



**Cohort 2
2015-2017**

MediPIET Report Summary of work activities

**Pranvera Kačaniku-Gunga
Republic of Kosovo**



Training site: National Institute of Public Health of Kosovo, Republic of Kosovo, Prishtina

National Supervisors: Isme Humolli

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Pre-fellowship short biography

Pranvera Kačaniku-Gunga is a medical doctor, Epidemiologist since 2012. Prior to National Institute of Public Health of Kosovo (NIPHK) she gained an experience as a Monitoring & Evaluation Assistant in Global Fund funded project "Maintaining and scaling up Tuberculosis prevention and treatment activities in Kosovo". She works as an Epidemiologist at the Department of Epidemiology, within the unit for surveillance of communicable diseases. During this period, she participated or led numerous projects like infectious disease surveillance, outbreak investigations, prevention and control activities, immunization, preparedness against acute and emerging threats, etc. Nowadays her work mainly refers to the surveillance and control of infectious diseases especially zoonosis and she is a part of the team for Influenza sentinel surveillance within NIPHK.

Fellowship projects

Surveillance project

Evaluation of SARI Sentinel Surveillance System in Kosovo, 2014/2015 - 2016/2017

Background:

Severe Acute Respiratory Infection (SARI) inpatient surveillance is a component of Influenza Surveillance. SARI data are particularly useful for: Monitoring and assessing the impact of Influenza on high-risk populations and Severity of seasonal outbreaks, or future global pandemics. SARI Surveillance System in Kosovo is performed through: Epidemiological/clinical based Influenza Surveillance and Laboratory-Based Sentinel Surveillance System. SARI Sentinel Surveillance System in Kosovo was established in 2014, five sentinel sites in two main regions

Objectives:

- Assess the data quality and performance of SARI Sentinel Surveillance System
- Identify the gaps of surveillance system and help provide feedback and recommendations in order to improve sentinel surveillance

Methods: This is a descriptive study in accordance with CDC Guidelines for Evaluating Surveillance Systems. Case definition for SARI based on the ECDC/WHO, recommendations 2012 is: an acute respiratory illness with onset during the previous 7 days requiring overnight hospitalization that includes: Fever of $\geq 38^{\circ}\text{C}$, Cough, AND Shortness of breath.

Surveillance data were used for assessing quantitative attributes: Data quality, completeness and timeliness. Questionnaires were used for assessing qualitative attributes: Representativeness, simplicity, acceptability, flexibility and utility. Questionnaires were distributed to all health staff in five sentinel sites during May 2017. Laboratory confirmation with RT-PCR and Categorical variables using Excel 2010. Scoring scale: less than 60% = 1 (weak performance), 60-79% = 2 (moderate), 80-100% = 3 (good performance).

Results: From 2014/2015—2016/2017, we analysed data from 500 SARI cases during 2014-2017. Data quality and completeness with 23/24 variables, the proportion of completeness SARI forms is 78% with missing data for risk factors. All SARI cases had respiratory specimens collected within their first day of hospitalization. The laboratory results were available within 1-2 days. With five sentinel sites in two main regions of Kosovo we are covering 48.4% of the population including all age-groups. Seventy one per cent (71%) of the participants on the questionnaire answered that their perception is simple and it's easy to work with variables while 22% of the participants answered that system is complicated. We had made changes of SARI case definition, and introduced information system that integrates microbiology and epidemiology. External quality assurance program was performed from the WHO in selected samples with 100% accuracy

Conclusion: SARI sentinel surveillance system has capacities to meet its objectives but further investment is needed, it provides high data quality and timeliness but there is a need for training to improve reporting of risk factors, system should be expanded, include private sector.

Status: Completed

Outbreak Investigations:

Tularemia Outbreak in Kosovo, October 2014-May 2015

Background: Tularemia is a bacterial zoonotic disease caused by *Francisella tularensis* *F.tularensis* which is transmitted to humans by arthropod bites, direct contact with infected animals, infectious animal tissues or fluids, ingestion of contaminated water or food, inhalation of infective aerosols. Kosovo is an endemic zone for Tularemia. First outbreak in Kosovo was reported in 1999/2000 with 327 serologically confirmed cases of Tularemia and 2001/2002 with 170 confirmed cases.

