Strengthening Partnerships and Improving Global Health Security through Field Epidemiology Training, Surveillance, and Outbreak Response

FETP INTERNATIONAL NIGHTS

Poster Presentations: Tuesday · APRIL 30, 2019 · 6:00 pm – 8:30 pm
Oral Presentations & Award Ceremony: Wednesday · MAY 1, 2019 · 6:30 pm – 9:00 pm

SHERATON ATLANTA HOTEL / 165 COURTLAND STREET, NE / ATLANTA / GEORGIA / USA
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Cover Photo
First place winner of the 2018 FETP International Nights photo contest. The photo was taken during a food poisoning “enterotoxin” outbreak in Secondary Boarding School in Chamwino, Tanzania, November 2017, and submitted by Fadhill Ngogo from the Tanzania Field Epidemiology and Laboratory Training Program (FELTP).

2019 Photo Contest
Photos from the 2019 FETP photo contest are available for viewing April 29 - May 1 on Level 1.
Dear Colleagues:

It gives me great pleasure to welcome you to the 68th Annual Epidemic Intelligence Service (EIS) Conference and 19th Field Epidemiology Training Program (FETP) International Nights, where EIS Officers and FETP residents share their scientific findings and interact with some of the most brilliant minds in public health. I am especially pleased to welcome the distinguished moderators of the oral presentations, Dr. Rebecca Bunnell, Director of CDC’s Office of Science, and Professor Mufuta Tshimanga, Chair, AFENET Board of Directors and Program Director, Zimbabwe FETP. Like you, I am looking forward to exciting and engaging evenings of scientific presentations and exchange of thought-provoking discussions that inform efforts to improve public health and global health security initiatives.

This year’s theme, Strengthening Partnerships and Improving Global Health Security through Field Epidemiology Training, Surveillance, and Outbreak Response, embodies the Division of Global Health Protection’s commitment to helping countries build capacities to quickly contain threats and improve public health preparedness. We remain committed to supporting the development of a global cadre of disease detectives able to quickly detect and effectively respond to outbreaks and stop them from spreading.

For nearly 40 years, working collaboratively with ministries of health and other partners, CDC assisted with the establishment of more than 70 FETPs in over 100 countries, significantly strengthening national and global health systems. With each FETP, the world moves one step further towards improving global health security and being more prepared to deal with natural and man-made public health threats.

In 2018, highly trained FETP disease detectives, working in some of the most challenging parts of the world, investigated more than 340 outbreaks. In the Democratic Republic of the Congo (DRC), FETP residents and graduates are actively engaged in a robust response to the ongoing Ebola outbreak, the largest in DRC’s history and the second largest Ebola outbreak ever recorded. FETP graduates in neighboring countries are shoring up disease detection systems and supporting other Ebola preparedness efforts. Around the world, FETP graduates and trainees are on the frontlines applying their world-class knowledge and skills to prevent, detect, and respond to emerging and re-emerging public health threats.

FETPs do more than respond to outbreaks. In 2018, residents conducted 108 planned epidemiologic investigations, along with other surveillance evaluations and analyses. Some of this exciting work is showcased in the poster and oral presentations and is complemented by an amazing photo exhibition of FETPs in action.

As we honor the achievements of FETPs globally, I want to acknowledge the tremendous contributions of the late Dr. Dionisio José Herrera Guibert, the former Director of TEPHINET, who worked tirelessly over the past nine years to build a powerful global network of FETPs in over 100 countries. We honor his legacy and know that his spirit will always be with us.

Finally, I want to thank each of you—FETP residents, graduates, resident advisors, mentors, and support staff—for your tremendous commitment to public health. You are all heroes and we are grateful for the work you do on a daily basis to create a safer, healthier, and more secure world.

CAPT Nancy Knight, MD, USPHS
Director, Division of Global Health Protection
Center for Global Health
Centers for Disease Control and Prevention
Dear Colleagues:

Greetings and welcome to the 68th Annual Epidemic Intelligence Service (EIS) Conference and 19th Field Epidemiology Training Program (FETP) International Nights.

International Nights are a highlight of the EIS Conference, shining light on the remarkable work of FETPs around the world. In the past three years, we switched from one to two International Nights—one night dedicated to poster presentations and the other to oral presentations. Every year, the quality of the abstracts submitted gets better and better, making it difficult to select the best to showcase. This year, 195 abstracts were submitted from 52 countries, and we accepted 29 presentations (21 posters and 8 oral). The winning abstracts feature investigations and research from 23 countries and address diverse public health issues, such as linking HIV-infected individuals to care, tuberculosis therapy, vaccine-preventable diseases, and emerging infectious disease outbreaks.

This year, for the first time, two abstracts submitted for International Nights, will be presented during the EIS conference, bringing greater awareness of FETPs and their impact globally. Congratulations to Sa’ed Assaf from Jordan and Adine Marquis from Germany for this extraordinary accomplishment!

As we congratulate this year’s FETP International Nights presenters, we also recognize the hundreds of other FETP projects and activities that advance public health and help to save lives around the world. Some of this impactful work is captured through eye-catching photographs on display. Please take time to enjoy the exhibit and appreciate the visual depiction of investigations and research conducted by our FETP graduates and trainees.

Aware that public health threats will continue to emerge, CDC remains vigilant and committed to supporting FETPs, a cornerstone of global public health workforce development since 1980. In 2018 alone, CDC alongside ministries of health and other partners trained more than 2,000 disease detectives—430 FETP-Advanced, 75 FETP-Intermediate, and over 1,500 Frontline—graduating from 37 programs around the world with critical skills to prevent, detect, and respond to public health threats wherever they occur. Also in 2018, FETP-trained disease detectives responded to over 340 public health emergencies, including viral hemorrhagic fevers, influenza, anthrax, cholera, malaria, acute flaccid paralysis, and vaccine-preventable diseases including measles.

As we celebrate the collective work and accomplishments of FETPs in 2018, we also mourn the loss of Dr. Dionisio Herrera, the former Director of TEPHINET, whose larger-than-life presence at FETP International Nights for the past nine years will be sorely missed. We will forever remember Dionisio for his passion, energy, and commitment to working collaboratively to build core capacities in disease surveillance and outbreak response around the world.

Please take advantage of the International Nights platform to learn from each other and build lasting relationships that will broaden our network and collective efforts to improve global health security.

Kip Baggett, MD, MPH
Chief, Workforce and Institute Development Branch
Division of Global Health Protection, Center for Global Health
Centers for Disease Control and Prevention
Dear Colleagues:

On behalf of TEPHINET, I thank you for joining us for the 2019 FETP International Nights. For nearly 20 years, this event has been a highlight of the annual EIS Conference, showcasing the important work of Field Epidemiology Training Program (FETP) trainees and recent graduates from around the world through oral and poster presentations featuring exceptional public health research and outbreak investigations.

As an EIS graduate, I am proud to see the critically important work of global field epidemiologists represented at this conference. There is increasing recognition that FETPs are essential to applied epidemiology capacity development in countries throughout the world and are thus key partners to be engaged in important global health initiatives of the World Health Organization and allied global bodies. By strengthening countries’ capacities to detect and respond to outbreaks and other public health emergencies, FETPs have proven vital to increasing global health security.

Since TEPHINET’s formation in 1997 as a global professional network of FETPs, we have been committed to empowering and mobilizing a competent field epidemiology workforce to protect all people from health threats. Our network now comprises 71 FETPs, working across more than 100 countries, which collectively have trained more than 14,800 doctors, nurses, veterinarians, and other public health professionals in field epidemiology.

This year’s FETP International Nights presenters represent 23 countries and a diverse range of topics, from drug-resistant tuberculosis and typhoid fever to HIV, cholera, malaria, yellow fever, and more. In addition, for the first time, two of our accepted authors had the opportunity to present their work during the daytime sessions of this year’s EIS Conference to raise awareness of the work of FETPs globally. I sincerely congratulate each of our presenters on their tremendous efforts.

I hope that you find this event to be informative and inspiring and use this special opportunity to network and share experiences with our guests. Thank you to the organizers of this event and to our partners at CDC for their continued co-sponsorship.

Patrick O’Carroll, MD, MPH, FACPM, FACMI
EIS Class of 1985
Acting Director, TEPHINET
Sector Head, Health Systems Strengthening
The Task Force for Global Health
Celebrating the Life and Legacy of
Dionisio José Herrera Guibert, MD, PhD
1965 - 2018

In December 2018, the world of field epidemiology lost a visionary leader and genuine friend with the passing of Dionisio José Herrera Guibert, MD, PhD. From March 2009 until his passing, Dr. Herrera was the director of TEPHINET, a global network of Field Epidemiology Training Programs (FETPs) formed in 1997. Under his leadership, TEPHINET grew from a network of 30 FETPs to 71 programs in more than 100 countries, working to improve global capacity to detect and respond to disease outbreaks and other public health emergencies.

Dionisio or “Dio,” as he was affectionately known by his colleagues, will be remembered for his genuine compassion for others and his rare ability to build meaningful connections with people regardless of cultural or geographic distance. Over the last nine years, his beaming smile became a familiar sight at the EIS Conference as he networked with attendees and co-hosted the annual FETP International Nights event with CDC partners. His participation on the FETP International Nights planning committee helped make International Nights evolve into a robust platform to showcase scientific investigations and research findings presented by FETP trainees from around the world. With eternal gratitude, the planning committee remembers his inspirational leadership and firm commitment to the professional development of FETP trainees.
Tuesday, April 30, 2019

5:00 pm - 6:00 pm Opening Reception (Refreshments will be served)

6:00 pm - 6:05 pm Welcome and Introduction of Moderator
Seymour Williams, MD, MPH
Principal Technical Deputy, Workforce and Institute Development Branch
Division of Global Health Protection, Center for Global Health
U.S. Centers for Disease Control and Prevention

6:05 pm – 6:50 pm Poster Presentation Moderator
Reina Turcios-Ruiz, MD, FIDSA
CAPT, USPHS
Medical Epidemiologist, Workforce and Institute Development Branch
Division of Global Health Protection, Center for Global Health
U.S. Centers for Disease Control and Prevention

6:50 pm – 7:55 pm Poster Presentations (see listing)

7:55 pm – 8:05 pm Audience moves back into the Auditorium

8:05 pm – 8:10 pm Wrap Up
Robert E. Fontaine, MD, MSc
Senior Advisor, Field Epidemiology Training Program (FETP)
Workforce and Institute Development Branch
Division of Global Health Protection, Center for Global Health
U.S. Centers for Disease Control and Prevention

8:10 pm – 8:25 pm Certificate Ceremony
Kip Baggett, MD, MPH
Chief, Workforce and Institute Development Branch
Division of Global Health Protection, Center for Global Health
U.S. Centers for Disease Control and Prevention

Patrick O’Carroll, MD, MPH, FACP, FACMI
Acting Director, TEPHINET
Sector Head, Health Systems Strengthening
The Task Force for Global Health

8:25 pm – 8:30 pm Closing Remarks
Kip Baggett, MD, MPH
Chief, Workforce and Institute Development Branch
Division of Global Health Protection, Center for Global Health

*The Jeff Koplan Award for Best Poster will be presented on Wednesday, May 1, 2019 during the FETP International Nights awards ceremony.

**Presenters: Please remain in the room for the photo session immediately following the closing remarks.
2019 FETP International Nights
Oral Presentation Session

Wednesday, May 1, 2019

5:30 pm – 6:30 pm  Opening Reception (Refreshments will be served)

6:30 pm – 6:35 pm  Welcome
Kashef Ijaz, MD, MPH
Principal Deputy Director
Division of Global Health Protection, Center for Global Health
U.S. Centers for Disease Control and Prevention

6:35 pm – 6:40 pm  Opening Remarks
Stephen C. Redd, MD
RADM, USPHS
Deputy Director
Public Health Service and Implementation Science
U.S. Centers for Disease Control and Prevention

6:40 pm – 6:45 pm  Introduction of Moderators
Patrick O’Carroll, MD, MPH, FACPM, FACMI
Acting Director, TEPHINET
EIS Class of 1985
Sector Head, Health Systems Strengthening
The Task Force for Global Health

Moderators
Rebecca Bunnell, PhD, MEd
Director, Office of Science
U.S. Centers for Disease Control and Prevention

Mufuta Tshimanga, MD, MPH
Director, Zimbabwe Field Epidemiology Training Program (FETP)
University of Zimbabwe
Chair, AFENET Board of Directors

6:45 pm – 8:45 pm  Oral Presentations (see listing)

8:45 pm – 9:00 pm  Presentation of the 2019 FETP International Nights Awards
Kip Baggett, MD, MPH
Chief, Workforce and Institute Development Branch
Division of Global Health Protection, Center for Global Health
U.S. Centers for Disease Control and Prevention

Patrick O’Carroll, MD, MPH, FACPM, FACMI
Acting Director, TEPHINET
Sector Head, Health Systems Strengthening, The Task Force for Global Health

9:00 pm  Closing Remarks
Kip Baggett, MD, MPH
Chief, Workforce and Institute Development Branch

**Presenters: Please remain in the room for the photo session immediately following the closing remarks.**
Poster Abstract Listing

Full abstracts are found on the designated page numbers.

