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Ten Years Later: Locating and Interviewing Children of Drug Abusers

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Abstract

Longitudinal studies require high follow-up rates in order to maintain statistical power, reduce bias, and enhance the generalizability of results. This study reports on locating and survey completion for a 10-year follow-up of the Focus on Families project, an investigation of 130 families headed by parents who were enrolled in methadone treatment for opiate addiction. Despite having no contact with participants in the study for at least 10 years, the project successfully located nearly 99% of parent participants and 98% of their children. Twenty-four percent of the parents and one child had died before the follow-up. Of the surviving sample, 91% of parents and 86% of the children completed the follow-up interview. Multiple techniques were used to locate study participants, including internet searches, researching court and public records, collaborating with government and service agencies, and contacting family and social networks. For more than half of the sample, costly efforts were required to locate individual participants.

Keywords

Locating; Longitudinal; Substance Abusers

1. Introduction

Attrition can threaten the internal and external validity of longitudinal research. Maintaining a high proportion of the original sample size is essential for maintaining statistical power to detect hypothesized relationships among variables of interest (Hansen & Collins, 1994). Minimizing attrition is particularly important in studies where problem behavior such as drug use and abuse is of primary interest. Past research has shown that individuals with frequent drug use or who are exposed to high levels of risk for substance abuse are the most difficult to locate and interview at follow-up (Cotter et al., 2005; Cottler et al., 1996; Jessor & Jessor, 1977; Passetti et al., 2000; Ribisl et al., 1996; Stouthamer-Loeber & van Kammen, 1995).

Some recent longitudinal studies have demonstrated success in locating participants for long-term follow-up interviews in situations where there was little or no contact with study participants for multiple years. With gaps of 8–10 years between interviews, Lyons and colleagues (2004) found 86% and interviewed 80% of a sample of spouses of persons with

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Parkinson's disease. In a 40-year follow-up study of a sample of elementary school students in Australia, Hampson and colleagues (2001) were able to locate over 75% of the original sample, with 60% completing a mailed survey. Studies with populations characterized by drug abuse and other illegal behavior present unique challenges in locating and maintaining high interview completion rates. Participants in these studies tend to move frequently, have no reliable telephone number or email address, be estranged from their families, and may be hiding from law enforcement and wary of revealing their identity and whereabouts (Cottler, et al., 1996; Desmond et al., 1995). Locating high-risk samples also includes determining whether the subjects are still alive (Hser et al., 2001; Oppenheimer et al., 1994; Vaillant, 1988; Woody & Metzger, 1994). On the other hand, the lifestyle of high-risk or drug-abusing samples results in extensive contacts with the criminal justice and welfare system and service agencies such as homeless shelters and drug treatment facilities. These contacts can be useful resources in facilitating the location of research subjects. A number of studies have demonstrated success in retaining subjects for studies of drug abusers in which subjects were contacted annually or more frequently, with follow-up rates close to 90% or above (BootsMiller et al., 1998; Coen et al., 1996; Cottler, et al., 1996). There have been few long-term follow-up studies of substance abusers. A study of heavy alcohol users in Australia (Wutzke et al., 2000) found 78% of a sample of heavy alcohol users for a 10-year follow-up interview and were able to interview 91% of those located. Hser and colleagues (2001) have followed a sample of 581 male heroin addicts admitted to a California treatment program in 1962, conducting follow-up interviews in 1974–1975, 1985–1986, and 1996–1997. The mortality rate of the sample was high, 14% having died by the 13-year follow-up, 28% by the 23-year follow-up, and 49% by the 33-year follow-up. At the 33-year follow-up, 4% of the original sample (and 8% of the surviving sample) was not located, while 5% of the original sample (and 10% of the surviving sample) refused to be interviewed.

The literature on techniques for locating and interviewing samples in longitudinal studies has emphasized having well-trained staff, offering adequate remuneration for study participants, and using multiple locating strategies. These strategies include use of locating information gathered at earlier data collection points, contact with participants' social and family networks, frequent telephone calls and in-person visits, and use of public records (Coen, et al., 1996; Cotter et al., 2002; Hall et al., 2003; Stouthamer-Loeber & van Kammen, 1995; Sullivan et al., 1996). Recently, public databases easily accessed through the internet have become important resources for locating efforts, allowing rapid access to some public records as well as the use of paid searches (Passeti, et al., 2000).

