BRIEF COMMUNICATIONS

The community-based database prototype of the Southeast Florida AIDS Information Network*†

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INTRODUCTION

In unique and important ways, AIDS has heightened the need for and created new ways of disseminating information to various segments of the population [1–2]. Examples of new information resources on the national level include the surgeon general's report to the country [3]; the AIDSLINE, AIDSTRIALS, and AIDSDRUGS databases produced by the National Library of Medicine (NLM); the NIH Clinical Alerts program, which disseminates detailed summaries of the results of National Institutes of Health (NIH) clinical trials to members of the National Network of Libraries of Medicine; and the Online Journal of Current Clinical Trials, the first electronic, peer-reviewed, scientific journal, produced by OCLC, Inc., and the American Association for the Advancement of Science.

In recent years, librarians also have responded to the AIDS epidemic in unique and important ways at the local level. Their contributions include the creation of databases of locally available information on AIDS not included in national sources. The practice of identifying information needs that are not being met, creating information sources to meet those needs, and providing constituencies with direct access to vital local information is increasingly common in libraries of all types, a trend that has been heralded as "the most exciting development in the information business in this decade" [4].

At the Louis Calder Memorial Library (LCML) of the University of Miami School of Medicine/Jackson Memorial Medical Center, a major center for AIDS

patient care and research, the high demand for AIDS information led to the creation of a database of the hundreds of AIDS care and service providers and research studies in Dade, Broward, and Monroe counties. The database is one component of the Southeast Florida AIDS Information Network, funded in part by NLM. The database is unique and surpasses all other sources of similar information in scope and timeliness. The database was developed by library staff in conjunction with Innovative Interfaces, Inc., and an advisory committee of potential users and subject experts to satisfy the need for timely, comprehensive, and easily accessible information on community-based AIDS care and service providers. It is believed to be the first disease-specific, community-based database to be integrated with an online catalog.

DATABASE OBJECTIVES

To create a comprehensive, authoritative, up-to-date, and readily accessible source of information on the full range of services needed by and available to individuals with an HIV-spectrum disease in the tri-county area, the following objectives were formulated.

■ Develop specifications for an online database in machine-readable cataloging (MARC) format of AIDS care and service providers, research activities, and educational programs in the tri-county area.
■ Gather and verify data on these providers, activities, and programs; input and update data formally on a quarterly basis.
■ Integrate the database with the online public access catalog and network with the medical center and South Florida communities.
■ Market and teach health professionals in the tri-county area how to access the AIDS care and service providers database.

DATABASE DESIGN

The database was designed to be menu driven. There were two primary reasons for this decision. First, while the online catalog contains information found in the traditional card catalog and familiar to most users, no such familiarity could be assumed for the AIDS provider database. Accordingly, there was some concern that users would be frustrated when presented with a blank screen and prompted to enter a search. Second, a menu-driven system can address the problems that result from users' lack of a subject vocabulary. Users are presented with the terms used to create the database and are able to conduct searches easily and effectively. In a command-driven system without a

good subject vocabulary, users frequently would be dissatisfied with searches for terms not in use and with the lack of cross-references to the correct terms.

The bibliographic record in the INNOPAC‡ online catalog record must be in MARC format, but there is no similar restriction for the alternative database feature used to create the AIDS database. Even so, the decision was made to use MARC records for the provider database, for four reasons. First, MARC permits maximum customization of both data entry and retrieval, an important capability in a disease- and locale-specific database that permits the user to limit searches of common terms, such as AIDS, to a particular field. Second, MARC is very flexible and easily accommodates fields of variable length. This flexibility is useful for dealing with long agency names, lengthy service policies, and detailed statements of the purpose of a research study, for example. Third, a standard format facilitates both the moving of the database to other systems and the use of the database as a model for other applications. The database was conceived as a prototype, and, therefore, future portability and use by others were important considerations. And finally, because the online catalog is in MARC format, the benefits are maximized when a MARC-formatted database is integrated with the catalog; data entry and retrieval are facilitated when both databases are in the same format.

Database content

To determine the content of the database, the library staff examined existing sources of AIDS care providers and research studies, in both print and electronic formats. Sample records were created for individuals, provider organizations, and research studies and developed into a test database by Innovative Interfaces. Certain fields in each record were selected to be searchable and the main menu of the database was formulated from the searchable fields. Lists of standardized terms were developed for each searchable field other than "NAME." The standardized terms referred to the individual components within a broad service category (e.g., "HIV testing" is a component of "Health and Social Services"), and constituted the submenus for each main menu option.

This process reaffirmed the need for a specialized database. Traditional sources, such as the Directory of Medical Specialists, do not identify AIDS as a specialty. Three local print directories of organizations offering services to people with AIDS proved inadequate for identifying individual providers. They were outdated and difficult to use in identifying highly specialized

services, such as HIV testing in Dade County for Haitians who speak only Creole. National databases such as CAIN (Computerized AIDS Information Network), produced by Delphi in Los Angeles; and DIRLINE, produced by NLM, are rich sources of information but do not include local organizations. The need to make information on the research studies in southeast Florida available to local health care providers was underlined by the clinicians on the advisory committee who were unaware of the AIDSTRIALS database developed by NLM and print directories such as the AIDS/HIV Treatment Directory [5] and the Directory of AIDS/HIV Clinical Trials Open in New York and New Jersey [6].

Data collection, verification, input, and updating

After the advisory committee approved the content and format of the test database, a mailing list was created from existing sources and survey instruments reflecting the sample records were developed. During a three-month period, a research survey and either an individual or organization survey were mailed to the 432 individual and organizational providers on the original mailing list. A telephone follow-up resulted in the mailing of 170 repeat surveys. By the year's end, 264 individuals (63%) returned 314 surveys.

