

Gastroenteritis at a University in Texas: An Epidemiologic Case Study

Centers for Disease Control and Prevention

The Centers, Atlanta, GA, 2005

Format: CD-Rom. Price: \$30 from the Public Health Foundation or download at no charge from <http://www.cdc.gov/epicasestudies>

This CD-ROM is an important addition to case exercises in field epidemiology that serve to educate when actual participation in a field investigation is not possible or practical. The authors have prepared a case exercise based on an actual field investigation with real data that have been put together in a meaningful and effective way. The use of an epidemic of gastroenteritis is a cutting-edge element, since foodborne disease is a major public health problem today. The epidemic occurs on a college campus, which lends an air of verisimilitude, and the causative agent, norovirus, is a genuine public health threat.

This reviewer had a number of specific editorial recommendations for the authors that could enhance forthcoming versions. These suggestions included inserting a case definition in the investigation outline; adding the role of the state laboratory; consistently labeling outbreak, epidemic, and epidemic curve throughout the program; clarifying the rationale for limiting the outbreak to the university; further refining methods for the study and controls; using 2x2 tables to illustrate epidemiologic ratios; and expanding the employee training plan.

Overall, these types of training aids are needed as we attempt to further expose public health workers to

field investigations so that they can conduct investigations effectively. The reference to additional educational material throughout the steps is a well-conceived and appropriate aspect of the investigation. The narrative information, questions, and explanations are appropriate and flow smoothly.

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Antimicrobial Resistance in Bacteria of Animal Origin

Frank M. Aarestrup, editor

ASM Press, Washington DC, 2006

ISBN: 9781555813062

Pages: 442; Price US \$115.95

Resistance to antimicrobial agents develops soon after these life-saving drugs are introduced into human and animal medicine. The role of veterinary and animal use of antimicrobial agents has been debated for years. Frank Aarestrup and colleagues attempt to summarize information concerning this topic in their new book, *Antimicrobial Resistance in Bacteria of Animal Origin*. This book has 51 contributors, who have written 25 chapters on the public health, clinical, and regulatory importance of antimicrobial drug resistance in bacte-

ria of animal origin. The editor recognizes the complexity of this subject and makes no claims to cover all the issues but rather highlights what he and the contributors believe to be the most important topics.

The first 6 chapters highlight modes of action and resistance for antimicrobial agents, history of usage, susceptibility testing, antimicrobial-drug resistance detection methods, dosing schedules, and mechanisms that lead to the spread of bacterial resistance. These chapters provide the reader with very detailed molecular and genetic information on resistance mechanisms in bacteria of animal origin. Knowing the pharmacodynamics and pharmacokinetics of antimicrobial agents is essential for these drugs to be used correctly, and a good overview of these mechanisms is also provided in these beginning chapters. The book also stresses the urgent need for establishing veterinary-validated breakpoints for species-specific host-pathogen combinations that are clinically relevant. Some of the tables and diagrams in these chapters contain a large amount of material and need to be read carefully to understand the total wealth of information.

The 12 middle chapters provide an in-depth review of the known resistance mechanisms found in most of the pathogenic bacteria and bacteria of public health importance in animals. Each chapter takes a closer look at a particular family, genus, or species of bacteria and, when possible, attempts to estimate the prevalence of resistance to key antimicrobial agents. The information provided in these chapters is useful to clinicians, researchers, public health officials, and regulators. For some zoonotic agents, the animal health consequences of resistance are not known. For future editions, expanding on this topic would be helpful.

The last 7 chapters attempt to tie all of the previous information together by providing an overview of the

licensing and approval procedures for veterinary antimicrobial agents, surveillance systems that monitor resistance and usage, and the use of risk assessments to guide industry and government in decision making. These chapters take a global approach. When possible, side-by-side comparisons of resistance data or surveillance systems are discussed.

This book is the first of its kind to provide a comprehensive overview of

resistance mechanism in bacteria of animal origin rather than concentrating solely on zoonotic or foodborne bacteria. All uses of antimicrobial agents contribute to resistance, and each use must be examined in an attempt to understand its part in encouraging further dissemination of resistance in bacteria, including bacteria of animal origin. This book will serve as a valuable reference for persons who treat, research, or monitor

resistance in bacteria of animal origin.

