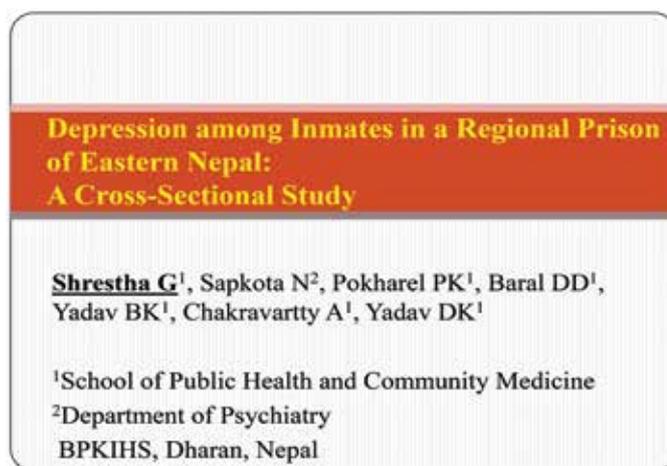
Dr Khem B Karki  
Nepal Health Research Council

While answering to question of **Dr. Basnyat** and **Dr. Agrawal** on concerning choice of drug of heart attack and possibility of allocation more resources on NCDs, Dr. Karki agreed with the views of Dr. Basnyat about the choice of drugs and reality of NCDs drugs were not available at a community level and district level. He asked the government to train all level health workers about the Non communicable disease. He further clarifies his statement for the need of global commitment to reduce the burden of NCDS.

**Ms. Laxmi Tamang**, raised the issues on a baby born from caesarian section were more risk for NCDS like asthma, heart disease, etc. So, BCC is needed for the awareness of people.

Session was continued with the presentation by **Dr. Natalia Oli**, on topic mother's knowledge, attitude and behavior on diet and physical activity of their preschool children. Dr. Oli presented that research was carried among 1,052 eligible mothers, and found that there was poor correlation of mother's knowledge and attitude with children's behavior regarding diet and physical activity.

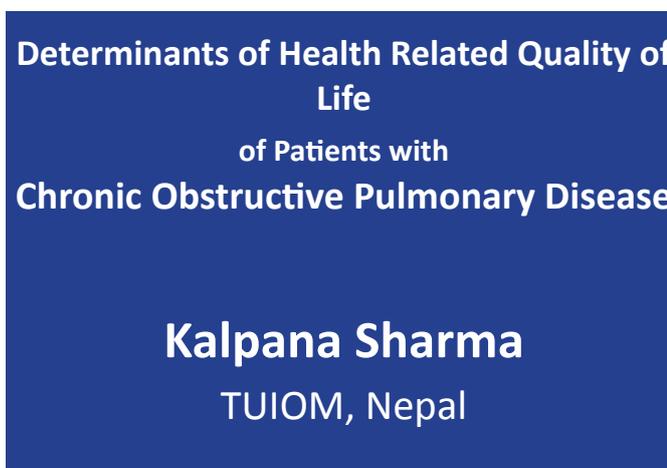
**Dr. Gambhir Shrestha**, presented study entitled depression among inmates in a regional prison of eastern Nepal. Dr. Shrestha's study was conducted among 434 randomly selected inmates; among them 35.3% of inmates were suffering from depression. On basis of the study, researcher Dr. Shrestha suggested for a need of medical/psychiatric care in correctional settings for improvement of health status of prisoner.



In the third presentation, **Mrs. Archana Bista Pandey** shared findings from a mixed method study of physical functional activities of elderly residents of Lalitpur sub-metropolitan. Study by Ms. Pandey had revealed that that 28.9% and 53 % elderly were fully dependent on others for performing basic activities and intermediate activities. On the basis of the findings, the presenter suggested needs of consideration of factors enhancing functional activity level of elderly in a home setting through the different national plan and policies.



The fourth presentation was of **Mrs. Kalpana Sharma**, a hospital based cross-sectional study about health related quality of life (HRQL) of patients with chronic obstructive pulmonary diseases with aim of assessing the determinants of HRQL. Her presentation revealed that patients HRQL is impaired in all aspects, mostly greater impairment was on physical health. Furthermore her study pointed out older age, financial difficulties, smoking status, increasing dyspnea score, number of exacerbation, perceived declining health status and perceived impact on working capacity were determinants for low HRQL score.



**Mr. Nagendra Prasad Luitel**, made his presentation related to mental health and psychosocial needs after the earthquake continued after a fore mentioned presentation. His mix method approach based study was conducted on earthquake severely affected three districts. On the basis of his study findings, he claimed there was surge of mental health problems and suggested need of trauma-specific treatments for Post Traumatic Stress Disorder (PTSD).

## Mental Health and Psychosocial Needs after the Earthquakes: In-depth Needs and Resource Assessment

Nagendra P Luitel, Jeremy Kane, Mark Jordans, Brandon Kohrt, Inka Weissbecker, Wietse Tol

In discussion following presentation,

**Dr. Surya Parajuli** raised the issues about the HMIS tools of mental health. He clarifies the mental health gap action plan programs was introduced by WHO. Mental health services are not provided by Health post, primary health care, and district level hospital. So, he suggested Mental Health Programs are necessary be included in the governmental program.

After Mr. Luitel presentation parallel session continued with **Dr. Bijaya Mishra's** presentation that was related about utility of Ischemia Modified Albumin as early marker for diagnosis of acute coronary syndrome. Dr. Mishra explained that study was conducted among fifty acute coronary syndrome diagnosed patients and fifty healthy controls. On basis study findings, she pointed out that IMA measurement was superior to ECG, cTnl and CK-MB for diagnosing ACS.

The last presentation on chronic disease session was made by **Mrs. Saraswati Sharma** where she presented her qualitative research findings on of topic lived experiences of people living with type II diabetes. Her phenomenological approach based study explained that most of the respondents perceived that diabetes depend upon unhealthy dietary intake, sedentary lifestyle, stressful life and consumption of pesticide used food.

### UTILITY OF ISCHEMIA MODIFIED ALBUMIN AS AN EARLY MARKER FOR DIAGNOSIS OF ACUTE CORONARY SYNDROME



Authors: Mishra Bijaya<sup>1</sup>, Pandey Sunil<sup>1</sup>, Niraula Raj Surya<sup>2</sup>, Rai Kumar Bijendra<sup>3</sup>, Karki Prahlad<sup>4</sup>, Baral Nirmal<sup>1</sup>, Lamsal Madhab<sup>1</sup>

<sup>1</sup>Department of Biochemistry, <sup>2</sup>Department of School of Public Health and Community Medicine, <sup>3</sup>Department of General Practice and Emergency Medicine, <sup>4</sup>Department of Internal Medicine, BPKIHS, Dharan

### TITLE OF THE STUDY: Lived Experiences of People Living with Type II Diabetes: A qualitative study



Saraswati Sharma  
Lt.col/Associate Professor  
NAIHS-CON

#### 4.4 Plenary Session 2: Emerging issues in Health and Way forward

Issues like undifferentiated febrile illness, emerging and re-emerging infectious and tropical diseases, antimicrobial resistance, environment and health, new born action plan, success factors for achieving MCH related goals in Bangladesh were covered in second plenary session of the summit. There was rigorous discussion on the session basically focusing on the concepts like equity and efficiency. The session was jointly chaired by:

- **Dr. Padam B Chand**, Chief Specialist, MoH
- **Prof. Dr. Jeevan B Sherchand**, co-ordinator, Ethical Review Board of NHRC

The first presentation of the session was by **Dr. Buddha Basnyat**, Vice Chairman of NHRC, on '*Undifferentiated febrile illness in Nepal: post-earthquake differential diagnosis*'. According to Dr. Basnyat, in the differential diagnosis of undifferentiated febrile illness (that is, fever without a known focus) in Nepal, enteric fever (Salmonella Typhior Paratyphiororganisms) top the list. Dr. Basnyat pointed out that many patients are in correctly thought to have enteric fever, possibly due to the wide spread use of non specific widely test, when in reality they have other causes of 'typhoid like' fever. Sharing about the finding of one recent study in Nepal, Dr. Basnyat depicted that about 20% of patients who seem to have 'typhoid-like fever' had typhus. Although the widespread presence of typhus fever in Nepal was established almost 13 years ago, it took an earthquake to establish this diagnosis as an important item in the differential diagnosis of typhoid fever because in post-earthquake Nepal, several out breaks of typhus was noted in various parts of Nepal. Dr. Basnyat also discussed on the importance of using doxycycline together with either ceftriaxone (orazithromycin) in the empirical treatment of typhoid-like fever in Nepal and the usefulness of the 'doxytest' in these kinds of fever.

### Post Earthquake Differential Diagnosis of Fever

Fever: Undifferentiated febrile illness: Acute and Prolonged.

That is fever for 3 to 4 days.

The common causes are:

**Dr. Ananda Ballav Joshi**, presenting on the topic '*Emerging and Re-emerging Infectious and Tropical Diseases: Threats to Human Health*', said that most of emerging and re-emerging infectious diseases have been eliminated from western countries due to improvement of sanitation while they still affect the world's poorest populations living mostly in developing countries. Joshi explained in his presentation that diseases thought to be adequately controlled, are making comeback as re-emerging some diseases that were not seen in human before are also making appearance and some are deliberately introduced in humans. Based on comprehensive literature review, Dr. Joshi highlighted AIDS, cholera, Ebola hemorrhagic fever, influenza,

dengue, rabies, chagas disease, Legionnaire disease, Lyme disease and cysticercosis as the most important emerging diseases. Re-emerging diseases included tuberculosis, malaria and schistosomiasis. These diseases disproportionately impact resource-poor settings with poor social determinants of health, spread through globalization and threaten global health security.

