



Calhoun: The NPS Institutional Archive
DSpace Repository

Faculty and Researchers

Faculty and Researchers' Publications

2010-07

Towards effective emerging infectious diseases surveillance in Cambodia and Indonesia

Ear, Sophal

Elsevier

Ear, S. "Towards effective emerging infectious diseases surveillance in Cambodia and Indonesia." *International Journal of Infectious Diseases* 14 (2010): S98, PP-242.
<https://hdl.handle.net/10945/65209>

This publication is a work of the U.S. Government as defined in Title 17, United States Code, Section 101. Copyright protection is not available for this work in the United States.

Downloaded from NPS Archive: Calhoun



Calhoun is the Naval Postgraduate School's public access digital repository for research materials and institutional publications created by the NPS community. Calhoun is named for Professor of Mathematics Guy K. Calhoun, NPS's first appointed -- and published -- scholarly author.

Dudley Knox Library / Naval Postgraduate School
411 Dyer Road / 1 University Circle
Monterey, California USA 93943

<http://www.nps.edu/library>

and qualitative methods have been referred for disease or health transition at grassroots level.

Results: The study indicates that the changing pattern of diseases observed over recent years, from acute infectious and deficiency diseases to the chronic non-communicable diseases, is a continuous process of transformation with some diseases disappearing and others appearing or reappearing. It is important to note that although infectious diseases are still an important public health concern but non-communicable diseases are also coming to the forefront as causes of illness and death, especially in developing countries where it is used to be possible to control many communicable diseases.

Conclusion: Bangladesh is now entering well into the third phase of mortality transition while the epidemiological transition is taking place in between the age of degenerative and manmade diseases followed by the transitional variant of delayed model. It is expected that this study will help to understand the process of the stated transitions in Bangladesh comparing with other developing countries identifying the changes and challenges to achieve the MDGs and further for appropriate policy options.

PP-242 Towards effective emerging infectious diseases surveillance in Cambodia and Indonesia

S. Ear¹*. ¹U.S. Naval Postgraduate School, USA

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 threats 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 policy-makers are to build more effective systems.

PP-243 *Giardia* in soil of public parks of Culiacan, Sinaloa, Mexico

M.C. Rubio Robles¹*, S.M. Gaxiola Camacho, N. Castro del Campo, M.T. Quintero Martínez², J.E. Borbolla Ibarra, J. Gaxiola Montoya, A. Pérez Corrales, I. Quintero Osuna, C. Barraza Tizoc, G. Vega Mendoza. ¹Facultad de Medicina Veterinaria y Zootecnia, Universidad Autonoma de Sinaloa, ²Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autonoma de México, Mexico

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 Thrusfield (2005) was used: $n = [t \cdot SD / L]^2$, 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.