Development and Use of an Electronic Resource Guide for Referral to Social and Health Services

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Abstract

In a companion article, Carise et al report that training on the use of an electronic Resource Guide (RG) which provides information on programs with free or low-cost services in social and personal health domains, is effective in facilitating increased services and improved needs-to-services match in substance abuse treatment. The RG developed for that study provided additional service resources and sorted those resources electronically by type of service and service location to improve the ease of locating appropriate and proximate services for substance abuse patients. A 2-hour training was developed on patient needs-to-services matching and the software. Seventeen counselors from 4 substance abuse treatment programs recruited 73 patients following the provision of the training and the corresponding RG. Findings showed that counselors used the RG to develop specific and comprehensive treatment plans for their patients and that their patients received increased and better-matched services. In order to facilitate the development of city-specific guides by others, this article describes the development and use of the RG and the corresponding training.

Keywords: resource guide, technology, needs-to-services matching, substance abuse treatment, treatment planning

1. Introduction

According to Waltman's (1995) review of the substance abuse treatment literature, some of the key factors most associated with successful treatment include easy access to services, skilled therapists, and "matching treatment to salient patient variables". Research also indicates that problems in social and personal heath areas such as family, legal, employment and psychiatric problems, are predictors of prognosis during addiction treatment as well as relapse to substance abuse following treatment (Rounsaville et al., 1987; Woody et al., 1985; McLellan et al., 1997). Thus, it is reasonable to think that substance abuse treatment outcomes would be better if patients received the services tailored to their specific needs as part of their addiction treatment.

There is substantial evidence of the benefits of providing additional medical, social, and psychiatric services in the course of addiction treatments (Gerstein & Harwood, 1990; Institute of Medicine, 1990; McLellan et al., 1998; McLellan & Weisner, 1996). While studies by McLellan et al. (1998, 1992), and Hser et al. (1999), showed the positive effects of simply providing **more** services to patients in addiction treatment, there is further evidence that the effectiveness of treatment can be improved by specifically targeting just those services needed by the patient; the so called 'individualized treatment' approach McLellan (1997).

However, a comprehensive review of contemporary addiction treatment practices by the Institute of Medicine (1999) and a more recent study with a national sample of treatment programs (McLellan, Carise et al., 2003, in submission) showed that few treatment programs have professional staff available to provide additional services; that shrinking medical insurance funds rarely reimburse for services deemed 'medically unnecessary', and that the general rule is standardization of treatment, regardless of the many individual differences in patients problems at admission (Institute of Medicine, 1999).

Some of the factors preventing the delivery of supplemental or "wrap around" services in community addiction treatment settings are organizational and include – lack of on-site services, few professional staff, inadequate training and no reimbursement for referral to these services (IOM 1999). Many treatment centers are not staffed to meet patients' needs in areas other than addiction treatment, clinicians need assistance with locating specialists, programs or agencies where their patients can receive needed services such as help with employment, medical, or housing problems. Finding appropriate and affordable services in social and personal heath problem areas to customize treatment plans and thus to achieve needs-to-services matching in addiction treatment can be time-consuming and costly for treatment providers. And although there are many factors preventing the delivery of wrap-around services, D'Aunno & Vaughn (1995) showed that counselors had no trouble identifying the problems patients had that needed supplemental services. Therefore, if referral or delivery of wrap-around services was made easier, there is every reason to believe the counselors would like patient with the services they need.

1.1. Background and purpose of the study

It was reasoned that needs-to-services matching for patients might improve if counselors were provided with and trained to use a directory or resource guide with information on local organizations that delivered services in social and personal heath areas such as employment training, housing, and medical care. These are the kinds of services that a prior study had shown to be the most desired by substance abusing patients and thought to be most necessary by directors of substance abuse programs (McLellan et al., 1998, 1999). Thus, we developed and tested a computer assisted Resource Guide (RG) designed to be a practical and easy way for counselors to provide needs-to-services matching in community programs. This National Institute of Drug Abuse funded study compared patients whose counselors received the RG, a

corresponding 2-hours training in addition to our traditional intake assessment training, with patients whose counselors received only the usual intake assessment training component. Findings revealed that the provision of the RG and brief training led to significantly higher levels of needs-services matching and number of services received. See Carise et al., (in press) for a complete report on the methods and results of this study. Here we describe the development of the RG, the training, and the extent of RG use with 73 patients admitted to 4 substance abuse treatment programs by 17 trained counselors.

