



N. 57 - 2009

Centro de Documentación / Documentation Center

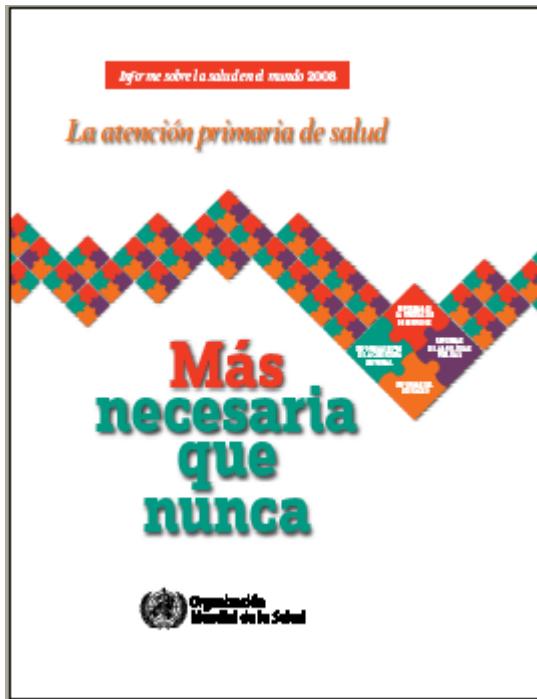
Objetivos/ Objectives

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

Informe sobre la salud en el mundo 2008: la atención primaria de salud, más necesaria que nunca



El "Informe sobre la salud en el mundo 2008: la atención primaria de salud, más necesaria que nunca", evalúa de forma crítica el modo en que la atención de salud se organiza, se financia y se presta en el mundo, tanto en los países ricos como en los pobres. En el informe de la Organización Mundial de la Salud (OMS) se documentan una serie de fracasos y defectos que han provocado peligrosos desequilibrios de la situación sanitaria entre poblaciones de un mismo país, o entre países.

Con la publicación de este Informe, la OMS espera iniciar un debate a nivel mundial sobre la eficacia de la atención primaria de salud como una forma de reorientar los sistemas nacionales de salud.

Text in Spanish

http://www.who.int/whr/2008/08_report_es.pdf

Text in English

http://www.who.int/whr/2008/whr08_en.pdf

Informaciones disponibles en formato electrónico / Information available in electronic format

Desarrollo Sostenible / Sustainable Development



Desenvolvimento sustentável e expansão do agronegócio brasileiro

MAPA, 2008

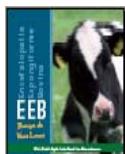
Este é o primeiro título da série institucional do Ministério da Agricultura, Pecuária e Abastecimento, cujo objetivo é divulgar os programas e ações desenvolvidos em cada área do órgão e a responsabilidade pela execução.

O volume agende à Secretaria de Desenvolvimento Agropecuário e Cooperativismo e descreve os principais programas implementados em cada área da secretaria.

Text in Portuguese

http://www.agricultura.gov.br/images/MAPA/arquivos_portal/desenv_sustent_web.pdf

Encefalopatia Espóngiforme Bovina (BSE) / Bovine Spongiform Encephalopathy (BSE)



Encefalopatia espongiforme bovina – EEB: doença da vaca louca

MAPA, 2008

Cartilha com orientações para prevenir essa doença – ainda não notificada no território nacional – de acordo com os princípios da Organização Mundial de Saúde Animal (OIE). Informa sobre a origem de doença, as formas de propagação e como é feito o diagnóstico, além de oferecer indicações sobre o controle de produtos para alimentação animal e regras de prevenção da “doença da vaca louca”.

Text in Portuguese

http://www.agricultura.gov.br/images/MAPA/arquivos_portal/pdf_vacalouca_web.pdf



Transmission of atypical bovine prions to mice transgenic for human prion protein

Béringue V, Herzog L, Reine F, Le Dur A, Casalone C, Vilotte JL, Laude H

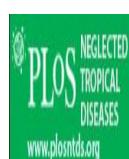
Emerg Infect Dis. 2008 Dec;14 (12): 1898-901

To assess risk for cattle-to-human transmission of prions that cause uncommon forms of bovine spongiform encephalopathy (BSE), we inoculated mice expressing human PrP Met129 with field isolates. Unlike classical BSE agent, L-type prions appeared to propagate in these mice with no obvious transmission barrier. H-type prions failed to infect the mice.

