



Centro de Documentación / Documentation Center

Objetivos/ Objectives

Identificar y atender las necesidades de información, adquisición, organización, almacenamiento, generación, uso y difusión de la información en salud pública veterinaria y proveer recursos bibliográficos técnicos-científicos al equipo de profesionales de la unidad y a los usuarios externos.

Identify and take care of the needs of information, acquisition, organization, storage, generation, use and diffusion of the information in veterinary public health and provide technical scientific bibliographical resources to the professional staff of the unit and to the users external.

Temas de interés general / Subjects of general interest



La **REDIPRA 13**, se celebrará en **Buenos Aires, Argentina** del **24 al 26 de agosto de 2010**, y será organizada conjuntamente por la Oficina Sanitaria Panamericana, la Organización Mundial de Salud Animal y el Gobierno de Argentina.

Objetivos de la Reunión:

- Analizar los avances alcanzados en la eliminación de la rabia humana transmitida por el perro
- Proponer estrategias para lograr la eliminación de la enfermedad, y la movilización de recursos de manera oportuna y coordinada, hacia las áreas en donde aún persiste dicha transmisión.
- Analizar las estrategias de vigilancia y prevención de la rabia silvestre.
- Analizar las estrategias de vigilancia y prevención de la leishmaniasis canina.

http://new.paho.org/panaftosa/index.php?option=com_content&task=view&id=255&Itemid=293

http://new.paho.org/arg/index.php?option=com_content&task=view&id=469&Itemid=384

Informaciones disponibles en formato electrónico / Information available in electronic format

Cooperación Internacional / International Cooperation



Cooperação internacional e políticas de ação afirmativa: o papel da Organização Pan-Americana da Saúde (OPAS)
[International cooperation and affirmative action policies: the role of the Pan American Health Organization (PAHO)]

Maio MC, Pires-Alves FA, Paiva CHA, Magalhães RCS
Cad. Saúde Pública 2010 Jul; 26 (7): 1273-91

The article analyzes the formulation, legitimation, and implementation of a policy with an ethnic/race approach by the Pan American Health Organization (PAHO). The study includes the emergence of the theme within this international organization, the institutional dynamics related to it, and the proposals focused on the Black population in Latin America. These issues are discussed on the basis of interaction between PAHO and a range of intergovernmental agencies and private organizations working in the international health domain. Participation by PAHO in the ethnic/racial theme provides elements for understanding the dual role played by intergovernmental organizations in the new global scenario, as both social actors and arenas. As an important social actor in the international health field, PAHO has produced and disseminated values and guidelines related to the ethnic/racial theme. As an arena, the organization has proven open to various interests, seeking to work harmoniously with them through its internal administration.

Text in Portuguese

<http://www.scielo.br/pdf/csp/v26n7/02.pdf>

Enfermedades Infecciosas Emergentes / Emerging Infectious Diseases



Doenças infecciosas emergentes e a emergência das doenças: uma revisão conceitual e novas questões

[Emerging infectious diseases and the emergence of diseases: a conceptual revision and new issues]

Grisotti M

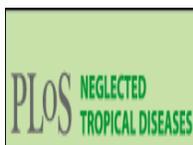
Cien Saude Colet. 2010 Jun; 15 (Suppl 1): 1095-1104

Contrary to expectations concerning the eradication of infectious diseases, it has been emerged, diseases worldwide that were unknown to science or considered to be eradicated or under control by epidemiological surveillance services. In this paper we outline the emergent infectious diseases debate and analyze the concept spread through publications from the Centers for Disease Control and Prevention (CDC) of the United States and through human science point of view. The review of national and international literature suggests some ambiguities in the definition of the categories "new disease" and "emerging disease" and the differences between the concept of emerging infectious diseases and the study of the emergence of diseases. Whilst the first concept includes the study of specific infections and focuses the analysis on the organism affected, on the patient and on the human population; the second concept - less studied - encompasses the study of the epistemological dimensions of medical knowledge and the ecology of emerging infectious diseases. This concept focuses on the systemic level - on the ecosystem and populations of parasites and hosts (whatever the species) and on the socio-cultural behavior - and demands the integration of various academic disciplines.

