



**Feasibility Study for a  
Web-Based Community Resource Inventory**

**Implementation Options and Costs**

Prepared for the Alliance for Human Services  
by the South Florida Regional Planning Council

Miami, Florida  
September, 2002

## Introduction

The Alliance for Human Services ([www.allianceforhumanservices.org](http://www.allianceforhumanservices.org)) is a non-profit organization dedicated to the development of a Health and Social Services Master Plan (SSMP) for Miami-Dade County. The Alliance Board of Directors includes all major funders of health and social services, as well as representatives from the business community, service providers, consumers, caregivers, advocates and faith-based organizations.

One of the priority areas identified in the SSMP is Countywide Services, which has as its primary goal “to ensure that consumers and providers have universal access to timely and accurate information about available community services including emergency food assistance and legal services.” Two outcomes targeted in the current plan are increased access to timely and accurate information regarding community resources, eligibility criteria, service hours, languages spoken, and completion of a feasibility study for a web-based resource and referral system.

In April 2002 the Alliance hired the South Florida Regional Planning Council (SFRPC) to assist in the preparation of the feasibility study, which was designed with three parts:

- Part I - interviews of key stakeholders, in order to gauge the level of interest and identify any issues, while refining the vision of the system to be developed;
- Part II - a study of models and best practices around the country, to see how other communities collect and make available the agency, program, service and funding data for human services, and how they are implementing the new 211 human services information and referral system; and
- Part III - the development of a set of implementation options with the associated costs.

This report is Part III of the feasibility study.

## Approach

Alliance staff convened the Web-Based I&R (Information and Referral) Committee, composed of representatives of the organizations that sit on the board and other community stakeholders, to guide development of the study. Alliance staff and the Committee approved the problem statement and the vision (as revised) transcribed below.

Problem Statement - Customers of human services in Miami-Dade County have difficulty obtaining accurate and timely information about the services available because of the proliferation of information and referral services, with the resulting fragmentation in the system; the difficulty and cost of maintaining current information about providers; and cost barriers to widespread use of the most comprehensive source of information. Case managers in provider organizations also have difficulty providing accurate referrals to their clients. Funders and system planners do not have easy access to information about gaps and overlaps in the service delivery system, in order to better target the use of scarce resources.

Vision - The (1) residents, (2) information and referral service workers, (3) case managers at provider organizations, and (4) human service system planners of Miami-Dade County will have access to up-to-date and consistent information about the programs and human services available in the community. This will be ensured through the development, implementation and funding of a comprehensive, web-based database that will provide an always current source of accurate information.

## **Summary of Initial Findings**

### **Part I – Summary of Stakeholder Interviews**

We conducted a survey of key stakeholders, which included representatives of the funders of health and human services; existing information and referral services; providers of health and human services; and organizations involved in the preparation of needs assessments and system planning for health and human services. Stakeholders were requested to read the Problem Statement and Vision and then respond to questions in an interview guide. A total of 21 responses were received.

In general, there was broad agreement with the Problem Statement and support for the draft Vision. However, there also was recognition that the proposal is ambitious, and that successful implementation will require coordination with other similar activities, collaboration among the many stakeholders, and sustainable funding. In particular, as Miami-Dade County looks for best practices models for the implementation of 211, a countywide information and referral service, it is necessary to articulate the connections with the development of the proposed database.

Other points worth emphasizing include

- Many Information and Referral service providers use Switchboard's Help Pages, but some have other systems. All of these are stakeholders in the design and implementation of 211, as well as the proposed database. Other services that do not use Switchboard's database need to be identified.
- There is general concern about the difficulty of keeping the data accurate and current.
- Most funders showed reluctance to require their funded agencies to keep the information current, and all do not show an understanding of the potential benefits of a comprehensive inventory of programs and funding.
- Providers showed concern about the extra workload this could cause, and probably need to be further informed about the potential benefits of the proposed system, such as the reduced need to respond to other surveys.

