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ABSTRACT

The purpose of this study was to examine the effectiveness of a multidisciplinary team (MDT) intervention—the Los Angeles County Elder Abuse Forensic Center (Center) to: 1) prosecute elder abuse, 2) protect vulnerable older adults through conservatorship, and 3) reduce/prevent recurring cases of abuse. The study also laid the groundwork for a cost effectiveness study by identifying the Center's key processes.

To evaluate the Center, the following seven hypotheses were tested. Compared to usual care:

1) Cases reviewed at the Center are more likely to be submitted to the District Attorney's Office (DA).
2) Cases submitted for DA review from the Center are more likely to have criminal charges filed.
3) Cases heard at the Forensic Center have a higher rate of successful prosecution, where guilt was established by plea or conviction.
4) Cases reviewed at the Center are more likely to be referred to the Office of the Public Guardian (PG).
5) Cases referred to PG by the Center are more likely to result in conservatorship.
6) Cases reviewed at the Center are more likely to have experienced prior recurrence within Adult Protective Services (APS).
7) Cases reviewed at the Center are less likely to experience future APS recurrence after they have been closed.

A quasi-experimental design was used, focusing on elder abuse cases involving victims aged 65 or older reviewed at the Center between April 1, 2007 and December 31, 2009. Center cases (n=287) were compared to a propensity score matched sample of Adult Protective Services (APS) cases. Comparison sample selection included all APS referrals aged 65 and over received by Los Angeles County's APS during the study period (n=33,650), excluding any cases heard at the Center. Matching variables, selected from APS administrative electronic data, included: age, gender, race/ethnicity, APS Office (geographic categories), service dates, type(s) of abuse, and referral source(s). Logistic regression was used to determine the odds of three outcomes.

Prosecution

Hypothesis 1: Center cases had nearly nine times greater odds of being submitted to the DA for review (OR=9.76, CI: 4.00-23.8).

Hypothesis 2: The hypothesis was not supported, as the proportion of cases filed by the DA was similar for both groups; however, because more Center cases were submitted, they had greater odds of being filed (OR=6.81, CI: 2.77-16.7).

Hypothesis 3: Likewise, the hypothesis was not supported; among cases submitted, guilty findings were similar, thus the odds of establishing guilt by plea or conviction were higher for Center cases (OR=6.14, CI: 2.45-15.4).

Conservatorship

Hypothesis 4: A significantly (p<.001) higher number of Center cases were referred to PG for investigation (30.6%, n=72) versus usual care (5.9%, n=14). Like prosecution, the strongest predictor was Center intervention (OR=8.69, CI: 4.41-17.14, p<.001).

Hypothesis 5: The hypothesis was not supported. Although the proportion of PG referred cases determined to need a conservatorship was higher among those cases heard at the Center (52.9%, n=36/68 Center vs. 41.7%, n=5/12), the difference was not statistically significant.

Recurrence

Hypothesis 6: Over twice as many Center cases were recurring cases than in the usual care sample (42.7% versus 16.7% usual care).

Hypothesis 7: From baseline, recurrence was significantly ($p<.001$) reduced in Center cases, to 24.6%; it was not significantly different from baseline (20.3%) in usual care.

Additionally, to set the stage for a cost analysis, an iterative approach was used to identify core processes related to case analyses, including observation, scenario analyses, and advisory council input.

This research provides the first empirical evidence that an elder abuse forensic center has improved outcomes for victims of elder abuse. Findings suggest the viability of the model introduced nationally through the Elder Justice Act (2010). The study also provides a template for future implementation and a foundation for cost analyses.

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EXECUTIVE SUMMARY

Problem

Elder justice, defined as freedom from abuse, neglect, and exploitation, requires that adequate resources and evidence-based interventions are in place to prevent, detect, treat, intervene, and, where appropriate, prosecute abuse (Breaux & Hatch, 2003). A necessary step is the testing and development of evidence-based elder abuse interventions and promising models (Bonnie & Wallace, 2003; The National Academies Committee on National Statistics, 2010). Although elder abuse has been studied for over 30 years and many programs have been developed to address it, there is a dearth of rigorous research on interventions. A recent review found few studies with strong research designs; among those that had rigorous designs, none showed evidence that the intervention had a positive effect (Ploeg, Fear, Hutchison, MacMillan, & Bolan, 2009).

Because cases of elder abuse, neglect, and exploitation can be exceedingly complex, addressing them may require the participation of diverse professionals with complementing areas of expertise. It is not uncommon, however, for professionals from a variety of service sectors (e.g., police, adult protective services, social service programs, mental health, and others) to be working in parallel fashion on behalf of an older adult, without knowing that others are involved. And when they attempt to work together to resolve cases, professionals may struggle to understand each other's methods, including their language, values, and goals for the case.

An innovative and emerging approach to respond to the fragmentation encountered with elder abuse is using a multidisciplinary team (MDT) to bring together a diverse array of professionals to problem-solve difficult cases (Bonnie & Wallace, 2003; Connolly, 2010; The National Academies Committee on National Statistics, 2010; Teaster, Nerenberg, & Stansbury, 2003; Wolf & Pillemer, 1994). Building on experience with MDT programs in aging and research in other settings (e.g., health and mental health), which has found the MDT approach to be effective (Kuipers et al., 2004; McNair et al., 2008), a number of elder abuse MDT models have been developed, including the Fiduciary Abuse Specialist Team (FAST), Vulnerable Adult Specialist Team (VAST), fatality review team, and elder abuse task force. A study by Teaster and colleagues (2003) noted that elder abuse MDTs vary in size, composition, and activity, resulting in a wide range of approaches to address often similar problems. This variety, coupled with the absence of rigorous evaluation for any of the models, provides a barrier to enacting policy support, including funding.

One relatively new and promising MDT model, the elder abuse forensic center (the Center) brings together traditionally distinct client wellness systems (e.g., health, social, and protective services) with judicial systems (e.g., law enforcement, attorneys, and victim advocates). Developed in Orange County in 2003 (Wiglesworth, Mosqueda, Burnight, Younglove, & Jeske, 2006), the Forensic Center model offers a structure to bridge diverse sectors by employing a full-time staff and conducting regular face-to-face meetings to review cases, engage the team in problem-solving, and facilitate recommended actions (Navarro, Wilber, Yonashiro, & Homeier, 2010; Schneider, Mosqueda, Falk, & Huba, 2010). As shown in Figure A, team members, even those who work for participating organizations rather than the Center itself, may conduct joint visits, trainings and ongoing collaboration and consultation outside of the structured face-to-face meetings. For a more detailed description of the conceptual framework and the model's core components, see Navarro and colleagues' (2010) paper.

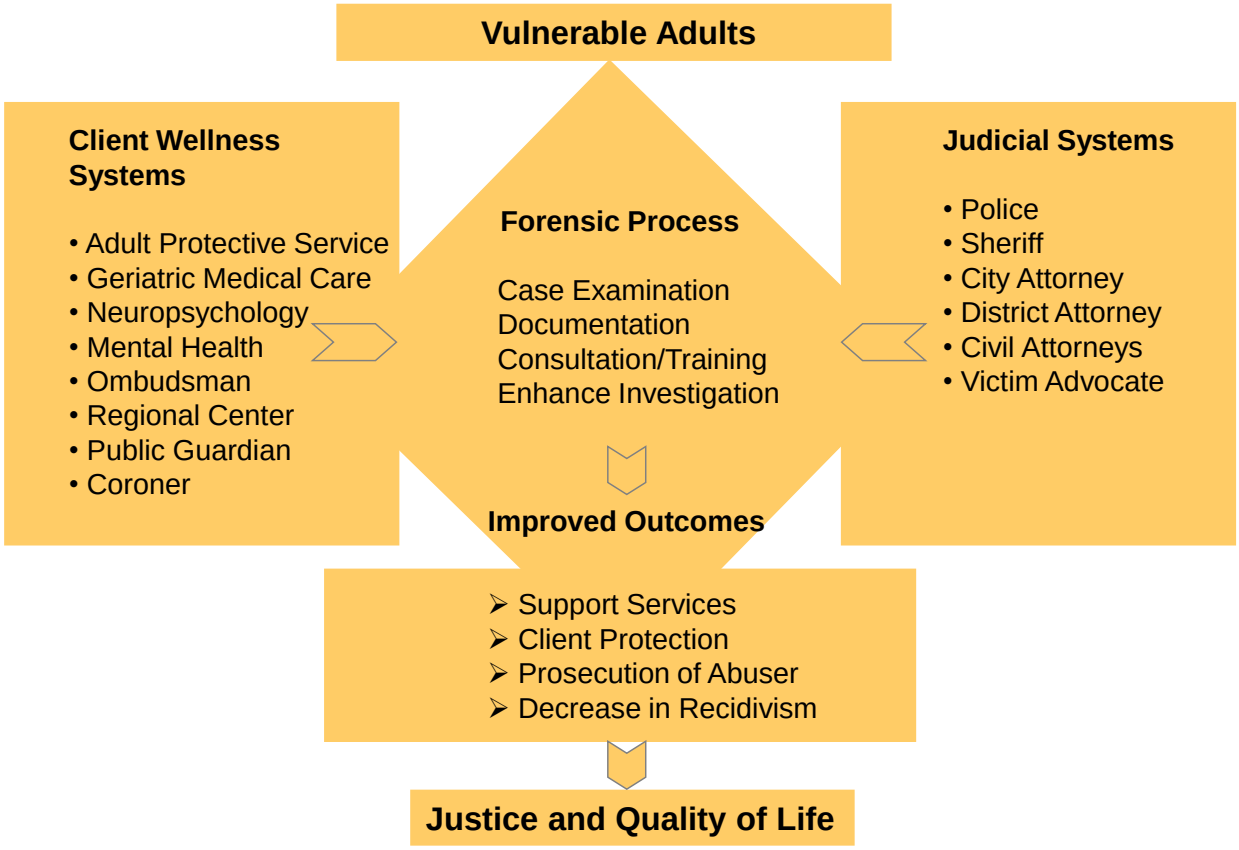


Figure A. Elder Abuse Forensic Center Model

Methods

The purpose of this study was to examine the effectiveness of an enhanced MDT model—the Los Angeles County Elder Abuse Forensic Center (the Center). The Center is compared to usual APS care and is considered to be a service that is built onto the usual care APS model. Thus the study compared usual APS care plus the Center to usual APS care alone. The study focused on outcomes of the Center including: 1) prosecuting elder abuse, 2) protecting vulnerable older adults through conservatorship, and 3) reducing/preventing recurring cases of abuse. In addition, the study laid the groundwork for cost effectiveness research by identifying the Center's key processes.

To evaluate the Center, the following seven hypotheses were tested. Compared to matched APS cases receiving usual and customary care, it was hypothesized that:

Hypothesis 1. Cases reviewed at the Center are more likely to be submitted to the District Attorney's Office (DA).

Hypothesis 2. Cases submitted for DA review from the Center are more likely to have criminal charges filed.

Hypothesis 3. Cases heard at the Forensic Center have a higher rate of successful prosecution, where guilt was established by plea or conviction.

Hypothesis 4. Cases reviewed at the Center are more likely to be referred to the Office of the Public Guardian (PG).

Hypothesis 5. Cases referred to PG by the Center are more likely to result in conservatorship.

Hypothesis 6. Cases reviewed at the Center are more likely to have experienced prior recurrence within Adult Protective Services (APS).

Hypothesis 7. Cases reviewed at the Center are less likely to experience future APS recurrence after they have been closed.

A quasi-experimental design was used, focusing on elder abuse cases involving victims aged 65 or older reviewed at the Center between April 1, 2007 and December 31, 2009. These Center cases were compared to a propensity score matched sample of Los Angeles County Adult Protective Services (APS) cases. The propensity score approach estimates the probability that members of a population who did not participate in an intervention would have been in the targeted intervention group (Braitman & Rosenbaum, 2002; D'Agostino, 1998). This method uses a "nearest neighbor" algorithm to match each case to case within recommended calipers, using 25% of the standard deviation, so every "intervention" case has one matched "comparison" case to create the full sample (Braitman & Rosenbaum, 2002; Guo & Fraser, 2010).

The Forensic Center team heard 316 cases during the study period, 287 of which involved clients aged 65 and over. These cases were propensity score matched using a database of 33,650 APS cases consisting of clients aged 65 and older (an age range that encompassed 65% of the referrals received by Los Angeles County's APS during the study period). Matching variables were selected from available administrative electronic data; after five stages of backward variable selection, the model's variables were age (coded categorically: 65-74 vs. 75 and older), race/ethnicity, APS office (16 geographic categories), total number of abuse types reported (maximum of 9 types), and dichotomous variables for select types of abuse (financial, neglect, self-neglect, isolation, physical, and financial-neglect interaction). Matching was completed in SAS version 9.1.3 using a slight modification of Parsons' (2004) macro. There were no significant differences between the Center group and the final propensity score matched group on any of these variables at the $p < .05$ level. Furthermore, standardized difference tests revealed few differences larger than 10%, suggesting a successful match. All variables with standardized differences that exceeded the 10% threshold were included as covariates in the outcome models.

Outcomes of interest for prosecution were: 1) whether the case was submitted to the DA's office for review; 2) whether criminal charges were filed; and 3) whether guilt was established by plea or conviction. Sentencing outcomes were collected for cases in which the perpetrator was found guilty, measured as years of probation and/or confinement in jail or prison. Finally, two case resolution times were calculated: 1) among those cases that the DA filed for prosecution, the number of days from the time the case was opened with APS to the DA filing charges; and 2) among those with successful prosecution outcomes, the number of days from the DA filing to a successful prosecution.

Two outcomes were examined for conservatorship: 1) whether APS cases were referred to the Office of the Public Guardian (PG), and 2) whether referrals resulted in conservatorship. For conservatorship, those who were referred but died before an outcome could be determined were excluded. This was not the case for prosecution, as the case could proceed even if the victim was deceased.

Prosecution and conservatorship responses to cases of elder abuse vary considerably based on the type of abuse. Some types of abuse (e.g., psychological aggression) are not

typically amenable to these outcomes, whereas other types (e.g., financial abuse) often require the pursuit of one or both of these remedies. Since the vast majority of cases in the study sample (over 80%) involved financial abuse, either alone or in conjunction with another type of abuse, we report prosecution and conservatorship results for just these cases (*n*=475). This allows for a more straightforward presentation and interpretation of the results, as it creates a level bar against which to compare the outcomes for these cases.

Recurrence of cases in the APS system was analyzed using cases involving all types of abuse. The sample used for these analyses was limited chronologically, however, to just those cases that were referred to APS after April 16, 2008 and would therefore have a year's worth of administrative data to analyze (*n* = 356). We first identified which cases had been referred to APS on one or more occasions during the year immediately prior to the baseline referral and during the year immediately following the baseline case's closure. This information was used to compare rates of recurrence for both Center and usual care cases, both before and after baseline. A logistic regression model was constructed to assess the effect of the Center on whether clients experienced post-baseline recurrence while controlling for pre-baseline recurrence and client sociodemographic characteristics. A similar analysis was run using the count version of the recurrence variable in a negative binomial model to determine whether the Center had a similar impact on the number of post-baseline cases (a count variable) as on the overall presence of a recurrent case (the dichotomous variable addressed in the logistic regression model) during one year following case closure.

Results

For prosecution, the Forensic Center had significantly more cases submitted for DA review ($p<.001$) (22%, *n*=51 Center vs. 3%, *n*=7). The proportion of cases for which the DA's office filed charges was not significantly different between groups (73%, *n*=37/51 Center vs. 86%, *n*=6/7), despite a substantially higher number of overall charges filed for Forensic Center cases. Similarly, despite a much higher number of Forensic Center filings that resulted in a successful plea or conviction, the proportion of cases that were successful was not significantly different between the groups (92%, *n*=33/36 Center vs. 100%, *n*=6/6). Because of increased overall volume of Forensic Center cases presented to the DA, a significantly higher proportion of all Forensic Center cases were filed and resulted in a plea or conviction (14.0%, *n*=33/237 Center vs. 2.5%, *n*=6/239; $\chi^2=21.7$, $p<.001$). Sentencing for both probation and confinement were not significantly different for Forensic Center cases. Similarly, time to case resolution (i.e., days between APS referral to DA filing and between filing of charges to a plea or conviction) was not significantly different.

<u>*Hypothesis 1.*</u> *Compared to matched APS cases receiving usual and customary care, cases reviewed at the Center are more likely to be submitted to the District Attorney's Office (DA).*

This hypothesis was confirmed. Using logistic regression, the strongest predictor was case presentation at the Forensic Center, resulting in nearly eight times greater odds of the case being submitted to the DA for review (OR=9.76, CI: 4.00-23.8).

<u>*Hypothesis 2.*</u> *Compared to matched APS cases receiving usual and customary care, cases submitted for DA review from the Center are more likely to have criminal charges filed.*

This hypothesis was not confirmed. Although the percentage of overall cases filed for prosecution was significantly higher for Center cases, the percentage of *submitted cases* that

were filed was not different between the groups. The higher rate of filing in those cases seen by the Center was directly due to the higher numbers of cases submitted for prosecution (51 Center cases compared to 7 usual care cases). In other words, because more Center cases were submitted, more were filed (OR=6.81, CI: 2.77-16.7), however, among those filed the outcome was not significantly different.

Hypothesis 3. Compared to matched APS cases receiving usual and customary care, cases heard at the Forensic Center have a higher rate of successful prosecution, where guilt was established by plea or conviction.

This hypothesis was not confirmed. Although cases seen by the Center were much more likely to be prosecuted than usual care APS cases, the rate of successful prosecution was not significantly different for those cases that were submitted to the DA and in which charges were filed. This is due, in part, to the fact that elder abuse cases are rarely prosecuted unless there is a high likelihood of success. In this study, all of the usual care cases referred for prosecution (n=6) were successfully prosecuted. Thus, it would not be possible for any intervention to exceed this 100% outcome. Further, among cases submitted, guilty findings were similar. Because the number of cases submitted to the DA for filing was higher, the overall odds of establishing guilt (plea or conviction) were also higher for Center cases (OR=6.14, CI: 2.45-15.4). Time to outcome and sentencing was not significantly different, among those cases in which criminal charges were filed.

Hypothesis 4. Compared to matched APS cases receiving usual and customary care, cases reviewed at the Center are more likely to be referred to the Office of the Public Guardian (PG).

This hypothesis was confirmed. A significantly higher number of cases heard at the Forensic Center were referred to PG for investigation than from the usual care APS cases (30.6%, n=72 Center vs. 5.9%, n=14, p<.001). Similar to prosecution, the strongest predictor was the Center intervention, with seven times greater odds of referral to PG (OR=8.69, CI: 4.41-17.14, p<.001) compared to usual care.

Hypothesis 5. Compared to matched APS cases receiving usual and customary care, cases referred to PG by the Center are more likely to result in conservatorship.

This hypothesis was not confirmed. A higher proportion of all cases seen at the Center resulted in conservatorship; however, there was no significant difference in the percentage of cases conserved among cases referred to the PG for conservatorship. After excluding those who died before an outcome was determined, the proportion of PG-referred cases determined to need a conservatorship was higher among those cases heard at the Center (52.9%, n=36/68 Center vs. 41.7%, n=5/12), but the difference was not statistically significant. Because of the higher number of cases referred to the PG, a higher number of Forensic Center cases resulted in conservatorship.

Hypothesis 6. Compared to matched APS cases receiving usual and customary care, cases reviewed at the Center are more likely to have experienced prior recurrence within Adult Protective Services (APS).

This hypothesis was confirmed. The Center saw more than twice the number of recurring cases (42.7%, n=85/199) compared to the usual care group (16.7%, n=32/192; p<0.001). This is likely a reflection of the complexity of the cases referred. Observations of Center meetings

suggest that some cases are brought because they have proved intractable to remedy through usual approaches.

Hypothesis 7. *Compared to matched APS cases receiving usual and customary care, cases reviewed at the Center are less likely to experience future APS recurrence after they have been closed.*

This hypothesis was confirmed. From baseline, recurrence was significantly reduced in Center cases, from 42.7% to 24.6% ($p< 0.001$). Although usual care saw a small increase, it was not significantly different from baseline (16.7% to 20.3%; $p=0.358$). Perhaps reflecting added complexity, those Center cases that had experienced past recurrence had a slightly, though not significantly, higher number of past cases (1.45, SD=0.70) compared to usual care (1.25, SD=0.67; $p=0.172$).

In addition to testing outcomes, to understand how the Center works and to set the stage for a cost analysis, an iterative approach was used to identify core processes in the Center's case analysis. The process for identifying these processes included observational methods, scenario analyses and advisory council input. The product that resulted is depicted in Figure B.

The resulting conceptual map describes the decision process during case review starting with receiving the case, beginning the investigation, and determining the need to refer to the specific Center team members for input and expertise. During the case review there are three themes of data collection: creating a profile of the victim, a profile of the suspected abuser, and determining the factual details of the case. Wherever possible the case details are backed up with documentation, such as bank records and copies of legal documents. Once the team has sufficient information they can begin to analyze the case, answering questions of risk, vulnerability, has a crime occurred, and asking if more information is needed. Answers to these questions inform case goals and recommendations.

This tool provides a model of the decisional process of members, as they respond to cases of financial exploitation. Having a conceptual mapping also provides the foundation for future research to analyze the costs associated with specific decisions and outcomes, helping to understand and to refine this promising intervention.