Text in English

<http://www.cdc.gov/eid/content/14/12/pdfs/1898.pdf>

Enfermedades Desatendidas / Neglected Diseases



Cost-effectiveness of chagas disease vector control strategies in northwestern Argentina

Vazquez-Prokopec GM, Spillmann C, Zaidenberg M, Kitron U, Gürtler RE
PLoS Negl Trop Dis. 2009; 3 (1): e363

BACKGROUND: Control and prevention of Chagas disease rely mostly on residual spraying of insecticides. In Argentina, vector control shifted from a vertical to a fully horizontal strategy based on community participation between 1992 and 2004. The effects of such strategy on *Triatoma infestans*, the main domestic vector, and on disease transmission have not been assessed. **METHODS AND FINDINGS:** Based on retrospective (1993–2004) records from the Argentinean Ministry of Health for the Moreno Department, Northwestern Argentina, we performed a cost-effectiveness (CE) analysis and compared the observed CE of the fully horizontal vector control strategy with the expected CE for a vertical or a mixed (i.e., vertical attack phase followed by horizontal surveillance) strategy. Total direct costs (in 2004 US\$) of the horizontal and mixed strategies were, respectively, 3.3 and 1.7 times lower than the costs of the vertical strategy, due to reductions in personnel costs. The estimated CE ratios for the vertical, mixed and horizontal strategies were US\$132, US\$82 and US\$45 per averted human case, respectively. When per diems were excluded from the costs (i.e., simulating the decentralization of control activities), the CE of vertical, mixed and horizontal strategies was reduced to US\$60, US\$42 and US\$32 per averted case, respectively. **CONCLUSIONS AND SIGNIFICANCE:** The mixed strategy would have averted between 1.6 and 4.0 times more human cases than the fully horizontal strategy, and would have been the most cost-effective option to interrupt parasite transmission in the Department. In rural and dispersed areas where waning vertical vector programs cannot accomplish full insecticide coverage, alternative strategies need to be developed. If properly implemented, community participation represents not only the most appealing but also the most cost-effective alternative to accomplish such objectives.

Text in English

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2613538/pdf/>



Doenças tropicais

Camargo EP

Estud av. 2008; 22 (64): 95-110

Discutem-se os componentes biogeográfico e econômico das doenças tropicais, ou, em sentido mais amplo, das doenças definidas como negligenciadas pela OMS. Doenças tropicais surgem graças a um conjunto de fatores biológicos, ecológicos e evolutivos que condicionam a sua ocorrência exclusivamente às proximidades do Equador, entre os trópicos de Câncer e Capricórnio. Nesse sentido, reconhece-se que há, de fato, uma "fatalidade tropical". Porém, a perpetuação das doenças tropicais em países aí situados depende fundamentalmente da precária situação econômica vigente e é consequência direta do subdesenvolvimento.

Text in Portuguese

<http://www.scielo.br/pdf/ea/v22n64/a07v2264.pdf>



Global health. Some neglected diseases are more neglected than others

Enserink M

Science 2009 Feb; 323 (5915): 700

The first global study tracking spending on research and development for "neglected diseases" finds that

the battle against dengue is relatively well-funded, whereas pneumonia, meningitis, and diarrhea get mere table crumbs.

Text in English

Estomatitis Vesicular / Vesicular Stomatitis



A recombinant vesicular stomatitis virus replicon vaccine protects chickens from highly pathogenic avian influenza virus (H7N1)