The current study reports on the results of efforts to systematically locate and interview participants in the Focus on Families (FOF) project, a longitudinal study of 144 parents who were enrolled in methadone treatment for opiate addiction between 1991 and 1993 and 178 of their children. The study was an evaluation of a six-month intervention designed to reduce relapse to illicit drug use among the parents and prevent involvement in problem behavior among their children. Families were randomly assigned to experimental and control conditions. The Focus on Families study had a 92% completion rate for parent interviews and 87% for child interviews at a follow-up interview 2 years after participants in the experimental condition finished the intervention. In 2005 and 2006, the project attempted to locate and interview participants in the original study. This study examines the sources used to locate this sample of high-risk subjects 10 years after the 2-year follow-up.

This study differs in two ways from prior reports that have addressed whether high location and interview completion can be achieved in long-term follow-ups of drug-abusing samples (e.g. Hser, et al., 2001; Wutzke, et al., 2000). First, a long-term follow-up was not part of the original study design and proactive tracking to locate the sample was not conducted after the 2-year follow-up. Thus, this sample had not been contacted nor tracked for at least 10 years,

providing a challenge for locating and interviewing. Second, the focus of the study was primarily female substance abusers and their children. Children of drug abusers display elevated rates of drug abuse and illegal behavior in both adolescence and adulthood (Barnard & McKeganey, 2004; Catalano et al., 2003; Kumpfer, 1987; Sher et al., 1991) and thus present similar locating challenges as their parents, in this case compounded by the fact that the children from the original study were mostly minors (age 4-18) at the 2-year follow-up and offered little independent, reliable contact information (e.g. address, phone number, social security number). At the 10-year follow-up, children's ages spanned from 14 to 28. Most were at the period in the lifespan characterized by highest rates of residential mobility and transitions in educational, work, and family status (Arnett, 2000).

2. Methods

2.1. Sample

Participants in FOF were recruited from two Seattle-area methadone clinics beginning in 1991. Over the course of 2.5 years, the project enrolled 130 families which included 144 parents and 178 children between the ages of 3 and 14 years at the time of enrollment. The project's primary purpose was to provide an experimental evaluation of an intervention designed to prevent relapse to drug use among the parents and initiation or escalation of substance use and other problem behaviors among the children. Families were randomly assigned to intervention and control groups and completed a baseline interview. Post-intervention interviews were conducted when participants assigned to the intervention condition had just completed the intervention, and follow-up interviews were then conducted 6, 12, and 24 months later (about 2.5 years after enrollment). The last follow-up interviews were completed in August of 1995. Completion rates for parents were 94% at the post-intervention interview and 6-month follow-up, and 92% at the 12- and 24-month follow-ups. Children age 6 and older were interviewed at baseline, and at the 6-, 12-, and 24-month follow-ups. Attrition was slightly higher for children, with 86% of eligible children completing the 24-month follow-up interview. (See Catalano et al., 2002 for a summary of findings from the original FOF study.)

The demographic characteristics of the FOF sample are shown in Table 1. In the long-term follow-up of FOF, an attempt was made to interview all participants from the original study, including those who did not complete interviews at the earlier time points. The long-term follow-up of the FOF sample consisted of interviews conducted between April 2005 and June 2006. At the time of the long-term follow-up, 75% of the children in the original study were over age 18.

2.2. Prior locating information

Table 2 summarizes the locating information available from the original study at the start of the long-term follow-up. Date of birth and last known address were available for almost all participants. Addresses were between 10 and 14 years old at the time of the 10-year follow-up. Contact information for friends and other family members did not exist for over half of the sample, and social security numbers were available for less than half of parents and for none of their children. Three parents and one child were known to have died prior to the end of the original study.