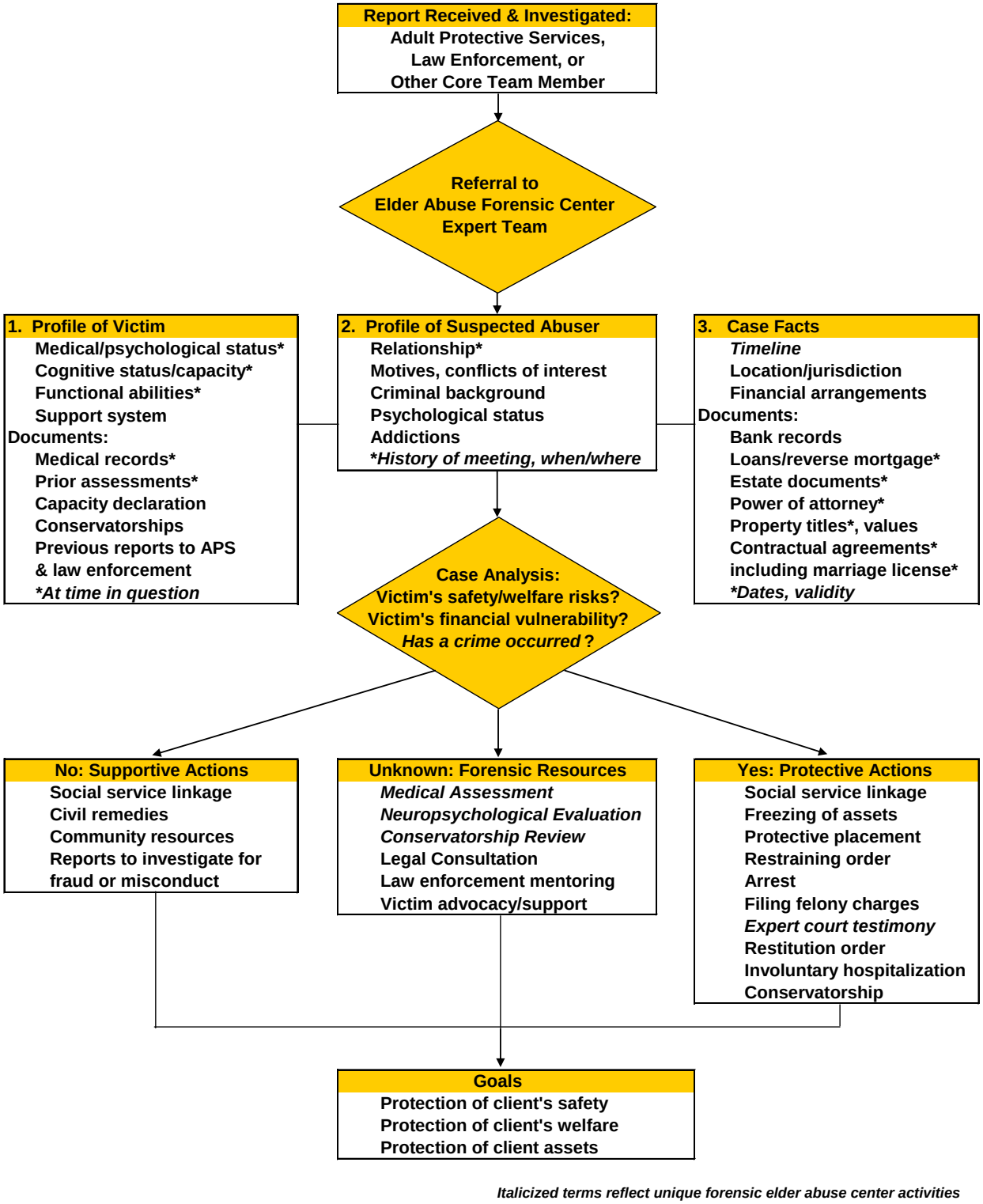


Figure B. Conceptual Map of the Los Angeles County Elder Abuse Forensic Center Decision Processes

Conclusion: Implications for policy and practice

This research provides the first rigorously tested empirical evidence that we are aware of that an elder abuse intervention—an elder abuse forensic center—has improved outcomes for victims. Rigorous methods—using propensity score matching to compare Center outcomes with APS usual care—suggested that the Los Angeles County Elder Abuse Forensic Center is effective in bringing cases to the DA for review (21.7%) and that a majority of these cases go on to be prosecuted and attain a plea or conviction. This is striking, as elder abuse crimes are considered difficult to prosecute and the literature suggests that prosecution is rare (U.S. Government Accountability Office, 2011). Findings were similarly robust when conservatorship was examined. Having a case heard at the Center increased the odds substantially of referral to the PG and resulted in a much higher proportion of cases that resulted in conservatorship (*n*=36/235, 15.3%) compared to usual care (*n*=5/237, 2.1%). Evidence for both prosecution and conservatorship findings show that the higher numbers of referrals were not based on inappropriate cases, as both the intervention and usual care referrals showed a similar proportion who achieved the outcome. These results may play a role in the study's finding that presentation at the Center significantly reduced APS case recurrence.

There is a high bar for achieving prosecution and conservatorship in Los Angeles County as both are rare and require stringent evidence. Using an MDT approach for complex elder abuse cases has received strong support in the literature for two decades. The positive outcomes demonstrated in this study show that this interest is supported by evidence that this MDT is effective.

Forensic Centers were identified in the Elder Justice Act; the legislation authorizes $26 million for the development of both mobile and stationary Centers. The Forensic Center research described in this report suggests that the Center model offers a viable approach to addressing the complex problem of elder abuse. The research supports the replication of the model in other communities and offers these communities tools identified as core components. As the nation wrestles with elder abuse, neglect, and exploitation, the Elder Justice Act stands poised and ready for funding to expand the elder abuse forensic center initiative. This research provides strong evidence that funding for the expansion of the Forensic Center intervention is warranted.

INTRODUCTION

The Problem of Elder Abuse

Over the past decade, elder abuse has become widely recognized as a pervasive problem and a growing concern (Acierno, 2010; Bonnie & Wallace, 2003; Connolly, 2010; Dressin, 2000; Heisler, 2000; Laumann, 2008). It is increasingly recognized as having major consequences for victims, their family members, and society. Older adult victims may incur serious physical injuries, emotional pain and suffering, shame, depression, shattered trust, financial ruin, and increased risk of mortality (Comijs, Penninx, Knipsheer, & Tilburg, 1999; Lachs, Williams, O'Brien, Pillemer, & Charlson, 1998). In addition to breaking the covenant to honor our elders, consequences for society at large include the expenditure of billions of dollars in avoidable health care costs, the loss of billions of dollars in defrauded retirement savings, mortgage failures, and an expanded Medicaid earmark. Despite increased attention to the problem, elder abuse is still shrouded in uncertainty, with little information available to inform policy makers and community leaders on the effectiveness of interventions (Bonnie & Wallace, 2003; Ploeg, Fear, Hutchison, MacMillan & Bolan, 2009).

Background: Identifying, Measuring, and Addressing Elder Abuse

Strides have been made in several areas of elder abuse research, including studies to determine how much elder abuse occurs in a given time frame and overall (incidence/prevalence) as well as improvements in the measurement of elder abuse. Over the last three decades, a number of studies have been conducted to determine the incidence/prevalence of elder abuse. Early well designed studies (Pillemer and Filkelhor, 1988; Podnieks, 1992) suggested that the rate of abuse was about 3-4% of the older adult population. Two decades later a review of incidence and prevalence studies by Cooper, Selwood, and Livingston (2008) identified 49 studies conducted in more than a dozen countries. Focusing on the seven studies that used validated measures, they found a wide variety of prevalence rates, ranging from 3.2% to 27.5% with response rates from 10% to 100%. Their work, which indicated that rates of abuse may be higher than earlier studies indicated was supported by another study—the National Social Life, Health and Aging Project (NSHAP), which used a population-based, nationally representative survey that included elder abuse prevalence in the United States (Laumann, Leitsch, & Waite, 2008). Using a combination of questions from two screening instruments (the Hwalek-Sengstock Elder Abuse Screening Test [Hwalek-Sengstock, 1986] and the Vulnerability to Abuse Screening Scale [Schofield & Mishra, 2003]), the NSHAP surveyed community residing adults aged 57-85 in their homes. Building on recommendations from the National Research Council (NRC) recommendations, they assessed respondents' cognitive status, contextualized the questions around social relationships rather than abuse, and when elder abuse was detected asked about their relationship to the perpetrator. The weighted response rate was 75.5%; the 12-month elder abuse prevalence rate of abuse by a family member was 9% for psychological, 3.5% for financial, and 0.2% for physical. Examining relationships among abuse and characteristics of the older adult, findings also suggested that different types of abuse are associated with different risk indicators. The most recent study, by Acierno et al., (2010), which was funded by the National Institute of Justice noted that the literature supports using comprehensive, behaviorally defined descriptions of interpersonal conflict with close-ended questions to produce accurate predictions. Using random digit dialing across geographic strata, they analyzed data from 5,777

respondents, aged 60 and older. One-year incidence of abuse was 4.6% for emotional abuse, 1.6% for physical abuse, 0.6% for sexual abuse, 5.1% for potential neglect (Acierno, et al., 2010). They also found a rate of 5.2% for current financial abuse by a family member (Acierno et al., 2009).

Progress is also occurring in the area of measurement. Conrad and his colleagues have developed and tested approaches to measuring several different types of elder abuse including financial, psychological, and self-neglect (Conrad, Iris, Ridings, Fiarman, Rosen, & Wilber, 2011; Conrad, Iris, Ridings, Langley, & Anetzberger, 2011; Conrad, Iris, Ridings, Langley, & Wilber, 2010; Conrad, Iris, Ridings, Rosen, Fairman, & Anetzberger, 2011; Iris, Ridings, & Conrad, 2010). Using expert panels of practitioners and researchers, they identified possible items that reflect abuse and applied an approach called concept mapping to organize these items into domains. The instruments developed from this method were then field tested. They are currently developing the Elder Abuse Decision Support System (EADSS, www.eadss.org). These instruments and related approaches offer the promise of providing standardized measures to better assess elder abuse and compare findings across different settings and geographic areas.

In addition to growing interest in prevalence and improved measures to detect and study abuse, leaders in the field have called for increased examination of the promising approach to address abuse. Elder justice, defined as freedom from abuse, neglect, and exploitation, requires that adequate resources and evidence-based interventions are in place to prevent, detect, treat, intervene, and, where appropriate, prosecute (Breaux & Hatch, 2003). Yet a comprehensive report on elder abuse by the National Research Council (NRC) noted that efforts to understand and address elder mistreatment were about 20 years behind similar work in child abuse and intimate partner violence (formerly called domestic violence) (Bonnie & Wallace, 2003). In addition to the need for basic research to determine prevalence and risk factors, the NRC report identified a need for evidence-based interventions and suggested promising approaches that could be applied to elder abuse. The report recommended that novel, scientifically grounded interventions be supported, and that resources be made available to thoroughly evaluate such interventions. It identified as priorities those interventions that emphasize specialized professional training and interdisciplinary collaboration. Similarly, a convening of experts in 2010 by the National Institute on Aging and the National Academy of Sciences identified a need for research on interventions to prevent and to address abuse (The National Academies Committee on National Statistics, 2010).

One of the difficulties in responding to elder abuse, neglect, and exploitation is that cases can be exceedingly complex. Although Adult Protective Services (APS) is the agency charged with receiving and investigating reports of abuse in community settings, the complexity of some elder abuse cases means that one type of professional cannot do the job alone—diverse areas of expertise (e.g., law enforcement, health and mental health, protective services) are required to address complex cases. Unfortunately, it is not uncommon for a variety of service sectors to be working in parallel fashion on behalf of an elder who is a victim of mistreatment, without knowing that other professionals are also involved. When they do work together, professionals may struggle to understand each other's language, values, methods of working, and goals for the case.

For these reasons, elder abuse cases that involve a complex web of medical, social, legal, and /or financial issues, are often understood more fully, and responded to most effectively, when viewed in the context of these various disciplines working together (Connolly, 2010). One possible means to address this problem is an elder abuse multidisciplinary team (MDT) (Bonnie

and Wallace, 2003; Connolly, 2010; The National Academies Committee on National Statistics, 2010; Teaster, Nerenberg, and Stansbury, 2003). Over a decade ago, Wolf and Pillemer (1994) identified elder abuse MDTs as an important means to address the complexities of elder abuse. Experts contend that MDTs, offer a promising, albeit largely untested intervention to aid APS and law enforcement investigations (Brandl, et al., 2007; Connolly, 2010; Schneider, Mosqueda, Falk, & Huba, 2010). Because MDTs can be superimposed on current delivery systems, they can improve communication and problem solving, without fundamentally altering the service delivery structure (Reuben, 2002). Given the range of professionals needed to address complex cases of elder abuse, and the diverse communities that are interested in enhancing their response to elder abuse, it is important to develop flexible and effective approaches to tap into these diverse systems.

An MDT offers a way to bring professionals together to work on cases, improve protocols and service delivery approaches, and develop team-based problem solving strategies. In California, where the Forensic Center evaluation was conducted, the law permits APS to share information with MDT members without violating victim/client/patient confidentiality. Specifically, the California Welfare and Institutions Code (Section 15610.55) defines "multidisciplinary personnel team" as any team of two or more persons who are trained in the prevention, identification, and treatment of abuse of elderly or dependent adults and who are qualified to provide a broad range of services related to abuse of elderly or dependent adults (California Legislature, 2011). Given broad parameters, a number of different elder abuse MDT models have been developed, including the Fiduciary Abuse Specialist Team (FAST), Vulnerable Adult Specialist Team (VAST), fatality review team, and elder abuse task force.

There is a growing literature that describes the roles and various features of MDTs. For example, in a study of 31 MDTs, Teaster and Nerenberg (2003) found that they vary extensively in purpose, size, composition, and activity; resulting in a number of different approaches. This variety provides a barrier to enacting policy support to any one model of elder abuse MDT, especially in the absence of rigorous evaluation. The researchers did find consensus, however, that among the various roles identified, consultation on difficult cases was rated the highest, whereas, team input on more systemic activities (e.g., identifying gaps in services, system problems, updating participants on new programs and policies) was rated as lower importance. They also noted that getting the array of key professionals to participate in an MDT can be challenging. Nearly half (48%) of the MDTs surveyed were challenged by "a lack of participation by some disciplines" (Teaster et al., 2003).

Teaster and Wangmo (2010) surveyed one type of MDT, Kentucky's local elder abuse coordinating councils (n=39), focusing on roles, processes, varieties, and accomplishments. These councils seemed to function primarily as community educators; half conducted case reviews, most with all types of abuse cases. Recommendations to ensure sustainability and to integrate and unify their efforts included committed staffs, seeking a stable funding base, clear vision and goals, and uniform and consistent outcome measures (Teaster & Wangmo, 2010).

To get a sense of MDTs in Los Angeles and to compare and contrast the activities of these teams with the Los Angeles County Forensic Center MDT, Navarro (2011) cataloged elder abuse MDTs in Los Angeles County in April 2010. After seeking to identify the universe of elder abuse-related MDTs within Los Angeles County, each identified MDT (n=9 excluding the Forensic Center) was queried about meeting days, times, locations, primary purpose and specific contact information. Respondents, most often the program manager, indicated that the purpose included case reviews, education, and training. Of the 10 identified (See Table 1), the Forensic

Center was the only MDT to report the provision of forensic evaluations and consultations. Also most held meetings monthly or less; the Forensic Center was the only MDT that met weekly.

Table 1. Survey of Multidisciplinary Teams in Los Angeles County (2010)

MDT	Meeting Frequency	Purposes of Meeting
1- Elders At Risk	Monthly	Education for providers of geriatric patients, case reviews, CEU credits, networking
2- WSGV Elder Abuse Coalition	Monthly	Case reviews, educational presentations, training workshops
3- ESGV Adult Abuse Task Force	Monthly	Case reviews, educational in-services, resources, networking, guest speakers
4- Financial Abuse Specialist Team	Monthly	Case reviews, training programs, education, guest speakers
5- LAC Elder Death Review Team	Quarterly	Multidisciplinary case reviews, education, training, networking
6- Long Beach Elder Abuse Prevention Team	Monthly	Case reviews, develop action plans, share information on how to detect and report financial abuse, legal issues, guest speakers
7- South Bay Multidisciplinary Team	Quarterly	Case reviews, education, resources, networking
8- Long Beach Hoarding Task Force	Monthly	Case reviews, education, implementation plans, training, resources
9- KEEP-SAFE Coalition	TBA	Training programs, educational seminars

Meeting purposes were found to have similarities across three themes: education and training (*n*=9, 100%), case reviews (*n*=8, 89%), and networking (*n*=4, 44%). Some teams were specialized within a specific area. For example, the Los Angeles Financial Abuse Specialist Team (FAST), reported being focused solely on financial exploitation; the Long Beach Elder Abuse Prevention Team specifically noted an activity was to educate others about detecting and reporting financial abuse. These findings align with the survey findings completed in Kentucky by Teaster and Wangmo (2010). Meeting frequency varied from monthly (6), quarterly (2), or on a "to be arranged" (TBA) basis. Regular weekly meetings may provide added opportunity for members to become increasingly invested, cohesive, and trusting of one another's skill sets.

Researchers have noted that despite interest in the MDT approach, there is a dearth of studies evaluating the outcomes of elder abuse MDTs (Navarro, 2011; Teaster & Nerenberg, 2003). Lessons gleaned from evaluating studies of MDTs in other fields, however, offer some support. For example, research using randomized controlled trials (RCTs) in both health and mental health settings, found the MDT to be efficacious in such areas as cancer care (McNair et al., 2008) and outpatient treatment for severe mental illness (Kuipers, Holloway, Rabe-Hesketh, & Tennakoon, 2004); as well as in family violence fields such as domestic violence and child abuse (McNamee & Mulford, 2007).

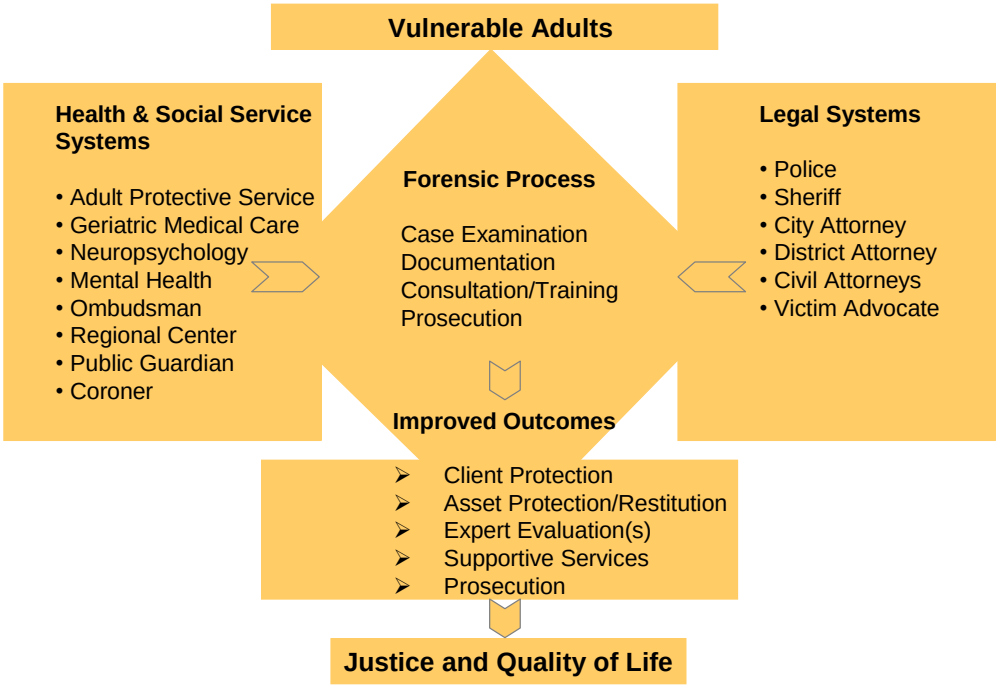
The particular model of interest for this study, the elder abuse forensic center was developed in Orange County in 2003 (Wiglesworth, Mosqueda, Burnight, Younglove, & Jeske, 2006). Forensic is defined as *relating to or dealing with the application of scientific knowledge to legal problems* (Merriam-Webster online, 2011). In keeping with this definition, a unique contribution of the Forensic Center model (Figure 1) is bringing together traditionally distinct "Client Systems" (e.g., health, social, and protective services) and "Judicial Systems" (e.g., law enforcement, attorneys, and victim advocates). Although involvement by both types of systems may be essential to resolve complex cases, their different goals, approaches, and perspectives can create barriers to collaboration. Center activities, shown in Figure 1, were designed to bridge

these differences by creating an effective case review process through weekly meetings and ongoing consultation.

The original model combined knowledge from many of its MDT predecessors in other areas to integrate various approaches into a combined medical-legal model. Orange County's Center team includes medical, mental health, social service, law enforcement, and legal professionals who meet to address select cases of abuse involving elder and dependent adults.

Participating members of the Orange County Elder Abuse Forensic Center reported the program as a promising practice that is both effective and efficient (Wiglesworth, Mosqueda, Burnight, Younglove, & Jeske, 2006); yet empirical research lags on the outcomes achieved from this specialized MDT intervention. The National Institute of Justice conducted an innovations assessment in 2007, concluding that with the level of possible impact, and current rate of dissemination of this model of elder abuse case investigation, investment is warranted in evaluating the model's effectiveness (McNamee & Mulford, 2007).

This model offers an innovative and emerging method to respond to the fragmentation in treating elder abuse, by bringing providers into a team to investigate, remedy, and sometimes prosecute elder abuse cases. Moreover, although participants in the Forensic Center model represent an array of diverse organizations, they expect to be involved not only at the weekly meeting but occasionally during the other 38 hours in the week. Member of the Forensic Center may make home visits together or consult with each other as cases are worked.



The model builds upon an adaptation of Wagner's Chronic Care Model designed to interpret the chronic care services established by the Care Advocate Model (Alkema, et al., 2007).

Figure 1. The Los Angeles County Elder Abuse Forensic Center Model.

In response to enthusiasm over the potential for the Center MDT model to improve outcomes for victims of abuse, the Archstone Foundation funded several Forensic Centers. One of these, the Los Angeles County Elder Abuse Forensic Center, included an evaluation component to identify and examine the structure and process of the Forensic Center Model (Navarro, Wilber, Yonashiro, & Schneider, 2010). Although there has been no formal evaluation of the Center's outcomes prior to this study, the present evaluation builds on the previous structure and process evaluation to assess the model's overall impact on prosecution, safety/protective services, and reduction of recurrent referrals to APS.