Text in Portuguese

<http://www.scielo.br/pdf/csc/v15s1/017.pdf>

Enfermedades Negligenciadas / Neglected Diseases



Neglected tropical diseases outside the tropics

Norman FF, Pérez de Ayala A, Pérez-Molina JA, Monge-Maillo B, Zamarrón P, López-Vélez R

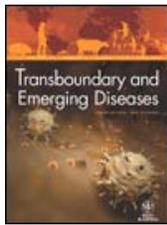
PLoS Negl Trop Dis. 2010 Jul; 4 (7): e762

BACKGROUND: The neglected tropical diseases (NTDs) cause significant morbidity and mortality worldwide. Due to the growth in international travel and immigration, NTDs may be diagnosed in countries of the western world, but there has been no specific focus in the literature on imported NTDs. **METHODS:** Retrospective study of a cohort of immigrants and travelers diagnosed with one of the 13 core NTDs at a Tropical Medicine Referral Unit in Spain during the period April 1989-December 2007. Area of origin or travel was recorded and analyzed. **RESULTS:** There were 6168 patients (2634 immigrants, 3277 travelers and 257 VFR travelers) in the cohort. NTDs occurred more frequently in immigrants, followed by VFR travelers and then by other travelers ($p < 0.001$ for trend). The main NTDs diagnosed in immigrants were onchocerciasis ($n = 240$, 9.1%) acquired mainly in sub-Saharan Africa, Chagas disease ($n = 95$, 3.6%) in immigrants from South America, and ascariasis ($n = 86$, 3.3%) found mainly in immigrants from sub-Saharan Africa. Most frequent NTDs in travelers were: schistosomiasis ($n = 43$, 1.3%), onchocerciasis ($n = 17$, 0.5%) and ascariasis ($n = 16$, 0.5%), and all were mainly acquired in sub-Saharan Africa. The main NTDs diagnosed in VFR travelers were onchocerciasis ($n = 14$, 5.4%), and schistosomiasis ($n = 2$, 0.8%). **CONCLUSIONS:** The concept of imported NTDs is emerging as these infections acquire a more public profile. Specific issues such as the possibility of non-vectorial transmission outside endemic areas and how some eradication programmes in endemic countries may have an impact even in non-tropical western countries are addressed. Recognising NTDs even outside tropical settings would allow specific prevention and control measures to be implemented and may create unique opportunities for research in future.

Text in English

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2910704/pdf/pntd.0000762.pdf>

Fiebre Aftosa / Foot-and-Mouth Disease



Options for decentralized testing of suspected secondary outbreaks of foot-and-mouth disease

Sammin D, Ryan E, Ferris NP, King DP, Zientara S, Haas B, Yadin H, Alexandersen S, Sumption K, Paton DJ

Transbound Emerg Dis. 2010 Aug; 57 (4): 237-43

This article reviews the options for use of virus detection techniques for decentralized testing of samples from suspected secondary outbreaks of foot-and-mouth disease (FMD). These options have been expanded by the advent of new tests including disposable lateral flow devices (LFDs) that detect viral proteins and portable RT-PCR equipment that detects viral RNA. LFDs have been developed with similar sensitivity to antigen detection ELISA but with the ability to provide a result 1-30 min after the addition of epithelium or vesicular fluid. Portable RT-PCR platforms are being developed that can detect FMD viral RNA in blood, epithelium or other materials with minimal sample processing and with high sensitivity, in as little as 60 min in some cases. These devices may be used on infected farms as pen-side tests, in regional, local or mobile laboratories, or in National Reference Laboratories (NRL). Advantages and disadvantages of different testing options are considered to inform decisions on the optimal strategies for different national circumstances. Issues include validation and quality control, containment needs, availability of test devices and reagents, the decision tree for declaring an outbreak, training issues and provision of samples for subsequent viral characterization. Tests to confirm the diagnosis of the index case of an outbreak of FMD should continue to be carried out in the NRL.

Text in English



Vaccination against Foot-and-Mouth Disease. Differentiating strategies and their epidemiological and economic consequences

Backer J, Bergevoet R, Hagenaars T, Bondt n, Nodelijk G, van Wagenberg C, van Roermund H

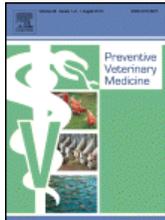
2009

This report is the result of a close cooperation between two institutes of Wageningen UR: CVI and LEI. It shows that an effective multi-disciplinary approach can lead to better insights into complex problems. The effectiveness of different control strategies against Foot-and-Mouth Disease (FMD) were investigated using epidemiological and economic models. A quick and large-scale vaccination within a radius of at least 2km is as effective as preemptive 1-km ring culling to mitigate FMD epidemics. Control measures should primarily target cattle farms. After the epidemic, most seropositive animals are expected on sheep farms and vaccinated cattle farms. An effective end-screening strategy should focus on these farms. Market acceptance by trade partners of products of vaccinated animals can limit the economic consequences of outbreaks of FMD.