Objectives:

- To describe the outbreak and
- To identify the potential risk factors linked with an infection source and modes of transmission during a recent outbreak
- To provide recommendations on control measures and actions for preventing future outbreaks

Methods: This is descriptive study, Case definition: clinically compatible with a positive laboratory test for *F. tularensis* on serological results and an agglutination titer greater than 1:160. Data were collected with face-to-face interviews using standardized questionnaire. Analyze the potential risk factors linked with an infection source and modes of transmission Attack Rate and Relative Risk (RR) by univariate analysis. χ^2 -Statistical Significance Testing.

Results: Four hundred and fifty nine Tularemia cases were registered in 21 out of 38 municipalities in Kosovo. No deaths occurred. Most of the cases were from the central and eastern part of Kosovo, 77.8% from rural area. The crude incidence rate was 24.4/100 000. Most of the cases were from the age group 0-14 (median age 30, range 1 to 82). By performing age adjustment the most affected age group is 35-44. Male 52. 5% and females 47. 4%. From the clinical data 438/459 or 95.4% has presented with lymphadenopathy, cervical 431 or 98.4% and inguinal lymphadenopathy 7 or 1.6%. Among cases 82. 6% were exposed to the well water (AR=14.8/100), to tap water 16. 8% (AR=6.8/100) and 0.7 % had contacts with rodents. With a RR=2.00 95%CI (1.6-2.5) $p<0.0001$, there is a significance between exposure to the well water and the disease.

Conclusion: The population which is exposed to the well water is at higher risk of Tularemia infection. Sanitary conditions and education on using well water of population in endemic areas is needed in order to control and prevent future outbreaks. The causality of the outbreak is challenging to interpret due to the limitation on veterinary and water expertise but further studies are needed to address the importance of integrated surveillance system.

Status: Completed

Research

Programmatic Mapping and Size Estimations of People Who Inject Drugs, Kosovo 2016

Background: Communities of people who inject drugs, men who have sex with men and female sex workers bear a disproportionate burden of the HIV epidemic in most countries. A total number of 100 HIV infections in Kosovo have been registered from the first reported case in 1986 until 2015 (100 HIV and AIDS cases: 46 HIV, 54 AIDS cases with 41 AIDS related deaths). The HIV epidemic in Kosovo remains, most likely, a small epidemic with the potential for growth, particularly among men who have sex with men and people who inject drugs.

Objectives:

- To conduct population size estimate and to map whether services currently provided are aligned with Key Populations' needs, with intention to create evidence for developing action plans for HIV prevention interventions tailored to key populations including People who Inject Drugs (PWID).

Methods: People who inject drugs were defined as men or women who are currently injecting drugs, regularly for non-therapeutic purposes. Those who self-inject medicines for medical purposes were excluded. The mapping methodology includes two sequential steps:

- Level 1 – Systematic information-gathering from key informants (KI) regarding the locations (sites) where key population members congregate and/or meet casual or paying sexual partners. These will include both geographic and virtual locations.
- Level 2 – Site validation and in-depth profiling of sites identified in Level 1.

Results: Our study estimated a total of 4,973 (range; 3,932 to 6,015) people who inject drugs (PWID) in Kosovo, spread over 847 geographical spots. A remaining 17.0% of PWID in Kosovo did not visit geographic spots. Estimated no. of PWID who do not come to spots is 845. Therefore, when accounting for the 845 PWID who remain hidden from geographical spots, the total estimate of PWID in Kosovo increased to 5,819 (4,777 to 6,860).

All of the PWID identified on geo-locations were males. There is some anecdotal information that a small proportion (< 5%) of all PWID in Kosovo are females, but these women were not captured in this study. One of the reason could be that most female injecting drug users have male PWID as partners or are part of the same network.

These PWID visit the geographical sites on behalf of the woman to buy drugs and thus the females in Kosovo remain more hidden and do not come to physical locations. These female injectors are highly likely a part of the hidden 17% of population who does not visit geo-spots at all. Additionally, no large age discrepancy was identified across PWID in Kosovo, yet the number of PWID over the age of 40 was slightly higher in smaller cities. In Kosovo, the distribution of PWID visiting geographic spots was found to vary by municipality. The findings illustrate that municipality of the capital city, Prishtinë, as well as the municipality of Ferizaj and Prizren still remain to be the locations with the highest prevalence of geo- and non-geographical spots and PWID. This indicates that the highest proportion of female injecting drug users would also be found in these areas. In Prishtinë, a total estimate of 1,217 PWID reside on geo-spots while another 207 remain hidden, making this municipality largest proportional distribution (24.5) of PWID in Kosovo (1,424 PWID). The municipality of

Skënderaj was found to be home to the smallest amount of PWID in the country (0.4% or 24 PWID).

