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Zoonoses and Food Hygiene News, published four times a year, provides a medium for disseminating technical information on matters related to zoonoses and food hygiene generated in the world, particularly in Nepal. The editors welcome submissions on these topics with appropriate illustrations and references. The views and opinions expressed in the News are those of the authors.

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Year 1 Interim Technical Report on Reducing Vulnerability to the Threats of Japanese Encephalitis Transmission in High Risk Districts in Nepal

August 2011-August 2012

Year 1 overview

Summary of activities and deliverables for the project objectives

| Specific Objectives | | |
|--|--|---|
| <i>Develop a socio-ecologic description of determinants of JE risk</i> | <i>Build and support ecohealth collaborative and research capacity for JE prevention and control</i> | <i>Assess implications of findings for public health, animal health and community planning</i> |
| Activities | | |
| Pig farmer surveys completed (with one associated peer-reviewed publication) | Early, mid and senior career researchers recruited in Nepal and Canada | 2012 activities restricted to gathering data on the costs of clinical JE Other activities for year 2-3 |
| Household surveys completed | Junior career Canadian and Nepalese researchers partnered | |
| Early season mosquito sampling | Stakeholder and advisor groups formed | |

| | | |
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| completed | | |
| Pig sera collection (ongoing – to be completed in September 2012) | Survey of team members’ knowledge and attitudes in ecohealth research completed and will be followed up later in the project | |
| Expert opinion on relationship of JE determinants (analysis completed Aug-Sept 2012) | Team members completed training on diagnostic methodology | |
| Data for geographic study collected and analysis plan completed | GIS training workshop | |
| Human serum samples being collected for case-control study that started in July 2012. Analysis of 10 samples from last season completed. | Educational materials provided for professional education (PowerPoint and fact sheets) | |

Summary of Year 1 Activities

All year 1 activities have been addressed. The geographic study was scheduled to be completed by September 2011 to August 2012 but were delayed into year 2 due to issues of data acquisition. All research tools were developed on schedule. The household survey and pig farmer surveys were finished ahead of schedule.

| Activity | Specific Tasks | Status |
|-----------------------------|--|---|
| Project Governance | Stakeholder and Advisory Groups established | The stakeholders and steering committee meeting was established at the national and regional level. Inception workshop was held |
| | Roles and responsibilities for trainees and project workers | All tasks assigned to personnel |
| | Site visits to all regions to introduce the project to the stakeholders. | Completed |
| Research (geographic study) | Availability of data from different government and non-government organization | Completed |
| | Collection of historic JE case data from 75 districts of Nepal including different hospital of JE project area | Completed for project districts and nationally |
| | Data gaps identified and plan formulated to overcome the gaps | Completed on July 2012-Aug 2012 |
| | Analytical plan | Completed on September |

| | | |
|--|---|---|
| | completed | 2012 and post-data was collected and reviewed |
| | Demographic characteristics of study regions | Completed |
| Research (swine farm study) | Serum from pigs collected at the end of 2011 JE season | Completed |
| | Training of staff on ELISA in India | Completed between January 27 to February 05, 2012 |
| | Surveys developed and pre-tested | Completed in January 2012 |
| | Survey of farmer knowledge and practices | Completed for all study regions. Data from Kathmandu published. Data from other districts were analyzed in summer of 2012. Working on manuscript for next paper comparing four JE project areas |
| | 2012 JE swine serosurvey | Serum samples collected and tested |
| Research (household survey) | Surveys developed and pre-tested | Completed in January 2012 |
| | Household surveys for JE knowledge and practices | Completed in Spring 2012 |
| | Survey analysis | Planned to complete in June 2012; completed by Fall 2012 |
| | Supplemental survey of pig farm nearest neighbor JE knowledge and practices | Data completed and analyzed. |
| Research (case-control) | Survey forms developed and pre-tested | Completed |
| | Serum from human JE cases collected at the end of 2011 JE season | Completed (JE clinical cases ELISA was performed) |
| | Case ascertainment plan | Completed. Data collected in the 2012 JE season from hospitals and metropolitan health services was analyzed in winter 2012-13 |
| Research (ecohealth learning and perspectives) | Workshop of stakeholders and team to determine if/how JE is viewed as a system | Workshop completed by disseminating ecohealth learning and perspectives. Analysis completed in August 2012. |
| | Focus group within the NZFHRC JE team to establish baseline on ecohealth learning | The baseline survey on ecohealth approach was completed and the approach was targeted to the focus groups |
| Research (JE cost study) | Data sources identified and collection planned | Cost estimation of JE patients was analyzed and the required data was gathered on JE peak season from different hospitals |
| Knowledge sharing | Fact sheet on JE epidemiology for | Completed (English version) May 2012 |

| | | |
|--|---|--|
| | stakeholders | |
| | National television exposure about the project and JE | January 2012 |
| | Community meetings for PRA exercises and JE education | Completed in all study sites |
| | Pig farmer education | Completed (delivered after each farm survey) |
| | Dissemination in the scientific press | 1 publication, 1 conference presentation |
| | Use of the project outputs for teaching | Major teaching case study for undergraduate veterinarians at the University of Calgary |
| | Creation of web capacity for information sharing | Section on the web site (VetsforOneHealth.org) dedicated for the project |