2.3. Locating strategies

Prior to the 10-year follow-up study, the University of Washington Institutional Review Board (IRB) approved a plan for locating participants which involved using public records and prior locating data to find and contact study participants and offer them the opportunity to consent to participate in the follow-up study. Procedures approved by the IRB ensured that locating efforts did not involve disclosing protected health information of study participants.

Additionally, we applied for and received a Federal Certificate of Confidentiality which protects the privacy of all research participants by withholding names and other identifying characteristics from all persons not connected with the research.

The locating efforts were carried out by two staff persons between November 2003 and April 2006, one employed 16 hours per week on the project, and an assistant employed an average of 30 hours per week for 7 months. The lead locator had three years experience locating participants in longitudinal studies.

The locating strategies for the FOF follow-up study were implemented in two phases. In the universal phase, between November 2004 and February 2005, the following four strategies were applied across the entire sample:

1. Use of locating information from the original study. Mailings and telephone calls were made to study participants based on the locating information they had given in the original FOF study.
2. State and national death records. Death records were searched for all project participants age 18 or older. The project had access to the Washington State Department of Health (WSDOH) death registry, which is updated annually. This registry had a one-time \$30 subscription fee. The WSDOH registry was used when possible, since it contained detailed information about the circumstances of death, including cause of death. Nationally, the project relied on the Social Security Death Index (SSDI) which is free to all online users.
3. National Change of Address (NCOA) database. The names and last-known addresses of all adult participants were sent to the local NCOA franchise, which provides access to U.S. Postal Service (USPS) records of address histories. This service was used to find the most recent USPS records of mailing addresses for those respondents who completed mail-forwarding forms.
4. Commercial databases available on the internet. Various combinations of names, date of birth, last known address, and social security number (when available) were run through ChoicePoint's AutoTrackXP and QuickInfo.net for a set fee (\$5–\$15 for each individual search depending on complexity of the search). The initial use of these databases was intended to identify the specific individual by obtaining or confirming his or her social security number and cross-referencing it with other information we either previously had or had obtained in our searches (e.g., last known addresses), as well as to get accurate information on full names.

In the second phase of locating, a tailored approach was used for those not located in the universal phase. This approach consisted of using the full array of locating strategies in order to piece together information and find participants. In addition to repeated use of the four locating strategies described above, the following seven strategies were used during the tailored phase of locating:

1. Directory assistance. Calls were placed to directory assistance in situations where the project had information on the city or county in which a participant possibly lived, but lacked a telephone number or specific address, or when there was reason to think a respondent had moved to a new area more recently than an on-line search site could be updated.
2. Free internet searches. Names, last-known addresses, and phone numbers were run through various free on-line search sites. Four that were especially helpful were: WhitePages.com, ReferenceUSA.com, da+.us, and ZabaSearch.com.

3. Court and other public records. Public records were accessed through both on-line databases (both free and paid) and courthouse visits. Sources included Department of Corrections, local assessor offices, licensing departments (professional, marriage, etc.), and the Washington State Voters Registration Database. The Washington State court system has a database, JIS-LINK (Judicial Information System), with complete district and superior court records for the prior 15 years. In addition to address information, these records sometimes provided names of attorneys who had represented study participants and who were able to provide locating information. The cost for JIS-LINK service, which was installed on office computers, was an initial \$100.00 installation fee and a user fee of \$.065 per command or response requested within the site.
4. Collaboration with Washington State Department of Social and Health Services (DSHS) and Department of Corrections (DOC). The Social Development Research Group has been collaborating with Washington State Social Service Agencies for several decades in both research and clinical capacities. We developed and signed Letters of Cooperation and Confidentiality with DSHS departments. This allowed the project to obtain the help of DSHS to get locating information that either led directly to finding a respondent or provided clues to their whereabouts. A similar relationship was established with the DOC, which provided last-known addresses and Community Officer contacts for participants who had been incarcerated or were released under supervision.
5. Collaboration with methadone clinics. All adult/parent participants in the original study were recruited from two methadone clinics in the Seattle area. Names of participants in the study were submitted to these clinics and clinic staff contacted participants who were on their treatment rosters, informing them of the follow-up study and providing them with project contact information.
6. Home or in-person visits. FOF project interviewers made visits to promising addresses (or even neighborhoods) for participants who could not be reached by telephone and had not responded to letters or other contact attempts. When making an in-person visit, interviewers identified themselves as working for the Focus on Families study that was being conducted by a research team from the University of Washington. It was not revealed that the parents in the original study had been in methadone treatment. Inquiries were made as to the study participant's whereabouts. When appropriate, a note was left to let the participant know of the opportunity to participate in the follow-up study. In some instances, family members or friends indicated to us that a participant was a frequent visitor at a particular homeless shelter, drop-in center or food bank. In these cases, using IRB approved protocols, we made in-person visits, inquiring about how to contact the participant.
7. Other study members. When the study began, at least two family members were involved. Consequently, when a participant was located, they were sometimes able to supply locating information for another family (e.g. parent, child, or sibling) who was also enrolled in the project.