The Intervention: Los Angeles County Elder Abuse Forensic Center

One of the major problems inherent in program evaluation is that models are developed and tested simultaneously without the opportunity to "get up and running." Steep learning curves and start up challenges may mean that programs are evaluated before they are fully functional. As a well established program, the Los Angeles County Elder Abuse Forensic Center (the Center) offers a remedy to this dilemma. Launched in 2006 with funding from the Archstone Foundation, the Center is well established and includes a research team that has been involved in evaluation of the Center since its inception. Therefore, the Center provides an ideal foundation upon which to assess the effectiveness of the model.

The Center is housed in the Los Angeles County + University of Southern California Medical Center (LAC+USC), within the Victim Intervention Program (VIP). The director, Dr. Diana Homeier is also director of USC's Adult Protection Team (APT), which include routine in-house elder abuse screening, hospital APS liaison, and continuing care for victims through an accessible Geriatric Clinic.

The Center works closely with the Los Angeles County APS program. Mandated by the State of California, APS is a 24-hour service designed to investigate at-risk situations involving older adults (aged 65 and older) and dependent adults (ages 18-64 who are physically or mentally impaired), without regard to income. The California Welfare and Institutions Code 15610.10 defines APS as:

> *"…the agency that provides preventive and remedial activities performed on behalf of elders and dependent adults who are unable to protect their own interests, harmed or threatened with harm, caused physical or mental injury due to the action or inaction of another person or their own action as a result of ignorance, illiteracy, incompetence, mental limitation, substance abuse, or poor health, lacking in adequate food, shelter, or clothing, exploited of their income and resources, or deprived of entitlement due them"* (Community and Senior Services website, retrieved April 1, 2011).

The Center began in January 2006, with a four month planning process that included developing the vision and mission statements. Through this process, a planning team of potential participants identified other organizations that should be at the table, explored the interest of potential core members, incorporated lessons learned from the Orange County Elder Abuse Forensic Center, and developed the Memoranda of Understanding with key participants. A program logic model was created to represent and evaluate the Center's process, with the resources, the activities, target populations and the desired outcomes represented (see Appendix B).

The Center's mission is to improve the quality of life for vulnerable older and dependent adults who have been victims of abuse and neglect in Los Angeles County. The Center works to carry out this mission via a multidisciplinary team of professionals that meets weekly for case

examination, documentation, consultation, and recommendations for further action. Core members include Los Angeles County Adult Protective Services (APS), Los Angeles Police Department (LAPD), Los Angeles Sheriff's Department (LASD), Los Angeles District Attorney's Office (DA), Victim/Witness Assistance Program (VWAP), Los Angeles City Attorney's Office (CA), Los Angeles County Office of the Public Guardian (PG), Los Angeles County Department of Mental Health (GENESIS), forensic neuropsychologists, Bet Tzedek Legal Services, and USC Keck School of Medicine. The core membership also includes the director, who is a geriatrician, and a full time project manager. Others invited to participate on an ad hoc basis include the Los Angeles County Department of the Coroner, the Long-term Care Ombudsman Program and the area Regional Centers. Members of the evaluation team from the USC Davis School of Gerontology regularly observe weekly meetings. Approximately three quarters of the Center team are public agencies (77%), while two participating groups are not-for-profit agencies providing legal and long-term care Ombudsman services (15%). The Center neuropsychologists are the only private, for-profit team members, providing assessments when the team recommends this as part of the case plan.

The team hears two to four new cases each week and receives updates on previous cases. Planning time is set aside monthly, as needed, for problem-solving structural and procedural issues, discussing member agency protocols, managing administrative issues, coordinating special trainings, and organizing annual retreats. Although all member agencies are invited to present, the majority of cases are presented by APS case workers. There has been some fluctuation over time but in general APS presents about 60% of the cases, law enforcement presents about 30% and other team members present the remaining 10%. Regardless of who presents, all cases must be cross reported to APS and most cases that have been crossed referred to law enforcement are presented jointly by APS and law enforcement together. Because APS feedback indicated that Center presentations add travel and preparation time, the Center added teleconference capability, allowing APS case workers and their supervisors to present from their area offices, as they deem appropriate.

Prior to presenting a case, the person bringing the case provides the Center's project manager with preliminary information on the client and perpetrator characteristics and the history and background of the case. At the time of the presentation, Center team members receive a redacted copy of the client referral sheet. During the presentation, the presenter gives an informal case presentation to Center team members, providing a brief background of the case, along with history of the interventions completed or attempted. Case presenters are questioned about the case to clarify information, establish the timeline, and learn additional facts. When specific information that the team considers important is not available, presenters are requested to conduct further evaluation and update the Center, since these facts may be pivotal in determining next steps. Presentations include a brief background and history of the problem with descriptions of interventions attempted or completed. Following the case discussion, attendees identify case goals and recommend next-steps for investigating and intervening to resolve the reported abuse. In addition to participating in the weekly meetings, team members assist those working the case (usually APS and law enforcement) through such activities as assessing the client's health status, capacity, and need for health/mental health care or social services; reviewing medical records; conducting home assessment; doing neuropsychological testing; and proving ongoing case consultation.

In addition to hearing cases and making recommendations, team members may be asked to bring their individual areas of expertise to the case. Health care professionals include the

Center's geriatrician, who attends each meeting, as well as a physician or nurse representing the mental health agency GENISIS. If recommended by the team, the geriatrician conducts forensic reviews of medical records, conducts home visits, contacts the victim's physician, assesses the victim's health and cognitive capacity and, when appropriate completes capacity declaration forms. During case discussions she also provides input and educates the team members in such areas as implications of diagnoses, medications, and case history. The Center's forensic neuropsychologist is focused on testing the victim's cognitive capacity, especially as it relates to medical and legal decisions and ability to manage their finances. Center professionals collaborate with the client's medical and psychological service providers when necessary, streamlining information-sharing processes and providing APS case workers, investigators, and prosecutors with knowledge about health status, cognitive capacity, and the health care system. When needed, these providers function as a bridge to outside providers of similar professional affiliation, facilitating communication, access to records, and/or specific interventions.

Law enforcement representatives are expert investigators, and are frequently in the role of educating and mentoring presenters. They share insights about collecting evidence, furthering investigations, and are integral in facilitating work with APS staff at the station-level. Prosecutors (DA and CA) provide suggestions on what information is necessary for filing a criminal case. The Center's deputy district attorneys decide which cases should be pursued criminally, when a case is ready for filing, and what information is necessary to move the case forward. The involvement of prosecutors and law enforcement officers at Center meetings facilitates communication and referrals to public entities. Attorneys from a legal service agency (Bet Tzedek) are available to address civil matters related to financial abuse, such as undoing home title transfers or other real estate matters.

Scope of this Study

This study addressed the question of how effective the Elder Abuse Forensic Center model is at attaining outcomes in three domains: increasing prosecution of cases, promoting safety through conservatorship where appropriate, and reducing recurrence once a case has been closed. Each of the three areas and the hypotheses developed to test outcomes related to these domains is described below.

Prosecution

Elder abuse and neglect by definition involve victims and those who victimize them—called perpetrators in this report. Although in some cases, particularly involving family or caregiver perpetrators, social services can be provided that resolve the ongoing abuse or neglect, this is not possible in all cases. For some victims of abuse and neglect, holding abusers accountable for their actions has the potential to support victim safety and improve quality of life. This is commonly pursued via the court system in the form of criminal prosecution.

An initial step toward prosecution occurs when law enforcement officers prepare the evidence in conjunction with APS workers and submit the case for review by the DA's office. The DA then determines if there is sufficient evidence to file charges with the court, alleging an individual as the perpetrator in a case of abuse or neglect, or if the case must be dropped due to insufficient evidence. These steps reflect stages of evidence and investigation needed to bring about accountability in prosecuting perpetrators (Brandl et al., 2007).

By bringing together APS workers, law enforcement officers, the DA, and other relevant parties at the Center, cases can be identified earlier as appropriate for prosecution and guidance

can be given to assist in the collection of evidence in support of the case. The following prosecution hypotheses were tested. Compared to matched APS cases receiving usual and customary care, it was hypothesized that:

Hypothesis 1. Cases reviewed at the Center are more likely to be submitted to the District Attorney's Office (DA).
Hypothesis 2. Cases submitted for DA review from the Center are more likely to have criminal charges filed.
Hypothesis 3. Cases heard at the Forensic Center have a higher rate of successful prosecution, where guilt was established by plea or conviction.

Conservatorship

Another role of the Center is to ensure the safety of the victim by if necessary pursuing protective services such as conservatorship. While addressing some cases of abuse, neglect, or exploitation, questions may arise as to whether the victim is at risk for further abuse due to a loss of capacity to make his or her own reasoned decisions. When this occurs and the victim does not appear to have a support system able to provide needed support without legal authority an appropriate remedy is to petition the court for a conservator who will take control of the assets and make decisions on behalf of the older adult. In most states this is referred to as guardianship and is carried out by a guardian on behalf of a ward. Because our study was conducted in California, we use California's terms: conservatorship, conservator, and conservatee.

The purpose of conservatorship is to protect those who lack decision making capacity and as a result are unable to manage their affairs or provide for basic necessities such as food, shelter, and clothing, resulting in risk of financial and/or personal injury. Sometimes engaging a reliable and trusted support system may be sufficient, short of conservatorship (Wilber, Reiser, & Harter, 2001). For those who are at risk and lack adequate supports, conservatorship is initiated by filing a petition with the court. A judge makes the determination of whether or not to appoint a conservator to manage the affairs of the adult. In many states, including California, conservatorship can be delineated into decisions "of the person" (e.g., living arrangements, medical decisions, personal care) and "of the estate" (e.g., bill paying, property and asset management).

Conservatorship, which can be full (plenary) or limited to the identified needs of the conservatee (Quinn, 2005), is considered a service of last resort for older adult victims of elder abuse, because it reduces the adult to the legal status of a minor child. This process, which negates basic civil liberties and autonomy, comes under the state's *parens patriae* power, which both empowers and obligates the government to protect those who lack the capacity to protect themselves (Quinn, 2005; Wilber et al., 2001). Most often, conservators are family members or friends who are willing and able to take on this complex role (Keith & Wacker, 1994). For those with sufficient financial means, a private professional conservator may be hired. In situations where these options are not available, 48 states offer the services of a public guardian, who is either a public official or designated public agency (Wood, Karp, Lawrence, Schmidt, & Mendiono, 2005).

Having a representative from the Office of the Public Guardian's office participating in Center meetings has the potential to enhance the processing of cases by the APS worker and could result in more appropriate referrals for conservatorship that have a higher rate of success. Compared to APS usual care:

Hypothesis 4. Cases reviewed at the Center are more likely to be referred to the Office of the Public Guardian (PG).
Hypothesis 5. Cases referred to PG by the Center are more likely to result in conservatorship.

Recurrence

"APS recurrence" refers to one or more new referrals to APS after the closure of an original case. While "recidivism" has also been used to describe repeat victimization within APS and child protective services (CPS), recent CPS research uses recidivism for repeat offenders of abuse and "recurrence" for repeat victims (Helie & Bouchard, 2010; Johnson-Reid, Chung, Way, & Jolley, 2010; Jonson-Reid, Drake, Chung, & Way, 2003; Spensley, 2008). APS recurrence is a familiar phenomenon to those within the service system; however, there is little research on this problem. The two studies identified as part of this study focused on risk factors, which include self-neglect, refusal of services, mild cognitive or physical impairment, mental illness, and addiction (Simon, 1992; Spensley, 2008).

While elder abuse in general is known to be complex, an increasing number of cases include one or more the following factors—numerous forms of abuse, multiple perpetrators, substance abuse, and/or cognitive impairment—factors that all increase the difficulty of abuse substantiation and resolution (U.S. Government Accountability Office, 2010). Such factors are also likely to increase the risk of recurrence. APS recurrence reflects ongoing and likely unresolved problems for victims and a potentially unnecessary burden to an overwhelmed social service (Dong & Simon, 2011). Jackson and Hafemeister (2010) found that financial abuse combined with caregiver neglect cases are more likely to result in repeat victimization. This suggests both the increased challenges of stopping multiple forms of abuse and that victim dependency on the abuser creates a dynamic that is difficult to disentangle and more prone to become ongoing or chronic.

Despite the recognition of recurrence as a problem, there is no research that we are aware of that examined approaches to reduce recurring cases through an intervention. Though research on APS recurrence appears to be lacking, the concept is similar to other fields, including Child Protective Services (CPS), domestic violence, and health care readmission. As with these fields, examining the impact a program has on recurrence offers a measure of overall effectiveness as well as a potential measure of cost effectiveness. Compared to APS usual care cases:

Hypothesis 6. Cases reviewed at the Center are more likely to have experienced prior recurrence within Adult Protective Services (APS).
Hypothesis 7. Cases reviewed at the Center are less likely to experience future APS recurrence after they have been closed.

METHODS

This project is the first to evaluate the forensic center model outcomes. It builds on previous research that identified the structure and processes of the Center, the lessons learned, products developed, and issues to consider in replication (Navarro et al., 2010). This study examines outcomes in terms of prosecution, safety (conservatorship), and impact on recurrence of abuse reports.

Design

The design was a quasi-experimental, matched comparison study using propensity score matching to construct the analysis sample. While one of the most powerful approaches to program evaluation is a randomized controlled trial (RCT), it is not always possible to use this design in practice settings. The original research plan was to conduct an RCT, as reflected by the original and formal title of the proposal. However, legal and ethical concerns were raised by some members of the Center team, who argued that an RCT would not be appropriate because it necessitated withholding Center services from the control group. Therefore, a decision was made and approved by all parties to use another rigorous method: a propensity score matching approach.

Propensity score matching has been used in health and social science research to estimate the probability that each individual in a broad comparison sample would be in the targeted intervention group, all other things being equal (Braitman & Rosenbaum, 2002; D'Agostino, 1998). The classic propensity score (P score) is defined as a predicted probability, computed from an estimated logistic regression model (Guo & Fraser, 2010; Rosenbaum & Ruben, 1985). This method uses a "nearest neighbor" algorithm to match each case to case within recommended calipers, using 25% of the standard deviation, so every "intervention" case has one matched "comparison" case to create the full sample (Braitman & Rosenbaum, 2002; Guo & Fraser, 2010).

The specific approach used to implement the propensity match was based on guidance and a macro published by Lori Parsons (2004) for using SAS to generate propensity scores and match cases. This approach includes the use of backward variable selection in the calculation of propensity scores, which removes variables from the model that are not statistically significant. The Parsons macro has been used broadly, particularly in health research (e.g., Fonarow, Albert, Curtis, et al., 2012; Kim, Kim, Park, & Kawachi, 2008; Vohr, Stephens, Higgins, et al., 2012). We started with the 32 variables available in the dataset, which represented seven conceptual domains (age, gender, race/ethnicity, number of abuse types, individual abuse types, abuse type interactions, APS office); after the backward variable selection, 27 variables remained, representing six of the original conceptual domains (all but gender). Our construction of the model was an iterative process, during which we decided to exclude five additional conceptual domains due to methodological and data limitations: living status (alone vs. with others), marital status, referral source (who reported the case to APS), when the abuse occurred (quarter in which referral was made), and location (zip code). Of these, living status and marital status were difficult to include due to an abundance of missing data. Zip code was too granular a geographic region to be informative in the propensity matching process. Because APS has 16 different offices to accommodate Los Angeles' large geographic size, APS office was used as an acceptable and more informative alternative. Given the relatively short period of reports included in this study, we did not include a temporal variable. Furthermore, given the number

and diversity of referral source, we decided that it was best treated as a predictor variable in the regression models on our outcome variables rather than a variable in the propensity model. An analysis of the region of common support broadly supported the resultant propensity scores (Thoemmes & Kim, 2011). The range of scores for the usual care group (0.0003 to 0.3999) completely encompassed the range for the Center group (0.0009 to 0.2781). Although the scores for the usual care group skewed lower (Figure 2), the vastly larger nature of the usual care sample meant that there were still an adequate number of data points with higher propensity scores to support the common support region (Figure 3).

All aspects of the study were approved by the University of Southern California's Institutional Review Board. Only blinded, anonymous data were utilized by the research team in conducting this study.

Figure 2. Region of common support, usual care (top; black) and Center cases (bottom; grey)

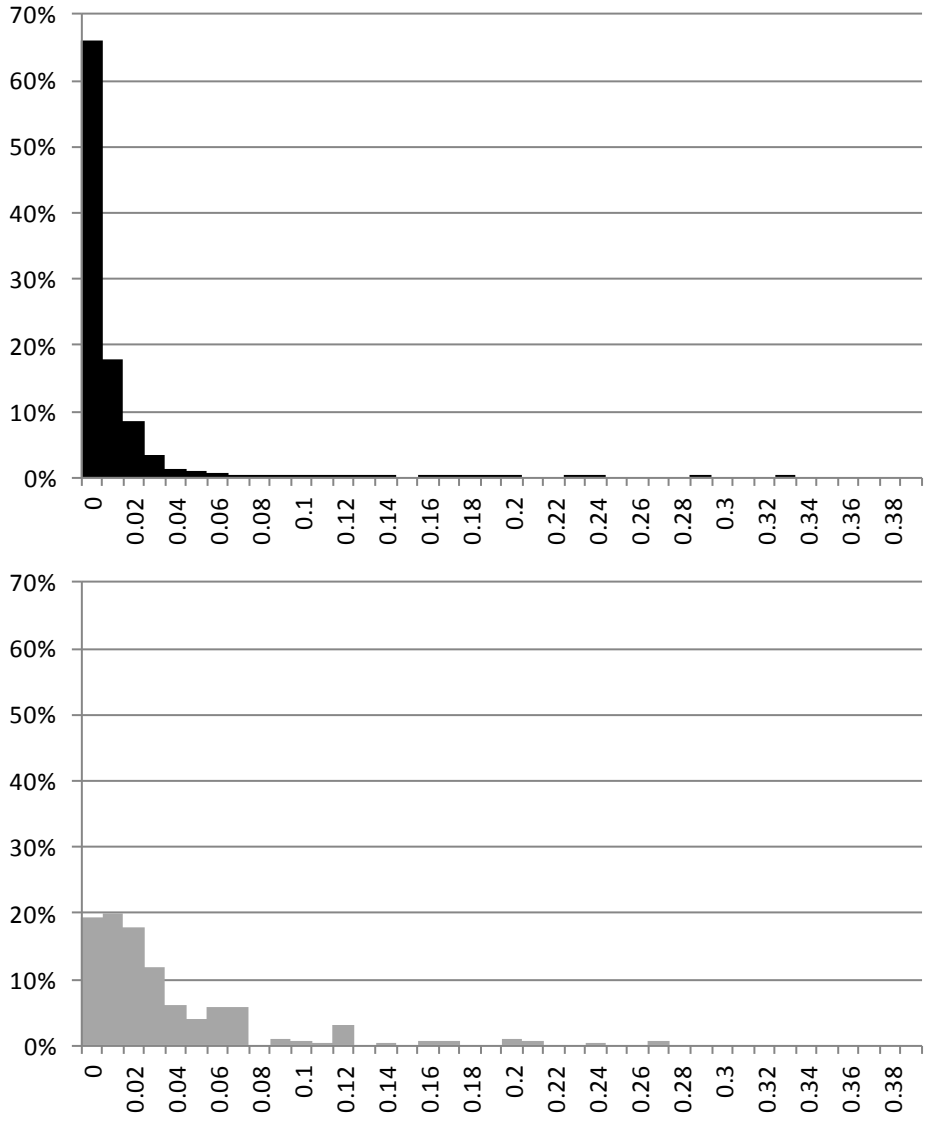
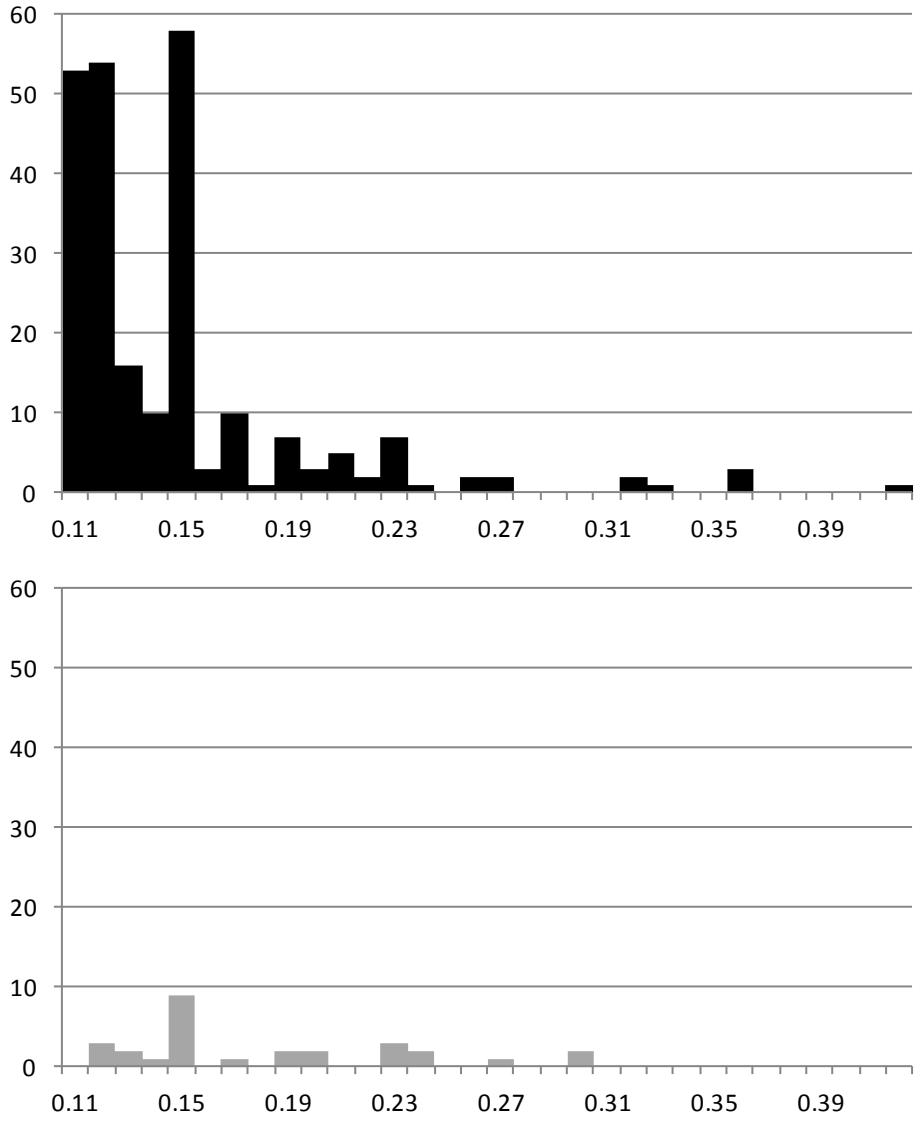


Figure 3. Region of common support, upper tail; usual care (top; black) and Center cases (bottom; grey)



Data Acquisition

The sample was constructed using administrative data, which was compiled from various sources: the Los Angeles County Elder Abuse Forensic Center; the Los Angeles County Community and Senior Services department, Adult Protective Services division. The process for drawing the sample and characteristics of the sample are described below. The timeframe for both the Center intervention and APS comparison cases was April 1, 2007 to December 31, 2009. Inclusion criteria consisted of individuals referred during this study period who were aged 65 and over.

