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MEETING HOST:



ADDRESSING ANIMAL HEALTH ISSUES IN CARICOM MEMBER STATES

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ABSTRACT. More than 75% of human diseases are contracted from animals. Contaminated or infected meats and other foods can affect trade. Foods may contain hazards at the point of production, or acquire hazards along the food chain from farm to table. These hazards may be chemical (drug, pesticide or other chemical residues) or biological (food borne diseases). Caribbean countries with their striving tourist industry are very vulnerable to transboundary and endemic animal diseases that require the full intervention of veterinary resources. Inter-ministerial and inter-sectoral collaboration and coordination are paramount in addressing the concerns. Thus public and private partnerships are needed, which involve national authorities, industry, academia and research institutions. Import and export products must comply with the guidelines and regulations of WTO/SPS, OIE, Codex Alimentarius and IPPC. Thus foods of animal origin require disease diagnostics, risk assessment and overall food safety and quality controls. Skilled and experienced personnel are needed with expertise in clinical veterinary services, animal production and herd health medicine. Of special concern are methicillin-resistant *Staphylococcus aureus* (MRSA), a bacterium responsible for difficult-to-treat infections. Pathogens may survive food harvesting, storage, manufacturing and preparation. This veterinary diagnostics are essential. A legal framework with standards and regulatory procedures may be beneficial with endorsement by regional forums, such as the already established CVO/CEDHO/DVPH Forum. Caribbean countries should collaborate more to promote and support the development of entities and instruments within the countries and within the Region to assist in the coordination of the different multi-sectoral actors, particularly the health and agricultural sectors.

KEY WORDS: Zoonoses, transboundary, endemic, animal diseases, diagnostics, MRSA, regional forums, CVO/CEDHO/DVPH Forum, inter-ministerial, inter-sectoral collaboration

INTRODUCTION

It is accepted globally, that animals serve as a major source of human illnesses. Much has changed in the manner in which man co-habited with his animals and became ill because of direct encounter between man and his pet or livestock in the early days. But even today, companion animals continue to be a threat to man for diseases transmission. It is well known that many animals receive state-of-the-art treatment by veterinary practitioners and at grooming clinics. Even the way in which meats and other foods are processed in food establishments, some using the most modern methodology and technology, has changed considerably. At the same time, it is known that animals continue to serve as the origin of several communicable diseases contracted by humans (Figure 1). Emerging and re-emerging diseases have crossed, or have threatened to cross country borders, and the experiences have often revealed that the state of preparedness of the countries that face potential risks is still unsatisfactory. For example, the

epizootic of Avian Influenza since 2003, demonstrated the weaknesses in the existing infrastructure within countries, and the apparent lack of mechanisms and systems to address disease prevention and control. Within the Caribbean Community, there were numerous concerns regarding disease detection and response, disease containment and eradication, laboratory diagnostics and laboratory infrastructure, surveillance systems, among others. It was obvious that these all required resources, and that governments and private sector groups would need to revisit and examine the current veterinary infrastructure in CARICOM countries in order to deal effectively with the veterinary problems that may emerge.

Veterinary professionals alone cannot address the numerous intersectoral issues and therefore, inter-ministerial and inter-sectoral collaboration and coordination are paramount. Public and private sector personnel must partner together, and academia and research institutions must become equal partners in any strategy adopted. Additionally, serious consideration should be given to agricultural technologies and management practices of agriculture from farm to fork, gate to plate, and boat to throat. This means that from the farm production level through the intermediary stages of harvesting, manufacturing and processing, marketing and distribution, up to the consumption level, there must be data and research aimed at identifying the presence of hazards linked to animals and the potential spread to humans. It is known that in some countries, memoranda of understanding and agreements have been entered into to meet the multi-sectoral needs. This consideration is important in the Caribbean.

Veterinary Public Health issues require the support of veterinarians to respond to this changing world, in which public health issues ranging from animal diseases to environmental impact assessment, and overall food safety and quality must be viewed in the context of risk analysis and science-based research. Experiences and knowledge of clinical veterinary field services, animal production and health, and herd health medicine, are needed to contribute to finding solutions for global challenges related to requirements for compliance to the World Trade Organizations/Sanitary. In the early 1970s, there was an attempt by Caribbean governments to establish Veterinary Public Health (VPH) Units. Only four countries (Barbados, Guyana, Jamaica and Trinidad and Tobago) institutionalized the VPH program. Those Units were specifically focused on using professional veterinary knowledge and experiences to address disease prevention, control and eradication and a comprehensive program for health care through a Primary Health Care framework. Today, only Guyana, Jamaica and Trinidad and Tobago retain such units. However, the twenty-first century challenges are signaling to us, that there are emerging and re-emerging diseases (whether bacteria, viruses or parasites) that would require the joint action of colleagues in Ministries of Agriculture, Ministries of Health, and in other ministries (Tourism, Trade, Consumer Affairs, among others).