Text in English

<http://www.lei.dlo.nl/publicaties/PDF/2009/2009-042.pdf>

Influenza Aviar / Avian Influenza



Identifying areas for infectious animal disease surveillance in the absence of population data: highly pathogenic avian influenza in wild bird populations of Europe

Iglesias I, Perez AM, De la Torre A, Muñoz MJ, Martínez M, Sánchez-Vizcaíno JM
Prev Vet Med. 2010 Aug; 96 (1-2): 1-8

A large number (n=591) of H5N1 highly pathogenic avian influenza virus (HPAIV) outbreaks have been reported in wild birds of Europe from October 2005 through January 2009. Consequently, prevention and control strategies have been implemented in response to the outbreaks and considerable discussion has taken place regarding the need for implementing surveillance programs in high-risk areas with the objective of early detecting and preventing HPAIV epidemics. However countries ability to define the temporal and spatial extension of the high risk areas has been impaired by the lack of information on the distribution of susceptible wild bird populations in the region. Here, a technique for the detection of time-space disease clustering that does not require information on the distribution of susceptible populations and that has been referred to as the time-space permutation model of the scan statistic was used to identify areas and times of the year in which epidemics of H5N1 HPAIV were most likely to occur in wild bird populations of Europe from October, 2005, through December, 2008. The scan statistic was parameterized considering pre-existing knowledge on the epidemiological and ecological characteristics of the disease in the region. Robustness of the results was assessed using a generalized linear regression model to compare the outcomes of 36 alternative parameterizations of the scan statistic. Ten significant time-space clusters of H5N1 HPAI outbreaks were detected in six European countries. Results were sensitive ($P < 0.05$) to the definition of the maximum spatial size defined for the clusters. Results presented here will help to identify high risk areas for HPAIV surveillance in the European Union. Assumptions, results, and implications of the analytical model are extensively presented and discussed in order to facilitate the use of this approach for the identification of high risk areas for infectious animal disease surveillance in the absence of population data.

Text in English

Inocuidad de los Alimentos / Food Safety



Contaminação microbiológica de ambientes e de superfícies em restaurantes comerciais

[Microbiological contamination of environments and surfaces at commercial restaurants]

Coelho AIM, Milagres RCRM, Martins JFL, Azeredo RMC, Santana AMC
Ciênc. saúde coletiva 2010 Jun; 15 (supl.1): 1597-606

This study was carried out to provide subsidies for sanitary actions applied to manipulators,

environments and surfaces, assessing levels of microbiological contamination in three commercial restaurants (A, B and C) in Viçosa, Minas Gerais State. Microbiological analysis were performed for presumptive counting of *Bacillus cereus* and mesophilic aerobic bacteria on surfaces of stainless steel benches, equipments, utensils and hands of the manipulators (swab technique), and air (simple sedimentation). It was observed expressive contamination by mesophilic aerobic bacteria in the samples examined, exceeding limits proposed by the APHA (American Public Health Association). Mesophilic aerobic microorganisms were detected in 100% of air samples, with counts ranging from 4.1×10^1 CFU/cm²/week to 1.1×10^3 CFU/cm²/week. Typical colonies of *B. cereus* were detected in 19% of all air samples, and the presence of such colonies was observed in all restaurants in levels that reached 2.1×10^1 CFU/cm²/week. In surfaces and hands examined it was also possible to isolate typical colonies of the pathogen in all restaurants. The sanitary situation of the environments studied requires interventions to reduce risks of great magnitude, concerning the occurrence of foodborne diseases.

Text in Portuguese

<http://www.scielo.br/pdf/csc/v15s1/071.pdf>

Leishmaniasis



Prevalência e epidemiologia da leishmaniose visceral em cães e humanos, na cidade de Cuiabá, Mato Grosso, Brasil

[Prevalence and epidemiology of visceral *Leishmaniasis* in dogs and humans in the city Cuiaba, Mato Grosso, Brazil]

Almeida ABPF, Adriane Jorge Mendonça AJ, Sousa VRF
Cienc. Rural, ahead of print Epub July 16, 2010

Visceral *Leishmaniasis* is an infectious disease endemic in several regions of Brazil, including the state of Mato Grosso. In Cuiabá, from January 2006 to December 2008, a research was performed in canine cases of infection with *Leishmania* sp. by serology and cytology, focusing on its geographical distribution, correlating to the occurrence of human visceral *Leishmaniasis* cases. From 150 dogs with suspected infection, 57 (38%) were serological or parasitologically positive. Seroprevalence was observed ($P \leq 0.05$) in districts with low per capita income, besides a larger number of canine cases in the East regional, but there was a diffuse distribution of the canine disease in the city of Cuiabá, in contrast to cases focused mainly on human in the northern municipality. This suggests risk throughout the municipality and further epidemiological studies should be carried out, as well as vector distribution, to promote better understanding of canine infection by *Leishmania*, in order to promote appropriate measures for disease control.