The core intervention sample was drawn from those older adults whose cases were heard at the Center during the study period, a total of 316 possible intervention cases (see Table 2).

Table 2. Target Intervention Group

Year	Target group (N=316)	Total cases	Excluded-under 65
2007	92	107	15 (14%)
2008	106	122	16 (13%)
2009	118	140	22 (16%)

Of the 316 cases, 287 met all study criteria for the propensity score matching, including having received service from APS. A small number of intervention cases brought to the Center by law enforcement or other team members were not cases served by APS, so they were excluded from the sample (*n*=29). Cases included in the study could have been referred to the Center by APS or another team member (e.g., law enforcement), as long as there was APS involvement in the case at some point, either before presentation at the Center or following the case's presentation at the Center.

Comparison Group

The comparison group consisted of older adults, aged 65 and older, who were referred to the Los Angeles County APS program for suspected elder abuse, neglect and/or financial exploitation. Types of referrals include physical abuse, sexual assault, financial exploitation, isolation, neglect, and self-neglect. It is not uncommon for referrals to have more than one type of abuse indicated. Referrals were received through the APS centralized intake unit (commonly referred to as the Elder Abuse Hotline) from various sources. Referral sources included: hospitals, other health and social service providers, public and private programs, law enforcement, financial institutions, relatives, friends and neighbors, self-referrals and unknown sources. Inclusion criteria for comparison group cases consisted of individuals aged 65 and over, with an APS referral between April 16, 2007 (the earliest date for which data were available) and December 31, 2009.

Sample Construction

The sample began with all referrals received by Los Angeles County's APS during the study period (04/16/2007-12/31/2009) that involved an individual aged 65 and older (60%; n=33,650). Prior to matching, all cases ever heard at the Forensic Center (March 2006 through December 2010) were removed. Matching variables were selected from available APS administrative electronic data. The APS data, extracted from an Oracle database, provided the following measures for matching:

- Age (continuous and coded categorically)
- Gender
- Reported as a racial/ethnic minority
- APS Office (geographic categories)
- APS service dates
- Type(s) of abuse (discrete, multiple types)
- Referral sources (who reported the case to APS)

Although propensity score matching attempts to create a comparable group by determining which subjects have the highest probability of being in the treatment group, some unmeasured differences may occur. One area that is not measured per se is overall case complexity. It is likely that the most complex cases are the most likely to be referred to the Forensic Center. As discussed in the results section, this difference is reflected in the finding that a higher percentage of Forensic Center cases were recurring cases at baseline. Cases are also more likely to be referred to the Forensic Center based on the assumption that referral is likely to lead to the desired outcome. For example, *ceteris paribus*, an APS worker will refer a case in which prosecution is sought because she recognizes that the Forensic Center resources will be more likely to support the outcome than if she were to refer the case through her supervisor to the DA. Face-to-face contact simplifies the referral process, with referrals made immediately during the meeting instead of having to go through the standard system of administrative checks before the referral can be sent to the DA. Moreover, observations of team meetings suggest that the Forensic Center team appears willing to recommend moving ahead with cases for prosecution and conservatorship that they might not consider when a paper referral is presented. Data were initially cleaned and coded by APS prior to being delivered to the research team. Cases were recoded with an observation number assigned by APS allowing them to link each case to additional records with which to track outcomes and provide redacted files. Prosecution outcomes were collected from the Los Angeles County District Attorney's Office and linked to the existing dataset. Conservatorship referrals and outcomes (client and asset protection) were obtained from the Los Angeles County Office of the Public Guardian. Under the study design, systematic processes were established for the Center's project manager to provide the link to Center team members for specific outcomes. Professional evaluations and supportive services were links to additional resources rather than outcomes per se.

Measures

Dependent Variables: Prosecution

Dependent variables collected by the District Attorney's Office measured three dichotomous prosecution outcomes: 1) cases submitted for review; 2) cases in which criminal charges were filed; and 3) cases successful in establishing guilt by plea or conviction. Sentencing outcomes were also collected by mean years of probation and/or confinement (defined as jail time, prison time, or a combination of both). Two case resolution times were computed: 1) the mean number of days from the date APS opened the case to the date the DA filed charges; and 2) the mean days from the DA filing date, to the date of a successful prosecution outcome.

Dependent Variables: Conservatorship

Conservatorship variables, drawn from PG data, included three dichotomous outcome variables: 1) cases submitted for review; 2) cases that resulted in PG conservatorship; and 3) cases that resulted in third party conservatorship. For the purposes of some analyses, the second two categories were combined for a group that reflected all cases that resulted in conservatorship.

Dependent Variables: Recurrence

Recurrence was measured by identifying cases that had APS referrals in the year prior to the baseline case. The reference date used for the baseline case was the date of that case's original APS referral, when known, or the average time between referral and case presentation at the Center (64 days). The number of referrals in the year following the case's closure was also measured. The same procedure was followed for comparison cases, using the date of referral to APS.

Recurrence of cases in the APS system was analyzed using cases involving all types of abuse. The sample used for these analyses was limited chronologically, however, to just those cases that were referred to APS after April 16, 2008 and would therefore have a year's worth of administrative data to analyze. We first identified which cases had been referred to APS on one or more occasions during the year immediately prior to the baseline referral and during the year immediately following the baseline case's closure. This information was used to compare rates of recurrence for both Center and usual care cases, both before and after baseline.

Independent Variables

The independent variable of primary interest was if the case was reviewed by the Center, 1=yes and 0=no. Independent variables collected by APS included socio-demographic and abuse characteristics. Age was a continuous variable starting at 65 years to focus on older adults. In addition age was shown categorically for ages 65-74, 75-84, and 85 and older. Gender was coded as female. Ethnicity/race was a categorical variable that represented White, Non-Hispanic; African American; Hispanic; and Asian/Pacific Islander.[1] Because marital status and living situation had missing data on more than 75 cases, these variables were not included in the models. Abuse data included multiple abuse types, collected as a continuous variable, and coded categorically by count of one type, two types, three types, and four or more types of abuse. Co-occurring types of alleged abuse were coded dichotomously; including neglect, self-neglect, isolation, physical abuse, and other abuse. Other abuse grouped less frequent types, including abandonment, abduction, coercion, sexual abuse, and chemical restraints. The APS referral sources, of which some cases had more than one source, included relative, financial institution, hospital, public program, private program, law enforcement, other health or social service provider, friend/neighbor, self, and unknown.

Analysis

Data analysis was completed using SAS Version 9.2 (SAS Institute, Cary, NC) and Mplus Version 6.11 (Muthen & Muthen, Los Angeles, CA). Descriptive and bivariate statistics were used to compare the Center cases with matched cases, and to compare the outcome data (i.e., prosecution, conservatorship, reduced recidivisms). Given that little is known about how these characteristics affect these outcomes, logistic regression examined the odds ratios of socio-demographic, abuse characteristics, and the intervention on outcomes, while also controlling for these variables—even though they were not significantly different between the two samples.

[1] Race/ethnicity is missing for many of the cases in both the Forensic Center and Comparison groups. To allow for a more inclusive propensity matching process, the matching model included flags for individuals reported to APS or the Forensic Center as being a member of a racial/ethnic minority; however, the full conceptualization of race/ethnicity was used for the analysis models, including the missingness. This missingness was accounted for by using the Mplus analysis software, as is explained in the Analysis section.

Statistical Modeling

Prosecution and conservatorship responses to cases of elder abuse vary considerably based on the type of abuse. Some types of abuse (e.g., psychological aggression) are not typically amenable to these outcomes, whereas other types (e.g., financial abuse) often require the pursuit of one or both of these remedies. Since the vast majority of cases in the study sample (over 80%) involved financial abuse, either alone or in conjunction with another type of abuse, we report prosecution and conservatorship analyses of just these cases (n=472). This allows for a more straightforward presentation and interpretation of the results, as it creates a level bar against which to compare the outcomes for these cases.

Prior to this study, sparse evidence existed on rates of the outcomes in cases of elder abuse, especially regarding cases brought to an elder abuse forensic center, which is needed for pre-hoc power calculations. Based on several years of experience with Center cases, we estimated that one in every five cases (20%) seen at the Center gets sent for prosecution. To provide conservative estimates for use in the power calculation, we assumed that only twice as many Center cases were sent for prosecution as comparable cases in the general APS caseload, giving a rate of 10%. Based on power calculations based on these and other assumptions (run in G*Power using $\alpha = 0.05$ and $\beta = 0.80$), a sample size of 173 or greater for each group (346 total) was determined to provide acceptable power; 472 falls well above that threshold. Furthermore, the rates found in the comparison group were considerably lower than the conservative estimates used in the power calculation, suggesting that the power achieved in the sample is more than adequate.

Initially, bivariate analyses were used to compare outcomes between the two study groups. This included both t-tests for continuous variables and cross-tabs with χ^2 tests for categorical and dichotomous variables. Further testing of group differences was performed using the standardized difference approach (Austin, 2009), with a goal of achieving standardized difference scores under 10%. Any variables not included in the matching model that exhibited standardized differences over 10% were included in the regression models of the outcomes to control for possible differences in the groups. Logistic analysis was performed on all three outcomes to assess the effect of presentation at the Center on prosecution, conservatorship, and APS recurrence in a multivariable context. When the Propensity Score matching was conducted early in the study, we relied on data included in the APS electronic data files. During the study, APS provided the research team with complete redacted files and additional APS referral data for study subjects, allowing for the measurement of additional variables (e.g., recurrence) that were unavailable at the time of matching. As appropriate, these variables were added as control variables during the regression modeling process to account for their effect when comparing the two samples.

For APS recurrence, an additional analysis was performed using negative binomial regression, to analyze the number of times a case recurred in the APS case history. All descriptive analyses were performed in SAS, but due to missing data on race/ethnicity and referral source, the logistic and negative binomial models were run in Mplus using robust estimators. Using Mplus allowed us to take advantage of the full-information maximum likelihood (FIML) approach, which performs analyses using all available data without having to drop cases that have missingness on the independent variables. For all of the analyses, findings were considered significant at the p<.05 level.

Preliminary Cost Effectiveness

Although a cost effectiveness analysis was beyond the scope of this study, a related and initial goal was to gather information to inform a future study. The team's experience with successful cost-effectiveness analyses included conducting a range of approaches from the development of decision tree models to complex state transition Markov models in health services research.

The goal of this study was to develop a decision tree that captured the Forensic Center process. This tool could then be used to compare EAFC intervention processes with usual care in a future Cost Study. A decision tree is an important first step because it provides the framework to identify costs, which can then be then linked to intermediate outcomes. Using the decision tree, the impact of key decision points (e.g., the decision to obtain a neuropsychological evaluation) can be derived from observational data. At each decision point, the probability of the event, as well as the costs and outcomes, can be specified. A range of probabilities, costs, and outcomes can then be used to develop a sensitivity analysis that will provide insight into the robustness of the results.

RESULTS

Sample Characteristics

Prior to matching, Forensic Center and usual care APS cases were different on many characteristics (see Table 3). Center cases were older and more likely to be reported to APS as being African American. Center cases had more types of abuse reported; among abuse types, financial abuse and isolation were far more common among Center cases, and self-neglect was far less common. Significant differences existed on referral from several locations, which is due in part to the Center cases having been referred from more sources than the usual care APS cases (mean number of sources = 1.1 Center vs. 1.6 usual care).

Despite these differences, Forensic Center cases and comparison cases appeared well matched under the propensity matching model, allowing for a robust outcome evaluation which goes beyond previous descriptive analyses. As confirmed by the comparisons presented in Table 4,[2] significant differences were seen on only three variables, all of which were APS referral sources. None of the referral sources significantly predicted the outcomes. Forensic Center cases were referred more by law enforcement (17.7% Center vs. 4.7%), other public agencies (20.8% Center vs. 13.9%), and friends, neighbors, or landlords (11.1% Center vs. 4.7%). Frequent referral sources for both groups included: relatives (20.8% Center vs.16.6%), financial institutions (20.8% Center vs. 15.5%), and hospitals (18.1% Center vs. 21.3%).

Characteristics of the financial exploitation analysis sample are presented in Table 5. The average age of the sample was 82 years old; two-thirds were female (67%). One-fourth was African American (25%), and a smaller percentage was Hispanic (15%) or Asian/Pacific Islander (5%). Less than half (46%) were referred only for financial exploitation. The mean count of abuse types reported was 1.9 (SD=1.0). Co-occurring abuse categories included suspicion of neglect (23%), self-neglect (14%), isolation (11%), and physical abuse (9%).

Prosecution Outcomes

Table 6, showing prosecution outcomes, indicates that the Forensic Center had significantly more cases submitted for DA review (22%, n=51 Center vs. 3%, n=7; p<.001). The proportion of cases for which the DA's office filed charges was not significantly different between groups (73%, n=37/51 Center vs. 86%, n=6/7), despite a substantially higher number of overall charges filed for Center cases because of the large number submitted to the DA. Similarly, despite a much higher number of Forensic Center filings that resulted in a successful plea or conviction, the proportion of cases that were successful was not significantly different between the two groups (92%, n=34/37 Center vs. 100%, n=6/6). Because of increased overall volume of Center cases presented to the DA, a significantly higher proportion of all Forensic Center cases resulted in a plea or conviction (14.3%, n=34/235 Center vs. 2.5%, n=6/237; χ^2=21.7, p<.001). Sentencing for both probation and confinement were not significantly different for Forensic Center cases. Similarly, time to case resolution (i.e., days between APS referral to DA filing and between filing of charges to a plea or conviction) was not significantly different between the two groups.

[2] This table is presents a comparison of the full sample that was included in the propensity matching. Due to issues uncovered later in the project, 11 of the Center cases that were initially matched against were eventually removed from the final analytic sample. Their comparison group counterparts were removed from the sample as well, resulting in a final study sample size of 570.

Table 3. Comparison of Forensic Center and APS cases prior to matching, 2007-2009

	Total Sample	Forensic Center	Comparison			
	(*N* = 25,612)	(*n* = 296)	(*n* = 25,316)	χ^2/*t*-test	*p*	*d*
Age, years (mean ± SD)	79.5 ± 8.2	81.7 ± 7.5	79.5 ± 8.2	-5.05	<.001***	0.282
Female	16,334 (63.8)	196 (66.2)	16,138 (63.7)	0.77	0.38	0.042
Reported as Racial/Ethnic Minority[a]						
African American	2,444 (9.5)	61 (20.6)	2,383 (9.4)	42.48	<.001***	0.247
Hispanic	3,778 (14.8)	43 (14.5)	3,735 (14.8)	0.01	0.91	-0.005
Asian/Pacific Islander	1,027 (4.0)	14 (4.7)	1,013 (4.0)	0.40	0.53	0.029
Multiple Abuse Types						
Number of Types Reported (mean ± SD)	1.5 ± 0.8	1.8 ± 0.9	1.5 ± 0.8	-5.62	<.001***	0.360
By Count				48.75	<.001***	
1	17,448 (68.1)	150 (50.7)	17,298 (68.3)	---	---	-0.295
2	5,509 (21.5)	87 (29.4)	5,422 (21.4)	---	---	0.148
3	1,948 (7.6)	42 (14.2)	1,906 (7.5)	---	---	0.168
4 or more	707 (2.8)	17 (5.7)	690 (2.7)	---	---	0.116
Types of Abuse						
Financial	9,692 (37.8)	241 (81.4)	9,451 (37.3)	241.76	<.001***	0.851
Physical	2,363 (9.2)	31 (10.5)	2,332 (9.2)	0.56	0.46	0.034
Neglect	6,005 (23.4)	71 (24.0)	5,934 (23.4)	0.05	0.83	0.010
Isolation	827 (3.2)	33 (11.1)	794 (3.1)	60.11	<.001***	0.237
Self-Neglect	10,915 (42.6)	72 (24.3)	10,843 (42.8)	40.97	<.001***	-0.334
Other	7,323 (28.6)	72 (24.3)	7,251 (28.6)	2.67	0.10	-0.081
APS Referral Source(s)[b]						
Financial Institution	2,025 (7.9)	47 (20.8)	1,978 (7.8)	51.73	<.001***	0.290
Law Enforcement	1,276 (5.0)	40 (17.7)	1,236 (4.9)	77.53	<.001***	0.312
Hospital	7,440 (29.1)	41 (18.1)	7,399 (29.2)	13.33	<.001***	-0.221
HCBS & Mental Health	2,050 (8.0)	21 (9.3)	2,029 (8.0)	0.50	0.48	0.037
Other Public Agency	3,433 (13.4)	47 (20.8)	3,386 (13.4)	10.60	0.001**	0.157
Other Private Agency	2,344 (9.2)	32 (14.2)	2,312 (9.1)	6.79	0.009**	0.124
Relative	3,698 (14.5)	47 (20.8)	3,651 (14.4)	7.35	0.007**	0.134
Friend/Neighbor	1,374 (5.4)	25 (11.1)	1,349 (5.3)	14.47	<.001***	0.163
Self	2,000 (7.8)	19 (8.4)	1,981 (7.8)	0.11	0.75	0.017
Other/Anonymous/Unknown	2,770 (10.8)	34 (15.0)	2,736 (10.8)	4.16	0.04*	0.101

Note: Unless otherwise indicated, variables are categorical and statistics reported are n (%). When indicated, continuous variables have mean ± SD reported along with *t*-tests in place of χ^2 statistics; calculation methodologies for standardized difference also varied for continuous vs. categorical variables. APS = Adult Protective Services, SD = standard deviation, HCBS = home and community-based services. [a] Referent group is a combination of non-Hispanic whites, other race/ethnicity, and cases with no reported race/ethnicity. [b] Referral source data available for a subset of cases; Total Sample *n* = 522; Forensic Center n = 226; Comparison n = 296. * $p<.05$; ** $p<.01$; *** $p<.001$.

Table 4. Comparison of the Forensic Center and APS matched groups, all cases, 2007-2009

	Total Sample (*N* = 592)	Forensic Center (*n* = 296)	Comparison (*n* = 296)	χ^2/*t*-test	*p*	*d*
Age, years (mean ± SD)	81.7 ± 7.5	81.7 ± 7.5	81.7 ± 7.5	0.03	0.97	-0.003
Female	393 (66.4)	196 (66.2)	197 (66.6)	0.01	0.93	-0.006
Reported as Racial/Ethnic Minority[a]						
African American	128 (21.6)	61 (20.6)	67 (22.6)	0.36	0.55	-0.040
Hispanic	88 (14.9)	43 (14.5)	45 (15.2)	0.05	0.82	-0.016
Asian/Pacific Islander	28 (4.7)	14 (4.7)	14 (4.7)	0.00	1.00	0.000
Multiple Abuse Types						
Number of Types Reported (mean ± SD)	1.8 ± 0.9	1.8 ± 0.9	1.7 ± 0.9	0.31	0.76	0.027
By Count				0.08	0.99	
1	303 (51.2)	150 (50.7)	153 (51.7)	---	---	-0.017
2	173 (29.2)	87 (29.4)	86 (29.1)	---	---	0.006
3	83 (14.0)	42 (14.2)	41 (13.9)	---	---	0.008
4 or more	33 (5.6)	17 (5.7)	16 (5.4)	---	---	0.012
Types of Abuse						
Financial	484 (81.8)	241 (81.4)	243 (82.1)	0.05	0.83	-0.014
Physical	59 (10)	31 (10.5)	28 (9.5)	0.17	0.68	0.027
Neglect	143 (24.2)	71 (24)	72 (24.3)	0.01	0.92	-0.006
Isolation	60 (10.1)	33 (11.1)	27 (9.1)	0.67	0.41	0.054
Self-Neglect	139 (23.5)	72 (24.3)	67 (22.6)	0.24	0.63	0.032
Other	149 (25.2)	72 (24.3)	77 (26.0)	0.22	0.64	-0.032
APS Referral Source(s)[b]						
Financial Institution	93 (17.8)	47 (20.8)	46 (15.5)	2.42	0.12	0.110
Law Enforcement	54 (10.3)	40 (17.7)	14 (4.7)	23.24	<.001***	0.316
Hospital	104 (19.9)	41 (18.1)	63 (21.3)	0.79	0.37	-0.065
HCBS & Mental Health	43 (8.2)	21 (9.3)	22 (7.4)	0.59	0.44	0.054
Other Public Agency	88 (16.9)	47 (20.8)	41 (13.9)	4.41	0.04*	0.147
Other Private Agency	65 (12.5)	32 (14.2)	33 (11.1)	1.07	0.30	0.073
Relative	96 (18.4)	47 (20.8)	49 (16.6)	1.54	0.22	0.088
Friend/Neighbor	39 (7.5)	25 (11.1)	14 (4.7)	7.43	0.006**	0.182
Self	34 (6.5)	19 (8.4)	15 (5.1)	2.35	0.13	0.105
Other/Anonymous/Unknown	67 (12.8)	34 (15)	33 (11.1)	1.74	0.19	0.093

Note: Unless otherwise indicated, variables are categorical and statistics reported are n (%). When indicated, continuous variables have mean ± SD reported along with *t*-tests in place of χ^2 statistics; calculation methodologies for standardized difference also varied for continuous vs. categorical variables. APS = Adult Protective Services, SD = standard deviation, HCBS = home and community-based services. [a] Referent group is a combination of non-Hispanic whites, other race/ethnicity, and cases with no reported race/ethnicity. [b] Referral source data available for a subset of cases; Total Sample *n* = 522; Forensic Center n = 226; Comparison n = 296. * $p<.05$; ** $p<.01$; *** $p<.001$.