Feasibility of One Health (OH) Initiative in Nepal for Surveillance of Emerging and Re-emerging Zoonotic Diseases of Public Health Importance (17th – 19th January, 2013)

This workshop entitled “Feasibility of One Health initiative in Nepal for Surveillance of Emerging and Re-emerging Zoonotic Diseases of Public Health Importance” was held at Summit Hotel, Kupondole, Lalitpur from 17th to 19th January, 2013 in collaboration of World Health Organization, Country Office for Nepal, Centre for Molecular Dynamics (CMDN), Epidemiology and Disease Control Division (EDCD) and National Zoonoses and Food Hygiene Research Centre (NZFHRC). Total 60 delegates including Mr. David Wolking from University of California, Davis and two delegates from India – Dr. Manish Kakkar and Dr. Syed Abbas participated in workshop. The activities of 3 days workshop are summarized here.

17th January – 2013, day first of workshop

Day 1 of workshop started at 8:30 am with registration. Ms. Meena Dahal was the master of ceremony and she started the program formally at 9:30 AM. Day 1 program was divided into two session viz. inauguration session and technical session.

Dr. PB Chand from Ministry of Health was the chairperson of inauguration program. Dr. BK Subedi from Department of Health Services, Dr. DD Joshi from NZFHRC, Dr. Lin Aung from WHO, Country Office for Nepal, Dr. GD Thakur from EDCD/DHS, Dr. SM Dixit and Mr. D Karmacharya from CMDN and Dr. NB Rajwar from DLS were the guests. Mr. D Karmacharya delivered welcome speech in the program. Dr. DD Joshi described the objectives and agenda of the workshop with brief description on one health. Then Dr. SM Dixit, Dr. Lin Aung, Dr. GD Thakur, Dr. NB Rajwar, Dr. BK Subedi delivered their short speech expressing best wishes for the program. Inauguration session ended at 11:10 AM with the closing remarks from the chairperson.

The technical session started at 11:20 after a short tea break. Dr. M Kakkar from Public Health Foundation of India chaired the session. Dr. S Dhakal and Mr. D Pant were the rapporteurs for the technical session. The first joint paper presented was by Dr. DD Joshi continued by Dr. IP Dhakal on “One Health Program formulation to control any emerging and re-emerging zoonotic diseases in Nepal.” They briefed about the one health concept and what initiatives are being taken in Nepal. Another paper presented after the lunch break by Dr. S Abbas from Public Health Foundation of India was on “Identifying research priorities for zoonoses prevention and control in

India (2019-2015)". After his presentation the chairperson Dr. M Kakkar concluded the session after discussion on the presented paper.

The next session commenced with two separate group discussions. Group A discussed on the various zoonotic diseases in Nepal and prioritized them. Group B discussed on the policy gaps in existing control of emerging and re-emerging zoonotic diseases. The first day of the workshop concluded with the presentations of group discussion.

18th January, 2013 - Second day of workshop

The second day program started with registration at 9:00 AM. Technical papers were presented by two resource persons Dr. M Kakkar and Mr. Wolking followed by papers of young researchers of different institutions and then the closing ceremony. Dr. S Abbas from Public Health Foundation, India was the Chairperson and Dr. RK Khatiwada, the DDG of DLS was the co-chair of the second day technical session. There were 13 paper presentations, each followed by a short discussion. The first paper was by Dr. M Kakkar on "Agenda setting for one health in India: experiences from RCZI initiative" and described the experiences gained in his country that can be useful for ours too. Mr. D Wolking from University of California presented then on "PREDICT Nepal project under emerging pandemic threat (EPT-USAID) an overview". He delivered his speech on the clear vision of PREDICT in Nepal and future research perspectives associated with it. There were research concept note presentations on epidemiological studies of leptospirosis by Dr. IP Dhakal, on screening of migratory birds for emerging zoonoses by Dr. S Dhakal, on tuberculosis at human animal interface by Mr. Y Shah, and on avian influenza surveillance and control strategies by Dr. A Ale.