2. Methods

Development of the RG - Our RG used the 1998-1999 Electronic Edition of the First Call for Help (FCH) directory as a foundation (Mackie & Walton 1998). The United Way of Southeastern Pennsylvania in cooperation with Dorland's Directories produced the directory and provided approval for our use and modification of the product in this study. The FCH directory was chosen to be the foundation because it was the most comprehensive source available and it had been adapted for electronic use. The new RG was also produced in both electronic and paper versions.

2.1. Content

Our goal was to ensure that the original information in the United Way services database was updated, relevant to the needs of our target population, and easy to access. The FCH directory included information on more than 5900 human services agencies, alternate sites, and programs in Philadelphia and the counties surrounding it. To get an estimate on the reliability of the programs' information listed, a small sample of agencies in Philadelphia County was randomly selected and called to verify the information presented in the FCH publication. Of the 81 agencies called, 76.5 % (N=62) had no change in their information and 23.5% (N=19) had a change in either the locating or specific program details. Overall, 87.7% (N=71) had the same

locating information, or if they had changed locations, that change was indicated by way of a forwarding message. Satisfied by this validation effort showing that most agencies' information was accurate, the guide's organizational structure became the focus of our efforts.

Our RG was designed to limit listings to those programs with services available in Philadelphia County (where we were conducting the original study), and to include any services that may be of use to patients presenting to substance abuse treatment. Within the FCH database, all programs and agencies that did not provide services within the city of Philadelphia were deleted. Keywords referring to auxiliary clubs and agencies that were not thought to be pertinent to service delivery to addictions treatment were excluded (e.g., 4-H club, animal control, donations, horticulture, etc.). Programs soliciting for volunteers rather than providing direct services, delivering services only to other service providers, or delivering services to a very specific group such as students at a particular school, were deleted.

Some additional agencies were added based on our knowledge of the patient population. For example, programs for obtaining motor vehicle (driver's) licenses, or dealing with suspended or revoked licenses, were added. In addition, by combining most keywords into more inclusive groups (i.e. epilepsy and heart/lung disease programs were combined in the keyword 'health care'), the original list of 316 keywords in the FCH version was reduced to a list of 130, which increased the ease of use. All changes to the database were made using Microsoft Access software.

After the listings were refined, each entry was examined to decide whether to keep or delete the program and, more importantly, how to categorize the program. To date, the Resource Guide is a Microsoft Access database including 971 agencies and parent organizations, 1525 programs, and 131 keywords.

2.2. Resulting RG paper manual

The RG was divided into 14 categories and within each category the programs were organized by keywords (see Table 1 for Category and Keyword List sample from the RG Binder). The same general format for the program specific information (program name and information, address, phone number, hours of services, nearest public transportation, intake procedures, languages spoken, fees, eligibility, age groups, and handicapped accessibility) from the original manual was maintained. For added ease of use, a laminated keyword list, a service index of the keywords and the categories, as well as a category-specific table of contents was added.

2.3. Organization and search methods of the RG software version

An introduction screen was written to acknowledge the United Way and the National Institute on Drug Abuse and to describe the general search features of the software. There are two search methods in the RG electronic version, the Name Search and the Program Services Search. The first method is by agency name where the counselor or patient can enter part of or the entire name of a known agency to access information. From the agency's information screen, the programs offered can be directly accessed and printed (see Figure 1 for Agency Information Screen). The second and more refined searching approach, the Program Services Search, utilizes program keywords. The program keyword search gives the user an alphabetical menu of the 131 keywords with the number of programs offering services related to each keyword. The user simply highlights the appropriate keyword (e.g.: day care, family planning). As an added feature, the user can also enter the patient's location by zip code, so that upon highlighting the chosen keyword, the programs display in order of their proximity to the patient's zip code (see Figures 2 and 3). The patient location aspect is particularly useful when searching for programs near the treatment site, the patient's home, or a shelter.

