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Newsletter

Elizabeth M. Lund - President; Paul Schmitz - President Elect, Rick M. Mills - Immediate Past President; Robin M. Starr - Secretary Treasurer; Ronald D. Smith - Newsletter Editor

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ASSOCIATION NEWS

From the AVI Newsletter Editor

I have been editing the AVI Newsletter for 10 years. When originally asked to serve as newsletter editor by the AVI President Steve Waldhalm, he suggested 6 issues per year. There was no particular reason for this number, but it has worked reasonably well. With the start of my second decade as newsletter editor, I am reducing the number of newsletters from 6 to 4 per year.

Before the creation of the AVI Web site, the newsletter was the only way to communicate with the membership in a timely fashion. Although the "AVI-L" (and formerly VETINFO) e-mail distribution lists existed, it wasn't clear how many AVI members actually subscribed to these lists. A newsletter issue every 2 months permitted us to disseminate time-sensitive information to AVI members before it was out of date. The Web site has removed this urgency.

I expect each issue of the quarterly newsletter to include more content than previous issues. I welcome any and all newsletter contributions from the AVI membership, and will periodically solicit contributions from the executive board and working group chairs.

Ronald D. Smith
AVI Newsletter Editor

AVI Scholar's Award for 2002

Congratulations to Chris Brandt and Robert Malinowski, recipients of the 2002 AVI Scholar's Award. Each will receive a \$750 award and reimbursement for travel expenses to the 2002 Talbot Informatics Symposium, to be held Sunday, July 14 in conjunction with the AVMA Convention in Nashville, TN.

Each will give a 20 minute presentation at the Talbot Symposium:

- Chris Brandt - VetPDA-Rx: Is That a Veterinary Drug Database in Your Pocket?
- Robert Malinowski - Promoting Veterinary Medicine on Television and the Web

Applications for membership, accompanied by How to Contact AVI

Applications for membership, accompanied by a check payable to the AVI, should be sent to:

Dr. Robin M. Starr; Secretary Treasurer, AVI;
31575 Griffin Drive, Conifer, CO 80433
Phone: 303/674-5231; FAX: 303/674-9717;
e-mail: starrchi@earthlink.net

Membership application forms are available online at:

<http://www.avinformatics.org/>

Dr. Starr is responsible for distribution of the hardcopy version of the AVI Newsletter.

Newsletter items can be sent to:

Dr. Ronald D. Smith, Newsletter Editor, AVI;
UI College of Veterinary Medicine; 2001 South Lincoln; Urbana, IL 61801.
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If you are an AVI member and would like to be on the AVI Newsletter electronic distribution list, send an e-mail message to the Newsletter Editor. The electronic (PDF) version is faster, searchable, easier to store and retrieve, and environmentally friendly.

Current and past issues of the AVI Newsletter are also available on the Web at:

<http://www.avinformatics.org/>

BENEFITS OF A NATIONAL DATABASE FOR PATIENT MEDICAL RECORDS

Robert H. Featherston, DVM, MS

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American Veterinary Medical Association, 1997. All Rights Reserved.

Almost all of us in veterinary practice are now computerized. Typically, our computer systems are made up of 3 or 4 databases. Perhaps the most common database in veterinary hospitals is one that contains information on the individuals who own our animal patients, including their names, addresses, and phone numbers. Another widely used veterinary database contains detailed information on specific patients, including name, breed, gender, age, and related medical data. In our computer systems, many of us also maintain a pharmacy inventory of individual drugs and other products used for in-hospital patients and direct sale.

Databases of this type help immeasurably with the business management of our practices. They are of little value, however, with respect to patient diagnosis or treatment. When most veterinarians encounter a puzzling medical condition, they are unable to turn to their computer systems for diagnostic help. However, some veterinarians have recognized the value that can be provided by a different type of database. These veterinarians are electronically storing medical records on individual patients. Within their own computer systems, they have created databases into which they routinely enter details on observations, treatments, procedures, and results related to specific patients.

By later reviewing these case records stored in their computer systems, veterinarians are able to elicit information that not only can be applied to a specific animal case, but also to similar conditions discovered in other animals. They also are better able, to identify local epidemiologic trends.