## Emerging and Re-emerging Infectious and Tropical Diseases: Threats to Human Health

Second Summit of Health and Population Scientists in Nepal (11-12-April 2016)

Prof. Dr Anand Joshi

In her presentation on '*Antimicrobial Resistance: Nepal's status in its Containment*', **Dr. Geeta Shakya**, Director, National Public Health Laboratory said that AntiMicrobial Resistance (AMR) is a rising global concern and has undermined the technological advancement. According to Dr. Shakya, irrational antibiotics use, sale without prescription, inadequate doses, inclusion as growth promoters in animal feeds and agriculture make AMR arising threat. She shared about the efforts going on in Nepal for the prevention of antimicrobial resistance in Nepal. She highlighted improvement of awareness and understanding on antimicrobial resistance, strengthening knowledge and evidence base, reduction in infection through effective hygiene and preventive strategies, optimizing the use of antimicrobial medicines and development of economic status for sustainable investment were highlighted as key objectives of National Action Plan for combating AMR.



In the fourth presentation of the session, **Dr. Meghnath Dhimal** discussed about Environment, Health and the Sustainable Development Goals in Nepal. Presenting findings from a study conducted by World Health Organization revealing that 23% of global deaths were attributable to the environment, amounting to 12.6 million deaths in 2012 Dr. Dhimal shared his understanding that health related goals



alongside environmental and other sectoral are as that strongly influence determinants of health. Dr. Dhimal also opined that the SDGs place healthy and equitable environments at the centre of their goals and pointed out that number of deaths and burden of disease tend to be more in low and middle income countries. Given the multiple linkages between sustainable development, environment and health in the SDGs, creating health-supportive, sustainable and equitable environments will be pre requisite to the attainments of SDGs. In addition, internationally agreed approaches for reducing the diseases burden linked to unhealthy environmental conditions and strategies for promoting healthier lifestyle were also presented by Dr. Dhimal.

**Professor Allison Edelman** made a presentation on '*Achieving Sustainable Development Goals in Nepal: The Role of Safe Abortion Care and Post-Abortion Family Planning*'. Dr. Edelman focused the presentation on Goal 3 and 5 of SDGs that is directly related with the women's health. According to Dr. Edelman, restrictive laws on abortion do not decrease risk of unsafe abortions but put women in more risk. In her presentation, Dr. Edelman said about the role of safe abortion services in reducing maternal mortality ratio. Contraception was highlighted as strategy of prime importance for reduction of maternal mortality ratio. Stagnant contraceptive prevalence rate and male migration were among key challenges identified by Dr. Edelman.

### Achieving SDGs in Nepal: The Role of Abortion and Postabortion Family Planning

Allison Edelman, MD, MPH  
Professor of OB/GYN  
Director, Family Planning Fellowship  
Oregon Health & Science University  
Portland, Oregon USA

Senior Clinical Consultant, Clinical Affairs  
Ipas  
Chapel Hill, North Carolina USA



**Scientist Dr. A.T.M Iqbal Anwar of icddr, b** presented on '*Bangladesh paradox: success factors of achieving maternal and child health in Bangladesh: moving towards sustainable development goals*'. In his presentation, Dr. Anwar shared about the factors that led to achievement of maternal and child health indicators in Bangladesh. According to Anwar, health system factors and contextual factors act together to reduce maternal mortality ratio. Slow reduction in neonatal mortality was presented as challenge. Sharing about demographic and epidemiological transition, Dr. Anwar depicted lowering burden of infectious diseases and increasing burden of non communicable diseases. He also highlighted the issues of inequity in maternal health related

### Success factors of achieving MDG 4&5 in Bangladesh: moving towards Sustainable Development Goals

**Second National Summit of Health and  
Population Scientists in Nepal  
(11-12 April 2016)**

**Dr. A.T.M. Iqbal Anwar  
Scientist, icddr, b**

issues like cesarean section. Furthermore, Dr. Anwar said about policy environment, service delivery structure, human resource, health financing issues as system factors relating to maternal health. Female education, communication, economic development, community solidarity as key contextual factors. Dr. Anwar recommended for the use of innovative financing strategies, monitoring of caesarean section for better outcome.

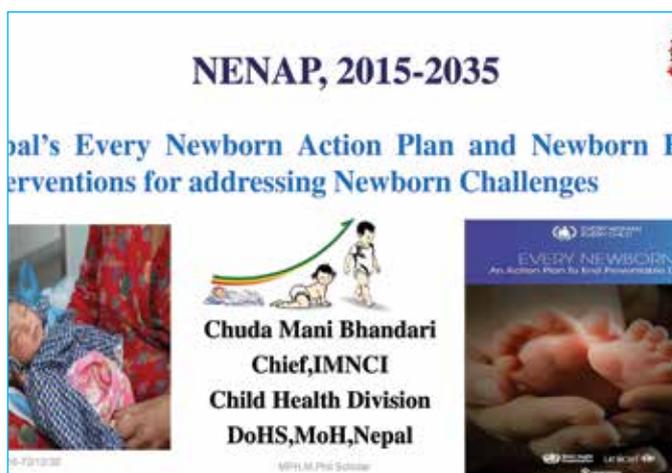
#### 4.5 Parallel Session 3: Maternal, Neonatal and Child Health and Nutrition

In third parallel session of the summit on maternal neonatal and child health and nutrition, risk factors like alcohol and smoking among pregnant women, effect of interventional program like education, anemia, coexistence of iron deficiency and iodine deficiency, women empowerment were covered. Methodology used for the studies ranged from correctional study to randomized control trials. Session was jointly chaired by :

- **Dr. Gehanath Baral**, Chief Editor, JNHRC
- **Dr. Meera Thapa Upadhaya**, WHO country office Nepal

The first presentation of the session was on 'Nepal Newborn Action Plan (NeNAP: 2015-2035) for addressing newborn challenges' by

**Mr. Chudamani Bhandari**, Chief, IMNCI unit of Child Health Division at Ministry of Health. According to Mr. Bhandari, Nepal has made a significant progress in improving the health status of children over the past few decades. However, Mr. Bhandari highlighted Sepsis, birth asphyxia, prematurity and low birth weight as the major causes of neonatal mortality in the country.



According to Mr. Bhandari, the slow pace of reduction of neonatal mortality suggests rapid scale up of focused interventions for the improvement in newborn survival. Sharing about Nepal Newborn Action Plan (NeNAP: 2015-2035) Mr. Bhandari said that is an opportunity to restructure and rearrange the situation of newborn in Nepal.

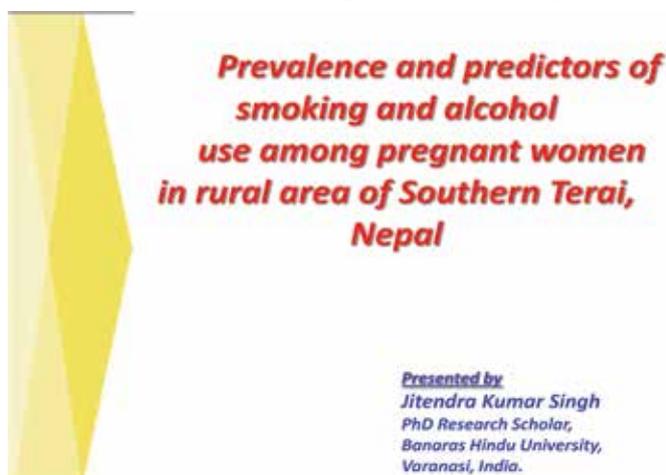
From a quantitative study in Sindhupalchowk district **Dr. Krishna Kumar Aryal**, Senior Research officer,



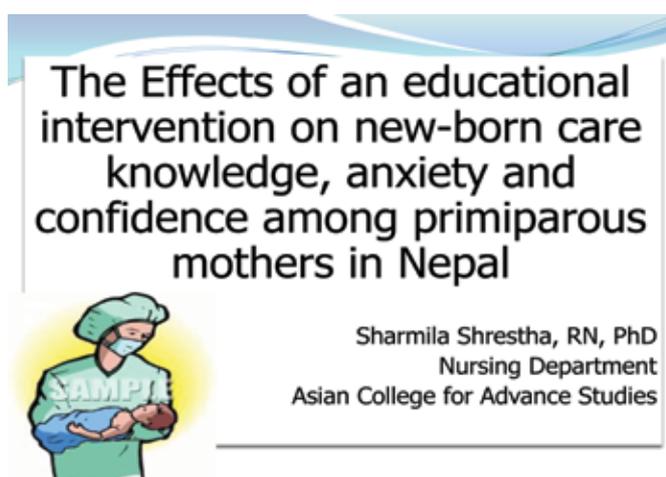
NHRC, had attempted to bring to light the pattern and predictors of alcohol consumption by pregnant women would support planning targeted interventions. Sharing about the findings, Dr. Aryal highlighted that substantial proportion of women consume alcohol in their pregnancy and frequency of consumption is quite high. Understanding the predictors of alcohol consumption would help in designing targeted behavior change interventions and help reduce alcohol consumption during pregnancy and lactation.

