

**NEPAL HEALTH RESEARCH COUNCIL
(NHRC)**

ANNUAL REPORT

Fiscal Year 2074/75 (17 July 2017 - 16 July 2018)

**Government of Nepal
NEPAL HEALTH RESEARCH COUNCIL
Ramshahpath, Kathmandu**

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FOREWORD

Nepal Health Research Council (NHRC) is an autonomous body under the Ministry of Health and Population, Federal Democratic Republic of Nepal. NHRC was established in 1991 by an Act of Parliament and was given the responsibility to promote and coordinate health research for improvement of the health status of the people of Nepal. NHRC aims to create conducive environment for health research and helps the researchers and research institutions in enhancing their research capacity.

NHRC has been conducting research projects, providing health research grants, conducting research trainings workshops and dissemination programs to promote research activities. In order to carry out the different activities, NHRC receive funding support from the Government of Nepal/Ministry of Health and Population, World Health Organization (WHO), UNFPA, UNICEF and other national/international organizations.

It is my great privilege to bring out the annual report of the NHRC for the fiscal year 2074/75 (17 July 2017 – 16 July 2018). This report reflects the activities implemented within the year and also highlights the achievement accomplished. It aims to share the information about the research activities, carried out in order to promote health research and improve utilization of the research findings for the development of health policy of Nepal.

I am thankful to Mr Arun Kumar Sah, Coordinator of preparing this Annual Report for his valuable effort in making annual report successfully.

I would also like to express my sincere thanks to all the institutions and individuals who supported NHRC to carry out its activities. I am thankful to Mr Nirbhay Kumar Sharma, Deputy Chief Admin Officer, Mr Subodh Kumar Karna, Deputy Chief Account Controller, Dr Meghnath Dhimal, Chief, Research Section, Mr Bijay Kumar Jha, Training Officer, Ms Namita Ghimire, Ethical Review, Monitoring & Evaluation Section, Mr Chandra Bhushan Yadav, Library & Information Officer, and Research Officers of NHRC for their valuable effort for making this annual report successful.

Lastly, I would like to give my sincere thanks to all the staff of NHRC for their great effort for publishing this annual report.

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

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1. INTRODUCTION

Nepal Health Research Council (NHRC) is the national apical body for promoting health research across the country. NHRC was established in 1991 by an Act of Parliament and was given the responsibility to promote and coordinate health research for improvement of the health status of people of Nepal.

The major focus areas of NHRC have been research regulation, evidence generation including translation into policy and practice and research capacity building. It serves as the main national institution responsible for technical and ethical review of proposals submitted by individual health researchers, national authorities, NGO, INGO's and universities. After appropriate review these proposals are approved by ERB of NHRC. In its role of generating evidences, it carries out research on its own on national priorities and has major focus on national representative studies. Finally, in its role of research capacity building, it provides trainings on various aspects of health system research methodology to aspiring researchers in order to develop a critical mass of people who can develop good quality research proposals. The aim of NHRC is to maintain high levels of technical and ethical standards of research carried out in Nepal.

NHRC has been providing health research grants to the researchers in order to enhance the research activities throughout the country. It also conducts research trainings, workshops and dissemination programs in development regions to promote research activities and generation of evidences. NHRC also facilitates access to research finding from different research reports, journals, books, magazines etc. through the library and digital data base.

2. OBJECTIVE OF THE NHRC ANNUAL REPORT

The main objective of publishing the NHRC annual report of this fiscal year 2074/75 (17 July 2017 – 16 July 2018) is to compile all the activities in a systematic order and to disseminate the information about the research activities. And the rationale behind production of annual report is the statement in Nepal Health Research Council's Act, 1991 Section 17 that Council shall have to submit an annual report of its activities to Government of Nepal in the end of every fiscal year.

3. MAJOR ACTIVITIES OF NHRC

3.1 Health Research Grants

NHRC has been supporting and encouraging researchers and students to conduct research by providing several types of grant under various titles. Grants are specifically focused to encourage and support the researchers who intend research on the priority health related areas. Grants are provided to the researchers to promote health research culture and to create more research activities within the country. The grants are provided with the support of the Government of Nepal (GoN), World Health Organization (WHO) & other research institutions. However, in this fiscal year, NHRC have provided provincial grants for 25 individual and post graduate grants for 35 individuals.

(For more information refer to Annex – I)

3.2 Training & Workshops

NHRC has been conducting different kind of trainings and workshops related to health research. The workshops include training workshop on health systems research proposal development, training workshop on data management and analysis, report writing, ethical review process, and meetings with different Institutional Review Committees (IRCs) in different medical colleges. All the trainings/workshops/meetings were conducted with the support of Government of Nepal, World Health Organization & other institutions.

(For more information refer to Annex – II)

3.3 Dissemination of Health Research Findings

Considering the importance of bringing out the findings of research, making it available to be used and just not keeping them as a report, NHRC promotes research to be disseminated. One of the ways that NHRC follows to disseminate the findings is by organizing dissemination workshops. The aim is to promote the utilization of the findings to formulate new plan and policy and to revise the existing policy as well as bring changes in practice. To fulfill this objective NHRC conducted dissemination workshops in different regions of Nepal. There are no dissemination program held in this fiscal year.

3.4 Capacity Strengthening Training of NHRC Personnel

Nepal Health Research Council provided and nominated its staffs in different types of trainings according to the needs in the relevant fields in order to strengthen the knowledge and capacity of the staffs and officials.

(For more information refer to Annex – III)

3.5 Publications

NHRC published a number of reports during the last fiscal year, apart from the peer reviewed index journal, Journal of Nepal Health Research Council. During this fiscal year the frequency of publication of this peer reviewed journal was increased from triannual to quarter-annual. Other reports include different Training Workshop, Dissemination Workshop and Research Reports of the various studies conducted by NHRC.

(For more information refer to Annex –IV)

3.6 Status of Research Projects/Activities

Nepal Health Research Council conducted different research activities supported by Government of Nepal, World Health Organization and other different agencies. This is following:

3.6.1 Prevalence of Selected Chronic Non-Communicable Diseases in Nepal

Status: Ongoing

Objectives:

To determine the community-based prevalence of the selected chronic diseases {Coronary Artery Disease(CAD), Chronic obstructive pulmonary diseases(COPD), Diabetes Mellitus(DM), Chronic Kidney diseases (CKD) and Cancer (self reported)} in Nepal.

Background

Non-communicable diseases (NCDs) are the leading causes of death worldwide and so in

Nepal. They surpass communicable diseases, nutritional deficiencies, maternal and neonatal conditions as the major cause of hospital admissions, disabilities and deaths in Nepal. Although the 2013 STEPS survey conducted in Nepal has provided data on prevalence of NCD risk factors, the population based prevalence of major NCDs are still largely unknown. This study aims to assess the prevalence of selected NCDs [Coronary Artery Disease, Diabetes Mellitus, Chronic Kidney Disease, Chronic Obstructive Pulmonary Disease (COPD)] among people aged 20 years and above, from a nationally representative sample.

Methodology

Study population

The study population will include participants of both sex aged 20 years and above. Participants will be eligible for the study if they fulfill the criteria indicated in the box below.

Inclusion criteria:	Exclusion criteria:
Living at their place of residence for at least six months or more Able to give consent	Too frail to participate in the study People unwilling or unable to provide consent

Sample design

Sample size

We considered the prevalence of raised blood glucose ($p=4\%$) from NCD risk factors survey in 2013 for sample size calculation (9). Taking $Z= 1.96$ at 95% confidence level and margin of error (d) 20% of p, we reached to an initial sample size of 2305. With design effect of 2, adjusting the sample size for 3 domains and 20% non-response rate, our optimum sample size was 12965 and we rounded this off to 13200 such that we could enroll 33 individuals from 400 clusters across the country.

Sampling technique

For the survey, we have considered wards (sub units of village development committees (VDCs) and municipalities – the lowest administrative units) as clusters and taken them as the Primary Sampling Units (PSUs). We have sampled a total of 400 clusters (PSUs) in close coordination with Central Bureau of Statistics. The survey team in the field will select 33 households (secondary sampling units – SSUs) from each cluster using systematic random sampling. Prior to sampling, we will obtain the list of households in the selected ward from reliable local source (VDCs/Municipalities, district health offices local health units such as primary health centers, health posts, other local village level committees such as forest consumer committee, water and sanitation consumer committees) which will serve as sampling frame. In case the list is not available we will conduct social mapping of the ward to generate the sampling frame. In municipalities, one ward covers a large number of households and each ward has more than 5 and some up to 100 streets (margs or toles). We will randomly select three margs or toles (sub units) using lottery method. We will then distribute the 33 households across the three sub units selected proportionately and from each of the sub units we will sample respective number of households using systematic random sampling as described above with the help of sampling frame either already available or generated by the survey team. In case, the selected ward does not have enough households i.e. 33 we will combine geographically adjacent two wards with the selected ward to make the combined wards a sampling unit and select 33 households from that unit using same procedure as mentioned above. We will list eligible candidates (20 years and above) from the selected household according to age and sex (males first and then females in descending order) in KISH table and select one eligible candidate from each household.

Survey instruments

Study Components	Measurements	Study Instruments
Interview for Background Information and History of diseases and risk factors	<ul style="list-style-type: none"> • Socio-demographic information (age, sex, ethnicity, religion, education, marital status and primary occupation) • Risk factors (tobacco use and alcohol consumption) • History of Coronary Artery Disease (CAD) • History of Diabetes • History of Cancer • History of Chronic Kidney Disease (CKD) 	Structured questionnaire <ul style="list-style-type: none"> • Mobile phones with special data collection software (REMO) • CAD-Rose Angina Questionnaire (RAQ) • COPD Diagnostic Questionnaire (CDQ) • NCDs risk factors survey questionnaire
Physical Measurements	<ul style="list-style-type: none"> • Height • Weight • Blood pressure and • Waist-hip circumference 	<ul style="list-style-type: none"> • Stature meter • Seca Weighing Machine • Seca tape • Omron digital blood pressure machine
Biochemical Measurements	<ul style="list-style-type: none"> • Blood glucose • Blood lipids • Serum Creatinine • Urine Albumin and Creatinine • Other urine tests (PH, specific gravity, protein, sugar, ketone, bilirubin, urobilinogen, nitrite, blood, leukocytes and ascorbic acid) 	<ul style="list-style-type: none"> • Semi-automated Clinical Chemistry Analyzer • Urilyzer
Physiological Measurements (For identifying coronary artery disease and pulmonary function)	<ul style="list-style-type: none"> • Electrocardiography • Spirometry 	<ul style="list-style-type: none"> • 12 lead electrocardiogram machine • Spirometer

Plan for data analysis

We will use android mobile phones inbuilt with data collection software (REMO) to collect data digitally. There will be separate forms/questionnaire for Day 1, Day 2 and Follow up. The enumerators will collect the data in the field and send them to the server on day to day basis after completion. Core research team based at the NHRC will then extract data through server

using specific username and password in various formats (CSV, SPSS, Stata). The researchers will match common variables (Participant ID, name, age sex, height, weight and BMI) in the dataset and carry out data cleaning including correction of inconsistencies in SPSS version 20.0 for day1 and 2 data. We will apply the same process for data from the follow up data collection for chronic kidney disease. We will assign missing data with unique codes and label them as missing. We will merge the cleaned dataset from day1, day 2 and follow up using the participant's identity number and again check the final dataset for any other inconsistencies. We will calculate sample weights using the probability of selection at each stage of sampling. We will calculate the final weight by first multiplying P1 (probability of selection at ward/PSU level), P2 (probability of selection at household/SSU level), P3 (probability of selection at individual level), and then taking the inverse of final probability. We will then export the dataset to Stata version 13 for analysis and produce descriptive results for each of the outcome variables using complex sample analysis considering the clusters, strata and weight.

3.6.2 Population Based Cancer Registry in Nepal

Status: Ongoing

Background

Nepal Health Research Council, a national apical body of Government of Nepal, responsible for providing scientific study and quality health research in the country, has started Population Based Cancer Registry in Nepal since January 1, 2018. Starting with Kathmandu Valley, PBCR has been expanded to other districts as well in order to have representative information throughout the country. Kathmandu valley cancer registry covers the population of Kathmandu, Bhaktapur and Lalitpur districts of Province 3, cancer registries in Siraha, Saptari, Dhanusha and Mahottari covers the population of four districts of province 2, and Rukum cancer registry covers the population of Rukum district of Province 5 and 6. NHRC is making close collaboration with Ministry of Health and Population (MoHP) and WHO to establish the registry in Nepal, which has been technically supported by International Agency for Research on Cancer (IARC). The objective of the registry is to generate evidence on cancer incidence, patterns and trends of disease and mortality related to cancer in the defined population, and also to enhance national capacity for sustainable PBCR in Nepal. The cancer registry data will be useful in planning cancer control activities and to strengthen cancer care services by the government of Nepal. The registry office is located in Nepal Health Research Council, Ramshah Path, Kathmandu.

Population Covered

The total population of Nepal according to the census 2011 is **2,64,94,504**. Population Based Cancer Registry in Nepal which includes registry in province no. 2, 3 and 6 covers **20.3% (53,84,523)** of the total population as shown in the table below.

Cancer Registry	Province	Metropolitan City / Municipalities	Rural Municipalities	Population
PBCR Kathmandu valley	3	21	3	2,517,023
PBCR Siraha, Saptari, Dhanusha and Mahottari	2	39	28	2,658,933
PBCR Rukum	5 and 6	3	6	2,08,567
Total		63	37	53,84,523

Methodology

The methodology of data collection by the registry is both active and passive depending upon the data sources. There are two major ways through which data are obtained for the registry. One is from the facilities which include hospital, pathology laboratory, hospice, department of health service bipanna section and civil registration. The registry personnel visit these sources at regular intervals and actively collect cancer cases data available there. The data is collected from the records of the sources since January 2018 and recorded in the standard format. Other is from the community in which orientation is given to the Health Coordinators at each Municipality/Rural Municipality, Health In-charges and even the Female Community Health Volunteers (FCHVs) wherever necessary. Data is then obtained by FCHVs from the population through home visit submitted to the Health In-charges. The Health In-charges submit data to the Health Coordinators and the Health Coordinators to the NHRC office on monthly basis. The obtained data from all these sources is verified for the completeness, accuracy and residence and then entered into CanReg5 Software at the NHRC office.

For the Kathmandu Valley cancer registry, there are many cancer diagnostic and treatment facilities in Kathmandu valley. Thus, most of the cases can be obtained from these facilities within Kathmandu, Bhaktapur and Lalitpur districts. However, people sometimes visit B.P. Koirala Memorial Cancer Hospital (BPKMCH), Bharatpur, Chitwan around 200 km away from the valley. So we collect the data of the cases of our selected districts from there as well. Since people also visit India for cancer treatment, we have coordinated to some familiar cancer hospitals in India to collect data of cancer patients. Nevertheless, for other two registries of Province no. 2 and 6, there are not any diagnostic and treatment facilities within Siraha, Saptari, Dhanusha, Mohattari, and Rukum districts. Thus, besides the data from the communities through Female Community Health Volunteers, health post incharge and health coordinators of these districts, PBCR has coordinated with different diagnostic and treatment facilities inside and outside Kathmandu valley such as Banke, Bardiya, Nepalgunj, Dharan, Birgunj, Biratnagar, Chitwan and even with India.

Result

The data collection of cancer cases from all the sources has been completed till August, 2018. Out of total **5260** cases (new and old) checked by PBCR from various sources, **2612** cases have been found to be new cases.

The incidence was separated according to the date of diagnosis, and all the cases were contacted through the phone calls in order to confirm their residence. The verification and residence confirmation of the cases are completed till May 31st 2018, which shows a total of **702** cancer cases from Kathmandu Valley, **256** cancer incidences from Siraha, Saptari, Dhanusha and Mahottari and **23** incidences from East and West Rukum.

The Annual Report 2018 is expected to be completed and published till September 2019. However, interim analysis of Kathmandu Valley registry until May 2018 has been completed. The major findings are summarized below

In 702 cases from Kathmandu Valley, cancer incidence is higher among females comparing to the males (379 Vs 323). The higher incidence is found among the age group of 70-74 years followed by the age group of 65-69 years and then 60-64 years with an age specific rate of 230.5, 203 and 185.3 per 100,000 respectively. In male the top leading cancer site is lungs followed by lip and oral cavity, colon and rectum, stomach, pharynx, bladder, larynx, pancreas, gall bladder and kidney. In females, breast, lungs, cervix uteri, thyroid, gall bladder, colon and rectum, ovary, stomach, lip and oral cavity, Non-Hodgkin's disease and brain are the leading cancer sites.

There might be under registration or under diagnosis of cancer cases as the pediatric cases are found very less. Similarly, we may have missed clinically diagnosed and radiological diagnosed cases. The primary unknown cases are only 6.2% in males and 4% in females which signifies the quality of diagnostic information as well as proper documentation of health care providers.

3.6.3 Population based screening of sickle cell disorder in Tharu community of Bardiya district, Nepal

Status: Ongoing

Objectives: To determine the prevalence of sickle cell disorder and develop strategy to prevent its further inheritance

Specific Objectives

- To determine the prevalence of Sickle cell disorder in 1- 29-year age group in Tharu community of Bardiya District
- To identify the socio demographic factors related to sickle cell disorder.
- To identify the clinical symptoms related to Sickle cell disorder.
- To provide post test counseling of the genetic inheritance of disease after the findings of the research.

Background

SCD was first reported in the literature in November 1910 by James B. Herrick, who referred to “peculiar elongated and sickle-shaped red blood corpuscles in a case of severe anemia.

Sickle Cell Disease is a serious, inherited condition affecting the blood and various organs in the body. It affects the red blood cells, causing episodes of sickling, causing experiences of pain and other symptoms.

It has been a century since the first description of abnormally elongated red blood cells in an anemic patient and the link with clinical symptoms of what is now called sickle cell anemia (SCA) has been demonstrated. Sickle hemoglobin (HbS), a structural variant of normal adult hemoglobin, results from single amino acid substitution at position 6 of the beta globin molecule (B 6 Glu- Val). When HbS is inherited from only one parent, the heterozygous child is usually an asymptomatic carrier. When inherited from both parents the homozygous child suffers from SCA. HbS is the most common pathological hemoglobin variant worldwide. Without treatment, which is rarely available in low-income, high burden countries, the vast majority of children born with SCA die before the age of 5 years.

Sickle Cell Disease affects nearly 100 million people in the world and it is responsible for 50% of deaths with the most severe form of disease.

Over 300000 children are born annually with SCD and over 70% of the births occur in Sub-Saharan Africa where majority of them die before the age of 5 years as a result of poor standard of management (1).

The highest prevalence of Hb S is seen in blacks from tropical Africa who participated in slave trade. Hb S is also seen in Mediterranean basin, Saudi Arabia and parts of India. Approximately 45% of the population, in some parts of Africa has sickle cell trait and 8% of blacks in United states carry sickle gene. It has been recognized that sickle cell trait has its highest in areas that are hyper endemic for malaria. It suggests that carrier state of Hb S afforded selective protection against lethal forms of malaria.

The annual mortality rate per 100000 people from sickle cell disorders in South Asia has decreased by 63.9% since 1990, an average of 2.8% a year.

Nearly 20 million people suffer from Sickle Cell Anemia in India. The Sickle Cell gene in India was first found among tribal groups in South India but is now recognized to be widespread, especially in Central India, where the prevalence in different castes and communities varies between 9.4-22.2%.

In India sickle cell anemia is more common in males, the male: female ration being 3.6:1 in sickle cell disease patients and 1.38:1 in carriers (Hb AS). (3)

As per the literature, it was during 1956 A.D when Nepal Malaria eradication organization was established and two decades later the early cases of Sickle cell in the same blood samples was observed on alkaline electrophoresis of those residing in the malaria endemic zone like chitwan and inner terai region of Nepal.

The first reported case of Homozygous Sickle cell anemia in Nepal has been documented by Institute of Maharajgunj, in January February 2003 from Nawalparasi district. (8)

In 2015, a study was done by Nepal Health Research Council titled "Anemia and its Determinants among women of reproductive age in Mid-Western Terai of Nepal" in Dang, Banke and Bardiya with a population of 875, which reported that 18% of the diagnosed Tharu population were affected from Sickle cell trait. (5)

A number of researches have been performed in these regions. Based on the case studies, the medical institutions like Bheri zonal hospitals have started free treatment to those who are diagnosed of Sickle cell disorder.

In Nepal it was found that Tharu (Chaudhary; 82.8%) was the most common ethnic group with this disorder followed by Tharu (Rana; 8.5%). (6). The disorder was also infrequently found in other ethnic groups including Lama, Neupane and Baral. Tharu (Chaudhary and Rana) were found to have both Hb SS and Hb AS where as Lama, Neupane and Baral suffered from only Hb AS. Subgroups Chaudhary and Rana Tharus are from Terai region of Nepal where there is prevalence of Malaria. (6)

According to a 2016 study by Pokhara University that looked into health condition of Tharus in Banke and surrounding area, 12 per cent of the respondents had sickle cell trait. These scenarios captured on the basis of intermittent micro projects reflects a high prevalence of the concurrent disorder among 1.8 million population of Tharus, (nearly 1.1 million living in the ten districts of western Terai). (7)

Despite some level of progress in the Sickle cell projections, there is no yet documented record available to demonstrate the exact number of people in Nepal affected by Sickle cell anemia, trait or diseased.

Thus this study aims to describe the associated clinical symptoms, to the age related prevalence of Sickle cell disordered in an area with highest number of this ethnic group.

Current Status and Provision of Sickle cell disorder in Nepal:

Ministry of Health and Population, Nepal estimates about 2000 Tharu people have sickle cell anemia thorough out the country, with heavy prevalence in Midwestern and far western region, where more than 1300 people have been diagnosed since 2011.

By 2014, the Constituent Assembly took up the issue of Sickle cell disease, recognizing it as national health crises and declaring the disease a Public health problem.

According to Department of Health Services, one new patient is diagnosed at Bheri Zonal Hospital each day and 3- 5 patients are visiting the hospital on a daily basis for a follow up.

In this context, Honorable Prime minister, Mr. Pushpa Kamal Dahal on September 7,2016 addressed the nation on Health issues and referred to identify all the affected followed by DNA analysis of 20000 Tharus with the distribution of genetic card along with marriage counseling.

Ministry of Health and Population, Nepal has a provision of impoverished citizen fund (Bipanna Nagarik Kosh) that was established after revolutionary movement of 2005. This fund was established to provide some financial relief to people from troublesome and expensive diseases. Identified and categorized list of 8 severe diseases under this program are Cardiovascular diseases, Cancer, Renal failure, Alzheimer's disease, Parkinson's disease, Head and Spinal injury, Sickle Cell Anemia and Stroke. Relevantly, each patient is provided NRs. 1,00,000/- as health care expense including medicines required for disease management

Services under this program for Sickle Cell Anemia are available at various health facilities and hospitals recognized and enlisted by the Ministry of Health.

Hospitals allocated for sickle cell anemia treatment and relief fund.

- Rapti sub zonal hospital, Dang.
- Bheri zonal hospital, Nepaljung, Banke.
- Lumbini zonal hospital, Butwal, Rupendehi.
- Seti zonal hospital, Dhangadi, Kailali.
- Ghoda Ghodi hospital, Sukhad, Kailali.
- Mahakali zonal hospital, Mahendranagar.
- District hospital, Bardiya.
- District hospital, Nawalparasi.
- District hospital, Kapilvastu
- Civil service hospital, Kathmandu

According to Department of Health Service, annul report 2014/ 15/ 16 (2071/72/73) for impoverished citizens, (Bipanna Nagarik) F/Y 2071/72/73, civil hospital, Kathmandu provided free treatment for 23 patients and Seti zonal hospital, Kailali provided free treatment to 16 patients.

A total of 362 referral cases of Sickle cell disorder has been reported from district health office, Bardiya in a period of less than three years (2015 March to 2017 November).

Owing to all these current status of the disordered cases, the Epidemiology and Disease control division of Department of Health services, Ministry of Health and Population has issued the first edition of National Guideline for Sickle cell disease and Thalassemia management which has come up as the first authentic guideline for the health managers, doctors, nurses, laboratory professionals and paramedics of Nepal.

Nongovernmental organizations like Sickle cell Nepal and Sickle Cell Anemia, Nepal etc are some of the few organizations working in the affected areas with a mission of creating awareness and recording the lives with sickle cell disorder.

Pathophysiology

Hemoglobin S differs from hemoglobin A by the substitution of valine for glutamic acid at position 6 in the β chain.

Sickling disorders are caused by the heterozygous state for hemoglobin S (sickle cell trait, AS), the homozygous state (sickle cell disease, SS), and the compound heterozygous state for hemoglobin S together with hemoglobins C, D, E, or other structural variants like alpha and beta thalassemia.

Although this has been known for nearly half a century, it is still not absolutely clear how it gives rise to the sickling phenomenon. The latter appears to be due to the unusual solubility characteristics of hemoglobin S which undergoes liquid crystal (tactoid) formation as it becomes deoxygenated. In this state, aggregates of sickled hemoglobin molecules arrange themselves in parallel, rod-like fibres, made up of a complex solid core about 21 nm in diameter, composed of 14 filaments arranged as 7 pairs of double filaments. Much is now known about the complex interactions whereby the $\beta 6$ valine substitution stabilizes the molecular stacks in the deoxy configuration of hemoglobin. There is considerable variation in the extent to which different hemoglobins are able to participate with hemoglobin S in the sickling process. This accounts for some of the clinical variability of the different sickling conditions. For example, hemoglobin F is almost completely excluded from the sickling process; increasing concentrations in the red cell reduce the rate of sickling.

Sickling is an extremely dynamic process. Red cells containing sickle hemoglobin at a high concentration endure a series of cycles of sickling and desickling with progressive membrane damage and loss of plasticity. Finally, these dry, rigid cells become irreversibly sickled. Sickling of this type has two main effects. First, sickled erythrocytes have a shortened survival, leading to a chronic hemolytic anemia. Second, and more importantly, these abnormal red cells tend to adhere to the various receptors on the walls of small blood vessels with the production of aggregates, blockage of the vessels, vascular stasis, and, ultimately, tissue damage. Changes in nitric oxide-induced vascular relaxation may also contribute to these complex interactions.

Clinical features: -

- 1) Sickle cell trait—causes no clinical disability except in conditions of extreme hypoxia.
- 2) Sickle cell disease—typical presentations in infancy include symptoms related to anemia or infection, and infarction of bones in the hands or feet causes dactylitis ('hand and foot' syndrome).

Acute exacerbations ('crises') can be

- 1) Thrombotic generalized or localized bone pain, abdominal, pulmonary, neurological;
- 2) Aplastic
- 3) Hemolytic
- 4) Sequestration—spleen, liver, lung
- 5) Various combinations of (1) to (4).

Chronic complications include

- 1) Aseptic necrosis of bone
- 2) Chronic leg ulceration
- 3) Chronic kidney disease
- 4) Recurrent priapism.

There is large amount of heterogeneity in the expression of sickle cell disease which is not fully explained by the single mutation or different variants of hemoglobin S. This variability is manifested by wide spectrum in both frequency and intensity of painful vaso-occlusive crises as well as highly variable degrees of organ dysfunction. The Patho-physiologic processes that lead to sickle cell disease related complications result from a combination of hemolysis and vaso-occlusion. Hemolysis occurs as a result of repeated episodes of hemoglobin polymerization/de-polymerization as sickle red blood cells pick up and release oxygen in the circulation. Red blood cell membranes become abnormal from this process and red blood cells have a shortened lifespan. Hemolysis can occur both chronically and during acute painful vaso-occlusive crises and also results in the release of substantial quantities of free hemoglobin into vasculature. Chronic multi organ dysfunction, and which is characterized by chronic inflammation and ischemia-reperfusion injury. Data suggest that neutrophils play a key role in the tissue damage which occurs as both neutrophil numbers are increased and evidence suggests that they are abnormally activated and adherent. Likewise, recent data suggest that sickle red cells induce adhesion of lymphocytes and monocytes to the endothelium such that these may contribute to the pathogenesis of vascular occlusion.

Rationale

It's been more than half a century when the first case of Sickle cell disorder in Nepal was documented and despite a good number of research performed in this area, precisely exact number of its prevalence is yet to be determined thus making it a matter of utmost importance for the management of this disorder. The epidemiological data on Nepal Malaria eradication organization indicates the survival of the Tharus since the prehistoric times in the high risk areas accrediting this group as the malaria resistant as compared to the non survival groups.

High resolution analyses of mitochondrial and Y chromosomal DNA variations of Tharus of Nepal reveals a deep shared ancestry between the Tharu, Indians (Hindus from New Delhi and tribal from Andhra Pradesh), Malaysia, Japan, the Andaman Islands as well as between North and East Africa. (27) This could be probably one of the causes of Tharu being included in the selective evolution towards resistance of *P. falciparum* as well as towards inheritance of point mutation for sickle cell genome.

It has already been reported that Tharu people of Terai region in Southern Nepal have an incidence of malaria caused by *Plasmodium falciparum* about seven folds lower than that of synapatric non Tharu population. (28) The resistance owes to several candidate protective genes like sickle cell trait, α thalassemia and others thus making an evidence for selection evolution towards fixation of an otherwise abnormal gene. Hence, Tharu community has been the long inhabiting tribal group and the survivors of malaria in malaria holoendemic zone.

Again, Newborn screening for sickle cell disease has been recommended as a method of decreasing patient mortality. (16). The data indicate that newborn screening when coupled with extensive follow-up and education significantly decreases mortality. (17). The mortality rate from Sickle cell disease is highest in the first five years of life, and the greatest risk period is the second 6 months of life. Approximately 15% of the young children with sickle cell anemia die of acute infections or anemic sequestration crises. (16-26). In 25% of the children who died, the initial complication was the cause of death. (17). These observations reflect a clustering of life threatening events in the young patient with sickle cell disease. Thus, below 5 years' age group is the major intervention group which highly affects the morbidity and mortality of this population as shown by a number of researches.

Though various researches reflects under five years' age group as the major intervention group, age group of less than one year requires precisely modified protocols like Dot blood spot DNA

extraction that needs to be separately studied under neonatal screening. Besides, the neonatal blood consists of high fetal hemoglobin that masks the sickle hemoglobin and moreover neonatal screening is a high risk based community program as they are acutely prone to infections and fluctuation of the environmental parameters. The aforementioned reasons explain why the age group less than one year of age has to be excluded from the study thus taking into consideration only age group above 1 year and less than 29 years.

The case of consanguinous marriages has been seen in some subgroups while it is strictly avoided by others. Hence, considering consanguinity marriages as one of the important aspect of the inherited genetic disorders, its occurrence cannot be neglected. In the context of an inherited condition such as sickle cell disorder (SCD), it is critical to understand how people with SCD or carriers (sickle cell trait [SCT]) face the challenges of making informed reproductive health decisions. (29)

Within the context of learning early about their sickle cell status and sickle cell inheritance, participants have to understand and agree upon the choice of partner without disease or trait which prevents children from being born with the disease (29). Thus making a core decision in choosing a partner without disease or trait will relieve their forthcoming children from the struggle and sufferings that they have experienced.

People with the SCD or SCT have the options to not have a child, to have a child with or without SCD or SCT, or to seek other non-childbearing options such as parenting an unaffected, non-biological child (e.g., foster, adopt).(29) The decision to have children is influenced by people's knowledge of the genetic transmission of SCD or SCT and their perceptions of the disease severity and risks of pregnancy to the mother, as well as the people's attitudes and beliefs about preserving the family genetic heritage. (29)

Further, for the intergenerational prevention, respondents aged 10-29 years would be included as there still is the provision of early marriage in this community. Thus, raising awareness regarding informed reproductive health decisions and choice of partners for marriage will help to manage marriage counseling as well as Genetic counseling in order to prevent further genetic inheritance. Thus the overall age group of 1-29 years has been opted as the appropriate age group for the study purpose.

The experience of the recent past demonstrates a panicking impact of the reported cases of misdiagnosis of SCD in the in the western region of Nepal. The impact is high on those who are economically challenged and have spent hundred thousands of rupees until their disease have diagnosed. There are a good number of such families who not only have lost their lives but also are heavily indebted.

Methodology

Study design:

This study will be a cross sectional study to determine the prevalence of sickle cell disorder in Tharu community of Bardiya district, Nepal.

Study population

The study population includes children, men and women aged 1–29 years who had been living at their place of residence for at least six months. The inclusion and exclusion criteria of the population under study are defined as below.

Inclusion criteria:

1) All Tharu population aged 1 to 29 years of age residing in Baniyabhar and Dhadhwar as

permanent citizens since at least 6 months.

2) Tharu population including inter racial marriages with their surname as Tharus

Exclusion criteria:

- 1) Those aged less than 1 year and more than 29 years will be excluded.
- 2) Those unable or unwilling to give informed consent.
- 3) Those unable or unwilling to give informed assent of their children.
- 4) Those who are not available at the time of survey will be excluded.
- 5) Those not fulfilling the inclusion criteria will be excluded.
- 6) Those non-Tharu population and visiting Nepal (e.g., tourists)
- 7) Those aged less than 1 year.
- 8) Those aged more than 29 years
- 9) Those with blood transfusion history in last three months
- 10) Those unable or unwilling to give informed consent
- 11) Those unable or unwilling to give informed assent of their children.

Sample design

Mid-western region of Nepal selected purposely In order to assess prevalence of sickle cell disorder among Tharu population, since this region has dense Tharu population(10).Study conducted by NHRC in 2015 revealed the high prevalence of sickle cell disorder in mid-western region (i.e. 2.4%) and among Tharu population 18%(11). Table 1 presents the Tharu population distribution in Western and Mid-western development region of Nepal.

Sample Size

As table three shows the weight of the population by age in Bardiya district, it can be observed that the population aged 1-29 year is high in Bardiya district so apart from other rationale for selecting this age group, due to the coverage of a large sample, above mentioned age group can be included.

This study will be carried out in Bardiya district where Tharu population is 53% and proportion of population aged 1-29 years is 64%. Based on these assumptions, the estimated sample size is 19992. Thus final sample size will be 20000 of respondents aged 1-29 years.

Since, Tharu population of Dhadhabar VDC is 16999 and in Baniyabhar VDC is 14239. The estimated population of 1-29 year is 10878 for Dhadhabar VDC and 9112 for Baniyabhar VDC which 64% of total Tharu population for both VDC separately so the final sample size will be 20000.

Data collection Tool and Technique

Family history of the participant will be taken by using structured questionnaire by the trained enumerators which will be followed by phlebotomy of 3ml of blood by the experienced Staff nurses/Health Assistants in a 5 ml EDTA vial. Identification of the research participants will be

done by barcode system that will minimize the possible entry errors. All the collected samples will be maintained in cold chain until further processed. For the diagnosis of sickle cell disorder, a preliminary screening by complete blood count will be done at Primary Health care center, Magaragadhi Municipality of Bardiya district, in coordination with local level government. This will be followed by HPLC at Bir Hospital. The final confirmatory diagnosis will be done by the DNA analysis for mutation detection and confirmation at Bir Hospital.

Transportation of the sample from the collection site to the diagnostic centres at local level or central level will be done by maintaining the temperature of 2 to 8°C in cold chains boxes and required precaution.

The blood and DNA of the Sickle positive or relevant hemoglobinopathic samples (Thalassemia, compound heterozygote of SCD etc) as detected by HPLC will be stored at NPHL and Bir hospital for a time period of 5 years for further research purposes in future.

Once the blood is collected at the collection site, they will be transferred to the PHC of Magaragadhi, Nepalgunj for CBC on the same day. The same samples will be transported in a semi weekly basis next morning via airways to Kathmandu for HPLC and DNA analysis

All the reports of the diagnosis (CBC, HPLC and DNA analysis) will have an online reporting system with permitted access for the interpretation of the reports by the experts within the TWG members.

The overall steps for sample collection and diagnosis will be as follows:

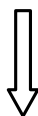
Screening test for Sickle cell disorder: (SCD)

Complete blood Count

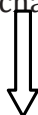
Complete blood count of the collected blood samples will be done by the automated hemato analyzer majorly for the quantitative determination of Hb types, MCV, MCH, and RDW as MCH<77pg, MCV<27 fl and HBA2 of >3.5% are indicative of hemoglobin disorders including Sickle cell anemia, Thalassemia etc.

The phlebotomy and CBC process flowchart:

3ml of blood will be collected in the barcode labeled EDTA vials by the median cubital venipuncture of the research participants by trained Health assistants/pediatric staff nurses/CMLT adhering to the WHO guidelines for phlebotomy.



All the collected samples will be, handled, and stored in cold chain boxes to maintain the integrity of hemoglobin as high heat and humidity can change the levels of hemoglobin A and S



The samples will be stored immediately in cold chain boxes and transported to the Magaragadhi PHC for CBC run and storage of the blood samples.

High performance Liquid Chromatography

Principle:

HPLC, short for **High Performance Liquid Chromatography**, is a form of column chromatography (laboratory technique used to separate mixtures) used frequently in biochemistry and analytical chemistry. It involves passing a mixture which contains the “test solution” & “analyte” through a **column** (stationary phase), by a **liquid** (mobile phase) at high pressure. It also utilizes the process called cation exchange chromatography that allows the separation of the mixture based on the charge properties of the molecules in the mixture. Cation exchange chromatography retains analyte molecules based on coulombic (ionic) interactions. The stationary phase surface displays negatively charged functional groups that interact with positively charged cations in the mixture.

HPLC of the test samples will be performed at Bir Hospital by utilizing The Tosoh Glycated Hemoglobin Analyzers HLC-723 series allow rapid HbA_{1c} analysis with variant detection and high quality β -Thalassemia Screening.

The automated cation-exchange HPLC instrument will be used to quantify HbA₂, HbF, HbA along with the screening hemoglobin variants like HbS, HbD, Hb E and Hb C in a single, highly reproducible system.

Molecular Examination:**Extraction of DNA****Isolation of DNA from Whole Blood**

DNA isolation will be carried out as per the manufacturer’s instructions from the collected blood sample. The eluted DNA samples will be labeled and stored at -20°C for molecular genetic testing.

PCR Amplification

Extracted DNA will be subjected to amplification refractory mutation system (ARMS-PCR) to detect sickle cell mutation (GAG - GTG) in the sixth codon of β globin gene. Amplification-refractory mutation system (ARMS) or allele-specific polymerase chain reaction (ASP) is a method for detecting any single base pair mutation or deletion. We will use it to detect sickle cell allele by using two ARMS primers. One of the primers will be designed to detect normal DNA sequence of β globin gene and is known as normal sickle cell specific primer. While other primer known as Mutant Sickle cell specific Primer, will be designed to detect point mutation GAG - GTG at sixth position of β globin gene which causes SCD and amplification with this primer will occur only in presence of this sickle cell mutation.