Even though these veterinarians are now building their own internal case-record

databases, the real potential lies in another direction. The prospect that holds promise of enormous benefits for practitioners is a national database for veterinary medical records. Such a database would be constructed, from clinical records submitted by hundreds of veterinarians, practicing in all parts of the country. It would be continually updated and, thus, would ensure that information on such factors as epidemiologic trends and treatment results is current.

Moreover, the national database would be structured around a common nomenclature. This would permit individual veterinarians, confronted with a difficult diagnosis, to tap into the database and-within minutes-print out current data on treatment of the patients with similar signs and diagnostic values.

Creation of a national medical-records database for veterinarians is a not a pie-in-the-sky concept. The technology for it exists. What is principally needed is a coordinated effort to bring the concept to fruition. Plans for creating such a database are already under way.

Advantages of a National Database

Before examining the structure of a national database for patient records, let's look at advantages creation of the database system will provide for our profession. For the, individual practitioner, the major benefit of the national database will be instant accessibility to current, reliable medical informati6n - covering even the most arcane patient conditions and epidemiologic trends.

- The national database could represent all areas of the United States, unlike medical-record databases maintained within private practice or in connection with

veterinary colleges. Although it is inevitable that veterinarians entering data will have a wide variety of clinical experiences, the universality of information fed into the database will ensure greater reliability in results.

- The national database will make early detection of disease trends possible and help veterinarians choose procedures for dealing with these diseases.
- The national database will enable veterinarians to make precise comparisons of the results of their treatment procedures with a much larger universe of results. Suppose, for example, that a veterinarian is achieving a 60% success ratio with a particular treatment protocol. Suppose that a survey of information in the database reveals an 80% success ratio with a somewhat different treatment protocol. This type of information, not currently available, would prompt the veterinarian to move to the more successful procedure. The effectiveness of old and new diagnostic techniques and treatment protocols could be continuously evaluated.
- Trends, revealed by surveys of the database will be important to human health. For example, the database can provide early warning of the localized threat of such diseases as rabies, leptospirosis, erlichiosis, rickettsial disease, and other diseases transmitted from animals to human beings. Similarly, information provided by the database will alert veterinarians to local or regional disease conditions. Thus, veterinarians will be in a much better position to advise clients on measures for prevention and care.
- The national database will provide enhanced resources for research on a animal breeding and disease, prevention.

Creation of the Database: What Is Required?

The advantages of a national database for animal medical records are numerous. What, then, is required to get such a database up and running? With computers in essentially universal use today in veterinary hospitals, informatics committees of the AVMA and the

AAHA are at work on practical procedures for making a national medical records database a reality. Here are some of the issues these committees are addressing.

The-need for standardized data collection protocols in veterinary computer systems – If you follow a certain data collection format when you input patient medical data into your hospital's computer system, and I follow a somewhat different format in inputting similar data into my system, we are not going to be able to directly transfer our information into a national medical records database. Standardized procedures are clearly needed. Before a national database can work efficiently, individual veterinarians must adopt common data collection (or capture) protocols for their own computer systems. These protocols for standards and structure must be defined and then be made available in commercial system applications.

Requirement for common nomenclature - To use The national database system, individual veterinarians must be prepared to input standard terms. We must acknowledge the need for a single set of computer commands and for use of standard clinical terms. Without a common language, it will be impossible for us to feed information into the national database system or to withdraw reliable information from it.

A need for an incentive arrangement to encourage veterinarians to regularly input data into the national system - Veterinary practitioners are busy. Time spent in preparing patient medical records for transmission to the national database is time that cannot be spent in compensable aspects of our practice. As a means of encouraging veterinarians to regularly transfer medical records to the national database, some sort of compensation arrangement must be devised. One possibility is to make this data available to the pharmaceutical-biological industry, institutions; and governmental agencies for database searches, and to then use the fees for data to reward veterinarians who submit quality patient medical records.

Establishment of the National Database

The issues presented by the need for common protocols, standard nomenclature, and veterinary fee arrangements can, for the most part, be resolved through work of the national veterinary organizations, universities, and companies with time and money invested in veterinary information management. There will remain, however, such questions as: Where will the national database be located? Who will be responsible for management? Who will define procedures for its use?

Actually establishment' of a national medical records database may not require that we start from ground zero. As most veterinarians are aware, there already exists a national medical records database for our profession. This pioneer medical-information depository is presently maintained on the campus of Purdue University, and is known as the Veterinary Medical Data-base (VMDB).