Presentation session continued at 13:05 PM after one hour lunch break. Presentations were made on spatial clustering of leishmaniasis by Mr. DK Pant, on food borne zoonotic diseases and climate change impacts on food security by Mr. Y Shah and Ms. M Sharma, on elimination of dog transmitted rabies by Mr. S Chaulagain, on seroprevalence of brucellosis by Mr. YR Pandey, on tuberculosis in elephants and mahouts by Dr. A Pandit, and on Salmonella isolation, identification and antibiogram by Dr. T Khanal. The participants from various sectors had provided constructive criticisms to all presentations and how those research projects can be made better and beneficial.

The closing ceremony started at 15:20 PM with the chairmanship of Dr. GD Thakur, Director, EDCD. Mr. D. Wolking, USAID gave his short closing remarks and wished the best for future endeavors. Dr. BP Parajuli from Animal Quarantine Head Office delivered the closing remarks highlighting the One Health (OH) concept in Nepal. Vote of thanks to all the international delegates, presenters and participants were given by Dr. IP Dhakal. Finally Dr. GD Thakur closed the workshop expressing his gratitude to all those who supported well for the program. He also informed that the 3rd day will include discussion only for young researchers, resource persons and the One Health Alliance for Nepal members.

19th January, 2013 – third day training of young research career fellows

The third day of the workshop was structured as a training day for young research career fellows. The training started with registration at 8:00 AM. Young researchers, resource persons and One Health Alliance for Nepal (OHAN) members were present on the training. Dr. IP Dhakal was the chairperson for this day's training. The training was mainly focused to establish the context for research priority setting for emerging and reemerging zoonotic diseases, its

prevention and control in Nepal, orient research team for conducting the prioritization exercise, finalize methods for priority setting and plan for developing a strategic research agenda. There were series of presentations by Dr. M Kakkar and Dr. S Abbas entitled "Identifying Research Priorities for Zoonoses Prevention and Control in India (2010–2015)" and Dr. DD Joshi was the moderator. All the participants were involved actively in the exercise about how to carry out the disease prioritization process. Different stakeholders and large reference group members were identified for conducting questionnaire surveys, how to manage data and how to analyze data. The criteria for weighting research options were also identified and. The training ended with the closing remarks of chair person Dr. IP Dhakal followed by lunch.

Overview of the workshop on "Role and Possibilities in Transmission of Wildlife Zoonotic Diseases in General and JE in Particular from Birds and Research Needs in Nepal"

Inauguration and registration

The workshop entitled "Roles and possibilities in transmission of wildlife zoonotic diseases in general and JE in particular from birds and research needs in Nepal" was organized by (NZFHRC) on 8th March, 2013 at Hotel Orchid, Tripureshwor, Kathmandu, Nepal. The program was organized in collaboration with Centre for Coastal Health (CCH), University of Calgary, Canada and with the financial aid of International Development Research Centre (IDRC), Ottawa, Canada.

The program began with registration and tea at 9:00 am. Ms. Meena Dahal, socio-economist and computer analyst of NZFHRC was the master of ceremony in this one day workshop. After registration and tea all the participants from different sectors introduced themselves during the introductory session. Dr. DD Joshi, Executive Chairperson of NZFHRC was the chairman for the inaugural session. Dr. DR Ratala, President of Nepal Veterinary Council was the chief guest. Dr. VK Jha, Director of Animal Health Directorate; Dr. BP Parajuli, Director of Animal Quarantine Head Office, Dr. NP Ghimire, Registrar of Nepal Veterinary Council, Dr. YP Pokhrel, Deputy Director of Epidemiology and Disease Control Division and Mr. S. Rimal, Under Secretary of the Environment Department were the other guests of the program.

Ms. Minu Sharma, program officer of NZFHRC welcomed the participants and expressed gratitude to all organizations for sending their representatives. Dr. DD Joshi, Executive Chairman of NZFHRC explained the objectives of the workshop. The objectives were:

- To bring wildlife researchers from different sectors at one platform and discuss about the ongoing research activities being carried out by them
- To discuss on the research needs mainly for Japanese encephalitis and other zoonotic diseases that can be transmitted by birds and wildlife in Nepal
- To develop a clear concept for writing proposal on screening of migratory and non-migratory birds against Japanese encephalitis and other disease surveillance
- To discuss on multiple agendas related to limitations and possibilities of research activities in wildlife and bird sector

The main focus of the workshop was to get information from experienced participants representing different wildlife related sectors in order to develop a project proposal to carry out research on probable role of migratory and other birds in zoonotic disease

transmission. Dr. DD Joshi briefed about the NZFHRC, its history and involvement in zoonoses research, and the overall goal of the workshop. Then, Mr. S Rimal, Under Secretary of Department of Environment expressed his remarks and expectations from the program. Dr. VK Jha, Director of Animal Health Directorate (AHD), then expressed his remarks and expectations about the workshop. After this, Dr. DR Ratala, President, Nepal Veterinary Council, expressed few words and expectations from the workshop. The inaugural session was ended with the concluding remarks by Dr. DD Joshi, the chairperson of inaugural session.

