Guidelines for Professional Referral to Alcoholics Anonymous and Other Twelve Step Groups

Richard J. Riordan and Lani Walsh

In working with clients who have addiction issues in addition to the presenting problem, counselors often consider support groups as adjuncts to treatment. "Twelve step" groups have been useful for this purpose. In this article the authors review Alcoholics Anonymous (AA), the oldest and largest twelve step group. They explore some criticisms of AA, describe its components and mechanics, and provide guidelines for client referral.

alf-help groups have been used increasingly by counselors as an adjunct in their work (Riordan & Beggs, 1987). The various "anonymous" or twelve step groups have become especially popular because of their perceived effectiveness in treating addictive disorders. Indeed, alcohol treatment centers almost uniformly involve their patients in such groups during both treatment and aftercare. Moreover, counseling on other issues may be counterproductive if addiction goes unaddressed (Buie, 1987). Although most counselors are aware of therapeutic and psychoeducational group resources in their community, many may not understand or be aware of the mechanics of twelve step groups. Such groups often maintain a low profile in the mental health community, because they do not involve psychological service providers. Furthermore, counselors often rely on word-of-mouth for any detailed information more precise than meeting place and time. Even if a counselor is regularly involved in addictive treatment programs, little is available in the existing literature to guide the process of referral to Anonymous groups. In this article we present some criticisms professionals may have regarding twelve step programs, and more specifically, Alcoholics Anonymous (AA). Furthermore, we provide some guidelines for referral of clients to AA.

CRITICISMS OF TWELVE STEP PROGRAMS

Twelve step groups have their roots in the 1935 founding of AA. Since then, many groups that were formed to deal with other addictions have borrowed the AA twelve step program of recovery. Narcotics Anonymous, Sex Addicts Anonymous, Overeaters Anonymous, and Al-Anon are a few of these groups. Perhaps the most scholarly and complete history and analysis of AA and the twelve step recovery principles is Kurtz's Not God (1979). The title "Twelve Step" refers to a series of 12 statements beginning with "We admitted we were powerless over alcohol [other substance, condition, or behavior]—that our lives had become unmanageable" (AA World Services, 1953, p. 59). A twelve step group, for the purpose of this article, refers to a group that adheres specifically to the twelve steps and twelve traditions set forth by AA. There are numerous other mutual help groups that have either altered the twelve step program (such as Alcoholics Victorious and Secular Organization for Sobriety) or have developed different programs entirely (such as Recovery, Inc.).

The twelve steps "are a group of principles [that are] spiritual in nature" (AA World Services, 1953, p. 15). These principles set out specific actions to assist an individual in obtaining sobriety and making changes in his or her life to maintain sobriety. Along with AA slogans, the twelve steps are frequently referred to as "tools" of recovery. The twelve traditions set forth the philosophy and structure of the groups.

They mandate that the groups keep a singleness of purpose, be self-supporting, have a nonprofessional lay leadership, be nonpolitical, and have no membership requirements except the desire to quit drinking, gambling, overeating, and so forth.

The twelve step program is commonly cited by professionals as one of the most effective treatments for alcoholism (Brown, 1985; Flores, 1988; Glasser, 1976; Kurtz, 1979; Madsen, 1974; Royce, 1981; Zimberg, Wallace, & Blume, 1985). Many authors, however, believe that if a person is an alcoholic, he or she is unlikely to be diagnosed by a professional and, if diagnosed, is unlikely to receive an appropriate referral (Brown, 1985; Flores, 1988). According to Kurtz and Chambon (1987), twelve step groups are inadequately referred mainly because of lack of information, understanding, and appreciation. Much of this inadequate referral could be the result of misconceptions and disagreements about the twelve step program's philosophy and basic concepts. Flores (1988) noted that critics of AA "fail to understand the subtleties of the AA program and often erroneously attribute qualities and characteristics to the organization that are one-dimensional, misleading, and even border on slanderous" (p. 203). For a counselor to make an adequate referral to twelve step groups, it is important to be aware of one's own assessment of the controversies and whether it is accurately grounded in the facts.

