

cases were evaluated with physical examination, CBC, AST,ALT, LDH, Rubeola IgM-IgG,Chest X-Ray.

**Results:** 9 cases were diagnosed as active measles infections according to their physical findings such as maculopopular rashes, conjunctivit, fever, rales with auscultation of lungs; laboratory/radiological findings such as neutropenia, elevated AST, ALT, LDH and reticulonodular infiltrations on Chest X-Ray. All cases were confirmed by serology also. All military personels with under risk of measeles were vaccinated (Priorix® GlaxoSmithKline,United Kingdom)simultaneously. No reaction due to immunization was determined. All of patients with measeles cured after this supportive and preventive management.

**Conclusion:** In conclusion immunization, screening and early diagnosis are always kept in mind in fighting againts unexpected epidemics such as measles and every military personels should be aware of the findings of measles and the prevention of this serious disease.

<http://dx.doi.org/10.1016/j.ijid.2014.03.1242>

#### Type: Poster Presentation

Final Abstract Number: 60.026

Session: *Epidemiology and Public Health III*

Date: Saturday, April 5, 2014

Time: 12:45-14:15

Room: Ballroom

#### The detection of psaA in serotypes of *S. pneumoniae* isolated from nasopharynx of healthy children

F. Fallah<sup>1,\*</sup>, A. Karimi<sup>2</sup>, F. Shiva<sup>3</sup>

<sup>1</sup> *Pediatric infectious research center of Shahid Beheshti university,M.C., Tehran, Iran, Islamic Republic of*

<sup>2</sup> *Pediatric infectious Research disease, Tehran, Iran, Islamic Republic of*

<sup>3</sup> *Pediatric Infections Research Center, Shahid Beheshti University of Medical Sciences, Tehran, IRAN, Tehran, Iran, Islamic Republic of*

**Background:** Recent attention has focused on the role of pneumococcal proteins, including the pneumococcal surface adhesion A, (PsaA), as a virulence factor in the pathogenesis of infections with *Streptococcus Pneumoniae*. Immunization with these proteins may provide long lasting protection against virulent pneumococci.

**Objective:** To detect the psaA gene in different serotypes of *S. pneumoniae* found in the upper respiratory tract of healthy children and to evaluate the potential usefulness of the psaA PCR assay as a possible diagnostic method for Pneumococcal disease.

**Methods & Materials:** In this study, nasopharyngeal swabs were taken from healthy children under 10 years old recruited from randomly selected daycare centers and primary schools in Tehran. These swabs were tested for the presence of Pnuemococci by both culture and the psaA PCR assay. To detect the gene we used a PCR-amplified internal fragment of the psaA gene.

**Results:** Samples were collected from 485 children. *Streptococcus pneumoniae* were isolated from 228, (47%), samples; fifteen different serotypes were identified. PCR detected the psaA gene in 164 specimens, (70%).

**Conclusion:** Our results confirm that psaA is present and detectable in heterologous serotypes of *Streptococcus pneumoniae*. These results indicate that PsaA can be used for detection of

invasive pneumococcal serotypes in carriers and may be for vaccination development in different areas.

<http://dx.doi.org/10.1016/j.ijid.2014.03.1243>

#### Type: Poster Presentation

Final Abstract Number: 60.027

Session: *Epidemiology and Public Health III*

Date: Saturday, April 5, 2014

Time: 12:45-14:15

Room: Ballroom

#### Malaria control interventions: Outcomes in attendees of health facilities in Oyo State, Nigeria 2012



O.T. Olugbade<sup>1,\*</sup>, T.O. Ladipo<sup>2</sup>, O. Ajumobi<sup>3</sup>, B. Adedokun<sup>4</sup>, A. Olayinka<sup>5</sup>, I. Ajayi<sup>4</sup>

<sup>1</sup> *Nigeria Field Epidemiology Laboratory Training Programme (NFELTP), Abuja, Nigeria*