2.4. RG Training

All counselors in the study received a comprehensive, 12-hour (2 day) training session that included instruction on both the ASI and the ASI software developed by the Drug Evaluation Network System or DENS (Carise et al., 1999). In addition, counselors in the Enhanced Assessment Training condition received an additional two-hour session on how to use the RG in their treatment care planning (TCP). Participants were shown the RG software, specifically the two methods of searching for program information and basic software navigation tips. Each counselor was given a manual that outlined the software program's abilities and provided screen shots for easy navigation.

Following the RG software and hardcopy introductions, the trainers began a brief discussion of treatment care plans (TCPs) and their utility in the assessment process. In a short, five-minute discussion, the counselors were shown that the printouts generated by the ASI software, such as the Treatment Care Plan Problem List, were useful in developing customized patient TCPs. More specifically, the participants were shown how to use the TCP Problem List with the RG software and paper manual to formulate a patient-specific TCP.

After a few examples, participants were given a mock assessment and were asked to compile a TCP using the RG software. After a designated time period, generally twenty minutes, the group discussed the TCPs developed, reasons for why counselors decided to target certain problems, and which problems were more immediate than others.

3. Results

3.1. Use of the RG in treatment planning

Seventeen counselors received the RG and the corresponding training, and recruited and

provided TCPs on 73 patients in the 10 months following the training. Twelve of the 17 trained counselors (71%) made at least one referral using the RG in the 10 months following the training. Three counselors used the RG with all of their patients, 7 counselors used the RG with more than half their patients. More than 50% of patients (37 of 73) received referrals to at least one service provider from the RG.

Types of RG referrals: Counselors referred these 73 patients to a total of 69 'wrap-around' services from the RG. Psychological services accounted for the largest number of referrals (35%, n=24), employment services accounted for 26% of referrals (n=18). Family/social services accounted for 22% (n=14) of service referrals, whereas medical accounted for only 13% (n= 9), and legal services accounted for 5% (n=4).

Counselor survey: Eleven of the counselors completed an additional survey, rating the value and frequency of use of each service category in the RG. Although the referral frequency was not high, 82% of counselors reported that the medical section was the most valuable section. Psychological services, educational services, and housing services categories were endorsed as valuable by 64% of the counselors; the family and social services category by 55%, and the remaining categories by 25% – 45% of the counselors.

3.2. Range and specificity of planned services

To evaluate the range and specificity of services planned for patients, 73 TCPs developed by counselors who received the RG and training were compared with 52 TCPs developed by counselors who had been trained to assess patients in the same way and with the same instrument (ASI and DENS software) but did not receive the RG and the corresponding training. Based on ratings by two independent, blinded evaluators, the counselors trained to use the RG identified and planned significantly more specific services. As displayed in Table 2, significantly more TCPs from RG-trained counselors showed specific service delivery plans in the family/social (51

%), psychiatric (45 %), employment (41 %), medical (30 %), and legal (23 %) problem areas than TCPs from counselors who had collected the same information (ASI) on their patients but were not trained to use the Resource Guide (14 %, 6 %, 8 %, 2 %, 0 %, respectively, all $p < .001$).

4. Discussion

In an attempt to ease the process of developing comprehensive, individualized treatment plans following patient admission assessment, and to make the process more time and cost effective, we adopted the United Way's Directory by modifying its categorization, organization, and referencing system, adding specific resources and providing a brief training to make it more practical.