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Alfredo, Roygue – Angola. Risk Factors for Active Tuberculosis in HIV Patients on ART: Hospital Esperança, Luanda, Angola 2018 (page 12)


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Jan, Salman – Saudi Arabia. A Massive Scabies Outbreak in Makkah Region, Western Kingdom of Saudi Arabia 2018: Matched Case-Control Study (page 17)

Kisaakye, Esther – Uganda. Outbreak of Human Anthrax Associated with Handling and Eating Meat From a Cow that Died from Unknown Cause: Kween District, Uganda, April 2018 (page 18)


Maramraj, Kiran Kumar – India. Outbreak of Severe Skin and Soft Tissue Infection Including Necrotizing Fasciitis, in a Village of Telangana State, India, August 2018 (page 20)

Mefoug, Severin – Cameroon. Suspicion of Yaws-Buruli Ulcer Co-Morbidity in Pygmy Children at Lolodorf Health District, South Region Cameroon, December 2017 (page 21)


Mutabazi, Zabulon – Rwanda. Factors Associated With Home Delivery Among Mothers Reported in Rapid SMS System, Nyanza District, Southern Province, Rwanda, 2017 (page 23)


Nsereko, Godfrey – Uganda. Malaria Outbreak Facilitated by Appearance of Vector-Breeding Sites After Heavy Rainfall and Inadequate Preventive Measures: Nwoya District, Uganda, March–May 2018 (page 26)


Roy, Kaushik – India (Chennai). Cholera Outbreak Following a Training Camp: Shimoga district, Karnataka, India, 2018 (page 29)

Uwamahoro, Bibiane – Rwanda. Factors Associated With Unsuppressed Viral Load Among HIV-positive Patients on Anti-retroviral Therapy, Gihundwe Hospital, Rusizi District, Rwanda, 2016-2017 (page 30)


Xia, Yunting – China. Contributing Factors to the Obesity Epidemic in China: Weight Perception and Control Behaviors (page 32)
Abstract Title: Foodborne Disease of Undetermined Etiology among Patrons of a Local Eatery, Bibiani Township, Western Region of Ghana-2018

Short Biography: Daniel Agudey was a member of the Ghana Technical Review Committee of the second edition Integrated Disease Surveillance & Response (IDSR) Technical Guidelines from January 23-27, 2017. He was a member of the STOP 33 team in Liberia from February to May 2010. He also has been a member of the Regional Epidemic Preparedness, Management and Response Team since 2000. Agudey participated in and presented at the 7th AFENET Scientific Conference in Maputo from November 11-16, 2018, as well as the 6th AFENET Scientific Conference in Abuja from August 8-12, 2016. He is particularly drawn to public health surveillance and is currently designing a project to assess the status of emergency preparedness of district public hospitals for viral hemorrhagic fever in six districts of the Western Region in Ghana.

ABSTRACT

Authors: Mr. Daniel Agudey, Dr. Jacob Mahama, Dr. Kofi Asemmanyi-Mensah, Dr. Donne Ameme, Dr. Ernest Kenu, Dr. Samuel Sackey, Dr. Christabel Ayepah, Ms. Safiatu Abdullahi Tarl. Ms. Vida Naana Kwofie, Mrs. Irene Amedzro, Mr. Michael Adjabeng, Prof. Edwin Afari

Background: Foodborne diseases (FBD) remain a major health security threat; particularly in resource-limited settings where capacity to identify their etiology for adequate control is limited. On July 12, 2018, the Western Regional Health Directorate received notification of suspected FBD outbreak in Bibiani. Patrons of a particular eatery in Bibiani Township reported to a clinic with gastrointestinal symptoms. We investigated to determine the magnitude, etiology and source of the outbreak and implement control and preventive measures.

Methods: We conducted a retrospective cohort study. We interviewed patrons of the eatery and reviewed medical records of case-patients for data on demographics and clinical information. A FBD case occurred in any person in Bibiani with abdominal cramps and/or diarrhea and vomiting on or after July 11, 2018 who had eaten from the eatery. We conducted active case-finding, descriptive data analysis and calculated food specific attack rate ratios (ARR) and their corresponding 95% confidence intervals (CI). We inspected the production facilities and cultured stool specimens from case-patients and food handlers for enteropathogenic bacteria; nasopharyngeal specimens from food handlers were tested for enterotoxin-producing Staphylococcus aureus.

Results: Of 56 case-patients identified, 62.5% (35/56) were females; median age was 22 years (IQR: 15–30 years). Overall attack rate was 45.9% (56/122) with no fatality. Sex specific attack rates were 47.3% (35/74) and 43.7% (21/48) for females and males respectively. Compared to those who ate other food items patrons who ate stew were more likely to develop FBD (ARR=3.8; CI=1.97–7.33). No leftover food was available for testing. All clinical specimens tested negative for enteropathogenic bacteria and enterotoxin-producing Staphylococcus aureus.

Conclusions: A point source FBD outbreak of undetermined etiology occurred among patrons of an eatery in Bibiani. The most probable vehicle of transmission was contaminated stew. Prompt case management, community education and training of food handlers on food hygiene were control and preventive measures.
Akyereko, Ernest

Country: Ghana

Abstract Title: Influenza A (H1N1)pdm09 outbreak in a correctional facility, Central Region, Ghana, July-August, 2018

Short Biography: Ernest Akyereko is a member of cohort nine of the Ghana Field Epidemiology and Laboratory Training Program (FELTP) and is currently working as an epidemiologist at the Disease Surveillance Department of the Ghana Health Service to strengthen surveillance, and investigate and control epidemics. He has evaluated the trachoma surveillance system of Ghana and has participated in many disease outbreak investigations. His interest is in the application of modern technology in disease surveillance and outbreak investigation and response. He is very skillful in the application of geo-information techniques in public health (spatial analysis, disease risk mapping, etc.). He developed an ecological niche model to predict meningitis outbreaks in the Upper East region of Ghana using Geographic Information System (GIS).

ABSTRACT

Authors: Mr. Ernest Akyereko, Dr. Franklin Asiedu-Bokoe, Dr. Donne Ameme, Dr. Ernest Kenu, Prof. Edwin Afari

Background: Influenza, a contagious respiratory illness caused by influenza viruses, usually leads to outbreaks among unvaccinated populations and in confined settings. On July 30, 2018 the Central Regional Health Directorate received reports of suspected influenza-like-illness outbreak among inmates of a Maximum Security Prison (AMSP). Inmates reported to the prison infirmary with symptoms of cough and fever. We investigated the outbreak to determine its magnitude, identify risk factors and implement control and preventive measures.

Methods: We conducted an unmatched case-control study. A case was cough and fever (history or temperature of 37.5°C or above) with illness onset on or after July 12, 2018 in any person in AMSP. For each case, two controls were randomly selected from the prison. We interviewed participants and reviewed their medical records for exposures. We calculated odds ratios (ORs) and 95% confidence intervals (CIs) for associations between illness and potential exposures. We conducted environmental assessment and collected oropharyngeal swabs from case-patients for laboratory testing.

Results: Of 378 persons who met the case definition, 350 (93.1%) were inmates; 373 (98.7%) were males; median age was 37 years (range: 14–78 years). Forty-five case-patients and 90 controls were included in the analysis. Sleeping in the same room with a case-patient (OR=8.3, CI: 2.3–14.9), working at prison infirmary (OR=1.4, CI 1.1–8.3) and previously smoked cigarette (OR=12.7, CI 4.3–31.9) were associated with influenza A illness. Three (3) of seven oropharyngeal specimens tested positive for Influenza A (H1N1)pdm09. Poor ventilation was noticed in the rooms of the inmates. Case patients were isolated, treated with Oseltamivir and reactive vaccination done.

Conclusions: Sleeping in the same room with a case-patient, working in prison infirmary and smoking cigarette were associated factors for this influenza A outbreak. Case isolation, management and reactive vaccination of inmates and correctional facility staff controlled the outbreak.
Alfredo, Roygue  

Country: Angola  

Abstract Title: Risk factors for active Tuberculosis in HIV patients on Antiretroviral Therapy (ART): Esperança Hospital, Luanda, Angola 2018  

Short Biography: Dr. Roygue Zeferino Alfredo is a field epidemiology training program (FETP) resident from the third cohort of the Angolan FETP. He currently works as an epidemiologist and hospital manager at a tertiary hospital in Luanda (Sagrada Esperança). Furthermore, he acts as a surveillance focal point for the Angolan Ministry of Health at his hospital, where he is responsible for the notification of mandatory diseases. As an FETP fellow he performed research on the risk for active tuberculosis (TB) among HIV patients on ART. After the study showed alarming results and while working at the National HIV Institute, he participated in the development and drafting of the technical note for Preventive Treatment with Isoniazid, with a focus on implementation and monitoring in sentinel health units. Associated with this activity, he has developed and implemented an integrated epidemiological surveillance system for diseases and responses at the Sagrada Esperança Hospital.  

ABSTRACT  

Authors: Roygue Alfredo, Rosa Moreira, João Pires  

Background: In 2017, an estimated 920,000 people living with HIV (PLHIV) have fallen ill with Tuberculosis (TB) worldwide. Angola is one of 20 countries with the highest estimated numbers of incident TB cases among persons living with HIV (PLHIV). Isoniazid preventive therapy (IPT) national policy for PLHIV was published in 2018 but with slow implementation. The objective of this study was to assess the incidence and risk factors for active TB among PLHIV on antiretroviral therapy (ART) in a tertiary HIV specialized hospital in Luanda, Angola.  

Methods: The sample size of 813 patients was calculated using an estimated prevalence of 10%, 95% CI and 1% precision. A cross-sectional study was conducted at Hospital Esperança between January-December 2018. Cases were defined as PLHIV who developed active TB while on ART. Semi-structured questionnaires and review of clinical files were used for data collection. Significance level was set at p<0.05 for all hypothesis tests. Pearson chi-squared ($\chi^2$) tests, followed by multivariable logistic regression modelling were used to identify factors associated with active TB.  

Results: A total of 849 HIV positive study participants were enrolled. Of these, 111 (13.1%) were found to have active pulmonary TB. Independent risk factors for TB were: contact with active TB cases (Adjusted OR = 341.40; 95% CI: 60.8 - 1918.6; p<0.01); active tobacco smoking (Adjusted OR = 8.1; 95% CI: 1.4-46.1; p<0.01); having a CD4 count below 200 cells/mm3 (Adjusted OR = 126.1; 95% CI: 2.9 - 5404.4; p<0.01); immune failure (Adjusted OR = 4.1; 95% CI: 1.11-15.1; p<0.05).  

Conclusions: Our study is the first in Angola to provide insightful data on active TB infection among PLHIV on ART. The alarmingly high incidence of active TB among PLHIV found in our study clearly shows the urgent need for stringent IPT policy implementation and increased coverage among PLHIV with a negative TB screening.
AL OMRAN, AHMED

COUNTRY: Saudi Arabia

ABSTRACT TITLE: Investigation of a Cluster of Hepatitis C cases associated with a hemodialysis center, Al-Ahsa region, Saudi Arabia – 2017-2018

SHORT BIOGRAPHY: Dr. Ahmed Tawffeq Al Omran, MBBS, is in his final year as a resident in the Saudi Arabian Field Epidemiology Training Program, under the Ministry of Health. He works on outbreak investigation and control. His areas of interest include infectious and non-communicable disease epidemiology. Dr. Al Omran has experience working in multiple emergency response settings, serving on the Rapid Response Team Al-Ahsa: a Kingdom of Saudi Arabia MERS-CoV outbreak, a diphtheria outbreak in the eastern region of Saudi Arabia, and multiple pediatric and neonatology intensive care unit hospital-acquired infection investigations. He also serves as an auditor for different assessment programs of infection prevention and control in Al-Ahsa Maternity and Children Hospital.

ABSTRACT

AUTHORS: Dr. Ahmed Alomran, Dr. Shady Kamel, Dr. Sami Almudarra

BACKGROUND: On the 18th of February 2018, the Saudi Arabian Ministry of Health was notified of a cluster of new hepatitis C virus (HCV) infections among patients at a renal hemodialysis center, Facility A. Patients were asymptomatic, and they detect it while they are doing routine serology screening every six months. We sought to identify the risk factors for HCV infection at Facility A.

METHODS: We defined cases as a patient treated at Facility A, between October 1, 2017 and October 30, 2018, who was HCV-antibody serology negative on center admission but subsequently seroconverted. To identify the source of the outbreak: we interviewed case-patients for risk factors (i.e., surgical history, blood transfusion and others) and conducted an environmental investigation. We assessed infection control practices and reviewed available records on staff management and maintenance of dialysis machines.

RESULTS: Twelve case-patients were identified out of 140 susceptible patients treated at Facility A (attack rate = 8%). All case-patients were females who were dialyzed in the same room. Three case-patients had symptoms consistent with acute HCV infection. Two case-patients had increased serum Aspartate aminotransferase (AST) levels. Three case-patients died from unrelated causes. We observed gaps in hand hygiene, potentially unsafe parenteral infusion administration, and inadequate disinfection of machines between patients. Staff interviews revealed shortages in IV equipment.

CONCLUSIONS: We identified a common exposure to the same treatment room among case-patients at Facility A. We identified gaps in hand hygiene, and inadequate disinfection procedures and errors in infusion administration that could have resulted in patients being exposed to contaminated equipment. These cross-contaminations were the most likely source of the outbreak. New policies were created to improve training and documentation of nursing practices. Dialysis machine disinfection policies were changed to decrease the risk of transmission of bloodborne disease. Dialysis machines are now used by a specific number of patients for better tracking of any new events.
Fatima, Munaza

Country: Pakistan

Abstract Title: Complications Associated with XDR Typhoid Fever Cases in Hospitalized Patients of District Hyderabad, Pakistan, 2017-2018

Abstract:
Authors: Munaza Fatima, Santosh Kumar, Ahsan Illahi, Mudassar Hussain, Naveed Masood, Mirza Amir Baig, Musa Raheem, Robert E. Fontaine, Eric Mintz, Rana Jawad Asghar

Background: Hyderabad, Pakistan, is the first city to witness an outbreak of extensively drug resistant (XDR) typhoid fever. The outbreak strain is resistant to ampicillin, chloramphenicol, trimethoprim-sulfamethoxazole, fluoroquinolones, and third-generation cephalosporin, greatly limiting treatment options. However, despite over 5,000 documented cases, information on mortality and morbidity has been limited. We examined medical records of patients hospitalized for typhoid fever in Hyderabad to characterize cases, complications, and deaths among those with non-XDR and XDR typhoid fever.