The Disease Model

A frequent criticism of twelve step groups and alcoholism treatment centers is their adherence to the medically based disease concept (Richards, 1986; Stein, 1986). Critics often object to a medical model, which makes the physician the primary therapist. This criticism objects to a biogenic view on the grounds that it places the individual in a passive role which only discourages personal responsibility. The competing rhetoric recognizes that the disease concept may be applied by some individuals in this way but notes that self-accountability is a requirement in the treatment of many diseases. For example, diagnosing diabetes as a disease does not absolve the individual of responsibility for self-care.

It seems inaccurate, however, to state that AA adheres to the disease concept, at least in the medical sense. AA literature uses the terms *illness* and *malady*, but it does not use the term *disease*. AA has avoided the term *disease* intentionally to avoid conflict and has considered the controversy over the etiology of alcoholism superfluous (Kurtz, 1979). AA's sidestepping on this issue apparently serves an important peace-keeping function for the organization. The Tenth Tradition of AA states that "Alcoholics Anonymous has no opinion on outside issues; hence the A.A. name might never be drawn into public controversy" (AA

World Services, Inc., 1953, p. 176). Other twelve step groups have followed this approach.

Many individual members do use the term disease, but in a different context than a purely medical one. Members think of alcoholism as a "four-fold disease" involving physical, mental, emotional, and spiritual factors (Flores, 1988). Other individual members of twelve step groups openly reject the disease concept. This is represented in AA, for instance, by such comments as "I'm alcoholic because I drank too much alcohol too long for the wrong reasons." In summary, AA seems to leave the debate about causes to the professionals and work instead on solutions. Although individuals have a variety of opinions, AA attempts to take a neutral stance regarding etiology.

Abstinence

Another criticism often heard of AA is its prescription of total abstinence as a solution to all drinking problems. AA calls for abstinence for those who have experienced a loss of control and want to join the program. The basic text *Alcoholics Anonymous* (AA Word Services, Inc., 1953) stated that "moderate drinkers have little trouble in giving up liquor entirely. They can take it or leave it" (AA World Services, Inc., 1955, p. 20). AA encourages a person to attempt to control drinking prior to membership and salutes those who can (AA World Services, Inc., 1955). The organization recommends its program only for those who have failed to control their drinking; this is the AA definition of alcoholism.

The behaviorist assertion that alcoholics can return to controlled drinking has caused a stir both in the treatment field and in the AA community (Watts, 1986). Research that supports these claims (Sobel & Sobel, 1973) has been challenged in long-term follow-up studies (Pendery, Maltzman, & West, 1982). There is also an assumption that controlled drinking is pleasant and free of adverse consequences. Once again, there is a split between areas of the profession. Researchers in the laboratory document cases of controlled drinking, whereas clinicians in the field see abstinence as the only goal of treatment (Flores, 1988; Vaillant, 1983). Vaillant (1983) reminded the professional that, although it is "theoretically possible for alcohol dependent individuals to be taught to return to asymptomatic drinking, it is equally important for them to appreciate that abstinence may be a more practical and statistically more useful therapeutic focus" (p. 235).

Substituting Dependencies

Glasser (1976) saw AA as a positive addiction and the single most successful antiaddiction organization that we have. Another frequent criticism of AA, however, is that it is a "crutch" or that alcoholics are just substituting dependencies (Bean-Bayog, 1985; Vaillant, 1985; Wallace, 1984). Inherent in this criticism is a belief that there is something undesirable about all dependence.

Flores (1988) was particularly bothered by this criticism in that it reflects a professional attitude that anything less than complete autonomy and independence is a problem. In fact, limited dependence on others allows for intimacy that can encourage the self to expand beyond its own limitations, thus strengthening one's own identity, not weakening it (Kurtz, 1982).

Spirituality Versus Religion

Perhaps the most common reason given for dismissing AA and other twelve step groups is that they are mistakenly thought of as espousing a religion (Wallace, 1984). Twelve step groups do use a spiritual program with an emphasis on spiritual growth. Abstinence is not the goal of twelve step groups, but it is the means to an end, which is spiritual

growth. Small (1990) described alcoholics as "very deep people; they have the qualities of the mystic, the artist, and the sage" (p. 144). Small said that the urge for a life with spiritual meaning is behind the urge to drink, and the recovering alcoholic is in search of another path to wholeness and transcendence.