Text in Portuguese (article in press)

<http://www.scielo.br/pdf/cr/2010nahead/a637cr2726.pdf>

Plant-made vaccines (PMVs)



Current status of plant-made vaccines for veterinary purposes

Ling HY, Pelosi A, Walmsley AM

Expert Rev Vaccines 2010 Aug; 9 (8): 971-82

Interest is growing for the use of plant-made vaccines for veterinary purposes since the regulatory landscape still enables delivery of either crude extracts or minimally processed plant materials to animals for medicinal purposes. In this article, we highlight the current research directions taken with four diseases considered as important constraints to international trade in animals: avian influenza, Newcastle disease, foot-and-mouth disease and diarrheal disease caused by enterotoxigenic *Escherichia coli*. We also discuss appropriate plant production platforms with regards to plant species and transformation methodologies, possible areas of development, and the remaining challenges for plant-made vaccines for

veterinary purposes.

Text in English

Rabia / Rabies



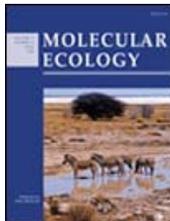
Bats, in black and white

Daszak P

Science 2010 Aug; 329 (5992): 634-5

Two bat studies tackle the "black box" of cross-species virus transmission and the impact of white-nose syndrome.

Text in English



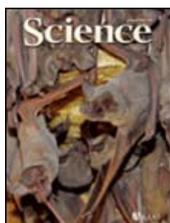
Contrasting landscape epidemiology of two sympatric rabies virus strains

Barton HD, Gregory AJ, Davis R, Hanlon CA, Wisely SM

Mol Ecol. 2010 Jul; 19 (13): 2725-38

Viral strain evolution and disease emergence are influenced by anthropogenic change to the environment. We investigated viral characteristics, host ecology, and landscape features in the rabies-stripped skunk disease system of the central Great Plains to determine how these factors interact to influence disease emergence. We amplified portions of the N and G genes of rabies viral RNA from 269 samples extracted from striped skunk brains throughout the distribution of two different rabies strains for which striped skunks were the reservoir. Because the distribution of these two strains overlapped on the landscape and were present in the same host population, we could evaluate how viral properties influenced epidemiological patterns in the area of sympatry. We found that South Central Skunk rabies (SCSK) exhibited intense purifying selection and high infectivity, which are both characteristics of an epizootic virus. Conversely, North Central Skunk rabies (NCSK) exhibited relaxed purifying selection and comparatively lower infectivity, suggesting the presence of an enzootic virus. The host population in the area of sympatry was highly admixed, and skunks among allopatric and sympatric areas had similar effective population sizes. Spatial analysis indicated that landscape features had minimal influence on NCSK movement across the landscape, but those same features were partial barriers to the spread of SCSK. We conclude that NCSK and SCSK have different epidemiological properties that interact differently with both host and landscape features to influence rabies spread in the central Great Plains. We suggest a holistic approach for future studies of emerging infectious diseases that includes studies of viral properties, host characteristics, and spatial features.

Text in English



An emerging disease causes regional population collapse of a common north american bat species

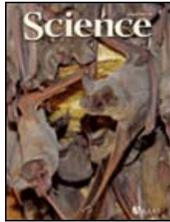
Frick WF, Pollock JF, Hicks AC, Langwig KE, Reynolds DS, Turner GG, Butchkoski CM, Kunz TH

Science 2010 Aug; 329 (5992): 679-82

White-nose syndrome (WNS) is an emerging disease affecting hibernating bats in eastern North America that causes mass mortality and precipitous population declines in winter hibernacula. First discovered in

2006 in New York State, WNS is spreading rapidly across eastern North America and currently affects seven species. Mortality associated with WNS is causing a regional population collapse and is predicted to lead to regional extinction of the little brown myotis (*Myotis lucifugus*), previously one of the most common bat species in North America. Novel diseases can have serious impacts on naïve wildlife populations, which in turn can have substantial impacts on ecosystem integrity.