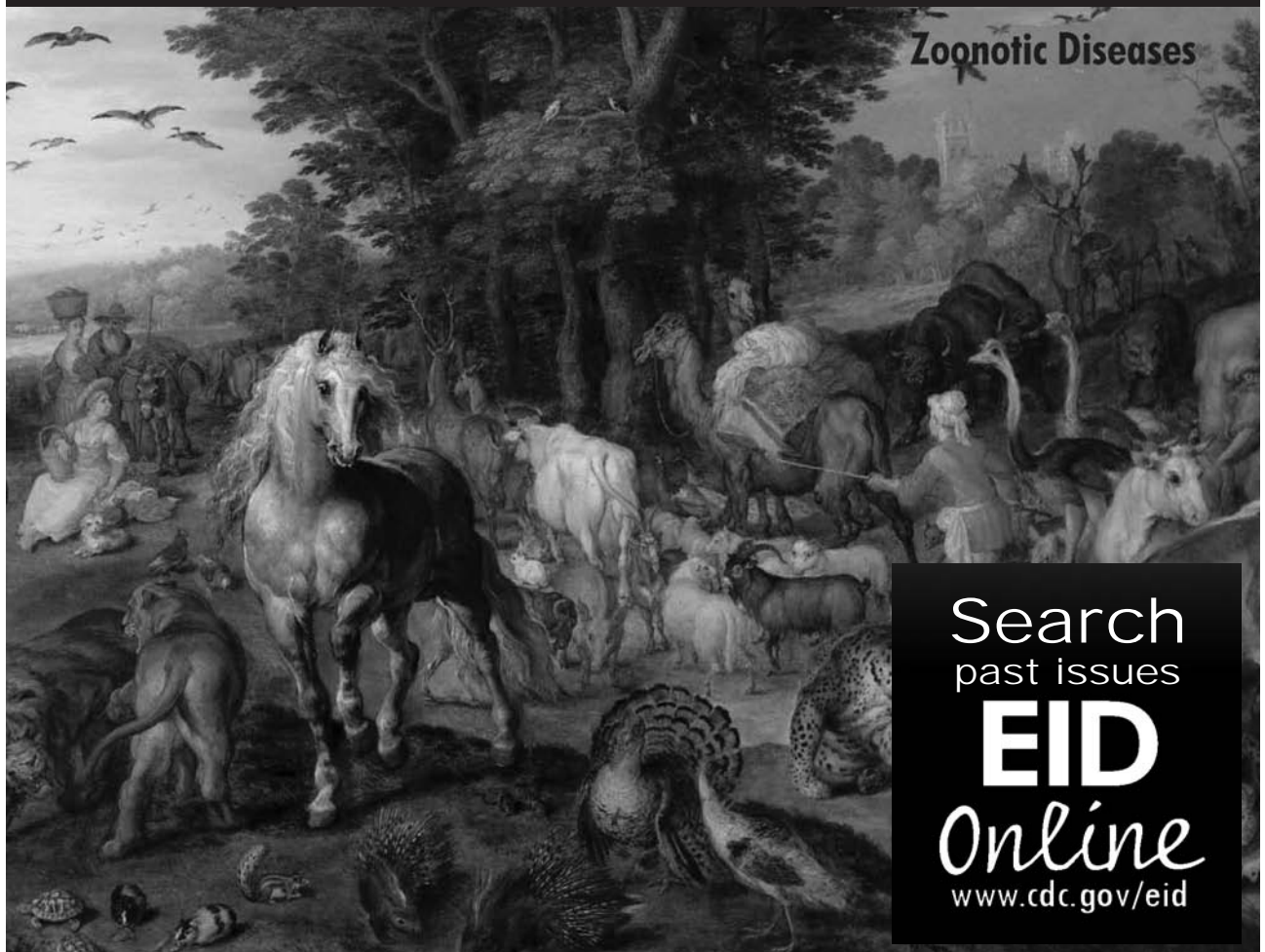
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