Mentioned below are the list of ARMS Primers for Mutation detection of Sickle cell disorder, where SKL-IF(A) and SKL-IR(T) represents the inner forward and reverse primers while SKL-FO and SKL-RO represents the outer forward and reverse primers.

SKL-IF (A)	5'TGGTGCATCTGACTCCAGA3'
SKL-IR (T)	5'AGTAACGGCAGACTTCTGCA3'
SKL-FO	5'CTTAGACCTCACCTGTGGAG3'
SKL-RO	5'ACATGCCAGTTTCTATTGGT3'

Gel Electrophoresis:

All the PCR products will be observed using 2% ethidium bromide under UV illumination.

Flow Chart of Technique for the study

Visit to the selected site for the feasibility study



Establishment of the Laboratory for Complete blood count at Primary health care center of Magaragadhi.



Pilot study to be performed to test our over protocol in 100 samples in a similar setting.



Introduction about the study to the participant



Obtaining ethical consent (verbal & written) from the participant and ethical assent from the participants under 14 years.



Obtaining socio demographic and clinical family history of the same disease from the participants on a sociodemographic form a day before blood collection.



Registration of the research participants on the following day at the blood collection site with the information provided on their form and generation of the participant's barcode.



Determining the height, weight, and blood pressure of the research participants



Collecting Blood sample from the selected participant as defined above



Blood samples will be transported to the PHC of Magaragadhi.



Complete Blood Count test of selected blood samples will be done at PHC of Magaragadhi.



High Performance Liquid Chromatography (HPLC) test will be done at Bir Hospital.



DNA analysis for the confirmation of mutation among participant will be done at Bir Hospital.



Posttest counseling of those who are found to be affected.



Distribution of Sickle cell disorder cards to the affected research participants

Pilot-Testing of Tool

Data collection tool, methodology of sample collection and diagnosis will be performed in 100 samples in a similar setting. All the protocols including data collection, phlebotomy, handling and storage, laboratory tests, LMIS integration, validity and reliability will be standardized and optimized during the pilot testing and the real test will begin only when the pilot testing protocol is ensured for its consistency and reliability.

Validity and Reliability of the Tool

- Questionnaire will be designed with expert consultation.
- Labeling of the blood samples will be done based on bar coding system to minimize the primary error of entry.
- Laboratory management information system (LMIS) software integration will be done in the Equipments for reporting CBC and HPLC to prevent the manual reporting errors
- For blood collection, adequate training will be conducted to enumerators and the recruitment will be done based on the experience of the phlebotomist.
- Blood testing instrument will be calibrated in specific time interval.
- QC documentation of CBC, HPLC and PCR equipments will be maintained on a daily basis.
- Cross validation of the samples will be done from the internal laboratories
- Instrument will be checked regularly for their consistency and adequacy.
- Bi directional LIS system with online reporting will be done for the accurate interpretation of observations obtained through different tests.
- Quality assurance will be performed by cross validating 5 to 10% of the samples from accredited laboratories
- More importantly actual testing will not be initiated unless the valid data in the pilot testing is ensured.
- Spot observation will be performed for handling, testing and reporting of the samples .

Potential Bias

Certain instrumental error may cause some cases to be under-reported or misreported.

Limitation of the study

As this study is concise in only one municipality of Bardiya district it will not represent whole district and whole Tharu community.

Supervision and Monitoring

- 1) Supervision and monitoring document will be developed based on the Standard operating procedure of different processes like, data collection, phlebotomy, storage, handling, laboratory tests and reporting to ensure the level of performance.
- 2) Field level supervision and monitoring will be done by NHRC at different phases of study like at initial phase, mid phase and end phase .

Data management and Analysis

Collected data will be stored in the Nepal Health Research Council office and will be handled

at the same place. All the data obtained from the questionnaire, and analysis reports will be integrated in the server based dolphin software installed at Nepal Health Research Council. Once the analysis done the report will be collected by NHRC and then will be analyzed among population by using SPSS software.

Expected Outcome of the Research

The findings of this study will help to explore the scenario of Sickle Cell Disorder in Tharu community and its related complication.

Plan for utilization of research findings

- The overall findings of the research will be shared with the concerned authorized body and Ministry of Health about prevalence of Sickle Cell Disease and its associated complication.
- Post test counseling will be given to those who are affected by a panel of doctors and medical geneticists, pathologists etc along with the distribution of the laminated genetic cards.
- The report further will be helpful to finalize the protocol of Sickle Cell disease management.

3.6.4 Assessing Trends of Heat Waves and Perception of People about Health Risks of Heat Wave in Nepal

Status: Completed

Excutive Summary

The number of heat waves is increasing worldwide due to climate change and land-use development and especially urban areas magnify the effects of heat waves by concentrating heat emissions (and air pollution) from vehicles and by trapping and absorbing heat between buildings and the pavement of roads. Global warming will unquestionably increase the impact of heat on individuals who work in already hot workplaces in hot climate areas. The increasing prevalence of this environmental health risk requires the improvement of assessment methods linked to meteorological data. Such new methods will help to reveal the size of the problem and design appropriate interventions at individual, workplace and societal level. The aim of this study was to assess the trend of heat waves and perception of people about associated health risks of heat wave in Nepal.

A mixed method study with concurrent triangulation design was done. The trend of heat wave was assessed using secondary analysis of retrospective meteorological data of last 30 years whereas descriptive cross-sectional study was done to explore people's perceptions and behavioral responses towards extreme heat exposure in a warming climate. A qualitative study was also done to assess the current organizational policies on heat wave and to explore key informants' (health service providers, officials of the line ministries, employers etc.) recommendations for improvement.

Meteorological data was collected using the pre-structured format from all the 40 meteorological stations of Nepal that have the record of the required climate variables of the given time range. For the cross-sectional study, face-to-face interview was done using questionnaire among 318 people in three districts. For the qualitative study, key informant interviews were done among school teacher, organization manager, community leaders and farmers using key interview guideline. The questionnaire and guideline were developed after comprehensive review of literature on occupational heat exposure.

Among 318 participants, from each 3 districts, there were 106 participants selected, among them majority were male, 30-49 years and involved in labor activities. Most of them have secondary level of education.

Most of participants were working on outdoor location. Furthermore, participants felt that they were working in hot but 30% participants were not using any kind of Personal Protective Equipment. About 58% participants were suffered from any kind of heat related events, however, 80% participants were deprived from paid leave if suffered from heat related illness/sickness and 89% of participants felt there is increment in temperature every year.

3.6.5 Independent Verification of Disbursement Linked Indicators (DLIs)

Status: Completed

Independent Verification of Disbursement Linked Indicators (DLIs): NHRC is an independent Verification Agency to assess the achievement of DLIs indicators as described and indicated in the DLIs Verification Protocol. NHRC completed verification of DLIs Year I targets during the FY 2074/75. NHRC is verifying the Year II targets.

3.6.6 Non Communicable Disease Risk Factors: STEPS Survey Nepal 2018

Status: Ongoing

Objectives: To assess the prevalence of NCD risk factors in Nepal

Background

World Health Organization (WHO) identified the major eight major behavioral and biological risk factors of non-communicable diseases (NCDs). These are: tobacco use, harmful alcohol consumption, unhealthy diet (low fruits and vegetables consumption), physical inactivity, overweight and obesity, raised blood pressure, raised blood glucose and abnormal blood lipids and its subset raised total cholesterol. Evidences suggest that these behavioral and biological risk factors contribute to chronic diseases like cardiovascular diseases (CVD), cancer, chronic obstructive pulmonary diseases (COPD) and diabetes mellitus. Additional risk factors like high salt consumption are also closely linked to the development of these chronic diseases.

WHO recommends that it is necessary to undertake non communicable disease risk factors survey every five years to facilitate evidence informed planning and programming. The last round of steps survey was done in 2013. However, since the country has moved to federal structure and provincial government will be planning the NCD related activities at provincial level, it's necessary to make the provincial estimates of NCD risk factors. In this context, NCD STEPS survey 2018 is planned to generate evidences on the status of major non communicable risk factors considering provincial structure in context of Nepal.

This study will be able to find the burden of non-communicable disease risk factors. In the base of this evidence, policy makers and planner will be better equipped to make a national action plan for the prevention and control of non-communicable diseases in Nepal.

3.6.7 Febrile illness outbreak Investigation in Sundarharicha-5 Foklan Tapu, Morang District

Status: Completed

Executive Summary

On the date of 24 July 2017, the major national daily newspaper reported that there were

two death cases from unknown disease were found in the Morang district, Sundarharicha Municipality 5, Foklan Tapu. According to news, the death cases were the 14-year-old male child and 5-year-old female child. The common symptom of the disease was fever, coryza, headache, drowsiness.

Addressing the outbreak, a descriptive study was conducted with the team of experts in affected area to investigate and identify the etiological and epidemiological causes, how this happens in the outbreak area for the period of July 2017 to December. Verbal Autopsy (VA) and Key in-depth guidelines were used to identify the major causes of febrile illness. Verbal autopsy interview and Key in-depth interview was done and once the diagnosis was confirmed the patient (134 patients, 37 household) was sent for the further full treatment also. The leptospirosis to a human being is contracted through the contaminated urine of infected domestic and wild animals. The disease is common in summer and rainy season. Socioeconomic factors, environmental conditions, and geographical areas are the associated with the risk factors of Leptospirosis. Leptospirosis is a widespread water-borne spirochetal zoonotic disease caused by leptospire.

The analysis was done in SPSS Statistics 20 version. Descriptive and inferential statistics was done to determine the association of major risk factors to the disease occurrence. Qualitative data (VA and KII) was analyzed manually. Of the 7 serum sample analyzed 2 samples were found to be IgM Reactive. Ethical approval was obtained from ethical review board at the NHRC (Reg. no. 382/2017) on expedited process according to the outbreak investigation guidelines.

Findings suggested that out of 83 blood samples 5 were antibody G and antibody M positive for leptospira, 20% were exposed to respiratory illness and three participants below 9 years have fA (H1N1) Pdm09. Study suggested that large portion i.e. 49% were Igm positive, 37% were Igm negative where as 13% stayed equivocal. Total of 87% of participants were found exposed to domestic animals including pets, 20% exposed to insects bites, 15% with closed exposure with swine and 2.4% exposed to animal necropsy. Participants were found 8.4% with receiving regular immunization vaccine, 1.2% received influenza vaccine and 1.2% were on medications.

Research hence concluded that not just exposure to ill contributed to the risk of developing illness but also increases the risk of infection. Also, Leptospira was responsible agent for the manifestation of an outbreak. Raising awareness of disease patterns and epidemiology of incidence may enrich practices of prevention of leptospirosis. This research finding could be used by concerned stakeholders in emergency and outbreak response to manage risk factors at outbreak sites. This finding may be used for further to assessing the capacity of outbreak response teams, to provide an evidence-based for planning and allocating outbreak management and public health resources and the overall disease burden of leptospirosis.

3.6.8 Quality of drug and drug use pattern at different level of health care settings in Nepal

Status: Completed

Objectives

General objective

- To assess the quality of drugs and drug prescribing pattern at different level of health settings in Nepal

Specific objectives

- To assess the quality of drugs available at public and private health facilities.
- To assess prescribing practice of drugs in different health facilities.
- To assess dispensing practices of drugs in health facilities.
- To identify the storage condition of drugs in health facilities.
- To find out drug compliance knowledge among patients in different health facilities

Background

Drug quality has direct impact on patient's health. The drug should be of standard quality in order to meet its therapeutic efficacy. The poor quality of drug results negligible to detrimental effect on human's health. Burgeoning various health issues and dampening medicine efficacy has questioned whether the drug being administered is appropriate and of standard quality in every individual. In addition to quality of drug, rising cases of irrational use of the drugs and lack of patient compliance are other key factors which directly contribute in diminishing drug efficacy. This study aims to assess the quality of drug and drug use pattern at different level of health settings in Nepal.

Methodology

A cross sectional study was conducted in randomly selected 88 health facilities representing three geographical areas from each developmental region. Five different brands from each of the ten generic medicines were collected randomly from private licensed pharmacies located in the radius not exceeding 100 meters from the selected government district hospitals. Selective free essential drugs supplied by the Government of Nepal were also collected from selected public health facilities. Face to face interview with health facility in-charge of selected health facilities was carried out along with the direct observation of the storage room to collect information regarding storage condition of medicines. Exit client interview was taken with 1929 patients using structured questionnaire. Similarly, face to face interview was also taken with health facility in-charge of selected health facility using structured questionnaire and required data were collected to determine the storage condition of the drug. The collected medicine samples were dispatched to two laboratories for in-vitro analysis. The labels of the collected medicine were analyzed for its sufficient content on the label. The price variations among different brands of same generic medicines were also analyzed by screening the labels. The obtained data were entered in Epidata version 3.1, cleaned in Microsoft excel 2007 and analyzed in SPSS version 20. Written informed consent was taken from each patient and for children less than 14 years' consents were taken from their parents.

Results

In this study, 45 different generic samples comprising 172 brands were tested on two laboratories. Among them, nine brands failed to comply all the required standards. Table 1 illustrates the list of samples that failed to meet the standard criteria. Majority of samples failed dissolution test and few failed disintegration test, content uniformity test and content of Active pharmaceutical ingredients (API) test.

Twelve generic medicines with different brands of each were studied to compare prices based on the prices written in label. There were large price variations among different brands of same generic medicines. The maximum price variations were identified in Cefixime 200 mg tablets and Tamsulosin 0.4 mg capsule (almost 400 %) followed by Amlodipine 5 mg tablets (386%), Ciprofloxacin 500 mg Tablets (193%), Metformin HCl tablets (177%), Losartan Tablets 50 mg Tablets (171%) and Cefixime 200mg dispersible tablet (149%).

On analyzing labels of the 172 brands, all the samples were found to have mentioned manufacture date, expiry date and batch number while 7 brands were found not mentioning storage conditions on their labels. Similarly, 35 brands had not mentioned about cautions, 33 had not mentioned about directions for use and 34 brands had not mentioned about samuha they belong to.

Among total prescribed drugs (6,175) from 90 health facilities, 68.91% were essential drugs and 23.74 % were antibiotics. In total, 61 % of drugs were prescribed with generic names. On analyzing 1929 prescriptions and interviewing 1929 patients, 51.81 % of drugs were dispensed in sufficient quantity compared to prescribed quantity. While taking face to face interview with the patients who received medicines, only 49% of patients were found to have knowledge about medicine and its use.

Further, the major parameters i.e. protection from sunlight, moisture, heat, well ventilation and proper sanitation included in the national guidelines prepared by Logistic Management Division for storage of drugs in health facilities were not found to be maintained completely in all the 88 selected health facilities.

3.6.9 Mapping the availability of Ayurveda and other Complementary Medicine Services centers in Nepal

Status: Completed

Executive Summary

Traditional and Complementary Medicine (T&CM) comprises of wide spectrum of practices to prevent and cure diseases. The terms like complementary, alternative, non-conventional medicine are homogenously used in different countries in reference to traditional medicine. The classification of practices and definitions of Traditional Medicine varies in different countries depending on the availability, accessibility, cultural and historical significance, and regulations.

In Nepal T&CM is implied as Ayurveda and other Complementary medicine. There are no definite distinctions on which systems are included in “other” complementary medicine. Department of Ayurveda refers Naturopathy and Homeopathy as the “other” complementary medicines. Whereas National Health Policy 2074 defines other complementary system as Yoga, Naturopathy, Sowa Rigpa, Homeopathy, Unani, Traditional Chinese Medicine, and other traditional medicine and practices

There is very limited knowledge about institutions providing T&CM service, Information on what conditions do patients usually consult for at T&CMs, type of services they provide, exact location of the particular kind of services and number of T&CM providing institutions inside Kathmandu Valley will be beneficial to service seekers

This study aims to collect information on the availability of Traditional and Complementary service facilities through GIS mapping to provide a complete picture of spatial distribution of facilities in Nepal.

The study was conducted in two phases; initially data was collected from Kathmandu valley including Kathmandu, Bhaktapur and Lalitpur. In the second phase we collected the data from all over Nepal. For the purpose of data collection, we included the following system of T&CM practices: Ayurveda, Homeopathy, Naturopathy, Acupuncture and Amchi(Sowa Rigpa). Herbal medicine centers were excluded from the study. For assessing information about availability of the services on those centers, a semi structured questionnaire was designed. Similarly, for location information Garmin GPS device was used.

The majority of complementary medicine centers were practicing Ayurveda followed by Homeopathy. The third most practiced system was Acupuncture. Acupuncture was mostly practiced in conjunction with Ayurveda or Naturopathy. Amchi was least practiced system in Nepal.

3.6.10 Monitoring of medical / health agencies designated as research centers in Nepal

Status: Completed

Executive summary

Health research has led to significant discoveries, the development of new therapies, and a remarkable improvement in health care and public health around the world. Concisely, health research has made many significant breakthroughs in disease treatment and prevention and saved the lives of millions of people.

Nepal Health Research Council is a national apical body for promoting health research in Nepal. The aim of NHRC is to maintain highest level of ethical standards and promote quality research enhancing research capacity in country. Being authorized body to regulate, monitor and coordinate health research centers of Nepal; Nepal Health Research Council had started to monitor the performance of health research centers throughout the country with an objective of assessing various research activities being conducted by Medical/Health Agencies designated as Research Centre in Nepal and also to ensure good ethical practices in health research are important to ensure that the dignity, rights, safety, and well-being of health research after all monitoring is also important for minimizing misuse of the word written as 'Research' in title of the health institutions.

A cross sectional descriptive study design was used to carry out monitoring and follow up of activities of research centre of all seven provinces of Nepal that had title "Research" in their title name from January 2018 to July 2018.

Initially, Company Registrar Office was contacted to collect relevant information of medical/health agencies (Hospitals, Polyclinics etc.) that has word "Research" in their title name. All the research centers were then grouped in their respective provinces and districts. The responsible persons of centers were contacted and their informed consent was taken and information was collected. Right after which twelve staff from NHRC was selected for monitoring and collecting the information from research centers all over Nepal and was provided intensive training before study. During training, emphasis was given on information collection procedures focusing on interview technique that used semi structured questionnaire contained with cover letter. After completion of data collection, questionnaires were checked for consistency and completeness. Data were entered into Epi Data 3.2 and cross tabulation were done using statistical package for social sciences (SPSS) version 17.0.

Research found that 82.3% so called research centers were just health service provider and 10 % of research institute were research based and just 5% have the core objectives of research. Likewise, 30% of research institute were actually involved in health related researches whereas large proportion (70%) of research institute were not involved in any kind of research work. Surprisingly, only 37.5% have taken ethical approval to conduct the designated research.

It has been concluded that there were 370 research centers presented in Nepal from the information provided by the Office of Company Registrar Tripureswor, Kathmandu (As per law every private institution must be register their firm before operating any kind of business in OCR).

It was also found that there are disparities in the availability of the research center. So, strategic policy should be incorporated for equal involvement. Similarly, organizations whose core objectives are to provide health services are more acting in research rather than research organization itself. Furthermore, most of the research organizations want to conduct research but they do not have required research skills and competent manpower at their institutions to carry out research.

3.6.11 National Mental Health Survey, Nepal

Status: After completing the translation of the major tool of data collection in the survey, the Mini International Neuropsychiatric Interview (MINI) standard and kid version 7.0.2 from English into Nepali language, pretesting of the translated tools were done in Kathmandu district. Then the pilot mental health survey was conducted in three districts: Dhanusha, Bhaktapur and Dolakha among 1647 sample of population aged 13 years and above. At present, NHRC is planning for the national level mental health survey and activities are being done accordingly, for example, a three-days training of trainers on the MINI tools was successfully conducted and this training was facilitated by Dr. David Vincent Sheehan, the copyright holder of the tools.

Objectives

General Objective

To assess the prevalence of mental disorders in Nepal, and find out the pathway of receiving care and the barriers to accessing care among people with mental disorders in Nepal.

Specific Objective:

- To estimate the prevalence of mental disorders in Nepal
- To find out the socio-demographic factors associated with mental disorders in Nepal.
- To identify the pathways of receiving care among people with mental disorders in Nepal.
- To assess the barriers to accessing care among people with mental disorders in Nepal.

Background

Mental health is an integral part of the definition of health given by the World Health Organization (WHO) and is a foundation for well-being and effective functioning for an individual and community. Poor mental health among young people is related to other development concerns e.g. poor academic achievement, violence, substance abuse, poor reproductive health etc. affecting them in the long run during their adulthood and later life. The treatment gap for mental disorders is huge all over the world; for instance, between 76% and 85% of people with severe mental disorders receive no treatment for their mental health conditions in Low and Middle Income Countries (LMICs).

In Nepal the burden of mental health problems in terms of morbidity, disability and costs to individuals, families and societies are overwhelmingly high. Nepalese people are at increased risk of developing mental ill health conditions due to extremely stressful environment brought about by the impact of ten years of armed conflict, political unrest and high vulnerability to natural disasters. Data from previous studies done in different parts of Nepal indicate an increasing prevalence of mental disorders in Nepal but these studies are based on limited population samples limiting the generalizability of the produced estimates. Since there are no any national level studies on mental disorders conducted in Nepal till date and the uncertainty about diagnostic categories, criteria and measurement of the previous limited studies explain the need of a national level study in Nepal using a highly valid and reliable tool.

Methodology

Research method: Quantitative

Research design: Cross sectional

Study duration: The duration of the study will be from January 2019 to January 2021. In the first phase data collection will be done from province 1 and 2 only which will then be subsequently followed by data collection in the other provinces.

Study population: Adolescents aged 13 to 17 years, and adults aged 18 years and above.

Sample size: Sample size for the national mental health survey was calculated using the prevalence estimates obtained from the pilot survey. The total sample size calculated is 15,088 that includes 9200 adults aged 18 years and above, and 5888 adolescents aged 13-17 years.

Sampling technique: Multistage probability proportionate to size method will be used to identify the Primary Sampling Units (PSU) whereas adults and adolescents from the household will be taken using systematic sampling.

Data collection technique: The data collection will be done using a face to face interview.

Data collection tools: Mini International Neuropsychiatric Interview (MINI) standard and MINI-Kid version 7.0.2 will be the major tool of data collection. Barriers to Accessing Care Evaluation (BACE) tool and Pathway related questionnaire will also be used.

Validity/reliability: Validity and reliability of tools have been ensured during the tools translation phase.

Expected outcomes of the study: From this national survey, we expect to estimate the prevalence of mental disorders in Nepal, the prevailing stigma and barriers to seeking care by the mentally ill people and their families. This survey will be useful in planning and policy making in the field of mental health in Nepal.

3.6.12 Assessing Professional Quality of Life and its relationship with their work characteristics of medical doctors working in Kathmandu valley

Status: Ongoing

Objectives

General Objective: The general objective of this study is to assess Professional Quality of Life and work characteristics of medical doctors working in Kathmandu valley, Nepal.

Specific Objectives: The specific objectives are-

- To assess the professional quality of life (Compassion satisfaction, Burnout and Compassion Fatigue) of the Nepalese medical doctors working in Kathmandu valley
- To assess the work characteristics of the Nepalese medical doctors working in Kathmandu valley.

Introduction

Quality of life is a multidimensional concept of one's perception about the status of their life in relation to their personal beliefs and values, culture, expectations, economic circumstances, social relationship and satisfaction in their environment¹. Occupation is one of the important aspects of life, there is therefore no doubt that a person's point of view towards their work and

the experiences he has been through is framed by the nature or any changes in his work which will definitely affect the individual's wellbeing also known as professional quality of life². Studies conducted in Asian countries reflect variations in its findings. Quality of life of doctors working in China, Bangladesh and Lahore was found to be low³⁻⁵ while the overall career satisfaction among Sri Lankan and Thai doctors was higher.^{6,7}

In the context of Nepal, studies indicated that appreciation from people and community as a whole and working for humanity were the main foundation of satisfaction and commitment of Nepalese physicians towards their job. Senior doctors were more satisfied with their job while junior doctors and residents were dissatisfied to a greater extent in relation to workload, financial and social circumstances leading to poor quality of life⁸. Several studies conducted among undergraduate medical students in Nepal revealed that the prevalence of psychological problems was high and the stressors were mainly related to academic and psychosocial factors⁹.

Similarly, several studies done in both LMICs and HICs depict interesting findings regarding Quality of life of health professionals. Studies done in developed countries such as Norway and United States^{10,11} indicates that burnout and low level of life satisfaction is highly prevalent among the physicians compared to general population. In addition, female physicians showed higher level of job dissatisfaction that did not change over a ten years' period in Hungary¹². Similar lines of evidence indicated that Australian doctors had below average levels of job satisfaction in association with higher level of exhaustion and difficulty to perform their work efficiently.

Rationale

There are altogether 21,413 doctors registered in Nepal Medical Council till the end of 2017¹³. There is high demand of doctors in Nepal where doctor per population ratio in 2014 was 0.6 per 1000¹⁴. In addition, doctor population ratio is estimated to be 40 times more in the capital city Kathmandu than in rural areas of the country¹⁵. Besides huge number of patient coverage, there might be various other factors that might affect professional quality of life of Nepalese physicians such as political influences, poor organizational characteristics such as insecure working environment specially for females and organizational support that can lead to increased physician's stress and burn out.

There are various pros and cons of working as a physician in Nepal. In addition to efforts that are being made to provide quality health care to Nepalese population, the impetus to improve the quality of life of Nepalese physicians also requires priority because negative effects on medical professional's quality of life can lead to compromise in quality of care provided to the patients. Therefore, it is important to assess work characteristic and ProQOL of medical doctors such that regulatory bodies can implement the plans and actions for improving quality of life of doctors and quality of health care delivery system of the country as a whole.

Study Variables

Dependent variable: Professional Quality of life

Independent variables

- Socio-demographic characteristics (i.e. personal and professional background)
- Professional quality of life (i.e. compassion satisfaction, Burnout and Compassion Fatigue)
- Work characteristics (i.e. job characteristics, social characteristics, organizational characteristics)

Description of research design: This will be a cross sectional study.

Study site and its justification: This study will be carried out in Kathmandu valley, Nepal.

Justification

Considering the physician-patient ratio (0.6 per 1000 population), it can be assumed that the physicians are highly overloaded with work in Nepal and it plays a crucial role in maintenance of their professional quality of life. Considering the high concentration of physicians with various specialties, availability of general and specialized health care services and high load of patients seeking health care services, physicians practicing in Kathmandu district faces many challenges in their daily life that might affect their professional quality of life. In addition to the workload, several other factors such as political influences, poor organizational characteristics (e.g. insecure working environment specially for females) and organizational support might play a crucial role in maintaining the professional quality of life of Nepalese physicians and can lead to increased physician's stress and burn out. However, with the wide nature of such underlying factors, it is needed to cover the different specialty, service type, seniority to understand the overall professional quality of life of the physicians all around the country specially in the larger cities. With the limited resources available and time constraints and considering the availability of health care services, number of physicians currently practicing and the patient load, Kathmandu district is an appropriate and feasible site for conducting such survey. Moreover, the findings will generate evidence on the professional quality of life of the physicians of different specialties working in different level of health facilities hence, will be generalizable to a wider range of population.

Study population: The study population for this study is Nepalese medical doctors who are practicing in Kathmandu valley, Nepal.

Data collection technique: Data will be collected electronically using a semi-structured format. The data collection tool has been developed based on the Professional Quality of Life questionnaire developed by World Health Organization (WHO) [REF] and questionnaire used for the study 'Relationships of work characteristics to job satisfaction, turnover intention, and burnout among doctors in the district public-private mixed health system of Bangladesh'. [REF]. Electronic version of the questionnaire will be sent to the physicians of selected tertiary hospitals through mail and will be collected once filled completely.

Pretesting: Questionnaire will be pre-tested among 10% of the study population and will be modified as needed.

Validity and reliability of tool: Not applicable

Potential Biases: The samples will be selected following purposive sampling method. So there is a risk of over representation of similar expertise in the sampling. Similarly, consultants are more likely to be satisfied with job in comparison to MOs and Residents. However, during selection of the samples this point will be kept under consideration to minimize the selection bias.

Limitation of the study: This study will follow a self-administered data collection process. Hence, we will need to approach more number of participants than the estimated sample size to meet the required samples. As this study will be conducted among the physicians working in Kathmandu district, the findings will not be generalizable to physicians of the whole country.

Plan for supervision and monitoring: The study team will comprise of a national Principal Investigator (PI), four research officers (ROs). The PI will be responsible for supervising and

monitoring the activities of rest of the team members. They will discuss the study updates based on their convenience.

The ROs will supervise and monitor the data collection activities with supervision from PI. The ROs will regularly communicate will randomly check the quality of filled forms/data on a regular basis. The PI will also check the quality of data randomly. The ROs with supervision from PI will analyze the data and produce the report.

Plan for data management and analysis: Data management and analysis will be carried out using SPSS version 23. Descriptive analysis will be done to present the socio-demographic characteristics and overall professional quality of life, work characteristics, work design outcome of Nepalese medical doctors. Bivariate analysis will be done to present the relationship between the independent and dependent variable. Chi-squared test and t-test will be done to see the relation between two variables. Significance level will be set at $p < 0.05$. Multivariate modeling will be done based on the findings in bivariate analysis.

Expected outcome of the research results: The findings will generate evidence on professional quality of life of the Nepalese medical doctors and the factors affecting their professional quality of life. The study findings will support in understanding potential scope for improvement as well as to develop strategies for improving the quality of life of the physicians which will eventually improve the quality of health care services provided to the general population living in Nepal. Moreover, the findings will also provide a direction of the need of conducting such surveys in a larger scale at national level in Nepal.

Plan for utilization of research findings: The findings will be shared among the stakeholders (e.g. administrative departments of the health facilities) to assist them in improving the professional quality of life of the medical doctors in their facilities. We will also use the findings for future scientific publication and for writing policy brief on improving the quality of health care services by improving the professional quality of life of the medical doctors in Nepal.

Ethical considerations: Ethical clearance will be taken from the ethical review board of Nepal Health Research Council (NHRC). Permission from each of the selected tertiary hospital will be taken prior to data collection. Informed written consent (explaining objectives and methods of the study, confidential handling of personal information their rights to withdraw/not responding and voluntary nature of participation) will be taken from each of the participants.

3.6.13 Vector biology of two *Aedes* species and eco-bio-social drivers for effective vector prevention & control along a climatic gradient in Nepal - NAECO

Status: Ongoing

Description

Despite of its mountainous terrain, Nepal is now endemic for four major mosquito-borne viral diseases (MBVDs): Japanese encephalitis, West Nile, chikungunya and dengue fever. The vectors *Aedes albopictus* and *A. aegypti* are broadly established at least 2000 m above sea level in Nepal. Ongoing range extensions of mosquito-borne diseases can be expected under climate changes. Furthermore, the ecological plasticity of *A. albopictus* to rapidly produce low-temperature phenotypes after introduction to cooler ecoregions has been identified. An understanding of the ecology and in particular the adaptive potential of the significant disease vector may support estimates on the extent of adaptation and hence on its distribution. However, an understanding of locally adapted vector control is not possible without combining the social and ecological perspective. Preventive measures such as individual exposure prophylaxis (dengue vaccination), avoidance of open water containers and destroying of mosquito breeding grounds at private

properties are essential to reduce disease burden from mosquitoes, but the implementation of preventive measures heavily depends on the knowledge, attitude and practice of local people. Furthermore, access to and quality of health services (vaccination, information about mosquito-borne diseases) and functioning of public services (water service) influence the risk for vector-borne diseases. An evaluation of the practice and social acceptance of different preventive and control measures along a climatic gradient in Nepal may help to further improve or implement integrative and easily implementable prevention and vector control strategies which are adapted to the different ecoregions of the country. The eco-bio-social research plan of the proposed project NAECO focus on (i) eco-bio-social aspects influencing vector prevention & control practices along a climatic gradient in a dengue and chikungunya epidemic country (Nepal) and (ii) the vector biology of the highly invasive mosquito *Aedes albopictus* at different climatic conditions and in order to establish scientific and technical basis in the field of Medical Entomology and One Health. The research team NAECO specifically aims to explore eco-bio-social determinants for development of integrative and community-based mosquito prevention and control measures in specific ecoregions and study the vector biology (plasticity of cold hardiness) of the dengue and chikungunya vector *A. albopictus* along a climatic/altitudinal gradient in order to understand the extent of adaptation of the vector to cooler ecoregions under climatic changes. Data collection of this study is completed and data analysis as well as experimental studies is going on.

3.6.14 Evaluation of the Home Based Record (HBR) Intervention Package to Improve the Availability, Retention and Use by Caregivers in Nepal: A Pre-Post Design Study in Three Districts/ Baseline Report, 2017

Status: Ongoing (baseline Report have been completed)

Objective

This study is a part of an interventional study that intends to evaluate the effect of HBR intervention package and use of HBR. This study obtained the baseline data from the intervention and control districts of the interventional study.

General Objective

To find out baseline information on availability, use and retention of HBR card in the intervention and control districts

Specific Objectives

- To find out the status of retention and utilization of vaccination card by the caregivers of children 9-18 months' old
- To find out the status of availability and quality of HBR card in the health facility
- To find out the health worker's knowledge and performance on HBR use
- To explore the perception of key informants about the implication of child health card in immunization program
- To explore the factors that enable and hinder the retention and use of card

Executive Summary

Immunization is one of the most-cost effective health investments with proven strategies that have contributed in reducing large numbers of child mortality, morbidity and disability worldwide. In Nepal where only 18 districts have been certified fully immunized until 2016,

recording of vaccination status of the child in the Home-Based Record (HBR) is one of the verification mechanisms in the full immunization declaration process. However, there are problems related to availability, retention and safe handling of the HBR card as shown by different studies. Realizing the importance of HBR card in accelerating the full immunization certification process and in sustaining the status in current fully immunized districts, this study was conducted to evaluate the effect of HBR intervention package on retention and use of HBR.

An interventional study with pre-post design included three districts: one full intervention district, one partial intervention district and one no-intervention control district. In the first phase, baseline survey was conducted in all the three districts. This report includes the baseline information of these districts. A cross-sectional baseline study with mixed methods (qualitative and quantitative) was conducted in Sindhuli, Dhanusha and Dolakha districts which represent full intervention, partial intervention and no-intervention control districts respectively. For the quantitative study multi-stage cluster sampling technique was used and a total of 444 mothers/caregivers of children aged 9 to 18 months were surveyed from each district using structured questionnaire. Similarly, interview with 22 health care providers was done using structured questionnaire. For the qualitative study, Key Informant Interview (KII) using KII guideline with the focal person of major stakeholders was conducted. Similarly, 22 in-depth interview using interview guideline was also conducted with the caregivers and service providers.

Findings from interview with caregiver revealed that majority of the participants (95.2%) had got HBR card during first vaccination of their children and they were mostly counseled about keeping the card safely during immunization sessions. However, about one third of caregivers also shared that they had their cards torn, damaged (turned black), was wet and information was erased and not clear. Also, few of the participants (10.3%) were unaware about the usefulness of information written in card. Most of the caregivers suggested to make the card waterproof to improve the quality of card.

Findings from interview with health service providers showed that most of the caregivers (84.3%) often bring the card during vaccination. However, some of the caregivers forget to carry the card or had lost their cards. Majority of the health workers suggested to re-issue the card with plastic cover.

Findings from In-depth Interview with caregivers showed that most of the caregivers didn't have complete knowledge on the immunization schedule. Almost all caregivers responded that they always carried the card. Majority of them complained that the card is not durable and suggested that government should promote its use by improving its paper quality, appearance and making waterproof cards.

Findings from In-depth Interview with health service providers revealed that majority of the health workers had good knowledge on immunization schedule. They shared that despite knowing the importance of card by care givers, utilization was not seen as expected. They also shared that besides counseling, no additional programs were carried out in any of the districts to increase the use and retention of HBR card. Most of them suggested waterproof card, either laminated or with plastic cover, and they believed that this change in physical appearance of card can help to increase use and retention.

Thus, the study shows that though most of the caregivers had got HBR card, they had inadequate knowledge about the importance of information written in card. The study also highlighted that almost all the health facilities provide counseling to mothers and caregivers regarding the importance of the HBR card and about its proper use and storage. Despite the counseling provided, caregivers had their cards torn, damaged, wet or information erased. Regarding the response of caregivers and mothers, they complained that card was not durable and could

be easily torn. As HBR card is one of the important tool for verification of full immunization declaration process in the country, caregivers and health service providers suggested that challenges faced by caregivers and health service providers can be addressed improving its paper quality, appearance and making waterproof cards.

Methodology

This baseline study was a part of an interventional study that intends to evaluate the effect of HBR intervention package and use of HBR. Methodology of this baseline study is described below:

Study design

This was a cross-sectional baseline study conducted using mixed methods (qualitative and quantitative) in three districts. Sindhuli, Dhanusha and Dolakha districts represented the full intervention, partial intervention and no-intervention control districts respectively.

Study population and unit of analysis

The study populations included were the stakeholders engaged in vaccinating a child- district supervisor, health worker and caregiver (mother) of children aged 9-18 months. The unit of analysis were individual mothers of children aged 9-18 months, individual health worker and key informant of the district such as district supervisor.

Sample size calculation

Sample size was calculated on the basis of proportion by comparing the proportion with a dichotomous outcome between two samples. The adjustment was made with the continuity correction. By applying the proportion of 34.00% as the national home-based record retention as baseline risk and the proportion of central Terai (17.00%) as in exposed group. The probability of significance was set at 5% level of significance and statistical power at 80%. The calculated sample size was 222 and by adding the double design effect, the actual sample size was 444 and the calculated sample size for health facilities was 22 from each district. Similarly, 22 KII and in-depth interviews were done in each district.

Sampling technique

Multistage cluster sampling technique was adopted. At first three districts (Sindhuli, Dhanusha and Dolakha) were selected based on their similarity in the geographic terrain, Village Development Committees (VDCs), municipalities and immunization coverage.

At first, from the list of the VDCs in each district random selection of 20 VDC was done by simple random sampling. The name of all the VDCs were placed in a container and the lottery method was adopted to fix the required sample VDCs. In the stage two, after the selection of VDCs, wards were selected by random sampling technique, generated by computers and all the samples were picked from those randomly selected wards. In the stage three, household listing of the randomly selected wards was done, and survey was carried out in the households with children aged 9 to 18 months. Every child of age between 9-18 months was taken as sample irrespective of no of children in house. If the adequate sample was not available in the particular ward, sample was taken from the adjacent ward. Health Facilities were chosen randomly by forming committee in respective district in presence of District Health officer, other supervisors of district, research supervisor from NHRC and representative of JSI and UNICEF.