Answering to **Dr. Mahesh Puri's** concern on the additional value of the research, Dr. Aryal opined that it gives more details about alcohol consumption among married women of reproductive age.

**Dr. Jitendra Kumar Singh**, presented findings from community based cross-sectional study in 6 VDCs in Dhanusha district that aimed to explore the prevalence and predictors of smoking and alcohol consumption among pregnant women in rural area of southern Terai, Nepal. The study showed that's till there is potential use of smoking and consumption of alcohol during pregnancy in rural Nepal. The result showed smoking and alcoholism are strongly associated with the socio demographic characteristics and mass media exposure. Therefore, awareness on anti-tobacco and anti-alcohol programs should be provided among pregnant women through mass media by considering the influencing factors (such as ethnicity, education and socio-economic status).



**Dr. Sharmila Shrestha** shared findings from a randomized controlled trial study conducted to determine the effectiveness of new born care educational program on maternal newborn care knowledge, confidence, and anxiety. The study revealed that educational intervention increased maternal knowledge of newborn care and maternal confidence which reduce anxiety in Nepalese primiparous mothers. This educational program could be integrated into routine educational programs to promote maternal and infant well-being in Nepalese society.



In his presentation on topic '*Association of anemia with socio-economic and nutritional factors in adolescent girls of Itahari sub-metropolitan city in eastern Nepal*', **Mr. Man Kumar Tamang** said that anemia is a serious public health problem among adolescent girls of Itahari Sub-Metropolitan City. Anemia was associated with menstrual characteristics and intake of iron. The study presented by Mr. Tamang was a cross-sectional survey which was carried out among 86 adolescent girls of Itahari Sub Metropolitan City. Mr. Tamang also highlighted the fact that anemia coexists with a number of other causes, such as malaria, parasitic infection, nutritional deficiencies, inherited conditions that affect red blood cells (RBCs), such as thalassemia and hemoglobinopathies.

## Anemia status among adolescent girls of Itahari, Nepal

**Man Kumar Tamang<sup>1</sup>, Dinesh Shrestha<sup>2</sup>, Samiksha Dulal<sup>1</sup>**  
<sup>1</sup>Teaching Assistant, Department of Nutrition,  
<sup>2</sup>Department of Statistics, Central Campus of  
 Technology, Tribhuvan University, Dharan, Nepal

The seventh presentation of the session was on '*Coexistence of Iron and Iodine Deficiency among school children from Jhapa district*', by **Dr. Madhab Lamsal**, shared the findings that a total of 16.9% were found to be iron deficient while only 3.5% were deficient both in iron and iodine on the basis of thymoglobulin status: an indicator of long term reserve. The study also revealed iron status was found to be better correlated with functional status of iodine (thymoglobulin) than the nutritional status (URIC status).

## COEXISTENCE OF IRON AND IODINE DEFICIENCY AMONG SCHOOL CHILDREN FROM JHAPA DISTRICT

**Madhab Lamsal<sup>1</sup>, Saroj Khatriwada<sup>1</sup>, Basanta Gelal<sup>1</sup>, Gauri Shankar Sah<sup>2</sup>, Paras Kumar Pokharel<sup>3</sup>, Nirmal Baral<sup>1</sup>**

<sup>1</sup> Department of Biochemistry,

<sup>2</sup> Department of Pediatrics and Adolescent Medicine,

<sup>3</sup> School of Public Health and Community Medicine,

B. P. Koirala Institute of Health Sciences, Dharan, Nepal

Answering to participants concern on quality control of iodine test, Dr. Lamsal made it clear that quality control was in line with recommendation by CDC Atlanta.

## Women's Empowerment and Nutritional Status of Children : A Community-based Study from Selected VDCs of Bhaktapur District, Nepal

The last presentation of the session was made by **Ms. Rupa Siwakoti**, from her cross-sectional descriptive study carried among 402 children aged 6-59

**Presented by: Rupa Siwakoti**  
 (PBBN, MA, MPH)  
 Program Officer  
 Karuna Foundation Nepal

months in five Village Development Committees (VDCs) of Bhaktapur. She shared that mothers with low empowerment had children suffering from underweight, stunted and wasted. From the study, she suggested that improving empowerment of mother could have a better result on child's nutritional status.

**Dr. Mahesh Puri** providing overall comment to presentations, opined that we need to be careful while designing research design. He explained that some of the studies might have mentioned research design that do not match to the type of study they carried out.

#### 4.6 Parallel Session 4: Environmental and Occupational Health

The paper presented in this session covered different issues of environmental and occupational health like climate change, indoor air pollution, solid waste management, environmental changes to prevent child injury, contamination of patients' medical chart and river pollution in Kathmandu. The session was jointly chaired by:

- **Dr. Dipendra Raman Singh**, Chief, Curative Service Division, MoH
- **Prof. Dr. Bandana Pradhan**, Professor, IOM

The first presentation was on '*Health Sector's response to impacts of climate change in Nepal*', was presented and response by **Mr. Rajaram Pote Shrestha**. He highlighted about recently development on climate change health adaptation strategy in Nepal and its policy program implementation role in terms of climate vulnerability adaptation in Nepal. Further he also mentioned health research / awareness activities initiated by Nepal to combat climate vulnerability to marginalized population. No question was raised from participants about his presentation after floor open for question by chair.

**Mr. Sanjay Sagar**, presented his research on '*Use of Portable Exposimeters to Monitor Radio frequency Electromagnetic Field Exposure in the Everyday Environment*'. His paper mainly related with measurements of

## Health Sector's response to impacts of climate change in Nepal

**Raja Ram Pote Shrestha**

Email: poteshresthar@who.int



### Use of portable exposimeters to monitor radiofrequency electromagnetic field exposure in different microenvironments in Kathmandu valley, Nepal



**Sanjay Sagar**

different micro environments with portable devices to monitor RF-EMF exposure levels in the environment in a representative and efficient manner using the portable ExpoM-RF devices, in 12 different micro environments from Kathmandu, Lalitpur and Bhaktapur district. His study yield highly reproducible measurements which allow monitoring time trends in RF-EMF exposure over an extended time period of several years.

**Dr. Arun Sharma**, presented findings on *'Effect of Indoor Air Pollution on respiratory health in residents of Ilam districts in Eastern Nepal.'* Study was aimed to assess the respiratory health effect of indoor air pollution in residents of Ilam district using structured questionnaire, observation check list, and GOLD guidelines for COPD and ISAAC questionnaire for asthma. His study concluded indoor air pollution parameters were responsible for respiratory problems.

### Effect of Indoor Air Pollution on respiratory health in residents of Ilam district in Eastern Nepal

Meghnath Dhimal, Khem B. Karki, Haridutt Joshi, Achyut Raj Pandey, Krishna Kumar Aryal, Purustam Dhakal, **Arun Kumar Sharma**, Pradeep Gyawali, Narayan Mahotara, Om Kurmi

On response to Dr. Sharma's presentation,

**Dr. Buddha Basnyat** laid query whether Dr. Sharma's study had assessed relationship between clean fuel and occurrence of disease.

Dr. Sharma addressed that his study had assessed association about occurrence of disease and fuel type.

Next presentation was of **Ms. Jasmine Maskey**, about factor influencing the behavioral intention towards *'Household solid waste management and its contributing factors in Kathmandu Metropolitan City'*. Her study concluded that there is a need for more awareness campaign, separate waste collection service for separate types of waste, imposing waste collection tariff to increase household toward waste management in Kathmandu Metropolitan City.

### Household Solid Waste Management and its contributing factors in Kathmandu Metropolitan City

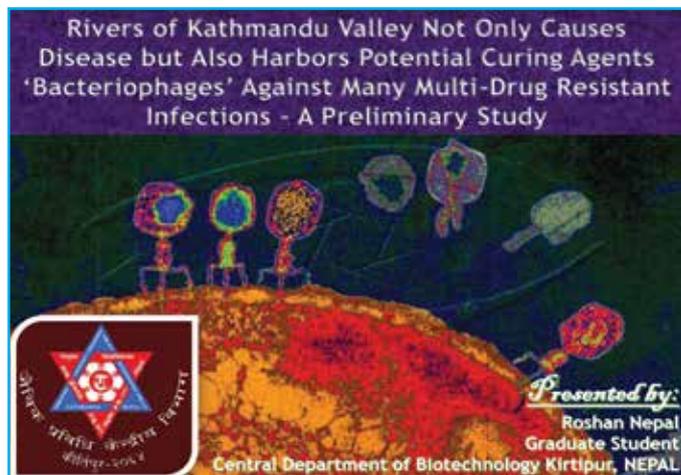
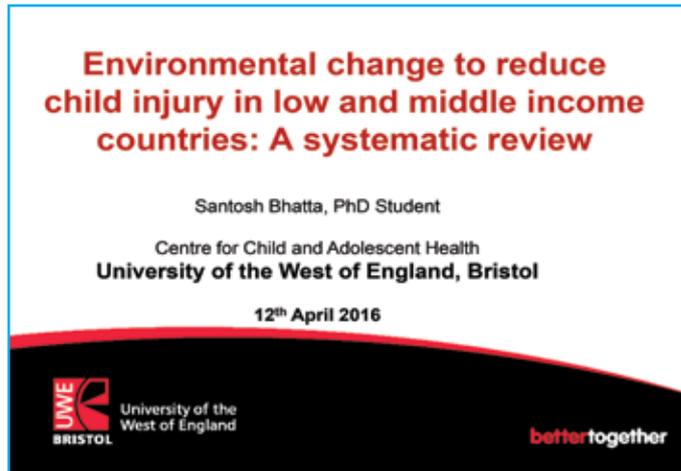
**Jasmine Maskey, Ashok Pandey, Namuna Shrestha, Bihungum Bista, Achyut Raj Pandey, Suneel Piryani**

Ms. Maskey presentation was followed by presentation of **Mr. Santosh Bhatta**,

about systematic review on *'Environmental change to reduce child inquiry in low and middle income countries'*. Study adopting randomized clinical trial was only considered for systematic

review which was about four in number. His review paper revealed that there is limited evidence to determine if environmental change interventions reduce child injuries

**Mr. Roshan Nepal**, presented paper related with availability of 'Bacteriophages on river of Kathmandu Valley against many multi-drug Resistant Infections'. For this study, 5 different water samples were collected from the hospitals representing 12 genera of 40 MDR bacteria and his study concluded that 'phages against MDR bacteria' that could be used therapeutically exists in sewage contaminated rivers of Kathmandu valley and they aren't extremely host specific as professed in scientific world and even possess inter specific lytic.