Throughout both phases of locating, when new address or telephone number information was uncovered, letters were mailed and/or telephone calls were made. A \$10 incentive was offered to study participants who responded to a locating letter with confirming locating information.

2.4. Interviewing

Between two and four interviewers worked on interviewing subjects during the field period. The interviews were 2 to 2.5 hours in length and included questions on substance use; sexual risk behavior; employment and financial stability; physical health and service utilization; and

relationships with family, intimate partners, and friends. It also included components of the Composite International Diagnostic Interview (CIDI) (Kessler et al., 1998) to provide diagnoses of substance abuse and dependence and other mental health disorders and an audio-taped role-play test to assess drug refusal and relapse prevention skills. At the end of the interview, participants were asked for a urine sample that was screened for traces of illicit drugs. Participants received \$60 for completing the assessment battery. Every effort was made to complete interviews in person, either at the participant's home or at a meeting place that afforded some privacy (e.g., a library or community center), even if the subject had moved from the local area or even out of the state. Interviewers asked survey questions aloud and entered answers into a laptop computer using a Computer-Aided Personal Interviewing (CAPI) program. Sensitive questions were completed by the subject on the laptop to provide privacy of response. For participants who were incarcerated at the time they were located, the project either waited until they were released to complete the interview or applied for permission from the corrections system to conduct the interview at the correctional facility.

Interviewers were hired who had strong communication skills and experience working with at-risk populations. During their training, interviewers learned and practiced techniques for approaching study participants. These strategies included stating the project's university affiliation in order to reassure participants of the study's legitimacy; indicating how long the interview would take and how participants would be compensated for their time; emphasizing that participation and information given in the interview would be kept confidential and was protected with a Federal Certificate of Confidentiality. Interviewers explained to participants that their opportunity to participate was time-limited; and emphasized that their participation would make an important contribution to public health research. Although interviewers were instructed to accept a firm refusal to participate, they were also trained in how to approach participants who were reluctant. The key strategy in these cases was for interviewers to ask questions and listen to the answers in order to understand participants' concerns so that these concerns could be honestly addressed.

3. Results

3.1. Locating

A participant was considered to have been located if government death records indicated the participant was deceased or the locating staff spoke, in person or over the telephone, to the participant or someone living with the participant. By these criteria, FOF was successful in locating almost all of the participants in the original sample. Table 3 shows the results of our locating efforts. Although multiple locating strategies were used for almost all participants, we categorized participants by the locating strategy that was the final source of locating information and whether they were located in the universal or tailored phase of locating.

The universal phase of locating resulted in finding 47% of the parents and 29% of the children. Only a small number of participants in the study (9% of parents and 18% of children) were found using the locating information available from the original study. During this phase of locating, searches of death records revealed that 28 of the parents and one child from the original study had died. During this phase, the use of the commercial internet databases and the National Change of Address (NCOA) system resulted in finding contact information on 26 parents and 15 children. The cost of this initial phase of locating (i.e., staff salary plus cost of mailings and fees for paid searches) was \$104 per located participant.

The tailored phase of locating, in which the full range of locating strategies was used, resulted in an additional 51% of the parents and 69% of the children being found. Six parents were found in death records who were not found in the initial search because an incorrect name, social security number, or birth date was provided at the time of enrollment in the original

study. When correct identifying information was found through other locating strategies (e.g., contact with surviving family members) we were able to confirm that these study participants had died.