Tools and techniques of data collection

For both quantitative household survey and health facility survey, face-to-face interview was

done to collect data using structured questionnaire. Respondents for these quantitative surveys were caregivers of children aged 9-18 months and health workers of the health facility such as immunization officer, health facility in charge respectively. For the qualitative study, key informant interview (KII) was done using key informant interview guideline and in-depth interview was done using interview guideline. Respondents of the KII were the focal person of major stakeholders such as current and retired chief of Immunization program, focal person from multilateral and bilateral agencies, NGOs, INGOs. Similarly, the respondents for in-depth interview were caregivers of children aged 9-18 months and health service providers. These tools were design with standard Nepali translation.

Findings

469 caregivers from Dhanusa, 485 caregivers from Sindhuli, and 432 caregivers from Dolakha districts, a total of 1386 caregivers were interviewed to evaluate the HBR card intervention package from three districts. This survey was carried out in the households with children aged 9 to 18 months in randomly selected wards of three districts.

Out of total 1374 participants, 69.7% of participants were enrolled in school and 30.3% of participants (30.30%) didn't go to school for education. Out of 595 participants, who didn't go to school after standard five, 16.5 % participants can read full sentence of HBR card, 42% of participants can read some words and 41.5% of participants can't read a single word.

Among 1370 participants, majority of participants were Hindu (86.9%) followed by Buddhist (8.5%), Muslim (3.5%), Christian (0.8%) and Kirat (0.2%). Majority of participants (97.5%) had attended ANC visit during their last pregnancy. The median of ANC visit of participants was 4 times. Majority of participants (59.8%) visited health post for ANC checkup. Government hospitals and primary health care center were visited by 18.9% and 15.7% of participants respectively. NGO/private Hospital/clinic was visited by 3.3% of participants and 1.6% of participants visited other health facilities like private hospitals, Red Cross etc.

Among 992 participants, 39.5% deliveries were done at government hospital followed by health post (38.2%), PHCC (13.4%), Private hospital/clinic (7.7%) and Red Cross (1.2%). Among 838 participants who were counseled on immunization, 93.6% of participants were also suggested the place of immunization and 87.7% were also counseled about the importance of immunization card.

About half of the participants (51.4%) were unknown about the home-based record card before delivery and 48.6% of participants knew about HBR card already before delivery. Among 483 participants who had known about child health card before delivery, 59.5% of participants had known about it from FCHV, followed by health worker (31.1%), family/friends (12%), poster/pamphlet/newspaper (3.4%), radio (2.9%) and others(1.3%).

Most of the participants knew about polio (62.5%), MR (60.6%), and BCG (59.5%). About 40-50% of participants knew about TD (49.3%) and DPT-HepB-Hib (46.1%) and about 25% of participants knew about PCV (25.9%) and JE (25.8%) vaccines. 47.3% of participants knew about the accurate number of times (dose) about BCG vaccines, followed by polio oral (24%), TD (21%), DPT-HepB-Hib (20%), JE(16.7%), MR(16.2%), Polio IPV(10.7%) and PCV(4.3%). 43.9% of participants had heard about the vaccines from health worker, followed by FCHV (27.5%), radio (2.6%), television (2.1%), social worker (1.9%), students (1.3%) and others (1.2%). 99.7% of participants had immunized their recently born children. Among 1375 participants, majority of participants had immunized their children in health post (63%) followed by PHCC (12.7%), village outreach clinic (11.5%) and government hospital (10.1%). Very few participants immunize their children also in private hospitals/clinic (0.7%), Red Cross (1.4%) and others (0.3%).

Majority of participants (94.7%) responded that they had immunized their child always in same health facility whereas only 5.3% of participants responded that they visited different health facilities for immunization. The main reason for visiting different health facilities is migration (78.9%). Other reasons are untimely immunization sessions (14.1%) and others (11.3%). 98.1% of participants immunize their children on scheduled date whereas only 1.9% missed the scheduled date. The reasons for missing the date are busy schedule (38.5%), forgetting the date (23.1%) and unaware about the importance of exact time of immunization (7.7%). Other reasons are migration, sickness of child, visiting maternal house during days of immunization etc. 95.2 % of participants had got HBR card during first vaccination of their children whereas 3.8% of participants didn't receive card during first vaccination. Among 52 participants who didn't get the card, 48.1% of participants were called the next day to take the card.

Majority of the participants (97.5%) take the HBR card of their children during each immunization session. Among 1338 participants, 89.8% were counseled about proper use and storage of health workers during each immunization session. They were mostly counseled about keeping the card safely (85.9%).

Among 1339 participants, 25.2% of participants felt the information written in card very useful, 62.1% of participants felt the information written in card useful while 2.4% of participants felt the information less useful and 10.3% of participants responded that they were unaware about the usefulness of information written in card. Only, 23.6% has practice of taking HBR card while seeking other child health services. The major reason for not taking the card by other 76.4% of participants is unknown about the importance of carrying card (95.9%). Also, the card was not taken due to having their cards torn or lost. Most of the participants (44%) had practice of keeping HBR card at cupboard followed by keeping in box (28.5%), keeping in bag (21.3%), under bed (3.9%), under roof (1.9%), on table (1.2%) and others (1.4%). Others include keeping card in cradle, on purse and some participants do not have specific place to keep (thrown here and there).

Majority of the participants (65.61%) suggested to make the card waterproof followed by to re-make the card small, thick and strong one (16.64%), card with good paper quality (10.65%) and 3.77% of participants have no suggestions as they like the quality of card. Other 3.3% of participants don't know about what needs to be done to improve the quality of card.

Total 70 health service providers were interviewed to evaluate the HBR card intervention package. This survey was carried out in randomly selected 70 health facilities from three districts. Majority of participants were Senior AHW/HA (60%) followed by staff nurse/ANM/Senior ANM (27.1%), medical officer (5.7%), vaccinator (2.9%), Senior/Public health Administrator (2.8%) and CMA (1.4%). 77.1% of interviews were taken in health post, 17.1 % of interviews were from PHC and 5.7 % of interviews were taken in hospitals. 78.6% of health facilities reported that there was stock out of HBR card in their health facilities during the last 18 months. 46.2% of health facilities had stock out of HBR card for two months, 23.1% had stock out of HBR card for one month, 15.4% had stock out for 3 months and other 15.4% had stock out for 6 months.

About one-third (33.3%) of the health facilities bring HBR card from district after stock out, 13.3% of health facilities bring card from nearest health facilities and others write in simple paper or OPD card and send it to district (40%). Health facility staff reported that they also use photocopy of card (6.7%) and record the information of child in immunization register and provide vaccination (6.7%).

In majority of the health facilities (95.5%), supply of HBR card was from district store, in 4.5% health facility, supply was done from nearest health centers. 64.3% health facilities had protocol to demand HBR card when stock of HBR card reach to certain number. Health facilities

demand HBR card when the stock is around 61 on average. Majority of health facilities (82.9%) fill up form to demand HBR card and 77.8% of the health facilities report to DHO for stock out of HBR card. 417 HBR card was received (from Kartik 2072 to Baisakh 2074) on average. 57.1% of participants suggested to re-make the card with hard plastic cover followed by make it waterproof (30.4%), laminate the card (28.6%), increase the thickness of card (21.4%), decrease the size of card (21.4%), make it durable (14.3%), re-make the card like citizenship (7.1%), good print quality (7.1%) and increase the size of card (5.4%). All the health facilities (100%) provide HBR card to caregiver of child during first vaccination

43.9% of health workers suggested to keep card safely at home. 41.5% of health workers counseled that HBR card is useful to keep record of child health. 39% of health workers counseled caregiver to bring card during each immunization session. 12.2% of them informed that caregivers can know about the vaccines given to their children. 17.1% informed them that their children couldn't go to foreign countries without card in future and 9.8% of health workers also informed them that card will be important to admit their children at school. All the health workers (100%) reported that they counsel mothers about importance of HBR card. Among them, 97.1% counsel mothers during immunization, 27.9% counsel mothers during PHC-ORC clinic, 23.5% counsel during EPI clinic and 8.8% of health workers counsel during regular checkup.

According to 77.3% of health worker the main reason was caregiver forget to bring HBR card. Similarly, 52.3% health workers reported that caregiver lost the HBR card whereas 36.4% reported that HBR card was torn. 9.1% of health workers mentioned that another reason was damaging of card and 6.8% mentioned that caregiver hadn't received HBR card. According to health workers, 58.6% of mothers/caregivers ask the HBR card during first immunization of their children.

Qualitative Part

Most of the caregivers were reluctant to speak about the immunization since they didn't have complete knowledge on the immunization schedule. Few of them knew about vaccines like BCG, DPT and measles. Only few participants knew that vaccines are also included in National Immunization program. According to them they took their children to immunize but they did not remember the name of those vaccine. Almost every caregiver knew about HBR card except one mother who didn't know anything about the card. Unexpectedly most educated mothers were found to be negligent about the card, they said that they don't know about the information in the card and they never tried to read it. Some of the caregivers who did not know about the card discussed about the shortcomings of health care workers.

Regarding the view of caregivers about the quality of HBR card, majority of them complained that the card is not durable, as most of their cards were torn by their child and damaged by water. They also expressed their desirability for water proof card or card with plastic cover. However, few caregivers were satisfied with the card quality, and shared that the cards should be kept safely with care.

Main barrier in the use and retention of the card was found to be inadequate knowledge about importance of card, due to which many caregivers didn't keep it properly, threw away the card after completing immunization and didn't bother to keep it for future use.

According to the caregivers, to improve the retention, caregivers, health workers and government can play important role. Most of them suggested that government should promote its use by improving its paper quality, appearance and making waterproof cards.

Majority of the health workers had good knowledge on immunization schedule included in the national immunization program and they expressed their knowledge and experience confidently

without any hesitation. The knowledge on immunization schedule didn't seem to be universal even among health workers and few of them also complained about unavailability of JE and IPV for around 2-3 months in all three districts. Almost all of the health facilities had similar methods of preparing and managing for each immunization session.

Health workers working in most of the health facilities realized the importance of HBR card. Most of them expressed that HBR card would be the record and provide information of the vaccines provided to the children. In absence of the card, most of the health workers faced difficulty in determining date and the vaccine to be provided.

Most of the health facilities in all three districts had enough HBR cards with them during the time of study. According to the health workers they have been demanding the HBR cards either on the basis of target population or previous month's consumption or when cards are about to finish. In all three districts, few health facilities had faced shortage in cards for some period. During that period few health workers managed to record the information in a piece of paper along with registration number and after receiving card they made proper record.

All of the health workers expressed importance of the HBR card for the caregivers. Most of the mothers and caregivers, knew the importance of card for their children's development, admission in school etc. Despite the importance, among the care giver utilization was not seen to be as expected. In most of the health facilities more than 90% of the caregivers brought HBR card while coming for immunization, in few of the health facilities only 50-70% of them brought the cards where as in one of the health facility only 20-50% brought the card. Misplacing the card, damage/tear of card, forgetting to bring card were the main reasons for not bringing the card. In case of the card being lost, health workers provided a new card with records according to the child health register. Health workers presented different views on ways of improvement of HBR card. Most of them favored and suggested waterproof card, either laminated or with plastic cover, and they believed that this change in physical appearance of card can help to increase use and retention. Few of them suggested that the size should be reduced. According to the health workers, counseling along with health education is important to make mothers understand about the importance of HBR card and improve the retention.

3.6.15 Evaluation of Electronic Medical Recording System in Trisuli District Hospital, Nuwakot, 2018

Status: Completed

Electronic medical recording system that stores the data of patients and other hospital related information electronically is being used globally with the objective of bringing about major changes in health care system, saving health care cost, reducing medical errors and improving performance of health system, electronic medical record (EMR) systems is being widely adopted. In context of Nepal, the Korean and the German government are currently supporting the Ministry of Health and Population (MoHP), Nepal in improving measurement and accountability in Nuwakot District by introducing EMR at the district hospital using open-source technology. Introduction of EMR in health care system of Nepal can be a major push towards evidence based decision making in Nepal. Nepal has its own unique challenges in introducing EMR with very limited use of technology in health care setting, low level of computer literacy, constraints in human and financial resources. Documenting the effectiveness, facilitators, barriers and challenges in implementation of EMR in Trisuli District Hospital can give evidence on whether such program would be effective in other hospitals in days to come. In this context, this study was designed to assess the changes in quality of data after implementation of EMR, readiness of the hospital staffs, potential benefits, facilitators, barriers and challenges in implementation of EMR in Trisuli District Hospital.

Mixed method study was carried out that involved Key Informant Interviews and Focused Group Discussion as qualitative method of data collection and face to face quantitative interview and record review as quantitative method of data collection. Study was carried out in two phases: baseline survey that was carried out before implementation of EMR and an endline survey after implementation of EMR. Purposive sampling was used for selecting participants, from within the TDH, for KIIs and FGDs. There were 18 participants in baseline interview for both KIIs and quantitative interview. The response rate was 100% in baseline study. However in the endline survey, out of total 18 participants approached for participation, 16 agreed to participate and 2 refused participation. Separate readiness assessment tools were used for medical superintendent and other staffs involved in implementation of EMR. Readiness assessment tool used for medical superintendent covered information on organizational alignment, management capacity, operational capacity and technical capacity of the hospital. Readiness assessment tool assessed the readiness of staffs involved in implementation of EMR on Information Technology (IT) skills, organizational support, expected benefits and motivation and understanding about EMR. Each of these domains had multiple questions which were summed to compute the total score in each of these domains. Record review checklist was used for record review.

Percentage of missing information in patients' record on ethnicity, age, gender, district, VDC/Municipality and ward. However, the proportion of missing information seems to have increased in case of other variables like investigation and provisional diagnosis was seen after implementation of EMR. Reduction in duplication of task, availability of accurate and updated information, financial transparency, less chance of data loss, prevention of medical errors, reduction in cost of papers and printers, easiness in evaluation of staffs performance and easiness in financial and logistic planning were key benefits that participants shared would be achieved through implementation of EMR.

Implementation of EMR also drastically reduced time taken to prepare summary about the patients visiting hospital in a day and reporting time to HMIS 9.4. Relatively more participants in end line study said that they used data in influencing different decision made within the hospital after implementation of EMR.

Good team work, willingness of the staffs, commitment from government for sustainability of the program were facilitators in implementation of the EMR while the implementation was hindered by factors like high turnover and frequent transfers of staffs, technical issues like frequent power cutoff, slow server, inadequate backup plan, inadequate manpower for regular repair and maintenance. Participants also shared their experience that patients feel that they are not being paid attention while health personnel consistently look into computer screen for profile of patients and recording of information. Participants suggested that having the system in Nepali language would make it more useful and user friendly.

Despite multiple barriers and challenges, implementation of EMR seems to have positive impact on quality of data, use of data in decision making process and improving efficiency in hospital.

3.6.16 Validation of the Accuracy of the Recording and Reporting of the Newborn Health Service Provision in a Tertiary Hospital in Nepal

Status: ongoing

3.7 Knowledge Management

3.7.1 National Conference on Climate Change and Health

Background

Nepal is highly vulnerable to climate change despite low emission of greenhouse gas (GHG), without adequate mitigation and adaptation; climate change poses unacceptable risks to global public health of Nepal. The National Conference on Climate Change and Health brought together experts, policymakers, researchers and practitioners dealing with climate change policies for a two-day discussion and updated work being done in different sectors. The aim of the conference was to bring together a diverse, interdisciplinary group of experts from Nepal to address the potential effects of global climate change and its adverse effects to human health in Nepal. Based on presentations made by various sectors of people engaged in climate change and health addressed need of evidence and data on climate change and health.

3.7.2 Fourth National Summit of the Health and Population Scientists in Nepal

Executive Summary

The fourth national summit of health and population scientists on the theme 'Advancing Evidence for Changing Health Systems in Nepal' focused on evidence based health system in Nepal, in the context of transition from central to federal system. The summit was a platform for researchers and policy makers to come together and discuss about the research evidence and their potential implication in health policy making in Nepal.

There were 64 oral presentations in parallel session, 7 presentations in plenary session and 67 poster presentations covering different topics including non-communicable diseases, communicable disease, nutrition and food safety, health systems, mental health, biomedical research, maternal, sexual and reproductive health, neonatal and adolescent health, environmental, occupational and urban health. More than 1200 participants throughout the country were present in the summit.

In addition to the best oral presentation award and best poster award, Mrigendra Samjhana Medical Trust Young Health Research Award, Publication Award from Nepal Health Research Council, Health Research Outstanding Award, Best paper award of Journal of Nepal Health Research Council and Best Employee of NHRC were introduced this year. The declaration of the summit was presented at the end of the summit. The session was concluded with remarks from the executive chairperson of Nepal Health Research Council.

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

Background

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

The Fourth National Summit of the Health and Population Scientists in Nepal was held on 11-12 April, 2018 under the theme of 'Advancing Evidence for Changing Health Systems in Nepal'. The presentations and discussions made by rich diversity of participants from academia, research institutes, government, I/NGOs and external developmental partners, shed light into future actions for research, policy and practice.

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

Health research is one of the cornerstones for shaping health system that is strong, resilient, accessible, affordable, responsive and sustainable. We acknowledge that such health system contributes to achieving Universal Health Coverage. It is a foundation for harnessing demographic dividend, inclusive economic growth, prosperity, equity, social justice and quality of life. We recognize the recent political changes in the country with re-structuring of state and governance systems which provide an opportunity for advancing research and innovations to strengthen health system in the country.

Building on the foundation of health research practices in Nepal, and acknowledging the importance of harnessing evidence to strengthen national health system, Nepal Health Research Council in collaboration with a number of institutions, organized the 4th annual National Summit of Health and Population Scientists in Nepal on 11-12 April 2018. The rich discussions and deliberations at the summit highlighted the **'need for actions'** under a number of key areas that are aimed to accelerate accomplishment of the summit theme ***'Advancing Evidence for Changing Health Systems in Nepal'***.

We, the delegates, representing the Ministry of Health and Population, Nepal Health Research Council, professional councils and associations, academic institutions, bi-lateral and multilateral agencies, civil society, private sector, and individual researchers and scientists, collectively commit to the following declarations;

1. Undertake a rigorous appraisal of health research system including available resources, institutional and individual expertise, areas of research priority, with a view to advancing research system in federal context addressing needs of different sections of population;
2. Continue quality research for generation, synthetization and application of knowledge towards improving health system performance to contribute to achieve universal health coverage;
3. Continue high-level political advocacy for developing Centers for Excellence in health research;
4. Advocate for effective implementation of the international and national commitments made by the country for allocating adequate resources in health research;
5. Promote and adhere to responsible conduct of research practices;
6. Strengthen mechanisms to promote research capabilities of young researchers and scientists by increasing availability of research grants and capacity building opportunities and
7. Foster partnership among academia, research institutions, private sectors and researchers to enhance research capabilities and innovations – at national and international levels – that would address federal, provincial and local health research priorities.

3.7.3 Developing an Interactive Online Course on Health Research Ethic in Nepal

Background

Ethical approval of health research is one of the core functions of NHRC. Ethical approval through Ethical Review Board (ERB) or Institutional Review Committees (IRCs) is mandatory for all health related studies to be conducted in Nepal. Health research ethical guidelines for researchers have been developed to facilitate ethical conduct of studies in the country. The guideline requires research proposals to be ethically sound for the further undertaking. However, researchers often face the ethical dilemma during research proposal development and its implementation. Foreign investigators are often challenged with the requisites of the local ethics committee. Similarly, researchers are unable to adequately justify the risks and

benefits of their studies to the researcher participants and the research community. So, there is a need for an online course to acquaint researchers about ethical requirements set by NHRC to facilitate the responsible conduct of research in Nepal.

Objective (s)

To develop an online curriculum on research ethics, based on the ethical guidelines of NHRC, targeting the prospective researchers willing to lodge ethic approval application at the NHRC and NHRC certified IRCs.

Expected output (s)

The project will deliver an online curriculum integrated into the NHRC webpage. The curriculum will provide learning opportunities for researchers by acquainting them with fundamentals of research ethics. The online course will also facilitate NHRC to aware researchers about the ethical responsibilities and requirements while planning for health research in Nepal.

3.7.4 FK Norway Exchange Program between the Nepal Health Research Council (NHRC) and the Child Sight Foundation (CSF) Bangladesh

Background

FK Norway is the Norwegian Government exchange program to support exchange of employees between organizations in Norway, Asia and Africa. An FK Norway exchange takes place through the mutual exchange of employees or members between organizations or businesses based in different countries for a 3-12 months period. NHRC and CSF Bangladesh had an agreement with the FK Norway on August 2017 for the employee exchange program.

Objective (s)

The specific purpose of the project is on health and wellbeing of people living with disabilities through exchange of employees between the partner countries. The project aims to generate evidence in the area of non communicable diseases and health services delivery for people living with disabilities through research and knowledge management. The project also aims to promote the utility of evidence generate in these areas to support policy making in the partner countries.

Expected output (s)

The first round of exchange program is being executed from October 2017. Participant from CSF are working with NHRC on the areas of disability issues. This will help NHRC to become acquainted with research methods in disability issues which in turn will help NHRC to carry out community based research in disability and health issue. Similarly, participants from CSF are working on synthesizing evidence on health and disability useful for policymakers of all two countries. Participants from NHRC are supporting the CSF to develop its capacity on ethical conduct of research as well as chronic disease research. This will help CSF to improve access to screening services for diabetes and hypertension. NHRC participant are also working on evidence summaries on chronic diseases useful for policymakers of all two countries.

3.8 Monitoring and Supervision of Health Research Projects

Every year, team of NHRC supervises and monitors the approved and funded research projects. The main objective of the monitoring and supervision is to find out the ongoing status of the approved projects and to ensure whether the researchers are maintaining the ethical standard. Monitoring team consist the experts from the related subject matter and member of Executive Board and Ethical Review Board of NHRC. This fiscal year NHRC finalize the monitoring tool for supervision of health research projects. This tool was used in three research sites during

monitoring and supervision of research projects for validation.

(For more information refer to Annex – V)

3.9 Inspection of Institutional Review Committees

Every year, team of NHRC inspected the Institutional Review Committees approved by NHRC. The main objective of the inspection is to find out the status of the Institutional Review Committees and to ensure whether the institutions are maintaining the ethical standard. Inspection team consist the experts from the related subject matter and member of Executive Board and Ethical Review Board of NHRC.

(For more information refer to Annex – VI)

3.10 Strengthening the NHRC Library

3.10.1 Strengthening Digital Library

NHRC library was established with the purpose of providing research based health information in 1991. NHRC 143th executive board meeting was decided to replace the name of NHRC Library to Dr. Mrigendra Raj Pandey Library dated 2066/01/07 (2009/04/20) for his boundless contribution and the emeritus chairman of NHRC was nominated by GoN as chairman on 2048.01.10 (april 29, 1991). It was initially started its functioning as limited reports & books. By the year 2005 the library was sifted its role from limited resources to be growing rich resources doing by all the technical library procedure. By the year 2012 NHRC Library was flew in web based digital library where there are available 512 full text research reports, MoHP annual reports, Demographic Health survey reports and others documents. Now, it is being utilized by the all health and related professionals involved in research activities. It serves as a repository for health research related information and resources.

NHRC library has started to fulfill its purpose. NHRC library has a collection of research based books/tapes/documents and CD-ROMs, and is actively networking with other health research libraries. The Library system has been developing by applying internationally accepted classification scheme developed by the (NML)National Library of Medicine, USA; using MESH (Medical Subject Heading) for health related documents as well as it has also been accepted internationally classification (DDC) Dewey Decimal Classification for non-health documents.

NHRC library has actively established a network from the year 2005 with other health related libraries and information centers based in valley and out of valley also. It is also an active member of HELLIS Nepal in 2005 in which is a communication center and national focal point. Being Associated with HELLIS Nepal, NHRC library is participating in developing the HELLIS Nepal web page. This association will add the presence of NHRC Library not only at national but also at the International level.

NHRC library would like be known as active health research information center, which will provide the research based information in all aspects of health related subjects available in the country. NHRC library is a active member of Research4Life Programme separately Hinari (Health Inter-Network Access to Research Initiative) since February 2002, OARE (Online Access Research Environment since September 2007 & AGORA (Access to Global Online in Research Agriculture) since October 2007.

3.10.2 Services of NHRC Library

Computerized Retrieval Service, Internet Services, References Services, Articles downloading &

printing, Assisting with online Search users & Literature Search Facility

3.10.3 User Groups

NHRC Executive Members, NHRC Ethical Review Board (ERB) Members, NHRC Staffs, PHD Students, MPH Students, Senior Researchers, Young Researchers, Medical Doctors, Institutional Researchers, Nursing Students, Staff Nurses, Dissertations students from different colleges from valley students & outside the valley students & Medical Students from different parts of Nepal etc.

3.10.4 Collections:

- ▶ Books : 2216
- ▶ Research Reports : 807
- ▶ Thesis Reports : 433
- ▶ WHO publication : More than 300
- ▶ DHS Annual Report : 2052-53 to 2071-72
- ▶ Sight and Life Publication : 35
- ▶ Global Health : 35
- ▶ International Family Planning : 15
- ▶ Nepalese Health Literature: more than 3000 using Profile of health research projects in Nepal 2000-2007

3.10.5 2072-2073 Buy New Arrival books in this year

S.No.	Author	Title	Publisher	Year
554		National Policies of Nepal Government	Kathmandu, PR	2015
643	Look, Paul F.A. Van	Sexual and reproductive health a public health perspective	U.K., Elsevier	2011
644	Peace, Karle e./Chen, Ding-geng (Din)	Clinical trial methodology	Suite, Champman & Hall	2011
645	Evan Scoh & Ting Naitee	Fundamental concepts for new clinical trials	Suite, CRC Press	2016
646	Wellings, Kaye & Mitchell, Kristin	Sexual Health (A public health perspective)	USA, Open University	2012
647	Weaver, Ann & Goldberg, Stephen	Clinical Biostatistics and epidemiology made ridiculously Simple	Miami, Medmaster	2012
648	Norris, Deborrah	Clinical research coordinator handbook	New Jersey, Plexus	2015
649	Hulley, Stephen B./ Cummings, Steven R.	Designing clinical research	Ohma, Lipincott	2013
650	Fletcher, Robert H./ Fletcher, Suzanne W. & Fletcher, Grant S.	Clinical epidemiology: The Essentials	China, Lipincott	2014

651	Flick,UWE	The sage handbook of qualitative data analysis	New Delhi, SAGE	2014
652	Chevallier, Andrew	Encyclopedia of hearbal medicine : the definitive reference to550herbs and rmedies for common pilments	London, DK	2000
653	Richesson, Richel L. &Andrews , Jamies E.	Clinical research informatics	New York, Springer	2012
654	Liu, margaret B.&Davis, Kate	A clinical trials manual from the duke clinical research institute lessons from a horse named jim	Singapore, Wiley	2012
655	Hannes, karin&Lockwood,Craig	Synthesizing qualitative research choosing the right approach	malasiya, Wiley	2012
701		Chandranighantu	Kathmandu,SVVS	2012
702		Chandranighantu	Kathmandu,SVVS	2012
703		Chandranighantu	Kathmandu,SVVS	2013
704		Chandranighantu	Kathmandu,SVVS	2013
705		Chandranighantu	kathmandu,SVVS	2016
706		Chandranighantu	Kathmandu, SVVS	2016

3.10.6 Library Management System

Introduction

Library Management System (LMS) project is one of the ongoing projects which requires the regular flow of finance and manpower for establishing the system as well as for maintaining the system on future. So this project is decided to be conducted on different phases.

As initial phase or phase-I, the basic requirements like hardware and software were made available, software were installed and configured on the NHRC premises.

Objectives

- The fully featured library with proper data records, easy accessibility of records whenever or wherever required is major objectives of conducting this project.
- To provide a collection of reference materials and research programs and additional reading materials.
- To strive to make NHRC library as a central reference of NHRC information on national and international levels.
- Collecting, processing and disseminating the latest information for the purpose of teaching, research, legislation and publications.

Work carried out till to the date of this report

a. Hardware

- New Server computer with highly equipped configuration regarding the memory, processor and speed is bought.
- 24/7 Power backup for server computer.

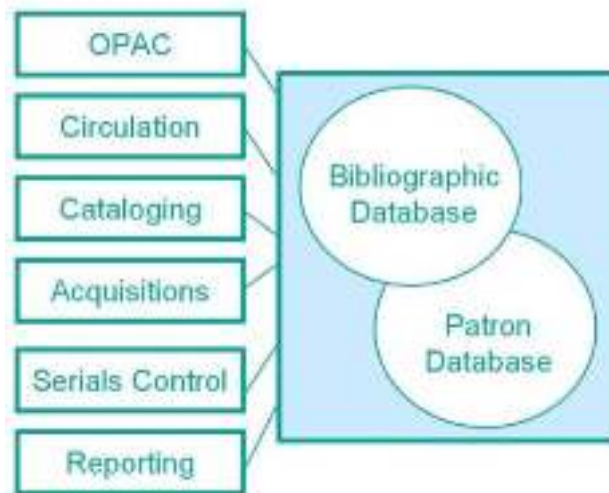
b. Software

- The free open source (no license required) operating system Debian (Squeeze version) is installed for LMS purpose.
- Backup method, new script is written for auto database backup and mailing it to GMAIL account of NHRC administration as secondary backup purpose.

Two different software were integrated to form complete fully featured Library Management system for NHRC. These are explained as:\

Integrated Library System

Integrated library system software installed/configured is fully featured and fulfills the demand of NHRC library. ILS comply all the international standards which are needed to be followed while having international standard library. As these are international standard, they are subjected to be no change for longer period making this software more reliable and flexible. It also assures that this software can be use for longer period in future without modifications.



Features:

The Integrated library system used on NHRC library has following features:

- Search, retrieval and display
- Cataloging , Marc21 standard format for data records
- Authority control
- Printing and output production
- Online Catalogue
- Patron Membership records
- Privileges matrix
- Barcode making and reading equipment
- Z39.50 protocol for data search on remote servers.
- Reports Generation

- Label creation, barcode printing
- Data export/import
- Acquisitions
- Serials
- Circulation : checkout/checkin
- Notice generation and triggering: advance notices, overdue notice through mailing system

More details is provided on manual (Appendices I)

ILS has two mode of accessing the data:

i) Staff Mode

This mode is accessible only for the library administrator who is responsible for maintaining the library. Through this mode, all the works those are required within the library are carried out like:

- cataloging data
- books/journal checkout – checkin
- acquisition
- serials
- Patrons entry (Lenders)
- report generation
- Advance Notice, Overdue notice and others , calendar
- Digital data backup

Some Staff mode views:

- **Login Form/Authentication:** Through this page only the user with permission of admin can authorized to get logged in.

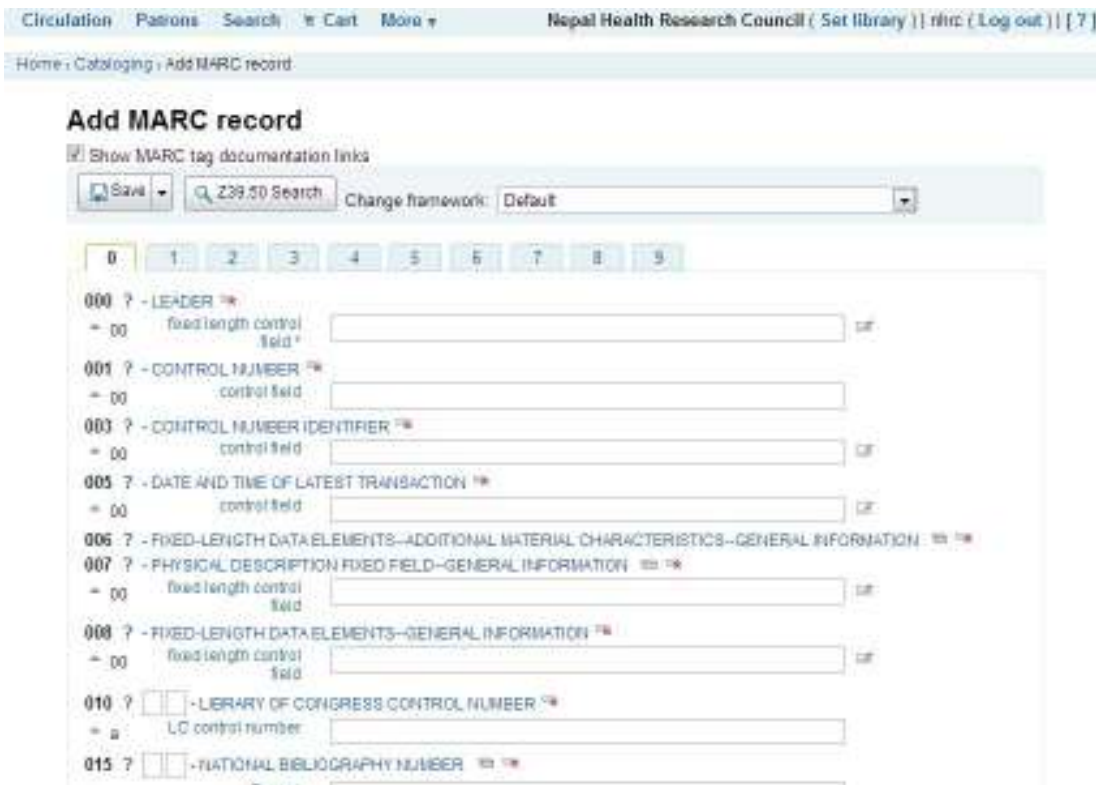


The image shows a login form for the NHRC Library System. At the top, it says "NHRC Library System". Below that, there are three input fields: "Username:" with the value "nhrc", "Password:" with a masked password of 12 dots, and "Library:" with a dropdown menu showing "Nepal Health Research Council". A "Login" button is located at the bottom right of the form.

- **Main Page of Staff mode:** This is the main page from where all the works are carried out, all the modules like cataloging, circulation, report generation, acquisitions, serials, patron information entry and many more tasks.



- **Marc21 Standard Records' field:** This software uses the International Standard for data cataloging i.e marc21 format and view below is the page showing the marc fields.



i) OPAC Mode

Open Public Access Catalog (OPAC), this is for the user or simply for library users. Through this mode, the users can have information about the books/journal or items available on the library. Social features and many other facilities can be used if the user is member of the library.

a. OPAC View

This is a page from where the user can see all the Catalog information of items available on NHRC library.



b. Search Result at OPAC

The search result page showing the records of items available on the NHRC library.



c. Catalog Information

Showing the detail catalog of individual record.



A. NHRC Digital Repository (DSpace)



Introduction

DSpace is an open source software package that provides the tools for management of digital assets, and is commonly used as the basis for an institutional repository. It is a product of the HP-MIT Alliance released in 2002.

DSpace is a platform that allows you to capture items in any format – in text, video, audio, and data. It distributes it over the web. It indexes your work, so users can search and retrieve your items. It preserves your digital work over the long term. DSpace provides a way to manage your research materials and publications in a professionally maintained repository to give them greater visibility and accessibility over time.

DSpace is typically used as an institutional repository. It has three main roles:

1. Facilitate the capture and ingest of materials, including metadata about the materials
2. Facilitate easy access to the materials, both by listing and searching
3. Facilitate the long term preservation of the materials

Benefits of using DSpace

- implemented in Java
- uses highly scalable postgresQL as the database back-end
- Compliance with standards and protocols like DC, OAI-PMH, UNICODE etc.
- Lucene search engine
- intuitive way of self archiving
- customization facility
- well defined workflows

Uses of DSpace

DSpace can be used to store any type of digital medium. Examples include:

- Journal papers
- Data sets
- Electronic theses
- Reports
- Conference posters
- Videos

Browsing in Dspace

Browse allows you to go through a list of items in some specified order. Dspace allows you to browse through

- Community/Collection,
- by Title,
- by Author and
- by Date

Some are shown here, more details is provided on manual (Appendices II)

Browse by Community/Collection takes you through the communities in alphabetical order and allows you to see the collections within each community.



Browse by Title allows you to move through an alphabetical list of all titles of items in DSpace.



Browse by Title

Browse by Author allows you to move through an alphabetical list of all authors of items in DSpace.



Browse by Author

Browse by Date allows you to move through a list of all items in DSpace in reverse chronological order.



Browse by Date

Searching in Dspace

To search all of DSpace, use the yellow search box at the top of the navigation bar on the left. The word(s) you enter in the search box will be searched against the title, author, subject abstract, series, and sponsor and identifier fields of each item's record.

Field Search

One can search for a term in a particular field. For example,

author:jaba

title:web

keyword:ocr

Advance Search

The advanced search page allows you to specify the fields you wish to search, and to combine these searches with the Boolean “and”, “or” or “not”.

You can restrict your search to a community by clicking on the arrow to the right of the top box. If you want your search to encompass all of DSpace, leave that box in the default position. Then select the field to search in the left hand column and enter the word or phrase you are searching in the right hand column. You can select the Boolean operator to combine searches by clicking on the arrow to the right of the “AND” box.

Advanced Search

Search scope:
Limit your search to a community or collection.
NHRC Digital Repository

Conjunction Search type Search for

Full Text

AND Full Text

AND Full Text

Results/page 10 Sort items by relevance in order descending

Go

Fig. 8 Advanced Search Page

3.11 Approved Health Research Proposals

Three hundred forty-three (343) health research proposals were approved by Ethical Review Board of NHRC in the fiscal year 2074/2075. Once the proposals are submitted by the researchers/ organizations, they are reviewed by internal as well as external reviewers. Once the process of review and necessary correction by the researchers is done, the proposals are forwarded to ERB meeting. For the administrative purpose researchers need to pay the processing fee as per the rules and regulations of NHRC.

(For more information refer to Annex – VII)

3.12 NHRC Representation in National and International Programs

NHRC represented in various national and international programs related to health, health research as well as health research and policy. NHRC Executive Board Members, Ethical Review Board members as well as NHRC staffs participated in national and international workshops, seminars, meetings and forums.

(For more information refer to Annex – VIII)

3.13 NHRC Meetings

3.13.1 Executive Board Meetings

There was four executive board meetings organized during this fiscal year.

(For more information refer to Annex – IX)

3.13.2 Ethical Review Board Meeting

There was Thirty-Eight Ethical Review Board meetings organized during this fiscal year.

(For more information refer to Annex – X)

4. FUNDING PARTNERS OF NHRC

In order to carry out the planned activities for the fiscal year, NHRC received the fund from the Government of Nepal/Ministry of Health and Population. NHRC also received funds from the World Health Organization (WHO) and others Partners, for research programs and trainings. While it also received technical support from NHSSP-II, GiZ-HSSP.

4.1 Government of Nepal

NHRC has been receiving regular annual budget since 2000 AD from the Government of Nepal. The date of the fiscal budget of the Government of Nepal starts from Shrawan (July) and ends at Ashad (July). Most of the activities of NHRC within its broad objectives are accomplished by the GoN's regular annual budget. Some of the activities to list are research grants, trainings, workshops, monitoring and supervision of approved research studies and dissemination of research finding in the regional level.