Religion tells a person how to believe, whereas twelve step groups tell a person of the need to believe in a "power greater than yourself," or a higher power. Twelve step groups emphasize that this power is "as you understand him." Such an approach emphasizes the distinction between being spiritual in the sense of being a positive and creative human being as distinct from following religious doctrine. Flores (1988) noted that "AA is clearly not a religious program—at least no more so than the way William James and Carl Jung applied spiritual or religious themes in their approach to treatment" (p. 220).

Labeling

Many professionals object to the stigma and isolation, which, they believe, results from an individual's labeling himself or herself, as in saying, "I am an alcoholic" (Brown, 1985). Many also believe that twelve step groups force this kind of label on members (Wallace, 1984). This assertion is not true of AA as a whole, although individual members and groups may vary in their adherence to the "traditions." "The only requirement for membership is a desire to stop drinking," (AA World Services, Inc., 1955, p. 3) as is stated in AA's Preamble. Within AA, it is considered bad manners to diagnose someone else as an alcoholic or other type of dependent person. Diagnosing someone else is generally known as "taking someone else's inventory." Individuals are encouraged to evaluate their own alcohol history for a loss of control and to diagnose themselves. There is, however, considerable peer pressure to label oneself. The group norm for introductions in AA is "Hi, I'm Joe, and I am an alcoholic." Less common, but acceptable, is the statement: "Hi, I'm Joe, and I have a desire to stop drinking." Many members see it as a promotion to identify themselves as an "alcoholic" or a "recovering person"-as contrasted with a "drunk"-so that a person can experience a sense of relief, dignity, and belonging in accepting the label. Brown (1985) believed that in accepting the label "alcoholic," a person accepts a new identity that provides a frame of reference for reinterpreting the past and adopting new behaviors and attitudes.

REFERRAL GUIDELINES

Which Clients to Refer

Until recently, some studies had indicated that a certain personality type responded to the twelve step approach and that only these individuals should be selected by counselors for referral to twelve step programs. For example, Ogborne and Glaser (1981) presented the following characteristics in alcoholics affiliated with AA:

... men over 40 years of age, white, middle- or upper-class and socially stable ... authoritarian personality, strong affiliative needs, proneness to guilt, an external locus of control, field dependence, cognitive simplicity, formalistic thinking, a low conceptual level, high autokinesis scores, a religious orientation, existential anxiety, and a tendency to conform. (p. 670)

A recent AA membership survey (AA World Services, 1987) contradicts such a stereotype: 34% of AA's members are women, 21% are under 30 years of age, and 52% are under 50 years of age. Also, more recent research and reviews refute earlier research claims of an "AA personality." Bradley (1988) provided an excellent summary of the

research and concluded that there was no clear profile that emerged of the alcoholic most likely to come to AA. Emrick (1989) came to the same conclusion in his review of the literature since 1976. He also noted that all alcohol-troubled patients could wisely be regarded as possible members of AA and at least need to be informed of the organization's potential benefits.

Similarly, Vaillant (1983) concluded that there are many alcoholdependent individuals regardless of social or psychological make-up who find help for alcoholism through AA. It seems prudent to consider a referral to AA for all alcoholic clients except for those with significant pathology.

Brown (1985) warned against an intellectual bias that sees AA as a less ideal choice than counseling. She warned against communicating to clients the idea that sobriety obtained through AA is somehow inferior to sobriety obtained without AA, and she rejected the idea that AA is not for bright, capable people who can make use of a counselor. Noting that not everyone will accept the referral, she sees the difficulties that individuals have in accepting a referral or in attending AA as part of the therapeutic process.

In this regard support groups such as AA can serve several adjunctive goals in a counselor's treatment plan. In the early phases, clients may be very needy as they work through the denial, guilt, and shame, as well as the craving. They may need almost constant support. The counselor cannot realistically be available on a 7-days-a-week basis; AA, however, is. Likewise, in a long-term counseling relationship, AA can be an ally to the counselor, providing extra foundation and support as the client works through more deeply seated issues.

Making the Referral

In making the referral to a twelve step group, it is important first to be sure there is not a need for inpatient treatment. Bean-Bayog (1985) suggested using inpatient treatment only if (a) outpatient treatment has failed, (b) current drinking is life threatening, (c) there is impaired neurologic functioning, or (d) there is massive denial. Of course, if the client has medical problems (e.g., diabetes, history of seizures) the counselor will want to coordinate treatment recommendations with a physician. If in doubt about an appropriate treatment step, the counselor may also want an assessment from an independent center. In this case, an assessment not associated with a recovery facility can help avoid a bias. For alcohol problems uncomplicated by the aforementioned factors, Bean-Bayog saw AA and counseling as the treatment of choice.