Kalhoro NH, Veits J, Rautenschlein S, Zimmer G

Vaccine. 2009 Feb; 27 (8): 1174-83

Highly pathogenic avian influenza viruses (HPAIV) of subtypes H5 and H7 cause fatal disease in poultry (fowl plague) but also have zoonotic potential. Currently commercially available vaccines often do not provide sufficient protection and do not allow easy discrimination between vaccinated and infected birds. Therefore, vaccination of domestic poultry against H5 and H7 HPAIV is not allowed in many countries, or is only possible after special permission has been provided. We generated a recombinant marker vaccine based on non-transmissible vesicular stomatitis virus (VSV) expressing the HA antigen of HPAIV A/FPV/Rostock/34 (H7N1) in place of the VSV G gene. This virus, VSV*DeltaG(HA), was propagated on a helper cell line providing VSV G in trans. Since no progeny virus was produced after infection of non-complementing cells, the vector was classified as biosafety level 1 organism ("safe"). Chickens were immunized via the intramuscular route. Following booster vaccination with the same replicons high titers of serum antibodies were induced, which neutralized avian influenza viruses of subtypes H7N1 and H7N7 but not H5N2. Vaccinated chickens were protected against a lethal dose of heterologous HPAIV A/chicken/Italy/445/99 (H7N1). Secretion of challenge virus was short-term and significantly reduced. Finally, it was possible to discriminate vaccinated chickens from infected ones by a simple ELISA assay. We propose that VSV replicons have the potential to be developed to high-quality vaccines for protection of poultry against different subtypes of avian influenza viruses.

Text in English

Fiebre aftosa / Foot and Mouth Disease



Airborne spread of foot-and-mouth disease - Model intercomparison

Gloster J, Jones A, Redington A, Burgin L, Sørensen JH, Turner R, Dillon M, Hullinger P,

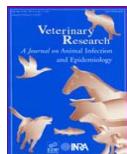
Simpson M, Astrup P, Garner G, Stewart P, D'Amours R, Sellers R, Paton D

Vet J. 2009 Jan

Foot-and-mouth disease virus (FMDV) spreads by direct contact between animals, by animal products (milk, meat and semen), by mechanical transfer on people or fomites and by the airborne route, with the relative importance of each mechanism depending on the particular outbreak characteristics. Atmospheric dispersion models have been developed to assess airborne spread of FMDV in a number of countries, including the UK, Denmark, Australia, New Zealand, USA and Canada. These models were compared at a Workshop hosted by the Institute for Animal Health/Met Office in 2008. Each modeller was provided with data relating to the 1967 outbreak of FMD in Hampshire, UK, and asked to predict the spread of FMDV by the airborne route. A number of key issues emerged from the Workshop and subsequent modelling work: (1) in general all models predicted similar directions for livestock at risk, with much of the remaining differences strongly related to differences in the meteorological data used; (2) determination of an accurate sequence of events on the infected premises is highly important, especially if the meteorological conditions vary substantially during the virus emission period; (3) differences in assumptions made about virus release, environmental fate and susceptibility to airborne infection can substantially modify the size and location of the downwind risk area. All of the atmospheric dispersion models compared at the Workshop can be used to assess windborne spread of FMDV and provide scientific advice to those responsible for making control and eradication decisions in the event of

an outbreak of disease.

Text in English (article in press)



Experimental evaluation of foot-and-mouth disease vaccines for emergency use in ruminants and pigs: a review

Cox SJ, Barnett PV

Vet Res. 2009 May-Jun; 40 (3): 13

Changes to foot-and-mouth disease (FMD) control policies since 2001 mean that emergency vaccination must be considered more readily as a control measure in the future. Since field application of vaccine for emergency use has only rarely been applied, the effectiveness of single dose administration, as a control measure in an outbreak situation, is poorly understood. In this review we consider all the available experimental data from studies utilizing either experimental or readily available, commercially produced vaccines, in order to assess their likely effectiveness as an additional means of controlling FMD transmission and spread in an emergency. Overall it is concluded that such vaccines offer an additional and valuable means of FMD control for both ruminants and pigs. They are able to reduce clinical disease, sub-clinical infection and excretion and onward transmission of virus. However, to be most effective, vaccination should be rapidly applied to give maximum opportunity for immunity to develop. We also identify areas for future research and emphasize the importance of vaccine efficacy studies in providing data for models that can help to predict the efficacy of differing FMD control strategies.