4.2 World Health Organization (WHO)

World Health Organization has been providing technical and financial support to Nepal Health Research Council (NHRC) since its establishment for conducting health related programs. WHO supported NHRC during this fiscal year mainly under two program Population Based Cancer Registry and Steps Survey 2018 .

4.3 Others

5. CONCLUSION

After receiving the funds from Government of Nepal and other donor agencies, NHRC has accomplished the following activities:

- Conducted various research projects,
- Strengthened the Library information system of NHRC,
- Monitored research project and Institutional Review Committees(IRC) approved by Ethical Review Board of NHRC,
- Conducted various trainings / workshops,
- Purchased different kinds of office items,

- Conducted national and international meetings / workshops,
- Published scientific journals and research reports, and
- Strengthened the capacity of NHRC staff.

NHRC has made significant progress developing a system of evidence generation in health systems and its various components in the country, but still a lot has to be done in order to generate quality evidences and also facilitate the uptake of evidences that are available. The number of research activities though has been expanded compared to few years back.

ANNEX I Health Research Grants

Result of PG Grant 2017

Grant Amount: NRs. 35,000.00 each

S.N.	Title	Institution	Name of PI
1	Depression in Patients with Chronic Kidney Disease on Hemodialysis at a tertiary care center in Nepal	Nepal Medical College	Dr. Krishna Kumar Agrawal
2	Prevalence and associated factors of tobacco use among higher secondary school students, Butwal, Rupandehi	Nursing Campus, Maharajgunj	Mina Panthi
3	Compliance to Directly Observed Treatment Short Course Chemotherapy (DOTS) among the Pulmonary Tuberculosis Patients in Kathmandu District of Nepal	Kathmandu College	Medical Dr. Sudhir Kumar Shah
4	Seroepidemiology of scrub typhus among patients with acute febrile illness attending in a tertiary care hospital in chitwan	Chitwan College	Medical Pradip Hamal
5	Mental health status and its associated factors among higher secondary school students in Nawalparasi	Nursing Campus, Maharajgunj	R a d h i k a Upadhyay
6	Study of Severity of Hyperemesis Gravidarum and Associated Maternal Factors.	National Academy of Medical Sciences .	Dr. Murari Thakur
7	A Study of Biofilm producing Staphylococcus aureus clinical isolates from patients of a tertiary care Teaching Hospital of Nepal	Shi-gan int'l college of Science and Technology	Sujina Maharjan
8	Efficacy of morphine versus tramadol for control of moderate cancer pain	National Academy of Medical Sciences	Ramila Shilpakar
9	Microbiological quality assessment of the bottled water locally available in Kathmandu valley	St Xavier's College	Bikram Gautam
10	Antithrombotic Prescribing Patterns and the outcomes among patients diagnosed with Atrial Fibrillation in Nepal: a multicentric registry based study	Kathmandu University	Durga bista
11	Nurse-patient communication barriers as perceived by patients in teaching hospital	Chitwan College	Medical Gita Dhungana
12	Study on Health and Nutrition among Adolescence girls in Kavre district, Nepal	Nepalese Institute of Science	Army of Health Bikal Shrestha

13	Essential neonatal care utilization and associated factors among underprivileged ethnic groups in Bardiya district	Institute of Medicine	Keshab Sanjel
14	comparison of the effectiveness of single fraction with multiple fraction radiotherapy in painful bone metastases	National Academy of Medical Sciences	Mukesh Yadav
15	Burden and anxiety among caregivers of patient undergoing haemodialysis at selected haemodialysis center of Kathmandu	Institute of Medicine	Renuka Adhikari
16	Non-Fermentative Gram Negative Bacilli Infection and Their Antimicrobial Susceptibility Pattern Among Hospitalised Patients in A Tertiary Care Hospital, Kathmandu	Institute of Medicine	Santosh Kumar Yadav
17	Outcome of EGFR mutated and non-mutated adenocarcinoma lung to standard therapy	National Academy of Medical Sciences	Dr. Soniya Dulal
18	Perception and practices of school actors towards healthy school environment: A Survey of Kathmandu Metropolitan City	Kathmandu University	Uma Kafle
19	Effectiveness of Burger Allen Exercise Among Pregnant Wmen With Restless Leg Syndrome In a Selected Hospital At Banke District, Nepal	Nepalgunj Campus	Nursing Srijana Sapkota
20	Intentional Change of Quitting Smoking among Heart Disease Patients: An Interventional Study	Pokhara University	Dilip Kumar Ishwar
21	Barriers to Reporting of Medication Administration Errors among Nurses Working at Teaching Hospital Kathmandu.	Pokhara Campus	Nursing Sapana Shrestha
22	Effect of ABCA1-R219K Variant Polymorphism in Serum Lipid Parameter in Patients under Statin Therapy in Nepal	Institute of Medicine	Ms Sapana Ghimire
23	Maternal Factors Affecting the Birth Outcome of Newborn at BPKIHS	B.P. Koirala Institute Of Health Sciences	Alpana Mandal
24	A Study On Non - Auditory Health Effects Of Noise Exposure Among Urban Residents Of Eastern Nepal	B.P. Koirala Institute Of Health Sciences	Ms. Anjali Mishra
25	Quality Of Life In Head And Neck Cancer patients Receiving Chemoradiation	National Academy of Medical Sciences	Dr. Asmita Rayamajhi
26	Assessment Of Potentially Malignant Disorders With Autofluorescence Imaging, Reflectance Spectroscopy And Vital Staining Techniques	B.P. Koirala Institute Of Health Sciences	Dr. Deepa Sharma
27	Comparison of sedation with dexmedetomidine versus propofol in mechanically ventilated critically ill adult patients in tertiary care centre.	Institute of Medicine	Dr Deepika Subedi (RYII)

28	A study on health care practices and comorbidities in diabetic population in an urban area in Sunsari, Nepal	B.P. Koirala Institute Of Health Sciences	Dr. Kamlesh Prasad Yadav
29	Carbapenemase producing <i>klebsiella pneumoniae</i> from different clinical specimens at tertiary care hospital	Tribhuvan University	Kiran Kumari Chaudhary
30	A study on practices of self care for raised blood pressure among people with hypertension in Itahari sub metropolitan, Nepal	B.P. Koirala Institute Of Health Sciences	Nishant Thakur
31	Dietary diversity and nutritional status of infant and young children aged 6-23 months at Bardaghat municipality in Nawalparasi district	Institute of Medicine	Ranjita Chaudhary
32	Estimation of catastrophic expenditure on oral health care among the residents of Sunsari district	B.P. Koirala Institute Of Health Sciences	Dr. Sarita Dhakal
33	Factors Influencing Cervical Cancer Screening Among Women in Banke District	B.P. Koirala Institute Of Health Sciences	Dr. Subhanshi Shamra
34	Male perception on family planning: a comparative study among urban and rural males of Dhading district	Kathmandu Medical College	Dr. Sudesha Khadka
35	Effect of educational intervention on Preventive Behaviors of Urinary Tract Infections Based on Health Belief Model among female outpatients.	Kathmandu University	Sukriti Srivastava

Result of Province Health Research Grant, 2017

Name of PI	Topic	Grant Amount (NRs.)
Province - 1		
Dr. Kumud Chapagain	Exploring the prevalence, profile, pattern and reasons of substance abuse amongst the adolescents of Eastern Nepal	100000
Mr. Uday Narayan Yadav	Prevalence of and factors associated with frailty among older adults of rural municipality in Morang and Sunsari District of Nepal- A cross-sectional study	100000
Dr. Deependra Prasad Sarraf	Pharmacovigilance of antiretroviral drugs in BPKIHS	100000
Dr. Prajjwal Pyakurel	Out-of-pocket health expenditure among industrial workers employed in a large scale industry in Eastern Nepal, 2016	100000
Dr. Ramayan Prasad Kushwaha	Socio demographic profile of metabolic syndrome in patients treated with Antipsychotic drugs: a tertiary hospital based study in Eastern region of Nepal.	100000

Province - 2		
Mr. Sandeep Thapa	Distribution and comparison of Human Papilloma Virus Genotype in Cervical Cancer in Three Different Ecological Region of Nepal	200000
Mr. Rajesh Sah	Evaluating TB patient satisfaction with Tuberculosis services: A cross sectional study in province 2	100000
Mr. Shailesh Kumar Mishra	An Assessment of Patient's Satisfaction with Eye Care Services Receiving from Eye Hospitals and Eye Care Centers in Nepal	100000
Province - 3		
Dr. Chandra Mani Adhikari	SGNHC-STEMI-Registry	150000
Dr. Bhupendra Bahadur Basnet	Frequency of KRAS mutations in colorectal cancer in patients attending Tertiary Care Hospital -	175000
Dr. Sagun Narayan Joshi	Microbiological aspect of seasonal Hyperacute Panuveitis	175000
Province - 4		
Dr. Kalyan Sapkota	Assessment of Thyroid Disorders during Pregnancy in Western Nepal	200000
Dr. Dipendra Kumar Yadav	Screening for Non-communicable Diseases Risk Factors among Adolescents of Higher Secondary Schools in State Four, Nepal	150000
Dr. Shankhar Gautam	An Assessment of traditional use pattern, current status and the quality of <i>Nardostachys grandiflora</i> (an antihypertensive herb) in Mustang district.	150000
Province - 5		
Ms. Ishwori Pokharel	KC/Aarati Health Related Quality of Life of Adult Client Living with Sickle Cell Disease in a Hospital at Banke District, Nepal.	100000
Dr. Bijen Shakya	Pain management practices and perceived barriers among the health professionals of different hospitals	100000
Dr. Lochana Shrestha	Nutrition and Health Status assessment in Geriatric people in Rural and Urban districts of Nepal	100000
Dr. Tulasi Ram Bhandari	Factors Associated with Psychoactive Substance Initiation Among Adolescents in Rupandehi District of Nepal: A Mixed Method Approach	150000
Province - 6		

Mr. Uttam Poudel	Identifying Factors and Environmental Change to Diseases Outbreak and Impact on Household Economy in Jajarkot District in Nepal	200000
Dr. Nirajana Kayastha	Prevalence of malnutrition among hospitalized children in Jumla	100000
Dr. Kamal Prasad Acharya	Effectiveness of information education and communication (IEC) on menstrual hygiene among adolescent school girls of Jumla district	150000

Province - 7

Dr. Pradeep Mishra	Treatment outcome of severe acute malnutrition and determinants of survival in far western region of Nepal	150000
Dr. Shubhesh Raj Kayashta	Study of prevalence, clinical presentation and treatment outcome of common tropical diseases in terai districts of far west region Nepal	100000
Ms. Kalpana Poudel	Prevalence and Determinants of Dementia and Depression among Elderly	100000
Mr. Shashank Shaker Kalouni	Prevalence of vitamin b12 deficiency in vegeterian population and assessment their clinical presentations; an unsearched cause of anemia	150000

ANNEX II Training & Workshops

Fiscal Year 2074 / 2075					
S.N.	Title of the Training	Venue	No. of Participants	No. of Days	Date
1	Training Workshop on Health System Research Methodology	Chitwan Nepalgunj Biratnagar Birgunj Pokhara	30 in each location	3	October, 2017 November, 2017 December, 2017 January, 2018 February, 2018 March, 2018 April, 2018
2	Training Workshop on Health Research Proposal Development	Kathmandu	30	6	2074/05/04 - 2074/05/09 (20-25 August 2017) 2074/06/22 - 2074/06/27 (08-14 October, 2017)
3	Training Workshop on Data Management and Analysis	Kathmandu	30	6	2074/05/25 - 2074/05/30 (10-15 September, 2017) 2074/08/03 - 2074/08/08 (19-24 November, 2017)
4	Training Workshop on Scientific Writing	Kathmandu	30	3	2074/07/12 - 2074/07/14 (29-31 October 2017) 2074/10/07 - 2074/10/09 (21-23 January)

ANNEX III Capacity Strengthening Training of NHRC Personnel

1. Mr. Bijay Kumar Jha, Training Officer, visited Bangkok, Thailand “To Participate in the FK Norway Training Programme” from 13-19 August 2017.
2. Dr. Krishna Kumar Aryal, Chief, Research Section, visited Bangkok Thailand “To participate in the “FK Norway Training Programme” from 13-19 August 2017.
3. Ms. RanjeetaSubedi, Research Officer, visited Tata Memorial, Mumbai India, “To participate in Training on Population Based Cancer Registry” from 21-29 November 2017.
4. Mr. BihungamBista, Research Officer, visited Tata Memorial, Mumbai India “To participate in Training on Population Based Cancer Registry” from 21-29 November 2017.
5. Dr. Sandhya ChapagainAacharya, Executive Board Member, visited Tata Memorial, Mumbai India, “To participate in Training on Population Based Cancer Registry” from 21-29 November 2017.
6. Mrs. JyotiJha, Medical Record Officer, visited Tata Memorial, Mumbai India, “To participate in Training on Population Based Cancer Registry” from 21-29 November 2017.
7. Mr. Min Bahadur Ghising, Senior Technical Assistant, visited Tata Memorial, Mumbai India, “To participate in Training on Population Based Cancer Registry” from 21-29 November 2017.
8. Mr. Achyut Raj Pandey, Research Officer, visited Hyderabad, India “To participate in Snakebite mitigation initiative and innovative ways to develop effective antivenom” from 29 November to 05 December 2017.
9. Mr. Binaya Chalice, Research Officer, visited New Delhi, India “To Attend Systematic Review Workshop organized by the Campbell Collaboration” from 11-14 December 2017.
10. Mr. Anil Poudyal, Research Officer, visited New Delhi, India “To Attend Systematic Review Workshop organized by the Campbell Collaboration” from 11-14 December 2017.
11. Mr. BihungumBista, Research Officer, visited Pokhara to participate in the “2017 Sub regional Demographic and Health Survey Further Analysis Workshop” from 07-19 January 2018.
12. Mr. Binaya Chalice, Research Officer, visited Bangkok, Thailand “To attend Partner’s Training on FK Norway Project” from 04-10 February 2018.
13. Mr. BinayaChalise, Research Officer, visited Greece, Athens for “GBD Workshop” from 09-16 April 2018.
14. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited New Delhi, India “To participate in Consulatative Meeting on Strengthening health research capacity in Nepal” from 24 - 29 July 2018.
15. Associate Prof. Dr. Prakash Ghimire, ERB Member, visited New Delhi, India “To participate in Consulatative Meeting on Strengthening health research capacity in Nepal” from 24 - 29 July 2018.
16. Dr. Rajendra Kumar B.C., Research Advisor, visited New Delhi, India “To participate in Consulatative Meeting on Strengthening health research capacity in Nepal” from 24 - 29 July 2018.
17. Dr. MeghnathDhimal Senior Research Officer/Chief Research Section, visited New Delhi, India “To participate in Consulatative Meeting on Strengthening health research capacity in Nepal” from 24 - 29 July 2018.

ANNEX IV- List of Publication and Reports

1. Dhimal, M; Bista, B; Neupane, T; Dahal, S; Pandey, AR; Nepal B; Karki RC Jha, AK; Assessing trends of heat waves and perception of people about health risks of heat wave in Nepal. Kathmandu: Nepal Health Research Council, 2018
2. Aryal KK; Pandey AR; Dhimal M; Bhattarai S; Makai P; Pandey ;, Jha AK; Assessment of Social Health Insurance scheme in selected districts of Nepal. Kathmandu, Nepal: Nepal Health Research Council, 2018
3. Evaluation of the Home Based Record (HBR) Intervention Package to Improve the Availability, Retention and Use by Caregivers in Nepal, A Pre-Post Design Study in Three Districts/ Baseline Report, 2017 *****
4. Sah AK; Pandey A; Dhimal M; Jha AK; Febrile illness outbreak Investigation in Sundarharicha-5 Foklan Tapu, Morang District Kathmandu, Nepal: Nepal Health Research Council, 2018
5. Karki S; Dhimal M; Jha AK; Institutional Mapping of Traditional and Complementary service outlets in Kathmandu Valley. Kathmandu , Nepal: Nepal Health Research Council, 2018
6. Sah AK; Neupane T; Shrestha N; Dhimal M; Jha AK; An assessment of research activity of *research center in Nepal*. Kathmandu: Nepal Health Research council, 2018
7. Journal of Nepal Health Research Council, 2018, volume 16, Number 2, Issue 39
8. Journal of Nepal Health Research Council, 2018, volume 16, Number 1, Issue 38
9. Journal of Nepal Health Research Council, 2017, volume 15, Number 3, Issue 37
10. Journal of Nepal Health Research Council, 2017, volume 15, Number 2, Issue 36

ANNEX V -Monitoring and Supervision tool for Health Research Projects.

**Nepal Health Research Council
Monitoring format for research project**

	Date	Purpose	Site	Team Member
First Visit				
Second Visit				
Third Visit				

Study Details (To be filled at central level in communication with research team at Central Level)

	Quote statement in proposal
Title of study	
Registration detail	Registration Date: Proposal Number: Approval Date:

Principal Investigator		Implementing organizations
Contact person		
Contact number		
Main Organization		
Timeline of the study	Start Date:..... Date of completion:..... Starting date of data collection..... Date of completion of data collection.....	
Study Sites		
Objective of study	General Objective:	
	Specific Objectives:	
	1	
	2.	
	3.	
	4.	
	5.	

Study Details 2 (To be filled at central level in communication with research team at Central Level)

	Mentioned in proposal	Quote statement in proposal	Remarks
Paradigm	Qualitative Quantitative		
Nature of investigation	Prospective Retrospective		
Research Design	Observational /non interventional		
	interventional		
	Specify.....		
Multi-centric	Yes	Centers:	
	No		
Multi-Country	Yes	Countries	
	No		
Funding	Yes	Funding agency:	
	No	Funding amount:	

Pretesting	Yes	No	
Simulation	Yes	No	
Field testing	Yes	No	
Major issues in pretesting	Changes made in the tool		
1:	1:		
2:	2:		
3:	3:		
4:	4:		
5:	5:		
Piloting	Yes	No	
Issues covered in piloting			
Translation in Local Language	Yes	No	

To be filled through review of proposal and interaction with field team

	Mentioned in proposal	Practiced in field	Remarks
Sampling Technique	Probability Nonprobability Mixed		
	Specify.....		
Data collection tool	Tools 1: Questionnaire Open ended Close ended		
	Tools 2: Observation checklist • Structured • Unstructured	Yes No	
	Tools 3: Key Informant interview: Yes No a) Participant • Relevant • Not relevant b) Audio/Video recording Yes Yes No		
	Tools 4: Focus Group Discussion: Yes No <i>If yes, ask following criteria</i> a) Number of participant: b) Type of participant: Homogenous Heterogeneous c) Total Duration (<i>in minute</i>): d) Audio/video recording: Yes No		
	Tools 5: In-depth Interview (participant relevant/not relevant)		Yes No
	Tools 6: Others		Yes No

Pretesting	Involvement in pretesting		Yes	No
	Involvement in simulation	Yes	No	
Remarks				

To be filled asking field team (Field Enumerator)

Name		Qualification	Responsibility	Suitability
1				Suitable Not Suitable
2				Suitable Not Suitable
3				Suitable Not Suitable
4				Suitable Not Suitable
5				Suitable Not Suitable
Pretesting	Involvement of field team		Yes	No
	Involvement of PI		Yes	No
Training of field team	Yes	No		
Details of the training				
	Content	Method	Duration	Trainer
1				
2				
3				
4				
5				
Monitoring of field activities				
Frequency of monitoring visit:				
Enumerator to supervisor ratio:				
Monitoring checklist		Yes	No	Remarks if any
Monitoring Guideline		Yes	No	
Supervision checklist		Yes	No	
Supervision Guideline		Yes	No	
Details of supervisor				

Name	Qualification	Previous experience	Training
			Yes No
			Yes No
			Yes No
			Yes No
Major responsibilities of supervisor			
Monitoring Indicators	1		
	2		
	3		
	4		
Provision of Interim Analysis	Yes No		
External supervisor	Yes No		
Problems and challenges in the field			
SN	Problems	Challenges	

For studies that require human specimen collection (field team)

		Storage Condition	Transportation (national/ international)	Laboratory
Human Specimen Collection	1.....	Proper Not Proper	Proper Not Proper	Proper Not Proper
	2.....	Proper Not Proper	Proper Not Proper	Proper Not Proper
	3.....	Proper Not Proper	Proper Not Proper	Proper Not Proper
	4.....	Proper Not Proper	Proper Not Proper	Proper Not Proper
	5.....	Proper Not Proper	Proper Not Proper	Proper Not Proper
	5.....	Proper Not Proper	Proper Not Proper	Proper Not Proper

Any comment relating to storage, transportation and laboratory testing of sample

Additional information in clinical trials (Field setting in interaction with person in charge)

	Statement in proposal	Deviation in field
Is randomization done? Yes No		Yes No
Duration of monitoring for clinical trial?		Yes No
Test performed to monitor adverse effects	1	Yes No
	2	Yes No
	3	Yes No
	4	Yes No
	5	Yes No
Management plan of adverse effects		Yes No
Frequency of monitoring		Yes No
Were there adverse effects?		Yes No
Were serious adverse effects requiring hospitalization seen?		Yes No
Time span of response after adverse effect	<i>(State in hours and day)</i>	
Person managing adverse effect?		
Outcome after management of adverse effect		
Referral of patients with adverse effects	Yes No	
Health facility referred <i>(For referred patients)</i>		
Time referral after adverse effect <i>(For referred patients)</i>	<i>(state time)</i>	
Reporting of serious adverse effects to NHRC and DDA		Yes No
Participants		
Participants stated in proposal		
Vulnerable participants involved		Yes No

Details record of individual patients maintained(Check file)		Yes	No
Communicating to research participants			
Is there official website?		Yes	No
Is the website updated regularly?		Yes	No

To be filled through interaction with participants or direct observation of data collection

	Question	Response	
	General Information		
1	Did they explain about the study?	Yes	No
3	Did they explain about the voluntary participation?	Yes	No
4	Did they explain about the autonomy to withdraw at any time?	Yes	No
5	Did they force you to participate in the study?	Yes	No
6	Did they lure you to participate in the study through financial and other benefit?	Yes	No
7	Did they adequately answer your queries?	Yes	No
8	Did they explain about your role in the study?	Yes	No
9	Did they mention approximate duration of interview?	Yes	No
10	Did they mention that your voice is audiotaped?(for qualitative)	Yes	No
11	Did they show sensitivity to your culture/gender? (For example, asking reproductive health question by male might not be comfortable)	Yes	No
12	Did you feel that they showed disrespect to your opinion?	Yes	No
	For studies that require human specimen collection		
13	Did they collect any specimen from you?	Yes	No
14	Did they explain about the laboratory test to be performed on your specimen?	Yes	No
15	Did they mention the duration of the storage of your specimen?	Yes	No
16	Did they mention when you will receive result of lab test performed on the sample?	Yes	No
	For studies that involves administration of drug/other products		
17	Did they explain risk and benefits of the drug/product?	Yes	No
18	Did they explain duration and frequency of the use of drug/product?	Yes	No
19	Did they explain appropriate alternative treatment procedure?	Yes	No
20	Did they explain about the compensation of adverse consequences are seen?	Yes	No
21	Did you encounter any adverse health consequences?	Yes	No
	Consent		

22	Nature of consent or assent	Assent Consent	Any Comment regarding consent
23	Person providing assent	Guardian Teacher/principal/head master	
24	Type of consent	Verbal Written	
25	Consent of the illiterate	Witness consent Thumb Print	
Closing of the interview			
26	Did they thank you for your participation?		Yes No

Document review and Observation checklist (Field level)

		Yes	No	Remarks
Informed consent (At least 5 randomly selected)	Objective of the study	Yes	No	
	Potential risk of the study	Yes	No	
	Potential benefit of the study	Yes	No	
	Person to be contacted in case of confusion	Yes	No	
	Use of collected specimen (If applicable)	Yes	No	
	Use of collected specimen for other purpose than stated by research objective (If applicable)	Yes	No	
	Assent Form (If applicable)	Yes	No	
	Consent Form	Yes	No	
Selected questionnaire (At least 5 randomly selected)	Completeness	Yes	No	
	Any discrepancies	Yes	No	
	Storage condition	Yes	No	
	Any suspicious observations	Yes	No	

Additional document review and Observation checklist for clinical trial (central level)

	Documents	Status	Remarks
Data safety monitoring board	Formal document of formation of DSMB board	Yes No	
	CV and contact address of DSMB members		
	Meeting of the board	Yes No	
	Meeting Minute	Yes No	

Patient safety data	Log book of adverse effects	Yes	No	
	Log book of serious adverse effects	Yes	No	
	Detail record of individual patient maintained	Yes	No	
	Record of action taken in case of adverse consequences	Yes	No	

Steps taken for data quality control (Shift towards end of tool)

		Steps taken	Responsible person	
At Field Level	Data collection			
	Control of fabrication (Making sure that data are not created by enumerator)	1:		
		2:		
		3:		
		4:		
	Ensure appropriate sampling (Making sure that enumerator have not violated sampling strategy)	1:		
		2:		
		3:		
		4:		
	For research involving human specimen collection			
	Human Sample Collection	1:		
		2:		
		3:		
		4:		
Field Storage of sample	1:			
	2:			
		3:		
		4:		
At Central Level	Data Entry (Errors in entry, missing entry)	1:		
		2:		
		3:		
		4:		
	For studies involving laboratory testing			
	Validation of tests	1:		
		2:		
3:				

Steps taken to ensure privacy and confidentiality

	Step Taken	Responsible Person
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At Field Level	1:	
	2:	
	3:	
	4:	
At Central Level	1:	
	2:	
	3:	
	4:	

Overall impression of monitoring team and feedback to the research team

Overall Impression *(to be filled through discussion of monitoring team including information on whether data collection procedures involved in field and issues not covered by tool above)*

Feedback to research Team

1:

2:

3:

4:

5:

6:

7:

8:

9:

10:

***Note:** Before monitoring visit, monitoring committee can ask the research team for following documents

- **Project summary:** Progress, remaining tasks, approximate time of completion, further plan
- **Details of research team:** Name, designation, contact number, qualification, experience

Name and Signature of monitoring team members

.....
Name:	Name:	Name:	Name:
Post:	Post:	Post:	Post:

ANNEX VI-Status of Inspection of Institutional Review Committees (IRCs)

1. Inspection visit of proposed Institutional Review Committee (IRC) at Annapurna Neurological Institute and Allied Sciences(ANIAS)

Introduction

Annapurna Neurological Institute and Allied Sciences is a full fledge 55 bed multi-specialty hospital established in the year 2009. The main objective of the hospital has been to deliver and disseminate accessible high quality medical service to the people of Nepal and which can be duplicated through standardization of the process. **ANIAS** has various academic activities with a range of competent faculties since its establishment. Elective students from different countries including Germany, Netherland, United Kingdom, USA, Japan, China, and Korea come for the short term posting ranging from 2 weeks to 2 months. It has established its research wing as Annapurna Research Center which is a non-governmental organization established to provide a forum for young people and nurture the culture of research in our country. **ANIAS** has proposed for formation of IRC within their organization to value and promote its collaborative role in research and commit to ensure that research conducted within the institution meets the highest scientific, ethical and legal standard in biomedical research.

On 11 April 2018, Chairman of proposed IRC-**Annapurna Neurological Institute and Allied Sciences** requested the approval of IRC at their organization to NHRC submitting the required documents. The organization was requested to submit revised documents. After receiving the revised documents, the request was discussed at 246thERB meeting held on 2 May 2018 and board decided to visit the organization to verify the capacity of proposed IRC before providing approval. Thus, on 17 May 2018, NHRC team visited the hospital.

Objectives

- To inspect infrastructure/facilities to establish IRC
- To verify the IRC members as per submitted CV of IRC members
- To evaluate the proposal review process and capacity of IRC

Methodology:

A monitoring team from the Nepal Health Research Council (NHRC) visited **Annapurna Neurological Institute and Allied Sciences** to inspect the infrastructure of proposed IRC and interact with the members of IRC as per the decision made by Ethical Review Board (ERB) of NHRC. On 17 May 2018, Prof. Dr. Aarati Shah, ERB Chair; Prof. Dr. Chitra Kumar Gurung, ERB member, Ms. Namita Ghimire and Dr. Anju Vaidya, Research Officers of NHRC visited proposed

IRC of ANIAS.

Dr. Sharad Hari Gajurel and other IRC members welcomed the NHRC team. Dr. Sharad Hari Gajurel started the meeting with welcome speech and highlighted the activities conducted by ANIAS. Dr. Basant Pant, Chairperson of ANIAS and advisor of IRC shared his experiences in the research field and highlighted the need of IRC in ANIAS to enhance its capacity.

Following are the Proposed IRC members:

S. No	Name	Designation	Area of expertise
1.	Dr. Prabesh Rajbhandari	Chairperson	MS, Fellow Neuro Surgeon
2.	Dr. Avinash Chandra	Member Secretary	MD(Internal Medicine), Fellowship in Neurology
3.	Dr. SharadHariGajurel	Member	MPH (Public Health Director)
4.	Dr. Rang Bahadur Basnet	Member	
5.	Dr. Resha Karmacharya	Member	MS Neurosurgery
6.	Dr. Shrijana Maharjan	Member	MD psychiatry
7	Dr. Gambhir Shrestha	Member	MD Community medicine and Tropical diseases
8	Mr. Ashok Bhusal	Member	Bachelor in Pharmacy
9	Mr. Sajjan Bar Singh Thapa	Member	Master of Laws
10	Dr. Bijaya Pant	Member	
11	Dr. Basant Pant	Advisor	PhD Neurosurgery

Dr. Basanta Pant further mentioned about undergoing plans to conduct 14 researches in the coming year. He further added that the researches will be conducted by faculties of different department. He further emphasized on establishment of sophisticated laboratory in the institution to provide the researchers with platform to do them researches and build their capacity.

Prof. Gurung, ERB member of NHRC appreciated the efforts made by the institution and encouraged them to carry on their efforts in the research field. Ms. Namita Ghimire, Research officer of NHRC gave a brief presentation on responsibilities and relationship between NHRC and IRC. She clarified the queries put forward by the members of IRC and encouraged the IRC members to work within the National ethical guidelines of NHRC. She further notified them about future plan of NHRC to initiate an online system to establish communication between IRC and NHRC.

Prof. Dr. Aarati Shah appreciated the initiatives and efforts made by the IRC and suggested then to work according to the National ethical guideline of NHRC. She further suggested them to establish the facility of bio-banking to further enhance the capacity of the researchers throughout the country.

Observation/Activities

- Office room of IRC and minute of meeting was observed.
- Financial and administrative support was ensured by budget allocated for IRC and administrative staff.
- Name list of IRC members was displayed in front of the IRC office

NHRC team suggested followings to IRC

- Mechanism to train its members should be established
- Member should be trained on basic principle of research ethics
- Regular refresher training should be provided to the IRC members

IRC suggested followings to NHRC

Positive co operation from NHRC.

Impression

The IRC members are very enthusiastic to do research in regular basis and run the committee smoothly as per the guidelines of NHRC.

Conclusion

Members of the proposed IRC of ANIAS are enthusiastic to establish IRC in the organization. They have fulfilled all the criteria present in the checklist for IRC approval. Thus, the inspection team recommends ERB for appropriate decision to establish IRC in ANIAS.

Report submitted by:

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Prof. Dr. Aarati Shah, ERB Chair of NHRC

Dr. Chitra Kumar Gurung, ERB member of NHRC

Ms. Namita Ghimire, Research Officer Ethical Review M & E Section, NHRC

Dr. Anju Vaidya, Research Officer Ethical Review M & E Section, NHRC

2. Supervision visit of proposed Institutional Review Committee (IRC) at Purbanchal University College of Medical and Allied Sciences (PUCMAS)

Introduction

Purbanchal University is an autonomous university established under Purbanchal University act of Nepal in 1995 AD. Purbanchal University's Central office is located in Biratnagar and the Education Complex of PU have located in Gothgaun.

Purbanchal University College of Medical and Allied Sciences (PUCMAS) runs Master's in Pharmacy and Public health, Bachelor in Public health, Pharmacy, Nursing, Agriculture and Forestry. There are 25 full time faculty members, 300 under-graduate students in PBBN and BSN program, and 40 graduate level students (MPH and M. pharmacy program). They are planning to run Master's in Nursing in near future. In this regards, PUCMAS wants to establish IRC in their institution to facilitate the students and the faculty members and to make all the research work scientifically sound and ethically performed and with a view to provide independent, competent, and timely review of research proposals.

On 20 April 2018, NHRC has received the request from proposed IRC of PUCMAS by submitting the required documents. After an initial review by the ERB secretariat, the request was discussed at ^{ERB} meeting held on 2 May 2018 and board decided to visit the Gothgaun to meet and interact to the member and head of the institution before providing decision of Ethical Review Board. Thus, on 20th August 2018, NHRC team visited the PUCMAS, Gothgaun. The team comprise with

Prof. Chitra Kumar Gurung, Member-ERB, NHRC. Dr. Meghanath Dhimal, Senior Research Officer and Ms. Namita Ghimire, Research Officer visited proposed IRC of PUCMAS, Gothgaun.

Dr. Binita Poudel Chair, IRC well-come the NHRC team and highlighted the activities of PUCMAS. She shared about the Purbanchal University and the structure, composition and working procedure of proposed IRC. She explained about process of proposal submission and ethical review process of the IRC. The proposals will also be sent to external reviewers for review, if required.

Following are the Proposed Members for the IRC:

S. No	Name	Designation	Area of expertise
1.	Dr. Binita Kumari Poudel	Chairperson	PhD, Public Health
2.	Dr. Kajiram Adhikari	Member	PhD, M-Pharm
3.	Ms. Namu Koirala	Member	MSc Nursing
4.	Ms. Reshma Thapa	Member	MSc Nursing
5.	Mr. Bhupendra Barakoti	MPH	Public Health
6.	Mr. Raman Kumar Barma	Member	Medi. Microbiology
7	Mr. Bal Krishna Acharya	Member	LLB. Advocate, MA
8	Mr. Nabin Lamichhane	Member	Public Health
9	Dr. Prasanna Dahal	Member secretary	Clinical Pharmacy

Dr. Gurung, ERB member of NHRC appreciated the efforts made by the institution and encouraged them to carry on their efforts in the research field. Ms. Namita Ghimire, Research officer of NHRC gave a brief presentation on responsibilities and relationship between NHRC and IRC. She clarified the queries put forward by the members of IRC and encouraged the IRC members to work within the National ethical guidelines of NHRC. She further notified them about future plan of NHRC to initiate an online system to establish communication between IRC and NHRC.

Dr. Meghanath Dhimal highlighted the need of responsible conduct of research in the country. He also clarified the queries raised by the IRC members and encouraged the IRC members to work within the National ethical guidelines of NHRC.

Observation/Activities

- Office room of IRC and minute of meeting was observed.
- Financial and administrative support was ensured by the principal of the university
- Name list of IRC members was displayed in front of the IRC office

NHRC team suggested followings to IRC

- Tentative schedule of IRC meeting should be mentioned clearly in a SOP
- Training to IRC member Should be provided

Conclusion

Members of the proposed IRC of PUCMAS are enthusiastic to establish IRC in their organization. They have fulfilled all the criteria mentioned in the checklist for IRC approval. Thus, the supervision team recommends to ERB for appropriate decision to establish IRC in PUCMAS

Reported by:

Dr. Chitra Kumar Gurung, ERB member of NHRC

Dr. Meghanath Dhimal, Senior Research Officer, Research Section, NHRC

Ms. Namita Ghimire, Research Officer Ethical Review M & E Section, NHRC

3. Inspection visit of proposed Institutional Review Committee (IRC) at Nepal Netra Jyoti Sangh

Introduction

Nepal Netra Jyoti Sangh (NNJS) established in 1978 AD; is a non-profit, non-governmental organization, welfare-oriented social organization. The objective is to make effective, high quality eye health services accessible to the people. NNJS is an umbrella organization for 18 eye care centers in 38 districts. NNJS affiliated Hospitals are operating MD (Ophthalmology) course under NAMS and 240 Ophthalmic Assistants (OAs). In MD course, research/thesis work is mandatory as requirement of the partial fulfillment of the respective degrees and have more than 2000 staffs which can conduct research for professional growth. The research associated with these program require human involvement and hence, ethical approval are necessary. Hence, to make all the research work scientifically sound and ethically performed and with a view to provide independent, competent, and timely review of research proposals NNJS has proposed formation of IRC within their organization.

On 20 April 2018, chief secretary of NNJS requested NHRC for the approval of proposed IRC submitting the required documents. After an initial review by the NHRC secretariat, the organization was requested to submit additional documents, which was fulfilled in due course of time. After receiving the revised documents, the request was discussed at 247th ERB meeting held on 9 May 2018 and board decided to visit the organization to verify the capacity of proposed IRC before providing approval. Thus, on 18th May 2018, NHRC team visited the NNJS office.

Objectives

- To inspect infrastructure/facilities to establish IRC
- To verify the capacity, interest and presence of IRC members as per submitted CVs
- To evaluate the proposal review process and capacity of IRC

Methodology:

A monitoring team from the Nepal Health Research Council (NHRC) visited NNJS to inspect the infrastructure of proposed IRC and interact with the members of IRC as per the decision made by Ethical Review Board (ERB) of NHRC. On 18th May 2018, Prof. Dr. Aarati Shah-ERB Chair, Prof. Dr. Prakash Ghimire-ERB Member, Ms. Namita Ghimire and Mr. Anil Kumar Sah, Research officers of NHRC, visited proposed IRC of NNJS, Kathmandu.

Dr. Shekhar Sharma, Manager welcomed the NHRC team. Mr. Ranjan Shah Member secretary of IRC, NNJS started the meeting with speech and highlighted the activities conducted by NNJS.

Following are the Proposed Membership for the IRC:

S.No	Name	Designation	Area of expertise
1.	Prof. Dr. Chet Raj Pant	Chairperson	MBBS, MD
2.	Prof. Dr. Sunil Kumar Joshi	Member	MD, MPhil, PhD
3.	Ms. Indira Singh	Member	BSc. Nursing, MA, M.Ed.

4.	Mr. Shital Bhandary	Member	M. Sc. Stat, Master in Demography
5.	Prof. Dr. Dev Narayan Shah	Member	MD. Ophthalmology
6.	Prof. Dr. Ramesh Kant Adhikari	Member	MD. Pediatric
7	Mr. Yuvraj Bhandari	Member	B.L. Advocate
8	Dr. Nisha Jha	Member	Ph.D. Pharmacology
9	Mr. Ranjan Shah	Member secretary	Public Health Graduate

Among them Prof. Dr. Dev Narayan Shah, Prof. Dr. Ramesh Kant Adhikari and Mr. Yuvraj Bhandari were absent during monitoring visit.

Member Secretary of IRC presented the structure, composition and working procedure of proposed IRC of NNJS. He explained about process of proposal submission and ethical review process of the IRC. The proposals will also be sent to external reviewers for review, if required.