<sup>2</sup> *Oyo State Malaria Elimination Programme, Ibadan, Nigeria*

<sup>3</sup> *National Malaria Elimination Programme, Federal Ministry of Health, Abuja, Nigeria*

<sup>4</sup> *University of Ibadan, Faculty of Public Health, Ibadan, Oyo State, Nigeria*

<sup>5</sup> *Ahmadu Bello University Teaching Hospital, Shika-Zaria, Nigeria*

**Background:** Globally, malaria is said responsible for one-fifth of all cause of mortality due to infectious diseases. Africa contributes an estimated 44% of the annual number of new cases, with Nigeria accounting for about 25% of the global burden of this disease.

Oyo state is holoendemic for malaria being the most common reason for hospital visits in all age groups; half of the populations have more than one episode per year and children have average of 2-4 episodes annually. We determined the monthly trend of suspected malaria cases, evaluated malaria case management practices, and access to preventive services.

**Methods & Materials:** We conducted a retrospective review of malaria case summary data for 330 health facilities across the 33 Local government areas in the state, from January to December 2012. The tertiary and private facilities were excluded. Descriptive analysis was done using Microsoft Excel.

**Results:** Suspected malaria cases accounted for 372,010 (62%) of clients presenting to public health facilities with 166,650 (45%) under 5 years (U5s) and 205,360 persons (55%) above 5 years (A5s) respectively. Testing with rapid diagnostic kits was performed for 25,372 (8%), and microscopy for 8632 (2.3%) of total fever cases, with only 36,303 (10%) of suspected cases confirmed with a diagnosis of malaria; of this proportion uncomplicated malaria was diagnosed in 10,700 (30%) of U5s, 17,747 (49%) of A5s, with severe malaria diagnosed in 799 (2%) of U5s, 704 (2%) of A5s population and Malaria in pregnancy accounted for 6373 (6%) of these cases. An estimated 122,596 (33%) of presumptively treated and laboratory diagnosed cases were treated with Artemisinin based Combination Therapy. A total 112,356 PW were seen in the review period, only 20% (22,048) received at least two doses of Sulphadoxine-Pyrimethamine. Distribution of Insecticidal Nets was to 6,652 (4%) of U5s and 1,911 (1%) of PW seen during Outpatient visits.

**Conclusion:** Poor access to preventive services and poor diagnostic practices were observed in the facilities assessed, we



recommend adherence to standard treatment protocols, increased availability of malaria prevention commodities to health facilities and utilization of malaria control measures by healthcare providers in the state. 2

<http://dx.doi.org/10.1016/j.ijid.2014.03.1244>

#### Type: Poster Presentation

Final Abstract Number: 60.028

Session: *Epidemiology and Public Health III*

Date: Saturday, April 5, 2014

Time: 12:45–14:15

Room: Ballroom

#### Lassa fever outbreak investigation in a Nigerian bakery - August, 2012



A.O. Ogunniyi<sup>1,\*</sup>, P. Nguku<sup>1</sup>, O. Gbadegehin<sup>2</sup>, E.O. Adedire<sup>1</sup>

<sup>1</sup> *Nigeria Field Epidemiology and Laboratory Training Program, Abuja, FCT, Nigeria*

<sup>2</sup> *Federal Ministry of Health, Abuja, FCT, Nigeria*

**Background:** Lassa fever (LF) is a severe hemorrhagic illness caused by Lassa virus and is associated with high mortality. Endemic in West Africa with an estimated 300,000 to 500,000 cases/year with 5000 deaths. The virus is transmitted to humans by contact with excreta, urine or blood of rodents - *Mastomys natalensis*. In 2012, LF outbreak affected 19 out of 36 states in Nigeria. In August 2012, a suspected case of LF was reported in a tertiary hospital at Ibadan. We investigated the outbreak to determine its magnitude, source, possible risk factors and to recommend control and preventive measures.