This study identified five spot types where PWID in Kosovo congregate. They included, abandoned buildings, establishments, public transport stops or parks, streets, and other. Wide variations were seen among the types of geo-spots utilized by PWID across different municipalities in Kosovo. In the capital city of Prishtinë, for example, 44.7% of geo-spots were street spots, followed by abandoned buildings (22.3%). Another 27 establishments, 20 other and 15 public transport/park geographic spots were also found in Prishtinë. The average number of PWID per geographical spot in Kosovo was found to be 7. This spot size is indicative of the average number of PWID found on a spot on a typical day. The PWID spot size was found to vary dramatically across municipalities in Kosovo. Of importance, the number of PWID found at each geo-spot was highest in the municipality of Ferizaj. This municipality has the second largest proportional distribution of PWID in Kosovo (15.2%) and includes an estimated 885 PWID spread over 77 spots, resulting in an average spot size of 11.7 PWID. The municipalities with the smallest spot size of PWID was found to be Klinë and Rahovec with 2.9 and 3.3 PWID, respectively, estimated at each spot.

Major cities, such as Prishtina and Ferizaj, were found to be more open societies and less stigmatizing towards PWID and the visibility of PWID on geographically-based spots. Peja, Podujeva, Skenderaj and Gjakova were identified to be very stigmatizing towards PWID. Since PWID have to inject every day, regardless of the time of the week or month or year, we therefore found no peak days where PWID activity or presence on geographical spots increased. However, there were found to be peak times of the day for PWID spot presence in Kosovo. A predominate percentage of PWID visited geo-spots during the daytime, in the morning before noon and in the afternoon before 5:00PM. Only a small percentage, 21% of PWID, frequented spots after 9:00PM to midnight. The daytime peak time for PWID in Kosovo reflects PWID's early morning search for drugs and daytime injecting practices. Typically, PWID in Kosovo were found to operate during early morning hours, 5:00 – 11:00AM. Out of the 496 PWID spots investigated in this study, there were only 39 spots where drugs were sold. Spots were also profiled to identify the presence of overlapping risk i.e., number of spots in each municipality where PWID and sex worker KPs overlapped. Sex workers identified at these spots were either male or female sex workers. Many a times the sex workers at this overlapping risk sites also injected drugs. The overlap of risk was highest in Prishtinë and Gjiilan, each municipality was the location of 10 spots where both PWID and sex workers operated. Gjakovë was the third municipality with the highest overlapping risk of five spots.

Conclusion: The study has produced estimates of these populations within all the districts studied, based on primary data collected in the field, validated and triangulated against multiple, independent sources of information. People who inject drugs is a small proportion of an overall large population of drug users in Kosovo. Our analysis revealed that there exist 10 PWID per 1000 adult men and 5.1 per 1000 adult population. This study has provided valuable information about the operational typologies and dynamics of these populations and can be used by the program planners to develop appropriate HIV program implementation strategies for these population groups with a view to enhance their program coverage.

Although the HIV epidemic in Kosovo remains, most likely, a small epidemic, there is a fairly high potential for growth, particularly among people who inject drugs. As the followup of the programmatic mapping is (Macro & Microplanning). Together with the NGO-s we are in a pilot phase (6 months) for developing field and outreach plans through microplanning for individuals

involved with high risk activities(PWID) and track the progress of our success through effective and robust monitoring systems.

Status: Completed

International Assignments:

1st Hepatitis B&C Surveillance system Exchange of knowledge between countries

Location: Institute of Public Health, Albania

Period: 29.05 – 09.06. 2017

Background: Albania is a country still highly endemic for HBV infection (9%) compared with the other countries in the same region like Croatia (2%), Serbia (2.4%), Italy (2.6%), Greece (2%).