During the tailored phase of locating, the three most successful locating strategies were: working through other family members enrolled in the study, more extensive use of on-line search services, and collaboration with government and other public service agencies. Other family members in the study were particularly helpful in locating the children from the original study, resulting in finding 56 (30%) children during the tailored phase of locating. A combination of free and paid internet searches yielded 24 (17%) parents and 33 (19) children during the tailored phase of locating. Collaboration with the state DSHS and DOC was crucial, resulting in locating 19 (13%) parents and 22 (12%) children. Also, the cooperation of local methadone clinics resulted in 4 (3%) parents and 1 (1%) child being found.

This tailored phase was more expensive, with an average cost of \$168 per located participant. Finding some of the subjects during the tailored phase of locating took considerable effort. Information was gathered from multiple locating strategies and required internet queries, letters, many phone calls, and in-person visits, including visits to temporary addresses and homeless shelters. Below are two examples of the multiple steps taken to locate participants:

J.W. was 10 years old when her family enrolled in FOF and was 23 at the time of the follow-up. We knew her birthmother, who was also in the study, is now deceased. We did not find any locating information during the universal phase. However, during a follow-up check with AutoTrack we found a new record with an address in the Seattle area that matched her name and birth date. We mailed a letter to this address, which came back "Return to Sender" and marked as undeliverable as addressed. We ran the address through the local county Assessor's on-line site and discovered a similar, but subtly different street address and zip code. The site listed the current owner of that residence as a man whose last name matched the study participant. The FOF staff made several trips to the address, but never found anyone home, although with each trip we learned a bit more. Neighbors told us that an older man lived there and they had seen a younger woman regularly come and go. After three visits, we left a note for the owner asking him to have the respondent get in touch with us. She finally did, telling us that she had changed her last name and that the owner of the house was her father.

J.D. was a 9-year-old boy when his family enrolled in FOF. His father had been in the study but has since died. We found a note in the father's locating file from the original project that mentioned an aunt and provided a phone number. This phone number was disconnected. However, we were able to locate the aunt through AutoTrack and contacted her. It turned out that she had taken care of J.D. after his father died. She told us that J.D. had recently attended an event where companies recruit young people to travel the country to sell magazine subscriptions door-to-door. J.D. signed up and was traveling around the southwest living in a van with a woman who was both his boss and girlfriend. Their home base was Las Vegas. The aunt provided us with his cell phone number, which turned out to be not in service. The aunt also mentioned that J.D. regularly called her and that she would ask him to contact us. We provided her with a pre-paid phone card to offer to him. At the same time we also worked with Washington State DSHS, who found that J.D. had an extensive criminal record and was currently out on bail and due back in local court within the month. We contacted J.D.'s case supervisor (CCO) who agreed to help us. She said he had promised he would return for his court date and that he would be staying with his mother (about whom we knew nothing) in the Seattle area. The CCO gave us the phone number of J.D.'s mother. We called her and she agreed to have J. D. by the phone at 9:00 p.m. on the eve of his court appearance. When an interviewer called him, he was there and an interview was scheduled for the next morning, right after his court hearing and just before he flew back to Las Vegas.

3.2. Interview completion

One hundred parents and one hundred fifty-one of the children completed a 10-year follow-up interview, resulting in overall completion rates of 69% for parents and 85% for the children. However, among the surviving sample, the completion rates were 91% for parents and 86% for the children. Of the 130 families in the study, at least one member of the family was interviewed in 120 (93%) of the families, with all surviving family members interviewed in 101 (78%) of the families. Of the eight parents who were located, still living, and did not complete the interview, four refused, three did not schedule to complete the interview before the end of the field period, and one was in a correctional facility that would not grant permission to conduct an interview. Of those who refused, none did so immediately after they were first located. For example, it was only after breaking one interview appointment and 72 subsequent contact attempts (i.e., phone calls and letters), that one person finally stated that she did not want to do the interview, without giving a particular reason. In another case, after 56 contact attempts, the participant finally refused, saying that she and her daughter were not interested and did not have time.