Counselors were very receptive to the RG. The counselors used it with most of their patients to find services but they also used the software to meet some of their own personal needs. We found that the treatment care plans that resulted from counselors who received the enhanced training were more complete, better matched to the reported needs of the patients at the admission assessment and led to more services (See Carise et al., 2003). It is interesting in this regard that the assessment and treatment care planning were not new activities for these counselors. All were experienced in this area and had performed the function many times prior to the training they received in this study. Further, since most treatment programs in Philadelphia are required to use the ASI in conducting an admission assessment, virtually all the counselors were familiar with the instrument. When asked about the value of the initial assessment and treatment care plan prior to the training, almost all of the counselors said that they generally filed the assessment in the patients' folders and began orienting the patient to the facility. In their view, the ASI and the care plan were merely administrative requirements – "paperwork" with no real clinical value. Based on these comments and the results of the training, we do not think that simply training counselors to use the ASI in assessment, or even providing a computer assisted program to collect

the ASI data alone will lead to improvements in the clinical use of the collected information. It is our view that it was the linking of the assessment information to an easy-to-use service directory (i.e. the RG) and the brief training that gave the assessment information clinical meaning and facilitated the needs-services matching.

One of the limitations of the study is that the RG was only tested on treatment programs and services in Philadelphia. The development process as well as the acceptance and utilization of similar guides in different geographical locations may be somewhat different from what we observed in Philadelphia. First, there are many free and low cost health and social services in the Philadelphia area and the transportation system provides relatively easy access to many of these services. Further, the Philadelphia United Way electronic guide was very well developed and our only tasks were to add a few services and re-categorize the listing. We do not know if other cities have the same range of services, public transportation or a similarly well-developed resource guide.

A second limitation is that we were not able to measure the quality of the assessment and treatment care planning process among these counselors prior to our training. This makes it difficult to know whether and how much our training actually improved this process. As reported above, we do have anecdotal reports about the views of the counselors about assessment and treatment care planning process prior to this intervention; and these reports suggest only a casual attention to that process. In future studies we will make additional effort to obtain baseline measures prior to intervening.

Despite these limitations, these findings indicated positive outcomes. Counselors who received the RG and the corresponding training developed more comprehensive treatment plans for their patients, addressing not only substance abuse problems, but also personal health and social problems that often interfere with the goals of substance abuse treatment.

The availability of the RG helped counselors not only in widening the scope of the treatment plans they created, but also in making plans with specific action steps. Using the RG, substance abuse counselors were able to quickly filter through all available programs in the area, make a decision on which program to refer by evaluating its characteristics (e.g., eligibility criteria, ages and gender served, languages spoken), and easily locate the program. Thus, individualized treatment planning to meet the specific needs of patients in medical, employment, legal, family/social, and psychiatric domains was more likely to be achieved by counselors who had access to the resource guide. It bears emphasizing that the difference in treatment care plans was not due to differential information collected in the patient assessment – all counselors had the same, standard training in patient assessment and all counselors passed a post-training test of proficiency in collecting that information.

In fact, it appears that better developed treatment plans among RG-trained counselors was a simple and direct function of having access to brief training and the technology. This is a very simple, even obvious finding, but one that has not been applied in the substance abuse treatment field. Our experience in the development of this Resource Guide and in training counselors to use it suggests that the counselors appreciate the training; and that they will be willing and able to use the technology to assist them in assessment and treatment planning. We think this process is worthy of further study and development encourage other researchers, treatment providers, and quality improvement personnel to pursue this line of work with their population. In the text that follows, we offer guidelines for others to use in developing a similar RG in their location.