**Mr. Bivek Timalina**, one of the participants raised query about possibility of screening a "bacteriophage" on Nepal. On response to that Mr. Nepal answered that presently due to lack of electron microscopy and ultra-centrifugation equipment screening is not possible.

In the last presentation of the session, **Mr. Roshan Thapa**, presented on 'Medical Chart as Potential source for Nosocomial Infection'. This study aimed to assess the prevalence of and antimicrobials susceptibility profile of micro organisms isolated from patients' medical charts collecting 250 samples of medical chart 100 from specific units and 150 from general wards. Mr. Thapa study concluded that patients' medical charts were usually contaminated with pathogenic and potentially pathogenic bacteria thus may act as source of pathogenic bacteria and cross-infection in hospital.

After the presentation from presenters



and active participation of participants, **Prof. Dr. Bandana Pradhan**, IOM, TU summarized session highlighting findings of the study presented on forum.

#### 4.7 Parallel Session 5: Universal Health Coverage

The session on Universal Health Coverage covered wide range of issues covering effectiveness, efficiency, inequity and inequalities, cost of health care services and health care demand. Efficiency and equity were among the dominant themes in discussion session following the presentations. The session was jointly chaired by:

- **Dr. Guna Raj Lohani**, Director, National Health Insurance Board.
- **Ms. Franziska Fuerst**, Senior Technical Advisor, GIZ

The first presentation of the session was done by **Dr. Shiva Raj Adhikari**, on '*Creating Synergistic effects reflecting the fact that sustainable development for Nepal*' highlighting 17 goals and 169 targets which are interlinked with each others. He said that the improvement of national capacity in terms of producing evidence and designing the interventions is central to achieve SDGs and UHC should be the priority.

**Creating Synergistic Effects For and From Sustainable Development Goals and Universal Health Coverage: An Example of Nepal**

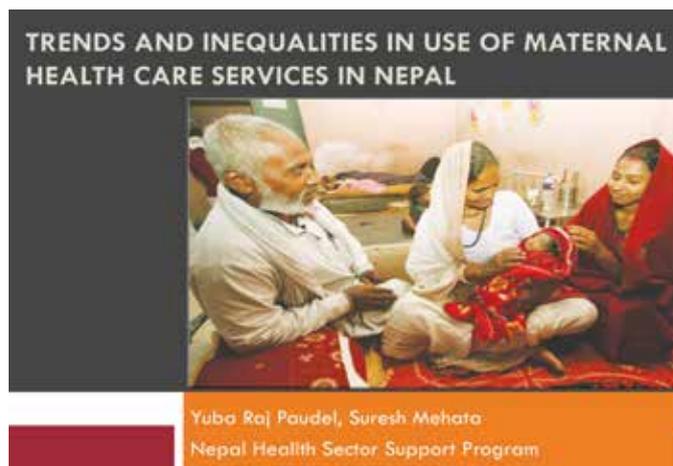
**Shiva raj Adhikari, PhD**  
Associate Professor of Economics,  
Tribhuvan University, Nepal

**Mr. Pushkar Raj Silwal**, on his presentation '*How efficient are the public hospitals in Nepal? a two-stage Data Envelopment Analysis*', highlighted that technological advancement and intensiveness of the high cost labor forces while establishing a hospital services as a challenge both in developing and developed countries. He concluded that sampled hospitals performed at only three fourth of the total potentials and it varies by individual hospitals. In addition to the scale economies, efficiencies have been affected by other administrative and operational factors as well. Referral level hospitals are likely to be more efficient than the district level and those located in Kathmandu and Terai may perform better than those in mountain and hill regions.

**How efficient are the public hospitals in Nepal? A two - stage Data Envelopment Analysis**

Pushkar Raj Silwal

**Mr. Yuba Raj Poudel**, in his presentation titled *'Trends and Inequalities in Use of Maternal Health Care Services in Nepal'* highlighted the disparities in use of maternal health services persist along geographic, economic and socio-cultural lines. He highlighted that, all socio-demographic variables were significant predictors of use of maternal health services; of them, maternal education was the most influential. He said that there is need of strengthening the health system to increase equitable use of maternal health services, utilization of the health services among poorer women with those with less education and those living in remote areas. Stronger efforts are needed to tackle the root causes of health inequity, reduce poverty, raise female education, eradicate caste/ ethnicities based social discrimination and invest in the development of remote areas.



Parallel session was continued with the presentation of **Mr. Chiranjivi Adhikari**, His presentation titled was *'Out-of-Pocket and Catastrophic Expenditure for Neonatal Health Care in Kaski District, Nepal'*. Highlighting the objective of the study he shared that Out-of-pocket expenditure (OOP) is unacceptably high among developing countries and remains one of the most important barriers in treatment for maternal, neonatal and child health, and as a result, also impoverished the families. Sharing his conclusion, the mean OOP for NHC in Kaski district was NRs. 4,322. Three percent HHs suffered catastrophic by OOP due to NHC. The CHE differed according to neonatal diseases whereas OOP differed according to levels of HF.



Parallel session was continued with a presentation of **Mr. Chudamani Poudel**, titled *'An Assessment of Cost of Daily Living and Access to Health Services of Severely Disable People in Chitwan'*. On his presentation he shared that, people living with disabilities are more likely to delay in acquiring health care due to financial factor than people without disabilities. On his presentation he shared that, a sense of stigma, financial problems, inadequate diet, and unavailability of assistive devices, inaccessibility of transportation and environment were the

major barriers in accessing health services to people living with disabilities. He concluded that high rate of cost incurred in medical services and physical health maintenance, worse socio-economic status, and layers of barriers in accessing health care services were the reason of poorer health outcome and exclusion from the society.

## AN ASSESSMENT OF COST OF DAILY LIVING AND ACCESS TO HEALTH SERVICES FOR SEVERELY DISABLED PEOPLE IN CHITWAN

**Chudamani Poudel**

Ramesh Baral

7th August 2015

**Mr. Arjun Kumar Thapa**, in his study on '*Health Care Demand in Nepal: Evidence from 2010/11 Household Survey*' highlighted the characteristics of morbidity and factors determining consumer's choice for a particular type of health care provider. The study highlighted that the age, education of household head, location, caste/ethnicity, price of health care and poverty determine consumers' decision for choosing a particular health care provider. Based on his study findings, Mr. Thapa suggested that government sector needs to play key role in Nepalese health system to ensure equality in health as majority of population are residing in rural areas and lower economic strata seek healthcare services in government facilities beside being price sensitive also.

### Health Care Demand in Nepal: Evidence from 2010/11 Household Survey

Second National Summit of Health and Population Scientists in Nepal, 11-12 April 2016

**organized by**

Nepal Health Research Council, MoHP Nepal

yogirajarjun@gmail.com; +977-9846172788; PhD scholar (Health Economics), Mewar University, Faculty member, School of Development & Social Engineering, Pokhara University  
7th August, 2015

#### 4.8 Parallel Session 6: Emerging and Re-emerging Infectious Diseases

New detection techniques for Vector-Borne Viral Diseases, TB leprosy co-infection, influenza like illness, visceral leishmaniasis, and urinary tract infection in early infancy Hepatitis B infection and significance of slit skin smears and biopsy histopathology in the clinical diagnosis, treatment and classification of leprosy patients were covered by presentation in this session on emerging and re-emerging infectious diseases.

The session was jointly chaired by:

- **Dr. GD Thakur**, Chief, PHAMED, MoH
- **Dr. Megha Raj Banjara**, Assistant Professor, Department of Microbiology, TU

**Dr. Basu Dev Pandey**, Director, Leprosy Control Division, DoHS presented a paper on '*Emergence and Improved Detection System of Vector-Borne Viral Diseases in Nepal*', based on primary data/sample collection from 2007 to 2014 and review of published literature. Dengue fever are found to be more common among males and peaked in post monsoon months. Though DENV-1 strain was responsible for major outbreaks, all other serotypes

were also seen. Dengue cases with presence of Chikungunya are in increasing trend, making it more difficult to differentiate Dengue and Chikungunya. JE is also expanding in mountainous region and has been reported in altitude of at least 2000 m above sea level. Climate change, increase migration or improved surveillance may be associated with this intensification of VBVD. It is expected that these are going to be epidemic in next one to two year.