Text in English



Foot and mouth disease virus transmission during the incubation period of the disease in piglets, lambs, calves, and dairy cows

Orsel K, Bouma A, Dekker A, Stegeman JA, de Jong MC

Prev Vet Med. 2009 Feb; 88 (2): 158-63

Transmission of foot and mouth disease (FMD) virus by infected animals may already occur before clinical signs are evident. Quantitative data for FMD transmission rates during this so-called high-risk period are currently lacking and would provide useful information to develop surveillance systems in which the number of new outbreaks is an outcome variable. In order to address this, we used experimental data to quantify transmission in cattle, swine and sheep during the non-clinical phase of the disease. Groups consisted of vaccinated or non-vaccinated animals of one species; half of each group was inoculated with FMDV, the other half was contact-exposed. We estimated the reproduction ratio $R_{(nonclin)}$ using a mathematical SIR model. $R_{(nonclin)}$ was defined as the average number of secondary infections caused by one infectious individual in its non-clinical phase. Animals not showing clinical signs shed lower amounts of virus than clinically affected ones. Therefore, we estimated transmission proportionally to the virus excretion. Low estimates for $R_{(nonclin)}$ in groups with non-vaccinated and vaccinated calves; 0.30 [0.03; 3.43] and 1.03×10^{-8} [0; infinity] respectively and 0.21 [0.02; 2.48] for the non-vaccinated and 0.16 [0.009; 2.96] for the vaccinated lambs, were observed. These results indicate that only few secondary infections are to be expected from infected calves and lambs when they are not clinically affected. In groups of non-vaccinated piglets estimates were $R_{(nonclin)} = 13.20$ [4.08; 42.68], and in vaccinated piglets $R_{(nonclin)} = 1.26$ [0.18; 8.96]. The estimate for $R_{(nonclin)}$ for non-vaccinated dairy cows was $R_{(nonclin)} = 176.65$ [80.38; 388.24], whereas $R_{(nonclin)}$ in the vaccinated groups could not be estimated. Our findings suggest that a large number of individuals might have been infected before clinical signs are noticed, especially in non-vaccinated swine and dairy herds. These findings suggest that after clinical recognition of FMD, priority should be given to trace back contacts with swine and dairy farms, as they may already have been infectious in the herd's incubation period.

Text in English

Intradermal vaccination of pigs against FMD with 1/10 dose results in comparable vaccine efficacy as intramuscular vaccination with a full dose



Eblé PL, Weerdmeester K, van Hemert-Kluitenberg F, Dekker A
Vaccine 2009 Feb; 27 (8):1272-8

The aim of this study was to investigate whether intradermal (ID) vaccination against foot-and-mouth disease (FMD) is suitable as an alternative for the usually used intramuscular (IM) route. We compared vaccine efficacy in groups of pigs in which vaccine administration differed with respect to antigen payload of the vaccine, administrated volume and administration route. When compared with pigs that were IM vaccinated with a full dose vaccine with a standard antigen payload, pigs vaccinated ID with 1/10 dose of the same vaccine were equally protected against clinical disease and subclinical virus shedding. The ID vaccinated pigs were protected against virus shedding at a significant lower VN-titre as compared to IM vaccinated pigs, suggesting that immune responses other than neutralising antibodies also contributed to protection. We conclude that the ID route might be a good alternative for IM application, as ID application might induce a very efficient immunological response against FMD and, moreover, because the dose required by the ID route is lower compared to the IM route, ID application may reduce the production costs per dose of FMD vaccine markedly.

Text in English



Measurement of airborne foot-and-mouth disease virus: preliminary evaluation of two portable air sampling devices

Ryan E, Wright C, Gloster J
Vet J. 2009 Mar; 179 (3): 458-461

Until now measurement of airborne foot-and-mouth disease virus (FMDV) in the Field has not been attempted or been practical; measurements have been restricted to the laboratory and isolation units using instruments developed in 1960s. However, with the development of air sampling devices for other biological purposes, there is now the possibility that this short-coming can be overcome and as a result earlier detection of virus may be possible in the future. Two recently-introduced commercially-available portable air sampling devices, the BioCapture 650 and the BioBadge 100, have successfully detected airborne virus in there proof-of-concept experiments involving pigs and cattle infected with FMDV. There is na early indication that these devices have potential for use in the Field, but for maximun benefit they Will need to be combined with a suitable portable analysis instrument. Further evaluation in the laboratory is required before any Field measurement are considered.