Methods: We reviewed medical records of culture-confirmed typhoid cases in five hospitals in Hyderabad from October 1, 2016 to September 30, 2018. We obtained data on age, gender, onset of fever, physical examination, serological and microbiological test results, treatment before and during hospitalization, time to defervescence, duration of hospitalization, complications and deaths.

Results: We identified 1,452 culture-confirmed typhoid cases including 947 (66%) XDR and 505 (34%) non-XDR cases. Complications occurred in 360(38%) XDR vs. 89 (17.7%) non-XDR typhoid cases (95% Confidence Interval [CI] 15.6-24.7, p<0.0001); ileal perforation was the most frequent complication in both groups (210 [22.8%] vs. 71[14%]; CI=1.29-2.33; p=0.0001).Deaths were documented in 17 (1.8%) of 360 XDR and 3 (0.6%) of 89 non-XDR patients (OR=3.04, CI = 0.88-10.3; x2=3.4, p=0.06).Median duration of illness before hospitalization was longer in XDR than non-XDR typhoid cases (20 vs.13 days; x2=62.82, p=0.00000), and was increased in patients with complications than in those without (22 vs. 6 days; x2=414.78, p 0.00000).

Conclusions: As this first XDR typhoid outbreak continues to spread, the increased duration of illness before hospitalization and increased rate of complications have important implications for clinical care and medical costs and heighten the importance of prevention and control measures.
**Gomez, Lara Victoria**

**Country:** Argentina

**Abstract Title:** Situation of Multidrug-resistant Tuberculosis - Argentina, 2016-2017

**Short Biography:** Lara Gomez, Bachelor's Degree in Nutrition, is currently in the second year of the Residence in Epidemiology under the Ministry of Health and Social Development's Epidemiology Directorate of Argentina. She is working at the Health Program Department on the national surveillance of respiratory diseases and carries out locally and nationally based research, with primary data collection of tuberculosis (TB), cardiovascular disease, asthma and pneumonia. In the past, she was a volunteer in epidemiology at the National Institute of Respiratory Diseases, working in the analysis of the childhood TB situation in Argentina, as part of the Childhood Tuberculosis Initiative held by the Ministry of Health and the Argentinian Pediatric Society. She was awarded a Carrillo Oñativia Fellowship for researching risk factors associated with loss to follow-up among childhood tuberculosis patients in Argentina. She was a volunteer teaching assistant for a course on nutrition in public health at the National University of the Littoral.

**ABSTRACT**

**Authors:** Lic. Lara Victoria Gomez, Dr. Sergio Arias, Med. VMD Natalia Mordini

**Background:** Multidrug-resistant Tuberculosis (MDR-TB) is the tuberculosis (TB) that doesn’t respond to at least isoniazid and rifampicin drugs and it aggravates and complicates the management of all forms of TB. In Argentina, 80 MDR-TB cases were reported in 2015 (0.75% of total cases). The objective of this study was to describe the characteristics of TB-MDR cases notified in Argentina in 2016 and 2017.

**Methods:** Descriptive analysis of MDR-TB cases notified in 2016-2017. Patient data was obtained from “Sistema Nacional de Vigilancia de la Salud” and Tuberculosis Laboratory of INER “Dr. Emilio Coni”. Absolute and relative frequencies were calculated. Notification rates were calculated per 100,000 population, using estimated population size from the “Instituto Nacional de Estadísticas y Censos”. Significant difference was evaluated using the chi-square test.

**Results:** During the biennium, 223 MDR-TB cases were notified in Argentina (57.6% of total drug resistance and 0.97% of the total cases). The biannual rate was 0.31 cases per 100,000 population. The proportion of MDR-TB was significantly higher among men (56%) than women (44%) (p=0.003). 161 patients (71.9%) were between 20 and 55 years old, 40 (17.8%) were children under 20 years. 195 cases (87.6%) were found in 3 highly urbanized provinces: Buenos Aires (49.8%); especially in the Metropolitan Area of Buenos Aires, Santa Fe (19.3%); especially in the Rosario department, and Ciudad Autónoma de Buenos Aires (18.5%). 162 (72.7%) cases were pulmonary, 18 (8.0%) extrapulmonary, and 43 (19.3%) didn’t have information about location. 65 (28%) patients had been previously treated for tuberculosis. There was information about HIV coinfection in 79 patients (35.6%), 41 (52%) were HIV coinfection.

**Conclusions:** Reported cases of MDR-TB were concentrated in dense urban areas, where social factors improve its perpetuation. The timely detection and strict monitoring of MDR-TB and study of their characteristics are important, especially in the mentioned urban areas.
Abstract Title: Re-emergence of Yellow Fever in South Ethiopia, 2018

Short Biography: Mr. Mesay Gunta Gutulo, a member of the third cohort of the Ethiopian Field Epidemiology and Laboratory Training Program (FELTP) at Hawassa University in Southern Ethiopia, is currently the resident at the respective field base. As an FELTP fellow, he was assigned to conduct disease outbreak investigation and response activities, surveillance system evaluation and other public health emergency events across the region. He is also interested in emerging and re-emerging infectious diseases epidemiology. Moreover, he has participated in the annual scientific conference held by AFENET in Ethiopia in 2018, and also has presented his work during the regional biannual meeting in 2019.

ABSTRACT

Authors: Mesay Gunta, Solomon Kinde, Fekadu Gemechu, David Sugerman, Mesay Hailu, Wadu Marshalo, Zinabu Desalegn, Jimmawork Wondimu

Background: Yellow fever (YF) is a viral hemorrhagic disease transmitted by the Aedes mosquito species, with prior Ethiopian outbreaks in 1966 and 2013 in Southern Nations, Nationalities, and Peoples Regional State (SNNPRS). The index case developed illness on August 21, 2018 after presenting with jaundice and bleeding and was reported from Offa District on September 29, 2018. There was little information about the factors. Thus, we aimed to describe the outbreak and identify associated factors.

Methods: We conducted an unmatched case-control study (ratio 1:2) between August 21 and October 16, 2018 in Offa district, SNNPRS. Cases were patients with fever and jaundice and/or YF-specific IgM antibody or polymerase chain reaction (PCR) or plaque reduction neutralization test (PRNT) positive. Controls were asymptomatic individuals selected randomly from the household or neighbor during outbreak period. Data were collected reviewing medical records, laboratory findings, and field visits. We also measured the mosquito larva density using Breteau Index (BI). We summarized the data by attack rate (AR) and adjusted odds ratio (AOR).

Results: We identified 5 lab-confirmed and 30 suspected YF cases; ten deaths (28.6%). Males (attack rate [AR] =5.4/10,000) and females (AR=5.6/10,000) were similarly affected, highest in Kodo village (AR=44.5/10,000). BI in the district were highest ranged from 40–109 (safe level <20). The odds of disease among people with presence of breeding sites around households were five times higher [aOR4.5; (95% CI: 1.5–13)], proximity of households and farmlands to jungle were 10 times higher [aOR10; (95%CI: 1.4–76)], and 54% lower (aOR=0.46; 95% CI: 0.004–0.52) among those sleeping under long-lasting bed net.

Conclusions: Following a 4-week reporting delay, we confirmed the first outbreak of yellow fever in Offa district in 50 years, contained with mass YF vaccination. We recommended enhanced surveillance for acute febrile jaundice/hemorrhage, improved vector control, and inclusion of YF vaccine within the routine immunization schedule. It was controlled with reactive YF vaccination, larviciding, indoor residual spray and distribution of mosquito nets. We recommended regular vector surveillance and inclusion of preventive vaccination within routine immunization schedule.
Abstract Title: A Massive Scabies Outbreak in Makkah Region, Western kingdom of Saudi Arabia 2018: Matched Case-Control Study

Short Biography: Dr. Salman Fudlaldeen Jan is currently a member of the 30th cohort of the Saudi Arabia Field Epidemiology Training Program (FETP). His fields of interest are disease prevention and health education. He worked as a supervisor of the Expanded Program of Immunization (EPI) in Makkah City, Department of the Infectious Disease Prevention, Directorate of Health Affairs in Makkah, Saudi Ministry of Health. Every year, he joins the surveillance system during Hajj in Makkah. In addition, he has participated in many anti-smoking and other health promotion campaigns.

ABSTRACT

Authors: Dr. Salman Jan, Dr. Shady Kamel, Dr. Sami Almudarra

Background: Muslims of different nationalities visit Makkah year-round to perform rituals in the Holy Mosque. The rituals involve close contact between pilgrims, and shared items, such as carpets for prayers. These are known risk factors for infectious skin diseases. In 2018, from March 25 to May 10, there were 4,423 cases of scabies reported from Makkah region (baseline data regarding prevalence of scabies are not available for Makkah), leading to concerns about an outbreak that could spread globally. We sought to describe the scope of the outbreak and identify risk factors for infection.

Methods: We conducted a matched case-control study (1:2 ratio). We defined cases as scabies clinically diagnosed by a dermatologist or family medicine consultant between April 11 and May 10, 2018, and used the Health Electronic Surveillance Network (HESN) for case finding. Controls were defined as scabies-free neighbors or students who shared schools and houses with cases. Data were collected through in-person interviews using a structured questionnaire.

Results: We enrolled 270 cases and 596 controls. Most cases were male (57.4%), Burmese (51.8%), students (41.8%), and lived in a slum area (70%) within Makkah. Significant risk factors were contact with a confirmed case (OR=10, p <0.001), male gender (OR=1.9, p <0.01), Burmese nationality (OR=1.5, p <0.003) and students (OR=1.4, p<0.012). We found no statistically significant relationship between infection and visiting the holy mosque (OR=1.1, p=0.7), contact with animals (OR=1.1, p =0.7) or with institutional (e.g. prisons) cases (OR=0.5, p=0.6). We received no reports of scabies cases being internationally exported.

Conclusions: Despite the proximity of the outbreak to the Holy Mosque, it was not associated with infection. Most cases occurred among Burmese students, who live in close communities. These communities should be specifically targeted for public health educational services to prevent future outbreaks.
Kisaakye, Esther

Country: Uganda

Abstract Title: Outbreak of Human Anthrax Associated with Handling and Eating Meat from a Cow that Died from Unknown Causes: Kween District, Uganda, April 2018

Short Biography: Esther Kisaakye is a field epidemiology fellow in the 2018 cohort of the Uganda Public Health Fellowship program. As a field epidemiology training program (FETP) fellow, she is currently hosted at the Uganda Ministry of Health to monitor, investigate and control disease outbreaks in the country. She also conducts disease and mortality surveillance activities to identify public health problems in the country. She has a passion for infectious and non-communicable disease epidemiology, maternal, child and adolescent health.

ABSTRACT

Authors: Esther Kisaakye, Kenneth Bainomugisha, Lilian Bulage, Musa Sekamatte, Bernard Lubwama, Dan Tumusiime, Alex Riolexus Ario, Bao-Ping Zhu

Background: On 20 April 2018, Kween District health officials reported to the Ugandan Ministry of Health 7 suspected cases of cutaneous anthrax among persons who had handled and eaten meat from 1 of 4 cows that died of unknown causes in April in one cattle pen. We investigated to determine the scope of and possible exposures for the outbreak, and recommend evidence-based control measures.

Methods: We defined a suspected cutaneous anthrax case as acute onset of painless, papulo-vesicular skin lesion, and a suspected gastrointestinal anthrax case as abdominal pain plus ≥1 of the following: diarrhea, vomiting, abdominal swelling, pharyngitis, and oropharyngeal lesions, in a Kween District resident during April 2018. A confirmed case was a suspected case with a sample testing positive for Bacillus anthracis by polymerase chain reaction (PCR). We reviewed medical records and conducted active community case-finding. We collected lesion swabs and blood samples for PCR testing at Uganda Virus Research Institute. We conducted a retrospective cohort study to identify potential exposures.

Results: Among 234 persons who handled or ate the cow’s meat, we identified 48 cases (3 confirmed and 45 suspected; 15 cutaneous, 15 gastrointestinal, 18 both) (attack rate=21%), with no deaths. Skinning (RR=4.2, 95%CI 2.6–6.7), cutting (RR=4.9, 95%CI 3.2–7.5) or carrying the meat (RR=4.9, 95%CI 2.7–9.0), and cleaning the processing site (RR=4.2, 95%CI 2.6–6.7) increased the risk of cutaneous infection. Eating the meat increased the risk of gastrointestinal anthrax (RR=∞, 95%CI 4.3–∞). Among persons who ate meat, boiling meat for >60m was protective (RR=0.49, 95%CI 0.26–0.92).

Conclusions: This outbreak of mixed cutaneous and gastrointestinal anthrax was caused by handling and eating meat from a cow that died of unknown causes. We recommended treating all cases, vaccinating healthy animals, and conducting community education on avoiding eating meat from, and safe burial of, animals that died of unknown causes.
Lawal, Bola

Country: Nigeria

Abstract Title: Risk Factors for Drug-Resistant Tuberculosis: An Unmatched Case-Control Study, Nigeria-2018

Short Biography: Dr. Bola Biliaminu Lawal is a very recent graduate of the Nigeria Field Epidemiology and Laboratory Training Program (FELTP) and a fellow of the West African College of Physicians. He presently works as a public health physician at the University Health Services of Ahmadu Bello University in Zaria, Nigeria. Bola has been involved in a number of outbreak investigations and responses, notable among which is the outbreak of Lassa fever in Edo State, Nigeria in 2018; surveys (such as the Nigeria AIDS Indicator and Impact Survey) and operational research (e.g., economic evaluation of public-private-mix of directly observed tuberculosis treatment in Kaduna State, Nigeria). He is currently working on a TEPHINET mini-grant to pilot a birth defect surveillance program in northern Nigeria. His publications in peer-reviewed journals include both infectious and non-communicable disease epidemiology.