When discussing alcoholism with clients, it is important to be forthright with any facts and concerns. To minimize or understate the facts could feed into the client's denial. When referring to a specific twelve step group, a counselor should provide a realistic assessment of probable benefits to the client. To avoid rejection, the referral should be presented as an additional source of help.

Timing the Referral

Timing is important in making the referral. The counselor needs to make an independent decision concerning many different variables, such as severity of drinking and the trust established in the therapeutic relationship. A general rule of thumb is that the earlier the referral, the better, to avoid more adverse consequences of drinking. Moreover, the benefits of continued counseling sessions will be limited as long as a drinking problem persists.

Frequently, the alcoholic is more receptive to a referral after a binge or some adverse consequence has occurred, and he or she is remorseful over drinking. Oglesby (1987) discussed the issue of being too quick or

too slow in referring in general and noted the importance of judgment on the part of the counselor. With alcohol problems the danger of waiting (e.g., alcoholism causing harm to self or family) has to be balanced against the possible damage to trust in the relationship. Waiting too long to address the issue, however, can be interpreted as condoning the behavior and may add to the severity or the progression of the condition.

The "A" Word

Just as professionals may believe that labeling stigmatizes a person, many clients are offended at the use of the word "alcoholic." It is important to be mindful of this when counseling clients initially. Depending on the situation, the counselor may choose to use the terms alcohol problem or alcohol abuse and encourage the client to make the diagnosis of alcoholism for himself or herself through attendance at AA meetings and lectures. This approach can be facilitated in counseling sessions by exploring examples of loss of control.

Many clients will deny the need for outside support or believe they can quit or control their drinking on their own. When this occurs, clients should outline a specific plan and goal to control their drinking or abstain completely. This kind of plan is helpful if it is written in a contingency contract and supported wholeheartedly by the counselor with an agreement to attend a twelve step program if the plan fails.

Clients are usually more receptive to twelve step programs after they have failed at attempts at self-control. Part of the referral process is motivation and working through resistance.

Personalizing the Referral

It is important that the referral to a twelve step program be personally tailored to the client. This can be done in a variety of ways and degrees. At the least it should include writing down the number that the client is to call to get information. It would be more helpful to have the client establish contact from the counselor's office. It could be helpful to have some pamphlets and meeting books in the office for the client to take

The first meeting is usually difficult for the client to attend. Frequently, arrangements can be made through the AA central office for a temporary contact to meet a newcomer at a meeting or take the newcomer there personally. It would be beneficial to have a session several days after the client's first meeting to process the experience. The referral process does not end with making the recommendation.

Anxiety is likely to be high early in recovery for a variety of reasons: withdrawal, newness of the situation, lack of a familiar coping tool (alcohol), and unconscious conflicts. Brown (1985) saw the counselor as providing a framework through which the patient can accept attendance without sacrificing other long-held beliefs.

Preparing the Client

Many referrals to twelve step groups can be unsuccessful if the client does not have a realistic expectation of what he or she will find at the meeting. The counselor should make the client aware that it is a spiritual program and should assist the client in distinguishing between religious and spiritual programs. Referred clients should also be aware that the twelve steps are suggestions, not rules. The counselor should also explain the anonymous part of the program. Newcomers may be asked to identify themselves by their first name so that they can be welcomed, but this is not mandatory. Also, the client does not need to identify himself or herself as an alcoholic. When newcomers do identify themselves, some groups will have a "newcomers meeting," where various

members attempt to reach out to the individuals by sharing their early experiences in AA. It is most important to assure the client that although attendance at meetings might be unpleasant or uncomfortable, this is not related to possible benefits. The counselor should caution the client not to make a decision on involvement based on one or two meetings. The client should sample a variety of meetings held at different times and locations. It is useful for the counselor to know the catchment area to recommend specific groups with whom the client is more likely to identify.

Attending Meetings

The best way to understand twelve step groups is to attend a wide sampling of meetings to see the diversity of groups and individual members. Professionals are welcome as guests at "open" AA meetings; "closed" meetings are reserved for AA members only. It is a good idea to send newcomers to "open" meetings, especially while they work through any reservations about whether they choose to call themselves alcoholics. Some groups, after all, use this label despite AA World Service Guidelines.