Prof. Dr. Aarati Shah, ERB Chair of NHRC highlighted the need of responsible conduct of research in the country. Prof. Dr. Prakash Ghimire mentioned that the role of NNJS should be defined clearly on how it can act as an umbrella organization, as it has 18 Hospitals under its umbrella. He also asked the authorities on how it is planning to coordinate IRC among the Hospitals under its umbrella as one of its umbrella Hospital at Biratnagar's IRC has been recently was approved by NHRC/ERB and other Eye Hospital at Lumbini is in process of obtaining IRC approval. Prof. Dr. Sunil K Joshi shared how the organization can conduct collaborative research in 18 hospitals under NNJS umbrella.

Observation/Activities

- Office room of IRC and minute of meeting was observed.
- Financial and administrative support was ensured through budget allocation for IRC and administrative staff.

NHRC team suggested followings to IRC

- Strengthen collaboration within hospitals under NNJS umbrella.

Conclusion

AS NNJS umbrella accommodates 18 eye hospitals spread over the country, and the proposed committee has experienced personalities in health research and ethical principles, ERB may consider its approval, provided there is commitment from NNJS and Hospitals who have already received IRC approval very recently, to work together under one umbrella for responsible and ethical conduct of the research.

Reported by:

Prof. Aarati Shah Chair ERB,

Prof. Dr. Prakash Ghimire Member, ERB

Ms. Namita Ghimire, Research Officer Ethical Review M & E Section, NHRC

Mr. Anil Kumar Sah, Research Officer Ethical Review M & E Section, NHRC

ANNEX VII: List of Approved Health Research Proposals

1. Title : Antibiotic use in the general population in Rupandehi district of Nepal and factors associated with prescribing practices
 PI/Co PI Name : Mr.Anant Kumar Nepal
 Institution : Curtin University
 Approval Amount : Rs 294000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 10000
 Approval Date : 19-Jul-17

2. Title : Real time resuscitation experience and perceived clinical training competency among candidate Helping Babies Breathe Master Trainers in Nepal
 PI/Co PI Name : Dr. Dinesh Dharel
 Institution : BP Koirala Institute of Health Sciences
 Approval Amount : Rs 39500.00
 Funding Agency : Self-Funded
 NHRC Fees : Rs 5000
 Approval Date : 26-Jul-17

3. Title : Awareness Regarding Osteoporosis Among Middle Aged Women in chitwan district
 PI/Co PI Name : Ms. Mathura Sapkota
 Institution : Bharatpur Hospital Nursing college
 Approval Amount : NA
 Funding Agency : Self-Funded
 NHRC Fees : Rs 5000
 Approval Date : 26-Jul-17

4. Title : Acceptability, appropriateness and effectiveness of mobile sms intervention to enhance knowledge and behaviours of community people towards dengue prevention in Chitwan District, Nepal
 PI/Co PI Name : Mr. Ashmin Hari Bhattarai
 Institution : Universitas Gadjah Mada
 Approval Amount : Rs 200000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 10000
 Approval Date : 26-Jul-17

5. Title : Assessment of Vital Respiratory Indices of Petrol Pump Workers of Kathmandu
 PI/Co PI Name : Mr. Rajan Pandit
 Institution : Nepal Medical College
 Approval Amount : Rs 3,000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 5000
 Approval Date : 26-Jul-17

- 6.** Title : Prevalence of Vaginal Candidiasis among females of reproductive age group visiting Global Hospital, Lalitpur, Kathmandu.
 PI/Co PI Name : Ms. Sapana Lamsal
 Institution : St. Xavier's College
 Approval Amount : NA
 Funding Agency : Self-Funded
 NHRC Fees : Rs 1000
 Approval Date : 26-Jul-17
- 7.** Title : Combination of Coagulation Mutation Panel Factor V, Factor II, MTHFR Leading to Deep and Superficial Venous Thrombosis and Thromboembolism of the Lower Limb
 PI/Co PI Name : Mr. Anil Kumar Sah
 Institution : Annapurna Research Center and Annapurna Neurological Institute and Allied Sciences
 Approval Amount : Rs 82000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 5000
 Approval Date : 26-Jul-17
- 8.** Title : A retrospective hospital based study to comparison of risk factors and resistance patterns by genotype in ESBL and carbapenem resistant bacterial strains at Kathmandu Model Hospital
 PI/Co PI Name : Dr. Rajesh Dhoj Joshi
 Institution : Kathmandu Model Hospital
 Approval Amount : Rs 604546.02
 Funding Agency : Henry Ford Health System
 NHRC Fees : Rs 10000
 Approval Date : 26-Jul-17
- 9.** Title : Evaluation of Diagnostic Yield and Turnaround Time of Liquid and Solid Culture Compared to Fluorescence Microscopy for Detection of Mycobacterium Tuberculosis: Active Case surveillance emigrants from Nepal
 PI/Co PI Name : Mr. Ram Datt Bhatt
 Institution : Sunsari Technical Collage Dharan NEpal
 Approval Amount : NA
 Funding Agency : Self-Funded
 NHRC Fees : Rs 1000
 Approval Date : 26-Jul-17
- 10.** Title : Urban Equity: A mixed method study on getting, and using the data to respond to mental health and injury in Kathmandu valley
 PI/Co PI Name : Dr. Sushil Chandra Baral
 Institution : HERD International
 Approval Amount : Rs 8481300.00
 Funding Agency : Self-Funded
 NHRC Fees : Rs 254439
 Approval Date : 9-Aug-17

- 11.** Title : Menstrual Restriction in Nepal and its impact on women's health, education and empowerment
 PI/Co PI Name : Ms. Radha Paudel
 Institution : Tribhuvan University
 Approval Amount : NA
 Funding Agency : Self-Funded
 NHRC Fees : Rs 1000
 Approval Date : 9-Aug-17
- 12.** Title : Factors Influencing Care-Seeking Behaviors for Ill Children Under 5 years old by Mothers Attending Government Health Facilities in the Lalitpur District of Nepal
 PI/Co PI Name : Ms. Marin Annalise Strong/ Ms. Mamata Sherpa Awasthi
 Institution : University of New Hampshire
 Approval Amount : \$4,100.00
 Funding Agency : University of New Hampshire, Hamel Center for Undergraduate Research
 NHRC Fees : \$200
 Approval Date : 9-Aug-17
- 13.** Title : Review of Nepal's Draft Mental Health Legislation: A Policy Review
 PI/Co PI Name : Ms. Jane Stephens
 Institution : London School of Hygiene and Tropical Medicine
 Approval Amount : Rs 400000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 20000
 Approval Date : 9-Aug-17
- 14.** Title : Assessing quality of family planning services provided from public health facilities in selected districts of Nepal.
 PI/Co PI Name : Mr. Arjun Aryal
 Institution : Marie Stopes International
 Approval Amount : Rs 4370000
 Funding Agency : Marie Stopes International
 NHRC Fees : Rs 131100
 Approval Date : 9-Aug-17
- 15.** Title : Adaptation of technology and strengthening systems for ROP management in Kathmandu Valley, Nepal.
 PI/Co PI Name : Mr. Sanyam Bajimaya
 Institution : Tilganga Eye Center
 Approval Amount : Rs 9552540
 Funding Agency : USAID, CBP (Child Blindness Program)
 NHRC Fees : Rs 286576.2
 Approval Date : 9-Aug-17
- 16.** Title : Detection of Extended Spectrum Beta lactamase producing Uropathogenic E. coli and The Correlation of Biofilm in Development of Antibiotic Resistance Pattern.

- PI/Co PI Name : Mr. Raju Shrestha
 Institution : National College
 Approval Amount : Rs 56000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 1000
 Approval Date : 9-Aug-17
- 17.** Title : Prevalence and correlates of Anxiety among patients admitted to Tertiary Care Hospital in Kathmandu .
 PI/Co PI Name : Dr. Sharad Hari Gajuryal
 Institution : Annapurna Neurological Institute & Allied
 Approval Amount : Rs 30000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 5000
 Approval Date : 9-Aug-17
- 18.** Title : Job satisfaction among graduate nurse faculty in Nepal
 PI/Co PI Name : Ms. Abja Sapkota
 Institution : Nepal Medical College
 Approval Amount : Rs 47000
 Funding Agency : Nepal Medical College
 NHRC Fees : Rs 5000
 Approval Date : 9-Aug-17
- 19.** Title : Antithrombotic Prescribing Patterns among patients diagnosed with Atrial Fibrillation in Cardiac super specialty hospital of Kathmandu
 PI/Co PI Name : Mr. Pawan Maharjan
 Institution : Kathmandu University
 Approval Amount : Rs 12000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 1000
 Approval Date : 9-Aug-17
- 20.** Title : Disaster management nursing competencies among nurses working in tertiary level teaching hospital in Kathmandu, Nepal
 PI/Co PI Name : Ms. Hricha Neupane
 Institution : University of Oveido
 Approval Amount : Rs 20000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 10000
 Approval Date : 9-Aug-17
- 21.** Title : The Acceptability of Screening of Diabetes Mellitus among Tuberculosis Patients at Directly Observed Treatment Shortcourse (DOTS) Center in selected districts of Nepal
 PI/Co PI Name : Ms. Sabina Timilsina
 Institution : Universitas Gadjah Mada
 Approval Amount : \$4,403.00
 Funding Agency : Universitas Gadjah Mada

- NHRC Fees : \$100
Approval Date : 9-Aug-17
- 22.** Title : Baseline survey for an intervention study of Save the Children's Integrated Adolescent Development Interactive Learning Program among an adolescent population in Saptari District, Nepal
PI/Co PI Name : Madan Gotame
Institution : Save the Children
Approval Amount : Rs 988400
Funding Agency : Save the Children
NHRC Fees : Rs 10000
Approval Date : 16-Aug-17
- 23.** Title : A single center, open label pilot study to evaluate the safety and efficacy of CC-11050 in Nepalese patients with erythema nodosum leprosum
PI/Co PI Name : Dr. Mahesh Shah
Institution : Anandaban Hospital, The Leprosy Mission Nepal
Approval Amount : \$98,944.75
Funding Agency : Celgene Corporation via TLM Nepal
NHRC Fees : \$2,968.34
Approval Date : 16-Aug-17
- 24.** Title : Assessing the impact of a Vi-Polysaccharide Conjugate Vaccine in preventing typhoid infection among Nepalese children – a Phase III trial
PI/Co PI Name : Prof. Andrew Pollard/Prof. Dr. Buddha Basnyat
Institution : University of Oxford, Oxford Vaccine Group
Approval Amount : \$1,209,594.00
Funding Agency : University of Maryland, Baltimore
NHRC Fees : \$36,287.82
Approval Date : 16-Aug-17
- 25.** Title : PHENOTYPIC DETECTION OF Extended Spectrum Beta Lactamases (ESBLs) IN CLINICAL ISOLATES BY MODIFIED CLSI ESBL CONFIRMATORY METHODS IN TERTIARY CARE HOSPITAL
PI/Co PI Name : Ms. Sushma Rijal
Institution : Goldengate International College
Approval Amount : Rs 73000
Funding Agency : Self-Funded
NHRC Fees : Rs 1000
Approval Date : 16-Aug-17
- 26.** Title : Prevalence of Nosocomial Infection and antimicrobial Susceptibility profile at Annapurna Neurological Institute & Allied Sciences
PI/Co PI Name : Dr. Sharad Hari Gajuryal
Institution : Annapurna Neurological Institute & Allied Sciences
Approval Amount : Rs 20500
Funding Agency : Self-Funded
NHRC Fees : Rs 5000
Approval Date : 16-Aug-17

- 27.** Title : Determination of training needs for lung ultrasound proficiency and impact of training on care in the Patan Hospital Emergency Department
 PI/Co PI Name : Darlene Rose House
 Institution : Patan Academy of Health Sciences
 Approval Amount : Rs 810000
 Funding Agency : NA
 NHRC Fees : Rs 20000
 Approval Date : 16-Aug-17
- 28.** Title : Designing a Micro-survey Research Methodology to Assess Use of Health Services in VDCs/Municipalities: A feasibility study in Chandani Mandan of Kavre district and Gunsakot of Sindhupalchok district of Nepal
 PI/Co PI Name : Dr. Subas Risal
 Institution : New Era
 Approval Amount : Rs 1521795
 Funding Agency : NA
 NHRC Fees : Rs 45653.85
 Approval Date : 16-Aug-17
- 29.** Title : Assessing health worker's fidelity and patient satisfaction regarding community based DOTS program in Chitwan and Palpa districts of Nepal: An Implementation Research
 PI/Co PI Name : Ms. Merina Joshi
 Institution : Universitas Gadjah Mada
 Approval Amount : Rs 72000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 16-Aug-17
- 30.** Title : Parent-adolescent communication and utilization of adolescent-friendly health services in Kailali district, Nepal
 PI/Co PI Name : Mr. Bharat Raj Bhatta
 Institution : The University of Tokyo
 Approval Amount : Rs 280000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 16-Aug-17
- 31.** Title : Perceived Self Body Image, Body Mass Index and Depression Among Female Adolescent Students of Surkhet District of Nepal
 PI/Co PI Name : Ms. Pratiksha Bhandari
 Institution : Padma Kanya Multiple Campus
 Approval Amount : Rs 42000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 1000
 Approval Date : 16-Aug-17

- 32.** Title : Nepal Government MBBS Scholarship Scheme: A study of the process and implementation
 PI/Co PI Name : Ms. Agya Mahat
 Institution : Nick Simons Institute
 Approval Amount : Rs 310000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 16-Aug-17
- 33.** Title : Nurses' perception towards working environment in different tertiary hospitals' emergency departments of Nepal
 PI/Co PI Name : Ms. Shradha Shakya
 Institution : Metropolia University of Applied Sciences
 Approval Amount : Rs 10000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 10000
 Approval Date : 16-Aug-17
- 34.** Title : Comparison of Biochemical Markers of Bone Turnover in Pre- and Post-menopausal Women in Tahachal-13
 PI/Co PI Name : Mr. Sashir Maharjan
 Institution : JF Institute of Health Sciences
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-Aug-17
- 35.** Title : Differences Of Body Mass Index In Diabetic and Non Diabetic Individuals attending Alka Hospital, Lalitpur
 PI/Co PI Name : Ms. Anisha Maharjan
 Institution : JF Institute of Health Sciences
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-Aug-17
- 36.** Title : Comparison of the serum uric acid level in post and pre-menopausal women visiting Alka Hospital
 PI/Co PI Name : Ms. Sujata Maharjan
 Institution : JF Institute of Health Sciences
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-Aug-17
- 37.** Title : Knowledge about air pollution and its protective practice among geriatric population of Kalanki-14 Kathmandu Nepal

- PI/Co PI Name : Ms.Salina Thapa
 Institution : National Open College
 Approval Amount : Rs 6500
 Funding Agency : Self-Funded
 NHRC Fees : Rs 1000
 Approval Date : 16-Aug-17
- 38.** Title : Knowledge, Attitude and Practice of Personal Hygiene and Sanitation among Secondary School Children in Kalanki Area, Kathmandu Metropolitan City, Kathmandu, Nepal
- PI/Co PI Name : Ms.Swornima Shrestha
 Institution : National Open College
 Approval Amount : Rs 8500
 Funding Agency : Self-Funded
 NHRC Fees : Rs 1000
 Approval Date : 16-Aug-17
- 39.** Title : Study on the level of stigma related with depression and its' impact on health seeking behavior among bachelors' student in Lalitpur
- PI/Co PI Name : Ms. Aashrita Choudhary
 Institution : National Open College
 Approval Amount : Rs 7000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 1000
 Approval Date : 16-Aug-17
- 40.** Title : ABO & Rh blood grouping in diabetic patient attending Star Hospital, Lalitpur, Nepal"
- PI/Co PI Name : Mr. Anil Baniya
 Institution : Modern Technical College
 Approval Amount : Rs 13000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 1000
 Approval Date : 16-Aug-17
- 41.** Title : Hemoglobin and C-reactive protein level among smoker and non-smoker individuals of Kathmandu valley, Nepal
- PI/Co PI Name : Ms.Dipika Lama
 Institution : Modern Technical College
 Approval Amount : Rs 13000
 Funding Agency : Self-Funded
 NHRC Fees : Rs 1000
 Approval Date : 16-Aug-17
- 42.** Title : Detection and Enumeration of Coliforms in Dairy milk of kathmandu valley, Nepal
- PI/Co PI Name : Ms.Nikita Timalsina
 Institution : Modern Technical College
 Approval Amount : Rs 12000

- Funding Agency : Self-Funded
NHRC Fees : Rs 1000
Approval Date : 16-Aug-17
- 43.** Title : Study of bacterial contamination among currency notes and coins circulating in Kathmandu valley, Nepal
PI/Co PI Name : Ms.Sajana Maharjan
Institution : Modern Technical College
Approval Amount : Rs 12000
Funding Agency : Self-Funded
NHRC Fees : Rs 1000
Approval Date : 16-Aug-17
- 44.** Title : Prevalance of Helicobacter pylori infection in patient attending ,Star Hospital, Lalitpur, Nepal.
PI/Co PI Name : Ms.Aayasha Shakya
Institution : Modern Technical College
Approval Amount : Rs 10000
Funding Agency : Self-Funded
NHRC Fees : Rs 1000
Approval Date : 16-Aug-17
- 45.** Title : Prevalence of Intestinal Parasitic Infection among school going Children in Banepa Municipality, Kavre
PI/Co PI Name : Mr. Mani Sambhu Sainju
Institution : JF Institute of Health Sciences
Approval Amount : Self-Funded
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 16-Aug-17
- 46.** Title : Effect of plant extract on multidrug resistant strain isolates from urine sample, kalimati, Kathmandu
PI/Co PI Name : Ms.Tibrata Sharma
Institution : JF Institute of Health Sciences
Approval Amount : Self-Funded
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 21-Aug-17
- 47.** Title : Factors Associated with the Practice of Personal Protective Equipment for Pesticides among Farmers of Panchkhal, Kavre
PI/Co PI Name : Ms. Shraddha Nepal
Institution : Institute of Medicine, Maharajgunj Medical Campus
Approval Amount : Rs 12500
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 21-Aug-17

- 48.** Title : Association of elevated first trimester serum uric acid level with development of gestational diabetes mellitus
PI/Co PI Name : Ms. Renuka Basukala
Institution : JF Institute of Health Sciences
Approval Amount : Self-Funded
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 21-Aug-17
- 49.** Title : Nasal Carriage Rate of Streptococcus pneumoniae in Children of Little Angels School and its Antibiotic Susceptibility Pattern
PI/Co PI Name : Ms. Prarthana Tako
Institution : JF Institute of Health Sciences
Approval Amount : Rs 38000
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 21-Aug-17
- 50.** Title : Comparison of serum electrolytes level in chronic kidney disease patients with normal individuals
PI/Co PI Name : Ms. Sujata Paudel
Institution : JF Institute of Health Sciences
Approval Amount : Self-Funded
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 21-Aug-17
- 51.** Title : Knowledge practice and perception of menstrual hygiene among adolescent students of public schools in Budhanilkantha Municipality
PI/Co PI Name : Ms. Mamta Verma
Institution : Maharajgunj Medical Campus
Approval Amount : Rs 7500
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 21-Aug-17
- 52.** Title : Physical activity and its associated factor among public school students in Chandragiri Municipality, Kathmandu, Nepal
PI/Co PI Name : Ms. Amrita Giri
Institution : Institute of Medicine, Maharajgunj Medical Campus
Approval Amount : Rs 20000
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 21-Aug-17
- 53.** Title : Molecular detection of NDM-1, NDM-2 and NDM-3 gene from metallo beta lactamase producing gram negative isolates in tertiary care hospital

- PI/Co PI Name : Ms. Akriti Dahal
 Institution : Goldengate International College
 Approval Amount : Rs 59000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 23-Aug-17
- 54.** Title : Impacts of Health Education on Knowledge, Attitude and Practice of Health Care Staffs Regarding Healthcare Waste Management at a Tertiary Neurological Center in Kathmandu
 PI/Co PI Name : Dr. Narayan Satyal
 Institution : Annapurna Neurological Institute & Allied Sciences
 Approval Amount : Rs 25500
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 23-Aug-17
- 55.** Title : Retrospective Study of Herniated Lumbar Disc patient presented with Lumbar Radiculopathy at a tertiary Neurological Center in Kathmandu
 PI/Co PI Name : Dr. Pravesh Rajbhandari
 Institution : Annapurna Neurological Institute & Allied Sciences
 Approval Amount : Rs 30000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 23-Aug-17
- 56.** Title : Prediction of neonatal sepsis through high vaginal swab and umbilical cord blood analysis
 PI/Co PI Name : Ms. Dhruba Shrestha
 Institution : Siddhi Memorial Hospital
 Approval Amount : Rs 410000
 Funding Agency : Siddhi Memorial Foundation
 NHRC Fees : Rs 10000
 Approval Date : 23-Aug-17
- 57.** Title : Evaluation of using existing writing therapy to help Nepalese students cope with natural disaster
 PI/Co PI Name : Ms. Jo Anne Shwayder Pandey
 Institution : California State University, Northridge
 Approval Amount : \$2,500
 Funding Agency : California State University, Northridge
 NHRC Fees : \$200
 Approval Date : 23-Aug-17
- 58.** Title : The role of self-efficacy and social support in subjective well-being among people with spinal cord injury in five Districts of Nepal
 PI/Co PI Name : Ms. Muna Bhattarai
 Institution : Padmakanya Multiple Campus
 Approval Amount : Rs 40000

- Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 23-Aug-17
- 59.** Title : Comparative Study between Fentanyl-Propofol and Ketamine-Propofol in induction and maintenance of anesthesia in high altitude.
 PI/Co PI Name : Mr. Ramesh Bhattarai
 Institution : Karnali Academy of Health Sciences
 Approval Amount : Rs 45000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 23-Aug-17
- 60.** Title : Development and testing of the Implicit Association Test to understand ethnic biases and stigma among youth in Itahari and Kathmandu
 PI/Co PI Name : Mr. Sauharda Rai
 Institution : TPO Nepal
 Approval Amount : Rs 153000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 23-Aug-17
- 61.** Title : Seasonal Monitoring Survey for Homestead Food Production and impact on health, hygiene & nutrition practices in Makawanpur, Udayapur and Sindhuli districts of Nepal: A longitudinal cohort study
 PI/Co PI Name : Mr. Jaganath Sharma
 Institution : Helen Keller International
 Approval Amount : Rs 4123500
 Funding Agency : NA
 NHRC Fees : Rs 123750
 Approval Date : 23-Aug-17
- 62.** Title : Probing the normal and abnormal development of the human visual system in children and adults of Kathmandu using clinical and psychophysical methods
 PI/Co PI Name : Dr. Nabin Paudel
 Institution : Drishti Eye Care Center
 Approval Amount : Rs 70000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 23-Aug-17
- 63.** Title : Workplace Violence and Negotiation Practices in Hospitals
 PI/Co PI Name : Prof. Madhusudan Subedi
 Institution : Tribhuvan University
 Approval Amount : Rs 480000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 23-Aug-17

- 64.** Title : The role of immune activation in major depression comorbid with alcohol use disorders: A prospective study in rehabilitation facilities, Kathmandu
 PI/Co PI Name : Ms. Susmita Pandey
 Institution : University of Oslo
 Approval Amount : \$65,000
 Funding Agency : NA
 NHRC Fees : \$1,950
 Approval Date : 23-Aug-17
- 65.** Title : Factors influencing quality of life among elderly population with type 2 diabetes melitus: A clinic based cross sectional study in Kathmandu valley, Nepal.
 PI/Co PI Name : Ms. Kriti Adhikari
 Institution : College of Public health Sciences
 Approval Amount : Rs 210000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 23-Aug-17
- 66.** Title : Cost of out-patient imaging services in selected public and private health facility of Kathmandu District
 PI/Co PI Name : Mr. Sagar Pandit
 Institution : Maharajgunj Medical Campus (MMC, IoM)
 Approval Amount : Rs 7500
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 11-Sep-17
- 67.** Title : Cost of out-patient imaging services in selected public and private health facility of Kathmandu District
 PI/Co PI Name : Ms. Jasmin Maskey
 Institution : Institute of Medicine, Maharajgunj Medical Campus
 Approval Amount : Rs 13000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 11-Sep-17
- 68.** Title : The Effect of migration on health status among left behind geriatric Population in krishnapur Municipality, kanchanpur
 PI/Co PI Name : Mr. Dharendra Nath
 Institution : National Open College
 Approval Amount : Rs 35500
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 11-Sep-17

- 69.** Title : Assessment of nicotine dependence among smokers of Godawari Municipality
PI/Co PI Name : Ms. Roshani Khatri
Institution : National Open College
Approval Amount : Rs 7500
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 11-Sep-17
- 70.** Title : Assessment of the salivary glucose as a non- invasive test for the Diabetes patients
PI/Co PI Name : Ms. Kajol Thapa
Institution : Modern Technical College
Approval Amount : Rs 1400
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 11-Sep-17
- 71.** Title : Antimicrobial sensitivity pattern in bacterial isolates in urine from nosocomial and community acquired infection
PI/Co PI Name : Mr. Sushan Shrestha
Institution : Modern Technical College
Approval Amount : Rs 15000
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 11-Sep-17
- 72.** Title : C-reactive protein as a diagnostic marker of septicemia in neonates in Dhulikhel Hospital, Dhulikhel
PI/Co PI Name : Ms. Ramana Manandhar
Institution : Modern Technical College
Approval Amount : Rs 14000
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 11-Sep-17
- 73.** Title : Non-compliance to diet and medication among type 2 Diabetes Mellitus patients in Kathmandu
PI/Co PI Name : Ms. Nisha Kusum Kafle
Institution : Institute of Medicine
Approval Amount : Rs 24150
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 11-Sep-17
- 74.** Title : Assessment of the Problems Related to Menstruation, Their Impact on Daily Routine and Management Techniques of Problems Among Under Graduate Level of Selected College of Dang

- PI/Co PI Name : Ms. Sima Regmi
 Institution : National Open College
 Approval Amount : Rs 18500
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 11-Sep-17
- 75.** Title : Prevalence and associated factors of childhood overweight/obesity among primary school children in Lalitpur district
 PI/Co PI Name : Ms. Asmita Karki
 Institution : Maharajgunj Medical Campus
 Approval Amount : Rs 15000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 11-Sep-17
- 76.** Title : Exclusive breastfeeding practices and associated factors in Tulsipur Sub-Metropolitan and Dangisharan Rural Municipality of Dang District
 PI/Co PI Name : Mr. Santosh Sharma
 Institution : Maharajgunj Medical Campus
 Approval Amount : Rs 7500
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 11-Sep-17
- 77.** Title : Perception of community people towards mental illness in selected ward of Tarkeshwor Municipality
 PI/Co PI Name : Mr. Muskan Pudasainee
 Institution : Maharajgunj Medical Campus
 Approval Amount : Rs 9000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 11-Sep-17
- 78.** Title : Diagnosis of Human Neurocysticercosis (NCC) by Antigen Specific Enzyme linked Immunosorbant Assay (ELISA) in seizure patients
 PI/Co PI Name : Dr. Basant Pant
 Institution : Annapurna Research center
 Approval Amount : Rs 164000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 13-Sep-17
- 79.** Title : Phenotypic and Molecular characterization of plasmid mediated AmpC beta lactamase MOX and FOX gene among clinical isolates
 PI/Co PI Name : Ms. Swechha Poudel
 Institution : Goldengate International College
 Approval Amount : Rs 59000

- Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 13-Sep-17
- 80.** Title : Vitamin D status and risk factors among stroke patients in an Tertiary Neurological Center in Kathmandu
 PI/Co PI Name : Dr. Avinash Chandra
 Institution : Annapurna Neurological Institute & Allied Sciences
 Approval Amount : Rs 83850
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 13-Sep-17
- 81.** Title : Study on the level of stigma related with depression and its' impact on health seeking behavior among bachelors' student in Lalitpur
 PI/Co PI Name : Ms. Aashrita Choudhary
 Institution : National Open College
 Approval Amount : Rs 7000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 13-Sep-17
- 82.** Title : Phenotypic detection of extended spectrum beta -lactamase and metallo beta-lactamase in gram negative organism isolated from different clinical specimen among cancer patients and non cancer patient
 PI/Co PI Name : Mr. Nabaraj Nepal
 Institution : St. Xavier's College
 Approval Amount : Rs 63000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 13-Sep-17
- 83.** Title : Knowledge and behavior of noncommunicable diseases among women enrolled in microcredit programs in central development regions of Nepal
 PI/Co PI Name : Ms. Pramita Shrestha
 Institution : The University of Tokyo
 Approval Amount : Rs 300000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 13-Sep-17
- 84.** Title : Community-wide behavior change and clean fuel interventions to maximize cleaner cooking and achieve better indoor and outdoor air quality and health in Panchkhal and Mandandeupur municipalities, Nepal
 PI/Co PI Name : Dr. Amod K Pokhrel

- Institution : Society for Legal and Environmental Analysis and Development Research (LEADERS) Nepal
 Approval Amount : \$68,335
 Funding Agency : Global Alliance For Clean Cookstove
 NHRC Fees : \$2,050
 Approval Date : 13-Sep-17
- 85.** Title : Households' strategies to cope with economic consequences of catastrophic health expenditure and their willingness-to-pay for health insurance: evidence from Nepal.
 PI/Co PI Name : Ms. Mamata Ghimire
 Institution : University of Tsukuba
 Approval Amount : Rs 560000
 Funding Agency : Fuji Xerox Co., Ltd. Kobayashi Fund
 NHRC Fees : Rs 10000
 Approval Date : 13-Sep-17
- 86.** Title : Identification of rpoB gene (β -sub unit of DNA dependent RNA polymerase) in rifampicin resistant Mycobacterium tuberculosis among retreatment tuberculosis patients in Nepal
 PI/Co PI Name : Mr. Dhruva Kumar Khadka
 Institution : National TB Centre, Thimi Bhaktapur (Present: NAMS-Bir Hospital, Mahabauddha, Kathmandu)
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 13-Sep-17
- 87.** Title : Psychiatric Symptoms and Coping Strategies of earthquake affected school children in Kathmandu and Sindhupalchok districts in Nepal: A follow-up study
 PI/Co PI Name : Ms. Sanju Silwal
 Institution : University of Turku
 Approval Amount : \$2,000
 Funding Agency : Research Centre for Child Psychiatry
 NHRC Fees : \$100
 Approval Date : 13-Sep-17
- 88.** Title : Gastrointestinal parasites of human, rhesus monkeys and dogs of Manakamana area, Gorkha, Nepal
 PI/Co PI Name : Ms. Karishma Shrestha
 Institution : Science and Technology
 Approval Amount : Rs 40500
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 13-Sep-17

- 89.** Title : Creating a Space for Nepalese Male Migrant Workers to Co-create Internet Based HIV Prevention
PI/Co PI Name : Mr. Til Bahadur Chhetri
Institution : Auckland University of Technology
Approval Amount : Rs 70000
Funding Agency : NA
NHRC Fees : Rs 10000
Approval Date : 13-Sep-17
- 90.** Title : Oral anticoagulants utilization pattern in patients with atrial fibrillation: focus on NOACs
PI/Co PI Name : Ms. Aditi Shrestha
Institution : Kathmandu University
Approval Amount : Rs 11500
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 13-Sep-17
- 91.** Title : Factors influencing in the success of tapering dose of Adalimumab in SpA patients.
PI/Co PI Name : Ms. Jayanti Chamling Rai
Institution : National Center for Rheumatic Diseases
Approval Amount : Rs 25000
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 20-Sep-17
- 92.** Title : Evaluating the safety, acceptability and feasibility of an outpatient “day procedure” service documenting the roles of health workers in the provision of medical abortion at 13-18 weeks gestation
PI/Co PI Name : Dr. Chanda Karki
Institution : Kathmandu Medical College
Approval Amount : \$49,414
Funding Agency : The David and Lucile Packard Foundation via a sub-grant through Gynuity Health projects
NHRC Fees : \$1,482.42
Approval Date : 20-Sep-17
- 93.** Title : Molecular investigation of Carbapenem resistant pathogens prioritized as critical by WHO
PI/Co PI Name : Ms. Samikshya Kafle
Institution : Central Department of Biotechnology
Approval Amount : Rs 61000
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 20-Sep-17

- 94.** Title : Antimicrobial resistance and bacterial spectrum of infections among children in Siddhi Memorial Hospital in Bhaktapur, Nepal
 PI/Co PI Name : Mr. Kenshi Furushima
 Institution : Nagasaki University
 Approval Amount : \$200
 Funding Agency : NA
 NHRC Fees : \$200
 Approval Date : 20-Sep-17
- 95.** Title : Detection of prevalence of viral diarrhea causing agent from children less than fifteen years old in different community of Kathmandu Valley
 PI/Co PI Name : Ms. Sarmila Tandukar
 Institution : University of Yamanashi
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 20-Sep-17
- 96.** Title : A Comparative Study of Three Cash-based School Meals Modalities Combined with Complementary Nutrition-sensitive Literacy Education”
 PI/Co PI Name : Ms. Rachana Manandhar Shrestha
 Institution : World Vegetable Center
 Approval Amount : \$23,900
 Funding Agency : World Vegetable Center
 NHRC Fees : \$717
 Approval Date : 20-Sep-17
- 97.** Title : Maternal and child health seeking behavior among women aged 15-45 years during earthquake of April-May 2015: A mixed Methods Study
 PI/Co PI Name : Mr. Janak Kumar Thapa
 Institution : Nepal Public Health Foundation
 Approval Amount : Rs 290000
 Funding Agency : UNICEF
 NHRC Fees : Rs 10000
 Approval Date : 20-Sep-17
- 98.** Title : Effectiveness of Radio Dramas on Reproductive Health Knowledge and Behavior among Clients of Visiting Health Facilities of Nepali and Maithili Speaking Areas
 PI/Co PI Name : Mr. Shailes Neupane
 Institution : Valley Research Group
 Approval Amount : \$46,652
 Funding Agency : Population Media Center
 NHRC Fees : \$1,202.49
 Approval Date : 20-Sep-17
- 99.** Title : Village integrated eye worker trial II - Pilot (View II Pilot)
 PI/Co PI Name : Prof. Jeremy D Keenan/Dr. Ram Prasad Kandel

- Institution : University of California, San Francisco/Seva Foundation, Bharatpur Eye Hospital
Approval Amount : \$56,000
Funding Agency : NA
NHRC Fees : \$1,680
Approval Date : 20-Sep-17
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- 100.** Title : Analysis of cesarean section rate according to Robson's classification of Lumbini Zonal Hospital, Butwal, Nepal
PI/Co PI Name : Dr. Bishnu Gautam
Institution : Lumbini Zonal Hospital
Approval Amount : Rs 147000
Funding Agency : NA
NHRC Fees : Rs 5000
Approval Date : 11-Oct-17
- 101.** Title : Family planning consumer journey mapping to identify barriers and constraints in accessing FP products and services
PI/Co PI Name : Ms. Lhamo Yangchen Sherpa
Institution : Population Services International Nepal
Approval Amount : Rs 2886520
Funding Agency : Population Services International Nepal
NHRC Fees : Rs 86595.6
Approval Date : 11-Oct-17
- 102.** Title : A baseline study of the environmental and occupational health risks and health behaviors of informal waste workers in Kathmandu valley, 2017
PI/Co PI Name : Dr. Jiban Karki
Institution : PHASE NEPAL
Approval Amount : Rs 2883880
Funding Agency : Medecins du Monde – France (Mdm-F)
NHRC Fees : Rs 86516.4
Approval Date : 11-Oct-17
- 103.** Title : Improving Clinic Attendance for Antiretroviral Pills Pick Up Among HIV Positive Individuals in Nepal Through a Mobile Phone Reminder Intervention: A Randomized Controlled Trial
PI/Co PI Name : Mr. Rakesh Ayer
Institution : The University of Tokyo
Approval Amount : Rs 800000
Funding Agency : Asian Development Bank-Japan Scholarship program and Open Society Foundation
NHRC Fees : Rs 10000
Approval Date : 11-Oct-17
- 104.** Title : A study on current knowledge of doctors and nurses regarding the early diagnosis and recognition of infected burns in Kirtipur Hospital, Nepal

- PI/Co PI Name : Dr. Shanker Man Rai/Mr. Simardeep Singh Sadhra
Institution : Public Health Concern Trust-Nepal/University of Birmingham
- Approval Amount : Rs 23000
Funding Agency : NA
NHRC Fees : Rs 20000
Approval Date : 11-Oct-17
- 105.** Title : Surveillance and Characterization of Multidrug Resistant Organisms (MDRO) at CIWEC, Nepal (WRAIR#2446)
PI/Co PI Name : Dr. Sanjaya Kumar Shrestha
Institution : Walter Reed/ AFRIMS Research Unit Nepal (WARUN)
Approval Amount : \$230,000
Funding Agency : NA
NHRC Fees : \$6,900
Approval Date : 11-Oct-17
- 106.** Title : Prevalence of Plasmid Mediated AmpC Beta-Lactamase Producing Uropathogen Isolated from Patients Visiting Polyclinic of Dharan, Nepal
PI/Co PI Name : Ms. Rojina Rai
Institution : Sunsari Technical College
Approval Amount : Rs 55000
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 11-Oct-17
- 107.** Title : Body weight and tuberculosis treatment outcomes in Kaski district, Nepal
PI/Co PI Name : Mr. Suraj Baniya
Institution : University of Bergen, Norway
Approval Amount : Rs 399000
Funding Agency : NA
NHRC Fees : Rs 10000
Approval Date : 11-Oct-17
- 108.** Title : Experience of sexual harassment among nursing students in the clinical settings in Private Nursing Colleges.
PI/Co PI Name : Ms. Shobha Gaihre
Institution : Trichandra Multiple Campus
Approval Amount : Rs 35000
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 11-Oct-17
- 109.** Title : Posttraumatic Growth and Depreciation in adults who have experienced the major earthquake in 2015 in Nepal
PI/Co PI Name : Ms. Rebekah Volgin/Mr. Sandesh Dhakal
Institution : Queensland University of Technology/Department of Psychology

