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Use of a Web-Based Data System to Conduct a Randomized Controlled Trial of an Intervention for Children Placed in Out-of-Home Care

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Children who are placed in out-of-home care because of maltreatment represent a vulnerable population. Unfortunately, there are a number of challenges in designing and implementing interventions for these children and families. Unlike many other high-risk populations, children in out-of-home care are much more likely to change residences (Newton, Litrownik, & Landsverk, 2000; Ryan & Testa, 2005). In addition, many children in out-of-home care reunify with biological parents, sometimes without much advance notice. These transitions make it challenging to conduct a randomized controlled trial (RCT) with a longitudinal follow-up in a sample of youths in out-of-home care.

One potential way to address the difficulty in tracking children in out-of-home care is to access and use data collected by child welfare agencies. All states are required by the federal government to collect data as a means of assessing compliance with federal standards, as well as for funding purposes. These data collection efforts, in turn, have resulted in the creation of large, state-level administrative databases. Recently, there has been a push to use these databases as a means of informing child welfare practice and evaluating programs aimed at improving outcomes for youths in the child welfare system (Casey Family Programs, 2006; Huber & Grimm, 2004). Because administrative data inevitably lag behind current case status information, the current study involved the creation of a Web-based caseworker survey tool, in which caseworkers can review and update administrative data that are critical for conducting a clinical trial.

Fostering Healthy Futures Preventive Intervention

Fostering Healthy Futures (FHF) is a RCT of a preventive intervention for preadolescent youths. Each year, the FHF program recruits a new cohort of nine- to 11-year-old children in participating counties who are court ordered into out-of-home care during the preceding year as a result of maltreatment. FHF is a voluntary program, and children and families are not court ordered to participate. Prior to the initial interview, informed consent and assent are obtained from legal guardians and children, respectively.

Once enrolled, youths receive a no-cost cognitive, academic, and mental health screening assessment over the summer months as part of the baseline interview. At the end of the summer, when all eligible children have completed the baseline interview, approximately half are

randomly selected to participate in a nine-month mentoring and skills group intervention, which takes place during the academic year. Mentoring is provided by graduate students in social work, who complete their field placement as part of this program. Manualized skills groups are conducted for 30 weeks and focus on basic social skills, processing feelings associated with placement in out-of-home care, and preventing risky behaviors (see Taussig, Culhane, & Hettelman, 2007, for a more detailed description of the program design and intervention). If youths change placements or reunify with their parents during the intervention, their participation continues with appropriate consent. Youths in both the assessment-only control group) and the intervention groups are assessed prerandomization and at multiple timepoints postintervention. An RCT of the FHF program has been conducted for six years, but only last year was a Web-based system instituted to collect real-time data on eligible children.

Eligibility Criteria

Children between the ages of nine and 11 are eligible for FHF if they have been placed in out-of-home care following a court order in the previous 12 months. Children must still be in some type of out-of-home care and their cases must be open when they are recruited for participation in the study during the summer months. In addition, they need to have lived with their current caregiver for three weeks before the baseline interview, to help ensure that data are not captured during a “honeymoon period” and that the caregiver knows the child well enough to report on his or her functioning. Children must reside no more than 40 minutes from sites where groups are held, so accurate addresses are needed before recruitment.

Approximately 80 children are recruited over a two-month period; therefore, current and accurate information on custody, case status (open or closed), and placement is needed. Initially, a list of potentially eligible participants is obtained from the legal databases that contain dependency and neglect data. These data are available in the Statewide Automated Child Welfare Information System (SACWIS). It is therefore possible to cross-reference the legal and child welfare databases to ensure that all potentially eligible children are identified.

After potentially eligible children are identified, some important data (such as placement information) are needed before families are recruited—data that the caseworker can most accurately provide. When the study first began, a paper-and-pencil survey was used to obtain the information from caseworkers of eligible children. After receiving a National Institute of Mental Health grant to conduct a multicounty efficacy trial, however, there was a need to collect this information on twice as many children in a shorter timeframe. With the assistance of information technology staff from one of the participating counties, a Web-based survey tool was created that enabled caseworkers to submit their surveys electronically.