Table 5. Characteristics of the Forensic Center and APS Comparison Cases of Financial Exploitation, 2007-2009

	Total Sample (*N* = 472)	**Forensic Center** (*n* = 235)	**Comparison** (*n* = 237)	χ^2/*t*-test	*P*	
Age, years (mean ± SD)	82.3 ± 6.9	82.6 ± 6.6	82.1 ± 7.2	0.88	0.38	
Female	314 (66.5)	156 (66.4)	158 (66.7)	0.004	0.95	
Race/Ethnicity				84.18	<0.001	***
White, Non-Hispanic	155 (32.8)	112 (47.7)	43 (18.1)	---	---	
African American	116 (24.6)	55 (23.4)	61 (25.7)	---	---	
Hispanic	72 (15.3)	36 (15.3)	36 (15.2)	---	---	
Asian/Pacific Islander	22 (4.7)	11 (4.7)	11 (4.6)	---	---	
Other	25 (5.3)	13 (5.5)	12 (5.1)			
Missing/Unknown	82 (17.4)	8 (3.4)	74 (31.2)			
Multiple Abuse Types						
Number of Types Reported (mean ± SD)	1.85 ± 1.0	1.85 ± 1.0	1.84 ± 1.0	0.08	0.94	
By Count				0.09	0.99	
1	219 (46.4)	108 (46.0)	111 (46.8)	---	---	
2	144 (30.5)	73 (31.1)	71 (30.0)	---	---	
3	78 (16.5)	39 (16.6)	39 (16.5)	---	---	
4 or more	31 (6.6)	15 (6.4)	16 (6.8)	---	---	
Co-occurring Types of Abuse						
Physical	44 (9.3)	23 (9.8)	21 (8.9)	0.12	0.73	
Neglect	107 (22.7)	51 (21.7)	56 (23.6)	0.25	0.62	
Isolation	54 (11.4)	29 (12.3)	25 (10.5)	0.37	0.54	
Self-Neglect	66 (14.0)	35 (14.9)	31 (13.1)	0.32	0.57	
Other	127 (26.9)	61 (26.0)	66 (27.8)	0.14	0.71	
APS Referral Source(s)[b]						
Financial Institution	89 (20.3)	46 (22.8)	43 (18.1)	1.45	0.23	
Law Enforcement	50 (11.4)	37 (18.3)	13 (5.5)	17.79	<.001	***
Hospital	75 (17.1)	29 (14.4)	46 (19.4)	1.97	0.16	
HCBS & Mental Health	25 (5.7)	12 (5.9)	13 (5.5)	0.04	0.84	
Other Public Agency	77 (17.5)	46 (22.8)	31 (13.1)	7.08	0.008	**
Other Private Agency	52 (11.8)	27 (13.4)	25 (10.5)	0.83	0.36	
Relative	95 (21.6)	50 (24.8)	45 (19.0)	2.14	0.14	
Friend/Neighbor	40 (9.1)	27 (13.4)	13 (5.5)	8.18	0.004	**
Self	25 (5.7)	14 (6.9)	11 (4.6)	1.06	0.30	
Other/Anonymous/Unknown	62 (14.1)	32 (15.8)	30 (12.7)	0.91	0.34	

Note: Unless otherwise indicated, variables are categorical and statistics reported are n (%). When indicated, continuous variables have mean ± SD reported along with *t*-tests in place of χ^2 statistics. APS = Adult Protective Services, SD = standard deviation, HCBS = home and community-based services.
[b] Referral source data available for a subset of cases; Total Sample *n* = 439; Forensic Center *n* = 202; Comparison *n* = 237. * *p*<.05; ** *p*<.01; *** *p*<.001.

Table 6. Prosecution Outcomes for the Forensic Center and APS Comparison Cases of Financial Exploitation, 2007-2009

	Forensic Center (*n* = 235)		Comparison (*n* = 237)				
	n	% or mean ± SD	*n*	% or mean ± SD	χ^2/ *t*-test	*P*	
Submitted for DA Review	51	21.7%	7	3.0%	38.48	<.001	***
Declined to File Charges	14/51	27.5%	1/7	14.3%	0.56	0.456	
Charges Filed	37/51	72.6%	6/7	85.7%			
Dismissed	3/37	8.1%	0/6	0.0%	0.52	0.470	
Successful Plea/Conviction	34/37	91.9%	6/6	100.0%			
Probation Sentence (years)	34	2.5 ± 2.1	6	2.0 ± 1.5	0.56	0.576	
Confinement: Jail/Prison (years)	34	1.6 ± 1.8	6	1.8 ± 2.8	0.25	0.801	
APS to DA File Time (days)	37	221.8 ± 187.5	6	181.7 ± 363.9	0.26	0.801	
File to Plea/Conviction Time (days)	37	243.4 ± 236.9	6	212.3 ± 170.0	0.31	0.760	

Note: Percentage and relevant χ^2 statistic are presented for categorical variables, and mean ± SD and relevant *t* statistic are presented for continuous variables. APS = Adult Protective Services, DA = District Attorney's office, SD = standard deviation. * $p<.05$; ** $p<.01$; *** $p<.001$.

Table 7 reports the logistic regression results from three models, identifying characteristics that predict prosecution outcomes for elder financial exploitation cases.[3] All three models were significant, using a Wald's χ^2 approach. The first outcome, submitted for DA review, had four significant predictors. Co-occurring physical abuse increased the odds of submission by nearly four times (odds ratio [OR] = 4.77 confidence interval [CI]: 1.67-13.6), and co-occurring self-neglect and other abuse type decreased the odds by 86% and 78%, respectively (OR=0.14, CI: 0.04-0.55; OR=0.22, CI: 0.08-0.58); none of the referral sources were significant predictors. The strongest predictor was the case having been presented at the Forensic Center, resulting in nearly eight times greater odds of the case being submitted to the DA for review (OR=9.76, CI: 4.00-23.8).

The next outcome, whether charges were filed by the DA, had similar findings. Co-occurring physical abuse resulted in over three times greater odds of charges being filed (OR=4.51, CI: 1.52-13.4), and co-occurring self-neglect and other abuse type reduced the odds by 87% and 71%, respectively (OR=0.13, CI: 0.03-0.53; OR=0.29, CI: 0.11-0.79). Having the case reviewed by the Forensic Center increased the odds by nearly six times (OR=6.81, CI: 2.77-16.7) that charges were filed by the DA.

The third model in Table 6 predicts guilt being established via a plea or conviction. Co-occurring physical abuse resulted in four times greater odds of a plea or conviction (OR=4.93, CI: 1.63-14.9), and co-occurring self-neglect and other abuse type decreased the odds by 87% and 66%, respectively (OR=0.13, CI: 0.03-0.57; OR=0.34, CI: 0.13-0.93). One referral source was a significant predictor of guilt being established: Center referral from law enforcement (OR=3.03, CI: 1.07-8.56). The intervention of the Elder Abuse Forensic Center increased the odds of establishing guilt via plea or conviction by 5.14 times (OR=6.14, CI: 2.45-15.4).

[3] The results presented in these tables vary slightly from those reported in our previously published paper (Navarro, Gassoumis, & Wilber, 2010) due to differing assumptions regarding missing data.

Table 7. Logistic Regression Models of Prosecutorial Outcomes in Cases of Elder Financial Exploitation, 2007- 2009 (*N*=472)

	Submitted for DA Review		Charges Filed		Plea/Conviction	
	OR (95% CI)	*p*	OR (95% CI)	*p*	OR (95% CI)	*p*
Age, years	1.02 (0.96-1.07)		1.00 (0.94-1.06)		1.01 (0.94-1.08)	
Gender (female)	1.52 (0.73-3.17)		1.57 (0.70-3.50)		1.53 (0.66-3.55)	
Race/Ethnicity						
White, Non-Hispanic (referent)	----		----		----	
African American	0.58 (0.25-1.34)		0.81 (0.31-2.13)		0.87 (0.33-2.31)	
Hispanic	0.38 (0.12-1.18)		0.62 (0.19-2.08)		0.45 (0.11-1.86)	
Asian/Pacific Islander	2.05 (0.46-9.17)		2.56 (0.46-14.2)		2.86 (0.51-16.1)	
Co-occurring Types of Abuse						
Physical	4.77 (1.67-13.6)	**	4.51 (1.52-13.4)	**	4.93 (1.63-14.9)	**
Neglect	0.60 (0.24-1.52)		0.92 (0.34-2.52)		0.85 (0.30-2.39)	
Isolation	0.87 (0.29-2.62)		0.40 (0.09-1.82)		0.45 (0.10-2.03)	
Self-Neglect	0.14 (0.04-0.55)	**	0.13 (0.03-0.53)	**	0.13 (0.03-0.57)	**
Other	0.22 (0.08-0.58)	**	0.29 (0.11-0.79)	*	0.34 (0.13-0.93)	*
APS Referral Source(s)						
Financial Institution	1.39 (0.50-3.87)		1.99 (0.65-6.07)		1.93 (0.61-6.04)	
Law Enforcement	2.12 (0.85-5.30)		2.56 (0.92-7.14)		3.03 (1.07-8.56)	*
Hospital	1.72 (0.62-4.77)		1.27 (0.37-4.37)		1.39 (0.38-5.07)	
Other Public Agency	1.18 (0.44-3.16)		2.14 (0.76-6.00)		2.02 (0.69-5.92)	
Other Private Agency	1.54 (0.49-4.86)		1.36 (0.35-5.27)		0.92 (0.20-4.31)	
Relative	1.23 (0.51-2.97)		1.47 (0.53-4.09)		1.39 (0.47-4.12)	
Friend/Neighbor	0.24 (0.05-1.17)		0.26 (0.03-2.24)		0.28 (0.03-2.74)	
Self	0.58 (0.11-3.14)		0.90 (0.16-4.92)		1.04 (0.19-5.57)	
Other/Anon/Unknown	0.55 (0.13-2.37)		0.85 (0.18-3.98)		0.95 (0.19-4.65)	
Elder Abuse Forensic Center	9.76 (4.00-23.8)	***	6.81 (2.77-16.7)	***	6.14 (2.45-15.4)	***
Overall Model Sig. – χ^2 (df)	74.26 (20)		61.59 (20)		64.67 (20)	
p	<0.001		<0.001		<0.001	

Note: DA = District Attorney's office, OR = odds ratio, CI = confidence interval, APS = Adult Protective Services, HCBS = home and community-based services. *p<.05, **p<.01, ***p<.001

Conservatorship

Cases that were referred to PG for conservatorship (see Table 8) were mostly female (70.9%), and half reported the client was of a race/ethnicity other than non-Hispanic white (41.9%). These cases were significantly more likely to have a co-occurring abuse type of self-neglect (25.6%, p<.001) and be referred to APS by law enforcement (18.8%, p<.05) or a public program (27.5%, p<.01) than those who were not referred to PG. The cases that saw clients placed under conservatorship were not significantly different from cases that referred to PG but didn't obtain a conservatorship.

Table 8. Characteristics of Elder Financial Exploitation Clients, by PG Referral and Conservatorship Status, 2007-2009.

	Total Sample (*N* = 472)	Referred to PG (*n* = 86)		Conserved (*n* = 41)
Age, years (*M* ± *SD)*	82.3 ± 6.9	82.2 ± 7.5		83.7 ± 6.8
Female	314 (66.5)	61 (70.9)		26 (63.4)
Ethnicity/race			**	
White, non-Hispanic	155 (32.8)	36 (41.9)		15 (36.6)
African American	116 (24.6)	26 (30.2)		14 (34.1)
Hispanic	72 (15.3)	15 (17.4)		10 (24.4)
Asian/Pacific Islander	22 (4.7)	3 (3.5)		1 (2.4)
Other	25 (5.3)	2 (2.3)		0 (0.0)
Missing/Unknown	82 (17.4)	4 (4.7)		1 (2.4)
Multiple abuse types				
Number of types reported (M ± SD)	1.8 ± 1.0	1.9 ± 1.0		1.9 ± 1.1
By count				
1	219 (46.4)	35 (40.7)		15 (36.6)
2	144 (30.5)	35 (40.7)		20 (48.8)
3	78 (16.5)	9 (10.5)		2 (4.9)
4 or more	31 (6.6)	7 (8.1)		4 (9.8)
Co-occurring types of abuse				
Physical	44 (9.3)	7 (8.1)		3 (7.3)
Neglect	107 (22.7)	21 (24.4)		12 (29.3)
Isolation	54 (11.4)	7 (8.1)		6 (14.6)
Self-neglect	66 (14.0)	22 (25.6)	***	8 (19.5)
Other	127 (26.9)	19 (22.1)		8 (19.5)
APS referral sources[a]				
Financial institution	89 (20.3)	17 (21.3)		7 (17.9)
Law enforcement	50 (11.4)	15 (18.8)	*	10 (25.6)
Hospital	75 (17.1)	14 (17.5)		4 (10.3)
HCBS & mental health	25 (5.7)	7 (8.8)		4 (10.3)
Other public program	77 (17.5)	22 (27.5)	**	15 (38.5)
Other private program	52 (11.8)	14 (17.5)		7 (17.9)
Relative	95 (21.6)	12 (15.0)		6 (15.4)
Friend/neighbor	40 (9.1)	11 (13.8)		5 (12.8)
Self	25 (5.7)	2 (2.5)		0 (0.0)
Other/anonymous/unknown	62 (14.1)	12 (15.0)		4 (10.3)

Note: Unless otherwise indicated, variables are categorical and statistics reported are n (%). Tests of significance are based on χ^2 statistics for categorical variables and *t* statistics for continuous variables; those referred to PG are compared to those not referred to PG, and those conserved are compared to those referred to PG but not conserved. M = mean, SD = standard deviation, PG = Public Guardian, APS = Adult Protective Services, HCBS = home- and community-based services. [a] Referral source data available for a subset of cases; Total Sample *n* = 439; Referred to PG *n* = 80; Conserved *n* = 39. *p<.05, **p<.01, ***p<.001.

In Table 9, the conservatorship outcomes for the Forensic Center comprise a much higher number of individuals referred to PG for investigation than usual care APS cases (30.6%, *n*=72/235 Center vs. 5.9%, *n*=14/237, *p*<.001). After excluding those who died before an outcome was determined, the proportion of PG referred cases determined to need a conservatorship was higher among the Forensic Center (52.9%, *n*=36/68 Center vs. 41.7%, *n*=5/12), though the difference was not statistically significant. Similarly, there were no significant differences in conserved cases that were for estate only or third party determinations. For those cases referred through the Forensic Center, the court usually denied conservatorship because the individual was determined to be self-sufficient (56.3%, *n*=18/32), but conservatorship was also denied because there were adequate informal supports in place (31.3%, *n*=10/32) or the person was placed in a facility (12.5%, *n*=4/32). This information was not available for the usual care cases.

Table 9. Comparison of Conservatorship Outcomes of Forensic Center and Comparison Group Samples, 2007-2009.

	Forensic Center (*n* = 235)		**Comparison** (*n* = 237)			
	n	**%**	***n***	**%**	χ^2	
Referred:						
Public Guardian referrals	72	30.6	14	5.9	48.44	***
Deceased	4/72	5.6	2/14	14.3	1.38	
Outcomes:						
Conserved	36/68	52.9	5/12	41.7	0.52	
Conserved by PG	21	30.9	3	25.0	0.17	
Person & Estate	16	23.5	3	25.0	0.01	
Estate only	5	7.4	0	0.0	0.94	
Conserved by third party	15	22.1	2	16.7	0.18	
Not conserved	32/68	47.1	7/12	58.3	0.52	
Self sufficient	18	26.5	unknown		---	
Informal support	10	14.7	unknown		---	
Facility placement	4	5.9	unknown		---	

Note: APS = Adult Protective Services, PG = Public Guardian's Office. *p<.05, **p<.01, ***p<.001.

Logistic regression was used to compute characteristics that predicted PG referral (Table 10). Using a Wald test for all null parameters, the model was determined to be significant (χ^2=80.36, df=22, p<.001). The only co-occurring abuse type noted to impact these outcomes was self-neglect, with two times greater odds of PG referral (OR=3.06, CI: 1.47-6.35, p<.01). The strongest predictor was the Forensic Center intervention, with over seven times greater odds of referral to PG (OR=8.69, CI: 4.41-17.14, p<.001).

Table 10. Logistic Regression Models for Public Guardian Outcomes in Cases of Elder Financial Exploitation, 2007-2009.

	Referred to PG (*n* = 472)	
	OR (95% CI)	*p*
Age, years	0.98 (0.93-1.02)	
Gender (female)	1.4 (0.78-2.52)	
Race/Ethnicity		
White, Non-Hispanic (referent)	----	
African American	1.86 (0.95-3.63)	
Hispanic	1.62 (0.72-3.67)	
Asian/Pacific Islander	0.76 (0.2-2.92)	
Other	0.37 (0.08-1.57)	
Co-occurring Types of Abuse		
Physical	0.61 (0.21-1.74)	
Neglect	1.32 (0.63-2.76)	
Isolation	0.59 (0.22-1.55)	
Self-Neglect	3.06 (1.47-6.35)	**
Other	0.83 (0.42-1.61)	
APS Referral Source(s)		
Financial Institution	0.88 (0.43-1.81)	
Law Enforcement	1.22 (0.52-2.89)	
Hospital	0.97 (0.41-2.26)	
HCBS & mental health	1.9 (0.6-6.04)	
Other Public Agency	1.54 (0.75-3.18)	
Other Private Agency	1.57 (0.68-3.65)	
Relative	0.45 (0.2-1.02)	
Friend/Neighbor	1.44 (0.6-3.45)	
Self	0.2 (0.03-1.28)	
Other/Anonymous/Unknown		
Elder Abuse Forensic Center	8.69 (4.41-17.14)	***
Overall Model Sig. – Wald's χ^2 (df)	80.36 (22)	
p	<0.001	

Note: PG = Public Guardian, OR = odds ratio, CI = confidence interval, APS = Adult Protective Services, HCBS = home- and community-based services. *p<.05, **p<.01, ***p<.001.

Recurrence

The analysis sample for the recurrence study—those cases referred to APS after April 16, 2008, a year after the earliest available data—generally exhibited high proportions of recurrence (see Table 11). In the year prior to the baseline case, 29.9% of all cases had been the subject of an APS investigation; within the year following the closure of the baseline case, 22.5% of cases were the subject of another APS investigation.

In a bivariate context (Table 11), the Forensic Center sample was much more likely than the usual care comparison sample to have had an APS case open in the year prior to baseline (42.7% vs. 16.7% usual care; $p<.001$), but not significantly more likely to have an APS case in the year following baseline (24.6% vs. 20.3% usual care; $p=0.308$). This finding remained in multivariable analysis, both when analyzing the dichotomous event of experiencing recurrence (logistic regression) and when analyzing the frequency of recurrence (negative binomial regression); cases seen at the Forensic Center did not have significantly different rates of recurrence after baseline than usual care cases (see Table 12). The only variables that were significant predictors of recurrence after baseline were self-neglect, other abuse, and self-reporting, with an added effect of gender in the negative binomial model. Furthermore, there was no significant difference between the number of recurrent cases in the two groups before (1.45, SD=0.70 Center vs. 1.25, SD=0.67; $p=0.172$) or after baseline (1.37, SD=0.67 Center vs. 1.26, SD=0.55; $p=0.405$).

Table 11. APS Recurrence, by Presentation at Forensic Center, 2007-2009.

	Total	Forensic Center	Comparison	χ^2/*t*-test	
Analysis Sample	(*n* = 391)	(*n* = 199)	(*n* = 192)		
Before Baseline					
APS recurrence - %(n)	29.9% (117)	42.7% (85)	16.7% (32)	31.62	***
# of recurrences - M(SD)	1.39(0.69)	1.45 (0.70)	1.25 (0.67)	1.37	
After Baseline					
APS recurrence - %(n)	22.5% (88)	24.6% (49)	20.3% (39)	1.04	
# of recurrences - M(SD)	1.32 (0.62)	1.37 (0.67)	1.26 (0.55)	0.84	
Pre-Post Difference Test - (χ^2)	5.56 *	14.58 ***	0.85		
Full Sample *(for comparison only)*	(*n* = 530)	(*n* = 245)	(*n* = 285)		
Before Baseline	---	---	---		
After Baseline					
APS recurrence - %(n)	20.4% (108)	25.7% (63)	15.8% (45)	8.00	**
# of recurrences - M(SD)	1.36 (0.72)	1.46 (0.82)	1.22 (0.52)	1.85	

*$p<.05$; **$p<.01$; ***$p<.001$

Note: Number of recurrences is only calculated for those individuals who experienced recurrence during the period in question (either before or after baseline). M = mean; SD = standard deviation.