- Approval Amount : \$150
 Funding Agency : UNICEF
 NHRC Fees : \$200
 Approval Date : 11-Oct-17
- 110.** Title : Identification of CITM And DHAM Genes associated with Plasmid Mediated AmpC Beta-lactamase among Gram-negative Clinical Isolates
 PI/Co PI Name : Mr. Subhas Chandra Aryal
 Institution : Goldengate International College
 Approval Amount : Rs 74000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 11-Oct-17
- 111.** Title : Bacterial and parasitological profile in gastroenteritis patients visiting tertiary care hospital of Kathmandu, Nepal
 PI/Co PI Name : Mr. Vishnu Bhattarai
 Institution : Central Department of Microbiology
 Approval Amount : Rs 88500
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 11-Oct-17
- 111.** Title : Clinical profile and outcome of neonatal admissions in Karnali Academy of Health Sciences, Jumla
 PI/Co PI Name : Mr. Nirajana Kayastha
 Institution : Karnali Academy of Health Sciences
 Approval Amount : Rs 20000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 11-Oct-17
- 112.** Title : Vector biology of two Aedes species and eco-bio-social drivers for effective vector prevention & control along a climatic gradient in Nepal - NAECO
 PI/Co PI Name : Dr. Ruth Muller/Dr. Meghnath Dhimal
 Institution : Goethe University/Nepal Health Research Council
 Approval Amount : Rs 11388656
 Funding Agency : Federal Ministry of Education and Research (BMBF)
 NHRC Fees : Rs 341659.68
 Approval Date : 11-Oct-17
- 113.** Title : Preventive therapy given to children under five living in a household with a tuberculosis patient in selected dots centers in Kathmandu valley, Nepal
 PI/Co PI Name : Mr. Akash Kapali
 Institution : University in Bergen
 Approval Amount : Rs 425000

- Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 11-Oct-17
- 114.** Title : Factors associated with Rabies Antibody Titre level in Vaccinated Dogs of Kathmandu Valley, Nepal
 PI/Co PI Name : Ms. Shikha Rimal
 Institution : Chiang Mai University
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 11-Oct-17
- 115.** Title : Effectiveness of structured teaching program on HIV/AIDS among school going adolescents of selected secondary schools in Mechi Municipality
 PI/Co PI Name : Mr. Furtengi Sherpa
 Institution : Central Institute of Science and Technology
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 17-Oct-17
- 116.** Title : Perceived stress and its coping strategies among undergraduate students of Pokhara-Lekhnath Metropolis
 PI/Co PI Name : Ms. Ngawang Choeden
 Institution : La Grandee International College
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 17-Oct-17
- 117.** Title : Knowledge and Practice of Oral Care among Patients Receiving Chemotherapy in Selected Hospital
 PI/Co PI Name : Ms. Ashmita Shrestha
 Institution : JF Institute of Health Sciences
 Approval Amount : Rs 24000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 17-Oct-17
- 118.** Title : Knowledge and Attitude Regarding Menstruation among Adolescent Boys in Selected Schools
 PI/Co PI Name : Ms. Binita Kutu
 Institution : JF Institute of Health Sciences
 Approval Amount : Rs 24000
 Funding Agency : NA
 NHRC Fees : Rs 1000

- Approval Date : 17-Oct-17
- 119.** Title : Knowledge and Practice regarding Breast Cancer Screening Methods among women of Mahalaxmi Municipality, Lalitpur
- PI/Co PI Name : Ms. Sujata Moktan
 Institution : JF Institute of Health Science
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 17-Oct-17
- 120.** Title : Factors Associated with Medication Adherence Among Diabetic Patients Attending Diabetic Center, Lalitpur
- PI/Co PI Name : Ms. Sushma Dhungel
 Institution : JF Institute of Health Science
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 17-Oct-17
- 121.** Title : Awareness and help seeking behavior regarding mental illness among students of selected collage Of Lalitpur
- PI/Co PI Name : Ms. Grishma Shrestha
 Institution : JF Institute of Health Sciences
 Approval Amount : Rs 15500
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 17-Oct-17
- 122.** Title : Adolescent friendly sexual and reproductive health services: compliance of certified health facilities with guidelines and attitude of health service providers in Kaski District
- PI/Co PI Name : Ms. Mamta Dhakal
 Institution : La Grandee International College
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 17-Oct-17
- 123.** Title : Risk Factors associated with Pneumonia among Children Under Five years of age attending selected public and private pediatric hospitals in Kathmandu : A case control study
- PI/Co PI Name : Ms. Nisha Kusum Bhandari
 Institution : Maharajgunj Medical Campus
 Approval Amount : Rs 60000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 17-Oct-17

- 124.** Title : Knowledge on aging, attitudes to older people and perceptions of working with older people among nursing students of Kathmandu Valley
 PI/Co PI Name : Ms. Nitisha Shrestha
 Institution : Asian College for Advance Studies
 Approval Amount : Rs 22000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 17-Oct-17
- 125.** Title : Study on predisposing factor of Intra-cerebral Hemorrhage and its association with compliance of antihypertensive medication at Tertiary Neurological center in Kathmandu
 PI/Co PI Name : Dr. Samir Acharya
 Institution : Annapurna Neurological Institute & Allied Sciences
 Approval Amount : Rs 20000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 25-Oct-17
- 126.** Title : Study on anxiety & depression in patients with seizure disorder at tertiary neurological center in Kathmandu
 PI/Co PI Name : Dr. Avinash Chandra
 Institution : Annapurna Neurological Institute & Allied Sciences
 Approval Amount : Rs 30000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 25-Oct-17
- 127.** Title : Assessment of serum Vitamin D level in pregnant women and their babies in Bhaktapur, Nepal
 PI/Co PI Name : Dr. Dhruba Shrestha
 Institution : Siddhi Memorial Hospital
 Approval Amount : Rs 90000
 Funding Agency : Nepal Paediatric Society
 NHRC Fees : Rs 5000
 Approval Date : 25-Oct-17
- 128.** Title : A Study on health vulnerabilities of cross border migrants from six mid to far western districts of Nepal to India
 PI/Co PI Name : Mr. Pratik Adhikary
 Institution : Green Tara Nepal
 Approval Amount : Rs 2798778
 Funding Agency : International Organisation for Migration (IOM)
 NHRC Fees : Rs 83963.34
 Approval Date : 25-Oct-17

- 129.** Title : Evaluation of WHO's recommendations on test and treat strategy, managing advanced HIV disease and rapid initiation of ART among people living with HIV (PLHIV) in Nepal
 PI/Co PI Name : Dr. Tarun Paudel
 Institution : National Centre for AIDS and STD Control
 Approval Amount : Rs 2624004
 Funding Agency : The Global Fund To Fight AIDS Tuberculosis and Malaria
 NHRC Fees : Rs 78720.12
 Approval Date : 25-Oct-17
- 130.** Title : Factors affecting cervical cancer screening barriers and risk factor knowledge to promote screening awareness among high school students and their mothers in Lalitpur Nepal
 PI/Co PI Name : Ms. Kritika Poudel
 Institution : Hokkaido University
 Approval Amount : Rs 100000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 25-Oct-17
- 131.** Title : Pattern of domestic violence in women over the period of pregnancy and post-partum in Kathmandu, Nepal
 PI/Co PI Name : Mr. Narayan Bhatta
 Institution : Prince of Songkla Univeristy
 Approval Amount : Rs 116000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 25-Oct-17
- 132.** Title : Pre-lacteal feeding and its associated factors (A case study of Mahendrakot VDC of Kapilvastu District)
 PI/Co PI Name : Ms. Prinka Singh
 Institution : Trichandra Multiple Campus
 Approval Amount : Rs 14000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 25-Oct-17
- 133.** Title : Strengthening the Voices of Adolescents with Disabilities in Nepal
 PI/Co PI Name : Ms. Maria Anne Zuurmond
 Institution : Londpn School of Hygiene and Tropical Medicine
 Approval Amount : Rs 1403366
 Funding Agency : CBM international
 NHRC Fees : Rs 42100.98
 Approval Date : 2-Nov-17
- 134.** Title : Effectiveness of Traditional Ayurvedic formulation in improving health related quality of life among cancer patients visiting a traditional Ayurvedic in selected site: a pilot study

- PI/Co PI Name : Mr. Ram Lal Shrestha
 Institution : Parampara Divya Ayurveda Aushadhalaya
 Approval Amount : Rs 325000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 2-Nov-17
- 135.** Title : Identification of CITM And DHAM Genes associated with Plasmid Mediated AmpC Beta-lactamase among Gram-negative Clinical Isolates
 PI/Co PI Name : Mr. Subash Chandra Aryal
 Institution : Goldengate International College
 Approval Amount : Rs 74000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 2-Nov-17
- 136.** Title : Assessing clients' satisfaction & perception of quality with services received from Marie Stopes Centres, Nepal
 PI/Co PI Name : Mr. Raman Shrestha
 Institution : Sunaulo Parivar Nepal (SPN) implementing partner of Marie Stopes International
 Approval Amount : Rs 914000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 2-Nov-17
- 137.** Title : Assessment of community auxiliary nurse midwives programme in Dadeldhura district of Nepal
 PI/Co PI Name : Dr. Naresh Pratap K.C
 Institution : Family Health Division, DoHS
 Approval Amount : Rs 950000
 Funding Agency : UNICEF Nepal
 NHRC Fees : Rs 10000
 Approval Date : 2-Nov-17
- 138.** Title : Determining discontinuation rates of Short-acting and Long-acting Reversible Contraceptive methods and factors associated with them: A prospective population based cohort study in Nepal
 PI/Co PI Name : Dr. Naresh Pratap K.C
 Institution : Family Health Division, DoHS
 Approval Amount : Rs 11579200
 Funding Agency : DFID
 NHRC Fees : Rs 347376
 Approval Date : 2-Nov-17
- 139.** Title : Incidence and risk factors of pre-eclampsia in first and subsequent pregnancies: A retrospective study

- PI/Co PI Name : Ms. Sima Das
 Institution : UiT The Arctic University of Norway
 Approval Amount : Rs 40000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 2-Nov-17
- 140.** Title : Effect of the Follow-Up and Enhancement Program (FEP) on the retention of knowledge and skills of Skilled Birth Attendants (SBAs) and on the improvement of their working environments in rural Nepal
- PI/Co PI Name : Dr. Rishav Shrestha
 Institution : Nick Simons Institute
 Approval Amount : Rs 803000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 2-Nov-17
- 141.** Title : A study of the possible association of fatigue and occupational exposure of anesthetic gases among nurses in selected hospitals of Kathmandu, Nepal
- PI/Co PI Name : Dr. Dibash Baral
 Institution : Bergen University
 Approval Amount : \$2,700
 Funding Agency : CBM international
 NHRC Fees : \$100
 Approval Date : 2-Nov-17
- 142.** Title : Utilization of health services and health care expenditure in social health insurance implemented Kailali District of Nepal
- PI/Co PI Name : Mr. Deepak Raj Paudel
 Institution : Kathmandu University School of Education
 Approval Amount : Rs 198150
 Funding Agency : CBM international
 NHRC Fees : Rs1000
 Approval Date : 2-Nov-17
- 143.** Title : An international multicentre controlled clinical trial to evaluate 1200mg and 1800mg rifampicin daily in the reduction of treatment duration for pulmonary tuberculosis from 6 months to 4 months
- PI/Co PI Name : Dr. Amina Jindani/Dr. Bhabhana Shrestha
 Institution : St George's University of London
 Approval Amount : Rs 7247800
 Funding Agency : St George's University of London
 NHRC Fees : Rs217434
 Approval Date : 3-Nov-17

- 144.** Title : Knowledge and practice on birth preparedness and complication readiness among mothers having child less than one years of Pokhara Lekhnath Metropolitan City
 PI/Co PI Name : Ms. Anjana Poudel
 Institution : LA Grandee International College
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 6-Nov-17
- 145.** Title : Utilization of maternal health services among mothers having under five years children of Tamang community at Talakhu VDC of Nuwakot District
 PI/Co PI Name : Ms. Sarmin Lama
 Institution : Asian College for Advance Studies
 Approval Amount : Rs 17000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 6-Nov-17
- 146.** Title : Anxiety and Depression among caregiver of cancer patient in selected cancer Hospital
 PI/Co PI Name : Ms. Sumnima Bhusal
 Institution : JFInstitute of Health Sciences
 Approval Amount : Rs 27000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 6-Nov-17
- 147.** Title : Knowledge regarding Suicide Prevention among the teachers of selected school of Lalitpur
 PI/Co PI Name : Ms. Reetu Shrestha
 Institution : JFInstitute of Health Sciences
 Approval Amount : Rs 16000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 6-Nov-17
- 148.** Title : Knowledge and practice regarding prevention of Osteoporosis among middle aged women of selected areas in Biratnagar
 PI/Co PI Name : Ms. Bhawana Wosti
 Institution : JFInstitute of Health Sciences
 Approval Amount : Rs 24000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 6-Nov-17

- 149.** Title : Knowlegde regarding postnatal care among primi postnatal mother attending in a selected Maternity Hospital Kathmandu
 PI/Co PI Name : Ms. Reeju Awale
 Institution : JF Institute of Health Science
 Approval Amount : Rs 15500
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 6-Nov-17
- 150.** Title : Willingness and status of social health insurance among people of Pokhara Lekhnath, Nepal
 PI/Co PI Name : Ms. Manju Adhikari
 Institution : LA Grandee International College
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 6-Nov-17
- 151.** Title : Client satisfaction and associated factors on health services of antenatal care clinics in Pokhara Lekhanath Nepal
 PI/Co PI Name : Ms. Anjana Subedi
 Institution : LA Grandee International College
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 6-Nov-17
- 152.** Title : Infection prevention measure adopted by nurses working in different public and private hospitals of Pokhara Lekhnath, Nepal
 PI/Co PI Name : Mr. Bibash Lamichhane
 Institution : LA Grandee International College
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 6-Nov-17
- 153.** Title : Knowledge and health care seeking behavior of married women of 18-49 years age regarding reproductive tract infection (RTI) at Pokhara Lekhnath Metropolitan City
 PI/Co PI Name : Ms. Saru Parajuli
 Institution : LA Grandee International College
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 6-Nov-17
- 154.** Title : Hygiene and sanitation practice among the resident of urban slums of Pokhara City

- PI/Co PI Name : Ms. Saraswati Ghimire
 Institution : LA Grandee International College
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 6-Nov-17
- 155.** Title : Prevalence of herbal products use and associated factors among pregnant women attending antenatal care
 PI/Co PI Name : Ms. Kabita Timilsina
 Institution : LA Grandee International College
 Approval Amount : Rs 6500
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-Nov-17
- 156.** Title : Newborn care knowledge and practices among mothers having children under two years of Tripurasundari Municipality of Dolpa District
 PI/Co PI Name : Ms. Pushpalata Bohara
 Institution : Asian College for Advance Studies
 Approval Amount : Rs 19000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-Nov-17
- 157.** Title : Occupational safety and health status among workers of textile industries at Bhaktapur District
 PI/Co PI Name : Ms. Mehendi Prakash
 Institution : Asian College for Advance Studies
 Approval Amount : Rs 18000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-Nov-17
- 158.** Title : Knowledge and practices about 3Es (Early initiation, Exclusive, Extended) of Breast feeding among muslim mothers having 6-24 months children at Sub-Metropolitan City Nepalgunj, Banke
 PI/Co PI Name : Ms. Susmita Acharya
 Institution : Asian College for Advance Studies
 Approval Amount : Rs 26000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-Nov-17
- 159.** Title : Occupational safety and health status among workers of textile industries at Bhaktapur District
 PI/Co PI Name : Ms. Subhechchha Bhandari
 Institution : LA Grandee International College

- Approval Amount : Rs 19500
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-Nov-17
- 160.** Title : Knowledge and Experience of Street Harassment among Adolescents of Selected School of Lalitpur
 PI/Co PI Name : Ms. Sanam Adhikari
 Institution : JF Institute of Health Science
 Approval Amount : Rs 17000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-Nov-17
- 161.** Title : Knowledge and practice regarding breastfeeding among mothers of selected maternity hospital
 PI/Co PI Name : Ms. Srijana Basnet
 Institution : JF Institute of Health Science
 Approval Amount : Rs 23000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-Nov-17
- 162.** Title : Women satisfaction of childbirth in birthing center and labour room of selected maternity Hospital, Kathmandu
 PI/Co PI Name : Ms. Nisha Khadka
 Institution : JF Institute of Health Science
 Approval Amount : Rs 20000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-Nov-17
- 163.** Title : Knowledge on prevention of puerperal infection among postnatal women at tertiary level hospital of Kathmandu
 PI/Co PI Name : Ms. Dolma Lama
 Institution : JF Institute of Health Science
 Approval Amount : Rs 23000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-Nov-17
- 164.** Title : Knowledge regarding effects of alcohol consumption during pregnancy and postpartum period among pregnant women of selected maternity hospital
 PI/Co PI Name : Ms. Sofeya Rokka
 Institution : JF Institute of Health Science
 Approval Amount : Rs 22000
 Funding Agency : NA

- NHRC Fees : Rs 1000
Approval Date : 16-Nov-17
- 165.** Title : Nutritional status and morbidity pattern among elderly people living in Devghat Ashram
PI/Co PI Name : Ms. Bandana Poudel
Institution : LA Grandee International College
Approval Amount : Self-Funded
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 16-Nov-17
- 166.** Title : Analysing the policy and governance environment for Non-communicable diseases control, and identifying potential policy options for Nepal
PI/Co PI Name : Dr. Mahesh Chandra Puri
Institution : Center for Research on Environment Health and Population Activities (CREHPA)
Approval Amount : \$69,938
Funding Agency : University College London
NHRC Fees : \$2,098.14
Approval Date : 26-Nov-17
- 167.** Title : Baseline non-communicable disease risk factors and prevalence within Thaha, Makwanpur, Nepal
PI/Co PI Name : Mr. Andrew T. Schlabach
Institution : Oregon College of Oriental Medicine
Approval Amount : \$6,600
Funding Agency : NA
NHRC Fees : \$200
Approval Date : 26-Nov-17
- 168.** Title : Infant Feeding Practices among Mothers in Eastern and Mid-western regions of Nepal
PI/Co PI Name : Ms. Asmita Bhattarai
Institution : Freelancer
Approval Amount : Rs 80000
Funding Agency : NA
NHRC Fees : Rs 5000
Approval Date : 26-Nov-17
- 169.** Title : Assessing clients' satisfaction & perception of quality with services received from Marie Stopes Centres, Nepal
PI/Co PI Name : Dr.Raman Shrestha
Institution : Sunaulo Parivar Nepal (SPN) implementing partner of Marie Stopes International
Approval Amount : Rs 914000
Funding Agency : NA

- NHRC Fees : Rs 10000
Approval Date : 26-Nov-17
- 170.** Title : A Comparative Study of the Quality of Life of the Women between the Earthquake affected and non-affected areas of Nepal
PI/Co PI Name : Ms. Januka Khatiwada
Institution : International University of Health and Welfare
Approval Amount : Self-Funded
Funding Agency : NA
NHRC Fees : Rs 10000
Approval Date : 26-Nov-17
- 171.** Title : Global Maternal Sepsis Study (GLOSS)
PI/Co PI Name : Dr. Amir Babu Shrestha
Institution : Paropakar Maternity and Women's Hospital (PMWH)
Approval Amount : \$15,003.19
Funding Agency : World Health Organization
NHRC Fees : \$450.10
Approval Date : 26-Nov-17
- 172.** Title : Spirituality in older adults living in selected residential care facilities in Kathmandu, Nepal
PI/Co PI Name : Ms. Sital Gautam
Institution : Auckland University of Technology
Approval Amount : \$4,928
Funding Agency : NA
NHRC Fees : \$100
Approval Date : 26-Nov-17
- 173.** Title : Nutritional status and health problems among post menopausal women residing in Pokhara Sub metropolitan City
PI/Co PI Name : Ms. Bandana Khanal
Institution : LA Grandee International college
Approval Amount : Self-Funded
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 28-Nov-17
- 174.** Title : Improper medication and its effect among elderly population of ward 3, Lalitpur
PI/Co PI Name : Ms. Jaya Maharjan
Institution : Patan Multiple Campus
Approval Amount : Rs 100000
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 28-Nov-17

- 175.** Title : Quality of life among patients with type 2 Diabetes Mellitus at selected hospital/clinic
 PI/Co PI Name : Ms. Smarika Chhetri
 Institution : Central Institute of Science and Technology (CIST) College
 Approval Amount : Rs 14000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 28-Nov-17
- 176.** Title : Use of pesticides and its effects on the health of farmers in Pokhara Lekhnath Metropolitan City
 PI/Co PI Name : Ms. Shanti Dahal
 Institution : La Grandee International College
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 28-Nov-17
- 177.** Title : Insulin Injection Practices Among Diabetic Patient Using Pen Device Attending Diabetic Center,Lalitpur
 PI/Co PI Name : Ms. Sagun Giri
 Institution : JF Institute of Health Sciences
 Approval Amount : Rs 22000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 28-Nov-17
- 178.** Title : Knowledge regarding cyberbullying and its prevalence among secondary level school students in Bhaktapur
 PI/Co PI Name : Ms. Anjali Bade
 Institution : JF Institute of Health Sciences
 Approval Amount : Rs 22000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 28-Nov-17
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- 179.** Title : Utilization and perception towards family planning in muslim community of Suklagandaki Municipality
 PI/Co PI Name : Mr. Anjan Sigdel
 Institution : La Grandee International College
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 28-Nov-17
- 180.** Title : Knowledge and preventive practice on uterine prolapse among married women of reproductive age (15-49 yrs) in urban slums of Pokhara City

- PI/Co PI Name : Ms. Sushila K.C.
 Institution : LA GRANDEE International College
 Approval Amount : Rs 5000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 28-Nov-17
- 181.** Title : Access to Disaster Risk Reduction Educational Materials for Persons with Disabilities in Kathmandu
 PI/Co PI Name : Ms. Stephanie Kirsten Hubbard
 Institution : La Trobe University
 Approval Amount : Rs 35000
 Funding Agency : NA
 NHRC Fees : Rs 20000
 Approval Date : 6-Dec-17
- 182.** Title : A Comparative Study of the Quality of Life of the Women between the Earthquake affected and non-affected areas of Nepal
 PI/Co PI Name : Dr. Simon Rushton/Dr. Jiban Kumar Karki
 Institution : The University of Sheffield
 Approval Amount : \$301,915.83
 Funding Agency : ESRC - DFID (Economic and Social Research Council and DFID UK)
 NHRC Fees : \$9,057.47
 Approval Date : 6-Dec-17
- 183.** Title : Mast cell derived protease as the biomarkers of dengue disease severity
 PI/Co PI Name : Mr. Anurag Adhikari
 Institution : Kathmandu Research Institute for Biological Sciences
 Approval Amount : Rs 365,500
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 6-Dec-17
- 184.** Title : Assessment of Availability, Accessibility, and Visibility of Family Planning and Maternal Child Health Products in Hill and Mountain Districts of Nepal
 PI/Co PI Name : Mr. Sujan Karki
 Institution : International University of Health and Welfare
 Approval Amount : Rs 7995000
 Funding Agency : NA
 NHRC Fees : Rs 239850
 Approval Date : 6-Dec-17
- 185.** Title : The impact of travelling to high altitude in the Himalayas on self-reported sleep and appetite
 PI/Co PI Name : Mr. Philip Demos Voyias

- Institution : University of Warwick
 Approval Amount : \$5,900
 Funding Agency : NA
 NHRC Fees : \$200
 Approval Date : 6-Dec-17
- 186.** Title : Pain education for patients with non-specific low back pain in a selected center in Kathmandu, Nepal: A randomized feasibility study
 PI/Co PI Name : Mr. Saurab Sharma
 Institution : Kathmandu University School of Medical Sciences
 Approval Amount : Rs 73000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 6-Dec-17
- 187.** Title : An assessment of the availability and readiness of birthing centres in Taplejung District, Eastern Nepal
 PI/Co PI Name : Mr. Amrit Banstola
 Institution : Public Health Perspective Nepal
 Approval Amount : Rs 171370
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 13-Dec-17
- 188.** Title : Development of a Self-Efficacy Scale for Abortion in Nepal
 PI/Co PI Name : Dr. Shibesh Chandra Regmi
 Institution : Ipas Nepal
 Approval Amount : Rs 2020000
 Funding Agency : NA
 NHRC Fees : Rs 60600
 Approval Date : 13-Dec-17
- 189.** Title : National program for Control Of Rheumatic Diseases (Nat-CORD) based epidemiological survey of musculoskeletal diseases in rural and urban areas in Hill and Terai region of in Nepal
 PI/Co PI Name : Dr. Abhilasha Shah
 Institution : National Center for Rheumatic Diseases
 Approval Amount : Rs 180000
 Funding Agency : National Center For Rheumatic Disease
 NHRC Fees : Rs 5000
 Approval Date : 13-Dec-17
- 190.** Title : Feasibility and Acceptability of Stress-Based Biomarker Research in a tertiary care hospital of Kavrepalanchok district
 PI/Co PI Name : Prof. Carol Marie Worthman/Dr. Rajeev Shrestha
 Institution : Emory University/Kathmandu University School of Medical Sciences
 Approval Amount : Rs 217939

- Funding Agency : NA
 NHRC Fees : Rs 20000
 Approval Date : 13-Dec-17
- 191.** Title : Isolation and identification of Methicillin Resistant Staphylococcus aureus and detection of mecA gene from children going to selected school of Kathmandu
 PI/Co PI Name : Ms. Bina Bhandari
 Institution : Central Department of Microbiology
 Approval Amount : Rs 65000
 Funding Agency : University Grant Commission
 NHRC Fees : Rs 1000
 Approval Date : 13-Dec-17
- 192.** Title : Survey to assess General Practitioners' training, experience and views concerning the management of non-communicable diseases in Nepal
 PI/Co PI Name : Dr. Daniel Munday
 Institution : International Nepal Fellowship
 Approval Amount : Rs 210000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 13-Dec-17
- 193.** Title : Determination of Maternal, Neonatal and Infant Mortality in Sankhuwasabha, Okhaldhunga and Ilam districts
 PI/Co PI Name : Mr. Liladhar Dhakal
 Institution : One Heart World-Wide
 Approval Amount : Rs 4250150
 Funding Agency : NA
 NHRC Fees : Rs 127504.5
 Approval Date : 13-Dec-17
- 194.** Title : Substance Use Disorder among Patients Diagnosed with Anxiety and Major Depressive Disorder attending Tertiary Hospitals of Kathmandu Valley Nepal
 PI/Co PI Name : Ms. Sirjana Adhikari
 Institution : Tri-Chandra College
 Approval Amount : Rs 85000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 13-Dec-17
- 195.** Title : Assessment of cognitive functions in children residing in Bhaktapur
 PI/Co PI Name : Dr. Laxman Prasad Shrestha
 Institution : **Institute of Medicine**
 Approval Amount : Rs 950000
 Funding Agency : Child Health Research project, Institute of Medicine

- NHRC Fees : Rs 10000
Approval Date : 20-Dec-17
- 196.** Title : Ethical and socio-cultural aspects of autopsy in low and middle-income countries
PI/Co PI Name : Ms. Halina Agnieszka Suwalowska
Institution : **University of Oxford**
Approval Amount : **\$6,038**
Funding Agency : Wellcome Trust
NHRC Fees : \$200
Approval Date : 20-Dec-17
- 197.** Title : Knowledge, Attitudes and Practices (KAP) Survey on family planning , maternal and child health products in Selected district of Nepal
PI/Co PI Name : Mr. Udbodh Ushakar Rijal
Institution : **New ERA**
Approval Amount : **Rs 20904499**
Funding Agency : Abt Associates Inc.
NHRC Fees : **Rs 627134.97**
Approval Date : 20-Dec-17
- 198.** Title : Characterization of TNF-alpha gene polymorphism and its impact in Influenza A/Pandemic(H1N1) patients visiting NPHL
PI/Co PI Name : Mr. Bimalesh Kumar Jha
Institution : **Tribhuvan University**
Approval Amount : Rs 310000
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 20-Dec-17
- 199.** Title : Service accountability of tertiary eye care facilities of Kathmandu valley
PI/Co PI Name : Mr. Bal Bahadur Kshetri
Institution : Mid Western University
Approval Amount : Rs 59000
Funding Agency : NA
NHRC Fees : Rs 1000
Approval Date : 20-Dec-17
- 200.** Title : Persistence of Immunity Following an Open Label, Randomised Controlled Non-inferiority Trial, Comparing Two-Dose Priming with the 10-Valent Pneumococcal Conjugate Vaccine at 6 and 10 Weeks to 6 and 14 Weeks in Nepali Children
PI/Co PI Name : Prof. Dr. Shrijana Shrestha/Prof. Andrew Pollard
Institution : School of Medicine Patan Academy of Health Sciences (PAHS)/ University of Oxford, Oxford Vaccine Group
Approval Amount : \$15,422
Funding Agency : University of Oxford

- NHRC Fees : \$462.66
Approval Date : 20-Dec-17
- 201.** Title : Assessment of role and feasibility of SpO2 screening in predicting critical congenital heart disease in apparently normal neonates in a pediatric hospital in Nepal.
PI/Co PI Name : Dr. Ganendra Bhakta Raya
Institution : Siddhi Memorial Hospital
Approval Amount : Rs 72000
Funding Agency : NA
NHRC Fees : Rs 5000
Approval Date : 20-Dec-17
- 202.** Title : Knowledge, Attitude and Barrier to Evidence Based Practice among Physiotherapists in selected districts of Nepal
PI/Co PI Name : Ms. Shristi Bajracharya
Institution : **Centre for Rehabilitation of Paralysed**
Approval Amount : Rs 18000
Funding Agency : NA
NHRC Fees : Rs 10000
Approval Date : 20-Dec-17
- 203.** Title : Comparative Study on effect of Rabeprazole versus Omeprazole in Acid-peptic disorder with Helicobacter pylori infection
PI/Co PI Name : Dr. Sukh Bahadur Gurung
Institution : **BP Koirala Institute of Health Sciences**
Approval Amount : Rs 50000
Funding Agency : NA
NHRC Fees : Rs 5000
Approval Date : 27-Dec-17
- 204.** Title : The Biomechanical and Physiological Impacts of Heavy Load Carrying Among Sand Miners in Seti River, Pokhara, Nepal- a preliminary study
PI/Co PI Name : Dr. Dirgha Jibi Ghimire
Institution : **Institute for Social and Environmental Research-Nepal**
Approval Amount : Rs 300000
Funding Agency : NA
NHRC Fees : Rs 5000
Approval Date : 27-Dec-17
- 205.** Title : PHENOTYPIC DETECTION OF EXTENDED SPECTRUM BETA LACTAMASE, METALLO BETA LACTAMASE AND AmpC BETA LACTAMASE IN CLINICAL ENTEROBACTERIACEAE ISOLATES
PI/Co PI Name : Ms. Anita Bhandari
Institution : Golden Gate International college College
Approval Amount : Rs 65000

- Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 27-Dec-17
- 206.** Title : Detection of Extended Spectrum Beta Lactamases and Metallo Beta Lactamases in selected samples collected in National Public Health Laboratory.
 PI/Co PI Name : Ms. Anjana Shrestha
 Institution : **Tribhuvan university**
 Approval Amount : Rs 10000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 27-Dec-17
- 207.** Title : Development of a Caring Model Incorporating Yoga for Promoting Physical Recovery and Wisdom of People Living with Stroke in Nepal
 PI/Co PI Name : Ms. Kalpana Paudel Aryal
 Institution : Prince of Songkla University
 Approval Amount : Rs 130000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 27-Dec-17
- 208.** Title : Quality of Life and its Associated Factors among Primary Caregivers of Children with Cerebral palsy Living in Sarlahi and Rautahat Districts of Nepal
 PI/Co PI Name : Ms. Bina Pandit
 Institution : Bangladesh Health Professions Institute
 Approval Amount : Rs 31500
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 27-Dec-17
- 209.** Title : Risk Factors for Falls in Elderly Living in selected old Age Homes of Nepal
 PI/Co PI Name : Ms. Niru Lama
 Institution : Bangladesh Health Professional Institute
 Approval Amount : Rs 40000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 27-Dec-17
- 210.** Title : Case control study on risk factors associated with low birth weight in Nepal
 PI/Co PI Name : Mr. Dilip Kumar Yadav
 Institution : Sam Higginbottom University of Agriculture, Technology and Sciences
 Approval Amount : Rs 305000

- Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 27-Dec-17
- 211.** Title : Assessment of the impact of education and training of health care professionals in counselling for and delivery of post- partum family planning/ post- partum intra uterine devices services
 PI/Co PI Name : Dr. Kusum Thapa
 Institution : **Nepal Society of Obstetrician and Gynecologist (NESOG)**
 Approval Amount : **Rs 1725173**
 Funding Agency : International federation of |Gynecology and Obstetrics (FIGO)
 NHRC Fees : **Rs 51755.19**
 Approval Date : 3-Jan-18
- 212.** Title : Analysis of EGFR mutations in non-small cell lung cancer patients visiting Nepal Cancer Hospital and Research Center
 PI/Co PI Name : Dr. Yuba Raj Pokharel
 Institution : South Asian University
 Approval Amount : Rs 790000
 Funding Agency : Institute of South Asian, South Asian University
 NHRC Fees : Rs 10000
 Approval Date : 3-Jan-18
- 213.** Title : Reintegrating to the Family: A challenges for the Incestuous Abuse Survivors in selected safe homes in Nepal
 PI/Co PI Name : Ms.Januka Khatiwada
 Institution : International University of Health and Welfare
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 3-Jan-18
- 214.** Title : Exploring the uptake and acceptability of HIV self-testing for men who have sex with men, male sex workers, and transgender people in Nepal
 PI/Co PI Name : Dr. Durga Prasad Bhandari
 Institution : FHI 360 Nepal
 Approval Amount : Rs 630000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 3-Jan-18
- 215.** Title : Knowledge, attitude and practice of menstrual hygiene and their association with sociodemographic variables among adolescent girls studying in selected public and private schools in Kirtipur Municipality, Nepal
 PI/Co PI Name : Ms. Swastika Shrestha

- Institution : Charité Universitätsmedizin Berlin
 Approval Amount : Rs 125000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 3-Jan-18
- 216.** Title : Risk factors for uterine prolapse among women living in selected districts of Nepal: A case control study
 PI/Co PI Name : Mr. Hridaya Raj Devkota
 Institution : Institute for Social and Environmental Research-Nepal
 Approval Amount : Rs 772500
 Funding Agency : The Regents of the University of California Berkeley
 NHRC Fees : Rs 10000
 Approval Date : 3-Jan-18
- 217.** Title : Reproductive Health Rights Knowledge Among Adolescent Students
 PI/Co PI Name : Ms. Amrita Shrestha
 Institution : **Padma Kanya Multiple Campus**
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 3-Jan-18
- 218.** Title : Evaluation of effectiveness of hospital-based stewardship program in wound and burn care associated resistance at Kathmandu and Pokhara of Nepal
 PI/Co PI Name : Dr. Rajesh Dhoj Joshi
 Institution : Kathmandu Model Hospital
 Approval Amount : Rs 1200000
 Funding Agency : Global Health Initiative, Henry Ford Health System
 NHRC Fees : Rs 36000
 Approval Date : 3-Jan-18
- 219.** Title : A randomized controlled trial to evaluate the safety and efficacy of early cataract surgery in Primary open angle glaucoma patients
 PI/Co PI Name : Dr. Suman Shumsher Thapa
 Institution : Tilganga Institute of Ophthalmology
 Approval Amount : \$75,001.97
 Funding Agency : That Man May See, Inc. (UCSF Department of Ophthalmology)
 NHRC Fees : \$2,250.06
 Approval Date : 24-Jan-18
- 220.** Title : Learning from Nepalese children exposed to the 2015 Gorkha earthquake: Understanding psychosocial resilience
 PI/Co PI Name : Prof. Michael Hutt/Mr. Nagendra Prasad Luitel
 Institution : SOAS University of London/TPO Nepal
 Approval Amount : Rs 151550

- Funding Agency : NA
 NHRC Fees : Rs 20000
 Approval Date : 24-Jan-18
- 221.** Title : Knowledge of, attitude to and barriers towards research in final year medical students of Kathmandu Valley
 PI/Co PI Name : Dr. Shristi Lamichhane
 Institution : Panchkhal PHC
 Approval Amount : Rs 105000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 24-Jan-18
- 222.** Title : Assessing the status of drug rehabilitation practices in selected Districts of Nepal
 PI/Co PI Name : Mr. Maheshwar GHIMIRE
 Institution : Youth Vision Nepal
 Approval Amount : Rs 850000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 24-Jan-18
- 223.** Title : Disaster preparedness of primary health care system in nepal for pre-hospital mass casualty management
 PI/Co PI Name : Mr. Kiriti Ray
 Institution : Singhania University
 Approval Amount : Rs 290000
 Funding Agency : NA
 NHRC Fees : Rs 20000
 Approval Date : 24-Jan-18
- 224.** Title : Baseline Survey for understanding the situation of Disability and its contributing factors in Ilam District
 PI/Co PI Name : Dr. Sushil Chandra Baral
 Institution : **HERD International**
 Approval Amount : Karuna Foundation Nepal
 Funding Agency : **Rs 2792142**
 NHRC Fees : **Rs 83764.26**
 Approval Date : 24-Jan-18
- 225.** Title : Illness Perception Predicting Cardiovascular Health Behaviors Among Patients with Ischemic Heart Disease visiting BPKIHS Hospital of Nepal
 PI/Co PI Name : Ms. Punam Gauro
 Institution : **Prince of Songkla University**
 Approval Amount : Rs 50000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 24-Jan-18

226. Title : Age at menarche among the school going children of Jorpati, Kathmandu
 PI/Co PI Name : Dr. Usha Chalise
 Institution : **Nepal Medical College**
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 24-Jan-18
227. Title : Highly Hazardous Pesticide Poisoning - Gathering Requisite Information from selected sites in Nepal for Decision-making for Effective Suicide Prevention (HOPE GRID)
 PI/Co PI Name : Prof. Michael Eddleston/Dr. Rakesh Ghimire
 Institution : University of Edinburgh/Maharajgunj Medical Campus, Institute Of Medicine
 Approval Amount : \$68,100
 Funding Agency : Centre for Pesticide Suicide Prevention
 NHRC Fees : \$2,043
 Approval Date : 24-Jan-18
228. Title : Characterizing Prevalence of Mycotoxins in Value Chain Crops and Livestock Feed in Selected Districts in Nepal
 PI/Co PI Name : Mr. Harvey Jagger/Mr. Jaya Kumar Gurung
 Institution : **Kansas State University/Nepal Development Research Institute**
 Approval Amount : **Rs 6500000**
 Funding Agency : USAID
 NHRC Fees : **Rs 195000**
 Approval Date : 24-Jan-18
229. Title : Health Facility Readiness Endline Survey in selected districts
 PI/Co PI Name : Dr. Subas Risal
 Institution : **New Era**
 Approval Amount : **Rs 9006570**
 Funding Agency : Health for Life/RTI International
 NHRC Fees : **Rs 270197.1**
 Approval Date : 24-Jan-18
230. Title : Delivery care staffs' perceptions and attitudes towards changes of the practice of umbilical cord clamping in selected birthing centres of Nepal
 PI/Co PI Name : Ms. Nisha Rana
 Institution : **Uppsala University**
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 24-Jan-18