The VMDB was developed in 1964 by the National Cancer Institute. Institute scientists were interested in tracking the prevalence of various forms of cancer in animals. They hypothesized that if orderly data could be collected on cancer in animals, review of the data might induce insights relevant to the detection of and cure for cancer in human beings. To aid in this work, the National Cancer Institute scientists prevailed on veterinary colleges to collect standardized clinical data.

Today, more than 5 million records, each describing an individual case, are stored in the VMDB. This database serves as the model for

a veterinary data collection program sponsored by the World Health Organization and as a model for university-sponsored programs in a half-dozen countries around the world. Data elicited from the VMDB also provides instructional material for US veterinary colleges.

There is a possibility then, that a plan can be devised for converting the existing VMDB into an authentic national medical records database - a database that could be readily accessed by all veterinarians. To accomplish this, a number of changes will have to be made. At present, for example, the records in the VMDB are confined to limited data from cases submitted by university faculty members. To be useful for practicing veterinarians, more detailed medical data from a larger and more representative animal population would be required.

Moreover, at present, no protocol exists at VMDB to allow practitioners to gain instant-access through their own computer systems to specific information stored in the database.

The basic question of how to create a national database for patient medical records must still be resolved. It may be determined that the most practical approach is to build on the existing VMDB. On the other hand, it may be determined that it will be more practical to start fresh to create a new national database, designed around its own unique nomenclature and computer protocols.

Regardless of how this question is resolved, there can be no doubt as to the enormous benefits a national medical database could provide for patient care and the veterinary profession in general.

^aEditor's note: At its November 1996 meeting, the AVMA Executive Board approved the recommendation that AVMA approve the concept of developing national veterinary medical databases to capture information relative to animal health and food safety, and to enhance the overall mission of the AVMA.

PRODUCTS & REVIEWS

Medical/Pharma Abbreviations Database for Palm Pilot

From: Christian Nordqvist
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Pharma Lexicon has just launched a Palm Pilot version of the Medical/Pharma Abbreviations Database. Details about it can be found at the following website address:

<http://www.pharma-lexicon.com>

The world's largest database of medical, pharma, biotech, agrochem and healthcare abbreviations (and their meanings). 46,000 entries. Created as a result of contributions from hundreds of people and organisations the world over. A must for doctors, pharmacists, scientists, healthcare professionals, students and academics.

INTERNET RESOURCES

The AMEDEO Literature Guide

Please check the medical literature guide AMEDEO at: <http://www.amedeo.com>.

In particular, "AMEDEO Parasitic Diseases" <<http://www.amedeo.com/medicine/pad.htm>> might be of interest for your co-workers. All

AMEDEO services have been free of charge since 1997.

Please inform your students and colleagues.

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NEWS & COMMENTARY

World's Largest Veterinary Medical Data Repository to Adopt SNOMED(R) CT Terminology

RE: VMDB <<http://www.vmdb.org>>

NORTHFIELD, Ill., Feb. 4 /PRNewswire/ -- The Veterinary Medical Database (VMDB), the world's largest veterinary medical data repository, will adopt SNOMED(R) Clinical Terms (SNOMED(R) CT) as its standard vocabulary. The veterinary community has already embraced SNOMED(R) Reference Terminology (SNOMED RT(R)) and will migrate to SNOMED CT upon its availability this month. SNOMED-encoded data enables veterinarians to reliably capture and share accurate patient data, as well as improve the accuracy of epidemiological studies used to identify thousands of animal diseases, problems and procedures in the United States and Canada.

"SNOMED will enable us to ensure that patient data is comprehensive, timely and accurate, thus maximizing the value of the veterinary database and allowing the veterinary community to better understand and care for all species," says Arthur Siegel, DVM, PhD, president of the VMDB and director of medical informatics at the University of Illinois College of Veterinary Medicine. "The database information provides a basis for evidence-based medicine, identifying epidemiological patterns and exchanging veterinary health records worldwide."

The VMDB is maintained by a consortium of colleges of veterinary medicine in the United States and Canada, and includes more than 6.5 million abstracts of patient records. In addition, the VMDB and American Veterinary Medical Association (AVMA) are partners in supporting the SNOMED Veterinary Secretariat, whose

goal is to incorporate unique veterinary terms into SNOMED CT that address animal diseases, abnormalities, drugs and anatomy.

