Knowledge, attitudes and practices related to dengue in Ribeirão Preto, Brazil

A. Markon [1,*], L.M.R. Passos [2], B. da Fonseca [2], M. Wilson [1]

[1] *University of Michigan, School of Public Health, Ann Arbor, MI, USA*
[2] *University of Sao Paulo, Ribeirao Preto, Brazil*

Background: Despite considerable information on the environmental conditions that promote transmission of dengue viruses, an estimated 50 million dengue cases still occur annually throughout the world. Exposure to *Aedes aegypti* mosquitoes is related to disease risk, and dependent upon conditions involving climate, housing, urbanization, personal behaviors, and more. Thus, dengue risk is considered to be both socially and environmentally defined, but variation in local, community-level, environmental and socio-behavioral drivers has rarely been carefully investigated. In particular, the importance of people's knowledge, attitudes and practices (KAP) concerning disease prevention in these local contexts is poorly understood. Accordingly, we studied the KAP of people regarding health-related decisions and behaviors intended to reduce dengue disease in urban Ribeirão Preto, Brazil.

Methods: A KAP questionnaire was administered by Vector Control Agents of the Secretariat of Health of Ribeirão Preto. A total of 48 homes in the Western district were chosen by neighborhood during November of 2011. One adult resident from 42 (88%) of the households participated and was asked 58 questions involving basic socio-demographic variables, knowledge of virus transmission, vector ecology, and disease symptoms.

Results: Most participants (67%) were female. Overall, 19% reported to have had laboratory-diagnosed dengue. The mean self-reported knowledge of dengue on a 0-10 scale was 6.7 (range 0-10), yet 12% of participants believed that a working vaccine against dengue was already being used. Among other highlights, it was found that 58% of respondents believed it to be the responsibility of individual city residents to prevent dengue, 6% believed it was only the government's responsibility, and 19% believed it was both (remainder did not respond or responded "other"). Interestingly, 71% indicated that the prevention of dengue at the household level should be enforced by legal means.

Conclusion: Results of our study suggest that the extent of knowledge regarding dengue in Ribeirão Preto is inadequate. Furthermore, many of those surveyed were in favor of mandatory prevention efforts by private citizens. Finally, this is the first known KAPs dengue study done Ribeirão Preto and points to the importance of expanded education aimed at improved understanding of and prevention efforts to reduce dengue virus transmission and disease.

Chagas prevalence in Bolivian children. Results from BOLKID study, 2010

C. Masuet Aumatell [1,*], J.M. Ramon Torrell [1], R. Dávalos [2], S.L. Montaño Rodriguez [2]

[1] *Hospital Universitari de Bellvitge, L'Hospitalet de Llobregat, Spain*
[2] *Universidad Mayor de San Simón, Cochabamba, Bolivia*

Background: Bolivian migration is increasing to Europe, mainly to Spain, and Chagas disease is of concern. However Chagas treatment is mainly effective in childhood so we undertook a study to assess seroprevalence of Chagas disease in 5 to 16 years old Bolivian children from the Cochabamba region.

Methods: A population-based cross-sectional survey (n = 441) was undertaken in 2010. A parental-administered questionnaire about socio-demographic information was gathered and a blood sample obtained from each participant with parental informed consent. Chagas disease prevalence was estimated as well as their 95% confidence intervals. A descriptive and bivariate analysis using Student T test or Mann-Withney U test to according to normality distribution and Chi-squared test or Fisher exact test when needed, were performed.

Results: The global prevalence of Chagas disease was 3.63% (CI95% 1.88-5.38) being statistically higher in male (p = 0.031), lower socioeconomic status studied by mother's education (p = 0.030) and children living in adobe houses (p = 0.014), without differences by living area (urban or rural), neither presence of farmyard or according to ethnic groups (p>0.05).

Conclusion: This study identifies a lower prevalence of Chagas than previously estimated and reported. However Chagas disease is still a public health concern, so some preventive measures in a short period of time should be taken in young Bolivian population were treatment could be cost-effective.

Type: Poster Presentation

The effective reproduction number of Pandemic 2009 H1N1 influenza in Thailand: a spatiotemporal analysis

A. Meeyai [1,*], B. Cooper [2], R. Coker [1], W. Pan [2], P. Akarasewie [3], S. Iamsirithaworn [3]

[1] *London School of Hygiene and Tropical Medicine, Bangkok, Thailand*
[2] *Mahidol-Oxford Tropical Medicine Research Unit, Bangkok, Thailand*
[3] *Bureau of Epidemiology, Nonthaburi, Thailand*

Background: Circulation of the influenza A/H1N1pdm virus was confirmed in many countries during 2009. Developing a quantitative understanding of the pandemic dynamics is important

for informing future pandemic plans. We aimed to quantify how transmission dynamics of the virus varied over space and time in Thailand over the first two waves of the epidemic by tracking variation in the effective reproduction number, R_t, which measures the average number of secondary cases per case.