- 231.** Title : Factors Related to ICU Transfer Anxiety Among Open Heart Surgery Patients, Shahid Gangalal National Heart Center, Kathmandu, Nepal
 PI/Co PI Name : Ms. Jaya Rijal
 Institution : Prince of Songkla University
 Approval Amount : Rs 40000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 31-Jan-18
- 232.** Title : Full Immunization Coverage Validation and Verification Study of Immunization in Low Performing Districts of Nepal
 PI/Co PI Name : Prof. Madhusudan Subedi
 Institution : Central Department of Sociology
 Approval Amount : Rs 901000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 31-Jan-18
- 233.** Title : An appraisal of under 5 stunting decline in Nepal
 PI/Co PI Name : Dr. Mahesh Kumar Maskey
 Institution : Nepal Public Health Foundation
 Approval Amount : Rs 931000
 Funding Agency : Sickkids
 NHRC Fees : Rs 10000
 Approval Date : 31-Jan-18
- 234.** Title : Assessment of cardiac self-efficacy and its impact on health behavior among patients diagnosed with coronary artery disease in tertiary centers of Nepal
 PI/Co PI Name : Ms. Rabina Shrestha
 Institution : BPKIHS
 Approval Amount : Rs 10000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 31-Jan-18
- 235.** Title : Health facilities readiness, providers perception and clients experience of care in the safe abortion services in the selected Districts of Nepal
 PI/Co PI Name : Dr. Suresh Mehata
 Institution : Ipas Nepal
 Approval Amount : Rs 2000000
 Funding Agency : NA
 NHRC Fees : Rs 60000
 Approval Date : 31-Jan-18
- 236.** Title : PRESERVE – Mitral Prospective REgistry to Study Clinical OutcomEs of Repair of Mitral ValvEs in South Asia

- PI/Co PI Name : Dr. Bhagawan Koirala
 Institution : Manmohan cardiothoracic vascular and transplant center
 Approval Amount : Rs 1000000
 Funding Agency : India Medtronic Pvt.Ltd
 NHRC Fees : Rs 10000
 Approval Date : 7-Feb-18
- 237.** Title : Assessment of a capacity enhancement model to strengthen basic health service delivery in Lekhnath Metropolitan city of Nepal
 PI/Co PI Name : Dr. Sushil Chandra Baral
 Institution : HERD International
 Approval Amount : Rs 5859083
 Funding Agency : University of Leeds
 NHRC Fees : Rs 175772.49
 Approval Date : 7-Feb-18
- 238.** Title : Population based screening of sickle cell disorder in Tharu community of Bardiya district
 PI/Co PI Name : Prof. Dr. Anjani Kumar Jha
 Institution : Nepal Health Research Council
 Approval Amount : Rs 32120000
 Funding Agency : Ministry of Health Nepal
 NHRC Fees : Rs 963600
 Approval Date : 7-Feb-18
- 239.** Title : Comparative screening of glucose-6-phosphate dehydrogenase (G6PD) deficiency between Dagaura Tharu and Rana Tharu of Dekhatbhuli VDC-9, Kanchhanpur, Nepal
 PI/Co PI Name : Mr. Himalaya Joshi
 Institution : Central Department of Zoology
 Approval Amount : Rs 71000
 Funding Agency : University Grant Commission
 NHRC Fees : Rs 1000
 Approval Date : 7-Feb-18
- 240.** Title : Biofilm formation in clinical methicillin resistant Staphylococcus aureus (MRSA) isolates and detection of icaA , icaD and fnbA gene involved
 PI/Co PI Name : Ms. Sushila Baral
 Institution : Central Department of Microbiology
 Approval Amount : Rs 68000
 Funding Agency : University Grant Commission
 NHRC Fees : Rs 1000
 Approval Date : 7-Feb-18
- 241.** Title : Religious Coping and Spirituality in Type 2 diabetes mellitus: An Observational Study of Patients with type 2 diabetes mellitus in Om Hospital and Research Center Nepal
 PI/Co PI Name : Dr. Bishwanath Koirala

- Institution : University of Roehampton
 Approval Amount : Rs 47000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 7-Feb-18
- 242.** Title : Assessment of the knowledge, attitude and practice of pharmacovigilance and investigation of the utility of phytosterols in the management of hyperlipidaemia among health care providers in Nepal
 PI/Co PI Name : Ms. Sony Chandi Shrestha
 Institution : London Metropolitan University
 Approval Amount : \$3,800
 Funding Agency : London Metropolitan University, Newton Fund
 NHRC Fees : \$100
 Approval Date : 7-Feb-18
- 243.** Title : Knowledge, Attitude and Practice among farmers and stakeholders on the use of pesticide and its health effects in Chitwan District
 PI/Co PI Name : Ms. Simrin Kafle
 Institution : Nepal Public Health Foundation
 Approval Amount : Rs 343000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 7-Feb-18
- 244.** Title : Assessing the feasibility of using Embrace Infant Warmer for transport in Sindupalchowk district
 PI/Co PI Name : Mr. Surya Bhatta
 Institution : **One Heart World-Wide**
 Approval Amount : Rs 180000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 21-Feb-18
- 245.** Title : Quality of life among mothers and families living with a child with a disability in selected centres throughout Nepal
 PI/Co PI Name : Ms. Catherine O’Kane
 Institution : **Maastricht University**
 Approval Amount : \$1,254
 Funding Agency : Handicap International
 NHRC Fees : \$100
 Approval Date : 21-Feb-18
- 246.** Title : Risk factors and outcomes of stroke patients presenting to Spinal Injury Rehabilitation Center, Banepa.
 PI/Co PI Name : Ms. Christine Cain Groves/Dr. Raju Dhakal
 Institution : Spinal Injury Rehabilitation Centre
 Approval Amount : \$5,540

- Funding Agency : NA
 NHRC Fees : \$200
 Approval Date : 21-Feb-18
- 247.** Title : Exploring perceived facilitators and barriers for treatment and control of high blood pressure among hypertensive patients of selected area of Kathmandu, Nepal
- PI/Co PI Name : Ms. Buna Bhandari Bhattarai
 Institution : University of New South Wales
 Approval Amount : Rs 200000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 21-Feb-18
- 248.** Title : Assessing Knowledge, Attitude and Perception (KAP) about abortion among target community members in Mugu and Terathum districts of Nepal
- PI/Co PI Name : Mr. Nischal Basnet
 Institution : Right Direction Nepal
 Approval Amount : Rs 1407100
 Funding Agency : NA
 NHRC Fees : Rs 42213
 Approval Date : 21-Feb-18
- 249.** Title : The association of migration for labour with the left-behind child's nutritional status and growth - Evidence from a birth cohort in Dhanusha district, Nepal
- PI/Co PI Name : Ms. Laura Katharina Busert
 Institution : Great Ormond Street Institute for Child Health, University College London
 Approval Amount : Rs 976605
 Funding Agency : Foundation fiat panis
 NHRC Fees : Rs 20000
 Approval Date : 4-Mar-18
- 250.** Title : Assessing trends of heat waves and perception of people about health risks of heat wave in Nepal
- PI/Co PI Name : Dr. Meghnath Dhimal
 Institution : Nepal Health Research Council
 Approval Amount : Rs 2189000
 Funding Agency : World Health Organization Country Office nepal
 NHRC Fees : Rs 65670
 Approval Date : 4-Mar-18
- 251.** Title : PREVALENCE OF ASYMPTOMATIC AND SUBMICROSCOPIC CASES OF MALARIA IN KAILALI AND KANCHANPUR
- PI/Co PI Name : Dr. Binod Kumar Giri
 Institution : **Vector Borne Disease and Research Center**

- Approval Amount : **Rs 1533800**
 Funding Agency : NA
 NHRC Fees : **Rs 46014**
 Approval Date : 7-Mar-18
- 252.** Title : Comparative study of Spinal Anesthesia for Cesarean Section at high altitude and low altitude
 PI/Co PI Name : Mr. Ramesh Bhattarai
 Institution : Karnali Academy of Health Sciences
 Approval Amount : Rs 55000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 7-Mar-18
- 253.** Title : Detection of pathogenic mutation in the breast cancer susceptible gene BRCA1 by PCR-RFLP & expression analysis of different breast cancer marker protein in Breast cancer patients of selected hospital in kathmandu valley.
 PI/Co PI Name : Mr. Maha Dev Bist
 Institution : Tribhuvan University
 Approval Amount : Rs 47500
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 7-Mar-18
- 254.** Title : Assessing Oral Health and Nutrition Beliefs, Access to Dental Care in Rural areas of Kaski District, Nepal
 PI/Co PI Name : Prof. Karen Sokul Gutierrez/Ms. Chandni Jaishwal
 Institution : University of California Berkeley/Jajarkot Hoapital
 Approval Amount : \$3,493
 Funding Agency : University of California, San Francisco, Global Oral Health Program
 NHRC Fees : \$200
 Approval Date : 7-Mar-18
- 255.** Title : Assessment of the attitude and practice of drug and oxygen use among Mount Everest climbers
 PI/Co PI Name : Dr. Sanjeeb Sudarshan Bhandari
 Institution : **Himalayan Rescue Association**
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 7-Mar-18
- 256.** Title : The Prevalence of subclinical High Altitude Pulmonary Edema in hikers in the Khumbu valley as measured by lung ultrasonography
 PI/Co PI Name : Prof. Norman Stuart Harris/Prof. Dr. Buddha Basnyat
 Institution : **Massachusetts General Hospital/Himalayan Rescue Association**

- Approval Amount : \$2,600
 Funding Agency : NA
 NHRC Fees : \$200
 Approval Date : 7-Mar-18
- 257.** Title : Effect of lifestyle risk factors modification intervention on adherence to lifestyle changes among patients with coronary artery disease(CAD)
 PI/Co PI Name : Ms. Pramila Gaudel
 Institution : **University of Tampere**
 Approval Amount : Rs 100000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 7-Mar-18
- 258.** Title : Evaluating the effectiveness of screening for detection and treatment engagement of maternal depression in selected health facilities of Chitwan
 PI/Co PI Name : Ms. Prasansa Subba
 Institution : **Transcultural Psychosocial Organization (TPO) Nepal**
 Approval Amount : **Rs 715000**
 Funding Agency : University of Cape Town, South Africa; Supported by Department of International Development (DFID)
 NHRC Fees : Rs 10000
 Approval Date : 7-Mar-18
- 259.** Title : Exploration of ethical challenges while conducting health research in emergency situations and develop post-research ethics analysis (PREA) tool
 PI/Co PI Name : Mr. Nawaraj Upadhaya
 Institution : TPO Alliance
 Approval Amount : Rs 474045
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 7-Mar-18
- 260.** Title : Determinant of Feeding Practices of Severely Acute Malnourished Children: Assessment Among Mothers or Caretakers in Rukum District
 PI/Co PI Name : Mr. Binod Kumar Aryal
 Institution : **Partnership for Social Development Nepal**
 Approval Amount : **Rs 198689**
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 7-Mar-18
- 261.** Title : Effectiveness of Structured Teaching Program (STP) on Menstrual Hygiene among Adolescent Girls at Selected Schools of Laitpur
 PI/Co PI Name : Ms. Susan Maharjan
 Institution : **PAHS, LNC**

- Approval Amount : Rs 70000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 7-Mar-18
- 262.** Title : Assessment to determine populations at risk of malaria and primaquine induced haemolysis in selected areas of Nepal
 PI/Co PI Name : Dr. Prakash Ghimire/Mr. Richard N Price
 Institution : Tribhuvan University, Central Dept. of Microbiology/Menzies School of Health Research
 Approval Amount : \$27,355
 Funding Agency : Menzies School of Health Research/APMEN/BMGF
 NHRC Fees : \$820.65
 Approval Date : 7-Mar-18
- 263.** Title : A Formative Evaluation of the introduction of an Electronic Medical Record System in Trishuli Hospital, Nuiwakot
 PI/Co PI Name : Prof. Dr. Anjani Kumar Jha
 Institution : Nepal Health Research Council
 Approval Amount : Rs 1250000
 Funding Agency : GIZ
 NHRC Fees : Rs 37500
 Approval Date : 7-Mar-18
- 264.** Title : Comparison of efficacy of oral montelukast versus sublingual immunotherapy in patients with allergic rhinitis
 PI/Co PI Name : Mr. Deependra Kasaudhan
 Institution : **Tribhuvan University Teaching Hospital ,IOM**
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 13-Mar-18
- 265.** Title : Using a health promotion- based street drama intervention to increase maternal knowledge about household handwashing with soap in selected rural areas of Nepal
 PI/Co PI Name : Mr. Shalik Ram Dhital
 Institution : **The University of Newcastle**
 Approval Amount : Rs 240000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 13-Mar-18
- 266.** Title : Incidence of neonatal encephalopathy and longterm developmental outcomes in babies who had hypoxic ischemic encephalopathy in 4 hospitals of Nepal
 PI/Co PI Name : Dr. Ashish KC
 Institution : UNICEF

- Approval Amount : Rs 510000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 13-Mar-18
- 267.** Title : Self-reported, questionnaire based chronic organophosphate based pesticide exposure and diabetes in Sunsari, Morang and Lalitpur, a case control study
- PI/Co PI Name : Dr.Shwetank Singh
 Institution : BPKIHS
 Approval Amount : Rs 230000
 Funding Agency : NA
 NHRC Fees : Rs 20000
 Approval Date : 13-Mar-18
- 268.** Title : Oral hygiene and risk factors responsible for oral health in school children of Kerung VDC of Solukhumbu district, Nepal
- PI/Co PI Name : Prof. Dr. Marten Luc/Dr. Shaili Pradhan
 Institution : **Ghent University Belgium/NAMS, Bir hospital**
 Approval Amount : **Rs 452000**
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 13-Mar-18
- 269.** Title : Change in health burden and risk factors following the 2015 massive earthquake in Nepal: a quantitative retrospective analysis at subnational-level
- PI/Co PI Name : Prof. Shuhei Nomura/Ms. Rohita Gauchan Thakali
 Institution : **National Center for Global Health and Medicine/University of Wollongong**
 Approval Amount : **\$18,040**
 Funding Agency : Japan Society for the Promotion of Science
 NHRC Fees : **\$541.20**
 Approval Date : 13-Mar-18
- 270.** Title : A Study on Lifestyle Management to Combat Non-Communicable Diseases in Kavre and Rautahat Districts of Nepal
- PI/Co PI Name : Ms. Lillian Kent/Dr. Ghanshyam Kumar Bhatta
 Institution : Avondale College of Higher Education/ADRA Nepal
 Approval Amount : Rs 2885000
 Funding Agency : ADRA International and ADRA Australia
 NHRC Fees : Rs 86550
 Approval Date : 13-Mar-18

- 271.** Title : Integrated biological and behavioural surveillance (IBBS) surveys to assess trends in HIV prevalence and risk behaviours among identified key populations at higher risk of becoming infected with HIV in selected epidemic zones of Nepal
- PI/Co PI Name : Dr. Basu Dev Pandey
 Institution : National Centre for AIDS and STD Control
 Approval Amount : Rs 12971400
 Funding Agency : NA
 NHRC Fees : Rs 389142
 Approval Date : 13-Mar-18
- 272.** Title : Efficacy and tolerance of aceclofenac and diacerin combination for inflammatory osteoarthritis- A Single Center Observational Study
- PI/Co PI Name : Dr. Abhilasha Shah
 Institution : National Center for Rheumatic Diseases
 Approval Amount : Rs 240000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 13-Mar-18
- 273.** Title : Nepal Cerebral Palsy Register (NCPR): Towards developing a platform for National cerebral palsy (CP) register and population- based surveillance of children with CP in Gorkha, Nepal
- PI/Co PI Name : Dr. Gulam Khandaker/Mr. Amir Banjara Chhetri
 Institution : CSF Global/CSF Global, Nepal
 Approval Amount : Rs 670625
 Funding Agency : University of Sydney
 NHRC Fees : Rs 20000
 Approval Date : 13-Mar-18
- 274.** Title : Pilot study on the use of autologous leukocytes and platelets rich fibrin (L-PRF) in the treatment of trophic ulcers in patients with hansen's disease at Anandaban Hospital Nepal
- PI/Co PI Name : Dr. Indra Bahadur Napit
 Institution : **The leprosy Mission Nepal**
 Approval Amount : **Rs 950000**
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 21-Mar-18
- 275.** Title : Pilot study for the characterization of bacterial plasmids on a smartphone
- PI/Co PI Name : Mr. Fredrik Westerlund/Mr. Santosh Pandit
 Institution : Chalmers University of Technology/Institute of Medicine
 Approval Amount : Rs 180000
 Funding Agency : Bill and Melinda Gates Foundation
 NHRC Fees : Rs 20000
 Approval Date : 21-Mar-18

- 276.** Title : Assessing Cardiovascular Disease and Chronic Kidney Disease Burden in Dang District, Nepal
 PI/Co PI Name : Mr. Yashashwi Pokharel
 Institution : **Health Foundation Nepal (HFN)**
 Approval Amount : **Rs 840000**
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 21-Mar-18
- 277.** Title : Vitamin D deficiency and nutritional status among rheumatic heart disease patients and non-rheumatic heart disease people in Pokhara, Western Nepal: a case-control study
 PI/Co PI Name : Ms. Lene Thorup
 Institution : **Center for Global Health, Dep. of Public Health, Aarhus University**
 Approval Amount : \$7,100
 Funding Agency : NA
 NHRC Fees : \$200
 Approval Date : 21-Mar-18
- 278.** Title : Evaluation of Skill Birth Attendants training in selected districts of Nepal
 PI/Co PI Name : Ms. Ruma Rajbhandari/Ms. Shovana Rai
 Institution : **Brigham and Women's Hospital/Harvard Medical School/Nick Simons Institute**
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 20000
 Approval Date : 21-Mar-18
- 279.** Title : Interplay Between Need and Response: multi-stakeholder response analysis to post-disaster distress in Kathmandu
 PI/Co PI Name : Ms. Pia Noel
 Institution : **University of Edinburgh**
 Approval Amount : \$5,800
 Funding Agency : Wellcome Trust
 NHRC Fees : \$200
 Approval Date : 21-Mar-18
- 280.** Title : Co-morbidities among Diabetes Patients: A retrospective, cross-sectional study among patients in Metro Kathmandu Hospital
 PI/Co PI Name : Dr. Jyoti Bhattarai
 Institution : **Metro Kathmandu Hospital**
 Approval Amount : Rs 10000
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 21-Mar-18

- 281.** Title : Mental health of spouses of Nepalese labour migrants in Nawalparasi district
 PI/Co PI Name : Dr. Pramod Raj Regmi
 Institution : **Bournemouth University, UK**
 Approval Amount : **Rs 978000**
 Funding Agency : Bournemouth University, UK
 NHRC Fees : Rs 10000
 Approval Date : 21-Mar-18
- 282.** Title : Mapping the current private sector practices in malaria diagnosis and treatment in malaria endemic districts of Nepal
 PI/Co PI Name : Poojan Shrestha
 Institution : **MITRA Samaj**
 Approval Amount : **Rs 1581300**
 Funding Agency : Save the Children/Global Fund
 NHRC Fees : **Rs 47439**
 Approval Date : 21-Mar-18
- 283.** Title : Risk Factors for Oral Cancer in Nepalese Population: A Hospital-Based Case-Control Study
 PI/Co PI Name : Mr. Kiran Sapkota
 Institution : **University of Iowa**
 Approval Amount : **Rs 85000**
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 21-Mar-18
- 284.** Title : Evaluation of the newly developed questionnaire on psychotic symptoms at high altitude (HAPSY-Q)
 PI/Co PI Name : Dr. Sanjeeb Sudarshan Bhandari
 Institution : **Mountain Medicine Society of Nepal**
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 21-Mar-18
- 285.** Title : Comparison of chest ultrasound findings between High Altitude Related Cough, High Altitude Pulmonary Edema and asymptomatic individual at the Mt. Everest Base Camp
 PI/Co PI Name : Dr. Sanjeeb Sudarshan Bhandari
 Institution : **Mountain Medicine Society of Nepal**
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 4-Apr-18
- 286.** Title : Clinical validation of a new diagnostic tool for fast diagnostic of mycobacterium tuberculosis

- PI/Co PI Name : Dr. Markus Beutler/Mr. Bhagwan Maharjan
 Institution : Institute of Microbiology and Laboratory Medicine (IMLred GmbH)/
 German Nepal TB Project (GENETUP)
- Approval Amount : \$4,744
 Funding Agency : Institute of Microbiology and Laboratory Medicine
 NHRC Fees : \$200
 Approval Date : 4-Apr-18
- 287.** Title : Global Congestive Heart Failure (G-CHF): A global registry to study
 the demographics, socioeconomic and clinical factors, etiologies,
 pathophysiology, management, barriers to care, and outcomes of heart
 failure patients
- PI/Co PI Name : Prof. Dr. Sanjib Kumar Sharma
 Institution : **B.P. Koirala Institute of Health Sciences**
 Approval Amount : Rs 9600000
 Funding Agency : Population Health Research Institute Hamilton Health Sciences and
 McMaster University Hamilton, ON, Canada
- NHRC Fees : Rs 288000
 Approval Date : 4-Apr-18
- 288.** Title : Probiotic supplementation on enteral nutrition-related outcomes in
 preterm babies
- PI/Co PI Name : Dr. Eva Gauchan
 Institution : **Manipal Teaching Hospital, Pokhara**
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 4-Apr-18
- 289.** Title : Cross-Cultural Validation of Two Scales to Assess Mental Health in
 Leprosy-Affected People in Province 1 and 7, Nepal
- PI/Co PI Name : Mr. Nand Lal Banstola
 Institution : Netherlands Leprosy Relief
 Approval Amount : \$850
 Funding Agency : Institute of Microbiology and Laboratory Medicine
 NHRC Fees : \$50
 Approval Date : 4-Apr-18
- 290.** Title : Implementation strategies and contextual factors associated with
 under-five mortality reduction in Nepal from 2000-2016
- PI/Co PI Name : Dr. Mahesh Kumar Maskey/Dr. Agnes Binagwaho
 Institution : **Nepal Public Health Foundation/University of Global Health
 Equity**
 Approval Amount : **Rs 2285800**
 Funding Agency : University of Global Health Equity
 NHRC Fees : **Rs 68574**
 Approval Date : 4-Apr-18

- 291.** Title : An assessment of research activity of research centres in Nepal
- PI/Co PI Name : Prof. Dr. Anjani Kumar Jha
 Institution : **Nepal Health Research Council**
 Approval Amount : **Rs 695000**
 Funding Agency : NA
 NHRC Fees : **Rs 10000**
 Approval Date : 18-Apr-18
- 292.** Title : The Effect of Nepali Traditional Healing Process on Mental Well-Being in Sindhuli, Kathmandu, and Chitwan
- PI/Co PI Name : Prof. Brandon Alan Kohrt/Dr. Rishav Koirala
 Institution : **Duke Global Health Institute, NC, USA and TPO Nepal, Kathmandu**
- Approval Amount : **Rs 736517**
 Funding Agency : NA
 NHRC Fees : **Rs 20000**
 Approval Date : 18-Apr-18
- 293.** Title : Association between Serum Vitamin D level and Bone Mineral Density
- PI/Co PI Name : Mr. Santosh Pradhan
 Institution : **Samyak Diagnostic Pvt.Ltd**
 Approval Amount : **Rs 300000**
 Funding Agency : NA
 NHRC Fees : **Rs 10000**
 Approval Date : 18-Apr-18
- 294.** Title : Designing family based mental health intervention to reduce stress, anxiety, and depression among people living with HIV/AIDS in Kathmandu Valley, Nepal
- PI/Co PI Name : Ms. Kalpana Poudel Tandukar
 Institution : **University of Massachusetts Amherst**
 Approval Amount : **\$666**
 Funding Agency : NA
 NHRC Fees : **\$200**
 Approval Date : 18-Apr-18
- 295.** Title : Endline Survey of Newborn Care Health Project in Mahottari, Bardiya and Surket districts of Nepal
- PI/Co PI Name : Mr. Niranjana Thapa
 Institution : **Save the Children**
 Approval Amount : **Rs 979500**
 Funding Agency : NA
 NHRC Fees : **Rs 10000**
 Approval Date : 18-Apr-18
- 296.** Title : Nutrition status among under five children in Tharu community of Kailali district

- PI/Co PI Name : Ms. Susmita Nepal
 Institution : **Om Health Campus**
 Approval Amount : **Rs 145000**
 Funding Agency : NA
 NHRC Fees : **Rs 5000**
 Approval Date : 18-Apr-18
- 297.** Title : Determining Accuracy of District Coverage Estimates of Health Management Information System (HMIS) by Annealing it with Lot Quality Assurance Sampling (LQAS) Community Survey Data in Nepal
- PI/Co PI Name : Prof. Joseph J. Valadez/Ms. Pragya Gartoulla
 Institution : **Liverpool School of Tropical Medicine**
 Approval Amount : **Rs 3476550**
 Funding Agency : DFID
 NHRC Fees : **Rs 104296.5**
 Approval Date : 18-Apr-18
- 298.** Title : Relationship between Maternal Exposure to Mycotoxins, Birth Outcomes and Stunting in children: A birth cohort study in Nepal-Phase II
- PI/Co PI Name : Prof. Patrick Webb/Prof. Dr. Kedar Prasad Baral
 Institution : **Tufts University, USA/Patan Academy of Health Sciences**
 Approval Amount : **Rs 8204473**
 Funding Agency : United States Agency for International Development (USAID) routed through Tufts University, Nutrition Innovation Lab
- NHRC Fees : **Rs 246134.19**
 Approval Date : 18-Apr-18
- 299.** Title : Impact of a Balanced Protein-Energy Supplement in Pregnancy and Early Lactation on Reproductive Outcomes and Growth in Sarlahi, Nepal
- PI/Co PI Name : Dr. Subarna Kumar Khatri
 Institution : Nepal Nutrition Intervention Project Sarlahi (NNIPS)
 Approval Amount : \$919,985.06
 Funding Agency : George Washington University (Subcontract)
 NHRC Fees : \$27,599.55
 Approval Date : 2-May-18
- 300.** Title : The role of immune activation in major depression comorbid with alcohol use disorders: a prospective study in rehabilitation facilities, Kathmandu
- PI/Co PI Name : Ms. Susmita Pandey
 Institution : **University of Oslo**
 Approval Amount : \$65,000.00
 Funding Agency : Research Council of Norway
 NHRC Fees : \$1,950.00
 Approval Date : 2-May-18

- 301.** Title : Stress, Inflammation and gut Dysbiosis in Comorbid Alcoholism and Depression (SIDCAD)
 PI/Co PI Name : Ms. Gabriella Renee Rodriguez/Dr. Sudan Prasad Neupane
 Institution : Institute of Health and Society, University of Oslo/Innlandet Hospital Trust
 Approval Amount : \$8,050.00
 Funding Agency : Research Council of Norway
 NHRC Fees : \$200.00
 Approval Date : 2-May-18
- 302.** Title : Identifying incidence, trends and patterns of cancer cases in Nepal: National Population Based Cancer Registry
 PI/Co PI Name : Prof. Dr. Anjani Kumar Jha
 Institution : Nepal Health Research Council
 Approval Amount : Rs 13082400
 Funding Agency : NA
 NHRC Fees : Rs 392472
 Approval Date : 2-May-18
- 303.** Title : Assessing the Impact of the Expanded Global Gag Rule in Nepal
 PI/Co PI Name : Dr. Mahesh Chandra Puri
 Institution : Center for Research on Environment Health and Population Activities (CREHPA)
 Approval Amount : \$22,385
 Funding Agency : International Women’s Health Coalition
 NHRC Fees : \$671.55
 Approval Date : 2-May-18
- 304.** Title : Measuring the effect on newborn jaundice management by improving access to phototherapy devices in selected districts of Nepal
 PI/Co PI Name : Ms. Ketki Sheth/Mr.Surya Bhatta
 Institution : **Univ. of California, Merced/One Heart World-Wide**
 Approval Amount : **\$9,975**
 Funding Agency : NA
 NHRC Fees : \$200
 Approval Date : 2-May-18
- 305.** Title : Assessment of the Nutritional Status and Feeding Behaviors of Children, Adolescent and Pregnant and Lactating Mothers in Selected Flood Affected Districts
 PI/Co PI Name : Mr. Shailes Neupane
 Institution : **Valley Research Group**
 Approval Amount : **Rs 6048850**
 Funding Agency : UNICEF Nepal
 NHRC Fees : **Rs 181465.5**
 Approval Date : 2-May-18

- 306.** Title : The role of Diabetes on Tuberculosis risk manifestations, treatment outcomes and survival in central development region of Nepal
 PI/Co PI Name : Mr. Roshan Kumar Mahato
 Institution : **Faculty of Public Health, Khon Kaen University, Khon Kaen, Thailand**
 Approval Amount : **Rs 989700**
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 2-May-18
- 307.** Title : Quality of essential medicines in public health care facilities of Nepal
 PI/Co PI Name : Prof. Dr. Anjani Kumar Jha
 Institution : **Nepal Health Research Council**
 Approval Amount : **Rs 7655000**
 Funding Agency : NA
 NHRC Fees : **Rs 229650**
 Approval Date : 2-May-18
- 308.** Title : Role of Stray Dogs in Visceral Leishmaniasis Transmission in Slum Area of Dharan
 PI/Co PI Name : Mr. Dhiren Subba Limbu
 Institution : **Central Campus of Technology**
 Approval Amount : **Rs 85000**
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 2-May-18
- 309.** Title : Molecular characterization of lytic bacteriophage specific to multidrug resistant bacteria and pharmacokinetics of phage in biological model
 PI/Co PI Name : Mr. Guna Raj Dhungana
 Institution : Central Department of Biotechnology
 Approval Amount : Rs 495000
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 9-May-18
- 310.** Title : Influence of BISHES Integrated Interventions on Cardiovascular Risk Behaviors of School Adolescents in Nepal
 PI/Co PI Name : Dr. Rita Thapa
 Institution : Bhaskar Memorial Foundation
 Approval Amount : Rs 500000
 Funding Agency : Bhaskar Memorial Foundation
 NHRC Fees : Rs 10000
 Approval Date : 9-May-18
- 311.** Title : Exploring the socio-cultural factors underlying son preference and the practice of sex selective abortion resulting to disparities in sex ratio at birth in selected communities of Nepal

- PI/Co PI Name : Mr. Anand Kumar Tamang
 Institution : **Center for Research on Environment Health and Population Activities (CREHPA)**
 Approval Amount : **Rs 5720442.50**
 Funding Agency : UNFPA, Nepal
 NHRC Fees : **Rs 171613.275**
 Approval Date : 16-May-18
- 312.** Title : Feasibility and acceptability of mobile technologies to collect child behavior data in the Kathmandu valley
 PI/Co PI Name : Dr. Kamal Gautam
 Institution : Transcultural Psychosocial Organization
 Approval Amount : Rs 979541
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 16-May-18
- 313.** Title : Human trafficking in Nepal: intervention strategies and re-integration of trafficked women in Nepal
 PI/Co PI Name : Ms. Ranjila Joshi
 Institution : University of Southern Denmark
 Approval Amount : Rs 900000
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 16-May-18
- 314.** Title : Prevalence and behavioral factors of sickle cell disorder among adolescent of Tharu population, Belaury Municipality, Kanchapur, Nepal
 PI/Co PI Name : Mr. Chiranjivi Adhikari
 Institution : Pokhara University, Faculty of Health Science, School of health and allied science
 Approval Amount : Rs 890000
 Funding Agency : Belaury municipality Kanchapur
 NHRC Fees : **Rs 10000**
 Approval Date : 16-May-18
- 315.** Title : Evaluation of anti-hyperuricemic effect of vitamin E on pyrazinamide-induced gouty arthritis rat model
 PI/Co PI Name : Mr. Hari Prasad Sapkota
 Institution : **Shree Medical and Technical College**
 Approval Amount : **Rs 39100**
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 16-May-18
- 316.** Title : Impact of arsenic on gut microbiome of exposed individuals in a disadvantaged population in Nawalparasi, Nepal
 PI/Co PI Name : Mr. Samendra Prasad Sherchan

- Institution : **Tulane University**
 Approval Amount : **Self-Funded**
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 30-May-18
- 317.** Title : Motivating children toward healthier food choices: An experiment combining school and home gardens
 PI/Co PI Name : Ms. Rachana Manandhar Shrestha/Mr. Pepijn Schreinemachers
- Institution : **World Vegetable Center**
 Approval Amount : **\$50,000**
 Funding Agency : World Vegetable Center
 NHRC Fees : **\$1,500**
 Approval Date : 30-May-18
- 318.** Title : Process Evaluation of Nepal Perinatal Quality Improvement Project (NePriQIP)
 PI/Co PI Name : Dr. Ashish KC
 Institution : **UNICEF Nepal**
 Approval Amount : **Rs 990000**
 Funding Agency : Uppsala University
 NHRC Fees : Rs 10000
 Approval Date : 30-May-18
- 319.** Title : Women 4 women - Improving sexual and reproductive health of female sex workers in Lalitpur district of Nepal
 PI/Co PI Name : Ms. Reena Lama
 Institution : Friends Affected & Infected Together in Hand
 Approval Amount : Rs 6168940
 Funding Agency : Grand Challenge Canada
 NHRC Fees : Rs 185068.2
 Approval Date : 30-May-18
- 320.** Title : Monitoring child births in low-income countries using mobile phone metadata: a pilot study in Sarlahi district, Nepal
 PI/Co PI Name : Dr. Stephane HELLERINGER /Dr. Subarna Kumar KHATRY
 Institution : Johns Hopkins University/Nepal Nutrition Intervention Project Sarlahi (NNIPS)
 Approval Amount : \$20,863
 Funding Agency : Johns Hopkins University
 NHRC Fees : \$625.89
 Approval Date : 6-Jun-18
- 321.** Title : Assessment of the impact of water quality and hygiene interventions on health and nutritional status of targeted children in the project areas of Helvetas WARM-P project areas (Surkhet, Dailekh and Achham) in Nepal

- PI/Co PI Name : Ms. Regula Meierhofer/Dr. Akina Shrestha
 Institution : Eawag/Dhulikhel Hospital Kathmandu University Hospital
 Approval Amount : \$39,800
 Funding Agency : Eawag
 NHRC Fees : \$1,194.00
 Approval Date : 6-Jun-18
- 322.** Title : Symptom based screening of rheumatic heart disease in school-aged children and development of an effective tool for self-screening in the Dadhing district of Nepal
- PI/Co PI Name : Dr. Madhab Ray
 Institution : Tufts University Medical Center
 Approval Amount : Rs 1000000
 Funding Agency : NA
 NHRC Fees : Rs 20000
 Approval Date : 6-Jun-18
- 323.** Title : Long term outcome of Undifferentiated Arthritis: A Prospective Cohort Study
- PI/Co PI Name : Mr. Lov Raj Lohani
 Institution : National Center for Rheumatic Diseases
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 1000
 Approval Date : 6-Jun-18
- 324.** Title : Epidemiological Study of Scrub Typhus and other Rickettsioses among Patients with Acute Febrile Illnesses in Nepal Version 1.2 dated 16 November 2017
- PI/Co PI Name : Dr. Sanjaya Kumar Shrestha
 Institution : Walter Reed/ AFRIMS Research Unit Nepal (WARUN)
 Approval Amount : \$12,000
 Funding Agency : NA
 NHRC Fees : \$360.00
 Approval Date : 6-Jun-18
- 325.** Title : Developing a locally-appropriate sociocultural and economic support package for people with tuberculosis in selected districts of Nepal
- PI/Co PI Name : Mr. Suman Chandra Gurung
 Institution : Birat Nepal Medical Trust
 Approval Amount : Rs 6736700
 Funding Agency : Wellcome Trust
 NHRC Fees : Rs 202101
 Approval Date : 6-Jun-18
- 326.** Title : Developing and pilot testing community participatory methods for understanding Antibiotic Resistance in two municipalities of Kathmandu Valley

- PI/Co PI Name : Dr. Sushil Chandra Baral
 Institution : HERD International
 Approval Amount : Rs 3876200
 Funding Agency : Arts and Humanity Research Council through University of Leeds
- NHRC Fees : Rs 116286
 Approval Date : 6-Jun-18
- 327.** Title : Relationship among dietary nutrients intake, cardiometabolic risk factors and coronary artery disease in Nepalese: A hospital based case control study
- PI/Co PI Name : Mr. Til Bahadur Basnet
 Institution : Nanjing Medical University
 Approval Amount : Self-Funded
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 6-Jun-18
- 328.** Title : Exploring feasibility and acceptability of HIV Pre-Exposure Prophylaxis for female sex workers, men who have sex with men, male sex workers and transgender women in selected district of Nepal
- PI/Co PI Name : Dr. Basudev Pandey
 Institution : **National Center for AIDS and STD Control**
 Approval Amount : **Rs 634000**
 Funding Agency : NA
 NHRC Fees : Rs 10000
 Approval Date : 13-Jun-18
- 329.** Title : Haemophilus influenzae b carriage prevalence in healthy children attending Pediatric OPD of Patan hospital
- PI/Co PI Name : Prof. Andrew Pollard/Dr. Shrijana Shrestha
 Institution : **University of Oxford, Oxford Vaccine Group/School of Medicine Patan Academy of Health Sciences (PAHS)**
- Approval Amount : **\$8,690**
 Funding Agency : NA
 NHRC Fees : \$200.00
 Approval Date : 13-Jun-18
- 330.** Title : Assessment of the nutrition status of children: knowledge, attitudes and behaviours regarding childhood nutrition in selected rural municipality in Mugu and Sindhupalchowk from 2018-2021
- PI/Co PI Name : Dr. Jiban Kumar Karki
 Institution : **PHASE Nepal**
 Approval Amount : **Rs 910000**
 Funding Agency : PHASE Worldwide
 NHRC Fees : Rs 10000
 Approval Date : 13-Jun-18

- 331.** Title : Assessment of mental health and psychosocial problems and needs of Tibetan refugees in Bouddha, Kathmandu
 PI/Co PI Name : Mr. Nagendra Prasad Luitel
 Institution : **Transcultural Psychosocial Organization Nepal (TPO Nepal)**
 Approval Amount : **Rs 868279**
 Funding Agency : The Lutheran World Federation Nepal (LWF)
 NHRC Fees : **Rs 10000**
 Approval Date : 13-Jun-18
- 332.** Title : Finding genes that influence rare eye diseases such as congenital cataract and coloboma in the Jirel population of eastern Nepal
 PI/Co PI Name : Dr. Matthew Johnson/Dr. Suman Thapa
 Institution : **University of Texas Rio Grande Valley/Tilganga Institute of Ophthalmology**
 Approval Amount : **\$5,720**
 Funding Agency : NA
 NHRC Fees : **\$200**
 Approval Date : 27-Jun-18
- 333.** Title : Developing a feature-phone based female community health volunteer program for hypertension control in Kavre district of Nepal
 PI/Co PI Name : Dr. Lijing Yan/Dr. Abhas Shrestha
 Institution : **Duke Kunshan University/Dhulikhel Hospital**
 Approval Amount : **\$9,000**
 Funding Agency : NA
 NHRC Fees : **\$200**
 Approval Date : 27-Jun-18
- 334.** Title : Implementing a modified WHO Package of Essential Non-communicable disease interventions protocol (PEN PLUS) by non-physician healthcare workers in Achham and Dolakha: a combined acceptability/feasibility and type 2 hybrid-effectiveness implementation research study
 PI/Co PI Name : Dr. Duncan Maru/Dr. Santosh Kumar Dhungana
 Institution : **Nyaya Health Nepal - Possible**
 Approval Amount : **Rs 10000**
 Funding Agency : NA
 NHRC Fees : **Rs 20000**
 Approval Date : 27-Jun-18
- 335.** Title : Study on Prevalence and Influence of Measures of Professional Quality of Life to the Psychological Distresses of Medical Doctors in Nepal
 PI/Co PI Name : Mr. Yuba Raj Adhikari
 Institution : **University of Nicosia**
 Approval Amount : **Rs 177750**
 Funding Agency : NA
 NHRC Fees : **Rs 10000**
 Approval Date : 27-Jun-18

- 336.** Title : Developing Peer Support for Adolescent Friendly Sexual and Reproductive Health Services: A study in Nuwakot and Rasuwa districts of Nepal
 PI/Co PI Name : Dr. Jill Denise Allison/Dr. Laxmi Tamang
 Institution : Memorial University of Newfoundland/The University of Sydney
 Approval Amount : \$9,950
 Funding Agency : NA
 NHRC Fees : \$200
 Approval Date : 27-Jun-18
- 337.** Title : Prevalence and Risk Factors of Tuberculous Disease among Diabetic Mellitus Patients Attending Selected Hospitals in Nepal, 2018
 PI/Co PI Name : Dr. Ram Padarath Bichha
 Institution : SAARC TB and HIV/AIDS Centre
 Approval Amount : \$12,000
 Funding Agency : NA
 NHRC Fees : \$360
 Approval Date : 27-Jun-18
- 338.** Title : Cervical intraepithelial neoplasia (CIN), Cervical Cancer screening and Human Papilloma Viru (HPV) testing with Single visit Approach in 30-60 years women of Khumbu Pasanglahmu Rural Municipality of Solukhumbu district of Nepal
 PI/Co PI Name : Dr. Sarita Ghimire
 Institution : **Nepal Cancer Care Foundation**
 Approval Amount : **Rs 420000**
 Funding Agency : Pasang Lhamu Nicole Niquille (PLNN) Hospital
 NHRC Fees : Rs 10000
 Approval Date : 11-Jul-18
- 339.** Title : Tuberculosis in asian elephant: A one health perspective
 PI/Co PI Name : Mr. Rajesh Man Rajbhandari
 Institution : University of Porto
 Approval Amount : **Rs 921900**
 Funding Agency : NA
 NHRC Fees : **Rs 10000**
 Approval Date : 11-Jul-18
- 340.** Title : A Study of cardiopulmonary disease associated factors among rural Nepalese women residing in Nuwakot district, Likhu Rural Municipality, Ward No 5 and 6.
 PI/Co PI Name : Dr. Yun-Chul Hong/Dr. Seshananda Sanjel
 Institution : **Seoul National University College of Medicine/Dhulikhel Hospital Kathmandu University Hospital**
 Approval Amount : **\$11,540**
 Funding Agency : NA
 NHRC Fees : **\$346**
 Approval Date : 11-Jul-18

- 341.** Title : Mean sodium intake among apparently healthy individuals in Kaski, Nepal
 PI/Co PI Name : Dr. Dinesh Neupane
 Institution : **Nepal Development Society**
 Approval Amount : **Rs 1000000**
 Funding Agency : NA
 NHRC Fees : **Rs 10000**
 Approval Date : 11-Jul-18
- 342.** Title : Exploring Perspectives of People with Disability in Kathmandu about Employment
 PI/Co PI Name : Ms. Samridhi Rana Thapa
 Institution : Karuna Foundation Nepal
 Approval Amount : Rs 74478
 Funding Agency : NA
 NHRC Fees : Rs 5000
 Approval Date : 11-Jul-18
- 343.** Title : Formative Research on understanding the situation of Family planning services and identifying its determinants among poor, hard-to-reach, and marginalised populations in 9 districts of Nepal
 PI/Co PI Name : Dr. Suresh Mehata
 Institution : Ipas Nepal
 Approval Amount : Rs 2590400
 Funding Agency : DFiD Nepal
 NHRC Fees : Rs 77712
 Approval Date : 11-Jul-18

ANNEX VIII NHRC Representation in National and International Programs

1. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Chitwan for “Community Based Intervention for Prevention and Control of Non Communicable Disease Risk Factors (CIPCON)” from 16-18 July 2017.
2. Mr. Ashok Pandey, Research Officer, visited Morang for “Outbreak investigation” from 31 July 2017 to 06 August 2017.
3. Mr. Arun Kumar Sah, Research Officer, visited Morang for “Outbreak investigation” from 31 July 2017 to 06 August 2017.
4. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Janakpur for “Community Based Intervention for Prevention and Control of Non Communicable Disease Risk Factors (CIPCON)” from 01-02 July 2017.
5. Mr. Chandra Bhusan Yadav, Library and Information Officer, visited Gothgaun, Morang “To Conduct HINARI Class” from 07-09 July 2017.
6. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Janakpur for “Community Based Intervention for Prevention and Control of Non Communicable Disease Risk Factors (CIPCON)” from 09-12 August 2017 (25-28 Shrawan 2074).
7. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Cape Town, South Africa “To

attend the Global Evidence Summit 2017” from 11-17 September 2017.