There are three basic types of AA meetings (AA World Services, 1990). "Speaker" meetings involve individual members sharing their personal story of drinking and recovery. These meetings can be useful to individuals in identifying and breaking through their denial systems. The speaker meetings can also be less intimidating to newcomers because the visitors experience no fear of being called on to talk. Although some newcomers object to this style, they may view it as "listening to someone else's problems." These individuals might be better referred to "discussion" meetings where topics relating to recovery can be discussed by the whole group. The format is nonconfrontational, and individuals may suggest topics for discussion. "Study" groups focus on AA's basic text, Alcoholics Anonymous (AA World Services, Inc., 1955), or The Twelve Steps and Twelve Traditions (1953) and follow a discussion format. Although study groups may be helpful for early recovery, they are not recommended for the first few meetings or until the newcomer has identified himself or herself as a member. Professionals should be familiar with all three formats of meetings.

Clubhouses

Many cities also have twelve step clubhouses. A clubhouse is a nonprofit organization whose purpose is to provide a meeting place for twelve step groups and for socializing afterwards. These clubhouses can be very useful for newcomers, especially for those with poor support systems or socialization skills. The clubhouses are frequently open for long hours and provide extra support. Some clubhouses have three or four meetings a day. It is important to note that these clubhouses are not run by the twelve step groups.

In making referrals, it is important to be familiar with the various clubhouses in a particular catchment area to make an appropriate referral. For example, one AA clubhouse known to the authors is frequented during the day by many older, retired alcoholics who attend 11:30 A.M. meetings and then have lunch in the club's restaurant. The same club's 5:45 P.M. meeting is frequented by busy professionals catching a meeting on the way home from work. The club's members are intolerant of drugs other than alcohol being discussed. Another local AA clubhouse attracts younger members (30 to 40) to its meetings; these members are more tolerant of dual addiction. A third AA clubhouse is frequented by, but not limited, to gay members of AA. A fourth AA clubhouse is right off a "skid row" area and attracts alcoholics from

the working class. These are important considerations to keep in mind when making a referral for obvious reasons of identification.

NETWORKING WITH AA

AA's Central Offices

In most cities, AA has a central office run by volunteers, paid office workers, or both. A counselor visit would be useful to meet staff, establish contacts, and buy literature and meeting books. Potential members can use central offices to get directions to a meeting, to speak to an AA member (usually 24 hours a day), or to arrange for an AA member to make a home visit (twelve step call). Many of the services of a central office are not available to a professional for reasons of anonymity or AA's singleness of purpose "to carry its message to the alcoholic" (Fifth Tradition).

Cooperation With the Professional Community

Contrary to many professionals' impressions, AA has a clear commitment to working with the professional community. In 1970, AA's General Service Office approved a new committee called Cooperation with the Professional Community (CPC). According to CPC's workbook, its purpose is to increase communication between AA and professionals and to inform them about what AA does and does not do, to assist professionals working with alcoholics by being an available community resource. Members of CPC will meet with professionals or organizations, provide speakers, and attend an open meeting with counselors.

The CPC contact can also assist the professional in working with clients with special needs. For example, AA's basic text, *Alcoholics Anonymous* (AA World Services, Inc., 1953), is available in 13 foreign languages. A total of 27 AA central offices have teletype machines used by the hearing impaired. The CPC can also provide information on how to contact Loners International (an AA meeting by mail, published six times yearly) for alcoholics isolated geographically or within their own homes. CPC is an invaluable resource to professionals to facilitate an informed referral. A professional can contact a CPC committee member through a local central office.

Contacting Other Twelve Step Groups

Many other twelve step groups besides AA, such as Al-Anon, Overeaters Anonymous, Narcotics Anonymous, and Codependents Anonymous, may have central offices in larger cities. It would be advisable to visit these offices, to obtain information and literature, and to make contacts to facilitate referrals. Less popular twelve step groups or rural areas may have only an answering machine or a member's home telephone number, and may choose to speak only to the potential member.

There are 80 local self-help clearinghouses nationally that can assist professionals in contacting twelve step groups in their catchment areas. Contact numbers should be listed in the local telephone directory. For those areas without a self-help clearinghouse or for additional information on a twelve step group's national organization, send a self-addressed envelope to National Self-Help Clearinghouse, 25 West 43rd Street, Room 620, New York, NY 10036.