Of the 21 surviving children who were located but did not complete the interview, 4 refused, 4 were minors whose parents did not grant permission for their participation, 11 failed to complete a scheduled appointment before the end of the field period, and 2 were in correctional facilities that refused permission to conduct an interview. Considerable time was spent on cases that were located but did not complete an interview. Of those who were located and not interviewed, an average of 33 contact attempts were made. Interviewers had difficulty making contact with participants because of frequent moves, moves out of the country, or participants being incarcerated. When these participants were reached over the telephone, scheduling interviews was a challenge. For example, in one case the participant was the mother of five young children and also had a job. The challenge of finding time available to do the interview was insurmountable for her.

Of the parents who completed an interview, all but one did the interview in person. Eight children were interviewed by telephone.

3.3. Attriters vs. non-attriters

Among the surviving parents, there were no differences between those who completed and did not complete an interview in terms of experimental condition; race; gender; age; report of heroin, cocaine or marijuana use at baseline of the original study; marital status; history of incarceration; or employment status. Those who died prior to the follow-up were more likely to be male and, surprisingly, more likely to be participants in the intervention condition of the original study. Among the children from the original study, those who completed the follow-up interview (n=151) did not differ from those who did not complete the interview (n=26) in terms of race, gender, age, or whether they lived with the biological mother or father at baseline.

4. Discussion

This study demonstrates that it is possible to locate a high-risk sample for long-term follow-up, even after an extensive lapse of time and with limited information at the beginning of locating efforts. Similar rates of locating and follow-up have been reported by other long-term studies of substance-abusing populations (e.g. Hser, et al., 2001; Wutzke, et al., 2000), although the FOF study differed from these prior studies in important ways. First, the longitudinal follow-up was conceived long after the intervention and original study had ended. Second, the FOF follow-up investigated an adult, addict population, most of whom were female and all of whom were parents during the original study. Perhaps as a result of this difference, fewer subjects were incarcerated at the time of follow-up compared to the study by Hser and

colleagues (2001). Since many mothers were receiving state-administered social service benefits (e.g., Temporary Assistance to Needy Families, food stamps, low-income housing), the state Social and Health Services department was an important collaborative partner. Third, the FOF sample included children of substance abusers, three quarters of whom were adults at the time of follow-up. Many of these participants were located with little or no information from the original study. However, the fact that each individual in the sample was part of a family that included at least one other participant in the study was an asset in locating participants. This was particularly true of the children from the original study, 31% of whom were found through a parent or sibling. Fourth, the FOF follow-up is distinguished from prior long-term follow-ups of high-risk populations in that it took place after a wealth of internet resources for locating had become available. As noted by Passetti and colleagues (2000), the internet has become an important resource for locating participants in longitudinal studies. Over 30% of both the parents and children in FOF were found through paid commercial on-line databases or free internet searches. In addition, many public records, such as JIS-LINK, court and Department of Corrections, voters registration, and local tax and assessor archival data, have been made accessible on-line. This has made searches using these resources more efficient and cost-effective than when locators submitted names by mail, over the telephone, or in-person.

Although internet resources have increased the possibilities and the efficiency of locating, they are not sufficient for achieving acceptable locating rates. In the FOF long-term follow-up, less than half of the parents and less than a quarter of the children were found through the initial, universal phase of locating. It was only when the project moved to tailored approaches, involving multiple searches of databases, telephone calls, collaboration with service agencies, and in-person visits, that we were able to achieve acceptably high locating rates. Seven participants were found by making in-person visits to homeless shelters or food banks. Using this full array of locating strategies is consistent with the recommendation made by other reports on locating high-risk samples (Coen, et al., 1996; Cotter, et al., 2002; Stouthamer-Loeber & van Kammen, 1995; Sullivan, et al., 1996) and attests to the importance of employing a dedicated, professional locating staff and budgeting sufficient funds for the tailored approach necessary to find most of the sample.