Recruitment via the Web-Based Survey for Caseworkers

In the current study, administrative data from the counties’ legal databases and SACWIS were used to identify those nine- to 11-year-old youths who had dependency and neglect petitions filed in the previous year. The SACWIS system was used to match the current caseworker for each child. Once eligible cases and children are identified, the Web-based system sends an automated e-mail to each caseworker, with an overview of the FHF program. By clicking a hyperlink within the e-mail, caseworkers can access the password-protected survey site to review and submit the surveys for identified children on their caseload. To maintain confidentiality, the Web site was designed so that caseworkers can only view surveys for children on their caseloads.

At the top of the Web-based survey are fields for child’s name, date of birth, age, gender, pertinent internal system tracking numbers, caseworker name, and county, all of which are

prepopulated. If all the prepopulated information is correct, the first question that caseworkers complete is, “Is this child currently living with one or more biological parents?” If the caseworkers indicate “yes,” there is no additional information for them to complete (as the child is ineligible for the study) and the caseworker simply finishes by clicking “Submit form.”

If the child is not, however, living with one or both biological parents, the caseworker is asked to complete the remainder of the form, which includes questions about the following:

- custody and placement information (see Figure 1). Caseworkers can either pull the placement information in from the SACWIS database and verify that it is correct or manually enter the correct placement information.
- length of time child has lived with current caregivers and how long they anticipate that the child will remain there.
- whether or not a child is placed through a child placement agency, and if so, the agency contact’s information. This information can also be extracted from SACWIS.
- contact information for biological parents, whether or not each parent is involved in the child’s life, and whether or not each parent can be contacted for an interview. Caseworkers are also asked to note any concerns they have about contacting parents for interviews.
- who, if anyone, in the biological or substitute families is non-English speaking, what language they speak, and their level of English proficiency.
- other salient information about the child or family (for example, developmental delays, sexual perpetration history, academic issues, pending moves, mental health issues) that would be relevant for their involvement in the project.

Randomization

After all the eligible children and caregivers who chose to participate have consented or assented and been interviewed, the project randomizes the youths into intervention and control groups. Because there is more than a two-month lag between the first interviews and randomization, children who were initially eligible may have become ineligible. This usually happens as a result of the child reunifying in the two months since being interviewed at baseline or moving too far away to participate in the intervention. In both of these cases, the child becomes ineligible for the RCT. This past year, 20% of the children who were interviewed changed placements between the time the caseworkers submitted their surveys and randomization, although not all children became ineligible as a result of their placement change.

Therefore, just before randomization, FHF needs the most up-to-date information from caseworkers so that decisions can be made regarding whether to randomize the child. To obtain this information, another e-mail is sent to caseworkers a week before randomization, asking them to answer three short questions about the status of children on their caseloads who were interviewed at baseline: (1) Will the child remain in out-of-home care until the start of the intervention a month later? (2) Will the child remain in the area over the duration of the nine-month intervention? If not, where is the child moving and when? and (3) Is there any other reason, if the child is selected for the intervention, that she or he might not be able to participate?

In the years prior to implementation of this Web-based system, project staff would call caseworkers and ask them these three questions. Unfortunately, sometimes caseworkers were unable to return calls as quickly as the information was needed. When randomization occurred before obtaining this information, some children were subsequently deemed ineligible. The

lack of up-to-date information led to two risks: (1) jeopardizing the stratification process, and (2) informing families of their randomization status before realizing they were ineligible.

Follow-Up Information

In addition to using the Web-based system to obtain real-time information from caseworkers before recruitment and before randomization, this system can be used to obtain current teacher and school information from caseworkers and to conduct long-term follow-up interviews. For example, each spring, project staff collect information from teachers and abstract school records. This information is collected seven months after youths are randomized, and for those youths in the control group, project staff have had no direct contact with them since the initial interview. A child's case status, custody, placement, and school may have changed. Prior to initiating this Web-based system, liaisons were asked to work with caseworkers to identify any changes in information before staff initiated the teacher surveys and school records data collection. In addition, as the youths are followed up several years postbaseline to evaluate the longer-term effects of our intervention, the Web-based system should also prove useful in helping FHF obtain the same timely information from caseworkers before initiating these follow-up interviews.

