Epidémiol. santé anim., 1997, 31-32

# VETERINARY EPIDEMIOLOGY AND MODERN INFORMATION TECHNOLOGY

Pfeiffer D.U.[1], Morris R.S.[1]

*Ready and up-to-date access to information is necessary for a veterinarian to be successful in a competitive environment, which has been subject to an exponential growth of information. Trained on the basis of printed media the majority of veterinarians still find it difficult to make effective use of computerized technology for information access and communication. The Internet has the potential of becoming the major information platform of the 21st century. Its growth coincided with the development of user-friendly graphical interfaces. The World Wide Web allows global access and distribution of digital information presented in printed, audio and video format. CD-ROM technology is currently probably the best compromise between accessibility for the user and expense for storing large amounts of data on a medium other than computer hard disks. Conference proceedings and some text books become more useful to the end user if provided in a digital format.*

The latter half of this century has been characterized by an exponential growth of the information available to everybody, including veterinarians. Strategies for coping with this information explosion have to be developed to enable veterinarians to select only the information relevant to them. Most of us use printed documents as the main information resource. Other media such as sound, graphics and still or moving visual images have been used to improve the effectiveness of or to complement the printed medium. Computerized technology allows integration of all these different media into what is commonly called multi-media. There is still some reluctance in the veterinary profession to adopt computerized technology as tool to be used on a daily basis. To some extent this is related to veterinarians being used to and trained on the basis of information distributed largely in a printed form. In addition, the complex and difficult user interfaces of these computerized tools has not made the situation any easier for the end user. A revolutionary change has occurred in the area of computerized technology over the last 10 years with the development of graphical user interfaces. For example, while the Internet had been around for a number of years, not until graphical user interfaces became widely available did it become readily accessible to the average person. It is now probably the most significant medium for global information exchange available. The Internet is ideally suited for providing the quickest possible access to up-to-date information and to the largest audience possible. While the medium has grown very quickly over the last 5 years, the development of tools suitable for extracting the information useful for the individual has not quite kept up with the pace. Hence, while the information is available, additional specific skill development is required to enable veterinarians to make effective use of this new computerized information technology. The services provided on the Internet range from basic services such as electronic mail and simple file transfer to the World Wide Web (WWW). The latter greatly facilitates access to a number of these services through a user-friendly interface, and is largely responsible for the recent success of the Internet. The World Wide Web allows managed access through WWW sites such as EpiVetNet to information stored on networked computers anywhere around the world. The objective of these web sites is to provide a digest of information relevant to a particular interest group and thereby prevent them from having to search "cyberspace". The veterinary epidemiology web site EpiVetNet was established in March 1996 and has since been visited (in a virtual sense) by several thousand people. The information provided includes contact information for educational institutions, people working on specific research projects and a large number of veterinary epidemiologists around the world. There are links to other web sites of potential interest in the veterinary, medical or statistical area. It is possible to download public domain computer software for epidemiological analysis as well as a large number of documents including papers presented at conferences, lecture notes and theses. A news section is available for announcement of conferences, and a list of recommended books on different topics has been added recently. The Internet is not the only computerized medium for access and distribution of information. A number of conference proceedings and text books (e.g. the Merck Veterinary Manual) are now available in digital format on floppy disks or CD-ROM. This has the advantage of greatly improving search capabilities and it is possible to add sound, animated graphics and video. Updating of information becomes easier as CD-ROM's are less expensive than printed documents and it may be possible to download updated component documents via the Internet. Expert systems, such as BOVID and CANID, are active information media as they develop a dialog between the user and the systems knowledge base. In the case of BOVID they also provide an interface between the user and the printed information, through pointing the user at the relevant pages in a standard veterinary textbook. Decision support systems are now being developed which will allow distributed processing of information with the Internet as a potential networking platform. The systems may be tailored for national disease control programmes or for individual farm-based animal health management with the farmer entering information into a remote database through a world wide web browser. New developments such as the Java programming language could be used to develop computer software for animal health management where the user has access the most current version of the software through a world wide web.

[1] Department of Veterinary Clinical Sciences, Massey University, Palmerston North, New Zealand