**PP-239 Ancylostoma spp. in soil of public recreative areas of Culiacan and Navolato Sinaloa, Mexico**

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**Background:** The soil of public areas such as parks and beaches can stay contaminated with parasites the pet animals mainly dogs and cats, that when have intestinal parasites that can disseminate through defecation in soil in public areas, and survive in adverse environmental conditions, representing a risk for health human and pets that have contacted with contaminated soil of parks and beaches that act as reservoirs or vectors of zoonotic parasites such as *Ancylostoma* spp. that can penetrate the skin of bare feet or hands of the host and produce Larva migrants, also known as creeping eruption or eruption sandworm, characterized by tortuous migratory lesions of the skin.

**Methods:** With the objective to determine the presence of *Ancylostoma* spp. in soil of parks and beaches of Culiacan and Navolato, Sinaloa, Mexico; we took 545 composite samples of soil of 23 parks and seven beaches determined for representative samples described by the technique of composite soil (e.g. Bangladesh Demographic and Health Survey, 1993–2007, Sample Vital Registration System, 1981–2007). The strain was also resistant to amoxicillin, amikacin, gentamycin, trimethoprim–sulfamethoxasole and chloromphenicol, susceptible to meropenem. Environmental culture also isolated similar strain from bed sheet and hands of healthcare providers. Outbreak was controlled after patient isolation, sterilization of NICU and effective hand washing measures.

**Conclusion:** This outbreak shows that simple carelessness may cause outbreak of potentially fatal pathogen in the hospital wards and can take the life of innocent newborns. Strict sanitation measures must be ensured in formula preparation and delivery procedure.

**PP-240 An outbreak of multidrug resistant *Salmonella typhimurium* in neonatal ward in Nepal**

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**Background:** Nosocomial neonatal infections are responsible for bulk amount of mortality and long-term morbidity for infants in the neonatal intensive care unit (NICU). We are reporting an outbreak caused by a multidrug resistant strain of *S. typhimurium* in NICU in Nepal.

**Methods:** Outbreak occurred during the period of 3 to 28th April 2007 in the NICU at Om hospital and research center, Kathmandu, Nepal. Asymptomatic neonates during the period of infection were taken as control subjects (n = 50). All infections occurred during first week of life. Stool specimens were obtained for culture in most of the cases, with blood specimens in two cases. Tryptic soy broth (BBL) moistened swabs were used to obtain specimens from inanimate objects in NICU. An investigation was undertaken to trace the source of infection. Culture, identification, antibiotic sensitivity, and serotyping were performed by following the manual of American Society of Microbiology.

**Results:** A total of 17 isolates recovered from 17 babies hospitalized in NICU with common biochemical features and same serotyping. All these subjects developed diarrhea (n = 17), out of them three developed septicaemia, one case of meningitis and two expired. The strain was resistant to third generation cephalosporin due to production of an extended spectrum β-lactamase (ESBL), which was confirmed by double disk combination test. The strain was also resistant to ampicillin, amikacin, gentamycin, trimethoprim–sulfamethoxasole and chloramphenicol, susceptible to meropenem. Environmental culture also isolated similar strain from bed sheets and hands of healthcare providers. Outbreak was controlled after patient isolation, sterilization of NICU and effective hand washing measures.

**Conclusion:**: This outbreak shows that simple carelessness may cause outbreak of potentially fatal pathogen in the hospital wards and can take the life of innocent newborns. Strict sanitation measures must be ensured in formula preparation and delivery procedure.
Towards effective emerging infectious diseases surveillance in Cambodia and Indonesia

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Note: The views expressed herein do not necessarily reflect the views of the Department of the Navy or the Department of Defense.

Objectives: Emerging Infectious Diseases pose a new international security threat because of the potential to inflict harm upon humans, crops, livestock, health infrastructure, and economies. H1N1’s impact on the Mexican economy in 2009, for example, has been estimated at almost 1% of Gross Domestic Product. What are the cultural, political, and economic challenges to obtaining the necessary (or desirable) infrastructure to translate common determinants into effective zoonotic virus surveillance?

Methods: A qualitative comparative case-study focusing on effective surveillance in Cambodia and Indonesia was undertaken centered on the U.S. Naval Area Medical Research Unit No. 2 as a common denominator. Nearly fifty informants were interviewed in Indonesia and Cambodia.

Results: Many of the similarities interview subjects identified as impeding surveillance systems in Cambodia and Indonesia stem from these states’ status as developing countries. That a lack of financial resources (low salaries for example were mentioned by 42% and 27% of Cambodian and Indonesian respondents, respectively), corruption, patronage networks (mentioned by 33% of Cambodian respondents), and the lack of a professional civil service constitute a challenge in such a context is not surprising. It is reasonable to hypothesize that other developing countries face similar barriers along a continuum from one extreme (Cambodia, a small post-conflict country) to another (Indonesia, a developing country of 230 million). In both countries, this lack of local resources has necessitated heavy donor involvement in order to achieve the present surveillance systems.

Conclusion: Given both countries’ developing country status, it is logical that the primary challenges impeding surveillance are observed on the human resources side of the equation. Nevertheless, as experience in both countries demonstrates, the technical and human sides of surveillance systems are complementary inputs. As such, awareness of economic, political, and cultural issues is critical if policymakers are to build more effective systems.

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Giardia in soil of public parks of Culiacan, Sinaloa, Mexico

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Background: Giardia is a nasty parasite, lives in the intestine of infected humans or animals (e.g., cats, dogs, cattle, deer, and beavers); and is passed in feces, and because the parasite is protected by an outer shell, it can survive outside the body and in the environment for long periods of time; is found on surfaces or in soil, food, or water that has been contaminated with the feces from infected humans or animals representing a risk for health human and pets that have contacted with contaminated soil of parks; the agent in Giardia is a protozoan called Giardia duodenalis, Giardia lamblia, or Giardia intestinalis, cause symptoms in its host, the human or animal that gets the disease. For many infectious diseases, like food poisoning or the stomach flu, millions of bacteria are necessary before the host has symptoms.

Methods: In order to know the frequency of contamination of soil public park caused by Giardia, was collected 316 samples of soil in 24 different parks of the city of Culiacan, Sinaloa, Mexico. determined for representative samples described by the technique of Thrushfield (2005) was used: n = [t*SD/L]^2, where n = sample size, t = value of the normal distribution (Student t) for a 95% confidence level (t = 1.96), L = accepted error or precision (5%), and SD = weighted disease prevalence (%), was took 100 grams of surface soil scraping for each sample and deposited it in plastic bags; transferred to the laboratory of parasitology of the FMVZ-UAS to be analyzed by zinc sulphate method.

Result: Evidence of Giardia was found in 25% (6) of the parks.

Conclusion: The contamination of the soil of with Giardia presents a latent health risk for the population and visitors of these parks, considering they are places of recreation; and therefore should be established health control measures and provide health education.