## Emergence and Improved Detection System of Vector-Borne Viral Diseases in Nepal

**Dr. Basu Dev Pandey**

Director

Leprosy Control Division, DoHS  
drbasupandey@gmail.com

**Dr. Mahesh Shah**, presented the paper on '*Tuberculosis Co-infection in Leprosy Patients: A decade of retrospective study in Anandaban Hospital of Nepal*'. There is high burden of co-infection of TB and Leprosy, but very limited numbers of leprosy patients were diagnosed with tuberculosis. Prednisolone or other immunosuppressive drugs for management of leprosy reaction may have made these patients more susceptible to TB. At the time of Leprosy diagnosis or leprosy reaction management may help in early detection and treatment of TB in Leprosy patients.

## Tuberculosis Co-infection in Leprosy Patients: A decade of retrospective study in Anandaban Hospital of Nepal

**Dr. Mahesh Shah**

Anandaban Hospital

The Leprosy Mission Nepal

Lalitpur, Kathmandu

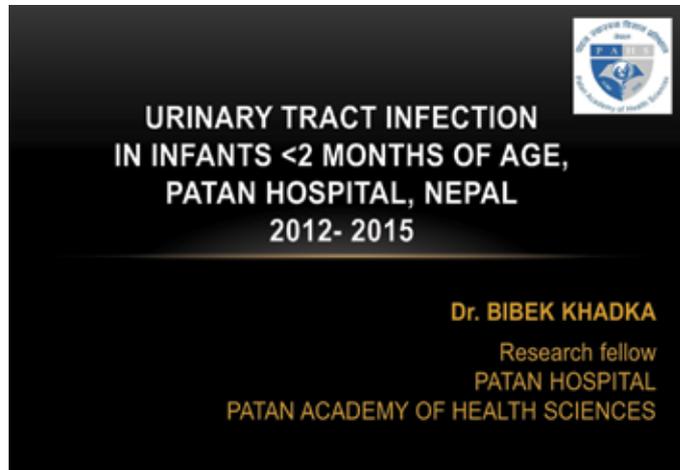
**Dr. Khem B Karki**, Member Secretary, NHRC highlighted the findings from Jajorkot Influenza like Illness (ILI) outbreak investigation in 2015. The response team with different medical background were deployed there as soon as the outbreak was reported and



cases were treated. Verbal autopsy, forensic information, and in-depth interview with health professional and patients were used during investigations. Out of total 35 deaths, only one death was suspected ILI. Sanitation, poor socio-economic status was found to be very poor and responsible for most of the problems.

Answering to question by **Dr. Sher Bahadur Pun**, on why the ILI had outbreak in Jajarkot district, Dr. Karki responded that it could be due to high rate of illiteracy, low sanitation practices, high rate of absenteeism of health personnel on health care system etc. are prime causes for repeated outbreak of different disease on Jajarkot districts.

Research fellow of Patan Hospital, **Dr. Bibek Khadka** presented the paper on prospective data collected from Patan hospital, on Urinary tract infection in infants <2 months of age, Nepal 2012-15. He point out that, early infancy were vulnerable and more prone to infection. Antimicrobial resistance is a major problem in Nepal and elsewhere. Like that, antibiotic resistance increased significantly over four years. He concluded that E.coli is the most common uropathogens causing UTI in early neonates. Antimicrobials are the most useful measures to cure the disease, in other hand with the increase in resistance to first line and even second line antibiotics treatment has become more challenging.



**Dr. Purushottam Raj Shedain**, IOM, TU, presented the paper on '*Indigenous Community and Hepatitis B Infection: A Case Study from the Remotest Mountain District of Nepal*'. The prevalence of Hepatitis B is 0.9 percent in Nepal, but it is heterogeneous in nature. The study result shows that the prevalence of Hepatitis B infection in the mothers having children under 5-year was 17 percent and the prevalence of hepatitis B infection in the youngest children under 5-years living with hepatitis B positive mothers was 48 percent. He concluded the presentation by sharing the results of indigenous mothers and children are threatened by hepatitis B.

## Indigenous Community and Hepatitis B Infection: A Case Study from the Remotest Mountain District of Nepal

April 11-12, 2016  
'Second National Summit of Health and Population Scientists in Nepal'

Researcher: Dr. Purusotam Raj Shedain, IOM, TU  
Supervisor: Prof. Dr. Madhu Devkota, IOM, TU

Answering to question of **Ms. Buna Bhandari** about why was there difference in prevalence of Hepatitis B based on gender, Dr. Purshottam Sedhain cited research findings that there is high chance of Hepatitis B among indigenous group people involved in '*jackne*' which is predominantly male occupation.

**Mr. Kapil Dev Neupane**, Lab Manager, Leprosy Mission Nepal, in his presentation on '*Is counting lesions enough for the classification/diagnosis of leprosy?*' highlighted the slit skin smears and biopsy histopathology in the clinical diagnosis, classification and treatment of leprosy patients. He examined the Lesions, Neuropathy, Slit Skin Smear and Skin Biopsy. Results indicate that diagnosis by lesion count alone can lead to misclassification and treatment especially among PB and suspect leprosy cases.

## Is counting lesions enough for the classification/diagnosis of leprosy?

Kapil Dev Neupane

Lab Manager

Mycobacterial Research Laboratories

The Leprosy Mission Nepal

### 4.9 Interactive discussion through [www.savaako.com](http://www.savaako.com)

Throughout the duration of summit, feedbacks from the participants were obtained through [www.savaako.com](http://www.savaako.com), an interactive platform developed by Roster Logic for the summit. Participants dropped feedback regarding the organization of summit. To promote the interactive discussion on the papers presented, methodology of the research, findings and policy implications, participants were requested to post questions in the website targeted to selected presenters. The questions raised from the participants were delivered to presenters and relevant questions were answered by the presenters in discussion session following presentation. Furthermore, answers to the questions were also posted in the website so that participants can also view the response in future as well.

## 5. Closing Session

In closing session of the summit, **Dr. Khem B Karki**, Member Secretary of NHRC, recited the summit declaration for feedback and approval from the participants. Summit declaration was approved unanimously by the participants presented in the conference hall.

**Ms. Durga Mishra**, Associate Professor, MMIHS, delivered speech from participants side, said that the summit has been more systematic compared to the previous one. She shared her expectations that in coming years, summit will be able to contribute to more international scientific committee.

**Ms. Jamuna Shrestha**, representative of VSO, delivered speech on behalf of the partners of the summit. In her speech, Ms. Shrestha thanked and congratulated Nepal Health Research council for being able to conduct such informative program in Nepal.

**Ms. Anju Karmacharya**, from UNFPA, sharing opinion on behalf of external development partners, expressed her gratitude Nepal Health Research Council for successful completion of 25 years in health research in Nepal. She further added that it was prime time to discuss about SDGs.

**Mr. Gehanath Baral**, representing scientific committee of the summit, thanked all participants for their presence till the last moments of the summit. He said that the papers presented in the summit have made it clear that we are not in infantile stage of health research.

**Dr. Jeevan Bahadur Serchand**, Coordinator, Ethical Review Board of NHRC, wished happy New Year to all participants of the summit shared his understanding that the summit is international summit although it has been named national summit. He expressed his commitment to facilitate the translation of research findings into policy and program.

**Dr. GD Thakur**, Chief, PHAMED, MoH congratulated NHRC team for successful conduct of the summit. He opined that the summit has been able to create chain of young scientists of Nepal with NHRC. Highlighting the need of operational research, Dr. Thakur opined that such researches are more often translated into policy and program. He also said that NHRC was able

to accommodate all scientists whether it is young scientists or senior scientists.

**Dr. Mahesh Devnani**, Post graduate institute of Medical education and Research, Chandigarh, India acknowledged the summit and expressed his desire to participate in future too.

**Dr. Krishna Kumar Aryal**, Research Officer, NHRC clarified about the evaluation criteria of papers before announcing different categories of award for different papers presented in the summit. Health and population scientists who were awarded in the summit are as follows:

- Senior Researcher Award: Dr. Mahesh Shah
- Young Researcher Award: Mr. Roshan Thapa
- Best Paper Award (Oral): Mr. Uddhav Sigdel
- Best Paper Award (Poster): Mr. Uday Narayan Yadav
- NHRC Silver Jubilee Outstanding Researcher Award: Mr. Yuba Raj Paudel

**Dr. Krishna P Adhikary**, Chairman of NHRC, thanked all participants for their enthusiastic participation.

## 6. Annex

### 6.1 Summit declaration

#### Declaration of

**The Second National Summit of Health and Population Scientists in Nepal Organized by Nepal Health Research Council (NHRC) on April 11-12, 2016 with the theme of *Health and Population Research for Achieving Sustainable Development Goals (SDGs) in Nepal.***

**April 11-12, 2016**

Realizing Universal Health Coverage (UHC) as a key strategy for achieving the SDGs and acknowledging social justice and health equity to be foundations for Universal Health Coverage, we the organizer, partners, and participants of the Second National Summit of Health and Population Scientists declare our commitment:

1. To carryout health research following the research ethics and responsible conduct of research based on the national ethical guidelines,
2. To engage in knowledge synthesis and translation of the evidence to meaningful actions to achieve the SDGs through Universal Health Coverage,
3. To work together with researchers, academicians, policy makers and program managers for the alleviation of pain and suffering of the people of Nepal, and
4. For NHRC to play a pivotal role as a national authority to promote a research culture and evidence-informed policy making.