### **Part II – Assessment of Existing Models and Best Practices**

Very few organizations that provide information and referral services use or have plans to use a web-enabled database that allows online data collection and/or update to keep information about service providers current and accurate. Most mail or fax printed forms to providers and make and receive phone calls to obtain updates. The information collected is reviewed and then used to update the database internally. Some send out and accept emailed forms to collect information; some have forms on their web sites that can be filled out online, generating a printed form that must be reentered after review; however, direct access to a database by providers is very unusual. The primary reasons for not using an online collection and update

process are (1) a conviction that providers will not keep the data current and (2) a belief that the information must be reviewed and validated by qualified professionals.

Implementation of the Alliance for Human Services vision of a web-enabled database in Miami-Dade County will require either (1) finding a suitable commercial product, or (2) embarking on the development of software that enables online access by provider agencies for updating. It also will require selecting a host agency and determining how quality assurance of the agency, program and service information will be carried out. The review of models currently available encompassed many that have some of the desired features, but few that have the primary capabilities required for the job. A detailed review was developed for the following four:

- North Light, Inc.'s Resource House
- VisionLink's Tapestry
- Community Information Toronto's FindHelp
- The Coordinating Council of Broward's Community Resource Inventory

### Characteristics of the Desired System

The Committee reviewed the matrix prepared for the four products selected in Part II of the study, and identified the following characteristics for a web-based system that will meet the needs of Miami-Dade County. The features that are considered "required" are listed first, followed by those that would be very highly valued, but are not indispensable.

#### Required Features

1. **Web-based updates by provider agencies** - Online entries and edits can be submitted to the database host agency, reviewed for consistency by the host, and integrated automatically into the database without the need to retype the information.
2. **A user-friendly interface for public access over the Internet** - The product should include such features as broad browser compatibility, required screen resolution no greater than 800x600, both graphic and text access, general ease-of-use, and the availability of user training modules.
3. **Full information and referral functionality for both the primary and other, specialized I&R services in the community** - This includes such features as a specialized I&R counselor interface, call tracking, client tracking and features to support follow-up with callers.
4. **Flexibility to accept host agency-defined fields for adaptation of basic database structure** - This includes built-in host agency-defined fields that are accessible for database functions and reporting.
5. **Flexible report generation capability** - The product must be capable of producing resource directories suitable for sale, call monitoring reports with usage statistics, planning reports capable of showing the distribution of service resources within the service area, and even provider profiles suitable for inclusion in Requests for Proposals, etc.
6. **Consistency with future implementation of 2-1-1 in Miami-Dade County** - This requires the ability to integrate this database with the efforts of the organization chosen to implement 211 countywide, including such capabilities as automated call forwarding to specialized I&R services, and one-time updating by each provider agency, with replication to appropriate users throughout the system.
7. **Host agency sustainability to ensure continuing collaborative ownership of the database, without the need to charge users for access** - This means ensuring sufficient resources to

enable the host agency to make the database available to both individual and institutional users without charge; in other words, not requiring the host agency to sell access to the information in order to sustain their organization. This will be a function of the annual cost to maintain the system after full implementation.

### **Desirable Features**

8. **Include information about funding sources along with program and service data** - The inclusion of comprehensive funding information (amounts and sources) for each provider agency and program, linked to the program and service information required for I&R purposes, makes possible the analysis of overall resource allocation in the community, meeting a critical need for human service system planning.
9. **Ease of transfer of information and referral data from the legacy database** - Miami-Dade County's most comprehensive information and referral database is maintained by Switchboard of Miami, in a software environment known as IRis, and must be transferred into the new database environment to "get started." Because IRis is the most widely used I&R database today, many competing products offer specialized support tools to facilitate the transition of data from IRis to their database structures. The ease or difficulty of the transition will affect the overall cost of implementation.
10. **Ability to offer information in 3 languages** - The user interface for Internet access to the database should ideally be available in the primary languages used in the service area: English, Spanish and Haitian-Creole/French, with an option for other inclusions as needed.
11. **Ability to get new features included in the system** - The host agency should be able to work with the developer of the chosen software to introduce new features and capabilities, when needed. Access to the source code could reduce the cost and the difficulty of making needed changes.
12. **Option for linkage to a future coordinated (shared) client case management capability** - The challenges of integrating provider agency client data systems and addressing confidentiality concerns make this a second phase endeavor, but the choices made now should provide opportunities to realize the intent of the Alliance for Human Services to move towards a coordinated case management system in the future.
13. **Potential to integrate with other Miami-Dade County information systems** - As for other items in this list, the I&R database should be viewed as a building block capable of being integrated into other information systems maintained by Miami-Dade County.