Table 12. Regression Models of 1-year APS Recurrence (n = 391)

	Logistic Regression		Negative Binomial Regression	
	OR (95% CI)	*p*	*b* (95% CI)	*p*
Age	0.98 (0.95-1.02)		-0.02 (-0.05-0.01)	
Gender (female)	1.49 (0.84-2.62)		0.53 (0.10-0.96)	*
Race/ethnicity (vs. white)				
Black/African American	1.61 (0.78-3.30)		0.15 (-0.37-0.68)	
Hispanic/Latino	1.59 (0.70-3.64)		0.47 (-0.20-1.14)	
Asian/Pacific Islander	1.18 (0.31-4.46)		-0.01 (-0.98-0.97)	
Other	1.04 (0.30-3.65)		-0.20 (-1.07-0.68)	
Types of Abuse				
Financial	2.14 (0.96-4.79)		0.43 (-0.14-0.99)	
Physical	1.60 (0.79-3.24)		0.24 (-0.24-0.72)	
Neglect	0.92 (0.50-1.71)		-0.09 (-0.59-0.42)	
Isolation	1.06 (0.41-2.72)		0.31 (-0.51-1.14)	
Self-Neglect	2.44 (1.29-4.65)	**	0.77 (0.34-1.20)	***
Other	1.82 (1.04-3.21)	*	0.45 (0.01-0.89)	*
APS Referral Source(s)				
Financial Institution	1.02 (0.50-2.09)		0.18 (-0.40-0.76)	
Law Enforcement	1.32 (0.58-3.00)		0.28 (-0.36-0.92)	
Hospital	0.72 (0.36-1.42)		-0.30 (-0.85-0.26)	
HCBS & mental health	1.93 (0.84-4.43)		0.39 (-0.19-0.97)	
Other Public Agency	1.02 (0.49-2.12)		-0.05 (-0.62-0.51)	
Other Private Agency	1.22 (0.54-2.74)		-0.05 (-0.66-0.55)	
Relative	0.73 (0.36-1.51)		-0.27 (-0.84-0.30)	
Friend/Neighbor	1.31 (0.50-3.40)		0.24 (-0.45-0.93)	
Self	2.65 (1.19-5.92)	*	0.86 (0.33-1.40)	**
Other/Anonymous/Unknown	0.84 (0.37-1.92)		-0.27 (-0.90-0.36)	
Elder Abuse Forensic Center	1.19 (0.67-2.12)		0.15 (-0.30-0.61)	
Recurrence before baseline	1.27 (0.70-2.33)		0.32 (-0.11-0.76)	
Dispersion	---		0.24 (-0.28-0.75)	
Overall Model Sig. – Wald's χ^2 (df)	30.59 (23)		75.70 (24)	
p	0.133		<0.001	

*p<.05; **p<.01; ***p<.001
Note: OR = odds ratio; CI = confidence interval

Although there was no difference between the Forensic Center and comparison groups with regards to experiencing recurrence after baseline, there was a difference in the recurrence rates before and after baseline within each of the two groups (a pre-post test). On the aggregate, the comparison group exhibited a slight, non-significant increase from 16.7% recurrence before baseline to 20.3% after baseline (χ^2 = 0.85, p=0.358; see Table 11). The Forensic Center group,

however, experienced a drop from 42.7% recurrence before baseline to 24.6% after baseline (χ^2 = 14.58, $p < 0.001$).

Additionally, there was no significant difference between the after-baseline recurrence rates for the analysis sample (Table 11) and the cases initiated in the first year of the study. No problems were evident from excluding those cases received during the first year.

Preliminary Cost Effectiveness Outcomes

Mapping the Forensic Center Decision Processes

To prepare for the Cost Study, a decision tree was developed to serve as a framework for understanding the forensic processing of cases. This work identifies key processes and distinguishes the Center from other MDTs. Decision trees, sometime referred to as conceptual maps are powerful knowledge representation tools, useful to inform practice, policy, and further research (Novak, 2004). To map the processes, an iterative approach was used (see Figure 4), in which the evaluation team first mapped decision making during the meeting based on observation. Three investigators independently collected data by observing four meetings each, taking notes on the Center activities. For the next step, they integrated their findings using a strategy called pattern matching to form a draft of the conceptual map of the Center processes. A first opportunity for the Center team's feedback was provided at the Advisory Council meeting in September, 2010. Advisory Council input was helpful and important as the activities represented expertise of multiple disciplines, some of which was not articulated in the draft model. To further refine and validate the conceptual map, in December 2010, core team members were asked to respond to three hypothetical financial exploitation cases. Administration of the survey took place during a routinely scheduled Center meeting, with 14 of 16 (88%) core team members completing the survey. Respondents were asked to identify professionals required to collaborate on each of the hypothetical case examinations and to provide specific case recommendations (see Appendix D: Los Angeles County Elder Abuse Forensic Center Survey – December 2010).

The three hypothetical case vignettes were constructed to collect varied forensic approaches by representing different types of elder financial abuse; in which victims' ages, types of abuse, and living situations were varied. For each scenario, respondents were asked which disciplines should be in attendance to review the case and what actions needed to be implemented. The following are brief synopses of the case vignettes and identified goals provided in the survey:

Case A. Elder (82 years old) with adult son in caregiver role

Center goals: 1) restitution; 2) protection of client's remaining assets

Case B. Vulnerable adult (26 years old) with recent marriage to "new best friend"

Center goals: 1) further investigation of wife's intent; 2) protection of client's welfare

Case C. Elder (92 years old) with financial planner controlling assets

Center goals: 1) prosecution of fraudulent financial planner; 2) protection of client's welfare

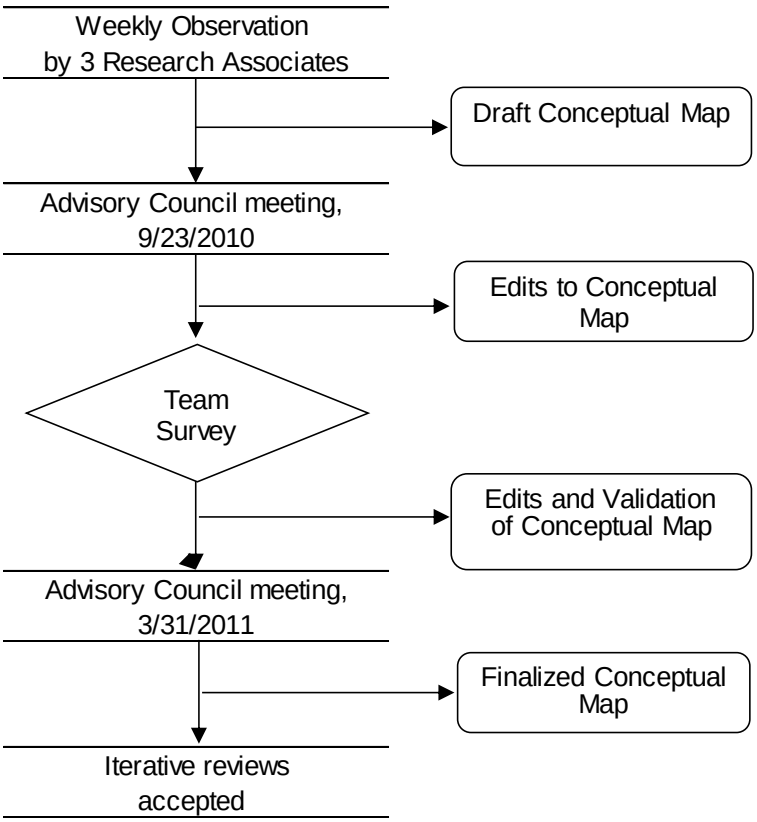


Figure 4. Developing the Conceptual Map

Of the 16 core team members approached for survey, ten members completed the survey during the meeting, two requested more time due to their schedules on the day of administration, and two were contacted after the meeting and subsequently emailed the survey. Two members, despite follow up email reminders, did not complete the survey; however, because other representatives from their agency did complete the survey, all core roles were represented.

Respondents had a mean of 10.8 years of elder abuse experience. They held diverse professional positions; two respondents identified as physicians, three as attorneys (one criminal, two civil), and one as a doctor of neuropsychology. Together respondents represented the fields of health, mental health, social services, gerontology, victim advocacy, law enforcement, civil and criminal law, and guardianship. Several had been participating with the Center since it began in 2006 (mean participation 3.7 years), and the average frequency of attendance was between two and three meetings per month (mean meeting per month 2.6).

Respondents provided a comprehensive list of disciplines needed for each hypothetical case; in most cases indicating their own discipline was needed to hear the case (see Table 13). Disciplines that did not mention their own role were the Center's program manager and the Victim Advocate. The representative from the Office of the Public Guardian was selective regarding his involvement, as Case B might have Regional Center involvement and Case C was an inpatient at a skilled nursing facility; both areas where they have a boundary regarding their role. Because the following participants do not participate as core team members—Ombudsman,

Regional Center, and Coroner—they were not surveyed, which may have decreased their specific representation in the results.

Table 13. Requested Disciplines for Three Vignettes

Vignettes:	A	B	C
		n (%)	
Disciplines:			
Law Enforcement	13 (93)	14 (100)	12 (86)
Adult Protective Services	13 (93)	13 (93)	11 (79)
Neuropsychologist	12 (86)	12 (86)	13 (93)
Physician	11 (79)	4 (29)	10 (71)
Prosecuting Attorney	11 (79)	11 (79)	14 (100)
Public Guardian	10 (71)	7 (50)	7 (50)
Civil Attorney	6 (43)	5 (36)	8 (57)
GENESIS/mental health	2 (14)	5 (36)	0
Ombudsman	0	0	4 (29)
Regional Center	0	11 (79)	0
Coroner	0	0	0

While this speaks to the importance of these team members, it should be recognized that these disciplines are not available in most elder abuse cases (U.S. Government Accountability Office, 2011). Moreover, other resources beyond these core disciplines were also identified as key for some specific types of cases. For example, some respondents noted that an institutionalized elder (Case C) may benefit from the Ombudsman being present (29%). About four out of five (79%) suggested that for some victims, often those who are younger with a disability (Case B), input provided by Regional Center (serving developmentally disabled adults, aged 18 and older) is needed. The mixed response regarding the civil attorney, mental health, and Ombudsman may suggest team members need more training in understanding the remedies these disciplines provide. Request for a specific team member reflects how having a core team that can coordinate and collaborate with additional professionals as needed is central to the activities of the Center. In practice, the Center director seeks to have all core team members in place at each meeting; making specific requests to more specialized team members such as the coroner, Regional Center or Ombudsman, as needed.

The recommendations provided in the survey also show variability. Some respondent's proposals were more interdisciplinary than others, which may reflect their discipline's practice, the specific needs of their role as discussed above or perhaps their level of knowledge about other disciplines and actions aimed at the Center's mission to protect victims. When responses were combined to include input from all the respondents (health, social service and legal) a comprehensive, multidisciplinary set of recommendations developed for each case vignette and was consistent with the conceptual map. Several outcomes specifically relate to the forensic investigation such as conservatorship, or prosecution; therefore when possible the team asks for dates and establishes a timeline in regards to the victim, suspected abuser and the case facts. Photos, medical records, and estate documents are examples of specific evidence the team will review during the case examination. Capacity was often considered to establish the victim's risk and vulnerability within the timeframe that the suspected abuse was thought to occur. With these areas of specific information, the team has concrete information with which to assess whether or

not the issue appears to rise to the level of criminal behavior and if protective actions are required. Based on these responses the conceptual map was modified to reflect survey recommendations and taken back to the Advisory Council for additional feedback in March, 2011 resulting in final refinement based on discussion and input.

The resulting conceptual map (Figure 5) describes the decision process during case review. The process starts with one of the team members receiving the case, starting the investigation, and determining the need to refer to the Center's team for their input and expertise. During the case review there are three themes of data collection: creating a profile of the victim, a profile of the suspected abuser, and determining the factual details of the case. Wherever possible the case details are backed up with documentation, such as bank records and copies of legal documents. Once the team has sufficient information they can begin to analyze the case, answering questions such as: is the victim personally at risk?, are their finances vulnerable?, and has a crime occurred? Many times the answer is unknown and more data is needed such as obtaining documents, or completing a medical or neuropsychological evaluation in the home. In other instances the review determines that no, the elder is not unsafe (personally and financially) and a crime has not occurred, and still supportive options can be provided. When the answer is yes to the analysis questions, protective actions can be taken and this is where the expertise of the team is especially useful in initiating and tracking identified plans, seeing that connections across systems are made, barriers avoided or addressed, ultimately to address the problem and reach a successful outcome.

The steps designed to create this tool can be especially helpful for other Centers to identify how they process cases. In addition, as growing evidence supports the achievement of positive outcomes in Los Angeles County, this conceptual map provides a model of the decisional process of an effective MDT, as they respond to cases of financial abuse. Having a conceptual mapping of the Center decisions also provides the foundation for future research to analyze the costs associated with specific decisions and outcomes, helping to understand and to refine this promising intervention.

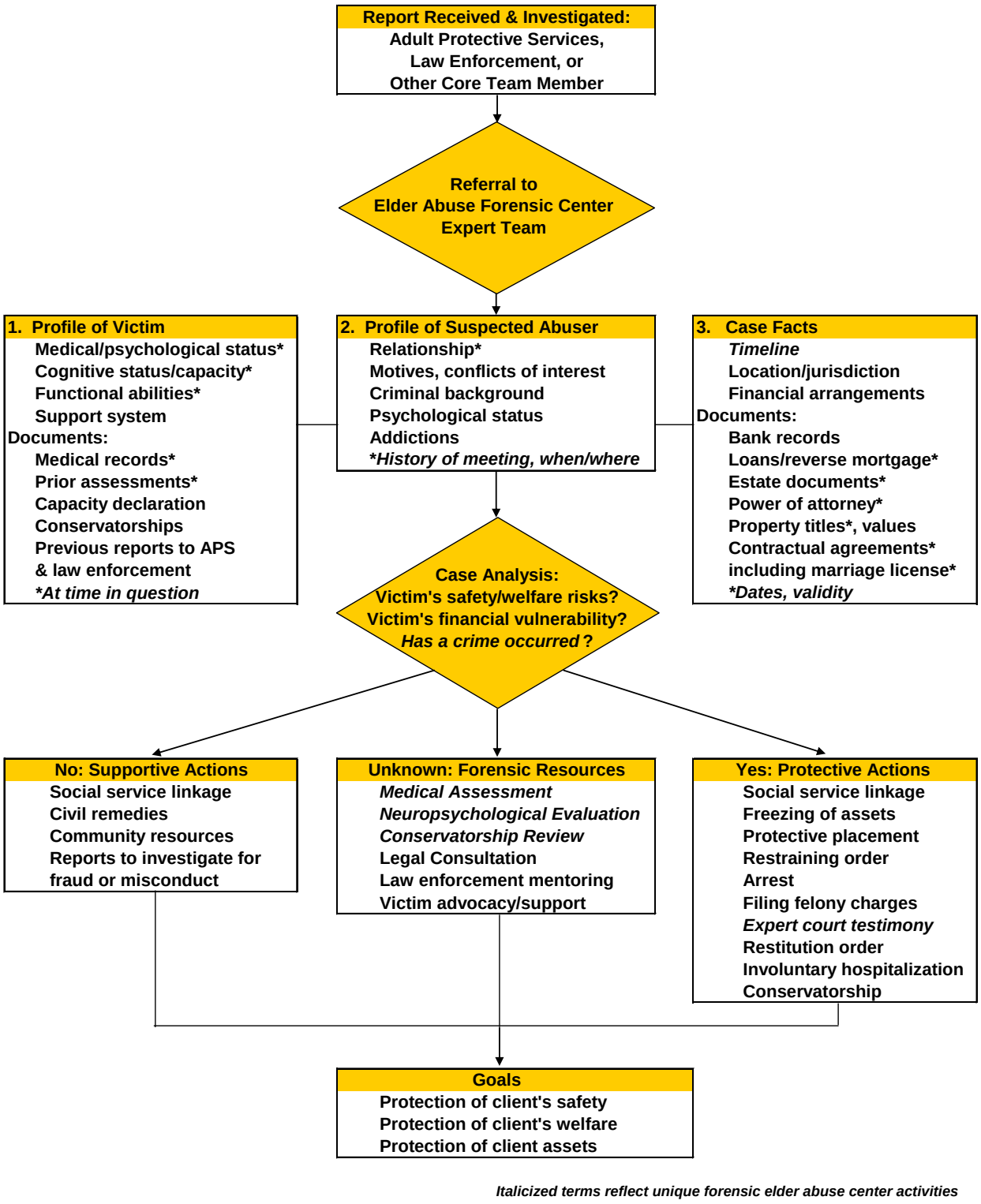


Figure 5. Conceptual Map: Los Angeles County Elder Abuse Forensic Center Decision Processes

CONCLUSIONS

The study's goals were to examine the effectiveness of the Elder Abuse Forensic Center model compared to current usual care practices. Effectiveness was measured in three areas: 1) holding perpetrators accountable through prosecution, 2) improving safety through increased referrals to and assignment of conservatorship, and 3) reducing recurring referrals back to the APS. By these measures, demonstrated outcomes of the Forensic Center study are striking. As noted in the introduction, elder abuse interventions lack an evidence-base—there is little in the evaluation research to inform policy and practice. A meta-analysis of research conducted in 2009 found no evidence that interventions were effective (Ploeg et al., 2009). In contrast, using a rigorous propensity score matching approach, the results from the present study indicated that the elder abuse forensic center model significantly increased prosecution rates and conservatorships for cognitively impaired older adults, and reduced the rate at which cases re-entered the APS system.

This research provides the first rigorously tested empirical evidence that we are aware of that an intervention—an elder abuse forensic center— has improved outcomes for victims of elder abuse, neglect, and financial abuse. The study compared the outcomes of cases heard at the Center to a propensity score matched sample of usual care clients in APS. Data came from APS administrative electronic data as well as data extracted from APS files. These data were linked to outcome records provided by prosecutors and the PG. Finding demonstrated the Center was effective in all three outcome areas. For prosecution, the Los Angeles County Elder Abuse Forensic Center is effective in bringing cases to the DA for review and many of these cases (21.5%) go on to prosecution. This is remarkable in that elder abuse crimes are considered difficult to prosecute and the literature suggests that prosecution is rare (U.S. Government Accountability Office, 2011). Findings were similarly robust when conservatorship was examined. Having a case heard at the Forensic Center increased the odds substantially of referral to the PG. Although the higher number of referrals increased the overall number of cases that resulted in conservatorship (n= 36; 25.3%) compared to usual care (n=5; 2%), the percent of cases referred that were conserved was not significantly different. Evidence for both prosecution and conservatorship show that the higher numbers of referrals accounted for the difference rather than a higher proportion of referred cases that were prosecuted or conserved (i.e., both the intervention and usual care showed a similar proportion of those referred to those who achieved the outcome).

There is a high bar for both prosecution and conservatorship in Los Angeles County. The use of an MDT approach for complex elder abuse cases has received strong support in the literature for two decades. The positive outcomes demonstrated in this study show that this interest is supported by evidence that the Center's MDT approach is effective.

Perhaps the most striking finding from this study is the Center's role in reducing recurring cases. Although elder abuse cases may be challenging and difficult to resolve, there has been little examination of the important problem of repeat cases in the literature. While it is possible that some of the difference in prosecution and conservatorship outcome is a result of higher referrals to the Center for these problems, the recurrence data is based on the difference from baseline such that each condition (Center versus usual care) is compared to the change in its own rate. The Center had a significantly higher proportion of recurring cases—more than twice the number in the usual care sample. And the Center cases had significantly higher numbers of cases filed in the year before baseline. Despite this, Center recurring cases were significantly

reduced ($p< 0.01$). Future research and next steps should include examining the role of various Center processes (prosecution, conservatorship, and additional services) in the reduction in repeat cases. It will also be instructive to examine some of the outlier cases of extremely high recurrence to determine the Center's impact in those highly complex cases.

Forensic Centers were identified in the Elder Justice Act; the legislation authorizes $26 million to develop stationary and mobile Elder Abuse Forensic Centers. This research suggests that in all three areas examined, this model offers a viable and promising approach to addressing a complex problem. The research supports the replication of the model in other communities and offers these communities tools identified as core components. As the nation wrestles with elder abuse, neglect, and abuse, the Elder Justice Act stands poised and ready for funding to expand the Elder Abuse Forensic Center initiative. This research suggests that funding for the expansion of Elder Abuse Forensic Centers may result in outcomes that protect victims and prevent and reduce elder abuse. Future research should test these results in other Forensic Centers.

Implications for Further Research

Building on the research conducted for this study, a cost analysis is now underway to identify cost outcomes associated with the model. The assumption is that improved coordination and collaboration will reduce costs but this may be offset with higher costs to provide prosecution and conservatorship services. The high costs of some of the recurring cases, however, may offer an additional cost reduction opportunity.

A second area of research involves identifying how to better target cases to ensure that the Center's resources are being used most effectively. One approach is to use a risk assessment to develop an algorithm that can be used identify the cases in greatest potential benefit from resources.

A third area of research is in translation. Translational research examines what happens when an efficacious model is replicated in different settings. This research was conducted in one Center in a large urban area. Future studies should test these findings in other Forensic Centers. The research question here is how well are other programs able to adhere to fidelity of the structure and process and what outcomes result in different contexts. For example, Los Angeles is a populous and geographically large area. Other contextual areas, such as California's mandatory reporting for bank employees and the relatively small amount of resources devoted to law enforcement, were not addressed. Other Centers may have different experiences based on the legal, policy, and cultural variations they encounter. In addition, as indicated in the Elder Justice Act, different Center models may be developed including mobile programs. The present study focused on a Center that serves a large population—Los Angeles County is home to about 10 million residents—and a large geographic area that is bigger than many states. The Center included use of remote access; however, the program did not have a mobile component per se.

A fourth area of research is to query victims of elder abuse who are served by the forensic center compared to usual care to explore how they experience the problem, what they perceive to be effective remedies, and how they assess the results of the intervention. It is important to recognize that the outcome measures used (prosecution, conservatorship, and recurrence), while important do not in themselves reflect the ultimate goals of improved well-being and better quality of life for victims. While it can be assumed that reductions in recurrence in particular have positive impacts on victims, future research should examine the Forensic Center's role in addressing elder abuse from the perspective of the victim.

In addition to these areas, conducting additional studies that build on and expand this first evaluation effort is important. We believe that increasing use of electronic data in APS including Los Angeles County offers the possibility to do matching based on additional measures. In addition refinement of measurement as discussed earlier should facilitate standardized measured to enhance the propensity score matching.