4.1. Guidelines for Creating a Resource Guide in Other Cities

Using the preceding RG development procedures as a general guideline, an area-specific resource guide can be created by following these suggested steps:

- Find existing resource guides/directories in your area. The United Way has various directories and websites available throughout the United States; contact your regional United Way office for more information. Other resources can be found in the telephone book "blue pages" or yellow pages. Evaluate and choose resource guide/directories based on their comprehensiveness, general organization, categorization of programs, and ease of use.
- Combine all resource guides/directories' content into a single electronic database to create a comprehensive foundation. By way of estimating time and manpower requirements, this step required one full-time staff member approximately two weeks to complete this task in Philadelphia (a city of approximately 4,000,000). The FCH database proved to be the most comprehensive directory to use as a foundation.
- Expand your database. Search the Internet and contact treatment providers to request their agency referral lists. Most treatment organizations and counselors have compiled short referral lists for their patients of self-help groups, recovery houses, and other local service agencies that may be an asset to the larger community. Finalize your listing of agencies and programs. This step required a staff member approximately five days to complete in Philadelphia.
- Decide on the level of detail of program information that should remain in your listing and what pieces should be discarded.
- Complete a pilot study on the reliability of the database information. Call a number of randomly selected programs. Verify that all information available is correct or up to date. This step required a full-time staff member approximately 3 weeks to complete in Philadelphia.

- Make all necessary changes to the database content. This may include contacting all programs and agencies to verify/correct information if the pilot study shows greater than ten percent change. This step required a staff member approximately 10 days to complete in Philadelphia.
- Re-organize and reshape the deliverable to fit your population's needs. This step required a staff member approximately 15 days to complete in Philadelphia

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Table 1

Category and Keyword Sample from RG Binder

Categories	Sample of keywords
Food and Material Needs	Congregate Meals; Food Banks; Home Delivered Meals
Housing	Boarding Home; Halfway House/Community Living; Mortgage Assistance
Medical	AIDS Testing; Healthcare, Primary Care; Women's Services
Psychological	Counseling, Bereavement/Grief; Mental Health, Outpatient; Support Groups, Sexual Abuse
Financial	Financial Guidance; Housing Assistance; Social Security
Education	Career Counseling; Employment Job Training; Mentoring
Legal	Crime Victim; Equal Opportunity/Discrimination; Legal Services
Employment	Computer Services/Training; Employment, Job Readiness; Unemployment
Family	Counseling, Marriage; Family Centers; Support Groups, Caregivers
Children and Youth	After-School Programs; Foster Care; Youth Development Programs
Older Adults	Alzheimer's Disease; Homebound Services; Transportation
Women	Emergency Housing & Shelters; Healthcare, Maternal & Child; Reproductive Health Care
Gay, Lesbian, Transgender	Advocacy; AIDS; Support Groups, Family
Other Populations (disabled, hearing impaired, bilingual, Jewish, vision impaired, Veterans)	Case Management; Mental Retardation; Sign Language; Language Interpreters

Note: A keyword can be found in more than one category.

Table 2

Comparison of Treatment Care Plans (TCP) for specificity of services

	Percentage of TCPs with specific services planned		
	ET group N = 73	ST group N = 52	X^2
Medical	30 %	2 %	16.10*
Employment	41 %	8 %	20.93*
Legal	23 %	0 %	17.55*
Family/Social	51 %	14 %	19.01*
Psychiatric	45 %	6 %	25.44*

df = 2

* $p < .001$

Figure 1.

Agency Information Screen.