ABSTRACT

Authors: Bola B. Lawal, M. Ibrahim, A. Olorukooba, S. Abdulkarim, M. Balogun, P. Nguku

Background: In Nigeria, drug-resistant tuberculosis (DR-TB) is a growing threat to tuberculosis (TB) control and a major public health problem. In 2017, Nigeria accounted for the highest incidence of multidrug-resistant or rifampicin-resistant tuberculosis (MDR/RR-TB) in Africa with an estimated 24,000 new cases. Understanding the risk factors for DR-TB is key to developing appropriate control strategies. We therefore investigated the risk factors for DR-TB in Nigeria.

Methods: We conducted an unmatched 1:2 case-control study from April 24 to July 12, 2018 using 180 cases and 360 controls selected randomly from DR-TB treatment centers across the country. Cases were bacteriologically diagnosed pulmonary TB patients ≥18 years old with TB resistant to either rifampicin or rifampicin and isoniazid, while controls were bacteriologically diagnosed pulmonary TB patients ≥18 years old with TB sensitive to rifampicin. We collected data using a structured questionnaire and reviewed medical records. We calculated adjusted odds ratios (aOR) with their corresponding 95% confidence intervals (CI) to identify independent risk factors for DR-TB.

Results: The mean age was 36.1 years ±12.6 years for cases and 36.6 years ±13.6 years for controls. Males constituted 110 (61.1%) and 223 (61.9%) of cases and controls, respectively. A higher proportion of cases (50.6%) as compared to controls (12.8%) were previously treated for TB (p<0.001). However, there was no significant difference in proportion of cases (16.7%) and controls (20.0%) with HIV co-infection (p=0.351). Independent risk factors for DR-TB were: previous TB treatment (aOR=6.22, 95% CI 3.89–9.92), poor anti-TB drug adherence (aOR=1.64, 95% CI 1.03–2.61) and poor socio-economic status (aOR=1.82, 95% CI 1.16–2.87). HIV co-infection was not a risk factor (aOR=1.16, 95% CI 0.67–2.02).

Conclusions: Risk factors for DR-TB in Nigeria were previous TB treatment, poor drug adherence and poor socio-economic status. We shared the findings with the National TB control Program and recommended to the program to prioritize these factors during screening for DR-TB.
Maramraj, Kumar

Country: India

Abstract Title: Outbreak of Severe Skin and Soft Tissue Infection Including Necrotizing Fasciitis, in a Village of Telangana state, India, August 2018

Short Biography: Surgeon Commander (Dr.) Maramraj Kiran Kumar is a public health specialist in the Armed Forces Medical Services of India. He is a postgraduate medical doctor specializing in community medicine and a fellow of the India Epidemic Intelligence Services Cohort-6 (National Centre for Disease Control, New Delhi), with a wide range of expertise in the fields of control of vector-borne and other communicable diseases, investigation of outbreaks and epidemics, and public health in mass gatherings and disasters. His areas of interests are emerging and re-emerging infections, vector borne diseases, public health surveillance and outbreak investigations.

ABSTRACT

Authors: Kiran Kumar Maramraj, Kavitha Latha ML, Tanzin Dikid, Sushma Choudhary, Thirupathi Nagoshe, Sukrutha Reddy, Sudheer Kumar Jain, Kayla Laserson, Sujeet Kumar Singh

Background: Necrotizing fasciitis (NF) is rare but highly fatal (76% mortality) and associated with diabetes, advanced age, and delays in treatment. A cluster of nine severe skin and soft tissue infections (SSTI), including four NF, reported on July 30, 2018 from Kalwala, Telangana led us to investigate to describe epidemiology, identify risk-factors and provide recommendations.

Methods: Cases, defined as localized painful swelling and redness in Kalwala resident from December 1, 2017- August 20, 2018, were identified from hospital records, house-to-house survey and medical camp, and categorized: severe (sSSTI), including NF; moderately-severe (msSSTI); and mild (mSSTI), based on hospitalization/surgical interventions. We conducted an unmatched case-control study, enrolling and interviewing sSSTI/msSSTI as cases and mSSTI as controls, to identify risk-factors for severity. We cultured wound samples and assessed infection control practices (ICP) in two hospitals (H1/H2) against standard-checklist; we cultured environmental samples from wound-dressing stations.

Results: We identified 36 case-patients (median age: 55 years [range: 17-80]; 78% male), village attack rate 1% (36/4337) and no deaths. In 34 (94%) case-patients, lower-limbs were involved. 19% were sSSTI and 25% msSSTI. Lymphatic filariasis (LF) was common among cases (69%) and controls (65%). Comorbidities (diabetes or hypertension) (OR=9, 95%CI 2.0–41.1), poor limb-hygiene (OR=16, 95%CI 2.8–95.3), poor health-seeking (delayed treatment ≥2days after symptom-onset or ≥2 days between dressing-changes) (OR=5, 95%CI 1.6–30.8) and consulting H1/H2 for wound-dressing (OR=7, 95%CI 1.6–30.8) were associated with severity. All seven wound-samples (3mSTI; 1msSTI; 3sSTI) showed atypical poly-microbial growth (Pseudomonas, Proteus, Klebsiella, E coli and Clostridium). ICP assessment revealed 57% compliance (8/14 assessment criteria) and 8/11 samples from wound-dressing stations showed poly-microbial growth.

Conclusions: Outbreak of severe SSTIs including NF among older males with LF was associated with comorbidities, poor hygiene and health-seeking, and likely contamination during dressing. Limb-hygiene and early treatment of SSTIs were promoted, home/facility-based morbidity management facilitated for LF patients and ICP training initiated.
Mefoug, Severin

Country: Cameroon

Abstract Title: Suspicion of Yaws-Buruli ulcer Co-morbidity in Pygmy Children at Lolodorf Health District, South Region Cameroon, December 2017

Short Biography: Dr. Severin Mefoug is a trainee of the sixth cohort of the Cameroon Field Epidemiology Training Program (FETP). He is currently assigned at the Neglected Tropical Diseases’ service under the Ministry of Health. He received the FETP Frontline training while he was regional coordinator of the South Region’s expanded program on immunization. As an FETP fellow, he has evaluated the sleeping sickness surveillance system in Cameroon and the national blindness control program. He was also a member of the scientific committee during the last international forum on the management of emergencies and public health events held in Yaoundé in September of 2018.

ABSTRACT

Authors: S. Mefoug, F. C. Amabo, A. Acho, A. Kort, E. Epee, A. Getoundi

Background: Yaws and Buruli ulcer are two neglected tropical diseases that can cause epidemics in rural communities. The co-morbidity of these two ulcerative diseases is a rare phenomenon. In December 2017, an outbreak of limb ulcers in Pygmy children was reported in Lolodorf Health District. We investigated to describe this outbreak, identify risk factors and implement control measures.

Methods: A standardized questionnaire was used to collect socio-demographic data and risk factors. Swabs from ulcers and blood samples were collected for laboratory analysis. We conducted a case-control study to identify risk factors. Cases were school-age children resident in the said district, with limb ulcers between September 1 and December 20, 2017, controls were matched (age, residence) with cases without ulcers. Odds ratios (OR) were calculated to measure the strength of association between exposure factors and the onset of ulcers.

Results: A total of 24 children with ulcers were identified from the same Pygmy community with a median age of 13 years (range, 7-13 years) of which 14 (58.33%) were females. The epidemic curve revealed a propagated source of transmission. The absence of a daily bath (OR= 3.08, 95% CI 1.08–8.94) was the main risk factor associated with having an ulcer. No other risk factors studied were significant. Putting on shoes daily was a protective factor (OR = 0.28, 95% CI 0.09–0.84). Laboratory results revealed one (3.57%) out of 28 cases tested positive for Yaws (rapid diagnostic test for Treponema), and four (14.81%) positive for Buruli ulcer (PCR). The PCR test for Yaws is awaited.

Conclusions: The outbreak of limb ulcers was probably due to a co-morbidity of Yaws and Buruli ulcer. Poor body hygiene was the risk factor associated with these ulcers while putting on shoes daily was protective. Cases and contacts were treated and the population sensitized.
Mitkie, Ayanaw

Country: Ethiopia

Abstract Title: Incidence and Predictors of Adverse Drug Reaction among HIV-Positive Adults on Anti-Retroviral Therapy in Government Hospitals of Kaffa Zone: A Retrospective Cohort

Short Biography: Mr. Ayanaw Ambachew Mitkie is a graduate of the 2018 second cohort of the Ethiopian Field Epidemiology and Laboratory Training Program (FELTP) at Hawassa University. He was born in a small village in North Gondar and raised as a cow keeper. He started primary school at the age of seven and studied medical laboratory science at the University of Gondar and Hawassa University, and he graduated with his diploma and a Bachelor of Science in Medical Laboratory Science. Mr. Mitkie worked for a government organization as a medical laboratory technician and quality officer in the district. Currently, he works as an officer in the tuberculosis and leprosy unit of the Chena District Health Office in Kaffa Zone, Ethiopia. As a resident, he presented three of five outputs at the first and second Ethiopian FELTP annual conference held in Addis Ababa. Additionally, he was awarded as the 2018 FELTP best performer. His interest is in the areas of communicable diseases including HIV, non-communicable diseases including cancer, diabetes, cardiovascular disease, and genetic epidemiology.

ABSTRACT

Authors: Ayanaw Ambachew Mitkie, Fanuel Belayneh Bekele, Alemu Tamiso Debiso

Background: An adverse drug reaction (ADR) is a noxious and unintended response to the correct use of antiretroviral therapy (ART) for HIV positive patients. ADR incidence varies from 11-73.3%; between developed and developing countries, with limited ADR information from Kaffa Zone, Ethiopia. Our aim was to determine incidence and identify predictors of ADR in adult HIV positive patients on ART.

Methods: We conducted a retrospective cohort study during June-August 2018 in government hospitals of Kaffa Zone. We included 592 clinical records of adult HIV positive patients started on ART between July 2006 and August 2017. We defined ADR as ≥1 noxious and unintended responses: anemia, fever, neuropathy, skin rash, immunologic failure and others to ART. We use a standardized form to extract data from medical records, intake forms, and treatment databases. We ran cox proportional hazard analysis and summarized results using adjusted hazard ratio (AHR).

Results: In total, 106 (18%) patients had any ADR and incidence was 4.1 per 100 person-years (95% CI 3.4–5.0). ADRs were reported 121 times: Anemia 24 (20%), neuropathy 17 (14%) and immunological failure 16 (13%) were most frequent. Rural patients had higher adverse drug reactions than urban patients [AHR=1.9 (95%CI 1.2–3.2)]. Patients on Stavudine (D4T)-Lamivudine(3TC)-Nevirapine(NVP) [AHR=1.8 (95%CI 1.0–3.1)]; Zidovudine (AZT)-3TC-NPV [AHR=2.3 (95% CI 1.2–4.6)]; AZT-3TC-EFV [AHR=2.2 (95%CI 1.2–3.9)]; D4T-3TC-EFV [AHR=2.9 (95% CI 1.4–6.0)] reported significantly higher ADR than those on Tenofovir disoproxil (TDF)-based treatments. Patients at WHO clinical stage III [AHR=2.5 (95%CI 1.2–5.0)] or stage IV [AHR=4.3 (95%CI 1.9–9.9)] reported higher drug reactions than stage I.

Conclusions: The overall incidence of ADR was considerable, and higher among patients from rural areas, at WHO stage III/IV, and on AZT- or D4T-based regimens than urban, stage I and TDF based treatment respectively. Due to reported ADR, AZT-based regimens may not be a good TDF alternative and clinicians should be aware of adverse reactions among rural and WHO clinical stage III/IV patients.
Mutabazi, Zabulon

Country: Rwanda

Abstract Title: Factors associated with home delivery among mothers reported in rapid SMS system in Nyanza District, Southern Province, Rwanda, 2017

Short Biography: Mr. Zabulon Mutabazi, a trainee of the fourth cohort of the Rwanda Field Epidemiology and Laboratory Training Program (FELTP), is currently working at Nyanza District Hospital as the supervisor in charge of community health activities. In this position, he provides technical support in planning, implementation, monitoring and coordination of community health programs and nutrition. He is also a member of the Integrated Disease Surveillance and Response (IDS) team. He is active in disease surveillance and participates in outbreak response. Previously, Mr. Zabulon worked for the Ministry of Health of Rwanda at the district health level as a nutritionist for more than thirteen years. He is recognized as a pioneer of community-based nutrition programs in Rwanda. In 2013, he participated in the African regional conference on renewing health districts for advancing universal health coverage in Africa. He is interested in public health data analysis.

ABSTRACT

Authors: Zabulon Mutabazi, Joseph Ntaganira, Lawrence Rugema

Background: Home deliveries are markedly associated with adverse maternal and infant outcomes. The Rwanda Demographic and Health Survey (RDHS), 2014–2015 showed that 9% of deliveries in Rwanda occurred at home. Nyanza, one of the 30 districts in Rwanda, was among those which reported disproportionately higher rates of home deliveries. We conducted this study to assess factors associated with home delivery among mothers reported in rapid SMS system in Nyanza.

Methods: We conducted a cross-sectional study involving secondary analysis of surveillance data reported through the Rapid SMS system from January to December, 2017. Rapid SMS is a community based approach implemented by all districts in Rwanda to report data on key maternal and newborn child health indicators for every delivery. We conducted descriptive analysis, and calculated adjusted odds ratios (aOR) and 95% confidence intervals (CI) to identify factors independently associated with home delivery.