This study was one of the first to examine recurring cases and the first to look at how an intervention affected recurrence. Much more work needed. Given the crisis rather than long term approach required of APS, recurring cases are common and appear to comprise about one-quarter of all cases. This is costly to the system and to clients who cases are not addressed. Triaging complex cases to a Forensic Center MDT offers an effective approach to move the cases toward resolution and reduce the revolving door of recurring cases. More research needs to be done on what processes and professionals account for the outcome as well as how the Center can continue to move the needle on reducing recurrence. In addition, it will be instructive to look at the types of cases that seem particularly intractable and work on the development of approaches to positively impact these cases.

Finally, more research is needed on the development of forensic evidence including risk factors and markers of abuse. Initial work on bruising offers a first important step (Wiglesworth, Austin, Corona, et al., 2009).

Limitations

As with all research several limitations exist that should be considered when interpreting the results. The study relied on administrative data collected for APS linked to administrative records from the district attorney and public guardian. These data were collected for purposes other than for research. Related to these data sources, an unexpected issue was the occurrence of database system changes by the Los Angeles County APS. Two separate efforts to improve upon the APS data system occurred in the five years involved with this research (2006-2011). Just over one quarter of the initial year in the study period (January 1 to April 15, 2007) could not be collected for matching to Center cases. With the large sample of APS cases, however, this problem did not deter the matching of appropriate cases. Although the second system update occurred after the study period, its implementation created added strain for APS data managers who were involved in the effort to develop the research data set for matching. It is important to recognize that the strong support of Los Angeles County in assisting with the data collection was essential to completing the study. File preparation, including redacting all identifying information was very time consuming and labor intensive. Because this effort took far more time than anticipated and was not completed until June 30, 2013, the research team had less time than necessary to fully examine and understand the recurrence data that was extracted from these references. The County utilizes an administrative data system for some of its data and is moving toward full electronic records but these records were not completed in time for this research. In future studies electronic records should make the transmission of anonymous data easier.

A second limitation is that case referral to the Center is based on individual decisions of frontline workers and their supervisors. Thus, it is not clear that the cases that most needed attention were referred. APS administrators have indicated that many more cases would benefit from the intervention, yet there are disincentives for workers to bring cases. For an APS worker the intervention itself can be time consuming to present the case at the Center and with added recommendations that need to be addressed can create the need for the case to remain open for a longer period of time, despite administrative encouragement to close cases quickly due to high

case loads. Going forward there needs to be a focus to see that appropriate cases, ones that could benefit from being heard by the Center team, all have access to the intervention and that the intervention is as efficient and supportive for APS workers as possible. A possible approach is to build on the use of an MDT with Intimate Partner Violence (Snyder, 2013) to develop a risk-assessment based algorithm to guide the section of cases to refer.

A related concern in terms of the nature of the cases is not that the cases were poorly targeted. Rather the opposite concern should be considered. This is the possibility that findings were skewed because cases were brought to the Forensic Center that were in need of prosecution and/or conservatorship. It is likely that the propensity score matching did not adequately account for this. As discussed earlier, it is also important to recognize the possibility of other unmeasured differences in the propensity score matching. Nevertheless, through the advisory council and interviews with presenters, it was made clear that getting a case to prosecution in Los Angeles, as in other areas (U.S. Government Accountability Office, 2011) is difficult and rare. The direct involvement of prosecutors and law enforcement facilitated this outcome. Similarly, the path to conservatorship referral is difficult and access to the PG representative made such a referral more likely. Moreover, given the strong findings, it is appears that having access to the team to discuss and problem solving cases resulted in the higher rates.

A final limitation is that the study was conducted in one Center. This Center had strong representation, commitment, and involvement. Attendance of core members was over 83-84% during the study period; the DA attended all but one meeting (Navarro et al., 2010). Members consistently ranked team effectiveness as very high as did presenters. Those seeking to replicate the model should adhere to the identified structure and process to ensure similar outcomes. Moreover, the positive outcomes can be linked to the commitment of the team members. At a recent advisory committee meeting, members of another Center sought advice on how to more fully engage their DA to pursue cases brought to the Center. It is important to recognize that the Los Angeles Center team was highly committed to the outcomes and highly invested in participation.

REFERENCES

Acierno, R., Hernandez-Tejada, M., Muzzy, W., & Steve, K. (2009). *Final report: National Elder Mistreatment Study*. Washington, DC: National Institute of Justice.

Acierno, R., Hernandez, M. A., Amstadter, A. B., Resnick, H. S., Steve, K., Muzzy, W., et al. (2010). Prevalence and correlates of emotional, physical, sexual, and financial abuse and potential neglect in the United States: The National Elder Mistreatment Study. *American Journal of Public Health, 100*(2), 292-297.

Austin, P. C. (2009). Balance diagnostics for comparing the distribution of baseline covariates between treatment groups in propensity-score matched samples. *Statistics in Medicine, 28*(25), 3083–3107.

Bonnie, R. J., & Wallace, R. B. (Eds.). (2003). *Elder mistreatment: Abuse, neglect, and exploitation in an aging America.* Washington, DC: The National Academies Press.

Braitman, L. E., & Rosenbaum, P. R. (2002). Rare outcomes, common treatments: Analytic strategies using propensity scores. *Annals of Internal Medicine,* 137(8), 693-695.

Brandl, B., Bitondo Dyer, C., Heisler, C. J., Marlatt Otto, J., Stiegel, L. A., & Thomas, R. W. (2007). *Elder abuse detection and intervention: A collaborative approach.* New York, NY: Springer Publishing Company, LLC.

Breaux, J. B., & Hatch, O. G. (2003). Confronting elder abuse, neglect, and exploitation: The need for elder justice legislation. *The Elder Law Journal, 11*(1), 207-211.

Comijs, H. C., Pennix, B. W. J. H., Knipsheer, K. P. M., & Tilburg, W. (1999). Psychological distress in victims of elder mistreatment: The effects of social support and coping. *Journal of Gerontology: Psychological Sciences, 54B*(4), P240-P245.

Community and Senior Services. (2011). Los Angeles County, Adult Protective Services website. Retrieved April 1, 2011, from http://css.lacounty.gov/aps-program-services.aspx

Connolly, M. T. (2010). Where elder abuse and the justice system collide: Police power, parens patriae, and 12 recommendations. *Journal of Elder Abuse & Neglect, 22,* 37-93.

Conrad, K.J., Iris, M., Ridings, J.W., Fairman, K.P., Rosen, A., & Wilber, K.H. (2011). Conceptual model and map of financial exploitation of older adults. *Journal of Elder Abuse & Neglect, 23*(4), 304-325. DOI: 10.1080/08946566.2011.584045

Conrad, K.J., Iris, M., Ridings, J.W., Langley, K., & Anetzberger, G.J. (2011). Self-report measure of psychological abuse of older adults. *The Gerontologist, 51*(3), 354-366. doi:10.1093/geront/gnq103

Conrad, K.J., Iris, M., Ridings, J.W., Langley, K., Wilber, K.H. (2010). Self-report measure of financial exploitation of older adults. *The Gerontologist, 50*(6), 758-773, doi: 10.1093/geront/gnq054

Conrad, K.J., Iris, M., Ridings, J.W., Rosen, A., Fairman, K.P., & Anetzberger, G.J. (2011). Conceptual model and map of psychological abuse of older adults. *Journal of Elder Abuse & Neglect, 23*(2), 147-168. DOI: 10.1080/08946566.2011.558784

Cooper, C., Selwood, A. & Livingston, G. (2008). The prevalence of elder abuse and neglect: A systematic review. *Age and Ageing, 37*(2), 151-160.

D'Agostino, R. B. (1998). Tutorial in biostatistics propensity score methods for bias reduction in the comparison of a treatment to a non-randomized control group. *Statistics in Medicine, 17*, 2265-2281.

Dressin, C. L. (2000). Financial abuse of the elderly. *Idaho Law Review, 36*, 203-226.

Dong, X., and Simon, M. A. (2011). Enhancing national policy and programs to address elder abuse. *Journal of the American Medical Association, 305*(23), 2460-2461.

Elder Justice Act of 2009, 42 U.S.C. § 2031 (2010).

Fonarow, G. C., Albert, N. M., Curtis, A. B., Gheorghiade, M., Liu, L., Mehra, M. R., et al. (2012). Incremental reduction in risk of death associated with use of guideline-recommended therapies in patients with heart failure: A nested case-control analysis of IMPROVE HF. *Journal of the American Heart Association, 1*(1), 16-26.

Forensic. 2011. In *Merriam-Webster.com*. Retrieved July 25, 2011 from http://www.merriam-webster.com/dictionary/forensic

Guo, S., & Fraser, M. (2010). *Propensity score analysis: Statistical methods and applications*. Thousand Oaks, CA: Sage Publications, Inc.

Heisler, C. J. (2000). Elder abuse and the criminal justice system: New awareness, new responses. *Generations, 24*(2), 52-58.

Helie, S., and Bouchard, C. (2010). Recurrent reporting of child maltreatment: State of knowledge and avenue for research. *Children and Youth Services Review, 32*, 416-422.

Hwalek, M. A., & Sengstock, M. C. (1986). Assessing the probability of abuse of the elderly: Toward development of a clinical screening instrument. *Journal of Applied Gerontology, 5*, 153-173.

Iris, M., Ridings, J.W., & Conrad, K.J. (2010). The development of a conceptual model for understanding elder self-neglect. The Gerontologist, 50(3), 303-315, doi: 10.1093/geront/gnp125

Jackson, S., & Hafemeister, T. L. (2010). *Financial abuse of elderly people vs. other forms of elder abuse: Assessing their dynamics, risk factors, and society's response*. Washington, DC: National Institute of Justice, No. 2006-WG-BX-0010.

Johnson-Reid, M., Chung, S., Way, I., & Jolley, J. (2010). Understanding service use and victim patterns associated with re-reports of alleged maltreatment perpetrators. *Children and Youth Services Review, 32*, 790-797.

Jonson-Reid, M., Drake, B., Chung, S., & Way, I. (2003). Cross-type recidivism among child maltreatment victims and perpetrators. *Child Abuse & Neglect, 27*, 899-917.

Keith, P. M., & Wacker, R. R. (1994). *Older wards and their guardians.* Westport, CT: Praeger Publishers.

Kim, M.-H., Kim, C., Park, J.-K., & Kawachi, I. (2008). Is precarious employment damaging to self-rated health? Results of propensity score matching methods, using longitudinal data in South Korea. *Social Science & Medicine, 67*(12),1982–1994.

Kuipers, E., Holloway, F., Rabe-Hesketh, S., Tennakoon, L. (2004). An RCT of early intervention in psychosis: Croydon Outreach and Assertive Support Team (COAST). *Social Psychiatry and Psychiatric Epidemiology, 39*, 358-363.

Lachs, M.S., Williams, C. S., O'Brien, S., Pillemer, K. A., & Charlson, M. E. (1998). The mortality of elder mistreatment. *The Journal of the American Medical Association, 280*(5), 428-432.

Laumann, E. O., Leitsch, S. A., & Waite, L. J. (2008). Elder mistreatment in the United States: Prevalence estimates from a nationally representative study. *The Journals of Gerontology: Series B, 63*(4), S248-S254.

McNair, A. G. K., Choh, C. T. P., Metcalfe, C., Littlejohns, D., Barham, C. P., Hollowood, A., et al. (2008). Maximising recruitment into randomised controlled trials: The role of multidisciplinary cancer teams. *European Journal of Cancer, 44*(17), 2623-2626.

McNamee, C., & Mulford, C. (2007). *Innovations assessment of the Elder Abuse Forensic Center of Orange County, California*. Washington, DC: U.S. Department of Justice.

The National Academies Committee on National Statistics. (2010). *Meeting on Research Issues in Elder Mistreatment and Abuse and Financial Fraud.* Retrieved September 29, 2013 from http://www.nia.nih.gov/sites/default/files/meeting-report_1.pdf

Navarro, A. E, Wilber, K. H., Yonashiro, J. Y., & Homeier, D. C. (2010). Do we really need another meeting? Lessons from the Los Angeles County Elder Abuse Forensic Center. *The Gerontologist, 50*(5), 702-711. doi:10.1093/geront/gnq018

Novak, J. D. (2004). Reflections on half a century of thinking in science education and research: Implication from a twelve-year longitudinal study of children's learning. *Canadian Journal of Science, Mathematics, and Technology Education, 4*(1), 23–41.

Parsons, L. S. (2004). Performing a 1:N case-control match on propensity score (Paper No. 165-29). In *Proceedings of the twenty-ninth annual SAS® Users Group International conference*. Cary, NC: SAS Institute Inc.

Pillemer, K., & Finkelhor, D. (1988). The prevalence of elder abuse: A random sample survey. *The Gerontologist, 28*(1), 51-57.

Ploeg, J., Fear, J., Hutchison, B., MacMillan, H., & Bolan, G. (2009). A systematic review of interventions for elder abuse. *Journal of Elder Abuse & Neglect, 21*(3), 187-210.

Podnieks, E. (1992). Emerging themes from a follow-up study of Canadian victims of elder abuse. *Journal of Elder Abuse and Neglect, 4*, 59-111.

Quinn, M. J. (2005). *Guardianship of adults: Achieving justice, autonomy, and safety*. New York: Springer Publishing Company.

Reuben, D.B. (2002). Organizational interventions to improve health outcomes of older persons. *Medical Care, 40*(5), 416-428.

Rosenbaum, P. R., & Rubin, D. B. (1985, February) Constructing a control group using multivariate matched sampling methods that incorporate the propensity score. *The American Statistician, 39*(1), 33-38.

Schneider, D. C., Mosqueda, L., Falk, E., & Huba, G. J. (2010). Elder abuse forensic centers. *Journal of Elder Abuse & Neglect, 22*(3-4), 255-274.

Schofield, M. J., & Mishra, G. D. (2003). Validity of self-report screening scale for elder abuse: Women's Health Australia Study. *The Gerontologist, 43*(1), 110-120.

Simon, M. L., (1992). *Exploratory Study of Adult Protective Services Programs Repeat Elder Abuse Clients*. National Criminal Justice Reference Service, AARP, NCJ #139398.

Snyder, R. L. (2013, Jul 22). A raised hand: Annals of prevention. *The New Yorker, 89*: 34-n/a. Retrieved from http://search.proquest.com/docview/1411096474?accountid=1474

Spensley, C., (2008). The role of social isolation of elders in recidivism of self-neglect cases at San Francisco Adult Protective Services. *Journal of Elder Abuse and Neglect, 20*(1), 43-61.

Teaster, P. B., Nerenberg, L., & Stansbury, K. L. (2003). A national look at elder abuse multidisciplinary teams. *Journal of Elder Abuse and Neglect, 15*(3), 91-107.

Teaster, P. B., & Wangmo, T. (2010). Kentucky's local Elder Abuse Coordinating Councils: A model for other states. *Journal of Elder Abuse and Neglect, 22*(1-2), 191-206, doi: 10.1080/08946560903446063

Thoemmes, F. J., & Kim, E. S. (2011). A systematic review of propensity score methods in the social sciences. *Multivariate Behavioral Research, 46*(1), 90-118.

U.S. Government Accountability Office. (2010). *Guardianships: Cases of financial exploitation, neglect, and abuse of seniors*. Retrieved September 29, 2013 from http://www.gao.gov/products/GAO-10-1046

U.S. Government Accountability Office. (2011). *Elder justice: Stronger federal leadership could enhance national response to elder abuse*. Retrieved April 25, 2011 from http://www.gao.gov/products/GAO-11-208

Vohr, B. R., Stephens, B. E., Higgins, R. D., Bann, C. M., Hintz, S. R., Das, A., et al. (2012). Are outcomes of extremely preterm infants improving? Impact of Bayley Assessment on outcomes. *The Journal of Pediatrics, 161*(2), 222-228.

Wiglesworth, A., Austin, R., Corona, M., Schneider, D. Liao, S., Gibbs, L., and Mosqueda, L. (2009). Bruising as a marker of physical elder abuse. *Journal of the American Geriatrics Society 57*:1191–1196.

Wiglesworth, A., Mosqueda, L., Burnight, K., Younglove, T., & Jeske, D. (2006). Findings from an elder abuse forensic center. *The Gerontologist, 46*(2), 277-283.

Wilber, K. H., Reiser, T. & Harter, K. (2001). New perspectives on conservatorship: Views of older adult conservatees and their conservators. *Aging, Neuropsychology, and Cognition, 8*, 225-240.

Wolf, R. S., & Pillemer, K. (1994). What's new in elder abuse programming? Four bright ideas. *The Gerontologist, 34*(1), 126-129.

DISSEMINATION OF RESEARCH FINDINGS

Publications, Conference Papers, and Presentation

Journal publications

Print version:

- Navarro, A. E., & Wilber, K. H. (2010). Elder financial abuse: outcomes using a multidisciplinary team. Gerontological Society of America Annual Meeting. Published. Acknowledgement of federal support: not in abstract, but included in presentation.
- Navarro, A. E., Wilber, K. H., & Homeier, D. C. (2011). Improving outcomes for victims of financial exploitation: The effect of an elder abuse forensic center. Gerontological Society of America Annual Meeting. Published. Acknowledgement of federal support: not in abstract but included on poster.
- Wysong, J. M., Gassoumis, Z. D., & Wilber, K. H. (2011). Why do they keep coming back? An examination of recidivism of elder abuse within adult protective services. Gerontological Society of America Annual Meeting. Published. Acknowledgement of federal support: not in abstract, but included in presentation.
- Navarro, A. E., Gassoumis, Z. D., & Wilber, K. H. (2012). Holding abusers accountable: An elder abuse forensic center increases criminal prosecution of financial exploitation. Gerontological Society of America Annual Meeting. Published. Acknowledgement of federal support: not in abstract, but included in presentation.
- Navarro, A. E., Gassoumis, Z. D., & Wilber, K. H. (2012). Protecting victims of financial exploitation: The effect of an elder abuse forensic center. Gerontological Society of America Annual Meeting. Published. Acknowledgement of federal support: not in abstract, but included on poster.
- Wysong, J., Gassoumis, Z. D., Cho, J. Y., & Wilber, K. H. (2012). Slowing the revolving door: The effect of an elder abuse multidisciplinary team on APS recidivism. Gerontological Society of America Annual Meeting. Published. Acknowledgement of federal support: not in abstract, but included on poster.
- Wysong, J., Riparetti-Brown, M., & Wilber, K. H. (2012). Inside the black box of multidisciplinary team process: Managing conflict and agreement. Gerontological Society of America Annual Meeting. Published. Acknowledgement of federal support: not in abstract, but included on poster.
- Navarro, A. E., Gassoumis, Z. D., & Wilber, K. H. (2013). Holding abusers accountable: An elder abuse forensic center increases criminal prosecution of financial exploitation. *The Gerontologist, 53*(2), 303-312. Acknowledgement of federal support: yes.

Books or other non-periodical, one-time publications

Nothing to Report

Other publications, conference papers and presentations

- Homeier, D. (04/29/2010). Participated in a panel presentation to the California Statewide Elder Abuse Summit. The focus of this presentation was to clarify what an elder abuse forensic center does, providing an overview and case examples of how the Center impacts vulnerable adult victims of abuse. San Francisco, CA.

- Navarro, A. E. (04/29/2011). *Striking back: Promising practices to combat financial abuse and exploitation.* Presented at the American Society of Aging conference, San Francisco, CA.
- Navarro, A. E., & Wilber, K. H. (10/03/2011). *Evaluation of an elder abuse forensic center: The Los Angeles County elder abuse forensic center.* Presented to the Elder Abuse Forensic Centers of California. Acknowledgement of federal support: yes
- Wysong, J. (03/29/2012). *Effectiveness of the elder abuse forensic center*. Presented to the Los Angeles County Adult Protective Services, Los Angeles, CA Acknowledgement of federal support: yes.
- Navarro, A. E. (03/31/2012). *Strength beyond numbers: Multidisciplinary teams combat elder financial abuse.* Presented at the annual meeting of American Society on Aging. Acknowledgement of federal support: yes.
- Wysong, J. (05/23/2012). *Measuring multidisciplinary team effectiveness*. Presented to the Ventura County Financial Abuse Specialist Team (FAST). Acknowledgement of federal support: yes.
- Wysong, J. (05/31/2012). *Effectiveness of the elder abuse forensic center.* Presented to the California Four-site Elder Abuse Forensic Center Convening. Acknowledgement of federal support: yes.
- Yonashiro-Cho, J. M., Wilber, K. H., & Gironda, M. W. (09/11/2012). *The elder abuse forensic center: A multi-disciplinary approach to elder mistreatment.* Presented at the Hawaii Pacific Gerontological Society Biennial Conference, Honolulu, HI Acknowledgement of federal support: yes.
- Yonashiro-Cho, J., & Wilber, K. (10/04/2012*). The Los Angeles County Elder Abuse Forensic Center*. Presented at the Los Angeles County Elder Abuse Forensic Center's 2012 retreat. Acknowledgement of federal support: yes.
- Gassoumis, Z. D., Yonashiro-Cho, J. M., Wu, Q. F., & Wilber, K. H. (06/06/2013). *Evaluating the Elder Abuse Forensic Center model*. Presented to the project's Advisory Committee. Acknowledgement of federal support: yes.
- Young, A., & Yonashiro Cho, J. (06/12/2013). *Los Angeles Elder Abuse Forensic Center*. Presented to San Bernardino County's elder abuse multidisciplinary team. Acknowledgement of federal support: yes.
- Navarro, A. E., & Wilber, K. H. (01/24/2014). *Prosecution of financial exploitation cases: Lessons from an elder abuse forensic center*. Presented as a webinar to 397 attendees, sponsored by the National Adult Protective Services Association. Acknowledgement of federal support: yes.
- Navarro, A. E. (2014). *Research to practice brief: Holding abusers accountable: An elder abuse forensic center increases criminal prosecution of financial exploitation*. Washington, DC: National Adult Protective Services Association. Announced 01/31/2014 via the National Center on Elder Abuse (NCEA) ElderAbuse listserve. Acknowledgement of federal support: no.

