**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**

**Gestión de la Información para la Innovación Tecnológica Agropecuaria**

COMUIICA 2007

La información técnica es un elemento clave en todo proceso de innovación o de investigación que tenga lugar en el sector agropecuario. En las instituciones que promueven estos procesos, son diversos los retos actuales para la gestión de información (GI). Estos se plantean en un entorno de cambios, marcado por un aumento exponencial en la cantidad de información potencialmente importante, y por crecientes avances en las tecnologías de información y comunicación (TIC), entre otros factores. Los desafíos incluyen la necesidad de incorporar la información de forma explícita dentro de la planificación y ejecución de cualquier proceso institucional y aprovechar al máximo las posibilidades que ofrecen las TIC disponibles, lo que generará un apoyo a los procesos de gestión de conocimiento. La GI tiene lugar mediante un conjunto de acciones que involucran: a) definir objetivos y prioridades relacionadas con el ámbito de la información; y b) planificar, facilitar y coordinar las actividades necesarias para alcanzar los objetivos.

**Text in Spanish**

http://webiica.iica.ac.cr/bibliotecas/replica/B0576e/B0576e.pdf

**Informaciones disponibles en formato electrónico / Information available in electronic format**

**Equinococosis Quística / Cystic Echinococcosis**

**Diagnosis of cystic echinococcosis, central Peruvian Highlands**


Emerg Infect Dis. 2008 Feb; 14 (2): 260-6

We evaluated prevalence of cystic echinococcosis (CE) in a central Peruvian Highland district by using 4 diagnostic methods: ultrasonography for 949 persons, radiography for 829, and 2 serologic tests for 929 (2 immunoblot formats using bovine hydatid cyst fluid [IBCF] and recombinant EpC1 glutathione S-transferase [rEpC1-GST] antigens). For the IBCF and rEpC1-GST testing, prevalence of liver and pulmonary CE was 4.7% and 1.1% and seropositivity was 8.9% and 19.7%, respectively. Frequency of seropositive results for IBCF and rEpC1-GST testing was 35.7% and 16.7% (all hepatic cysts), 47.1% and 29.4% (hepatic calcifications excluded), and 22.2% and 33.3% (lung cysts), respectively. Weak immune response against lung cysts, calcified cysts, small cysts, and cysts in sites other than lung and liver might explain the poor performance of the serodiagnostic tests. We confirm that CE is highly endemic to Peru and emphasize the limited performance of available serologic assays in the field.

**Text in English**
Fiebre Aftosa / Foot-and-Mouth Disease

**Application of modelling to determine the absence of foot-and-mouth disease in the face of a suspected incursion**

Heuer C, French NP, Jackson R, Mackereth GF

AIM: To use disease modelling to inform a response team about the number of animals per herd/flock to be examined, and the start date and duration of clinical surveillance required to be confident that foot-and-mouth disease (FMD) was not present on an island in New Zealand with a population of approximately 1,600 cattle, 10,000 sheep and a small number of pigs, goats and alpacas. METHODS: Because the probability of detecting clinical disease in (the) primary case(s) in larger herds and flocks was extremely low, deterministic and stochastic mathematical SLIR (susceptible, latent, infectious, recovered) models for the transmission of infection were constructed to estimate the date when clinical lesions in herds and flocks would be detected with 95% confidence. Surveillance targeted the first wave of infections following a suspect index case. RESULTS: If 70 cattle in herds of about 400 cattle were examined it was estimated it would take approximately 13 (90% stochastic range 9-19) days from first exposure before it would be possible to achieve 95% confidence for detecting clinical signs for a low-virulence virus, and 9 (7-14) days for a high-virulence virus. The duration of sufficiently accurate clinical detection was 17 (15-19) days and 13 (12-14) days for low- and high-virulence viruses, respectively. A sample of 70 sheep from flocks of >1,000 would be required to achieve clinical detection at about the same time but with a shorter period of detection than for cattle. The duration of effective detection could be increased by examining a larger sample in most sheep flocks, however the small size of many cattle herds in the study population limited the confidence of detecting group-level disease in cattle, therefore necessitating repeated herd inspections. The model suggested that group-level detection was not feasible if it was based on elevated body temperature alone because of short durations of fever in infected animals. CONCLUSION AND CLINICAL RELEVANCE: Simulation modelling is a useful and powerful tool for informing ongoing surveillance activities in the face of an exotic disease incursion. Results of modelling suggested to start clinical inspection activities at 4 days and to continue regular inspection twice a week for about 35 days after the date of first exposure, to satisfy the required 95% confidence threshold of clinical detection of FMD in cattle herds and sheep flocks.