"As the use of electronic medical record systems in veterinary medicine expands, many schools of veterinary medicine are obtaining licenses to use SNOMED CT for in-house repositories and for sharing data with institutions around the world," says Diane J. Aschman, MS, RPh, COO of SNOMED(R) International. SNOMED CT is the result of the convergence of SNOMED RT with the U.K. National Health Service's Clinical Terms Version 3 (Read Codes).

Aschman continues, "The innovative uses of the reports in which the VMDB plays a key role, such as tracking livestock vaccination data across state and country lines or confirming cases of rare infectious disease, is a great showcase for the value that SNOMED delivers in analyzing data and reacting in a timely fashion."

The Veterinary Medical Database (VMDB), the world's largest veterinary medical data repository, was instituted by the National Cancer Institute in 1964 to study cancer in animals. Since 1988, it has been operated independently by the Association of Veterinary Medical Data Program Participants, Inc. (A-VMDB-P). In the near future VMDB hopes to expand its participant base to include veterinary diagnostic laboratories, large referral practices and eventually private veterinary practices. Currently the database is housed at Purdue University under a contract with A-VMDB-P.

SNOMED(R) International is committed to the excellence of patient care through the development of a scientifically validated clinical reference terminology - SNOMED(R) CT - that enables clinicians, researchers and patients to share common concepts worldwide, across clinical specialties and sites of care. SNOMED

International is located on the World Wide Web at <http://www.snomed.org>.

Group to Release Course-Management Software Standards

Chronicle of Higher Education, 11 March 2002

The Open Knowledge Initiative is developing course-management software that will be available several months from now. Currently, however, the group is releasing technical standards for their project, hoping to generate interest in the project and to encourage other course-management software providers, including Blackboard and WebCT, to adopt the standards. If other providers employ the standards, or application protocol interfaces, then the various systems will be able to share information and work with each other. This could save institutions significant amounts of money by allowing faculty or departments to create their own software that would work with existing, commercial applications.

The Whole Critter Catalog

Wired News, 13 March 2002

The creators of the All Species Inventory project have set a 25-year deadline to catalog all living species on the planet using the latest technology, thus closing a serious gap in human knowledge, according to project co-founder Stewart Brand. The project has an ambitious goal: to provide a Web page for every species. Project directors envision tools such as pattern recognition software, the Internet, global positioning systems, and DNA analysis speeding up the identification and classification of species. There are currently only about 10,000 taxonomists active around the world, so directors are hoping that All Species will swell their ranks with amateur naturalists by making classification technology available to them. Others say the technological aspects of All Species could help retool the field's old-fashioned image, which has led to a cooling of public and private support.

MEETINGS & EDUCATIONAL OPPORTUNITIES

Slice of Life Workshop for Medical Multimedia Educators and Developers

June 18-22, 2002; University of Toronto, Canada

The Program is now online together with the abstracts at:

<http://www.slice.gsm.com>

We expect the meeting to fill this year, so do not be disappointed by not getting a spot or a hotel room. There is a discount for early registration.

The Registration Form:

<https://secure.gsm.com/slice/register.asp>

The host organizing committee has arranged for a first class experience with lots of participation by Canadians including all 3 of our keynote speakers. Following the 19 morning auditorium presentations there are 57 afternoon demonstrations and 28 posters (most with computers) They offer a panorama of disciplines, clinical topics, technologies, pedagogic approaches, and evaluation. In addition 20 breakout sessions allow for the exchange of ideas. Opportunities for networking abound during meals together, the hospitality suite, gala reception, and finally our trip to (not over) Niagara Falls. Over 14 countries are represented on the program.

The titles of the 20 pre-workshops on June 18 and 19 should excite you. Some are hands-on, others lecture/ demo. Some are for beginners and others for techies. Some are half day others all day. Some have very limited enrollment.

How can you resist such pre-workshop topics as?