Website(S) or Other Internet Site(s)
Nothing to Report

Technologies or Techniques
Nothing to Report

Inventions, Patent Applications, and/or Licenses
Nothing to Report

Other Products
Nothing to Report

APPENDICES

Appendix A. Tool Kit Cover Sheet

Throughout the course of this study, we have developed tools and products that we thought would be useful to other programs interested in replicating our evaluation. These tools will be posted to our website, currently under development, and are made available throughout this report.

1) *Conceptual Framework Figure* (Figure 1)
   Depicts the Center structure and flow.

2) *Logic Model* (Appendix B)
   Describes the Center's input, outputs, and outcomes.

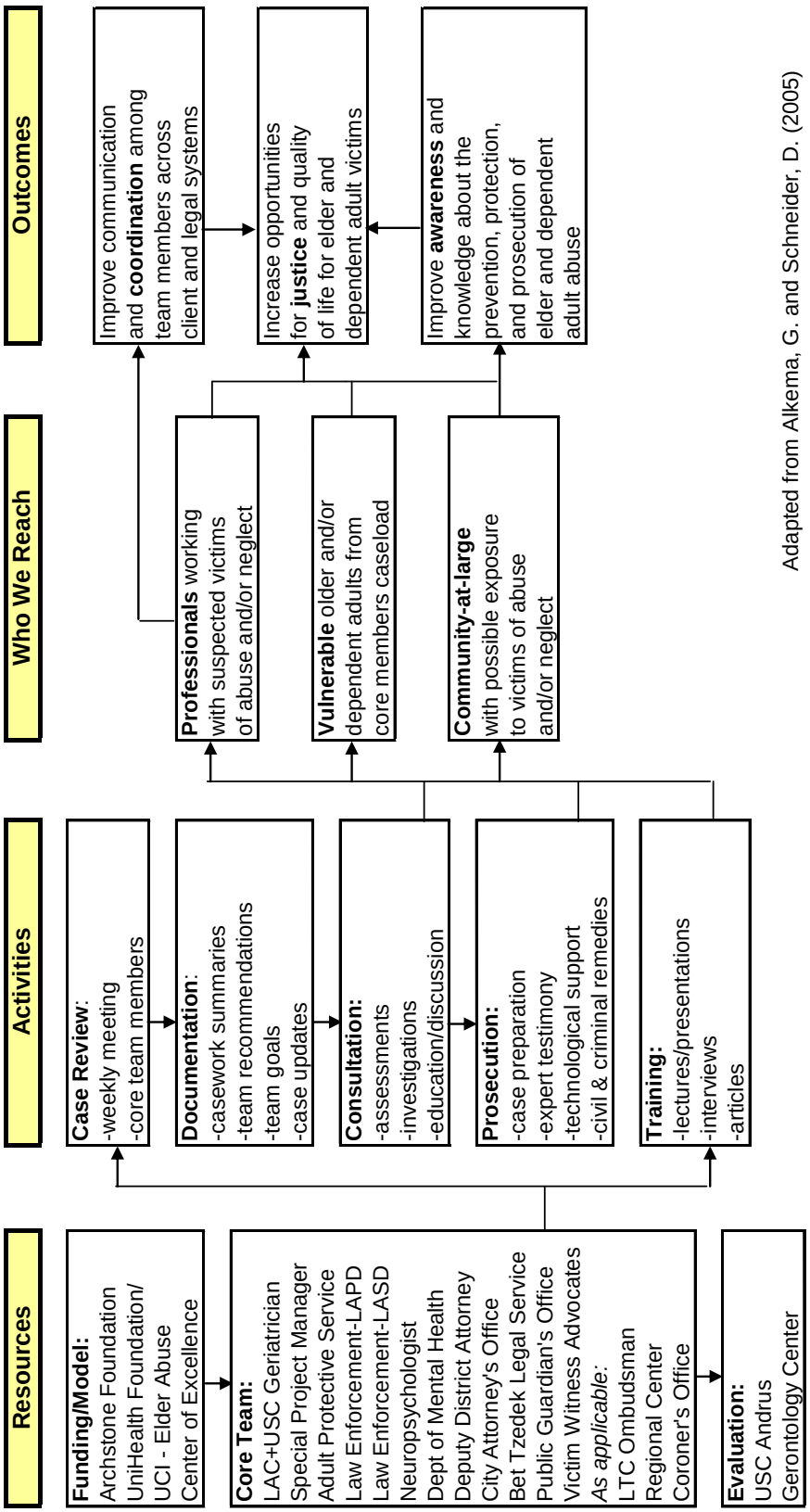
3) *Conceptual Map of Decision Processes* (Figure 5)
   Depicts the decisions made as cases proceed through the forensic process.

4) *Team Effectiveness Survey* (Appendix C)
   Team member's assessment of how effectively the team is functioning globally and in specific areas (e.g., leadership, roles, opportunities for input, expertise, goals setting, communication, culture).

5) *Los Angeles County Elder Abuse Forensic Center Survey* (Appendix D)
   This survey is designed to clarify the case review process from the perspective of the core team members routinely attending meetings.

6) *Information Management Database* (Appendix E)
   Describes the information used to track cases through the Forensic Center.

Appendix B. Logic Model



Adapted from Alkema, G. and Schneider, D. (2005)

Appendix C. Team Effectiveness Survey

Please check the box that best describes how long you have been on this team:

☐ 1-3 meetings ☐ 4-6 meetings ☐ 6-10 meetings ☐ 11 or more meetings

TEAM EFFECTIVENESS INVENTORY

Using the scale below, circle the number that corresponds with your assessment of the extent to which each statement is true about your team:

5=strongly agree, 4=agree, 3=neutral, 2=disagree, 1=strongly disagree

1	Everyone on my team knows why our team does what it does.	5	4	3	2	1
2	The facilitator consistently lets the project members know how we are doing in accomplishing the process.	5	4	3	2	1
3	Everyone on my team has significant say or influence on the team's decisions.	5	4	3	2	1
4	If outsiders were to describe the way we communicate within our team, they would use such words as "open", "honest", "timely", and "two-way".	5	4	3	2	1
5	Team members have the skills and knowledge to contribute to the task we have been assigned.	5	4	3	2	1
6	Everyone on this team knows and understands the team's priorities	5	4	3	2	1
7	As a team, we work together to set clear, achievable, and appropriate goals.	5	4	3	2	1
8	I would rather have the team decide how to do something rather than have the team leader give step-by-step instructions.	5	4	3	2	1
9	As a team, we are able to work together to overcome barriers and conflicts rather than ignoring them.	5	4	3	2	1
10	The role each member of the team is expected to play is well-designed and makes sense to the whole team.	5	4	3	2	1

11	If my team does not reach a goal, I am more interested in finding out why we have failed to meet the goal than I am in reprimanding the team members.	5	4	3	2	1
12	The team has so much ownership of the work that, if necessary, we would offer to stay late to finish the job.	5	4	3	2	1
13	The team environment encourages every person on the team to be open and honest, even if people have to share information that goes against what some of the team members would like to hear.	5	4	3	2	1
14	There is a good complementarity between the capabilities and responsibilities of everyone on the team	5	4	3	2	1
15	Everyone on the team is working toward the larger mission of the Center.	5	4	3	2	1
16	The team has the support and resources it needs to meet the goals expected of it.	5	4	3	2	1
17	The team knows as much about what is going on in the organization as the facilitator does, because the facilitator always keeps everyone up-to-date.	5	4	3	2	1
18	The team process shows that everyone on the team has something to contribute- such as knowledge, skills, abilities, and information- that is a value to all.	5	4	3	2	1
19	Team members clearly understand the team's unwritten rules of how to behave within the group.	5	4	3	2	1
20	The physical plant suggests and promotes team interaction.	5	4	3	2	1
21	The team is supportive and provides essential mentoring for new people.	5	4	3	2	1
22	Overall, at this point in time, how effective is this team at meeting its goals?	5	4	3	2	1

I have filled out this form before: ☐Yes ☐No *Please check one.*

Comments:

Appendix D. Los Angeles County Elder Abuse Forensic Center Survey – December 2010

Los Angeles County Elder Abuse Forensic Center
Survey – December 2010

This survey is designed to clarify the case review process from the perspective of the core team members routinely attending meetings. Please complete each section and return to the USC Evaluation Team.

I. Information about you:

1. Affiliation:

□ APT/Geriatrician	□ Neuropsychologist	□ Regional Center
□ Adult Protective Services	□ Los Angeles Police Dept	□ Ombudsman
□ Public Guardian	□ Los Angeles Sheriff Dept	□ Coroner/Medical Examiner
□ GENESIS/DMH	□ City Attorney	□ _____
□ District Attorney	□ Civil Attorney	

2. Years in this position: _____

3. Years working with elder abuse, neglect and exploitation: _____

4. Years attending the Forensic Center meetings: _____

5. In general my attendance at Forensic Center meetings:

□ 1 – 12 times a year
□ 13 – 24 times a year
□ 24 – 36 times a year
□ more than 36 times a year

II. Case scenarios (A, B, C) – please read each case scenario and answer the questions that follow:

Case A - Mabel & son

- 82 year-old Caucasian female, has no physical impairment but doesn't remember the social worker from one visit to another.
- Son lives with the client, is unemployed, and the neighbors state he has a history of alcohol abuse.
- Son convinced client to get a reverse mortgage on her home, to pay off deferred home maintenance, and offered to manage the finances and repairs.
- Bank reported the case to APS after the son received checks with a total amount of around $200,000. He refuses to give the Adult Protective Services social worker an accounting of this money.

- Client knows about the reverse mortgage and says she trusts her son with her finances. She was not aware of the checks that the son received.
- Case presenter is bringing this to the team for help getting the money back to the client and protecting her assets from future loss.

Questions (A):

A1. Who needs to provide input on this case presentation?

□ Physician	□ Neuropsychologist	□ Regional Center
□ Adult Protective Services	□ Law Enforcement	□ Ombudsman
□ Public Guardian	□ Civil Attorney	□ Coroner/Medical Examiner
□ Mental Health	□ Prosecuting Attorney	□ _____

_____

A2. What, if any, additional information would be important to know? Please list up to five (5) questions you would ask the case presenter:

_____

_____

_____

_____

A3. Please list the information or evidence that would be necessary to move the case toward the presenter's goal of restitution and future protection of assets:

_____

_____

_____

_____

A4. What additional goals or concerns do you have?

_____

_____

_____

_____

Case B – Lou & new wife

- 26 year old Hispanic male who lives in the home he grew up in, his parents have been deceased for nearly 3 years, the home is in an upscale neighborhood.
- Client presents well, but reportedly has a low IQ (70) and some difficulty recalling the sequence of recent events.
- Neighbor has been checking in on client and became aware of a new friend who suddenly has become his wife and has moved in with client. The client has no known remaining family.
- Client's savings account funds have been withdrawn over $100,000 in 3 months. When client is asked where the money has gone, he responds that he bought his wife a new car so that she can drive him places.
- She is in her mid-20s with no known criminal history, but is not cooperative with APS when they visit.
- Bank tellers noticed that the client's wife was hiding the amount of withdrawal from him; however, the bank manager will not turn over any account documentation to the Adult Protective Services worker.
- The case presenter thinks that the wife is taking advantage of him and wants to know if there's anything that should be done.

Questions (B):

B1. Who needs to provide input on this case presentation?

□ Physician	□ Neuropsychologist	□ Regional Center
□ Adult Protective Services	□ Law Enforcement	□ Ombudsman
□ Public Guardian	□ Civil Attorney	□ Coroner/Medical Examiner
□ Mental Health	□ Prosecuting Attorney	□ _____

_____

B2. What, if any, additional information would be important to know? Please list up to five (5) questions you would ask the case presenter:

_____

_____

_____

_____

B3. Please list the information or evidence that would clarify the presenter's suspicion that the wife is taking advantage and what should be done:

_____

_____

_____

_____

B4. What additional goals or concerns do you have?

_____

_____

_____

_____

Case C – Lorraine & financial planner:

- 92 year old Caucasian female lives at a skilled nursing facility because a recent fall left her wheelchair bound and in need of 24-hour care. She has difficulty recalling any of the details of her finances.
- The case was reported by concerned family members who allege financial abuse by the client's certified financial planner, who is now the sole beneficiary and trustee of the client's estate.
- The client still owns her home, which is where the financial planner has been living. The approximate value is $800,000 and there are no liens on the property.
- The financial planner visits her frequently, and has access to her bank accounts as her agent under power of attorney. He withdraws $15,000 a month from the client's accounts and insists that this is her payment to him for his estate planning and financial management services.
- Case presenter is a detective who would like to file this case for prosecution and is asking the Forensic Center for guidance.

Questions (C):

C1. Who needs to provide input on this case presentation?

□ Physician	□ Neuropsychologist	□ Regional Center
□ Adult Protective Services	□ Law Enforcement	□ Ombudsman
□ Public Guardian	□ Civil Attorney	□ Coroner/Medical Examiner
□ Mental Health	□ Prosecuting Attorney	□ _____

_____

C2. What, if any, additional information would be important to know? Please list up to five (5) questions you would ask the case presenter:

_____

_____

_____

_____

C3. Please list the information or evidence that the detective would need to collect to be able to file this case for prosecution:

_____

_____

_____

_____

C4. What additional goals or concerns do you have?

_____

_____

_____

_____

Thank you for taking this time to inform the field about the valuable work you do!

Appendix E. Information Mangement Database

Types of Information Managed Through the Universal Forensic Center Database	
Case Management	
Client Information	Client contact information, communication needs, demographic background, physician contact information, type of insurance, physical and cognitive functional status, living setting, and known illnesses, addictions, and medications
Suspected Abuser Information	Suspected abuser name, organization, relationship to client, contact information, demographic information, caregiver role, living setting, communication needs, and known addiction or mental illnesses
Referral Source Information	Contact information for the referring individual
Abuse Information	History of present and past abuse, types of alleged abuse perpetrated, other agencies involved, reporter relation to the client, and others with knowledge of the abuse
Case Status	Tracking case progress as it is worked-up or processed for APS intervention, prosecution, or conservatorship
Case Goals	Team goals for the client and case
Case Recommendations	Team-recommended action steps, the team member responsible for taking the action, follow-up dates, and completion status
Services Provided	Medical and psychological assessments and evaluations, follow-up by law enforcement agencies, linkages with community and social services, civil legal remedies, and client and asset protection.
Case Outcomes	The final disposition of cases, including types of conservatorship awarded, prosecution of suspected abusers, institution of restraining orders, and the legal outcomes of any civil remedies sought
Miscellaneous Other Documents	Additional documentation or information relevant to the client or case, including capacity declarations, electronic bank statements, expert reports, correspondences, and applications for client services.
Forensic Center Management	
Correspondence Tracking	Management of communication efforts, including the reason for attempted contact, dates of attempted contact, and outcome of attempted contact. Users can filter the results to identify unfulfilled correspondence attempts
Forensic Center Roster	Roster of current and past Forensic Center team members and visitors
Agency Attendance	Tracking the attendance of Forensic Center team agencies

Appendix F. Vignettes

Vignette A. Elder (age 82), with adult son as caregiver. Overarching goals are 1) restitution, 2) protection of assets.

Health	Social Service	Justice
Geriatrician	**Adult Protective Services (1)**	**Sheriff's Department**
Physical/cognitive status	**Adult Protective Services (2)**	**Police Department**
Medical problems, medications	Presentation	Personal physician
Care needs	Capacity, cognitive impairment	Medications
Alternative family caregiver	Socialization	Dementia diagnosis, when
Understanding of reverse mortgage	Willingness to press charges	Competency
Condition of house, repairs	Supportive relatives	Capacity declaration
Accounting of spending	Medical records	Willing to prosecute
Bank records	Lack of amenities, food	Conservatorship, estate
Forensic Neuropsychologist	Prior APS reports	Relatives to intervene
Cognitive status, past year	Bank records, POA	Ability to repay, restitution
Functional status, past year	Spending history, who benefits	Report to law enforcement
Medical records	Value of home	Investigator assigned
History of financial knowledge	**Social Service Advocate**	Prosecutor to file case
Dependent relationship with son	Diagnoses	Bank records, money flow, account balance
Date of reverse mortgage	Medical follow up	Investigate loan, when, funds spent on elder, where wired, account number
Bank records	Physical appearance	
Police report	Capacity	
Date widowed	Supportive relatives	
Department of Mental Health/MD	Money management, POA	**Deputy District Attorney**
Details of cognitive decline, length	Conservatorship referral	Capacity during time in question
Medical work up	Criminal background check	Neuropsychological evaluation
Evidence of other abuse types	Bank records	Bank records
Hygiene	Condition of home	Property records
Food supply	**Gerontologist**	Law enforcement involvement
Condition of home	Cognitive functioning	**Civil Attorney (1)**
Evidence of medical care	Existing assessments	**Civil Attorney (2)**
Conservatorship referral	Capacity declaration, personal MD	Mental capacity, dementia
Changes to deed	History with APS, Ombudsman, or law enforcement	Personal physician
Property taxes paid	Medical records	Neuropsychological evaluation
Risk of foreclosure	Support to not grant son conservatorship	Understanding of finances
Trace money flow, who benefits	Rehabilitation referral for son	Level of self care
	Bank records, follow the money	Care provision, cost
	Detective assigned, status of investigation	Past medical records
		Capacity at time of loan
		Who is available for care
		Conservatorship vs other family
		Son's solvency, remove?

Vignette A. (continued) Elder (age 82), with adult son as caregiver. Overarching goals are 1) restitution, 2) protection of assets.

Health	Social Service	Justice
	Victim Advocate	**Civil Attorney (2) cont.**
	Capacity declaration	Legal authority of son
	Medical records	Bank records, track money
	Relatives for caregiving	Who signed loans
	Law enforcement report	Condition of home
	Bank records	Status of home repairs
	Construction work on home	Evidence of large purchases
	Reverse mortgage documents	
	Office of the Public Guardian	
	Personal physician	
	Capacity declaration needed	
	Level of independence	
	Relative contacts	
	Remove from home	
	Freeze assets	
	Coordinate with law enforcement	
	Accounting of money, balance	
	Coordinate with bank	
	Home equity	
	POA in force	

Vignette B. Vulnerable adult (age 26), recently married to "new best friend". Goals to 1) investigate motive, 2) protect client's welfare.

Health	Social Service	Justice
Geriatrician	**Adult Protective Services (1)**	**Sheriff's Department**
Cognitive status	**Adult Protective Services (2)**	**Police Department**
Ability to consent to wife	Presentation, status	Medical records
Motives of wife	Needs being met	Length of relationship
Accounting of assets	Regional Center involvement	Who pays bills
Bank records	Residential status of wife	Check for trust
	Determine wife's feelings	Accounting of assets
Forensic Neuropsychologist	Accounting of assets	Motives of wife
History of functional status	Bank records	Track incoming/outgoing funds
Financial responsibilitities		
Medical records	**Social Service Advocate**	**Deputy District Attorney**
Capacity	Regional Center history	Neuropsychological evaluation
Marriage records	Financial background	Law enforcement investigation
Bank records	Criminal background check	Bank records
	Trustee involved	
Department of Mental Health/MD		**Civil Attorney (1)**
Regional Center history	**Gerontologist**	**Civil Attorney (2)**
Special Needs Trust	Ability to manage funds	Functional status
Drug history	Validity of marriage	Self care abilities
Background information	Accounting of assets	Medical records
Accounting of assets	Awareness of finances	Regional Center involvement
	Bank records	Marriage details
		Criminal background check
	Victim Advocate	Subpeona bank records
	Capacity	Track where funds have gone
	Validity of marriage	Estate documents
	Track missing funds	
	Office of the Public Guardian	
	Needs being met	
	Criminal background check	
	Drug history	
	Who pays bills	
	Check title of house and car	

Vignette C. Elder (age 92), with financial planner controlling assets. Overarching goals to 1) prosecute, 2) protect client's welfare.

Health	Social Service	Justice
Geriatrician	**Adult Protective Services (1)**	**Sheriff's Department**
Physical/cognitive status	**Adult Protective Services (2)**	**Police Department**
Capacity/understanding of situation	Presentation	Capacity declaration
Family support	Diagnoses	Family to obtain past medical records:
Length of relationship	Children	Three year history, neurological focus
Reasonable estate fees	Past family support	Obtain evidence without alerting suspect
Date POA established	Capacity, when POA established	Length of suspect involvement
Value of estate	View of suspect residing in her home	Suspect's work history
Change in title	How/when did they meet	Family to obtain financial records
	How was trust established	Determine previous monthly spending
	Length of relationship	Losses to date
Cognitive, functional, medical status	Professional standing of suspect	Copies of old/new trusts
Family input	Date trust established	Dates POA/trusts established
Length of relationship	How have funds been spent	
Who is the suspected perpetrator	Are suspects actions prosecutable	**Deputy District Attorney**
How did they meet		Neuropsychological evaluation
Are there other potential victims	**Social Service Advocate**	
Date POA established	Cognitive status	**Civil Attorney (1)**
	Willingness of family to be conservator	**Civil Attorney (2)**
Department of Mental Health/MD	Criminal background check	Length of relationship
Decision-making capacity	Validity of POA	Caregiver, care manager involved
Better Business Bureau report	Ability to agree to monthly fees	Family willing to be conservator
Status of will, if/when changed		Medical history, diagnoses
Liens on home	**Gerontologist**	Obtain temporary restraining order
	Previous reports of abuse	Void financial documents
	Capacity/understanding of situation	Suspect isolating elder from family
	Suspect's history of previous incidents	How did they meet
	Date POA established	When hired/contracted to work for elder
	Itemized billing	Date of trust
	Copies of old and new trusts	
	Victim Advocate	
	Capacity/understanding of monthly fee	
	Clarify fiduciary responsibility	
	Clarify residential arrangement	
	Determine suspected crime	
	Office of the Public Guardian	
	Capacity when documents executed	
	Family barriers to conservatorship	
	Documents available for examination	