### **Strengths and Weaknesses of the Four Options Considered**

Each of the four products reviewed either already generally meets or is expected to be able to meet the required features highlighted in the above list. It is helpful to clarify at the outset that two of the products are full-featured, stable commercial products (Resource House and Tapestry), each with a significant user base, while two of the products are in various stages of development (FindHelp and The Community Resource Inventory). The strengths and weaknesses of each are highlighted in the short descriptions that follow.

### **Commercial Products**

- **Resource House** - Designed as a Windows and Internet based information and referral system, it can be used as a standalone product or as part of an integrated regional or statewide 211 network. The host agency maintains the I&R database on a local server, while

the Internet version for public access is maintained on the developer's server. It includes a component called Provider Annex, which is designed to allow provider agencies to add, change or delete information about themselves that is stored in the Resource House database. The information is submitted to the database owner agency for review, after which it can be automatically incorporated into the master database. Other modules ensure call center support and the ability to produce and print directories. It also is designed to allow multiple I&R services to receive updated provider data from a single centralized database. The product is in use statewide in Illinois, Minnesota and Texas.

- **Tapestry** – This industrial strength product includes capabilities that go beyond information and referral, such as agency data sharing, client tracking and multi-agency case management. It includes the ability to allow agencies to update program and service information online, subject to host agency review. The entire I&R database and other system modules are maintained on the developer's servers, which means that all users access the database over the Internet, requiring only a browser. Separate customized interfaces are available for I&R services and for public access. The database can be exported to Microsoft Access or Excel for customized reporting.

#### Products Under Development by Non-Commercial Organizations

- **FindHelp** – Community Information Toronto (CIT) has developed a pilot implementation of 211 in the Greater Toronto area with support from the Canadian federal government. The public access interface, called FindHelp, facilitates information retrieval for those looking online for services with a powerful and easy-to-use search capability. The proprietary software uses an Oracle database on a Sun workstation with IBM WebSphere application server and a front end developed with Sun Java languages. Thus, the required hardware and software installation is substantial. Currently, the product allows online updating by organizations that are included in the resource database, as well as inclusion of new organizations, but updates are reviewed by CIT staff and revised to meet stylistic guidelines, and must be put into the database in a separate step. Development planned for the next year includes a specific user interface for specialized I&R services, automatic agency information updates, directory printing and report generation.
- **Community Resource Inventory** - The Coordinating Council of Broward (CCB) has collected agency, program and service data for four years through an annual hard copy survey administered jointly with First Call For Help (FCFH), the agency that has implemented 211 in Broward County. Detailed information about the amounts and sources of funding for every program also is collected. The results are used to update FCFH's I&R database (also available online), and to produce the Community Resource Inventory (CRI), which is released on CD-ROM, with both database and mapping applications. The CCB is developing an online replacement for the current survey and expects to implement the new data collection procedure for the 2002-03 CRI. This new version will enable provider agencies to complete or update their organizational profiles online; the quality assurance review will be conducted by First Call For Help and the corresponding funding agency partners. Once validated, the online database will be updated automatically. This database will be made available to agencies providing information and referral services, and also will be available for public access over the Internet, with online reporting, replacing the CD-ROM distribution currently used. The product under development does not include built-in

I&R functionality, but it does link into the Broward Information Network, which will enable additional services, such as coordinated case management, in the future. A major advantage is that source code could be shared with the Alliance for Human Services.

The table below summarizes the characteristics of the four products with regard to the required and desirable features. Note that the consistency with 211 and the ability to integrate with County systems cannot be determined as part of the feasibility study, but it will be easier to ensure compatibility with products that are easier to modify. Also, the host agency sustainability will be determined by funding decisions, which ultimately will be affected by the cost of the chosen option.