Appreciating the role of state and non-states take holders including private sectors in building national research capacity and creating an environment for research promotion together with the responsibility of utilizing the evidence for policies and program, we urge to:

5. Allocate adequate resources for health research as per the international commitments and complying with the principle of aid effectiveness and harmonization.
6. Nurture the participatory decision-making process considering the local context, realities, evidence, and the innovations
7. Encourage, inspire and motivate the young generation in health research with their complete dedication, and commitments that their full potentials as health researchers is achieved.

## 6.2 Papers presented in the summit

### Invited papers

Invited Papers	
1. Emerging and Re-emerging Infectious and Tropical Diseases: Threats to Human Health	Ananda B. Joshi
2. Creating Synergistic Effects for and from Sustainable Development Goals and Universal Health Coverage: An Example of Nepal	Shiva Raj Adhikari
3. Nepal Newborn Action Plan (NeNAP: 2015-2035) for addressing newborn challenges	Chudamani Bhandari
4. Community Development for Day to Day Emergency to Disaster Response in Nepal	Ramesh Maharjan
5. Emergence and Improved Detection System of Vector-borne Viral Diseases in Nepal	Basu Dev Pandey
6. Undifferentiated Febrile Illness in Nepal: Post-earthquake Differential Diagnosis	Buddha Basnyat
7. Antimicrobial Resistance: Nepal's Status in its Containment	Geeta Shakya
8. Non-communicable Diseases in Nepal: The Way forward	Khem B Karki
9. Environment, Health and the Sustainable Development Goals	Meghnath Dhimal
10. High Altitude Pilgrimage Medicine	Buddha Basnyat
11. Assessing Appropriate Mechanism to Strengthen, Appraising and Translating Health Research Evidence into Policy and Planning in Nepal	Meghnath Dhimal
12. Health Sector's Response to Impacts of Climate Change in Nepal	Rajaram Pote Shrestha
13. Effects of Behavior Change and Social Transfers in Pregnancy upon Infant Nutrition in Nepal: the Low Birth Weight South Asia Trial	Dharma S Manandhar
14. Health Research and Social Justice	Sharad Onta
15. Foreign Medical Team's Response in Nepal Earthquake 2015	Khem B Karki
Oral Papers	
Theme 1: Health Systems Research	
1.1.1 Mental Health and Psychosocial Needs after the Earthquakes: In-depth Needs and Resource Assessment	Nagendra P Luitel
1.1.2 Health Care Demand in Nepal: Evidence from 2010/11 Household Survey	Arjun K Thapa
1.1.3 Contamination of Patients' Medical Chart: A Potential Source of Nosocomial Infection	Roshan Thapa

1.1.4 Health in the Sustainable Development Goals: Opportunities and Challenges for Nepal	Madhusudan Subedi
1.1.5 What are the Effective Interventions to Improve Quality of Care in Nepal: a Systematic Review?	Nipun Shrestha
<b>Theme 2: Universal Health Coverage</b>	
1.2.1 Out-of-Pocket and Catastrophic Expenditure for Neonatal Health Care in Kaski District, Nepal	Chiranjivi Adhikari
1.2.2 An Assessment of Cost of Daily Living and Access to Health Services of Severely Disable People in Chitwan	Chudamani Poudel
1.2.3 How Efficient are the Public Hospitals in Nepal? A Two - Stage Data Envelopment Analysis	Puskar Raj Silwal
1.2.4 Trends and Inequalities in Use of Maternal Health Care Services in Nepal	Yubaraj Poudel
<b>Theme 3: Emerging and Reemerging Infectious and Tropical Diseases</b>	
1.3.1 Outbreak Investigation of Influenza Like Illness in Jajarkot District in 2015	Khem B Karki
1.3.2 Urinary Tract Infection in Early Infancy (<2 Months of Age) at Patan Hospital, Nepal 2012 - 2015: Invasive Pathogens and Antimicrobial Resistance	Bibek Khadka
1.3.3 Indigenous Community and Hepatitis B Infection: A Case Study from the Remotest Mountain District of Nepal	Purusotam Raj Shedhain
1.3.4 Visceral Leishmaniasis Cases in Non-endemic Districts in Nepal: Import or Local Transmission?	Surendra Uranw
1.3.5 Tuberculosis Co-infection in Leprosy Patients: A decade of Retrospective Study in Anandaban Hospital of Nepal	Mahesh Shah
1.3.6 Health-seeking in Tuberculosis: A Frustrating Undertaking in Rural Nepal	Ullabritt Engelbrektsson
<b>Theme 4: Non Communicable Diseases</b>	
1.4.1 Influence of Mothers' Knowledge, Attitude and Behavior on Diet and Physical Activity of Their Pre-school Children: A Cross- sectional Study from a Semi-urban Area of Nepal	Natalia Oli
1.4.2 Depression among Inmates in a Regional Prison of Eastern Nepal: A Cross-Sectional Study	Gambhir Shrestha
1.4.3 Determinants of Health Related Quality of Life in Patients with Chronic Obstructive Pulmonary Disease in Chitwan, Nepal	Kalpana Sharma
1.4.4 Lived Experiences Of People Living With Type II Diabetes: A Qualitative Study	Saraswati Sharma
1.4.5 Physical Functional Activities of Elderly Residing in Sub-Metropolitan City, Lalitpur: A Mixed Method Study	Archana Bista Pandey
<b>Theme 5: Maternal, Neonatal and Child Health</b>	

1.5.1 Alcohol Consumption during Pregnancy By The Women of Sindhupalchowk District And Its Predictors	Krishna K Aryal
1.5.2 Environmental Change Interventions to Reduce Child Injury in Low and Middle Income Countries: A Systematic Review	Santosh Bhatta
1.5.3 The Effects of an Educational Intervention on New - Born Care Knowledge, Anxiety and Confidence among Primiparous Mothers in Nepal	Sharmila Shrestha
1.5.4 Prevalence and Predictors of Smoking and Alcohol Use among Pregnant Women in Rural Area of Southern Terai, Nepal	Jitendra Kumar Singh
1.5.5 Anemia among the Women of Mid-western Terai: Associated Determinants	Purushottam Dhakal
<b>Theme 6: Sexual and Reproductive Health and Rights</b>	
1.6.1 Knowledge on uterine prolapsed among married women of reproductive age in Nepal	Binjwala Shrestha
1.6.2 Factors Affecting Women's HIV/AIDS Behaviors in Nepal	Uddhav Sigdel
1.6.3 Post-abortion Long Acting Reversible Contraceptive (LARC) use in Nepal: Prevalence and Distribution	Suresh Mehata
1.6.4 Client Oriented Provider-Efficient (COPE) Approach in improving Quality of Care of Safe Abortion Service	Mukta Shah
<b>Theme 7: Environmental and Occupational Health</b>	
1.7.1 Factors Influencing the Behavioral Intention Towards Household Solid Waste Management among the Households of Kathmandu Metropolitan City	Jasmine Maskey
1.7.2 Use of Portable Exposimeters to Monitor Radiofrequency Electromagnetic Field Exposure in the Everyday Environment.	Sanjay Sagar
1.7.3 Indoor Air Pollution and its Effect on Human Health in Ilam District of Eastern Nepal	Arun Sharma
<b>Theme 8: Biomedical Research</b>	
1.8.1 Utility of Ischemia Modified Albumin as an Early Marker for Diagnosis of Acute Coronary Syndrome	Bijay Mishra
1.8.2 Is Counting Lesions Enough: The Significance of Slit Skin Smears and Biopsy Histopathology in the Clinical Diagnosis, Treatment and Classification of Leprosy Patients	Kapil Dev Neupane
1.8.3 Rivers of Kathmandu Valley Not Only Causes Disease but Also Harbors Potential Curing Agents 'Bacteriophages' Against Many Multi-Drug Resistant Infections – A Preliminary Study	Roshan Nepal
<b>Theme 9: Food and Nutrition</b>	
1.9.1 Reaching Disadvantaged Groups Through Peers to Improve Health and Nutrition Behaviors in Three Districts of Nepal	Bhim Kumari Pun

1.9.2 Association of Anemia with Socio-economic and Nutritional Factors in Adolescent Girls of Itahari Sub-Metropolitan City, Eastern Nepal	Man Kumar Tamang
1.9.3 Coexistence Of Iron And Iodine Deficiency Among School Children From Jhapa District	Madhab Lamsal
1.9.4 Women's Empowerment and Nutritional status of Children: A Community-Based Study from Bhaktapur District, Nepal	Rupa Shiwakoti
<b>Posters</b>	
<b>Theme 1: Health Systems Research</b>	
2.1.1 Factors associated with Utilizations of Maternal Health Services in Selected Mountainous Villages of Kaski District, Western Nepal	Anu Koirala
2.1.2 Knowledge and Practice on Voluntarily Blood Donation Among Bachelor Level Students of College of Applied Business, Kathmandu	Dibya Aryal
2.1.3 Prevalence of Post-Traumatic Stress Disorder (PTSD) and Associated Factors among Adolescents after 2072 Nepal earthquake	Deena Giri
2.1.4 Factors Affecting Medication Compliance among the Dyslipidemic Clients Attending Outpatient Department, Dhulikhel Hospital, Nepal	Khusbu Regmi
2.1.5 Errors in Cause-of-Death Statement on Death Certificates in Intensive Care Unit of Kathmandu, Nepal	Leison Maharjan
2.1.6 Determinants of Ethical Challenges in Nurses' Duty at Government Hospitals Kathmandu, Nepal	Muna Sharma
2.1.7 Evaluation of the Job Preference of Prospective Dentists using Discrete Choice Experiment	Rabindra Man Shrestha
2.1.8 Effect of 'ChaitanyaPrazolam' Meditation Technique on Selected Neuro-psychiatric Ailments Among the Patients Attending in Unique Meditation Center, Kathmandu	Ramanand Pandit
2.1.9 Targeting a Community-based intervention for Improving Maternal Health	Ram Chandra Silwal
2.1.10 Care Perception of Postnatal Mother Regarding the Care during Labour in Tertiary Level hospital, Nepal	Saraswoti Kumari Gautam
2.1.11 Attitude towards Death and End of Life Care among Nurses Working in Teaching Hospital	Tumla Shrestha
2.1.12 Efficacy of Ksharakarma in the Management of Internal Haemorrhoids – Case Series	Bijendra Shah
2.1.13 Group Antenatal Care: The Power of Peers for Increasing Skilled Birth Attendance in Achham, Nepal	Janak Raj Bajagai