Technical paper presentation and closing

After the end of short inaugural session technical session was started at around 10:45 am. Dr. VK Jha was the Chair person of this technical session. Dr. A Ale and Mr. DK Pant from NZFHRC were the rapporteurs. In total four papers were presented in this session:

- Screening of migratory birds for zoonotic diseases transmission in general and JE in particular by Dr. S Dhakal, NZFHRC.
- One health initiatives in Nepal: brief overview from wildlife health sector by Dr. J Thapa, Central Zoo, National Trust for Nature Conservation
- Possibilities of zoonotic disease transmission from wildlife in general and JE in particular by Dr. P Manandhar, Central Veterinary Laboratory, Kathmandu
- Potential of zoonoses from wild animals and birds in Chitwan national park and its buffer zone by Dr. KP Gairhe, Chitwan National Park

Each paper presentation was followed by a short discussion. After the lunch break from 12:30 PM to 13:30 PM, there was a special discussion session on the paper presented by Dr. S Dhakal on screening of migratory birds against zoonotic diseases. The main purpose of the workshop was to make it final draft to carry out the research on wildlife and migratory birds in future which play a vital role for transmission of the zoonotic diseases. At the end of the discussion, a final agreement was made on how should the new expected project should be build up and what factors should be taken under consideration. Dr. S Dhakal read out the conclusion made through the discussion among the participants. Finally at the end of the workshop Dr. Anita Ale from NZFHRC delivered the vote of thanks to all the delegates. The workshop ended with the closing remarks by Dr. DD Joshi, Executive Chairman, NZFHRC.

Dermatological manifestation in HIV infected patients visiting to Sparsh ART clinic Nepal: A Eight years retrospective review

Mr. Yogendra Shah, Microbiologist, NZFHRC

ABSTRACT

**From: Zoonoses & Food Hygiene News, NZFHRC
P.O. Box 1885, Chagal, Kathmandu, Nepal.**

TO:

Dr/Mr/Ms

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Background: Dermatological manifestations (skin disease) are common clinical findings among HIV infected patients. No study was done before on this topic in Nepal.

Objective: The objective of this study was to estimate the status of dermatological manifestation in HIV-infected patients visiting the Sparsh ART Clinic.

Methods: The retrospective data of patients presenting with with any dermatological manifestations collected from 2005-2012 of HIV seropositive patients visiting to Sparsha ART clinic were used for this study. The descriptive statistics were calculated by using Microsoft excel 2007.

Results: Four hundred and six HIV seropositive dermatological patients were included in this study. The most common dermatological manifestation were fungal infection (64.78%) including oral thrush (54.47%), Candidiasis/tinea (0.49%), viral infection (21.68%) including herpes zoster (18.23%) and herpes simplex (2.96%), bacterial infection (13.54%). The age wise distribution of dermatological manifestation in HIV infected patients were found in productive age 25-35 (59.11%) and least found in the age 15-25 (9.35%).

Conclusion: This study showed the different types of dermatological manifestations seemed to be in HIV-infected patients, and they occur more frequently with progression of HIV and decline in immune functions. Therefore, early diagnosis and management of skin disorders can improve the quality of life of HIV-infected subjects.

Keywords: HIV, dermatological manifestation, ART, Sparsha, Nepal.

NEWS

KDMA Research Award Awarded for the year 2012:

KDMA research award for the year 2069 B.S. (2012) was awarded to Mr. Yogendra Shah for his research work titled "**Dermatological manifestation in HIV infected patients visiting to Sparsh ART clinic Nepal: A Eight years retrospective review**".

K.D.M.A. Research Award:

Please kindly submit your research work paper on allergy award for the year 2013 for the consideration by the end of March 2013 to KDMART office Chagal, G.P.O. Box 1885, Kathmandu, Nepal, Phone: 4270667, 4274928 and Fax 4272694. This award was established by Dr. D.D. Joshi in 2049 B.S. (1992) on the memory of his wife, the late Mrs. Kaushilya Devi Joshi. The award includes a grant of NCRs. 10,001 with certificate.