Text in English



Rapid methodology for antigenic profiling of FMDV field strains and for the control of identity, purity and viral integrity in commercial virus vaccines using monoclonal antibodies

Seki C, Robiolo B, Periolo O, Iglesias M, D'Antuono A, Maradei E, Barros V, La Torre J, Mattion N
Vet Microbiol. 2009 Jan; 133 (3): 239-51

Monoclonal antibodies (MAbs) developed against different foot-and-mouth disease virus (FMDV) vaccine strains were extensively used to study any possible antigenic variations during vaccine production in Argentine facilities. Additionally, a typing ELISA using strain specific MAbs was developed to detect potential cross contaminations among FMDV strains in master and working seeds with high specificity and sensitivity and to confirm strains identity in formulated vaccines. This assay was carried out for the South American strains currently in use in production facilities in Argentina (A24/Cruzeiro, A/Argentina/01, O1/Campos and C3/Indaiá) and for the strain O/Taiwan, produced only for export to Asia. These non-cross reactive MAbs were also used to analyze the integrity of viral particles belonging to each one of the individual strains, following isolation of 140S virions by means of sucrose density gradients from the aqueous phase of commercial polyvalent vaccines. Antigenic profiles were defined for

FMDV reference strains using panels of MAbs, and a coefficient of correlation of reactivity with these panels was calculated to establish consistent identity upon serial passages of master and production seeds. A comparison of vaccine and field strain antigenic profiles performed using coefficients of correlation allowed the rapid identification of two main groups of serotype A viruses collected during the last FMD epidemic in Argentina, whose reactivity matched closely to A/Argentina/2000 and A/Argentina/2001 strains.

Text in English



Simulation of foot-and-mouth disease spread within an integrated livestock system in Texas, USA

Ward MP, Highfield LD, Vongseng P, Graeme Garner M
Prev Vet Med. 2009 Apr; 88 (4): 286-97

We used a simulation study to assess the impact of an incursion of foot-and-mouth disease (FMD) virus on the livestock industries in an 8-county area of the Panhandle region of Texas, USA. The study was conducted in a high-density livestock area, with an estimated number of cattle on-feed of approximately 1.8 million. We modified an existing stochastic, spatial simulation model to simulate 64 scenarios for planning and decision-making. Our scenarios simulated four different herd types for the index herd (company feedlot, backgrounder feedlot, large beef, backyard) and variations in three mitigation strategies (time-of-detection, vaccine availability, and surveillance during disease control). Under our assumptions about availability of resources to manage an outbreak, median epidemic lengths in the scenarios with commercial feedlot, backgrounder feedlot, large beef and backyard index herd types ranged from 28 to 52, 19 to 39, 18 to 32, and 18 to 36 days, respectively, and the average number of herds depopulated ranged from 4 to 101, 2 to 29, 1 to 15 and 1 to 18, respectively. Early detection of FMD in the index herd had the largest impact on reducing (approximately 13-21 days) the length of epidemics and the number of herds (approximately 5-34) depopulated. Although most predicted epidemics lasted only approximately 1-2 months, and <100 herds needed to be depopulated, large outbreaks lasting approximately 8-9 months with up to 230 herds depopulated might occur.

Text in English

Influenza Aviar / Avian Influenza



Avian flu becoming more resistant to antiviral drugs, says University of Colorado (CU-Boulder) study

University of Colorado
University of Colorado at Boulder January 2009

A new University of Colorado at Boulder study shows the resistance of the avian flu virus to a major class of antiviral drugs is increasing through positive evolutionary selection, with researchers documenting the trend in more than 30 percent of the samples tested.

Text in English

<http://www.colorado.edu/news/r/fe1c8e0ea11c9071a41bab551f261600.html>



Evolutionary biology, community ecology and avian influenza research

Caron A, Gaidet N, de Garine-Wichatitsky M, Morand S, Cameron EZ
Infect Genet Evol. 2008 Dec

The epidemiology of H5N1 HPAI is still unclear despite the efforts of the research community. Studies bringing new insights add more variability in the host-pathogen system and uncertainty in the prediction of local risks. Global analyses of the pathways of wild birds in parallel with virus outbreaks have brought limited conclusions once the raw information was extracted from relevant maps. In this article, we

propose an integration of epidemiology, evolutionary biology and community ecology on a local level in a research framework. This multidisciplinary approach aims at understanding the pathogen transmission processes at the interface between different bird groups whether wild or domesticated. We believe that this ecological data brought together with the epidemiological and molecular data is a key element to explore the mechanism of the AIV ecology in their hosts.