Other longitudinal studies have found that participants who are hardest to find for follow-up interviews are less financially stable and more likely to be engaged in substance abuse or criminal behavior compared to participants who are easy to locate (Cotter, et al., 2005; Cottler, et al., 1996; Jessor & Jessor, 1977; Passetti, et al., 2000; Ribisl, et al., 1996; Stouthamer-Loeber & van Kammen, 1995). Comparison of 10-year follow-up survey data on FOF participants located in the universal phase of locating and those located in the tailored phase showed few statistically significant ($p < .05$) differences. Among the parents in the study, those located in the universal phase were more likely to have graduated from high school (91% vs. 74%) and were less likely to have engaged in heavy alcohol use (> 5 drinks for males, > 4 drinks for females) in the year prior to the follow-up survey (15% vs. 33%); however, these easier-to-locate participants were also more likely to have reported smoking marijuana in the prior year (38% vs. 20%). Among the FOF children, there were no statistically significant differences between those located in the universal and tailored phases with respect to measures of substance use, criminal involvement, educational attainment, employment status, or financial stability. Although we found that problem behavior and financial stability were often associated with residential mobility and children being estranged from their parents, it was our experience that, among the high-risk FOF sample participants, being “worse off” often made the participants easier to locate because they were more likely to have been incarcerated, to be in drug treatment, or to be receiving state social services. Also, financially in-need participants were often quicker to respond to mailings because of the incentive offered for completing the follow-up survey. Conversely, some participants who were “well off” were reluctant to participate in the follow-

up study, or allow their children to participate, for fear that it would trigger memories of their drug using history. In one situation, we contacted a father as the locator for two female participants. The father had not lived with his wife or children during the original FOF study. He was a successful business owner and he requested that we not contact his now-adult children because he did not want his daughters asked to recall and relive their mother's drug problems.

The success of FOF in completing interviews with participants once they were located is comparable to other studies (e.g., Hser, et al., 2001). Among the children from the original study, the completion rate was 85%. Some children who were estranged from their FOF parents did not want to participate in the study. Also, about 25% of the children were not yet 18 years of age and could not be approached without the consent of their parent or guardian. This resulted in some third-party refusals. There were fewer barriers to completing interviews with surviving parents. Among parents, \$60 was a strong incentive for most to complete the interview.

Some limitations are noted to these generally positive locating and follow-up rates. First, the overall follow-up interview completion rate for parents from the original study was only 69%, due to the high mortality rate of the sample (24%). Although the mortality rate is similar to what has been found in other long-term follow-ups of opiate-addicted populations (Hser, et al., 2001; Oppenheimer, et al., 1994; Vaillant, 1988; Woody & Metzger, 1994), it does result in selection bias with respect to those that completed the follow-up interview. This selection bias due to mortality presents challenges for analyzing outcome data gathered from the follow-up interviews of parents (Zhang & Rubin, 2003). Second, intensive locating is costly in terms of time and dollars. It takes time to adequately seek out study participants that have "gone cold." Locating for this follow-up took nearly 16 months. Exclusive of interview costs, the cost for the universal locating strategies was \$104 per located participant. This increased by 61% (\$168) when more individualized and tailored strategies were used. Finally, this study was based on a unique sample of families drawn from methadone clinics in the Pacific Northwest. Our findings with regard to the ability to locate and interview participants in this study may not generalize to other high-risk samples. However, most strategies used by our research team are available to other research groups and can be used effectively with a wide range of samples.

The results of the locating efforts in the FOF long-term follow-up study provide evidence that high locating and interview completion rates can be achieved in a 10-year follow-up study, even when follow-up was not originally anticipated and proactive tracking was not conducted during the follow-up interval. The high locating rates in this study illustrate the importance of using a full range of locating strategies, including recently available internet resources and intensive tailored strategies, in order to achieve high success rates. Using a variety of techniques and resources in locating efforts contributes to the attainment of high rates of study participation.

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Biographies

Kevin Haggerty, MSW, is a lecturer faculty and project director of the Raising Healthy Children project at the Social Development Research Group, University of Washington. Mr. Haggerty is an international trainer and speaker in the areas of substance abuse and delinquency prevention and has written extensively in the field. He has more than two dozen articles and book chapters in print and is the developer of multiple researched prevention curricula.