It is frequently said that the small island states of the Caribbean comprise a community in which the several countries share a single domestic space. But each country is sovereign and therefore must decide on its own course of action, even if such action means entering into partnership with others to use a collective approach in which veterinary colleagues from neighbouring countries join forces to attack common problems. To many, this latter approach seems favourable, particularly since it is perceived that once a trans-boundary disease enters any one of these countries, it may have been perceived as having entered the entire region. Through networking among the various stakeholders in country, a strategic approach is possible to address the

numerous challenges. This joint action can assist in disease detection, response, containment and eradication depending in the degree of commitment.

The potential economic and social impact of animal diseases on Caribbean states is significant enough to merit finding solutions speedily to the problems. It is essential to develop prevention strategies at the pre-harvest and post-harvest levels and to monitor product flow from the farm to the table or from the farm to the port in the case of exports. Improved surveillance is required at the country level and then at the regional level. These actions will facilitate early detection and early warning. Response actions could be done by utilizing expertise from amongst the countries in the event of a crisis. Additionally, a closer look at the Animal Health Infrastructure in these small island states in which the required national expertise is not available, may well provide some thoughts for the establishment of a mechanism to address animal health issues in CARICOM countries.

CHALLENGES:

Food safety and food security factors are inherently linked to foods due to the nature of the foods themselves. But they are also linked to the biological agents associated with food animals and their by-products. For example, we must carefully consider the variety of exotic foods in our hemisphere. These include the BBQ chicken, sold on the streets of several of our countries, the numerous patties and pies (Jamaican pattie, beef pies, chicken pies, cheese puffs); other forms of meats (jerk pork, fried chicken, stewed beef) and other Caribbean dishes (Figure 2). While we must consider the foods, we are also challenged by the food handling practices of the vendors and cooks that prepare and sell the foods sold for human consumption. It is well known that diseases such as *E.coli* and *Staphylococcus aureus* (Staph) can be passed on to consumers via food handlers who do not practice good food hygiene.

FINDING SOLUTIONS

There are constraints in finding ways to deal with the challenging issues, among which constraints are the limitations associated with scarce finances and inadequate human resources. Alternatives have been explored. For example, alliances have been fostered amongst national bodies for enhanced integrated Food Safety Programs, and more recently, the concept of the establishment of National Agricultural Health and Food Safety Agencies, has been pursued.

There is scope for veterinarians and other agricultural and health personnel to make significant contributions to the knowledge base of animal data; particularly as they impact the safety of the foods we consume, and the trade that is of importance to countries. The reality is that many human diseases come from animal sources. This may be due to direct or indirect animal contact resulting in the spread of zoonoses (Brucellosis, rabies, leptospirosis, and tuberculosis), or through products that may be consumed after contamination by disease agents from animal sources (*Salmonella*, *E. coli* 0157:H7, and *Campylobacter*).

In short, we continue to live in a world in which people need animals for food, social and economic development, and companionship. And it is a fact that animals often serve as vectors for the transmission of fatal diseases, such as, rabies, leptospirosis, and BSE. Where diseases are

not fatal, they may sometimes cause chronic problems. For example, tuberculosis and brucellosis are diseases that are chronic. We are fortunate in that some diseases (such as Foot and Mouth Disease) are not known to exist in our Caribbean states. We need to act to ensure that we remain free of them.

A well designed Agricultural Health and Food Safety program is believed to be indispensable to ensuring that all our peoples are protected from diseases and unwholesomeness associated with foods. And this applies whether foods are sold at hotels, in restaurants, in supermarkets, or on the street; or whether they are produced, manufactured and packaged for export.

In another context, our CARICOM partners struggle to monitor and control indiscriminate use of antimicrobials that may contribute to allergic reactions. We struggle also with common diseases shared by man and animals. Among these diseases are West Nile Fever caused by the West Nile Virus, tuberculosis, and more recently there is the threat of Hantavirus Syndrome and the Norwalk Virus among cruise ships to our CARICOM states. Global travel means, therefore, that although the Caribbean sub-region does not experience the impact of diseases such as Foot-and-Mouth Disease (FMD) and human rabies caused by dogs, the threat of these diseases still lie at our doorsteps. Therefore, our contribution is needed for the advancement of human health in all aspects, whether in zoonoses, food protection, education in veterinary public health, biomedical models for the development of human drugs and vaccines, and the prevention, control and eradication of diseases exotic to our shores (e.g. foot-and-mouth disease).