Text in English (article in press)



Impacts of avian influenza virus on animal production in developing countries

Otte J, Hinrichs J, Rushton J, Roland-Holst D, Zilberman D

CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources
2008; 3 (080): 1-18

This paper reviews the (predominantly grey) literature on impacts of highly pathogenic avian influenza (HPAI) strain H5N1 and control responses on the livestock sector and associated industries in developing countries. The authors distinguish between impacts that arise directly through HPAI-related morbidity and mortality, those that are a consequence of public intervention to control or eradicate HPAI, and impacts that are mediated through market reactions. The paper further considers how these impacts propagate up-and downstream through related supply and distribution networks, how short-term reactions are followed by longer-term adjustments, how impacts include direct cost elements and foregone income, and why losses to the poultry sector will, at least to some extent, be 'passed on' on the one hand, for example through compensation, and, on the other hand, be compensated for by gains in other livestock subsectors. Differences in methodology applied in the reviewed reports result in a lack of comparability of estimates for HPAI 'costs/impacts' across countries and even within countries and are compounded by information deficits. Despite these shortcomings, the literature permits some significant conclusions to be drawn on the relative importance of direct and indirect impacts and on their distribution across different types of poultry producers. The paper ends by outlining directions of future research that combine epidemiology and economics to provide a framework for disease control decision-making.

Text in English

<http://www.fao.org/docs/eims/upload//251044/aj201e00.pdf>



Simulation of an early warning system using sentinel birds to detect a change of a low pathogenic avian influenza virus (LPAIV) to high pathogenic avian influenza virus (HPAIV)

Verdugo C, Cardona CJ, Carpenter TE

Prev Vet Med. 2009 Feb; 88 (2): 109-19

The placement of sentinel birds in a commercial poultry flock infected with low pathogenic avian influenza virus (LPAIV) may be an effective way of detecting subsequent change in the isolate to a high pathogenic avian influenza virus (HPAIV). Data collected from the 2002 Chilean HPAIV outbreak, along with information from a literature review of laboratory studies involving A/chicken/Chile/176822/02 (H7N3/LP) and A/chicken/Chile/184240-1/02 (H7N3/HP) viruses, were used to construct a computer simulation model. Mortality rates of the original LPAIV-infected population and the sentinel population were compared to detect the presence of HPAIV. A total of 12 increased mortality threshold scenarios were examined, using one-day absolute (2, 3, or 4 birds) or relative (0.5, 1.0, or 1.5%) mortality thresholds, and two-day absolute (1, 2, or 3 birds) or relative (0.25, 0.50, or 1.00%) mortality thresholds, to indicate the change from LPAIV to HPAIV in the sentinel and original populations, respectively. Results showed that following a one-day approach, threshold mortalities occurred on average at 7.35, 7.82, and 8.17 (0.5, 1.0, or 1.5%) and 6.21, 6.38, and 6.45 (2, 3, or 4 birds) days after the first infectious case for the original and sentinel populations, respectively. The two-day approach delayed the occurrence of threshold mortalities, on average, to 7.64, 8.05, and 8.62 (0.25, 0.50, or 1.00%) and 6.86, 6.78, and 7.23 (1, 2, or 3 birds) days after the first infectious case for the original and sentinel populations, respectively. Although, significant ($p < 0.10$) differences were observed among different combinations of detection times for the original and sentinel populations, the use of sentinel

birds has a maximum mean advantage, over monitoring mortality exclusively in the original population, of 1.96 and 1.84 days for one- and two-day threshold moralities, respectively. Additionally, the early warning system based on a sentinel vs. original population presented a decrease of the probabilities of a false alarm, from 0.04-0.45 to <0.01-0.10%. These findings may be used by decision makers to evaluate the risk of not depopulating a flock infected with a H5 or H7 LPAIV strain and the benefit of using sentinel birds as an early warning system of a change to HPAIV.