Text in English

A meta-analysis quantifying transmission parameters of FMDV strain O Taiwan among non-vaccinated and vaccinated pigs
Eblé PL, Koeijer AA, Jong MC, Engel B, Dekker A

Our aim was to provide additional estimates of main parameters for the transmission of foot-and-mouth disease virus (FMDV) strain O Taiwan (3/97). We used the data of previous experiments in non-vaccinated and vaccinated pigs and combined the data of experiments with the same treatment(s). First, we quantified the reproduction ratio $R$ for the various groups using a final-size method. Our final-size results predicted that vaccination with a four-fold vaccine dose (but not with a single dose) at 1 week before inoculation ($-7$ dpi) would reduce $R$ compared to the non-vaccinated group. Secondly, we used the daily results of virus excretion to quantify the transmission rate $\beta$ (by using generalized linear modelling), and the infectious period $T$ (by using survival analysis). We used the estimates of $\beta$ and $T$ to estimate $R$ more precisely as compared to the final-size method and also for the groups for which a finite estimate could not be obtained using a final-size method. Our modelling results predicted that $\beta$ for non-vaccinated, for single-dose and four-fold-dose groups would be $6.1 \pm 3.7$, $2.0 \pm 1.0$, and $0.4 \pm 0.1$ day$^{-1}$, $T$ at $6.5 \pm 5.7$, $5.3 \pm 4.7$, and $2.3 \pm 0.9$ days and $R$ at $40 \pm 21$, $11 \pm 4.9$, and $1.0 \pm 1.0$. These results predicted that both vaccination with a four-fold vaccine dose and with a single dose at $-7$ dpi would reduce $\beta$, $T$ and $R$ significantly as compared to the non-vaccinated pigs, thereby showing that vaccination will reduce transmission of FMDV significantly already 1 week post vaccination.

Text in English

Rapid and differential diagnosis of foot-and-mouth disease, swine vesicular disease, and vesicular stomatitis by a new multiplex RT-PCR assay
A highly sensitive and specific one-step multiplex RT-PCR assay has been developed and standardised for the simultaneous and differential detection of the most important vesicular viruses affecting livestock: foot-and-mouth disease virus (FMDV), swine vesicular disease virus (SVDV), and vesicular stomatitis virus (VSV). The method uses three primer sets, each one specific for the corresponding virus, selected to detect all serotypes of FMD and VS. The detection range was confirmed by examination of a collection of 31 isolates of the three target viruses. The specificity of the assay was also demonstrated by testing other related viruses, uninfected cell line cultures and healthy pig tissues. The testing of blood and serum samples from animals infected experimentally proved that the method can be useful for early diagnosis of the diseases, even before the first vesicular lesions are visualized in the infected pigs. An assessment of the performance of the multiplex RT-PCR was carried out using a panel of more than 100 samples from animals infected experimentally, showing the suitability of the method for a rapid (less than 6h), sensitive and specific differential diagnosis in clinical samples. Additionally, a uniplex RT-PCR for VSV, that amplifies the two viral serotypes, was also developed and tested as a rapid tool for the diagnosis of this vesicular disease.

**Influenza Aviar / Avian Influenza**

**Experimental infection and natural contact exposure of dogs with avian influenza virus (H5N1)**

Giese M, Harder TC, Teifke JP, Klopfleisch R, Breithaupt A, Mettenleiter TC, Vahlenkamp TW

Emerg Infect Dis. 2008 Feb; 14 (2): 308-10

Experiments that exposed influenza virus (H5N1)–infected cats to susceptible dogs did not result in intraspecies or interspecies transmission. Infected dogs showed increased body temperatures, viral RNA in pharyngeal swabs, and seroconversion but not fatal disease.

**Update on avian influenza A (H5N1) virus infection in humans**


The unprecedented epizootic of avian influenza A (H5N1) viruses among birds continues to cause human disease with high mortality and to pose the threat of a pandemic. This review updates a 2005 report and incorporates information recently published or presented at the Second World Health Organizatio (WHO) Consultation on Clinical Aspects of Human Infection with Avian Influenza A (H5N1) Virus.