Methods: Laboratory-confirmed cases (cases positive for influenza A/H1N1pdm 2009 by real-time PCR) were used as input data for the estimation procedure. Data points corresponded to dates of symptom onset of influenza A/H1N1pdm in Thailand from 3 May 2009 to 26 December 2010 in four geographic regions (central, north, north-east, and south). We analyzed these data using a previously described approach of epidemic reconstruction to derive estimates of how the effective reproduction number, R_t, varied with region and over time. Confidence intervals were calculated using a bootstrap procedure.

Results: We found that the estimated R_t values for the first wave peaked at 1.5 (with 95% CI, 1.4-1.7) in the central region and 1.6 (95% CI, 1.4-1.9) in the north, whilst the corresponding values in the north-east and the south were close to 1.3. By the time that the R_t estimate in the central region was below one, the value of R_t in the rest of Thailand had started to increase above one. The value of R_t in the first wave was estimated to be above one continuously for 30 days in all regions. For the second wave, the R_t estimates were only marginally above one within the first three months in all regions except the south.

Conclusion: The estimate values of R_t for the first and the second waves of the influenza A H1N1pdm epidemic in Thailand varied by region, with higher estimates obtained from the central and northern regions in the first wave. Accounting for regional variation in transmission potential is important for helping to predict the course of future pandemics and for analysing potential control measures (i.e. regionally-targeted control policies).

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Epidemiological situation of malaria infections in Nikshahr: A city in the endemic area of Sistan and Balouchestan province, Southeastern Iran

B. Sharifi-Mood[1], M. Metanat[2,*], N. Sepehrirad[2], N. Arbabi[3], M. Sakeni[4], R. Gholizadeh Doran Mahaleh[5]

[1] *Research Center for Infectious Diseases and Tropical Medicine, Boo-Ali Hospital,Zahedan University of Medical Sciences, Zahedan, Iran, Islamic Republic of*
[2] *Research Center for Infectious Diseases and Tropical Medicine, Boo-Ali Hospital,Zahedan University of Medical Sciences, Zahedan, Siatan&Baloochestan, Iran, Islamic Republic of*
[3] *Research center for infectious diseases and tropical medicine, Zahedan, Iran, Islamic Republic of*
[4] *Department of Health, Zahedan University of Medical Siences, Zahedan, Iran, Islamic Republic of*
[5] *Islamic Azad University, Zahedan, Iran, Islamic Republic of*

Background: Malaria, one of the most important health problem in tropical and subtropical regions is an endemic disease appeared in the Southeastern province of Iran.This descriptive study conducted to show the epidemiological feature of Malaria in Nikshahr (a city in the province of Sistan & Balouchestan), with a census of the positive cases reported through malaria-care programs during the March 2006-March2010.

Methods: This study is a descriptive epidemiological study of Malaria. Information extracted from the monthly report forms collected by the department of health, at Zahedan university of medical sciences. Peripheral blood smears were taken from all patients who had fever. Slides were prepared in both thin film at one end and thick film at the other side and were stained with Giemsa and examined under microscope by 100X magnification. Data from completed forms of epidemiology for all positive cases were analyzed in this study.

Results: A total of 30783 reported Malaria infections from the year 2006 to 2010 were investigated, 7035(22.8%) cases were isolated from the patients in Nikshahr city. 4183(59.4%) of these patients were male and 2852(40.5%) were female. 74 cases of women were pregnant. The highest infection rate observed in the patients above 15 years old (4236 cases, 60.2%) . Malaria was seen in patients between 5-14 years and less than 4 years 2227cases, 31.6%), (572, 8.1%), respectively. According to these data, 6965(99%) of isolated species were *Plasmodium vivax*, 50(0.7%) *Plasmodium falciparum* and 20(0.2%) were found to be mixed species. Ninety-six percent(7666 cases) of patients were Iranian, 221 cases (3%) Afghan immigrants and 47(0.6%) Pakistani immigrants.

Conclusion: This study showed that *Plasmodium vivax* is the most infection of Malaria in this area and the infectrion has declined from 2937 cases in the year 2006 to the 138 cases in 2010. No case of *Plasmodium falciparum* detected in 2010. More public knowledge, health centers control, use of mosquito-net in endemic region and immigrants control were the probable reasons of Malaria decline during the past recent years.

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Why are so many infants getting measles in China?

J. Montgomery[1,*], X. Wang[2], B. Carlson[1], Y. Zhang[2], B. Gillespie[1], A. Wagner[1], M. Boulton[1]

[1] *University of Michigan, Ann Arbor, MI, USA*
[2] *Tianjin Centers for Disease Control and Prevention, Tianjin, China*

Background: According to the World Health Organization (WHO), measles is the leading global cause of vaccine-preventable mortality and the fifth leading cause of all childhood mortality. Furthermore, WHO estimates 20 million individuals are infected with measles every year.

China is targeted for measles elimination by 2012 as part of the WHO's Western Pacific Region elimination plan. From 2002 to 2008, China experienced an increase in measles incidence from 4.8 to 9.9 per 100,000 persons. In 2010 in Tianjin, China, a municipality of approximately 10.4 million persons, nearly 600 cases of measles were reported in children under age 1 year (a rate of approximately 450 per 100,000 persons in this age group). Despite control efforts, sustained levels of endemic transmission present challenges to accomplishing the goal of elimination.

Methods: A research collaborative between the University of Michigan and the Tianjin Centers for Disease Control and Preven-