Text in English

Inocuidad de los Alimentos / Food Safety



Concerns related to international risk analysis

Kassianenko A, Jol S
Food Safety Magazine 2009 Jan

A key discipline for further reducing foodborne illness and strengthening food safety systems is risk analysis. Understanding the hazards in foods and knowing the risks they pose to public health are part of the risk analysis process, utilized in making the decisions that are needed in food control to establish acceptable levels of risk and implement measures to maximize public health protection.

Text in English

<http://foodsafetymagazine.com/article.asp?id=2717&sub=sub1>



Developing the Community reporting system for foodborne outbreaks

Gervelmeyer A, Hempen M, Nebel U, Weber C, Bronzwaer S, Ammon A, Makela P
Euro Surveill. 2008 Nov; 13 (45): 19029

Investigating and reporting of foodborne outbreaks became mandatory with Directive 2003/99/EC. In 2006 and 2007 the Community reporting system for foodborne outbreaks was further developed in an interdisciplinary approach, which is described in this paper. This involved experts on investigating and reporting foodborne outbreaks as well as experts on communicable diseases in addition to the European Food Safety Authority (EFSA) Task Force for Zoonoses Data Collection, the European Centre for Disease Prevention and Control (ECDC) Advisory Forum and representatives of ECDC, the World Health Organization (WHO), the World Organization for Animal Health (OIE) and the European Commission. European Union Member States participated in a survey regarding their national reporting systems and the needs for information on foodborne outbreaks at the Community level. The acceptability, the functionality and the data quality of the current reporting system were evaluated. The results were used to propose new variables on which data should be reported. Pick-lists were developed to facilitate reporting and better integration of the Community system with Member States' reporting systems. The new system is expected to yield better quality data on foodborne outbreaks relevant for risk assessment and risk management while reducing the work load for Member States.

Text in English

<http://www.eurosurveillance.org/images/dynamic/EE/V13N45/art19029.pdf>



A foodborne outbreak of Cryptosporidium hominis infection

Ethelberg S, Lisby M, Vestergaard LS, Enemark HL, Olsen KE, Stensvold CR, Nielsen HV, Porsbo LJ, Plesner AM, Mølbak K
Epidemiol Infect. 2009 Jan: 1-9

SUMMARY: Foodborne outbreaks of cryptosporidiosis are uncommon. In Denmark human cases are generally infrequently diagnosed. In 2005 an outbreak of diarrhoea affected company employees near Copenhagen. In all 99 employees were reported ill; 13 were positive for Cryptosporidium hominis infection. Two analytical epidemiological studies were performed; an initial case-control study followed

by a cohort study using an electronic questionnaire. Disease was associated with eating from the canteen salad bar on one, possibly two, specific weekdays [relative risk 4.1, 95% confidence interval (CI) 2.1-8.3]. Three separate salad bar ingredients were found to be likely sources: peeled whole carrots served in a bowl of water, grated carrots, and red peppers (in multivariate analysis, whole carrots: OR 2.1, 95% CI 1.1-4.0; grated carrots: OR 2.1, 95% CI 1.2-3.9; peppers: OR 3.3, 95% CI 1.7-6.6). We speculate that a person excreting the parasite may have contaminated the salad buffet.

Text in English

Malaria



The World Malaria Report 2008 describes the global distribution of cases and deaths, how WHO-recommended control strategies have been adopted and implemented in endemic countries, sources of funding for malaria control, and recent evidence that prevention and treatment can alleviate the burden of disease.