Results: During the period January–December 2017, the Rapid SMS system reported 4,942 deliveries. Of these, 256 (5.2%) were home deliveries. Home delivery was associated with previous history of delivery at home (aOR= 4.9, 95% CI 3.9–6.1), residing in rural areas (aOR = 3.6, 95% CI = 1.4–9.4), requiring at least one hour to get to the nearest health facility (aOR=1.9, 95% CI 1.4–2.5). Women who had a health insurance cover (AOR =0.08, 95% CI 0.06–0.12), were from Ubudehe (Rwanda government’s socio-economic classification of households where 1 is lowest and 4 is highest) category 3 or above, (aOR = 0.5, 95% CI 0.4–0.6) and had completed 4 antenatal clinic (ANC) visits (aOR =0.7, 95% CI=0.6–0.9) had lower odds of delivering at home.

Conclusions: Our study identified multiple factors associated with home delivery residence, accessibility, previous history of home delivery, ANC attendance and low socio economic status. In order to mitigate the challenge of home delivery, we recommend the development of a well-defined package of care to target mothers with previous history of home delivery, poor accessibility to health facilities and lower socio-economic status.
ABSTRACT

Authors: Francis H Nanzaluka, William Davis, Lwito Mutale, Fred Kapaya, Patrick Sakubita, Nelia Langa, Angela Gama, Hammad S N’cho, Jennifer Murphy, Anna Blackstock, Eric Mintz, Margaret Riggs, Victor Mukonka, Nyambe Sinyange, Ellen Yard, Joan Brunkard

Background: On October 6, 2017, the Zambia Ministry of Health declared a cholera outbreak in Lusaka. By early December, 1,462 cases and 38 deaths had occurred (case fatality rate, 2.6%). We conducted a case-control study to identify risk factors.

Methods: A case was defined as any person with acute watery diarrhea (>3 loose stools in 24 hours) admitted to a cholera treatment center in Lusaka from December 16–21. Controls were neighbors without diarrhea during the same time period. Up to two controls were matched to each case by age group (2-4, 5-17, ≥18 years) and neighborhood. Surveyors interviewed cases and controls using a structured questionnaire, tested free chlorine residual (FCR) in stored water and observed presence of soap in the home. Conditional logistic regression was used to generate matched odds ratios (mOR) based on district and age group with 95% confidence intervals (CI).

Results: We enrolled 82 cases and 132 controls. Common drinking water sources among cases were borehole (35%), shallow wells (26%), and kiosks (13%). Stored water in 72% of case homes had acceptable FCR levels (>0.2 mg/L); 42% of cases reported chlorinating their water within five days of interview. In multivariable analyses, cases had increased odds of drinking borehole water (35% versus 23%, mOR=2.4, 95% CI 1.1–5.6); living in the same house as another case (34% versus 7%, mOR=6.2, 95% CI 2.5–15), and being male (54% versus 30%, mOR=2.5, 95% CI 1.4–5.0).

Conclusions: Use of groundwater for drinking, contact with a cholera case and male sex were associated with cholera. Based on these findings, we recommended health education about household water chlorination, and hygiene in the home. Emergency responses included providing chlorinated water through emergency tanks, and maintaining adequate FCR levels through close monitoring of water sources.
Nassar, Abdulkareemi

Country: Yemen

Abstract Title: Cutaneous Leishmania Outbreak at Bani Oshb sub-district, Hajjah Governorate, Yemen, July 2018

Short Biography: Dr. Abdulkareem Ali Hussein Nassar obtained his M.Sc. degree in public health in 2014 from Sana’a University in Yemen. Currently, he is a resident in the fourth cohort of the Yemen Field Epidemiology Training Program (FETP), with a special interest in field research and public health. As an FETP resident, he carries out analyses of integrated outreach activities and an evaluation of the dengue surveillance system. He has also conducted many outbreak investigations, e.g., measles and dengue. He won the second place poster award at the 12th International Epidemiological Association Eastern Mediterranean Regional Scientific Meeting held in Beirut from February 21-23, 2019.

ABSTRACT

Authors: Abdulkareem Ali Nassar, Hassan M, Almahkri A, Al Amad M. and Al Serouri A.

Background: Cutaneous leishmaniasis (CL) continues to be one of important health problems in Yemen. On 23 July 2018, the surveillance officer in Hajjah governorate reported an increased number of suspected CL in Bani Oshb sub-district. On 24 July 2018, a field epidemiology team was sent to determine risk factors and recommend control measures.

Methods: Descriptive study followed by case-control study was performed. Cases were defined as any person who met the WHO suspected or confirmed case definition living in Bani-Oshb sub-district during August 2017 –July 2018. A control was any person living in the sub-district having no new or old skin lesion during same period. Data collected on individual, housing and animal risk factors. Attack rate, odds ratios (OR) and 95% confidence intervals (95% CI) were calculated, with p< 0.05 considered significant. Twenty-two skin scrapings were taken for lab confirmation.

Results: Thirty cases were identified. 57% were females and 80% were children aged <15 years who had an attack rate of 7/1000. 77% of cases had one lesion and 67% on their faces. There were significant associations between CL and female gender, (OR=5.2, 95% CI 1.7–16.5), malnutrition (OR = 5.2, 95% CI 1.7–16.5), not using bed net (OR = 14.5, 95% CI 1.7–122.4), dark houses (OR=6.4, 95% CI 2.1–19.7), houses without windows screen (OR = 5.2, 95% CI 1.3–21.2), plantation around (OR = 6.5, 95% CI 2.1–20.5), animals inside or close to house (OR = 9.3, 95% CI 1.9–46.7), rising animals (OR=8.1, 95% CI 1.6–40.7), existence of rodent (OR=14.5, 95% CI:1.7–122.4). Out of the 22 skin scrapings, 21 (96%) were positive for amastigotes.

Conclusions: CL Outbreak was confirmed. The identified risk factors suggest suitable environment for vector. Effective vector control (e.g. impregnated mosquito nets, pesticide spraying) together with raising community awareness are recommended. Introducing community-based surveillance will foster surveillance sensitivity.
Nsereko, Godfrey

Country: Uganda

Abstract Title: Malaria Outbreak Facilitated by Appearance of Vector-Breeding Sites after Heavy Rainfall and Inadequate Preventive Measures: Nwoya District, Uganda, March–May 2018

Short Biography: Godfrey Nsereko is a second year fellow of the fourth cohort of the advanced field epidemiology training program (FETP) of Uganda, the Uganda Public Health Fellowship Program. He is assigned to the National Malaria Control Division of the Ministry of Health of Uganda, where he has championed malaria mortality surveillance, epidemic preparedness and response, and publication of a quarterly national malaria bulletin. He has led public health action-driven disease investigations into causes and risk factors of malaria outbreaks within Uganda. He has interest in both infectious disease and non-communicable disease epidemiology. He received an AFENET grant-writing opportunity for a project to reduce maternal mortality due to malaria in pregnancy in Uganda. He is a member of the AFENET Corps of Disease Detectives (ACoDD), National Stop Transmission of Polio (NSTOP) and National Rapid Response Teams. He is a national trainer of Integrated Disease Surveillance and Response (IDSR) and Ebola virus disease surveillance and contact tracing.

ABSTRACT

Authors: Godfrey Nsereko, Daniel Kadobera, Denis Okethwangu, Joyce Nguna, Alex Riolexus Ario

Background: Malaria is a leading cause of morbidity and mortality in Uganda. In April 2018, malaria cases surged in Nwoya District, northern Uganda, exceeding the action thresholds. We investigated to assess the outbreak’s magnitude, identify transmission risk factors, and recommend evidence-based control measures.

Methods: We defined a malaria case as onset of fever in a resident of Nwoya District with a positive Rapid Diagnostic Test or microscopy for malaria P. falciparum from 1 February to 22 May 2018. We reviewed medical records in all health facilities of affected sub-counties to find cases. In a case-control study we compared exposure risk factors between 107 case-persons and 107 asymptomatic controls matched by age and village. We conducted entomological assessment on vector-density and behavior.

Results: We identified 3,879 case-persons (attack rate [AR] = 6.5%, 3879/59974) and 2 deaths (case-fatality=5/10,000, 2/3879). Females (AR=8.1%, 2485/30563) were more affected than males (AR=4.7%, 1394/29411). Of all age groups, the 5-18 year age group (AR=8.4%, 1809/21533) was most affected. Heavy rain started on 4 March; a propagated outbreak began during the week of 2 April. In the case-control study, 55% (59/107) of case-patients and 18% (19/107) of controls had stagnant water around households for several days following rainfall (ORM-H=5.6, 95%CI 3.0–11); 25% (27/107) of case-patients and 51% (55/107) of controls wore long-sleeve cloths during evening hours (ORM-H=0.30, 95%CI 0.20–0.60); 29% (31/107) of case-patients and 15% (16/107) of controls did not sleep under a long-lasting insecticide-treated net (LLIN) (ORM-H=2.3, 95%CI 1.1–4.9); 37% (40/107) of case-patients and 52% (56/107) of controls had ≥1 LLIN per 2 household members (ORM-H=0.54, 95%CI 0.30–0.97). Entomological and environmental assessments showed the predominant malaria vector to be Anopheles gambiae sensu lato, with indoor resting density of 4 mosquitoes/household/night. The household index, measuring larval density in active breeding sites, was 2.3% (5/214). Mosquito larvae were present in standing water in a river, a stream and excavated pit near the most affected communities.

Conclusions: Increased vector breeding sites after heavy rainfall, together with inadequate malaria preventive measures caused this outbreak. We recommended increasing coverage for LLINs and larviciding breeding sites.
Orózco, Marcela

Country: Australia

Abstract Title: Evaluation of the Surveillance System for Acute Neurologic Syndrome Associated with Zika – Northwest and Southwest Regions, Guatemala, 2016-2017

Short Biography: Ana Marcela Orózco Granados finished her bachelor’s studies in sciences and letters at the Technological Institute of the University of the Valley of Guatemala (2007), her degree in medicine and surgery at the University of San Carlos of Guatemala (2015), and her intermediate Field Epidemiology Training Program training at the University of the Valley of Guatemala (2017). Currently, she works at the National Institute of Forensic Sciences in Retalhuleu, Guatemala as a consulting physician.

ABSTRACT

Authors: Dr. Marcela Orozco

Background: After confirming autochthonous transmission of Zika virus in Guatemala in November 2015, many cases were reported in the western regions of the country. With description of Zika virus-associated Guillain-Barre Syndrome (ZIKV-GBS), the Epidemiology Department implemented ZIKV-GBS surveillance in September 2016. We evaluated the sensitivity, acceptability and timeliness of ZIKV-GBS surveillance in national hospitals of western Guatemala between October 2016 and June 2017.

Methods: We evaluated sensitivity of the case definition (Brighton criteria) in three hospitals by conducting search for suspected cases in medical records including differential diagnoses of GBS, using CDC’s screening form. We evaluated acceptability in five – three notifying and two non-notifying – hospitals through staff interviews (N=208; 58 physicians, 135 nurses, 15 technicians) exploring knowledge and attitudes about ZIKV-GBS surveillance. We evaluated timeliness by reviewing ZIKV-GBS surveillance records (N=45), calculating the period between case identification, time of specimen collection and shipment to the laboratory. We calculated frequencies, means and proportions; and assessed differences by Chi2 and p<0.05.

Results: After reviewing 103 medical records, we found 20 suspected cases (70% GBS), of which one was notified (sensitivity=5%; 1/20). Most staff had low acceptability (mean=61%; notifying hospital=57% vs. non-notifying=70%). Knowledge of ZIKV-GBS surveillance varied by hospital type (case definition: notifying=35% vs. non-notifying= 19%, p<0.02; and surveillance form: notifying=33% vs. non-notifying= 10%, p<0.04); and by staff type (case definition: physicians=50% vs. nurses=29%, p<0.01; and sample collection: physicians=53% vs. nurses=36%, p<0.02). Timeliness fared better with 48% of cases having sample collected within one week of symptom onset.

Conclusions: We documented low sensitivity and acceptability of ZIKV-GBS surveillance that affects case identification, and prevention and control measures in endemic areas. We recommend modifying ZIKV-GBS surveillance and strengthening Epidemiology Units in national hospitals through standardize case definitions and notification formats that facilitate case reporting and to train the personnel about the SNA Surveillance System associated with Zika.
Plotoge, Amalia

Country: Canada

Abstract Title: Evaluation of the Enhanced Syphilis Surveillance System - British Columbia, Canada, 2018

Short Biography: Amalia Plotoge is a second year field epidemiologist with the Canadian Field Epidemiology Program (CFEP). She brings with her a wealth of experience in public health at the local, national and international levels; her interests span both communicable and non-communicable disease epidemiology. For the past year and a half she has focused on the surveillance of sexually transmitted infections at the British Columbia Centre for Disease Control in Canada. Notably, she conducted an evaluation of the enhanced syphilis surveillance system and led projects focused on improving the representativeness of the molecular surveillance of gonorrhea in the province. During her time with the CFEP, she was also deployed on two mobilizations: First, to a remote Inuit community in Canada’s arctic to provide epidemiological support for a tuberculosis outbreak, and most recently as a surveillance officer in Bangladesh with the World Health Organization’s Rohingya refugee response.

ABSTRACT

Authors: Amalia Plotoge, Venessa Ryan, Christine Lukac, and Jason Wong

Background: From 2010 to 2015, the incidence of infectious syphilis increased nearly 5-fold in British Columbia (BC), Canada. In response, syphilis surveillance was enhanced in 2016 to improve collection of data on cases (i.e. geography, HIV co-infection, ocular syphilis) and partners. Using the enhanced data, Quarterly reports were developed for public health regional health authorities (RHAs) stakeholders. In 2018, an evaluation was initiated to determine whether the enhanced surveillance supported syphilis reduction efforts.

Methods: Using The CDC Guidelines for Evaluating Public Health Surveillance System, three attributes were evaluated: data quality, sensitivity, and usefulness. Data quality was measured as the change in completeness of key variables before versus after enhanced surveillance was implemented (2010-2015 vs. 2016-2017, respectively). Significance was assessed using interrupted time series regression analysis. Sensitivity of ocular syphilis was determined by comparing enhanced surveillance data versus a chart review. Usefulness of enhanced reports was assessed through an online stakeholder questionnaire.