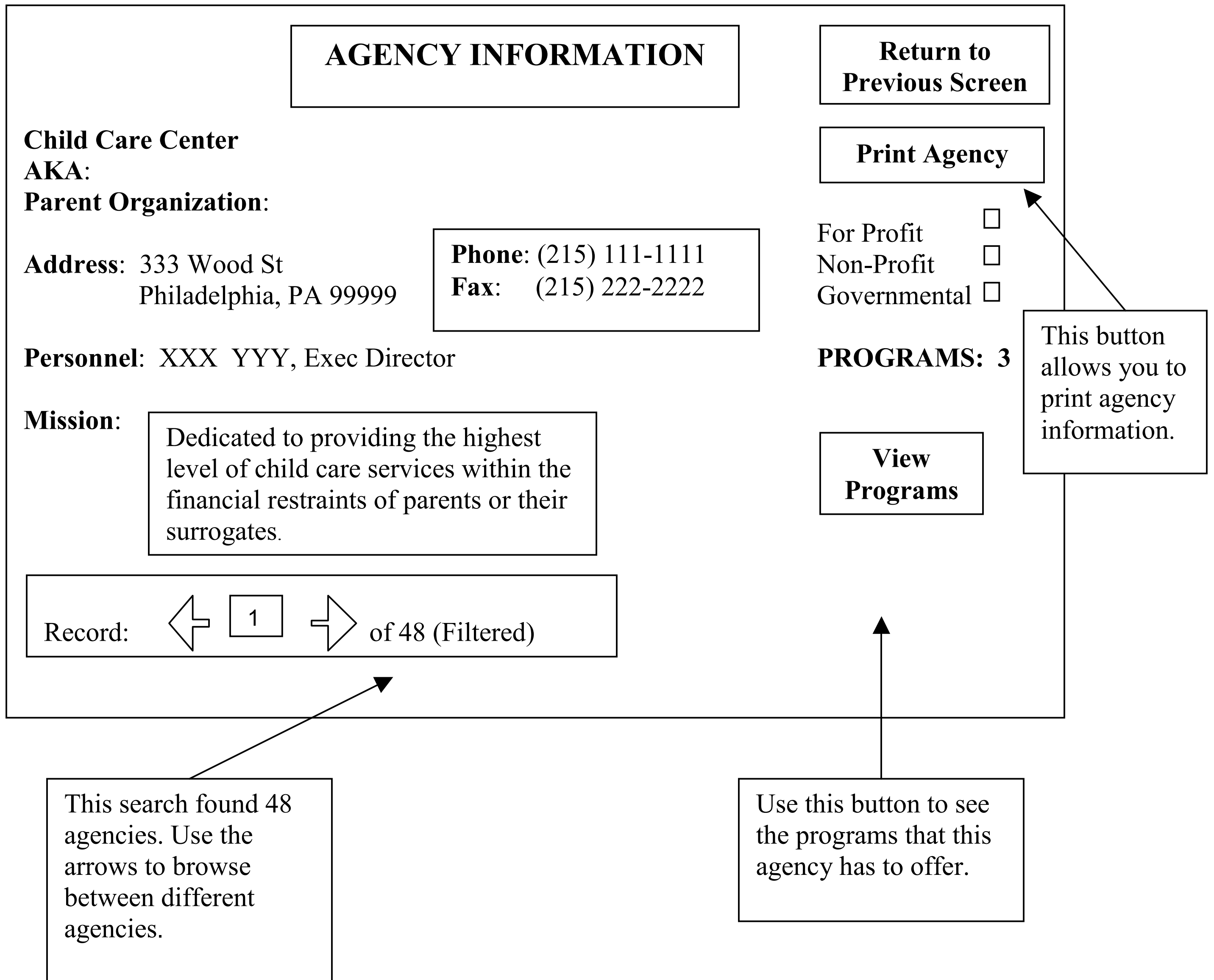

Figure 2.

Keyword List Screen.