Text in English

<http://www.who.int/malaria/wmr2008/>

Rabia / Rabies



Comparison of antibody responses after vaccination with two inactivated rabies vaccines

Minke JM, Bouvet J, Cliquet F, Wasniewski M, Guiot AL, Lemaitre L, Cariou C, Cozette V, Vergne L, Guigal PM

Vet Microbiol. 2009 Jan; 133 (3): 283-6

Thirty laboratory dogs were randomly assigned to two groups (A and B) of 15 dogs and subcutaneously vaccinated with a single dose of one of two commercially available monovalent inactivated rabies vaccines: RABISIN(1) (Merial, France) (group A) and NOBIVAC(2) Rabies (Intervet International) (group B). Rabies antibodies were measured over a period of 4 months using the fluorescent antibody virus neutralization (FAVN) test. The two vaccines performed differently in terms of magnitude and persistence of rabies antibodies titers in dogs. Two weeks after vaccination, average rabies antibody titers peaked at 2.53IU/mL (range, 0.17-13.77IU/mL) and 1.26IU/mL (range, 0.50-4.56IU/mL) in groups A and B dogs, respectively. The average FAVN antibody titres against rabies on D28, D56, D84, D112 and D120 were significantly higher in group A than in group B. Although all dogs from group B serologically responded to vaccination, the proportion of dogs with antibody titres ≥ 0.5 IU/mL dropped significantly after D28 and was statistically significantly lower on D56, D84 and D112 compared to group A dogs. In conclusion, in the context of international trade, the choice of the vaccine and the timing of blood tests are critical factors in achieving successful serological test results after rabies vaccination. RABISIN induces high and sustained antibody titres against rabies, increasing the flexibility for the time of blood sampling after primo-vaccination.

Text in English

Síndrome Reproductiva y Respiratoria de los Porcinos / Porcine Reproductive and Respiratory Syndrome (PRRS)

A method to provide improved dose-response estimates for airborne pathogens in animals: An example using porcine reproductive and respiratory syndrome virus

Hermann JR, Muñoz-Zanzi CA, Zimmerman JJ



Vet Microbiol. 2009 Jan; 133 (3): 297-302

This paper describes a method to provide improved probability estimates that exposure to a specific dose of an airborne infectious pathogen will result in animal infection. Individual animals were exposed to a specific dose of airborne pathogen. Following exposure, animals were individually housed and monitored for evidence of infection. The detection of specific antibodies and/or the pathogen in diagnostic specimens was evidence that the exposure dose resulted in infection. If replicated over a range of doses, the results can be used to derive a dose-response curve for a variety of animal species and infectious pathogens. This information is useful in estimating the likelihood of infection associated with exposure to airborne infectious microorganisms. Applications include predicting the risk of transmission associated with exposure to airborne pathogens, modeling the transmission of airborne pathogens, and determining requirements for effective exposure doses for vaccines delivered in aerosols.

Text in English

Zoonosis / Zoonoses



The molecular epidemiology of human and zoonotic *Mycobacterium bovis*: The intersection between veterinary medicine and public health

Moonan PK, Chatterjee SG, Lobue PA

Prev Vet Med. 2009 Mar; 88 (3): 226-7

M. bovis remains a significant challenge to veterinary medicine and public health practice. The molecular characterization (genotyping) of *M. tuberculosis* complex isolates collected from animal sources may have a substantial impact on our understanding of transmission dynamics between animals and humans.

Text in English

Seminarios, Congresos, Eventos, Cursos / Seminars, Congress, Events, Courses

9º Curso de Capacitação para Médicos Veterinários Responsáveis Técnicos em Estabelecimentos Produtores de Alimentos de Origem Animal

27 Fev – 04 Jul, 2009

Jaboticabal, SP, Brasil

http://www.funep.com.br/novoeventos/mostrar_evento.php?id_eventos=76

5th International Poultry Conference

10 - 13 March, 2009

Taba, Egypt

<http://wpc2009.googlepages.com/>

Conferencia Internacional sobre la Identificación y la Rastreabilidad de los Animales

23-25 Marzo, 2009

Buenos Aires, Argentina

<http://www.oie.int/esp/traceability-2009/welcome.html>

7th International Symposium on Avian Influenza: avian influenza in poultry and wild birds
05-08 April, 2009
Georgia, US
<http://www.georgiacenter.uga.edu/conferences/2009/Apr/05/avian.phtml>

Course on Disease Outbreak Management: Part 1 - E-learning
20 April – 31 May
Copenhague, Dinamarca
http://www.kursusinfo.life.ku.dk/Kurser/mvph/modules_and_courses/specific_courseplan/workshop.aspx



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Pan American Foot and Mouth Disease Center

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