2.1.14 Evaluation of Community-based Mental Health Program of Selected Districts in Nepal	Meghnath Dhimal
2.1.15 Road Traffic Accidents and Its' Characteristics: A Hospital Based Descriptive Study in Kathmandu Valley	Huang Ling
2.1.16 Knowledge Diversity And Resources Of Traditional Healers And Healing Practices In Western Development Region Of Nepal	Meghnath Dhimal
2.1.17 Drinking Water Quality Assessment: A Cross-Sectional Survey In Selected Schools Of Dolakha And Ramechhap Districts After The Nepal Earthquake 2015	Akina Sheathe
2.1.18 Domestic Violence and its Associated Factors Among Married Women of a Village Development Committee of Rural Nepal	Desha Dakota
2.1.19 A Study on Violence Depression and its Associated Factors among Sexual Minorities of Eastern Nepal	Mira Khadka
2.1.20 Post – Traumatic Stress Disorder (PTSD) Symptoms and Depression among School Children Affected by 2015 Nepal Earthquake	Nilam Sharma
2.1.21 Predictors of Job Satisfaction among Hospital Nurses	Rekha Timilisia
2.1.22 Assessment of the Knowledge and Attitude of Clinicians Towards Research Writings in Nepal, The Factors Promoting and Barriers to Clinical Research	Tanka P Bohara
2.1.23 Ethnic Groups, Survey Categories and our Understanding of Health: Case of Nepal DHS	Yashas Vaidya
2.1.24 Media as a Medium: Providing Rapid and Reliable Information to Design Response Actions through Media Monitoring Immediately after Nepal Earthquake	Sudeep Uprety
<b>Theme 2: Universal Health Coverage</b>	
2.2.1 Economic Costs Associated With Motorbike Accidents In Kathmandu, Nepal	Diksha Sapkota
2.2.2 Inequity in Use of Maternal Health Services in Nepal: Trends from 1993 to 2011	Rolina Dhital
2.2.3 Factor Affecting Client Diagnosis Delay and Calculate Out of Pocket Expenditure for Treatment of Cervical Cancer in BPKMCH, Bharatpur, Chitwan	Khagendra Poudel
2.2.4 Strengthening Media Response to Urban Health Issues in Nepal	Sudeep Uprety
2.2.5 Achieving Universal Institutional Delivery Among Mothers in a Remote, Mountain District of Nepal: What Are the Challenges?	Deepak Joshi

2.2.6 Closing the Equity Gap in Health Service Delivery: The Role of Formula-based Resource Allocation	Ghanshyam Gautam
2.2.7 Assessing the Direct Cost of Care for Deliveries among Public Facilities in Nepal	Hema Bhatt
2.2.8 Utilization of Health Care Services among Insured and Uninsured Clients of Nirdhan Utthan Bank Limited: A Cross Sectional Study on Micro Health Insurance, Nepal	Preeti Gautam
<b>Theme 3: Emerging and Reemerging Infectious and Tropical Diseases</b>	
2.3.1 Factors Contributing to Multi-Drugs Resistance Tuberculosis among Tuberculosis Patients Attending at the Clinic of District Public Health Office, Bhaktapur	Kabita Shrestha
2.3.2 Stigma Related to Tuberculosis in Patients Taking DOTS Treatment from DOTS Centre of Palpa District Hospital, Tansen, Palpa	Priyanka GC
2.3.3 Paragonimiasis : First autochthonous case report from Nepal	Sushila Khadka
2.3.4 Nocardiosis – A Diagnosis Of Consideration In Immunocompromised	Sushila Khadka
<b>Theme 4: Non Communicable Diseases</b>	
2.4.1 Health Literacy and Knowledge of Chronic Diseases in Nepal	Abha Shrestha
2.4.2 Evaluation of Maxillary Anterior Teeth in Relation to Golden Proportion, Red Proportion and Golden Percentage - A Clinical Study	Anjana Maharjan
2.4.3 Factor Structure and Reliability of Nepali Version of Perceived Stress Scale among Adolescents of Myagdi District, Nepal	Ashish Raj Subedi
2.4.4 Prevalence of Depression among Survivors of Female Trafficking in Shelter Homes of Kathmandu Valley	Garima Pradhan Malla
2.4.5 Physical Activity and Depression among Higher Secondary Students in Rupandehi District, Nepal	Kiran Thapa
2.4.6 Health Service Utilization By Elderly Population In Urban Nepal: A Cross-Sectional Study	Grish Paudel
2.4.7 Quitting Attempts among Adolescent Smokers in Dharan, Eastern Nepal	Pranil Man Singh Pradhan
2.4.8 Prevalence of Hypertension and Associated Cardiovascular Risk Factors in a Rural Community of Eastern Nepal	Rabin Gautam

2.4.9 Factors Affecting the Medication Taking Behavior of Psychiatric Patients: A preliminary Study from Central Nepal	Ramesh Sharma Poudel
2.4.10 Effectiveness of an Information Booklet on Knowledge regarding Life Style Management among Coronary Heart Disease Patients in a Cardiac Centre, Kathmandu Valley	Rosy Shrestha
2.4.11 A Case- Control Study on Behavioral Risk Factors Of Client with Ischemic Heart Disease of Selected Cardiac Hospitals of Kathmandu District	Sangita Shrestha
2.4.12 Gender-based Study of Pattern Reversal Visual Evoked Potential (PR-VEP) in Children	Sanjay Maharjan
2.4.13 Adherence to Recommended Management among Hypertensive People in Eastern Nepal	Satya Shrestha
2.4.14 Illness Perception and Depressive symptoms among Persons with Type 2 Diabetes Mellitus: An Analytical Cross-Sectional Study in Clinical Settings in Nepal	Suira Joshi
2.4.15 Risk Factors Associated with Coronary Artery Disease among Females in Tertiary Cardiac Center of Capital City of Nepal	Sumitra Sharma
2.4.16 Stages, Self-Efficacy, Motivation, and Decision-Making of Smoking Cessation among Adolescents in Selected Schools of Pokhara Sub-Metropolitan	Swati Khanal
2.4.17 Prevalence and Associated Factors of Elder Mistreatment: A Cross Sectional Study from Urban Nepal	Uday Narayan Yadav
<b>Theme 5: Maternal, Neonatal and Child Health</b>	
2.5.1 An Exploration of Role of Unintended Pregnancy on Maternal and Child Health in Nepal: A Regional Analysis	Komal Prasad Dulal
2.5.2 Male Participation in Safe Motherhood: Patriarchal Perspective and Prescribed Gender Role	Laxmi Raj Joshi
2.5.3 Practices to Prevent Childhood Drowning in Rural Bangladesh	Rasmita Paudel
2.5.4 Assessment of Dental Caries and Nutritional Status among School Children of Kathmandu Valley	Sujita Shrestha
2.5.5 Effect of Birth Outcome and Child Health Care Service Utilization to Physical Growth and Development of Infant: A Community Based Study in Rural Belgaum, India	Dillee Prasad Poudel
2.5.6 Care Seeking Behavior of Neonatal Health and Illness in Jumla District, Nepal	Kamal B Budha
2.5.7 Factors Influencing Institutional Delivery in disadvantaged Community of Lalitpur, Nepal	Manju Karmacharya