In Albania regular monitoring of viral hepatitis situation, through surveillance systems generating reliable epidemiological data about HBV and HCV infection, is essential to inform and evaluate strategies to reduce the burden of these diseases based on evidence-based public health decision making. In Albania there is no surveillance in place for chronic hepatitis.

Objective: to get acquainted with following:

- Hepatitis B&C surveillance system in Albania
- the collection, analyse, interpretation and dissemination of data
- improving questionnaire for Hepatitis B&C in Epi Info and analysing the data

Exchange experiences between countries will be a very good opportunity to compare and improve.

Results: HBV and HCV surveillance system in Albania is based on disease specific surveillance, syndromic surveillance and surveys. For HBV the main goal of identification of new cases is early treatment and counselling to prevent further spread whereas for HCV efforts are directed towards prevention since no vaccine is available. From all health-care providers it is required an immediate (within 24 hours) and mandatory reporting of all human Hepatitis B&C cases. The cases are confirmed by laboratory and for all the confirmed cases it is completed an individual form, which include demographic information as well as risk factors and transmission routes, in order to develop recommendations for future research, prevention and control. The prevention and control of Hepatitis B&C needs supportive action from various sectors, including private sector, in order to undertake the necessary actions to detect and treat patients.

Conclusion: Each case should be investigated for surveillance purposes, and include demographic information, risk factors and transmission route. In Albania the data are entered in Epi info and analysed in Excel while in Kosovo the data are entered and analyzed in Excel form. From next year both countries will be part of a new platform system Epi Hack (time to detect and time to respond) and it will be an opportunity to identify the gaps and improve

analyses of the data. In addition, it is highly recommended to include private sector in the reporting of cases with Hepatitis B&C.

Status: Completed

2nd. IHR process and procedures at Robert Koch Institute, Germany

Location: Robert Koch Institute, Berlin

Period: 06.11 – 11.11. 2017

Background: Robert Koch Institute (RKI) is the government's central scientific institution in the field of biomedicine. It is one of the most important bodies for the safeguarding of public health in Germany. As the WHO Collaborating Centre for Emerging Infections and Biological Threats, the Robert Koch Institute (RKI) in Germany seeks to assist with IHR implementation via exchange with other countries and trainings, in co-operation with the World Health Organization (WHO).

Objective The aim of the International Assignment in RKI is to:

- Gain experience to strengthen the IHR (2005) core capacities of interested partner countries (Kosovo) especially regarding
- Strengthen infectious disease surveillance, alert and response systems in Kosovo.

Results: In RKI I was introduced to the IHR (2005), core capacities via e-learning and exercises. Assess the events occurring within territory by using the decision instrument and notifying WHO of all events which may constitute a Public Health Emergency of International Concern based on the criteria's. I got more information about the toolkit Multilateral IHR NFP Strengthening Workshop Toolkit (PAHO toolkit), Response to Emerging infectious disease: Assessment and development of core capacities and Tools (REACT) and Emergency operation Center in RKI. I was introduced to tele-conference (EpiLag) which is conducted weekly since 2009 and one of the main tools of Epidemic Intelligence additional to the indicator-based surveillance. Interpretation of Manual Rapid Risk assessment of Acute Public Health Events (WHO). Get acquainted with the surveillance unit which is primarily responsible for the implementation of the notification system within the framework of the Protection against Infection Act (IfSG). Database of cases of notifiable diseases together with the exercises on SurvStat@RKI 2.0 as an application that allows retrieval of aggregated data from a limited version of the German notification system database. Visit in the surveillance unit in LaGeSo (Berlin federal state) together with Survnet (surveillance system within Berlin) and the introduction of their daily work, preparing the weekly bulletin, challenges and approaches.

Conclusion: Further cooperation between NIPHK and RKI is ongoing through project: Global Health Program. From the experiences gained in RKI, I will be a part of the group as a technical expert within NIPHK and supported by RKI on preparing the Operational guideline for Outbreak investigation and response including part of the risk assessment and risk

communication as core functions of the IHR (2005), further engagement on preparing case definitions for all notifiable diseases in Kosovo and a part of the group for implementing in the nearest future the EpiLAG-teleconference in Kosovo.