- Instructional Design for Medical Software.
- Intermediate Flash 5.0.
- Streaming Digital Video for the Web.
- Using Computers for Real Clinical Experiences.
- Building Interactive, Database-Driven Web Applications (JSP)
- QuickTime Player Pro as an Authoring Tool.
- Asynchronous Online Learning
- Moving from Paper-pencil to computer-based exams
- XML: An Overview of eXtensible Markup Language.
- Creating and Supporting a Course in a Virtual Environment.
- Creating Interactive Web Animations with PowerPoint.
- DVD-Production Steps & DVD Features.
- Problems and Solutions in Developing Medical CBT-programs.
- Techniques for Using GSM's Integrated Medical Curriculum
- Implementing a Multimedia Database
- The Dynamic Patient Simulator.
- Producing Ebook (Adobe) Content.
- Choosing Handheld Resources: PDA Technical Update
- Methods for Presenting Audio and Video Online
- Panel: Developing e-Curricula - Issues, Challenges, and Solutions

"Suzanne S. Stensaas"

<suzanne.stensaas@hsc.utah.edu>

SUGGESTED READING

Recommendations of the International Medical Informatics Association (IMIA) on Education in Health and Medical Informatics

<http://www.imia.org/wg1/rec.htm>

Version from November 99 - Endorsed by the IMIA-Board

*The recommendations are published in: Meth. Inform. Med. 39, 267-277.
It is intended to distribute the recommendations widely.*

Summary

The International Medical Informatics Association (IMIA) agreed on international recommendations in health informatics / medical informatics education. These should help to establish courses, course tracks or even complete programs in this field, to further develop existing educational activities in the various nations and to support international initiatives concerning education in health and medical informatics (HMI), particularly international activities in educating HMI specialists and the sharing of courseware.

The IMIA recommendations centre on educational needs for health care professionals to acquire knowledge and skills in information processing and information and communication technology. The educational needs are described as a three-dimensional framework. The dimensions are: 1) professionals in health care (physicians, nurses, HMI professionals, ...), 2) type of specialisation in health and medical informatics (IT users, HMI specialists) and 3) stage of career progression (bachelor, master, ...).

Learning outcomes are defined in terms of knowledge and practical skills for health care professionals in their role (a) as IT user and (b) as HMI specialist. Recommendations are given for courses/course tracks in HMI as part of educational programs in medicine, nursing, health care management, dentistry, pharmacy, public health, health record administration, and informatics/computer science as well as for dedicated programs in HMI (with bachelor, master or doctor degree).

To support education in HMI, IMIA offers to award a certificate for high quality HMI education and supports information exchange on programs and courses in HMI through a WWW server of its Working Group on Health and Medical Informatics Education (<http://www.imia.org/wg1>).

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References

The full version of the Recommendations is available as a PDF file at:

<http://www.imia.org/wg1/rec.pdf>

CLOSING BITS

Evidence You Live in the Year 2002

1. You just tried to enter your password on the microwave.
2. You have a list of 15 phone numbers to reach your family of three.
3. You call your son's beeper to let him know it's time to eat. He e-mails you back from his bedroom, "What's for dinner?"
4. Your daughter sells Girl Scout Cookies via her web site.
5. You chat several times a day with a stranger from South Africa, but you haven't spoken with your next door neighbor yet this year.
6. You check the ingredients on a can of chicken noodle soup to see if it contains Echinacea.
7. Your grandmother asks you to send her a JPEG file of your newborn so she can create a new screen saver.
8. You pull up in your own driveway and use your cell phone to see if anyone is home.
9. Every commercial on television has a web-site address at the bottom of the screen.
10. You buy a computer and 6 months later it's out of date and now sells for half the price you paid.
11. Leaving the house without your cell phone, which you didn't have the first 20 or 30 years of your life is cause for panic and turning around to go get it.
12. Using real money, instead of credit or debit, to make a purchase would be a hassle and takes planning.
13. Cleaning up the dining room means getting the fast food bags out of the back seat of your car.
14. Your reason for not staying in touch with family is that they don't have e-mail addresses.
15. You consider second-day air delivery painfully slow.
16. Your dining room table is now your flat filing cabinet.
17. Your idea of being organized is multiple-colored Post-it notes.
18. You hear most of your jokes via e-mail instead of in person.
19. You get an extra phone line so you can get phone calls.
20. You disconnect from the Internet and get this awful feeling, as if you just pulled the plug on a loved one.
21. You get up in the morning and go on-line before getting your coffee.
22. You wake up at 2 AM to go to the bathroom and check your E-mail on your way back to bed.
23. You start tilting your head sideways to smile. :)