Results: Data quality improved for postal code (38% vs. 13% missing, p<0.0001), but not other variables, such as sexual orientation or HIV co-infection. Enhanced surveillance did capture whether HIV was diagnosed at or around the time of syphilis diagnosis and viral load, which were not previously collected. Sensitivity to detect ocular syphilis was 97%. Stakeholders (n=9) rated the enhanced indicators as “useful/very useful” (89%). Reports were considered “very/extremely important” for monitoring regional trends (89%) and for supporting testing/clinical strategies (e.g. HIV pre-exposure prophylaxis). Stakeholders reported wanting data at lower geographic regions (78%), and in interactive dashboards (67%).

Conclusions: Enhanced surveillance provided additional data to more thoroughly describe the epidemiology of syphilis in BC. It provided information needed by stakeholders to more accurately describe syphilis spatial epidemiology, and better assess the potential for HIV transmission, which informed regional programs. Additionally, stakeholder feedback was used to identify improvements to knowledge translation.
Roy, Kaushik

Country: India

Abstract Title: Cholera outbreak following a training camp: Shimoga district, Karnataka, India, 2018

Short Biography: Dr Kaushik Roy is a current fellow of FETP at Indian Council of Medical Research-National Institute of Epidemiology (ICMR-NIE), Chennai, India, offering a MPH (Epidemiology and Health System) degree. He completed his MD (Community Medicine) from the Armed Forces Medical College, Pune, India in 2013 and is presently in his second year in the FETP 2017-19 programme. Kaushik has work experience of eleven years as a public health specialist in the Indian Navy. He is interested in infectious disease epidemiology and advanced statistics.

ABSTRACT

Authors: Kaushik Roy, Gudadappa Kasabi, Tarun Bhatnagar, Manoj Murhekar

Background: Most cholera outbreaks in India are in settings of ill-maintained piped water supply with sewage contamination. On 11 February 2018, 63 cases of Acute Diarrheal Disease (ADD) and three deaths were reported, post a training event for paramilitary police force at Mydolalu village, Karnataka, India. We investigated the outbreak to determine the cause and source, and recommend control measures.

Methods: We defined a probable case as sudden onset of three or more watery stools within 24 hours in residents of village between 1-22 February. Active (door-to-door survey) and stimulated passive (healthy facility-based) surveillance was done to identify cases. The stool specimen from 22 case-patients were sent for microbiological investigation. We compared the exposure in 88 case-patients with 88 age, gender and neighbourhood matched controls. We inspected the water supply and sanitation of the village and the training camp.

Results: Vibrio cholerae O1 Ogawa biotype El Tor was isolated from 36% stool samples tested. The attack rate was 5.7% (n=142) and five deaths were reported. Drinking water from either pipeline two of over-head water storage or water consumption from teashop (same water source) were significantly associated (mOR 11.2, 95%CI 4.5-28.0, PAF 80.7% 95% CI 68.4-93%) with occurrence of ADD. Investigation showed lack of sanitation during the training camp and rise of ADD cases among police trainees. Between 8 to 9 February, one of the trainee suffered from ADD defecated near the origin of pipeline two, which was leaking. There was no provision for disinfection of water before supply. Repair and chlorination of water supply ensured control of the outbreak.

Conclusions: Environmental contamination during training camp with unsafe water supply and sanitation in the village gave rise to cholera outbreak. We recommend routine chlorination of drinking water in the village and provision of safe water and sanitation during camps.
Uwamahoro, Bibiane

Country: Rwanda

Abstract Title: Factors associated with unsuppressed viral load among HIV-positive patients on Anti-retroviral therapy, Gihundwe Hospital, Rusizi District, Rwanda, 2016-2017

Short Biography: Mrs. Bibiane UWAMAHORO, a resident in fourth cohort of Rwanda FELTP, is currently working as a supervisor in charge of Integrated Diseases Surveillance and Response (IDSR) in Gihundwe District Hospital, Western Province in Rwanda country. As FELTP resident, she was invited to do outbreak investigation on measles; Cholera and other epidemic which appear in her Hospital catchment area, even in all Country when there is an outbreak occurs. As competences, she conducted a research to assess factors associated with unsuppressed viral load in Gihundwe District Hospital now she is at the end stage of his thesis.

ABSTRACT

Authors: Mrs. Bibiane UWAMAHORO, Prof. Joseph NTAGANIRA, Dr. Jared Omolo

Background: HIV remains a major public health challenge in Rwanda, with an estimated national prevalence of 3% among adults aged 15-49 years (4% in men and 2% in women). As the country strives to achieve HIV epidemic control by enrolling more HIV-positive patients into anti-retroviral therapy (ART), monitoring viral suppression and identifying determinants of treatment failure is important to inform timely interventions. We estimated the proportion of virologically non-suppressed patients, and identified the factors associated with non-suppression among patients on ART at Gihundwe hospital, Rusizi district among HIV-positive (HIV+) individuals enrolled in HIV Program.

Methods: We conducted a cross-sectional study by abstracting clinical data from a randomly selected sample of 384 patients on ART during the period, July 2016 to September 2017. We defined virological non-suppression as having >20 copies of viral Ribonucleic acid (RNA)/ml at least six months after ART initiation. We obtained data on socio-demographic, clinical, psychological and behavioral characteristics from patients’ clinical files. We used logistic regression to identify factors independently associated with virological non-suppression.

Results: Of the 384 patients, 215 (56%) were females while the median age was 44 years (5-73 years). Eighty-nine (23%) patients were virally non-suppressed. After multivariate analysis, poor adherence (Adjusted Odds Ratio (aOR)=91.0, 95% Confidence Interval (CI) 35.4 –234.2), age group 15-24 years compared to >25 years (aOR=15.5, 95% CI 2.9–82.7), age group 5-14 years compared to >25 years (aOR=9.7, 95% CI 1.1–90.0) and depression (aOR 25.3, 95% CI 4.5–141.8) were independently associated with non-virologic suppression.

Conclusions: We identified poor adherence, depression and young age as predictors of virologic failure among HIV-positive patients on ART at Gihundwe hospital. We recommended intensified adherence counselling, psychosocial and mental health support especially for young HIV-positive clients on ART.
Vighio, Anum

Country: Pakistan

Abstract Title: Risk factors of Extensive Drug Resistant Typhoid Fever among Children in Karachi: A Case-Control Study, 2018

Short Biography: Dr. Anum Vighio is a fellow of the Field Epidemiology and Laboratory Training Program (FELTP) of Pakistan and is attached with the Regional Disease Surveillance and Response Unit (RDSRU) at Karachi. Prior to this, she worked at the Directorate of Health Services, Karachi in the Preventive Department where her responsibilities included monitoring polio and health campaigns and compiling their data. She was part of the early response team deployed for a Chikungunya outbreak in Karachi in late 2016 and later participated in the WHO Mission for Chikungunya. As an FELTP fellow, she has multiple success stories under her belt, including chickenpox and Congo-Crimean hemorrhagic fever outbreak investigations. Furthermore, her expansive work on extensively drug resistant typhoid fever has helped policy-making for Sindh. Her subjects of interest include infectious diseases and One Health.

ABSTRACT

Authors: Anum Vighio, Ishfaque Hussain Memon, Syed Masroor, Muhammad Asif Syed

Background: From May-October 2018 cases of lab confirmed extensive drug resistant typhoid fever (XDR-TF) increased among children under 15 years. Resistance included first and second line antibiotics and ceftriaxone. XDR-TF is responsible for a continuing outbreak in Pakistan that began in November 2016. Our study objective was to identify risk factors associated with XDR-TF.

Methods: Using case-control design, we defined XDR-TF cases as, <15 years old, resident of Karachi with typhoid fever, resistant to chloramphenicol, ampicillin, trimethoprim-sulfamethoxazole, fluoroquinolones, and third-generation cephalosporins on blood culture and sensitivity during September–October 2018. Hospital-based controls (1:1) were matched with age and sex. We obtained relevant information by patient interviews and medical records. Logistic regression was used to identify factors significantly associated with XDR-TF.

Results: We identified 133 laboratory-confirmed cases of XDR-TF during September–October 2018 in laboratory-based surveillance data of Ministry of Health. Of these, we obtained complete information from 75 patients who were included. Case-patients were aged 1–15 years (mean 6.5 years; 53% male). In multivariate logistic regression model, we found positive association of XDR-TF with having family member with previous typhoid illness (exposure rate cases 21% and control 1%: adjusted-OR 16; 95% CI: 1.9–142), using foul-smelling municipal water at home (exposure rate cases 44% and control 7%: adjusted-OR 9; 95% CI: 3-27) and eating French-fries with improperly prepared (adulterated with water) tomato-ketchup from street vendors (exposure rate cases 38% and control 4%: adjusted-OR 8; 95% CI: 2-35) when compared to controls.

Conclusions: This study suggested that community water supply needed to be improved along-with education of street vendors on the risks of improperly preparing food. It is also recommended that children should be vaccinated and illicit the disease specific health education campaign with the help of media.
Xia, Yunting

Country: China

Abstract Title: Contributing Factors to the Obesity Epidemic in China: Weight Perception and Control Behaviors

Short Biography: Ms. Yunting Xia, a resident of the 17th cohort of the Chinese Field Epidemiology Training Program (FETP), is currently working as a public health professional at the Chinese Center for Disease Control and Prevention. During her residency, she conducted secondary data analysis of the China Chronic Disease and Risk Factor Surveillance Survey, focusing on the epidemiology of obesity and the factors related to weight perception and control behaviors in adults. She also conducted research on the management of chronic diseases.

ABSTRACT

Authors: Yunting Xia, Jianhong Li, Yali Zhang, Tao Shen

Background: In 2004, the prevalence of obesity in China was 7%, while in 2013 it had risen to 14% doubling within 9 years’ time. Deaths attributable to high body mass index (BMI) increased from 301,231 in 1990 to 640,294 in 2013, with cardiovascular disease causing the highest mortality. Obesity increases the risk of hypertension, dyslipidemia, diabetes by 2-4 times. Reduction of BMI is affected by weight perception and cultural influences. This study aimed to understand weight perception and control behaviors among overweight and obese adults, and assess the effects of weight underestimation on weight-control behavior.

Methods: Nationally representative data was collected in 2013 by the China Chronic Disease and Risk Factor Surveillance survey which used a multistage stratified cluster sampling method. Demographic characteristics, weight perception and weight-control attempts were obtained from in-person interviews. 87,482 overweight (BMI 24.0–27.9) and obese (BMI≥28.0) adults aged ≥18 years were included. Complex sampling was weighted and multiple logistic regression models were used to correlate weight underestimation and weight-control behavior and calculation of odds ratio (OR) and 95% confidence interval (CI).

Results: Among overweight and obese adults, 75% (95%CI 73%–76%) underestimated their weight status, 16% (95%CI 15–18%) attempted weight-control. Among 12,131 individuals who reported trying to control weight, only 32% (95%CI 29–34%) used both dieting and increased physical activity. Males, elderly people, rural residents, and those with lower education or economic level were at higher risk for weight underestimation and less likely to attempt weight-control. After adjustment for socio-demographics and measured weight status, those who underestimated their weight status were less likely (OR=0.23, 95% CI: 0.20–0.26) to attempt weight-control.

Conclusions: Three-quarters of overweight and obese adults underestimated their weight status, thus underestimating their risk for cardiovascular diseases and diabetes. Awareness of risk factors and interventions for overweight and obese individuals are strongly needed in China through aggressive educational campaigns, increased physician awareness and heightened public health interest to find useful interventions.
Oral Abstract Listing

Full abstracts are found on the designated page numbers.

6:45 pm  Chueh, Yu-Neng – Taiwan. Salmonellosis Outbreak in a Restaurant Associated with French Toast Sandwich — Chiayi County, Taiwan, 2018 (page 34)

7:05 pm  Golicha, Qabale – Kenya. Factors Associated with Tuberculosis Treatment Interruption in Igembe South, Meru County, Kenya (page 35)

7:25 pm  Katelaris, Anthea – Australia. Investigation and Response to Australia’s Largest Outbreak of Leptospirosis – New South Wales, Australia, 2018 (page 36)

7:45 pm  Kokuhabwa, Mukurasi Irene – Tanzania. Linkage into Care Among Newly Diagnosed HIV-infected Individuals in Njombe Region, Tanzania 2017-2018: A Prospective Cohort (page 37)

8:05 pm  Lehlewa, Asaad Mahdi Asaad – Iraq. Cutaneous leishmaniasis outbreak in Diyala Governorate, Iraq, 2018 (page 38)

8:25 pm  Singh, Akhileshwar – India. Risk Factors for Melioidosis in Udupi District, Karnataka, India, January 2017-July 2018 (page 39)

The following oral presenters will present during the EIS Conference (prior to FETP International Nights):

8:30 am Tuesday, April 30, 2019

Concurrent Session E2: Chronic Disease and Health


3:10 pm Wednesday, May 1, 2019

Concurrent Session L1: Maternal and Child Health

Adine, Marquis – Germany. Impact of the recommendation for routine Rotavirus vaccination in infants and vaccine uptake in Germany, 2013-18 (page 41)
Salmonellosis outbreak in a restaurant associated with French toast sandwich—Chiayi County, Taiwan, 2018

Short Biography: Mr. Yu-Neng Chueh graduated from the Institute of Microbiology and Immunology of National Yang Ming University. Since completing his master’s degree, he has been engaged in the public health department of the New Taipei City government for enterovirus and enteric disease surveillance programs. He is currently an assistant technical specialist at the Taiwan Centers for Disease Control. His work focuses on monitoring, investigating and implementing interventions for dengue fever control. He joined the Taiwan Field Epidemiology Training Program (FETP) in 2017. As an FETP trainee, he has conducted several outbreak investigations including foodborne and dengue fever outbreaks. Mr. Chueh is passionate about field epidemiology and the prevention and control of communicable diseases.