**Methods & Materials:** We reviewed hospital records from July–August 2012, interviewed health workers and conducted active case search and environmental assessment including rodents search. Blood samples were obtained from high risk contacts; including household contacts, bakery staff and health workers for serological tests. A suspected case was defined as any person resident in Ibadan or reported sick at the health facility between July and August 2012 with fever >38°C (101°F) and one or more of following: bleeding, chest pain, and not responding to appropriate anti-malarial or antibiotics treatment within 24–72 hours of treatment. A confirmed case was a suspected case with positive ELISA IgM.

**Results:** Two cases were identified; one confirmed case and a suspected case with one death (case fatality rate of 50%). There was no epidemiological linkage between the two cases, and serological test for all high risk contacts were negative. There was evidence of rat infestation in the home and bakery surroundings. There were no standardized protocols for the case detection and management of LF in all health facilities visited. Knowledge of mode of transmission of LF was poor in the bakery community

**Conclusion:** The outbreak of Lassa fever was confirmed. The possible mode of spread was rodent to human. Fumigation of the Bakery, Pre-positioning of standard PPE and health workers/community awareness was carried out. We recommended further research into prevalence of infected *Mastomys* spp. rat in this locality, and training of health workers on early detection and case management.

<http://dx.doi.org/10.1016/j.ijid.2014.03.1245>

#### Type: Poster Presentation

Final Abstract Number: 60.029

Session: *Epidemiology and Public Health III*

Date: Saturday, April 5, 2014

Time: 12:45–14:15

Room: Ballroom

#### Assessment of the Intermittent Preventive Treatment for Prevention of malaria in pregnancy (IPTp)



U.A. Katsayal<sup>1,\*</sup>, S.K. Musa<sup>2</sup>, A.A. Otu<sup>2</sup>, I.H. Suleiman<sup>1</sup>, F. Adiri<sup>1</sup>

<sup>1</sup> *Ahmadu Bello University, Zaria-Nigeria, Zaria, Nigeria*

<sup>2</sup> *Ahmadu Bello University, Zaria, Nigeria*

**Background:** Intermittent preventive treatment for prevention of malaria in pregnancy (IPTp) using sulfadoxine-pyrimethamine (SP) through focused antenatal care (FANC). Despite the evidence of the effectiveness of IPTp strategy using SP in reducing the adverse effects of malaria during pregnancy, the coverage of the programme in Nigeria seems to be low over a decade now. The present study therefore assessed the use of IPTp as a strategy for malaria control in pregnancy using SP in two Local Governments Areas (LGAs) of Kaduna State, Nigeria.

**Methods & Materials:** A cross-sectional design was employed in this study using a key-informant interview targeted at the heads of primary health care department at the Local Government headquarters as well as semi-structured questionnaire targeted at the heads of the primary health care centres (PHCs) in the two LGAs and another well-structured questionnaire targeted at all the pregnant women attending the PHCs for ANC services.

**Results:** All the PHCs in the two LGAs provide ANC and IPTp-SP services free of charge as directed by the Nigerian Federal Ministry of Health under the malaria control programme with high utilization rates. However, 40% of the PHCs in Giwa LGA reported an irregular supply of the drug compared with Sabon Gari LGA. Though, 80% of the PHCs in the two LGAs provide pharmacy services, only 15% of them were staffed by pharmacy technicians. A significant gap was noted in the practice of the IPTp strategy at the PHCs due to poor understanding of the program by most of the heads of the facilities, whereby only 60% of them attended a training on IPTp programme since its inception. Although all the heads of the PHCs correctly administer 3 tablets of SP to the pregnant women, it was observed that half (50%) of them incorrectly did so in the first trimester.

**Conclusion:** For the programme to succeed there should be a regular training of the health workers. A reliable SP supply system should be set up from procurement stage through storage, distribution and ultimately to the end users as practiced during the Nigeria's Petroleum Trust Fund (PTF) era.

<http://dx.doi.org/10.1016/j.ijid.2014.03.1246>