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Type: Poster Presentation

Final Abstract Number: 41.029

Session: *Infectious Disease Surveillance*

Date: Thursday, June 14, 2012

Time: 12:45-14:15

Room: *Poster & Exhibition Area***Epidemiology of the four human coronaviruses 229E, HKU1, NL63 and OC43 detected over 30 months in the Singapore military**C.W.J. Liaw^{1,*}, A.S.E. Lim¹, W.H.V. Koh¹, J.P. Loh¹, C. Kan¹, K.W. Chan¹, P.J. Ting¹, S.H. Ng¹, S.W.J. Chew¹, A. Dua¹, C.H. Tan², Q.H.C. Gao², H.P.V. Ho², V. Lee², B.H. Tan¹¹ DSO NATIONAL LABORATORIES, Singapore, Singapore² Ministry of Defence, Singapore, Singapore**Background:** Human coronaviruses (HCoVs) are common etiological agents of acute respiratory tract infections. However their prevalence and clinical presentations are less well studied.**Methods:** Here in Singapore, we conducted acute respiratory infection surveillance in selected military camps to investigate the epidemiology of such infections and pathogens involved. Nasal washes were done for patients that meet the case criteria along with a survey questionnaire. Nucleic acids were then extracted from the nasal washes and subjected to molecular testing for presence of various pathogens, including human coronaviruses.**Results:** The results presented will focus on the four human coronaviruses 229E, HKU1, NL63 and OC43 detected over a 2 ½ year period of surveillance.**Conclusion:** The epidemiology of the four human coronaviruses 229E, HKU1, NL63 and OC43 over the 2 ½ year period and how they compare with that of other published studies will be discussed.<http://dx.doi.org/10.1016/j.ijid.2012.05.305>**Type: Poster Presentation**

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Session: *Infectious Disease Surveillance*

Date: Thursday, June 14, 2012

Time: 12:45-14:15

Room: *Poster & Exhibition Area***Burden of dengue infection in children and adults of Santa Cruz comuna, Medellin: the dengue vaccine initiative project in Colombia**J. Lim^{1,*}, L. Da Silva², B. Maskery¹, M. Carabali¹, J. Egurrola³, I. Velez³, J.E. Osorio⁴¹ International Vaccine Institute, Seoul, Korea, Republic of² Novartis Vaccines and Diagnostics, Cambridge, MA, USA³ Universidad de Antioquia, Medellin, Colombia⁴ University of Wisconsin, Madison, WI, USA**Background:** Dengue infection is a major public health problem in Colombia where the largest epidemic with almost 157,000 DF cases and 217 deaths were reported in 2010. However, comprehensive data are scarce, yet essential for decision-making for dengue vaccines introduction.**Methods:** We are conducting a comprehensive study composed of a passive facility-based surveillance; sero-survey; a healthcare utilization survey; a cost-of-illness (COI) survey; and a willingness-

to-pay (WTP) survey to determine the true burden of dengue in the Santa Cruz comuna of Medellin, Colombia. In the surveillance, febrile patients between 1-65 years-of-age are evaluated for dengue infection. Among dengue-confirmed cases, the COI survey estimates the economic burden of disease. For the sero-survey, 2000 randomly selected residents are enrolled to calculate sero-conversion rate. The WTP and the healthcare utilization surveys assess private demand of dengue vaccines and the proportion of febrile cases missed by the passive surveillance.

Results: Passive fever surveillance was launched in November, 2011 in Santa Cruz Hospital and three affiliated health centers. It has been a season of low caseload for Colombia with only 26 subjects enrolled until the 31st of Dec. Among 23 samples processed, 3 samples were found to be positive by IgM capture ELISA. As there were none confirmed positive by NS1 rapid test, the COI survey has not begun. In the sero-survey, 61% (n=1191) were found to be positive by IgG indirect ELISA among 1955 samples processed. Prior to the WTP survey, focus group discussions were conducted. It was found that all respondents believe that dengue vaccines should be used and that the government should pay for children's vaccinations and cited price as the most important determinant of demand, followed by efficacy, duration, and side-effects. A reasonable vaccine price was about 20,000 Colombian pesos per dose.**Conclusion:** The data generated by the DVI with epidemiological, economic, behavioral, market-demand perspectives will be used to build a comprehensive national investment case of dengue vaccine in Colombia, a likely early adopter country of dengue vaccines. The investment case will be used as models for other countries in the respective regions to facilitate accelerated development and introduction of safe and effective dengue vaccines.<http://dx.doi.org/10.1016/j.ijid.2012.05.306>**Type: Poster Presentation**

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Date: Thursday, June 14, 2012

Time: 12:45-14:15

Room: *Poster & Exhibition Area***Rapid differentiation of *Vibrio cholerae* strains using MLVA and creation of a public MLVA database for epidemiological investigations**J.P. Loh^{1,*}, W.H.V. Koh²¹ DSO NATIONAL LABORATORIES, Singapore, Singapore² DSO National Laboratories, Singapore, Singapore**Background:** *Vibrio cholerae* is a globally important pathogen endemic in many areas of the world and causes up to 5 million reported cases of cholera every year. Straintyping is thus important for epidemiological surveillance purposes as well as determining source of infections for more targeted preventive measures. Multilocus variable-number tandem-repeat (VNTR) analysis (MLVA) is one method that has been proven useful for differentiating between strains that would be indistinguishable by other techniques such as PFGE and phage-typing.**Methods:** Here we present a rapid method for strain-typing of *Vibrio cholerae* using MLVA which does not require the use of a sequencer for analysis but give better resolution compared to conventional gel electrophoresis.**Results:** We are also in the process of generating a public MLVA database for *Vibrio cholerae* and compiling information from various sources and collaborators so as to build a useful database