An enhanced surveillance system, for example on food-borne diseases, would help us obtain current data on microbial contamination of food, and to determine whether such contamination may be due to poor handling of the food itself or to other factors. Such data can inform the need for training and retraining of our food handlers from farm to table, including giving training in good agricultural and good manufacturing practices.

In this regard, I believe that the Pan American Commission for Food Safety (COPAIA) that has been formed at the Pan American Institute for Food Protection and Zoonoses (INPPAZ) can support countries in the establishment of food safety policies and strategic approaches aimed at reducing or preventing diarrhoeal and other diseases associated with the foods we eat, whether at home, at work, at school or at play. We believe that there can be great benefits as COPAIA works with the Office of Caribbean Program Coordination, and with the Caribbean Epidemiologic Centre (CAREC), and the Caribbean Food and Nutrition Institute (CFNI). Together much can be accomplished. In a similar way, we believe that through the Inter-American Network of Food Analyst Laboratories (INFAL) and the support of CAREC, there can be an enhanced laboratory networking amongst our countries.

Figure 1. New, Emerging & Re-emerging Diseases, 2004.

Source: Dr. Judy Gerberding, Director of Centers for Disease Control and Prevention, USA.

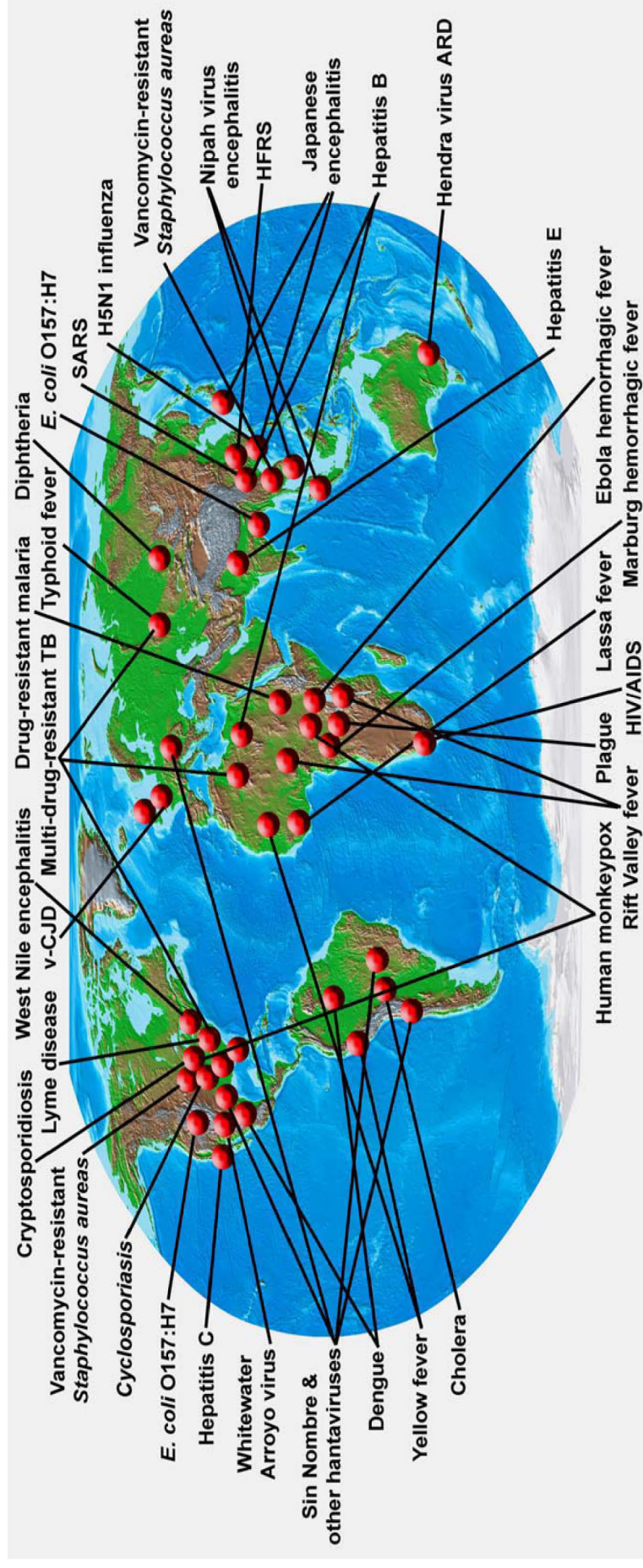


Figure 2. Street food preparation and vending in the Caribbean Region.

Product preparation is an extremely important step in street food vending