ABSTRACT

Authors: Mr. Yu-Neng Chueh, Dr. Chia-Ping Su, Ms. Tsai-Hsia Du, Ms. Chao-Jung Lee, Ms. Ying-Su Liao, Dr. Chien-Shun Chiou, Ms. Jui-Chen Chang, Ms. Chiao-Wen Lin, Ms. Tsuey-Fong Lee

Background: Salmonella is a common pathogen in foodborne outbreaks in Taiwan; however, the contamination routes remain largely unknown. On April 27, 2018, Taiwan CDC was notified of a salmonellosis outbreak related to a restaurant, with 13 patients laboratory-confirmed. We investigated the outbreak to identify the infection source and recommend preventive measures.

Methods: We conducted a case-control study. We recruited and interviewed patients with gastroenteritis and patrons through reviewing medical records from an emergency department, foodborne illness complaints, restaurant orders, and referrals from patrons. We defined case-patients as patrons with diarrhea occurring within 72 hours after consuming the restaurant foods during April 16–27, 2018. We conducted bivariate analyses to identify foods associated with illness. Stools from patients and food handlers, foods and environmental samples were tested for enteric pathogens. Salmonella isolates were analyzed using pulse-field gel electrophoresis (PFGE) and whole genome sequencing (WGS). We inspected the restaurant and reviewed surveillance camera recordings to identify possible source of contamination during food preparation.

Results: We identified 47 case-patients; 14 were hospitalized and one died. Median incubation period was 10.5 hours (range: 0.5–52.5 hours). Main symptoms included diarrhea (n=47, 100%), fever (n=32, 68%) and abdominal pain (n=31, 66%). Compared with 44 controls, case-patients were more likely to have eaten a French toast sandwich (OR=102.4, 95% CI 18.7–952.3). Salmonella Enteritidis were yielded from 16 case-patients, sharing indistinguishable PFGE and WGS results. Foods and food handler samples tested negative. Environmental inspection did not find lapses in food safety practices. Surveillance camera recordings showed that handmade liquid eggs, one ingredient of French toast sandwiches, were contaminated by egg shells stored at room temperature and reused for days.

Conclusions: French toast sandwich containing handmade liquid eggs could be the infection source. Restaurants should use pasteurized liquid eggs and ensure safe processing and storage techniques.
Golicha, Qabale

Country: Kenya

Abstract Title: Factors Associated with Tuberculosis Treatment Interruption in Igembe South, Meru County, Kenya

Short Biography: Qabale Golicha is a graduate of the Kenya Field Epidemiology and Laboratory Training Program (FELTP) advanced training. During her residency, she was placed at the National Tuberculosis (TB) Control Program, where she was involved in surveillance data analysis; protocol-based epidemiological study; and participated in designing and conducting surveys. She presented the findings of her surveillance project on TB/HIV coinfection at the AFENET international conference held in Abuja, Nigeria in 2016. She also led the investigation of the largest cholera outbreak in the largest refugee camp in Kenya, where a report of her team’s findings was published in the CDC MMWR in 2018. Post-training, she worked in Laikipia County as the county epidemiologist and technical lead for Universal Health Coverage implementation. Currently, she works for the county government of the Isiolo department of health as the chief officer for health. Her priority areas include planning for strengthening disease surveillance and outbreak response capacity, improving immunization coverage, and implementing universal health coverage in the county.

ABSTRACT

Authors: Qabale Golicha, Richard Kiplimo, Ann Mwangi, Mark Kola, Zeinab Gura

Background: Kenya has a national TB prevalence of 426 cases per 100,000 persons and a loss to follow-up rate of 5.3%. Treatment Interruption, a precursor for loss to follow-up involves not taking TB medication for two consecutive days or more. In 2017, Igembe South had a loss to follow-up rate of 5.6%. We identified factors associated with treatment interruption among TB patients in Igembe South.

Methods: Tuberculosis Treatment registers were reviewed to determine proportion of treatment interrupters. A case control study was conducted among 306 participants (153 cases, 153 controls). A case was a failure to adhere to prescribed TB medication for two consecutive days or more among patients on treatment during 2015–2016, while a control was adherence to prescribed medication among patients on treatment during 2015–2016. Cases and equal numbers of controls were selected from register by systematic random sampling. We calculated crude and adjusted odds ratios (aOR) and 95% confidence intervals (CI) with factors with p-value ≤0.05 were considered statistically significant.

Results: Of 1,461 registered TB patients, 1,046 (72%) were male, 1,289 (88%) had pulmonary TB, 1,430 (98%) were new patients, 279 (19%) were HIV co-infected and 180 (12%) interrupted treatment. Among the treatment interrupters, 120 (67%) were male, 145 (81%) had pulmonary TB and 70 (39%) were HIV co-infected. Factors associated with treatment interruption included: waiting time at the health facility for ≥1 hour (aOR=3.9, CI 2.1–7.1), monthly income ≤30 USD (aOR=2.5, CI 1.4–4.2), taking alcohol (aOR=2.3, CI 1.2–4.4), cost of transport to health facilities of ≥1.5 USD (aOR=2.0, CI 1.3–3.4) and not disclosing one’s TB status to relatives (aOR=2.9, CI 1.1–7.5).

Conclusions: Interruption rate among TB patients of Igembe South was double the national average. Waiting time ≥1 hour, high transport cost to health facility, income ≤30 USD and not disclosing one’s TB status were risk factors for treatment interruption. We recommended improvement of triage, encourage disclosure of TB status to relatives and innovative ways to minimize financial costs associated with seeking treatment.
Katelaris, Anthea

Country: Australia

Abstract Title: Investigation and response to Australia’s largest outbreak of leptospirosis – New South Wales, Australia, 2018

Short Biography: Dr. Anthea Katelaris is a trainee in Australia’s field epidemiology training program, the Master of Philosophy (Applied Epidemiology) at the Australian National University. She is based in Sydney, at Health Protection New South Wales, within the state’s Ministry of Health. Anthea is a medical doctor, undertaking specialist training in Public Health Medicine. She has worked clinically in Sydney and the tropical north of Australia, including in indigenous-owned Arnhem Land. She has also interned with WHO Europe in Vaccine Preventable Diseases and volunteered in a clinic in Timor Leste. Before starting field epidemiology training, she completed a MSc Public Health (with Distinction) at the London School of Hygiene & Tropical Medicine, where her thesis was on the effectiveness of BCG against acquiring tuberculosis infection. She currently works across communicable disease and environmental health issues. She investigated and responded to an outbreak of leptospirosis and is completing projects on Legionnaires’ disease surveillance and influenza epidemiology.

ABSTRACT

Authors: Anthea L Katelaris, Keira Glasgow, Anthony Zheng, Suhasini Sumithra, Daneeta Hennessy, Stacey Kane, Kerryn Lawrence, John Turahui, Janet Terry, Debra van den Berg, Paul Corben, Vicky Sheppeard, Jeremy McAnulty

Background: In June 2018, an outbreak of leptospirosis was recognised among raspberry workers from a mixed-berry farm. Initial detection was via polymerase chain reaction (PCR). We conducted an investigation to identify risk factors for infection to inform control measures.

Methods: We detected cases through mandatory laboratory notifications, awareness-raising among farm employees, clinician alerts and syndromic surveillance of hospital presentations. Confirmed cases had a four-fold rise or single titre ≥400 on microscopic agglutination test (MAT) and positive IgM. Probable cases were IgM or PCR positive. In a case-control study among raspberry workers on the farm, we compared questionnaire responses on potential risk-factors between cases and seronegative controls (opportunistically recruited onsite). Adjusted odds ratios (aOR) were calculated from logistic regression using backwards elimination. We assessed environmental risks on-site and tested trapped rodents for leptospirosis.

Results: We identified 69 cases with onsets between April and August 2018 (50 confirmed, 19 probable). All were raspberry workers from the single farm. All confirmed cases were MAT-positive for Leptospira borgpetersenii serovar Arborea. Compared with controls, cases were less likely to wear gloves (39/67 [58%] versus 53/69 [77%], aOR=0.30, 95% CI 0.20–0.88) and more recently employed (median 0.54 versus 1 year employed; each additional year aOR=0.76, 95% CI 0.61–0.95). On unadjusted analysis, cases more commonly reported always having scratched hands (28/67 [42%] versus 18/69 [26%), OR=2.70, 95% CI 1.13–6.43). Rodent activity was evident around raspberry plants. Three of twelve mice tested PCR and MAT positive (for Leptospira Arborea).

Conclusions: Workers were likely exposed through scratches inflicted during harvesting, which potentially came into contact with environmental leptospires from mice. Control measures included enhanced glove-use, short-term doxycycline prophylaxis and rodent control. The outbreak subsequently subsided. We think hand protection should be used to mitigate risk among raspberry workers. Chemoprophylaxis may assist in controlling outbreaks. Including PCR in surveillance definitions enhances case detection.
Authors: Kokuhabwa Irene Mukurasi, Candida Moshiro, Rogath Kishimba, Ahmed Abade, Loveness Urio, Diana Faini

Background: HIV continues to be a major public health problem in developing countries including Tanzania. Early linkage to HIV care forms an essential bridge to the first and second 90 of the UNAIDS 90-90-90 goal and remains a key challenge to the attainment of this goal. This study aimed at identifying factors associated with linkage to HIV care, one year after the national adoption of the ‘test-treat’ guideline.

Methods: The study was conducted in Njombe region during December 2017–February 2018. Newly HIV diagnosed individuals aged ≥18 years tested at facility and community testing points were enrolled and followed for 30 days. Socio-demographic data and factors associated with linkage information were collected using questionnaires. Time to linkage was estimated using Kaplan–Meier and Cox-proportional hazard regression was used to evaluate factors associated with linkage to care. Ethical clearance was granted by Muhimbili University of Health and Allied Sciences Institutional Review Board.

Results: The median age of the 382 enrolled HIV clients was 32 years (IQR 26 to 38 years). Females constituted 70% while the majority were married. Of those enrolled 70% (266/382) were linked to care after one month with median time to linkage being one day (IQR 1–2 days). Linkage to care for those who tested at a community vs facility testing point was 74% vs 68% (p=0.1). In the multivariate analysis, having secondary education or higher was independently associated with higher rate of linkage (aHR=2.53, 95% CI 1.27–5.02) whereas, transport cost of >1 USD to HIV clinics was associated with lower linkage rate (aHR =0.37, 95% CI 0.15–0.90).

Conclusions: The overall linkage at one month was less than the desired 90%. Community linkage was slightly higher than facility linkage and higher education level was a predictor of linkage. We recommend strengthening interventions for early linkage, bringing HIV services closer to the community and continual community health education on importance of early linkage and early initiation treatment.
Lehlewa, Asaad Mahdi Asaad

Country: Iraq

Abstract Title: Cutaneous leishmaniasis Outbreak in Diyala Governorate, Iraq, 2018

Short Biography: Dr. Asaad Mahdi Asaad Lehlewa is a graduate of the second cohort of the Iraq Field Epidemiology Training Program (FETP). He completed the Postgraduate Public Health Program in International Health and was awarded a master’s degree from the National Institute of Public Health-NIPH in Japan in 2011. He is currently working as the Director of the Iraq Communicable Diseases Control Center (Iraq-CDC Center) within the Ministry of Health. Previously, he worked in different sections within Iraq-CDC Center (Bilharzia and Parasitic Diseases, Malaria, Viral Hepatitis, Acute Enteric Diseases and Zoonosis Diseases). He is a mentor for FETP residents, and he was a team leader for more than 10 outbreak investigations that occurred within the country in recent years. He also participated in different national and international workshops and conferences and attended a four-month fellowship at the University of Georgia Department of Food Science and Technology Center for Food Safety during 2015 as part of the Iraq Biosciences Fellowship Program by CRDF Global. He is focusing now on building national and sub-national response teams all over the country.

ABSTRACT

Authors: Dr. Asaad Asaad, Dr. Razzaq Alghanmy, Dr. Qais Aziz, Dr. Mohammad Ali Kareem, Dr. Hasanein Malik, Dr. Hanan Abdulghafoor Khaleel, Dr. Faris Lami

Background: Cutaneous leishmaniasis is endemic in Iraq. Historically, the number of reported cases declined because of malaria vector control activities. The latest countrywide outbreak started at the end of 2014 and continued throughout 2015 and 2016. The overall incidence rate was 0.9/103 and Diyala governorate reported the highest incidence rate (4/103 population). Large number of the population were displaced because of ISIS invasion of the governorate. The objectives of the current study were to identify risk factors of cutaneous leishmaniasis in Diyala governorate, and recommend control measures.

Methods: This is a population based, sex and age matched case-control study conducted in Muqdadiya and Mansuriya districts (500,000 population) in Diyala governorate. The investigating team used the cutaneous leishmaniasis case investigation form adopted by Zoonotic Diseases Section in Iraq Ministry of Health. A case-patient was defined as any person showing skin or mucosal lesions and diagnosed by a dermatologist as cutaneous leishmaniasis. The control was any person from the neighboring house proved to be free (and his family members) of these lesions. Unadjusted odds ratio (OR) and 95% Confidence Interval (CI) for each risk factor was calculated using logistic regression analysis.