Advantages of the Web-Based System for Implementation of a RCT

Convenience and Ease for Caseworkers and Liaisons—The Web-based forms are extremely easy for caseworkers to use, as the caseworkers only have to click a link embedded in an e-mail and are automatically directed to the Web-based forms for children on their caseload. These forms are straightforward, easy to complete, and take less than five minutes each. Over the past summer, caseworkers had to complete an average of two forms. In addition, the Web-based application is very convenient. E-mails to caseworkers can be sent at any time (and project staff do not have to travel to the various counties to drop off or collect paper forms, which can take hours). Caseworkers can complete the forms from anywhere they can access the Internet and e-mail. If a child is not in out-of-home care during the recruitment phase, the caseworker has to complete only one question to submit the form. If a child is in out-of-home care, caseworkers are able to import data from SACWIS and then override incorrect data.

Liaisons can forward the e-mails to a caseworker's supervisor if the caseworker is out on extended leave and ask the supervisor to complete the information. Liaisons can also complete the forms for caseworkers if they obtain the necessary information verbally from the caseworker. Project staff can track who completed the form, which is helpful for follow-up contact. In addition, if a child's caseworker changes, the e-mail can be forwarded to the new caseworker, the caseworker information can be changed in the database, and all subsequent e-mails can be sent to the new caseworker.

Project and Data Management—The Web-based data system was designed to export survey data to an Excel spreadsheet with the click of a button. From a project standpoint, this enables FHF to manage the recruitment process more smoothly, as staff no longer have to wait for paper forms to be returned and the data to be entered manually. The data conversion process also eliminates the chance of data entry errors, although there is still the possibility that caseworkers enter data incorrectly or that data from the SACWIS system is incorrect. In the past, caseworkers sometimes lost or failed to return the paper forms. Using the Web-based system, caseworkers can delete the e-mail that provides access to the system; however, if the survey is not completed, the system automatically sends follow-up e-mails at designated intervals until it is completed.

Information from the caseworker also allows project staff to be sensitive and consistent in their recruiting. If a caseworker reports that a child is severely developmentally delayed, FHF will

not attempt to interview that child, because the process is likely to be too arduous. Caseworker information has also enabled staff to identify when it is too unsafe to interview a biological parent (for example, as they may have recently relapsed) or when it would be prudent to send out interviewers in dyads. When caseworkers indicate that a family is Spanish speaking, a Spanish introductory letter is sent to the family and Spanish-speaking interviewers make the recruitment calls and conduct the interviews in Spanish.

One of FHF's eligibility criteria is that a child must have lived with the current caregiver for a month prior to the baseline interview. If a caseworker reports that a child has resided in a new placement for only two weeks, or that a move is imminent, project staff can plan recruiting efforts accordingly so as to not cancel with the family after the interview has been scheduled. Alternatively, if at baseline a caseworker reports that a child is likely to reunify in a month (which would make the child ineligible for the RCT), then staff can wait and see whether reunification occurs before a decision is made to recruit the child. Sometimes caseworkers inform FHF of upcoming hearings, at which the permanency plan for the child is likely to change. Again, this information is invaluable, as FHF can wait to recruit the child and family if a child's eligibility status is likely to change after the hearing. Finally, if project staff learn from the caseworker that custody has changed, they will know that they need to obtain consent from the new legal guardian before the child's and caregiver's participation in the study can continue.

Comprehensiveness, Accuracy, and Security of Data Collected—As delineated earlier, because the FHF project follows a strict timeline, real-time data is needed to sensitively, accurately, and efficiently recruit and randomize participants to the RCT. Obtaining the information from caseworkers via the Web-based interface makes this possible. In the past, when county liaisons would distribute and collect paper forms, it was unknown how much time had elapsed between the caseworker completing the form and the liaison returning it. Moreover, sometimes the form was missing critical data. In the Web-based application, certain fields are mandatory, and caseworkers are prompted to complete missing information before they can successfully submit the form. Project staff can also track the day and time that the information was submitted, which helps them to determine whether updated information is needed before recruitment or randomization can take place.