As the completed surveys were received, specific data were verified either in print directories or by telephone. Following the data check, survey information was entered into the database by nontechnical services staff after a brief training session. During the data entry, three basic types of records were created, corresponding to the individual, organization, and research study survey forms.

Eleven months after the project began, a print copy of each record in the database was sent for updating to the person who completed the survey. The first formal update resulted in changes to 36% of the records in the databases. The second update, conducted three months later, resulted in changes to 20% of the records. Formal updating is done on a quarterly basis, but changes also are made as they come to the LCML's attention so that new information is automatically available to users.

SEARCHING THE DATABASE

When the user selects the database option from the main menu of the INNOPAC online catalog, the main menu of the AIDS provider database appears (Figure 1). As with the online catalog, the user must choose an access point. If the first menu option is selected, then the user is given examples of how to enter the name of a person, organization, or research study.

‡ INNOPAC is a fully integrated automated library system developed by Innovative Interfaces, Inc., 2344 6th Street, Berkeley, California 94710.

Figure 1
Main menu of the AIDS provider database

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                         SEFAIN Database


        You may search for AIDS Information by any of the following:

                       P > PERSON/ORG/RESEARCH
                       O > Organization TYPE
                       M > MEDICAL Specialty

                       R > Research SITE
                       T > Research TYPE
                       A > Res ELIGIBILITY

                       H > HEALTH&SOCIAL Serv
                       B > Mental HEALTH Serv
                       E > EDUC & Info Serv

                       Q > QUIT

               Choose one (P,O,M,R,T,A,H,B,E,Q) : _

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This is similar to selecting "NAME" on the online catalog menu. However, in the AIDS provider database, this is the only menu option that requires the user to input a search statement. Selection of any of the succeeding menu options results in a display of submenus, the searchable options within the category. This submenu display is the equivalent of the browse screen in the online catalog.

For example, if the second menu option in Figure 1 is selected, the organization types in the database automatically appear (e.g., public hospital, adult care living facility). To select one, the number corresponding to the desired type is entered, and the names of the relevant organizations appear alphabetically. To select a specific organization, the number corresponding to the organization is entered and the record for that organization appears. Selecting "M" on the main menu (Figure 1) produces a list of the medical specialties in the database from which the names of in-

dividuals and organizations offering services in that specialty can be identified. Similarly, selecting "H," "B," or "E" from the main menu generates lists of health and social, mental health, or education and information services.

Although the research records account for only 20% of the database, three of the nine main menu options are access points to these records. Selecting "S" (Figure 1) produces a list of the individuals and organizations currently conducting research on AIDS in southeast Florida. "T" lets the user identify research studies by subject type (e.g., ophthalmic studies), and "A" generates a list of the eligibility criteria for each study. The latter is intended to help health care providers match patients to studies by diagnosis. Additional criteria appear in the research record as "inclusion" and "exclusion" criteria.

If the "L" for "Limit this Search" is selected from the bottom of any browse screen, the user can limit

the listings to those in a particular county or available in a particular language. The limit option serves as the Boolean operator "AND." If the user wants to know, for example, whether HIV testing services are available in Dade County for individuals who speak only Creole, the answer can be found with only seven keystrokes. This limit capability is the same as in the online catalog, except that the ways the subset can be limited differ.

NETWORKING, EDUCATION, AND USE

With the AIDS provider database as an option on the main menu of the LCML online catalog, this database is readily accessible from terminals in the LCML, from the offices and homes of health care providers throughout southeast Florida, and from Internet. To teach health care providers and health sciences librarians how to use the database and other components of SEFAIN, a two-hour tutorial was developed and approved for American Medical Association (AMA) category 1 credit. The tutorial is marketed and taught both at the medical center and at off-campus locations throughout the three counties.

During the first six months of availability, the database was accessed by or for patrons 2,000 times. Subtracting the 15% of this activity related to teaching by library faculty, the average public use was 283 accesses per month during this period. The most frequently used menu option was "NAME" (21%), followed by "Medical Specialties" (17%), "Health and Social Services" (17%), "Education and Information Services" (10%), and "Organization Type" (10%). The three menu options for the research record—"Eligibility" (6%), "Type" (10%), and "Site" (9%)—accounted for 25% of the menu options selected by or for patrons.

CONCLUSIONS

The AIDS care and service provider database is a prototype for local identification of unmet information needs and development of information sources to meet those needs. Faculty at the School of Medicine have expressed interest in creating a similar database for mammography services in Florida, and other IN-NOPAC libraries are creating community-based files for direct access by patrons. The value of such efforts is confirmed by the usage of the AIDS database and by the many users who indicated on evaluation forms that it "makes an important contribution to AIDS care and service provision."

The database demonstrates the advantages of providing user access to factual databases that are fully integrated with an online public access catalog [7]. An advisory committee of potential users and subject experts is highly recommended for the creation of a

disease-specific database, to help ensure maximum benefit to health care providers. With assistance from potential users and a software vendor, librarians at the local level are well positioned to create databases of needed information, a challenging and rewarding trend in libraries of all types.

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Use of MEDLINE by health sciences faculty at the University of Minnesota

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MEDLINE is a major point of access to the biomedical journal literature. The Bio-Medical Library of the University of Minnesota has offered mediated MEDLINE searches since 1972. The number of searches conducted by librarians peaked during the academic year 1984/85, with 5,289 searches completed. The total has decreased since then, and only 2,993 searches were