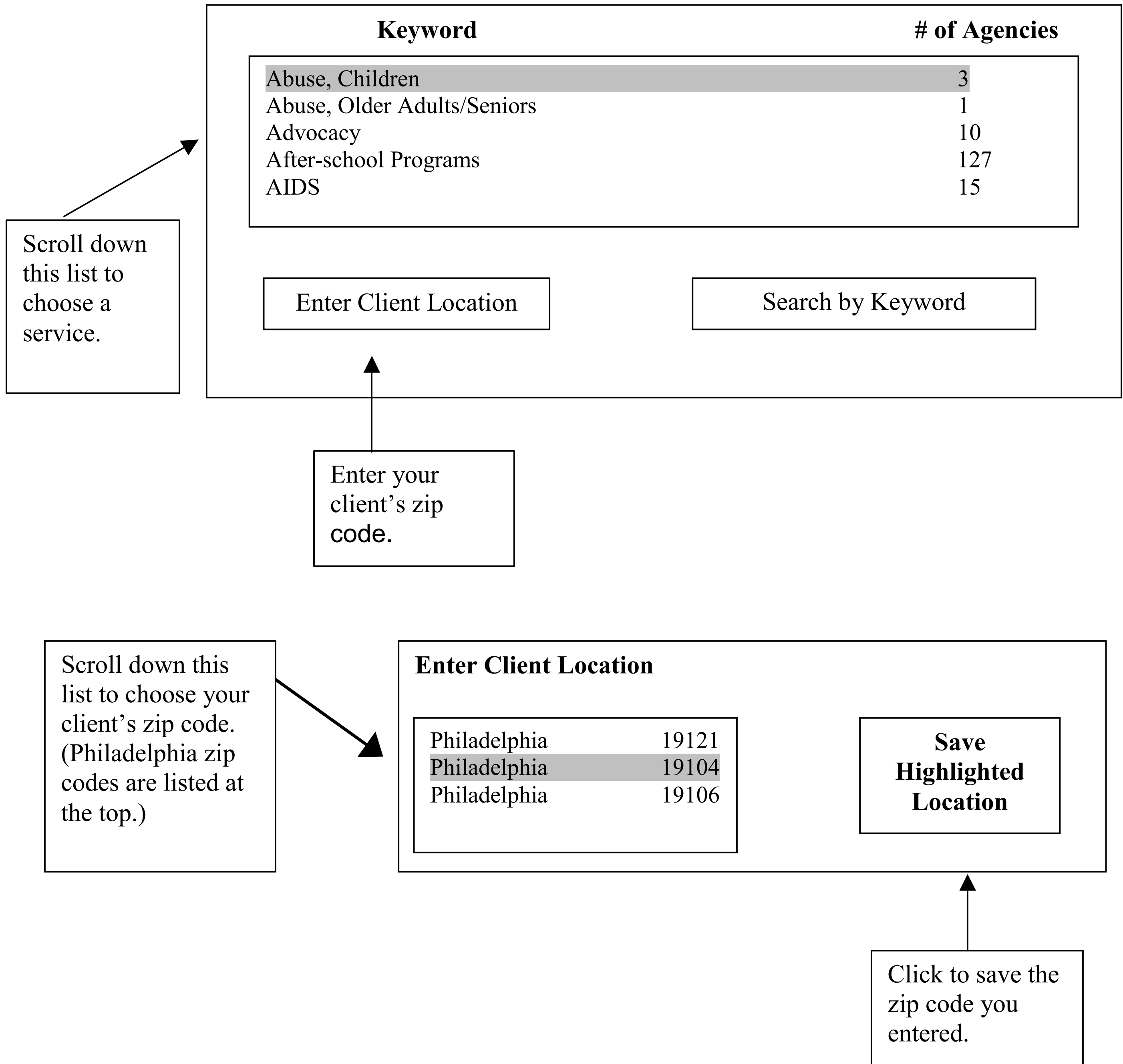

Figure 3.

Program Information Screen

PROGRAM INFORMATION

Return to Previous

Print

Go to Agency

Program Name: **Education Classes**

Agency: **XXX Agency**

Program Information: Basic skills and literacy education including reading, writing, math, computers and career classes and support services. Classes are 36 weeks long, but students can stay as long as needed. Application required.

Eligibility: Desire to upgrade academic skills. **Fees:** No Fee

Address: 123 Main St.
Philadelphia, PA 67890

Phone: (215) 555-1234
Fax: (215) 555-5678

Hours: Mon-Fri 8:30am-3pm

Intake Procedure: None **Languages:** English, Spanish

Genders Served:
Male □ **Female** □

Ages Served: 0-6 □ 7-12 □ 13-18 □ 19-25 □ 26-59 □ 60+ □

Handicap Access: □

Transportation: Market & Frankford El; Buses: #5 and #54