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Dr. Richard F. Catalano is Professor and the Director of the Social Development Research Group at the University of Washington's School of Social Work and adjunct Professor of Education and Sociology. For over 25 years, he has led research focused on discovering risk and protective factors for positive and problem behavior, designing and evaluating programs to address these factors, using this knowledge on etiology and efficacy to understand and improve prevention services systems. He is the co-developer of the Social Development Model, a theory of antisocial behavior. He is also the co-developer of the parenting programs "Guiding Good Choices," "Supporting School Success," and "Parents Who Care," of the school-based program, "Raising Healthy Children," and of the community prevention approach, "Communities That Care." He has published over 150 articles and book chapters. His work has been recognized by practitioners (1996 National Prevention Network's Award of Excellence); criminologists (2003 Paul Tappan Award from the Western Society of Criminology and Fellow of the Academy of Experimental Criminology); and prevention scientists (2001 Prevention Science Award from the Society for Prevention Research).

Renee Shatos Petrie is Sr. Research Director at DatStat, Inc and brings almost two decades of research experience developing and managing surveys that span a wide range of research topics and research populations. Ms. Petrie's interests include designing and implementing high quality longitudinal and cross-sectional studies using an array of survey methods including web, mail, telephone, in-person and mixed-mode designs.

Ronald J. Rubin is the Locating Supervisor for the Social Development Research Group, School of Social Work at the University of Washington. Mr. Rubin led the locating efforts in support of the NIDA-funded study, Long Term Follow-Up of the Focus on Families study, a 10-year follow-up of substance abusers and their children. His professional interests include

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Mary Grassley is a Data Manager for the Social Development Research group at the University of Washington. She works closely with research analysts and data collection staff to insure the quality and integrity of research data. Ms. Grassley has a Bachelor's degree in Health Education from the University of Washington.

Table 1
Demographic and baseline characteristics of the original FOF sample

Parents	m	s.d.	range
Age as of 1/1/05	48.48 n	5.71 %	33–61
Experimental condition	82	57	
Female	106	74	
Ethnicity			
White	112	78	
Black	25	17	
Other	3	2	
Mixed	4	2	
Baseline data			
Receiving Aid to Families with Dependent Children	59	41	
Employed in the 6 months prior to baseline	49	34	
High school graduate	111	77	
Lived with a spouse or partner	90	63	
Married	30	21	
Children	m	s.d.	
Age as of 1/1/05	21.26 n	3.96 %	14–28
Experimental condition	94	54	
Ex Female	98	55	

Table 2
Locating information from the original FOF study

	Parents		Children	
	n	%	n	%
Last known address (1995 or earlier)	142	99	177	99
Date of birth	144	100	172	97
Contact information on other family member (for family)	73	51	99	56
Social Security Number	67	47	0	0
Deceased	3	2	1	1

Table 3

Locating results by phase of locating and primary source of locating

	Universal phase				Tailored phase				Total			
	Parents (n=144)		Children (N=178)		Parents		Children		Parents		Children	
	N	%	N	%	N	%	N	%	N	%	N	%
Universal phase												
Locator information from the original study	13	9	32	18	0	0	0	0	13	9	32	18
Death records search	28	19	1	1	6	4	0	0	34	24	1	<1
National Change of Address (NCOA) database	1	1	3	2	0	0	0	0	1	1	3	2
Commercial internet databases	26	18	15	11	11	8	22	12	37	26	37	21
Tailored phase												
Directory assistance					3	2	1	<1	3	2	1	<1
Free internet search					13	9	11	6	13	9	11	6
Court and other public records					2	1	5	3	2	1	5	3
Collaboration with Washington DSHS/DOC*					19	13	22	12	19	13	22	12
Collaboration with methadone clinics					4	3	1	<1	4	3	1	<1
Home or in-person visit					2	1	5	3	2	1	5	3
Other study member					14	10	56	31	14	10	56	31
Total located	68	47	51	29	74	51	123	69	142	99	174	98
Not found									2	1	4	2

* Department of Social and Health Services and Department of Corrections