Finally, the Web-based interface also enhances the security of the data. Computer access and e-mail for both project staff and caseworkers are password protected. There is an additional password that project staff and liaisons must use to access the Web-based interface. The Web site itself is Secure Sockets Layer (SSL) enabled, which creates an encrypted connection for entering survey data and authenticating credentials.

Limitations

One major limitation to implementing a Web-based system to obtain real-time data needed for the implementation of a RCT is that it requires an individual with expertise in creating Web-based forms and databases and in using child welfare administrative databases. In addition, although the Web-based application greatly reduces the need to contact caseworkers via phone and e-mail, reminders to caseworkers still need to come from liaisons. Caseworkers can become frustrated when the system is “down” or if they receive a request to complete a form for a child who is no longer on their caseload.

Finally, there is a danger that data gathered from administrative databases may not answer the questions of interest. Determining which fields can be populated with administrative data and which fields must be completed by caseworkers are important decisions. For example, initially the field for “How long has the child lived there?” was prepopulated with data calculated from

the SACWIS system. The system calculated “length of stay” on the basis of the date that children were “officially” placed with a caregiver, but children might have been living with their current caregiver for years before they were officially placed there. For eligibility and data analysis purposes, we wanted the actual length of time a child had lived with their current caregiver, so we made it a mandatory field for caseworkers to complete manually.

Summary

Use of administrative data from child welfare systems is not a new practice, and use of Web-based surveys to gather information is not innovative. Merging these two strategies, however, to provide critical data for a time-sensitive RCT has not been done, to the best of our knowledge. This past summer, over a 10-week period, we obtained a 100% response rate by using the Web-based system to collect information on 375 children, on 166 different caseloads, in four counties. Using the Web-based system (and with the help of some extremely dedicated administrators and liaisons in the counties) made the launch of this multicounty efficacy trial feasible and successful. Although evidence-based practice within child welfare settings can be challenging, use of a Web-based system can greatly assist investigators in developing and implementing needed prevention programs for this high-risk population.

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The screenshot displays a web-based survey interface. On the left is a sidebar with a tree view containing the following items: 'FHF Home', 'My FHF Info Sheets' (with sub-items 'All', 'Pending', and 'Completed'), 'FHF Follow-Ups', and 'My Contact Info'. The main content area is divided into two sections. The top section, 'Case/Custody Information', includes a dropdown for 'Current Case Status' (set to 'Open') and a dropdown for 'Who has Legal Custody?' (set to 'County'). The bottom section, 'Placement Information', features a button 'Pull Placement Info from Trails', a dropdown for 'Where is the child living?' (set to 'Kinship Care'), a text input for 'How long has child been there?' (set to '3 months') with a note '(specify days, months, or years)', and another text input for 'How long do you expect the child to remain there?' (set to '6 more months'). Below these are text inputs for 'Caregiver Name' (Jane Doe), 'Date Placed' (03/01/07), and 'Address' (123 Smith St., Anytown, USA 12345). At the bottom are three yellow-highlighted text inputs for 'Home Phone', 'Work Phone', and 'Cell Phone', all containing the placeholder '555-555-5555'.

Case/Custody Information	
Current Case Status:	Open
Who has Legal Custody?	County

Placement Information	
<button>Pull Placement Info from Trails</button>	
Where is the child living?	Kinship Care
How long has child been there? (specify days, months, or years)	3 months
How long do you expect the child to remain there?	6 more months
Caregiver Name:	Jane Doe
Date Placed:	03/01/07
Address:	123 Smith St. Anytown, USA 12345
Home Phone:	555-555-5555
Work Phone:	555-555-5555
Cell Phone:	555-555-5555

Figure 1.
Example of the Web-Based Survey