Text in English



Host phylogeny constrains cross-species emergence and establishment of rabies virus in bats

Streicker DG, Turmelle AS, Vonhof MJ, Kuzmin IV, McCracken GF, Rupprecht CE
Science 2010 Aug; 329 (5992): 676-9

For RNA viruses, rapid viral evolution and the biological similarity of closely related host species have been proposed as key determinants of the occurrence and long-term outcome of cross-species transmission. Using a data set of hundreds of rabies viruses sampled from 23 North American bat species, we present a general framework to quantify per capita rates of cross-species transmission and reconstruct historical patterns of viral establishment in new host species using molecular sequence data. These estimates demonstrate diminishing frequencies of both cross-species transmission and host shifts with increasing phylogenetic distance between bat species. Evolutionary constraints on viral host range indicate that host species barriers may trump the intrinsic mutability of RNA viruses in determining the fate of emerging host-virus interactions.

Text in English



Human rabies transmitted by vampire bats: Antigenic and genetic characterization of rabies virus isolates from the Amazon region (Brazil and Ecuador)

Castilho JG, Carnieli P Jr, Durymanova EA, Fahl WD, Oliveira RD, Macedo CI, Travassos da Rosa ES, Mantilla A, Carrieri ML, Kotait I
Virus Res. 2010 Jul 15 [Epub ahead of print]

Since 2004, the main transmitter of human rabies in Latin America has been the vampire bat (*Desmodus rotundus*). Based on the nucleoprotein of the rabies virus (RV), we analyzed antigenic and genetic profiles of isolates from 29 samples taken from humans living in different areas of the Amazon region. Two isolates were from Ecuador and 27 from the Northern and Northeastern regions of Brazil, which were obtained during outbreaks in various municipalities in the states of Pará and Maranhão in the years 2004 and 2005. The partial N gene (nt 104-1477) of the 29 isolates was sequenced, and the sequences were used to build a neighbor-joining tree with the Kimura-2 parameter model. All 29 human RV isolates were identified as belonging to antigenic variant 3 (AgV3) and were genetically grouped into the *D. rotundus* cluster, which was divided into two subclusters (A and B), subcluster A in turn being divided into four genetic groups (A1, A2, A3 and A4). Genetic and molecular markers characterizing these genetic lineages were also identified. The results of this study show that the isolates belong to the same rabies cycle as that of the vampire bat *D. rotundus*. However, the division of clusters within the lineage associated with *D. rotundus* shows that different genetic sublineages of the virus were circulating in the Amazon region during the study period. Our findings suggest that there are phylogeographic differences between isolates obtained over a short period.

Text in English (article in press)

Zoonosis / Zoonoses



Percepção sobre o conhecimento e profilaxia das zoonoses e posse responsável em pais de alunos do pré-escolar de escolas situadas na comunidade localizada no bairro de Dois Irmãos na cidade do Recife (PE)
[Perception of the zoonosis and responsible pet care by the parents from public schools kindergarten located at metropolitan region of Recife, northeast of Brazil]

Lima AM, Alves LC, Faustino MA, Lira NM
Cien Saude Colet. 2010 Jun; 15 (Supl 1): 1457-64

The goal of this research was to examine parents' perception of the zoonosis and responsible pet care, observing their level of knowledge and awareness about the theme. A convenience sample of 64 parents from two kindergarten schools located at Metropolitan Region of Recife, Pernambuco State, was surveyed using a perception questionnaire. Findings indicate that 71.8 % didn't know the meaning of the term zoonosis, but 16% recognize at least one type of the disease. Diseases transmitted from animals to humans were associated to the way of transmission, as physical contact between animal and man, bite wound disease, fecal contamination of water, food with cysts or eggs of nematodes, skin penetration of nematodes, and also the arthropod borne disease. The major pet health care reported was rabies vaccine (92.2%), anthelmintic therapy (76.6%), and pet care provide by a veterinarian (82.8%). However, 23.4% of the parents had some knowledge about the zoonotic infections transmitted by dogs and cats feces. The parent's awareness not only about the risks about the diseases transmitted from animals to humans but also the responsible pet care, constitute a important tool to reduce risk of zoonosis transmission.

Text in Portuguese

<http://www.scielo.br/pdf/csc/v15s1/057.pdf>

Eventos / Events

13th Conference of the Association of Institutions for Tropical Veterinary Medicine

23-26 August 2010

Bangkok, Thailand

<http://www.aitvm2010.org/>

XXII Congreso Panamericano de Ciencias Veterinarias - PANVET

01-04 September 2010

Lima, Peru

<http://www.panvet2010.org/>



Salud Pública Veterinaria
Centro Panamericano de Fiebre Aftosa



Veterinary Public Health
Pan American Foot and Mouth Disease Center

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<http://new.paho.org/panaftosa>

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