Results: A total of 866 cases and controls were interviewed. The following personal factors were found statistically significant: rural residence (OR=3.2, 95% CI 2.0–5.1), internal displacement (OR=5.1, 95% CI 3.8–6.8) and outdoor sleeping (OR=4.1, 95% CI 1.3–12.2). Raising animals (OR=4.4, 95% CI 2.9–6.7), animal shed <100 meters from the house (OR=6.0, 95% CI 2.4–15.2), clay-made house (OR=2.6, 95% CI 1.7–2.9), <12 hours electricity power supply (OR=2.1, 95% CI 1.6–2.7), and presence of rodents (OR=5.0, 95% CI 3.5–7.2) were the significant housing conditions. Two factors were found protective, painted inner house (OR=0.5, 95% CI 0.3–0.7) and rodents control (OR=0.14, 95% CI 0.09–0.22).

Conclusions: Housing and personal characteristics were more important predictors of cutaneous leishmaniasis infection. Following the outbreak investigation, the health authorities launched rodent control and health education campaigns in all districts of Diyala governorate.
Singh, Akileswar

Country: India

Abstract Title: Risk Factors for Melioidosis in Udupi district, Karnataka, India, January 2017–July 2018

Short Biography: Dr. Akhileshwar Singh, an India EIS officer of cohort five, has completed his two-year EIS training from the National Centre for Disease Control in Delhi (February 2017–February 2019). Now he is working as a Senior Medical Officer under the Provincial Medical and Health Services (Uttar Pradesh, or UP), looking after the Integrated Disease Surveillance Program, Vector Borne Control Program in district Bareilly, UP, India. During his training tenure, he investigated cholera and measles outbreaks in Delhi, acute diarrheal disease in UP, and melioidosis in Karnataka. He completed his epidemiological study in identifying factors related to pre-hospital and hospital delay in Acute Coronary Syndrome cases admitted in a tertiary care center in Delhi. He has also worked in a non-communicable disease program (National Program for Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke) and done surveillance evaluation activities under this program. Now, he is pursuing his public health skills in State Health Services to strengthen the government system.

ABSTRACT

Authors: Akhileshwar Singh, Ashok Talyan, Vasudeva, Tanzin Dikid, Ramesh Chandra, Chiranjay Mukhopadhyay, Shyamsundar Shreedhar, Deepak Sudhakaran, Suma Nair, Mohan Papanna, Rajesh Yadav, Sujit Kumar Singh

Background: Melioidosis is a fatal bacterial illness, affecting both humans and animals, and a potential biological weapon. Annually, 44% of an estimated 165,000 cases globally occur in South Asia. Suitable environmental conditions and high burden of diabetes, a predisposing risk factor, makes India a hotspot. The death due to melioidosis of a 17-year-old boy in July 2018 in Udupi district, Karnataka state prompted us to conduct a wider study of melioidosis incidence and risk factors.

Methods: We defined a case as a resident of Udupi district diagnosed with Burkholderia pseudomallei by culture, confirmed by polymerase chain reaction during January 2017–July 2018. We identified cases from hospital records. We selected three gender and diabetes status-matched controls per case from patients hospitalized for non-infectious conditions during the same period. Socio-demographic and exposure data were collected from medical records and interviews. Matched odds ratios (mORs) with 95% confidence intervals (CI) were calculated using conditional logistic regression.

Results: We identified 19 cases, 74% males with a median age of 56 years (range 17–83 years). Most (90%) cases occurred during rainy season. Among cases, 83% were diabetics; the overall case fatality rate was 37%. Common presentations were fever (89%), cough (42%), joint pain (37%), and soft tissue swellings (14%). Among 19 cases and 57 controls, exposures such as contact with stagnant water (mOR 25.0, 95% CI 3.2–196.4), working in paddy fields (mOR 24.0, 95% CI 3.0–186.8), presence of collected rainwater around house (mOR 7.8, 95% CI 2.0–29.3) and cuts/abrasion due to injuries (mOR: 5.3, 95% CI 1.6–17.7) were significantly associated with melioidosis.

Conclusions: Melioidosis occurred among older diabetic males. Prolonged contact with stagnant water during routine or agricultural activities and open injuries were associated with acquiring melioidosis. We recommended sensitization of diabetic patients to use hand and foot protection such as gloves and gum boots during rainy season and for agricultural activities.
**Abstract**

**Authors:** Dr. Sa’ed Assaf, Dr. Ibrahim Ablan, Dr. Ahmad Abuslaih, Prof. Yousef Khader

**Background:** Diabetes mellitus (DM), hypertension, and lipid abnormalities are the major risk factors of cardiovascular disease. This study aimed to determine the prevalence, awareness, and control rates of diabetes, hypertension, hypercholesterolemia, and hypertriglyceridemia among Jordanian adults.

**Methods:** A multistage sampling technique was used to select a nationally representative sample of adults from the population of Jordan in 2018. Trained interviewers collected data using a questionnaire and collected blood specimens. The studied conditions were diagnosed based on the International Diabetes Federation criteria. The findings from this survey were compared with those from the 1994 survey that used the same methods and diagnostic criteria. The age-standardized prevalence rates (ASR) and 95% confidence intervals were calculated. Z-test was used to compare proportions of the two surveys at α of 0.05.

**Results:** This study included 1,193 men and 2,863 women aged from 18 to 90 years with a mean (SD) age of 43.8 (14.2) years. The ASR of DM were 32% (29–35%) among men and 18% (17–19%) among women. The ASRs of hypertension were 34% (31–37%) among men and 29% (27–31%) among women. Overall, the ASR of hypercholesterolemia and hypertriglyceridemia were 44% (42–46%) and 42% (40–44%), respectively. Compared to ASRs in 1994, the ASRs in 2018 increased significantly by 10% for DM (p<0.001), 4% for hypertension (p=0.033), and 20% for hypercholesterolemia (p<0.001), and 18% for hypertriglyceridemia (p<0.001). Of all patients with DM in 2018, there were 84% aware of diagnosis and 41% of treated patients had good glycemic control. Of those with hypertension, 61% were aware of hypertension and only 34% of those on treatment had controlled blood pressure.

**Conclusions:** The prevalence rates of DM, hypertension, and lipid abnormalities were considerably high, increasing, and they are poorly controlled. Therefore, health care systems should be strengthened for effective prevention and management of these conditions.
Abstract Title: Impact of the national recommendation for routine rotavirus vaccination in infants and vaccine uptake in Germany, 2013-18

Short Biography: Dr. Adine Marquis is a medical doctor who completed her doctoral thesis on virus infections following stem cell transplantation in children in 2011. She worked as a research fellow in non-communicable pediatric disease epidemiology and gained clinical experience as a medical resident in pediatrics. In 2017 she joined the German field epidemiology training program (FETP) at the department of infectious disease epidemiology at the Robert Koch-Institute Berlin, the German national public health institute. During her fellowship, she evaluated the routine rotavirus vaccination program in Germany from 2013-2018 and the national surveillance system for infectious diseases at the local level in view of the upcoming implementation of the national electronical-based surveillance system (DEMIS).

ABSTRACT

Authors: Adine Marquis, Judith Koch

Background: Routine rotavirus (RV) vaccination for infants has been recommended in Germany since August 2013 to reduce severe and nosocomial RV-gastroenteritis (RVGE) in under 5-year-olds. We aimed to assess vaccination coverage and determine the impact of the recommendation.

Methods: We estimated vaccination coverage from 2014 to 2017 using statutory health insurance prescription data (covering ~85% of the German population). We used RVGE-surveillance data of the German mandatory notification system stratified by epidemiological years (calendar-week 40 until the following year’s calendar-week 39) for impact assessment. We defined RVGE-associated hospitalizations of community-acquired RVGE as severe and RVGE-notifications with disease-onset of ≥2 days after hospitalization as nosocomial. We compared the time-period before RV-vaccine was utilized (2005/06–2007/08) with the period after the recommendation (2013/14–2017/18) and calculated incidence rate ratios (IRR) using Poisson regression. We analyzed hospital-discharge data (2006–2016) to determine the effect on intussusception using Wilcoxon rank-sum test.

Results: Vaccination coverage/birth-cohort increased from 59% (2014) to 81% (2017). Incidences of RVGE-outpatient cases, severe RVGE, and nosocomial RVGE among under 5-year-olds decreased by 74% (IRR=0.26, 95% CI 0.26–0.27), 70% (IRR=0.30, 95% CI 0.30–0.31), and 70% (IRR=0.30, 95% CI 0.30–0.31), respectively. Incidence of RVGE-outpatient cases in age groups ineligible for RV-vaccination decreased by 38% (IRR 0.62, 95% CI 0.61–0.63). The average number of intussusceptions in the first year of life decreased from 443 (range: 434–456) to 377 (range, 369–384) (p=0.03), while at age of the first vaccine-dose (7th–12th week of age) the average number was 18 (range, 14–21) compared to 27 (range, 16–30) (p=0.16).

Conclusions: Routine RV-vaccination in Germany is well-accepted and coverage continues to increase. With reduction of RVGE in under 5-year-olds and developing herd immunity in non-vaccinated age groups, the recommendations’ objectives were reached. The decrease of intussusceptions in the first year of life suggests potential protection by RV-vaccination but further research is needed. Therefore, routine RV-vaccination should be continued and vaccine uptake further increased to extent the positive effects.
DESCRIPTION OF AWARDS

JEFFREY P. KOPLAN AWARD FOR EXCELLENCE IN POSTER SCIENTIFIC PRESENTATION

The Jeffrey P. Koplan Award for Excellence in Poster Scientific Presentation was established in 2014 in honor of Dr. Jeffrey P. Koplan, former Director and 26-year veteran of the U.S. Centers for Disease Control and Prevention (CDC), for his outstanding contributions to improving public health globally and his commitment to excellence in scientific research, analysis, and presentation. The Jeffrey P. Koplan Award is presented to the winner of the scientific poster presentation that most effectively emphasizes the results of an investigation and its impact on public health.

Dr. Koplan is a Past-President of the International Association of National Public Health Institutes. He currently serves as Vice President for Global Health at Emory University and is the former Director of the Emory Global Health Institute, an organization created to advance Emory University’s efforts to improve health around the world. Before assuming this position, Dr. Koplan was Vice President, Academic Health Affairs for Emory University's Woodruff Health Sciences Center, and Director of CDC.

Dr. Koplan has served on many advisory groups and consultancies in the U.S. and overseas and has written more than 200 scientific papers. He served as a trustee of Yale University, and is currently on the boards of the Marcus Family Foundation, Michael C. Carlos Museum, Kaiser Foundation Health Plan of Georgia, Inc., and HealthMPowers.

WILLIAM H. FOEGE AWARD FOR EXCELLENCE IN ORAL SCIENTIFIC PRESENTATION

The William H. Foege Award for Excellence in Oral Scientific Presentation was established in honor of Dr. William H. Foege, the renowned epidemiologist, Presidential Medal of Freedom recipient, and former Director of the U.S. Centers for Disease Control and Prevention (CDC) credited with devising the global strategy that led to the eradication of smallpox in the late 1970s. The award is the highest FETP International Nights honor presented for the best oral presentation.

Dr. Foege is an Emeritus Presidential Distinguished Professor of International Health at Emory University and served as CDC Director from 1977 to 1983. Dr. Foege founded The Task Force for Child Survival (later renamed The Task Force for Global Health) and served as its Executive Director from 1984-2000. Under Dr. Foege’s leadership, The Task Force for Global Health developed and applied a model of collaboration that resulted in childhood immunization rates in the developing world increasing from 20 to 80 percent in just six years. He has also previously served as a Senior Fellow at the Bill and Melinda Gates Foundation and a Director at The Carter Center.

DIRECTOR’S AWARD FOR EXCELLENCE IN EPIDEMIOLOGY AND PUBLIC HEALTH RESPONSE

This award is presented in recognition of significant contributions toward successful responses to public health emergencies (natural and man-made disasters, disease outbreaks, etc.). Nominees can include FETP or FELTP Resident Advisors who have provided leadership working as part of a response and have been successful in overcoming challenging circumstances. The award is also to recognize excellence in epidemiologic practice or research and contributions that address a public health issue of major importance by applying epidemiologic principles and methods. Nominations can recognize accomplishments that improved human health; made a substantial reduction in burden of disease; or represented innovations to public health practice based on epidemiologic foundations or implementation of epidemiologic approaches. Recognized contributions should be practical, explicit, and applied rather than theoretical or implicit.
William H. Foege Award Recipients 2000-2018

2018 UGANDA

2017 INDIA

2016 INDIA

2015 CHINA
X. Lai. Case control study of risk factors of Avian Influenza A (H7n9) transmission in live poultry markets in Zhejiang Province, China, 2014.

2014 ZIMBABWE

2013 CHINA

2012 NIGERIA

2011 INDIA
P. Baral. Hepatitis outbreak caused by contaminated Tamarind water served in a mobile food kiosk in an affluent urban school of Mayurbhanj, Orissa, India, September.

2010 CHINA
K. Han. Shigellosis outbreak in an elementary school- Sichuan Province, China, June 7-16, 2009.

2009 AUSTRALIA

2008 CENTRAL ASIA

2007 CENTRAL ASIA

2006 ITALY
2005 CHINA
Y. Zhang et al. Large outbreak of waterborne paratyphoid fever attributed to a contaminated well in a rural junior high school in Guangxi Province, China, 2005.

2004 BRAZIL
L. Daufembach et al. Barium toxicity after exposure to contaminated contrast solution in Goiás State, Brazil, 2003.

2003 EPIET
U. Dürr et al. Outbreak of aseptic peritonitis among peritoneal dialysis patients associated with the use of icodextrin in Extremadura, Spain, January–April 2002.

2002 BRAZIL

2001 CANADA

2000 SPAIN
T. Pelayo et al. Study of two outbreaks of mumps in children vaccinated with the Rubini strain in Spain.
ACKNOWLEDGEMENTS

The FETP International Nights committee would like to thank the oral and poster presenters and photo contest participants for their scientific research and efforts to make this evening a success. We also thank the resident advisors, mentors, abstract reviewers, and volunteers for their time, expertise and commitment to supporting this event and FETPs around the world.

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