<b>Characteristics</b>	<b>Resource House</b>	<b>Tapestry</b>	<b>FindHelp</b>	<b>The CCB's CRI</b>
<b>Required Features</b>				
1. Web-based updates by providers, with automated database update	Yes, using Provider Annex	Yes	Next year	Yes (Dec/02)
2. User-friendly Internet interface	Yes	Yes	Exceptional	Yes (Dec/02)
3. Full I&R functionality for counselors and case managers	Yes	Yes	Next year	Data export to I&R software
4. Host agency-defined fields	Yes	Yes	Yes	Yes
5. Flexible report generation	Yes	Through data export	Next year	Yes (Dec/02)
6. Consistency with future 211 implementation in Miami-Dade County	Used today by other 211 systems	Used today by other 211 systems	Used today as part of 211 system in Canada	Used today as part of Broward's 211
7. Host agency sustainability / annual cost to maintain	TBD	TBD	TBD	TBD
<b>Desirable Features</b>				
8. Agency/program funding information included in database structure and reports	Funding sources at agency level	Through custom field(s)	Field exists in source database	Yes
9. Functionality to support transfer of legacy data from IRis	IRis Link Wizard	IRis import tool	No special tools	FCFH IRis to CRI queries
10. Internet interface in 3 languages (English, Spanish, Haitian-Creole/French)	\$20,000 per non-English version	On-the-fly translation	Possible	Access to source code
11. Ability to include new features	Subject to development cost	Subject to development cost	Subject to development cost	Access to source code
12. Cross-agency client case management capability	No	Yes	No	Access to source code
13. Ability to integrate with County systems	TBD	TBD	TBD	TBD

## Next Steps in the Process

The following steps outline a process that will enable the Alliance for Human Services to move forward based on this feasibility study.

- Identify the institutional requirements and responsibilities for the organization to be selected to host the database and implement the project.
- Define a desired implementation schedule, including a start date and the initial and subsequent cycles for provider updates of their program and service data.
- Identify organizations that meet minimum institutional requirements (candidates).
- Prepare and issue an Invitation To Negotiate (ITN) to selected candidates based on the criteria outlined above.
- Establish criteria for evaluation of the ITN based on those outlined above.
- Evaluate the responses to the ITN and select a candidate organization to host the database and implement the project.
- Work with the selected host agency to decide on software. Include consideration of the migration of existing data to the new system.
- Define responsibility and funding for quality assurance of the data (include the host agency, funders, I&R services and providers in the discussion).
- Create a permanent technical advisory group composed of funders, system planners, I&R services and providers, to serve as the oversight committee for the process. This group will
  - monitor implementation of the process and report to the Alliance for Human Services
  - work with provider agencies to encourage timely updates
  - make recommendations to the Alliance for Human Services for system enhancements
  - identify the need for training
- Develop a broad marketing plan to ensure that (1) end users are aware of how to have access to the information, and (2) that provider agencies are aware of the benefits they will have from keeping their information up to date.
- Train providers in updating their information online.
- Train residents, case managers and system planners in the use of the web interface.

## Cost Considerations

The costs for development of this project can be broadly divided into two groups:

- Initial implementation costs, including
  1. acquisition of hardware, operating system and database software, and telecommunications infrastructure, as needed;
  2. licenses for web-based I&R database applications; and
  3. host agency costs to implement the project, including legacy data conversion to the new database, and initial staff training.
- Host agency costs to sustain the project, including
  4. annual license renewals for operating system, database software and I&R database applications, as required;
  5. annual telecommunications services;
  6. outreach, marketing and training costs to ensure timely completion of updates; and
  7. personnel costs to maintain and provide quality assurance for the database.

The four products under consideration vary substantially in cost, and different components weigh more or less in each case. The two commercial products would have a relatively high initial cost while the initial implementation is undertaken but would remain constant over time after the initial phase of implementation. Exceptional costs would occur only if additional features became necessary and the Alliance was required to pay for their development. FindHelp would have a high cost initially, and could continue to incur development costs as the product is further developed by Community Information Toronto. The Community Resource Inventory would have a very low cost in the beginning, but could require the ongoing allocation of development resources to collaborate with The CCB in adding features and functionality to the initial product.

The following discussion provides additional detail for each product.