8. Mr. Subodh Kumar Karna, Deputy Chief Account Controller, visited Cape Town, South Africa “To attend the Global Evidence Summit 2017” from 11-17 September 2017.
9. Dr. Krishna Kumar Arayal, Research officer, visited Cape Town, South Africa “To attend the Global Evidence Summit 2017” from 11-17 September 2017.
10. Mr. Bijay Kumar Jha, Training Officer, visited Cape Town, South Africa “To attend the Global Evidence Summit 2017 from 11-17 September 2017.
11. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Janakpur for “Community Based Intervention for Prevention and Control of Non-Communicable Disease Risk Factors (CIPCON)” from 17-19 September 2017.
12. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Bharatpur, Chitwan “To participate in the Board of Director’s Meeting of BPKMCH” from 23-27 September 2017.
13. Mr. Nirbhay Kumar Sharma, Deputy Chief Administrative Officer, Pokhara for monitoring of “Testing the recording of priority facility-based, maternal and newborn coverage indicators for use in health management information system” visited 24-26 September 2017.
14. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Bharatpur, Chitwan for “Community Based Intervention for Prevention and Control of Non-Communicable Disease Risk Factors (CIPCON)” from 08-09 September 2017.
15. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Janakpur for “Community Based Intervention for Prevention and Control of Non-Communicable Disease Risk Factors (CIPCON)” from 30 September to 02 October 2017 (14-16 Ashoj 2074).
16. Mr. Bijay Kumar Jha, Training Officer, visited Pokhara for “Testing the recording of priority facility-based, maternal and newborn coverage indicators for use in health management information system” from 12-14 October 2017.
17. Dr. Meghnath Dhimal, Senior Research Officer/Chief, Research Section, visited Berlin, Germany “To Attend world Health Summit 2017” from 13-19 October 2017.
18. Mr. Binaya Chalise, Research Officer, visited New Delhi, India “To Participate Adolescence Health Congress” from 25-30 October 2017.
19. Mr. Achyut Raj Pandey, Research Officer, visited Hyderabad, India “To attend Snake Bite Workshop” from 29 November 05 December 2017.
20. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Janakpur for “Community Based Intervention for Prevention and Control of Non-Communicable Disease Risk Factors (CIPCON)” from 10-11 October 2017.
21. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Janakpur for “Community Based Intervention for Prevention and Control of Non-Communicable Disease Risk Factors (CIPCON)” from 19-22 October 2017.
22. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Bharatpur, Chitwan for “To participate in the Board of Directors’ meeting of BPKMCH” from 30-31 October 2017.
23. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Bharatpur, Chitwan for “Community Based Intervention for Prevention and Control of Non-Communicable

Disease Risk Factors (CIPCON)”from 01-02 November 2017.

24. Dr. Meghnath Dhimal, Senior Research Officer/Chief, Research Section, visited Nuwakot, Rasuwa, Dhading and Chitwan ”To conduct vector biology of Aedes albopictus and eco bio-social drivers for effective vector prevention and control ecoregion” from 07-27 November, 2017.
25. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Rasuwa for Monitoring of “vector biology of Aedes albopictus and eco bio-social drivers for effective vector prevention and control ecoregion” from 10-12 November, 2017.
26. Mr. Bijay Kumar Jha, Training Officer, visited Rasuwa for Monitoring of “vector biology of Aedes albopictus and eco bio-social drivers for effective vector prevention and control ecoregion” from 10-12 November, 2017.
27. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Janakpur for “Community Based Intervention for Prevention and Control of Non-Communicable Disease Risk Factors (CIPCON)” from 12-13 November 2017.
28. Dr. Rajendra Kumar B.C., Research Advisor, visited Banke and Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 16-19 October 2017.
29. Mr. Pramod Chaudhary, Expert, visited Bake and Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 16-19 October 2017.
30. Mr. Umesh Prasad Gupta, Expert, visited Bake and Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 16-19 October 2017.
31. Prof. Dr. Anjani kumar Jha, Executive Chairperson, visited Ilam for “Community Based Intervention for Prevention and Control of Non-Communicable Disease Risk Factors (CIPCON)” from 06-09 December 2017.
32. Mr. Subodh Kumar Karna, Deputy Chief Account Controller, visited Ilam for “Community Based Intervention for Prevention and Control of Non-Communicable Disease Risk Factors (CIPCON)” from 06-09 December 2017.
33. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Chitwan, Bharatpur ”To participate in the Board of Directors’ meeting of BPKMCH” from 30-31 November 2017.
34. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Dhanusa, Mahottari, Sarlahi and Morang for “Monitoring of IRC and “Prevalence of Selected Chronic Disease in Nepal” from 02-06 December 2017.
35. Mr. Bijay Kumar Jha, Training Officer, visited Dhanusa, Mahottari, Sarlahi and Morang for “Monitoring of IRC and “Prevalence of Selected Chronic Disease in Nepal” from 02-06 December 2017.
36. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Switzerland, Geneva “To participate in the Technical Meeting on the Implementation of the Global Action Plan on the Public Health Response to Dementia 2017-2025, 11-12 December 2017, WHO, Geneva, Switzerland” from 09-14 December 2017.
37. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Surkhet and Nepalgunj “To conduct Training Workshop on scientific Writing in Surkhet and monitoring of IRC in Nepalgunj” from 17-24 December 2017.

38. Dr. Meghnath Dhimal, Senior Research Officer/Chief, Research Section, visited Surkhet and Nepalgunj “To conduct Training Workshop on scientific Writing in Surkhet and monitoring of IRC in Nepalgunj” from 17-24 December 2018.
39. Mr. Bijay Kumar Jha, Training Officer, visited Surkhet and Nepalgunj “To conduct Training Workshop on scientific Writing in Surkhet and monitoring of IRC in Nepalgunj” from 17-21 December 2018.
40. Mr. Achyut Raj Pandey, Research Officer, visited Surkhet and Nepalgunj “To conduct Training Workshop on scientific Writing in Surkhet and monitoring of IRC in Nepalgunj” from 17-21 December 2018.
41. Mr. Bihungum Bista, Research Officer, visited Surkhet and Nepalgunj “To conduct Training Workshop on scientific Writing in Surkhet and monitoring of IRC in Nepalgunj” from 17-21 December 2018.
42. Prof. Dr. Sabina Shrestha, Ethical Review Board Member, visited Biratnagar for “IRC Monitoring” on 04 December 2017.
43. Mrs. Namita Ghimire, Research Officer, visited Biratnagar for “IRC Monitoring” on 04 December 2017.
44. Dr. Meghnath Dhimal, Senior Research Officer/Chief, Research Section, visited Surkhet and Nepalgunj “To conduct training in Surkhet and IRC monitoring in Nepalgunj” from 25-26 December 2017.
45. Mr. Bijay Kumar Jha, Training Officer, visited Surkhet and Nepalgunj “To conduct training in Surkhet and IRC monitoring in Nepalgunj” from 25-26 December 2017.
46. Dr. Meghnath Dhimal, Senior Research Officer/Chief, Research Section, visited Biratnagar “To present in Regional Conference on Climate Change and WASH, “Impact of Climate Change on Health” from 28-31 December 2017.
47. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Janakpur for “Community Based Intervention for Prevention and Control of Non-Communicable Disease Risk Factors (CIPCON)” from 30 December 2017 to 01 January 2018.
48. Dr. Meghnath Dhimal, Senior Research Officer/Chief, Research Section, visited Frankfurt am, Main Germany to attend a progress review meeting of collaborative Research project entitled “vector biology of Aedes albopictus and eco biosocial drivers for effective vector prevention & control in cooler ecoregions, AECO project” from 20 January to 02 February 2018.
49. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Bharatpur, Chitwan to conduct “Training Workshop on Health System Research Methodology” from 23-27 January 2018.
50. Mr. Bihugam Bista, Research Officer, visited Bharatpur, Chitwan to conduct “Training Workshop on Health System Research Methodology” from 23-27 January 2018.
51. Mr. Bijay Kumar Jha, Training officer, visited Bharatpur, Chitwan to conduct “Training Workshop on Health System Research Methodology” from 28 December 23-27 January 2018.
52. Mr. Achyut Raj Pandey, Research Officer, visited Bharatpur Chitwan to conduct “Training Workshop on Health System Research Methodology” from 28 December 23-27 January 2018.

53. Ms. Jyoti Kumari Jha, Research Officer, visited Dhanusha and Mahottari for “Supervision of Research Centers” from 01-10 February 2018.
54. Mr. Arun Kumar Sah, Research Officer, visited Saptari, Siraha, Dhanusha, Bara and Parsa for “Supervision of Research Centers” from 04-15 February 2018.
55. Mr. Namra Kumar Mahato, Research Officer, visited Arghakhachi, Kapilbastu, Syangja, Parbat and Kaski for Supervision and Monitoring of “Prevalence of Selected Chronic Diseases in Nepal” from 31 January to 10 February 2018.
56. Mr. Namuna Shrestha, Research Officer, visited Arghakhachi, Kapilbastu, Tanahu, Parasi, Nabalpur and Kaski for Supervision and Monitoring of “Prevalence of Selected Chronic Diseases in Nepal” from 31 January to 10 February 2018.
57. Mr. Anil Poudyal, Research Officer, visited Arghakhachi, Kapilbastu, Syangja, Parbat and Kaski for Supervision and Monitoring of “Prevalence of Selected Chronic Diseases in Nepal” from 31 January to 10 February 2018.
58. Mr. Rabindra Shrestha, Assistant Research Officer, visited Arghachhi, Kapilbastu, Tanahu, Nabalpur (Parasi), and Kaski for Supervision and Monitoring of “Prevalence of Selected Chronic Diseases in Nepal” from 31 January to 10 February 2018.
59. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Sarlahi, Dhanusa and Mohattari for “Supervision of Research Centers” from 02-11 February 2018.
60. Mrs. Srishtee Priyadarsini, Research Officer, visited Bardiya for Lab and Office setup of “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 05-09 February 2018.
61. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Janakpur for “Community Based Intervention for Prevention and Control of Non-Communicable Disease Risks (CIPCON)” from 15-17 February 2018.
62. Dr. Rajendra Kumar B.C., Research Advisor, visited Kohalpur, Nepalgunj, Banketo to conduct “Training Workshop on Health System Research Methodology” from 18-21 February 2018.
63. Mr. Bijay Kumar Jha, Training Officer, visited Kohalpur, Nepalgunj, Banke to conduct “Training Workshop on Health System Research Methodology” from 18-22 February 2018.
64. Mr. Achyut Raj Pandey, Research Officer, visited Kohalpur, Nepalgunj, Banke to conduct “Training Workshop on Health System Research Methodology” from 18-22 February 2018.
65. Mr. Bihungum Bista, Research Officer, visited Kohalpur, Nepalgunj, Banke to conduct “Training Workshop on Health System Research Methodology” from 18-22 February 2018.
66. Dr. Sandhaya Chapagain, Executive Board Member, visited Dharanto to participate in “Workshop on Using Cochrane Systematic Review for Evidence Based Decision Making” from 19-25 February 2018.
67. Mr. Binaya Chalise, Research Officer, visited Dharan to participate in “Workshop on Using Cochrane Systematic Review for Evidence Based Decision Making” from 19-25 February 2018.

68. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Kohalpur, Nepaljung, Bake for Certificate Distribution in “Training Workshop on Health System Research Methodology” from 21-22 February 2018.
69. Mr. Bihungum Bista, Research Officer, visited Biratnagar to conduct “NHRC Training” from 06-09 March 2018.
70. Mr. Achyut Raj Pandey, Research Officer, visited Biratnagar to conduct “NHRC Training” from 06-09 March 2018.
71. Mr. Bijay Kumar Jha, Training Officer, visited Biratnagar to conduct “NHRC Training” from 06-09 March 2018.
72. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Biratnagar to conduct “Training Workshop on Health System Research Methodology” from 08-09 March 2018.
73. Dr. Rajendra Kumar B.C., Research Advisor, visited Biratnagar to conduct “NHRC Training” from 06-09 March 2018.
74. Prof. Dr. Jeevan Bahadur Sherchand, Coordinator (HRPC), visited Chitwan for “IRC Monitoring” on 15 March 2018.
75. Mrs. Namita Ghimire, Research Officer, visited Chitwan “IRC monitoring” 15 March 2018 (2074-12-01).
76. Ms. Pratima Gautam, Field Research Officer, visited Nuwakot for “A Formative Evaluation of an Electronic Medical Record System in Trishuli Hospital, Nuwakot” from 13-24 March 2018.
77. Ms. Elisha Timsina, Assistant Research Officer, visited Nuwakot for “A Formative Evaluation of an Electronic Medical Record System in Trishuli Hospital, Nuwakot” from 13-24 March 2018.
78. Mr. Achyut Raj Pandey, Research Officer, visited Nuwakot for “A Formative Evaluation of an Electronic Medical Record System in Trishuli Hospital, Nuwakot” from 13-24 March 2018.
79. Mrs. Jyoti Jha, Researcher, visited Nuwakot for “A Formative Evaluation of an Electronic Medical Record System in Trishuli Hospital, Nuwakot” from 15-17 March 2018.
80. Ms. Namita Ghimire, Research Officer, visited Chitwan for “IRC Visit” from 19-20 March 2018.
81. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Chitwan for “IRC Visit” from 18-20 March 2018.
82. Dr. Anju Vaidhya, Research Officer, visited Chitwan for “IRC Visit” on 19-20 March 2018.
83. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Bardia for “Population Based screening of sickle cell disorder in Tharu community of Bardia district” from 21-23 March 2018.
84. Dr. Sandhya Chapagain Acharya, Executive Board Member, visited Bardia for “Population Based screening of sickle cell disorder in Tharu community of Bardia district” from 21-23 March 2018.
85. Mr. Subodh Kumar Karna, Deputy Chief Account Controller, visited Bardia for “Population

Based screening of sickle cell disorder in Tharu community of Bardiya district” from 21-23 March 2018.

86. Dr Neelam Thakur, Member, Sickle Cell Anemia, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 23-24 March 2018.
87. Dr. Rajendra Kumar B.C., Research Advisor, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 22-25 March 2018.
88. Ms. Srishtee Priyadarsini, Research Officer, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 21 March to 05 April 2018.
89. Dr. Runa Jha, Member, Sickle Cell Anemia, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 23-24 March 2018.
90. Dr. Rajan Pandey, Expert, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” on 23 March 2018 (2074-12-09).
91. Mr. Umesh Prasad Gupta, Expert, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 22-25 March 2018.
92. Ms. Namita Ghimire, Research Officer, visited Biratnagar for “Birat Medical College IRC Visit” on 25 March 2018.
93. Mr. Anil Kumar Sah, Research Officer, visited Biratnagar for “Birat Medical College IRC Visit” on 25 March 2018.
94. Mrs. Jyoti Kumari Jha, Research Officer, visited Bhairahawa for “Ran Ambika Sah and Debdaha Eye Hospital IRC Visit” on 27 March 2018.
95. Mr. Anil Kumar Sah, Research Officer, visited Bhairahawa for “Ran Ambika Sah and Debdaha Eye Hospital IRC Visit” on 27 March 2018.
96. Ms. Namita Ghimire, Research Officer, visited Bhairahawa for “Ran Ambika Sah and Debdaha Eye Hospital IRC Visit” on 27 March 2018.
97. Dr. Meghnath Dhimal, Senior Research Officer/Chief, Research Section, visited Biratnagar for Monitoring of “Assessing Health Risks of Heat Waves in Nepal” from 24-25 March 2018.
98. Dr. Shyam Kumar B.K., Executive Board Member, visited Bardiya “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” on 12 March 2018.
99. Mr. Anil Kumar Sah, Research Officer, visited Chitwan Monitoring of “Assessing Health Risks of Heat Waves in Nepal” from 30-31 March 2018.
100. Ms. Punam Gnawali, Assistant Program Officer, visited Chitwan Monitoring of “Assessing Health Risks of Heat Waves in Nepal” from 30-31 March 2018.
101. Dr. Anju Vaidhya, Research Officer, visited Chitwan Monitoring of “Assessing Health Risks of Heat Waves in Nepal” on 30 March 2018.
102. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 02-05 April 2018.
103. Mr. Subodh Kumar Karna, Deputy Chief Account Controller visited Bardiya for “Population

Based screening of sickle cell disorder in Tharu community of Bardiya district” from 05 April 2018.

- 104.** Ms. Uma Kafle, Assistant Research Officer, visited Jajarkot, Baka and Dolpa for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 05 April 2018.
- 105.** Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Janakpur “Community Based Intervention for NCD Risk Factors” from 06-08 April 2018 (23-25 Chaitra 2074).
- 106.** Ms. Pratima Gautam, Field Research Officer, visited Bangladesh for “Enhancing Capacity on Evidence Based Programming on Health” from 16 April 2018 to 01 November 2019.
- 107.** Ms. Ranjeeta Subedi, Research Officer, visited Pokhara for “Population Based Cancer Registry” from 15-18 April 2018.
- 108.** Ms. Nitisha Gautam, Assistant Research Officer, visited Baka, Bardiya, Pyuthan, Dang, Kailali, Baitadi and Dadeldhura for supervision of “Prevalence of Selected Chronic Diseases in Nepal” from 15 April to 03 May 2018.
- 109.** Ms. Namuna Shrestha, Research Officer, visited Baka, Bardiya, Pyuthan, Dang, Kailali, Baitadi and Dadeldhura for supervision of “Prevalence of Selected Chronic Diseases in Nepal” from 15 April to 03 May 2018.
- 110.** Mr. Namra Kumar Mahato, Research Officer, visited Baka, Surkhet, Salyan, Dang, Achham and Kanchanpur for supervision of “Prevalence of Selected Chronic Diseases in Nepal” from 15 April to 03 May 2018.
- 111.** Mr. Anil Poudyal, Research Officer, visited Baka, Surkhet, Salyan, Dang, Achham and Kanchanpur for supervision of “Prevalence of Selected Chronic Diseases in Nepal” from 15 April to 03 May 2018.
- 112.** Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 18-20 April 2018.
- 113.** Ms. Srishtee Priyadarsinee, Research Officer, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 18-20 April 2018.
- 114.** Ms. Ranjana Karn, Research Officer, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 18-20 April 2018.
- 115.** Ms. Uma Kafle, Assistant Research Officer, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 18-20 April 2018.
- 116.** Mr. Arun Kumar Sah, Research Officer, visited Kaski, Baglung, Tanahu, Lumjung, Syangja, Chitwan and Makwanpur for “Monitoring of Research Centers” from 18 April to 04 May 2018.
- 117.** Mr. Nirbhay Kumar Sharma, Deputy Chief Administrative Officer, visited Dang for “Monitoring of Research Centers” from 18-21 April 2018.
- 118.** Mr. Saraswati Prasad Bhattari, Store Officer, visited Jhapa for “Monitoring of Research Centers” from 19-23 April 2018.
- 119.** Mr. Ajay Kumar Lal Karna, Office Assistant, visited Morang and Sunsari for “Monitoring of

Research Centers” from 22-27 April 2018.

120. Ms. Ranjana Karn, Research Officer, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 19-27 April 2018.
121. Dr. Meghnath Dhimal, Senior Research Officer/Chief, Research Section, visited Morang for “Monitoring Research Centers” from 21-22 April 2018.
122. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Dhanusa and Mahottari for “Community Based Intervention for Prevention and Control of NCD (CIPCON)” from 22-24 April 2018.
123. Mr. Pradeep Belbase, Senior Training Assistant visited Nepalgunj, Rupandehi and Jajarkot for “Monitoring of Medical/Health Institutes/Agencies Designated as Research Center in Nepal” from 22-29 April 2018.
124. Mr. Nirbhay Kumar Sharma, Deputy Chief Administrative Officer, visited Pokhara “Work for Testing the recording of Priority Facility Based Maternal and Newborn Coverage Indicators for use in Health Management Information System” from 01-05 May 2018.
125. Dr. Meghnath Dhimal, Senior Research Officer/Chief, Research Section, visited Thailand “To attend the 8th International Conference of Young Scientists and General Meeting of the Found Academy” from 06-12 May 2018.
126. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Dhanusa and Mahottari for “Community Based Intervention for Prevention and Control of Non-Communicable Disease Risks (CIPCON)” from 09-11 May 2018.
127. Ms. Chanda Thakur, Assistant Research Officer, visited Saptari for “Population Based Cancer Registry” from 08-11 May 2018 (25-28 Baishakh 2075).
128. Ms. Ranjana Karn, Research Officer, visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 15-17 May 2018.
129. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Bardiya and Dhangadi for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 14-19 May 2018.
130. Ms. Uma Kafle, Assistant Research Officer, visited Bardiya, Nepalgunj for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district” from 14-20 May 2018.
131. Mr. Namra Kumar Mahato, Research Officer, visited Dharan, Biratnagar for “Prevalence of Selected of Chronic Diseases in Nepal” from 20-22 May 2018.
132. Ms. Sweta Labh, Assistant Research Officer, visited Dhanusa for “Mental Health Survey” from 20-23 May 2018.
133. Mr. Bijay Kumar Jha, Training Officer, visited Pokhara for “Work for testing the recording of priority facility based Maternal and newborn coverage indicators management information system” from 19-21 May 2018.
134. Ms. Chanda Thakur, Assistant Research Officer, visited Siraha and Saptari for “Coordination for PBCR” from 12-15 May 2018.
135. Ms. Chanda Thakur, Assistant Research Officer, visited Siraha and Saptari for “Coordination for PBCR” from 26-29 May 2018.

136. Ms. Kopila Khadka, Assistant Research Officer, visited Siraha and Saptari for "PBCR" from 26-29 May 2018.
137. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Chitwan, Siraha and Saptari for "Coordination for PBCR" from 25-29 May 2018.
138. Mr. Nirbhay Kumar Sharma, Deputy Chief Administrative Officer, visited Dhulikhel for "Patients Safety Workplan" from 28-29 May 2018.
139. Dr. Ishan Gautam, Entomologist, visited Chitwan "To Conduct Vector Biology of Aedes albopictus and eco-bio-social drivers for effective vector prevention and control in cooler ecoregion(AECO) related research Work" from 03 June to 02 July 2018.
140. Ms. Sunita Baral, Research Assistant, visited Chitwan "To Conduct Vector Biology of Aedes albopictus and eco-bio-social drivers for effective vector prevention and control in cooler ecoregion (AECO) related research Work" from 03 June to 02 July 2018.
141. Dr. Mandira Lamichhane, Sociologist, visited Chitwan "To Conduct Vector Biology of Aedes albopictus and eco-bio-social drivers for effective vector prevention and control in cooler ecoregion (AECO) related research Work" from 03-09 June 2018.
142. Mr. Keshab Prasad Upadhyaya, Research Assistant, visited Chitwan "To Conduct Vector Biology of Aedes albopictus and eco-bio-social drivers for effective vector prevention and control in cooler ecoregion (AECO) related research Work" from 03 June to 02 July 2018.
143. Ms. Susma Baniya, Research Assistant, visited Chitwan "To Conduct Vector Biology of Aedes albopictus and eco-bio-social drivers for effective vector prevention and control in cooler ecoregion (AECO) related research Work" from 03 June to 02 July 2018.
144. Ms. Sabita Oli, Research Assistant, visited Chitwan "To Conduct Vector Biology of Aedes albopictus and eco-bio-social drivers for effective vector prevention and control in cooler ecoregion (AECO) related research Work" from 03 June to 02 July 2018.
145. Ms. Santoshi Bhandari, Research Assistant, visited Chitwan "To Conduct Vector Biology of Aedes albopictus and eco-bio-social drivers for effective vector prevention and control in cooler ecoregion (AECO) related research Work" from 03 June to 02 July 2018.
146. Ms. Alisha Adhikari, Research Assistant, visited Chitwan "To Conduct Vector Biology of Aedes albopictus and eco-bio-social drivers for effective vector prevention and control in cooler ecoregion (AECO) related research Work" from 03 June to 02 July 2018.
147. Ms. Tamana Newpane, Assistant Research Officer, visited Chitwan "To Conduct Vector Biology of Aedes albopictus and eco-bio-social drivers for effective vector prevention and control in cooler ecoregion (AECO) related research Work" from 03 June to 02 July 2018.
148. Mr. Bijay Kumar Jha, Training Officer, visited Pokhara for "Monitoring of testing the recording of priority facility based maternal and newborn coverage indicators for use in health management information system" from 07-09 June 2018.
149. Mr. Bihungum Bista, Research officer, visited Pokhara to conduct "Training Workshop on Scientific writing" from 05-09 June 2018.
150. Mr. Aachyut Raj Pandey, Research Officer, visited Pokhara to conduct "Training Workshop on Scientific writing" from 05-09 June 2018.
151. Mr. Pradeep Belbase, Senior Training Assistant, visited Pokhara to conduct "Training Workshop on Scientific writing" from 05-09 June 2018.

152. Ms. Kopila Khadka, Assistant Research Officer, visited Rukum for “Population Based Cancer Registry” from 09-18 June 2018.
153. Ms. Uma Kafle, Assistant Research Officer, visited Bharatpur, Chitwan for “Population Based Cancer Registry” from 09-18 June 2018.
154. Ms. Chanda Thakur, Assistant Research Officer, visited Siraha and Sptari for “Population Based Cancer Registry” from 10-20 June 2018.
155. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Frankfurtam Main Germany and Terni Italy to participate in Consultation Meeting entitled “Vector biology of Aedesalbopictus and eco-bio-social drivers for effective vector prevention and controlin cooler ecoregions (AECO)” from 6- 16 June 2018.
156. Ms. Uma Kafle, Assistant Research Officer, visited Siraha and Saptari for “Population Based Cancer Registry” from 10-19 June 2018.
157. Ms. Neelam Dhakal, Program Officer,visited Biratnagar and Pathlaiya for “Quality of Essential Medicines in Public Health Care Facilities of Nepal” from 11-17 June 2018.
158. Ms. Alisha Timsina, Assistant Research Officer, visited Nuwakot ”To Conduct research work entitled “A Formative Evaluation of the Introduction of an Electronic Record System in Trishuli Hospital, Nuwakot”from 11-20 June 2018.
159. Ms. Srishtee Karki, Research Officer, visited Nuwakot “To Conduct research work entitled “A Formative Evaluation of the Introduction of an Electronic Record System in Trishuli Hospital, Nuwakot” from 11-20 June 2018.
160. Ms. Ranjana Karn, Research Officer,visited Bardiya for “Population Based screening of sickle cell disorder in Tharu community of Bardiya district”from 19-20 June 2018.
161. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Bharatpur, Chitwan for “Population Based Cancer Registry” from 18-20 June 2018.
162. Mr. Subodh Kumar Karna, Deputy Chief Account Controller, visited Dhanusa and Mahottari for “National Mental Health Survey, Nepal”from 21-25 June 2018.
163. Prof. Dr. Anjani Kumar Jha, Executive Chairperson, visited Janakpur for “Community Based Intervention for Prevention and Control of Non-Communicable Disease Risks (CIPCON)” from 22-23 June 2018.

ANNEX IX Executive Board Meetings

1. Nepal Health Research Council organized Excutive Board 176th Meeting on 15 Kartik 2074 in NHRC, Kathmandu.
2. Nepal Health Research Council organized Excutive Board 177th Meeting on 25 poush 2074 in NHRC, Kathmandu.
3. Nepal Health Research Council organized Excutive Board 178th Meeting on 23 Falgun 2074 in NHRC, Kathmandu.
4. Nepal Health Research Council organized Excutive Board 179th Meeting on 28 Baisakh 2075 in NHRC, Kathmandu.

ANNEX X: NHRC’s Ethical Review Board Meetings

- 1) Nepal Health Research Council organized Ethical Review Board (ERB) 217th Meeting on 04

Shrawan 2074 in NHRC, Kathmandu.

- 2) Nepal Health Research Council organized Ethical Review Board (ERB) 218th Meeting on 11 Shrawan 2074 in NHRC, Kathmandu.
- 3) Nepal Health Research Council organized Ethical Review Board (ERB) 219th Meeting on 25 Shrawan 2074 in NHRC, Kathmandu.
- 4) Nepal Health Research Council organized Ethical Review Board (ERB) 220th Meeting on 32 Shrawan 2074 in NHRC, Kathmandu.
- 5) Nepal Health Research Council organized Ethical Review Board (ERB) 221th Meeting on 07 Bhadra 2074 in NHRC, Kathmandu.
- 6) Nepal Health Research Council organized Ethical Review Board (ERB) 222th Meeting on 14 Bhadra 2074 in NHRC, Kathmandu.
- 7) Nepal Health Research Council organized Ethical Review Board (ERB) 223th Meeting on 28 Bhadra 2074 in NHRC, Kathmandu.
- 8) Nepal Health Research Council organized Ethical Review Board (ERB) 234th Meeting on 04 Ashoj 2074 in NHRC, Kathmandu.
- 9) Nepal Health Research Council organized Ethical Review Board (ERB) 225th Meeting on 25 Ashoj 2074 in NHRC, Kathmandu.
- 10) Nepal Health Research Council organized Ethical Review Board (ERB) 226th Meeting on 08 Kartik 2074 in NHRC, Kathmandu.
- 11) Nepal Health Research Council organized Ethical Review Board (ERB) 227th Meeting on 17 Kartik 2074 in NHRC, Kathmandu.
- 12) Nepal Health Research Council organized Ethical Review Board (ERB) 228th Meeting on 10 Mangsir 2074 in NHRC, Kathmandu.
- 13) Nepal Health Research Council organized Ethical Review Board (ERB) 229th Meeting on 20 Mangsir 2074 in NHRC, Kathmandu.
- 14) Nepal Health Research Council organized Ethical Review Board (ERB) 230th Meeting on 27 Mangsir 2074 in NHRC, Kathmandu.
- 15) Nepal Health Research Council organized Ethical Review Board (ERB) 231th Meeting on 05 Poush 2074 in NHRC, Kathmandu.
- 16) Nepal Health Research Council organized Ethical Review Board (ERB) 232th Meeting on 12 Poush 2074 in NHRC, Kathmandu.
- 17) Nepal Health Research Council organized Ethical Review Board (ERB) 233th Meeting on 19 Poush 2074 in NHRC, Kathmandu.
- 18) Nepal Health Research Council organized Ethical Review Board (ERB) 234th Meeting on 10 Magh 2074 in NHRC, Kathmandu.
- 19) Nepal Health Research Council organized Ethical Review Board (ERB) 235th Meeting on 17 Magh 2074 in NHRC, Kathmandu.
- 20) Nepal Health Research Council organized Ethical Review Board (ERB) 236th Meeting on 24 Magh 2074 in NHRC, Kathmandu.
- 21) Nepal Health Research Council organized Ethical Review Board (ERB) 237th Meeting on 02

Falgun 2074 in NHRC, Kathmandu.

- 22) Nepal Health Research Council organized Ethical Review Board (ERB) 238th Meeting on 09 Falgun 2074 in NHRC, Kathmandu.
- 23) Nepal Health Research Council organized Ethical Review Board (ERB) 239th Meeting on 20 Falgun 2074 in NHRC, Kathmandu.
- 24) Nepal Health Research Council organized Ethical Review Board (ERB) 240th Meeting on 23 Falgun 2074 in NHRC, Kathmandu.
- 25) Nepal Health Research Council organized Ethical Review Board (ERB) 241th Meeting on 30 Falgun 2074 in NHRC, Kathmandu.
- 26) Nepal Health Research Council organized Ethical Review Board (ERB) 242th Meeting on 07 Chaitra 2074 in NHRC, Kathmandu.
- 27) Nepal Health Research Council organized Ethical Review Board (ERB) 243th Meeting on 14 Chaitra 2074 in NHRC, Kathmandu.
- 28) Nepal Health Research Council organized Ethical Review Board (ERB) 244th Meeting on 21 Chaitra 2074 in NHRC, Kathmandu.
- 29) Nepal Health Research Council organized Ethical Review Board (ERB) 245th Meeting on 05 Baisakh 2075 in NHRC, Kathmandu.
- 30) Nepal Health Research Council organized Ethical Review Board (ERB) 246th Meeting on 19 Baisakh 2075 in NHRC, Kathmandu.
- 31) Nepal Health Research Council organized Ethical Review Board (ERB) 247th Meeting on 26 Baisakh 2075 in NHRC, Kathmandu.
- 32) Nepal Health Research Council organized Ethical Review Board (ERB) 248th Meeting on 02 Jestha 2075 in NHRC, Kathmandu.
- 33) Nepal Health Research Council organized Ethical Review Board (ERB) 249th Meeting on 16 Jestha 2075 in NHRC, Kathmandu.
- 34) Nepal Health Research Council organized Ethical Review Board (ERB) 250th Meeting on 23 Jestha 2075 in NHRC, Kathmandu.
- 35) Nepal Health Research Council organized Ethical Review Board (ERB) 251th Meeting on 30 Jestha 2075 in NHRC, Kathmandu.
- 36) Nepal Health Research Council organized Ethical Review Board (ERB) 252th Meeting on 13 Ashad 2074 in NHRC, Kathmandu.
- 37) Nepal Health Research Council organized Ethical Review Board (ERB) 253th Meeting on 20 Ashad 2074 in NHRC, Kathmandu.
- 38) Nepal Health Research Council organized Ethical Review Board (ERB) 254th Meeting on 27 Ashad 2074 in NHRC, Kathmandu.