**Inocuidad de los Alimentos / Food Safety**

**Foodborne disease outbreaks: Guidelines for investigation and control**

WHO, 2007

Food Control 2008 Feb; 19 (2): 186-90

The investigation and control of foodborne disease outbreaks are multi-disciplinary tasks requiring skills in the areas of clinical medicine, epidemiology, laboratory medicine, food microbiology and chemistry, food safety and food control, and risk communication and management. Many outbreaks of foodborne disease are poorly investigated, if at all, because these skills are unavailable or because a field investigator is expected to master them all single-handedly without having been trained. These guidelines have been written for public health practitioners, food and health inspectors, district and national medical officers, laboratory personnel and others who may undertake or participate in the investigation and control of foodborne disease outbreaks.

While the book focuses on practical aspects of outbreak investigation and control, it also provides generic guidance that can be adapted to individual countries and local requirements. At the field level it will be valuable in initial epidemiological, environmental and laboratory investigations, in implementation of appropriate control measures, and in alerting investigators to the need to seek assistance for more complex situations. At national and regional levels, the guidelines will assist decision-makers in
identifying and coordinating resources and in creating an environment appropriate for the successful management of foodborne disease outbreaks.

Text in English


The hygiene training of food handlers at a teaching hospital
Acikel CH, Oğur R, Yaren H, Gocgeldi E, Ucar M, Kir T
Food Control 2008 Feb; 19 (2): 186-90

Food-related infection is an important health problem in many countries. This study was designed as an interventional study and carried out between December 1999 and August 2000. All 83 staff, handling food at the kitchens, were included in the study. A questionnaire was developed to evaluate the level of information and self-reported behaviours of the participants before and after the training. The bacteria density of the left hand was analysed as a quantitative indicator of the subjects' self-reported behaviours on food and personal hygiene. Following the training, the only behaviour showing a statistically significant change ($p < 0.04$) was using watches, jewellery, etc. during work. Total number of colonies, growing on the participants’ hands, had decreased ($p > 0.05$). The main way of preventing or decreasing this problem is educating food handlers and repeating this training periodically, in addition to inspection.

Text in English

Rabia / Rabies

Inter-laboratory trial to evaluate the reproducibility of a new ELISA to detect rabies antibodies in vaccinated domestic and wild carnivores
Servat A, Labadie A, Hamen A, Boue F, Cliquet F
Biologicals 2008 Jan; 36 (1):19-26

Validation of new diagnostic assays requires the establishment of their performance characteristics such as diagnostic sensitivity and specificity, precision, repeatability, accuracy and reproducibility. These different stages of validation are described in the recent Standard Operating Procedure for OIE Validation and Certification of Diagnostic Assays. This report describes a reproducibility study of a new ELISA to titrate rabies antibodies in vaccinated wild and domestic carnivores. The study was modelled on the proficiency tests which are annually organised by the Community Reference Institute (Afssa Nancy, France) in the frame of international movements of pets. Analyses demonstrated that the five participants provided satisfactory repeatability estimates (variation coefficients generally below 15% for the 20 coded sera of the panel), and concordant status for all serums. A regression analysis performed on standard curves revealed that two different positive standards used in two dilution ranges were titrated similarly by all participants, and that no significant differences were observed by using these two standards. Titres obtained on a dilution range included in the panel demonstrated that all laboratories were consistent with themselves (significant correlation between experimental and theoretical results), and consistent with other laboratories (significant correlation between results of laboratory under test and mean results of all other laboratories).

Text in English

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

Modern Approaches to Disease Surveillance in Veterinary Public Health
February 25 - March 6, 2008
Chinese University of Hong Kong, Sha Tin, Hong Kong SAR
http://www.vetschools.co.uk/EpiVetNet/epidivision/surveillance_short_course.htm

Spatial Simulation Modelling for Animal and Public Health – Austrália
March 10-14, 2008
University House, Australian National University, Canberra, Austrália
Contact:
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CAVEPM Conference 2008 / Epi-on-the-Island Short Courses 2008
Decision-making Tools for Management of Animal Health and Food Safety - Systematic Reviews and Disease Modelling
May 21-30, 2008
Charlottetown, Prince Edward Island, Canada
http://www.upei.ca/cavepm/avc2008/index.htm

Unidad de Salud Pública Veterinaria
Centro Panamericano de Fiebre Aftosa

Centro de Documentación / Documentation Center (CEDOC)
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