1. **Acquisition of hardware, operating system and database software, and telecommunications infrastructure.** The following specifications refer to the items required to host the I&R database, and do not include any client workstations required by the host agency to provide helpline counseling and other information and referral services:

- **Resource House** - a standard Windows 2000 server workstation with a standard Internet connection at the primary host agency, and at each separate I&R service that runs an independent copy of the database using the Refer software.
- **Tapestry** - none (the entire database and required software are remotely hosted).
- **FindHelp** - a Sun Sparc workstation, Solaris 8 OS, IBM WebSphere 4 with IBM HIS Webserver, and Oracle RDBMS 8i, and a dedicated telecommunications link.
- **Community Resource Inventory** - a standard Windows 2000 server workstation running Microsoft SQL and Microsoft Access, a web-hosting setup and a dedicated telecommunications link.

2. **Licenses for the web-based I&R database applications.**

- **Resource House** - The annual license and hosting fee is \$4,650 for the host agency and for each additional I&R database installation, with annual maintenance fees of \$1,875 for an 11-25 seat license or \$2,850 for 26-50 seat license at each I&R site.
- **Tapestry** - Licensing fees would be approximately \$85,000 in the first year, and \$12,000/year thereafter, which includes server use fees.
- **FindHelp** - Although pricing policies have not been defined, CIT staff estimated that initial licensing and adaptations for the existing public access interface could cost approximately \$94,000, and approximately \$4,000/year thereafter (in Canadian dollars). New modules that are developed would incur additional expense upon implementation and for ongoing licensing.
- **Community Resource Inventory** - This product is under development by The Coordinating Council of Broward (CCB). Its adaptation to run in Miami-Dade County would depend on collaborative arrangements between the Alliance for Human Services and The CCB. Access to the source code would facilitate adaptation to fit the specific needs of the Alliance, but also would require the allocation (or hiring) of system development and programming resources to make any changes required and to continue the development of the product.

3. **Host agency costs to implement the project, including legacy data conversion to the new database, and initial staff training.** Initial staff training costs are assumed to be included in the first year licensing fees. Additional vendor-sponsored training may have substantially different costs for each of the options under consideration.

- **Resource House** - Data conversion costs, using IRis Link Wizard, would be \$150/hour, but no estimate of the number of hours required is available.
  - **Tapestry** - The costs of legacy data transition from IRis to Tapestry are estimated to be approximately \$3,000, using an IRis import tool.
  - **FindHelp** - No support tools for this purpose have been identified, and as a result, no estimate of the cost of legacy data transition from IRis to FindHelp is available.
  - **Community Resource Inventory** - The CCB and First Call For Help will migrate data from an existing IRis database into the new database environment, and would be able to facilitate the transition for the existing Switchboard of Miami IRis database to the Community Resource Inventory database.
4. **Annual license renewals (see 2. above).**
  5. **Annual telecommunications services.** It is assumed that public users will access the information and referral database over the Internet, using standard types of connections (dial-up, broadband). The services specified here are required for I&R counselors to have access to the data and for hosting and updating the database as needed.
    - **Resource House** - basic Internet access to enable periodic database updates to the remote server and to other local I&R services with their own copy of the database.
    - **Tapestry** - basic Internet access to a remote server for counselors and for periodic downloads of the database.
    - **FindHelp** - a web site capable of hosting the database and managing user access for all types of users.
    - **Community Resource Inventory** - a web site capable of hosting the database and managing user access for all types of users.
  6. **Outreach, marketing and training.** The effort to persuade health and human service providers to keep their data current will require an ongoing outreach program. The marketing program will target public users, to make sure they are aware that they can find information online. Both provider agency staff and public users will require training in the use of the system. It is reasonable to expect that these costs will not be substantially different regardless of which of the database approaches is chosen.
  7. **Personnel costs to maintain and provide quality assurance for the database.** Quality assurance - ensuring complete, current and accurate information - is critical to the success of an information and referral database. Online updates will offer providers a convenient way to make changes, but each update will require review by host agency staff prior to incorporation in the database. This activity will require full-time staff at the host agency. It is reasonable to expect that these requirements will not be substantially different regardless of which of the database approaches is chosen.

## Conclusion

Several options are available to the Alliance for Human Services to accomplish its Vision of a web-based information and referral database, including both commercial products and systems that are being developed by other public agencies, which could offer greater flexibility. Enabling online updates will put Miami-Dade County on the leading edge for ensuring current information about the health and human services in the County is available to all of its residents. While the costs of acquiring hardware, software and licenses vary among the options, the greatest cost will be the maintenance of the system, including staff both to oversee the data collection and to ensure the accuracy of the information.