REFERENCES

AA World Services, Inc. (1953). Alcoholics Anonymous. New York: Author. AA World Services, Inc. (1955). Twelve steps and twelve traditions. New York: Author.

- AA World Services, Inc. (1987). AA membership survey. New York: Author.
- AA World Services, Inc. (1990). The A.A. group. New York: Author.
- Bean-Bayog, M. (1985). Alcoholism treatment as an alternative to psychiatric hospitalization. *Psychiatric Clinics of North America*, 8, 501–512.
- Bradley, A. M. (1988). Keep coming back: The case for a valuation of Alcoholics Anonymous. *Alcohol Health and Research World*, 12, 192–199.
- Brown, S. (1985). Treating the alcoholic: A developmental model of recovery. New York: Wiley.
- Buie, J. (1987, November). Twelve step program can boost therapy. APA Monitor, p. 12.
- Emrick, C. D. (1989). Alcoholics Anonymous: Membership characteristics and effectiveness as treatment. In M. Galanter (Ed.), Recent Developments in Alcoholism, 7, 37-53.
- Flores, F. J. (1988). Group therapy with addicted populations. New York: The Haworth Press.
- Glasser, W. (1976). Positive addiction. New York: Harper & Row.
- Kurtz, E. (1979). Not-God: A history of Alcoholics Anonymous. Center City, MN: Hazeldon Foundation.
- Kurtz, E. (1982). Why A.A. works: The intellectual significance of Alcoholics Anonymous. *Journal of Studies on Alcohol*, 40, 230–239.
- Kurtz, L. F., & Chambon, A. (1987). Comparison of self-help groups for mental health. *Health and Social Work*, 12, 275–283.
- Madsen, W. (1974). The American alcoholic: The nature-nurture controversy in alcoholic research and therapy. Springfield, IL: Charles C Thomas.
- Ogborne, A., & Glaser, F. (1981). Characteristics of affiliates of Alcoholics Anonymous: A review of the literature. *Journal of Studies on Alcohol*, 7, 661-675.
- Oglesby, W. B. (1987). Referral as pastoral care. *Journal of Pastoral Care*, 41, 176–187.
- Pendery, M. L., Maltzman, I. M., & West, L. J. (1982). Controlled drinking by

- alcoholics? New findings and a reevaluation of a major affirmative study. *Science*, 217, 169–175.
- Richards, L. G. (1986). Perspectives on drug use in the United States. *Drugs & Society*, 1, 91–105.
- Riordan, R. J., & Beggs, M. S. (1987). Counselors and self-help groups. *Journal of Counseling and Development*, 65, 427–429.
- Royce, J. E. (1981). Alcohol problems and alcoholism: A comprehensive survey. New York: The Free Press.
- Small, J. (1990). Becoming naturally therapeutic. New York: Bantam Books.
- Sobel, M. B., & Sobel, L. C. (1973). Alcoholics treated by individual behavior therapy: One year treatment outcome. *Behavior Research and Therapy*, 11, 599-618.
- Stein, H. F. (1982). Ethanol and its discontents: Paradox of inebriation and sobriety in American culture. The Journal of Psychoanalytic Anthropology, 5, 355–377.
- Wallace, J. (1984). Myths and misconceptions about Alcoholics Anonymous. New York: AA World Services, Inc.
- Watts, T. D. (1986). Conceptions of the nature and treatment of alcoholism. In T. D. Watts (Ed.), Social thought on alcoholism (pp. 9-24). Malabar, FL: Robert E. Krieger Publishing.
- Vaillant, G. E. (1983). *The natural history of alcoholism*. Cambridge, MA: Harvard University Press.
- Zimberg, S., Wallace, J., & Blume, S. B. (1985). Practical approaches to alcoholism psychotherapy. New York: Plenom Press.

Richard J. Riordan is a professor in the Department of Counseling and Psychological Services at Georgia State University, Atlanta. Lani Walsh is an associate faculty member in the Department of Psychiatry at Emory University's School of Medicine, Atlanta, Georgia. Correspondence regarding this article should be sent to Richard J. Riordan, Department of Counseling and Psychological Services, Georgia State University, Atlanta, GA 30303.