Status: Completed

Scientific communication

Two presentations:

- 2nd MediPIET Annual Scientific Conference, Marrakech, Republic of Morocco, 6-8 December 2016 - "Tularemia Outbreak in Kosovo, October 2014-May 2015" (Oral presentation)
- 3rd MediPIET Annual Scientific Conference, Brussels, Belgium, 27 November 2017, - "Evaluation of SARI Sentinel Surveillance System in Kosovo, 2014/2015 -2016/2017" (Oral presentation)

Teaching experience

- Part of Team of Experts from NIPH on Routine periodical training of medical staff in primary health care regarding The Surveillance System in Kosovo and their commitment to report Infectious Diseases
- Lectures for nurses and doctors in resident, NIPHK- Epidemiology department.

Topics: "Surveillance of Tularaemia in Kosovo" and

"Influenza Surveillance in Kosovo"

Additional activities

- Member of Joint Commission on revised Action plan for Influenza Pandemics in Kosovo, 2017
- Technical expert on preparing the Operational guideline for Outbreak investigation and response, November 2017
- Part of the team members from NIPHK in our supervisory visits in Regional Institutes of Kosovo
- Routine Surveillance for the communicable diseases based on the reports from the hospitalized patients during last 24 h
- Active and passive surveillance on communicable diseases especially in Zoonosis

- Joint Meetings with veterinarians on Influenza & other issues related to public health, Kosovo
- Meeting "National Committee for Infectious Diseases", Kosovo-Measles as reemerging disease, 03.10.2017
- Global Health Programme from Robert Koch Institute, Berlin project planning and orientation visit to the National Institute of Public Health (NIPH) Kosovo, 19-20.09.2017
- ISEAL & NIPHK, "Mental Health, Public health challenge" (symposium, 26.05.2017)
- Joint meeting with regional epidemiologists regarding actual with communicable diseases (Influenza, measles, STI, etc.) and other issues related to Public Health, NIPHK, 22.05.2017
- Workshop on Monitoring & Evaluation of Surveillance Systems with Emphasis on Influenza Sentinel Surveillance, Sarajevo BIH/ 20-23.02.2017
- Macro and Micro planning approach for Key Population programs, Kosovo 18-22.04.2017
- Strategy for health promotion and education 2016-2020 – Workshop
- Intersectorial Food Safety Workshop for Albania and Kosovo, Albania-Tirana, 20-22.04.2016
- ECDC-TESSy Training Session for new users of the EU enlargement countries, Serbia-Belgrade, 24-25.05.2016
- 5th Annual Influenza Meeting Hungary, Hungary-Budapest 13-16.06.2016
- Study visit in "Universita degli studi di Milano", Italy, One Health Approach 19.06-03.07.2016

<https://www.evropaelire.org/a/semundjet-ngjitese-kosove/28571273.html>

<https://www.evropaelire.org/a/27120351.htm>

Next steps

In addition to my daily activities as Epidemiologist at the national level, I would like to enhance my personal knowledge through continuous education, especially in the area of analytical epidemiology and promote already gained knowledge and become a part of research projects. Plans for future activities also include maintaining and scaling up the connections that have been established within the MediPIET project and sharing the approaches learned from MediPIET to my colleagues within NIPHK and in the regional level.

Supervisor's conclusion

Pranvera Kaçaniku-Gunga is a fellow of the second cohort of MediPIET. She works as a clinical epidemiologist at National Institute of Public Health of Kosovo. Pranvera is responsible for Zoonotic diseases but very much involved on surveillance of Influenza. Being fellow of MediPIET Program for two years, she actively participated in all modules and expressed commitment to learn and build friendship with other fellows. Benefits and improvements are obvious but most

important is desire to continue to improve and share the experience with other colleagues in Kosovo.

Scientific Coordinator's conclusion

Text

References

1. P.Kaçaniku-Gunga, N. Ramadani, I. Humolli, A. Kalaveshi, M.Rexhepi, A. Zaghoul; Evaluation of SARI Sentinel Surveillance System in Kosova, 2014/2015-2016/2017. Oral communication at the 3rd MediPIET Annual Conference, 27 November - 1st December 2017, Brussels - Belgium
2. P.Kaçaniku-Gunga, N. Ramadani, I. Humolli, A. Kalaveshi, A. Zhagloul; Tularemia Outbreak in Kosovo, October 2014-May 2015. Oral communication at the 2nd MediPIET Annual Conference, 6-8 December 2016, Marrakech-Morocco