2.5.8 The Barriers against Immunization among Children from Socio-economically Disadvantaged Mothers of Two Geographical Areas of Nepal	Meika Bhattachan
2.5.9 Maternal Health in Nepal Progress, Challenges and Opportunities	Chetkant Bhusal
2.5.10 Prevalence of Parasitic Infection among the Children in Bhairahawa	Sujata Shrestha
2.5.11 Factors associated with Choice of Home, Public or Private Sector Delivery in Eastern Nepal	Nisha Manandhar
2.5.12 Postpartum Depression and Anxiety among woman attending PNC services at Maternity and Women's Hospital in Kathmandu, Nepal	Nisha Shrestha
2.5.13 Disease Profile and Outcome of Newborn Admitted to Neonatal Intermediate Care Unit at Tertiary Care Center, Nepal	Ram Hari Chapagain
2.5.14 Factors influencing Modes of Delivery among Post-Partum Women in B. P. Koirala Institute of Health Sciences, Nepal	Sajani Limbu
2.5.15 A School Based Intervention Study on Health Education Regarding Preconception Care for Preventing Birth Defect among Rural Middle Adolescent Girls in Rupandehi, Nepal	Sharmistha Sharma
2.5.16 Interventional Study on Knowledge and Practice of Hand Washing among School Age Children in Government School of Kathmandu	Samita Shrestha
<b>Theme 6: Sexual and Reproductive Health and Rights</b>	
2.6.1 Stigma and Discrimination Management in Nepal: A Study of People Living with HIV in Kathmandu and Pokhara Valleys	Ram Pd Aryal
2.6.2 Menstrual Hygiene Practices and School Absenteeism amongst School Girls from Public and Private Schools of Kathmandu District, Nepal	Shristi Bhochhibhoya
2.6.3 Exploring the Level of Knowledge, Attitude and Practices of Emergency Contraceptive among College Students of Banepa Municipality of Kavre District	Shrijana Dahal
2.6.4 Effectiveness of Educational Intervention on Knowledge regarding Uterine Prolapsed among Reproductive Age Group Women of Budhanilkantha Municipality Ward No 7 of Kathmandu District	Pragya K.C.
2.6.5 Practice and Cultural Beliefs related to Menstrual Management among Adolescent Girls in selected Government Schools of Bhaktapur District	Sabina Khadka

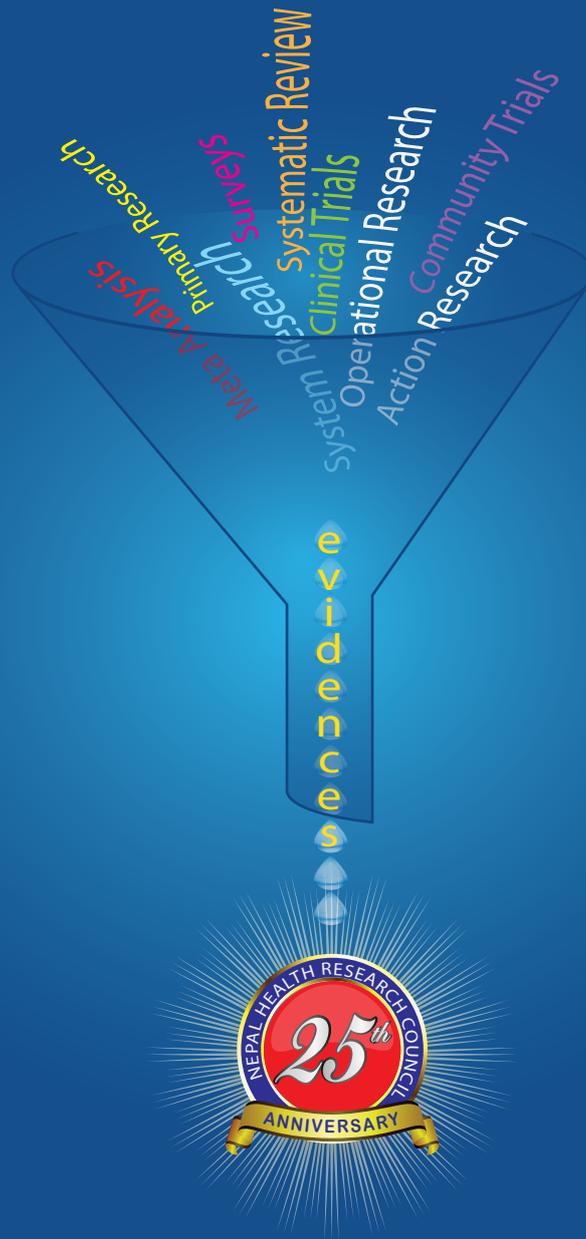
2.6.6 Correlates on Awareness of Abortion Legalization among Adolescent Girls in Nepal	Sajana Maharjan
2.6.7 Sexual Risk Behavior and Health Consequences among Adolescents in Banepa Municipality, Kavrepalanchowk	Pramita Manandhar
2.6.8 Utilization of Family Planning Methods among People Living with HIV and AIDS in Kathmandu, Nepal	Rajani Pokharel
2.6.9 Barriers affecting Young People's Access to and Use of Family Planning Services: A Review of Literature from Nepal	Sophika Regmi
2.6.10 Determinants of Awareness on Abortion Legalization up to 12 Weeks Gestation in Any Condition	Mukta Shah
2.6.11 Effectiveness of Educational Intervention on Knowledge regarding Emergency Contraceptives among Study and Control Group of Late Adolescent Girls	Sunita Thapa
2.6.12 Family Planning Practice among People Living with HIV/ AIDS (PLWHA) attending Anti-Retroviral Therapy (ART) Clinics of Eastern Nepal	Radhika Upreti
2.6.13 Risky Sexual Behavior among Youth in Public and Private Colleges in Kathmandu, Nepal	Manisha Singhal
<b>Theme 7: Environmental and Occupational Health</b>	
2.7.1 Successful Policy Influence to Eliminate Lead Exposure from Decorative Paints, Nepal	Ram Charitra Sah
2.7.2 A Study on Musculoskeletal Disorders, Hearing Quality, Ocular Problems and Treatment Seeking Behavior of Long Route Drivers of Sunsari District	Suman Bhatta Paneru
2.7.3 Epidemiological Study of Pesticide Poisoning Cases in Chitwan, Nepal	Deepak Gyenwali
2.7.4 Personal Protective Equipment Usage by Solid Waste Handlers of Kathmandu Metropolitan: Health Belief Model Perspective 2015	Anusha KC
<b>Theme 8: Biomedical Research</b>	
2.8.1 Evaluation of Serum Lipid Profile Parameters and C-peptide among Breast Cancer Patients Undergoing Chemotherapy: A Case-control Study	Anil Singh Basnet
2.8.2 Iodine Status, Thyroid function and Anti-thyroid Peroxidase Antibody Among Nepalese Pregnant Women	Saroj Khatiwada
2.8.3 The Prevalence of Low Triiodothyronine in Patients with Chronic Kidney Disease	Bishal Raj Joshi

2.8.4 Detection of Inducible Clindamycin Resistance and Biofilm Production among Staphylococcus aureus Isolates from the Clinical Specimens	Ankit Belbase
2.8.5 Cystatin-C as a marker for renal impairment in Preeclampsia	Preksha Niraula
2.8.6 Biochemical Analysis of Gallstone in Patients Operated at BPKIHS	Basanta Gelal
2.8.7 Comparison of Formalin Ethyl Acetate Sedimentation and Zinc Sulfate Flotation Techniques for the Detection of Intestinal Parasites	Dinesh Pd Joshi
2.8.8 Detection of Kala-azar Cases by PCR Method in Nepal Using Rapid Diagnostic Kit as Source of DNA	Kishor Pandey
2.8.9 Seasonal Microbial Quality of Drinking Water -A case study of Salyan from Source to Point of Use	Manish Baidya
2.8.10 Isolation of Salmonella Species from Bagmati River	Manita Aryal
2.8.11 Early Detection of Pre-malignant lesion of Cervix by Visual Inspection with Acetic Acid in Duhabi, Eastern Nepal	Mona Sharma
2.8.12 Prevalence of extended spectrum beta-lactamase producing Klebsiella pneumonia isolated from urinary tract infected patients	Prakash Chaudhary
2.8.13 Corynebacteriumxerosis: An unfamiliar pathogen	Ranjana Parajuli
2.8.14 Vancomycin Resistant Enterococcus faecalis Causing Diarrhea in a Renal Transplant Patient	Ranjit Sah
2.8.15 Plasmid Profiling and Phenotypic Detection of Different -lactamases Production among Multidrug-Resistant Uropathogenic Escherichia coli Isolates	Sabnum Shrestha
2.8.16 Efficacy of Combination Therapy Against Nalidixic Acid Resistant Salmonella	Shambhu K Upadhyay
2.8.17 Phenotypic Detection of OXA-48 (Oxacillinase) Producing Providencia in an ICU Patient for the First time in Nepal	Ranjit Sah
2.8.18 Interaction of Mast Cells may lead to inhibition or tolerance in different tumor cells	Sandeep Paudel
2.8.19 Thyroid Dysfunction and Thyroglobulin level in Iodine Deficient Children of Udayapur, Nepal	Saroj Kunwar
2.8.20 Iodine Status and Thyroid Dysfunction Among Primary School Children of Udayapur District, Nepal	Saroj Thapa
2.8.21 Association of Thyroid Profile and Prolactin Level inpatient with Secondary Amenorrhea	Sujata Shrestha
2.8.22 Prevalence of Inducible Clindamycin Resistance in Staphylococcus aureus Isolated from Skin and Soft Tissue Infections	Suman Shrestha

2.8.23 Association Between Serum Uric Acid, Urinary Albumin Excretion And GlycatedHaemoglobin In Type 2 Diabetic Patient	Sunita Neupane
2.8.24 Effect of Periodontitis on Systemic C-reactive ProteinLevels	Suajaya Gupta
2.8.25 Association of Lipid Profile with Thyroid Function Test in Thyroid Disorder Patients	Narayan Gautam
<b>Theme 9: Food and Nutrition</b>	
2.9.1 Nutritional Status of Under Five Children in Former Kamaiyas of Lamki Chuha Municipality, Kailali District, Nepal	Urmila Chaudharuy
2.9.2 Teachers' Knowledge Regarding Malnutrition of School Children at Government Schools of Bharatpur Sub-Metropolitan City	Sumita Paudel

### 6.3 Some photographs





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