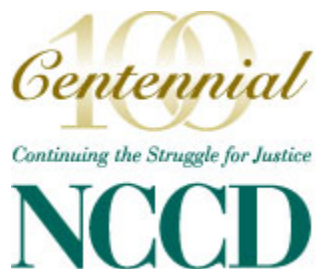


**New Hampshire Department of Health and Human Services
Bureau of Elderly and Adult Services**

**Feasibility and Design of an Adult Protective Services
Risk Validation Study**

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*Kristen Johnson
Andrea Bogie
Shannon Flasch
Dennis Wagner, Ph.D.*



National Council on Crime and Delinquency
426 S. Yellowstone Drive, Suite 250 • Madison, WI 53719
tel 608/831-8882 • fax 608/831-6446 • nccd-crc.org

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EXECUTIVE SUMMARY

The New Hampshire Bureau of Elderly and Adult Services (BEAS) asked the National Council on Crime and Delinquency (NCCD) to examine the feasibility of developing and implementing an actuarial risk assessment to be completed by adult protective services (APS) workers. While actuarial risk assessment has not been used in APS, a number of child protection and corrections agencies have implemented simple, objective, and reliable actuarial risk assessment instruments to help workers identify high risk clients and prioritize them for service intervention at the close of an investigation. Studies in both adult corrections and child welfare have demonstrated that active service intervention with high risk clients can reduce criminal recidivism and the recurrence of child maltreatment (Wagner, Hull, & Luttrell, 1995; Eisenberg & Markley, 1987; Baird, Heinz, & Bemus, 1981). Actuarial risk assessment may serve a similar objective for APS agencies by enhancing their ability to reduce maltreatment of their most vulnerable clients.

A. The Need for Actuarial Risk Assessment in APS

The first APS programs in the United States were initiated in the 1960s, but it was not until 1985 that every state had adopted procedures to process allegations of adult maltreatment and to conduct field investigations to substantiate them (Otto, 2000; Mixson, 1996). It is estimated that over 500,000 incidents of adult maltreatment occur in the U.S. each year, but only a small percentage may be formally reported to state APS agencies responsible for investigating them (Jogerst et al., 2003). The number of reported incidents is steadily increasing as more states require mandatory reporting by social workers or medical service providers and the U.S. population ages (Jogerst et al., 2003). In addition, the Administration on Aging estimates that the population of adults age 65 and older will increase 36% by the year 2020, to an estimated 55 million (Administration on Aging, 2007). While APS is a relatively new human services area, the need for such services is growing and will require effective case management procedures to improve service delivery.

States have developed their own APS policies and procedures, but all agencies are faced with very similar case management decisions (Otto, 2000). They must decide whether the adult maltreatment reports they receive should be investigated; how quickly an investigation should be initiated; and whether to offer protective services at the close of each investigation. APS workers must evaluate the current safety of their clients as well as the risk to their clients' future well-being. Then they may develop a service plan to address individual client needs.

Determining which clients require subsequent service planning—one of the goals of risk assessment—is a necessary step common to processes in all states. Unfortunately, caseworkers are not always able to accurately assess risk. Research shows that case decisions based on clinical judgment alone have little predictive validity (Andrews, Bonta, & Wormith, 2006) and are unreliable even among the most qualified and experienced workers (Hendryx & Rohland, 1997; Rossi, Schuerman, & Budde, 1996).¹ The implication of unreliable and/or inaccurate case assessments is that families may receive very different treatment recommendations based on the

¹ Predictive validity is tested by answering the question, do the assessment's findings successfully predict outcomes? Essentially, the assessment is used to evaluate the group of interest, and the group is then observed for a period of time afterwards to determine the relationship between the overall assessment score and the outcomes of interest. A positive finding for predictive validity requires a strong relationship between assessment items and subsequent outcomes.

worker assigned to their case. Even when structured by the use of consensus-based assessments, case decisions based on clinical judgment have little predictive validity (Andrews et al., 2006).

Since the capacity of APS agencies to provide services is limited and complicated by a chronic lack of resources (Otto, 2000), risk assessment is becoming a more common component of decision making in APS, just as it has in child protective services (CPS) and adult and juvenile corrections. Unlike in CPS or correctional agencies, however, APS risk assessments are based on clinical consensus rather than actuarial research (Wolf, 2000). While some formal APS risk assessment procedures used by state agencies were tested for reliability and construct validity, very few have been tested for predictive validity (Goodrich, 1997). Without demonstrated predictive validity, it is unknown whether the assessments accurately estimate future adult maltreatment.

By comparison, state CPS agencies, which perform similar investigation and case management tasks to APS, have developed validated actuarial risk assessments that can accurately identify families who have very high and very low probabilities of future maltreatment at the close of a field investigation. Research findings indicate that high risk families are often four times more likely to maltreat children within a one-year follow-up period than low risk families (Baird & Wagner, 2000). Actuarial risk assessment helps CPS agencies focus service interventions on the families most likely to maltreat their children, which increases agencies' ability to reduce subsequent child maltreatment. Successful development of an actuarial risk assessment for APS can help improve and support the decisions that APS workers in the field make at the close of each investigation (i.e., which clients are at greatest risk of subsequent maltreatment and which cases require service intervention) by providing a simple method for accurately estimating the likelihood of future maltreatment.

The reliability and validity of caseworker decisions may increase if these decisions are informed by actuarial risk assessments. Evidence from CPS suggests that actuarial risk assessments have greater inter-rater reliability (Baird, Wagner, Healy, & Johnson, 1999) and predictive validity (Baird & Wagner, 2000) than consensus-based assessments. Implementing an actuarial risk assessment to estimate the likelihood of future maltreatment or future allegations can inform worker decisions about case actions, and allow an agency to more effectively allocate limited resources to the individuals most likely to be subsequently maltreated. It can also help workers decide whether to make extra attempts to engage high risk clients who refuse involvement.

A caseworker can, however, sense things that an actuarial instrument would ignore or could not employ. Many characteristics of human subjects simply cannot be quantified empirically, and actuarial models cannot easily account for rare events. The point of actuarial assessment in case management is not to substitute an actuarial procedure for the discretionary judgment or skill of social workers. The goal is to assess families more accurately and prioritize them for services more effectively by integrating an actuarial assessment tool into current case assessment procedures (Shlonsky & Wagner, 2005). This practice may prove more effective than clinical judgment or consensus-based tools because the actuarial assessment model helps practitioners focus their initial assessment on the relatively small set of case characteristics that have a demonstrated strong statistical relationship to future maltreatment. After having made this objective assessment, they may exercise discretionary judgment more effectively in each case.

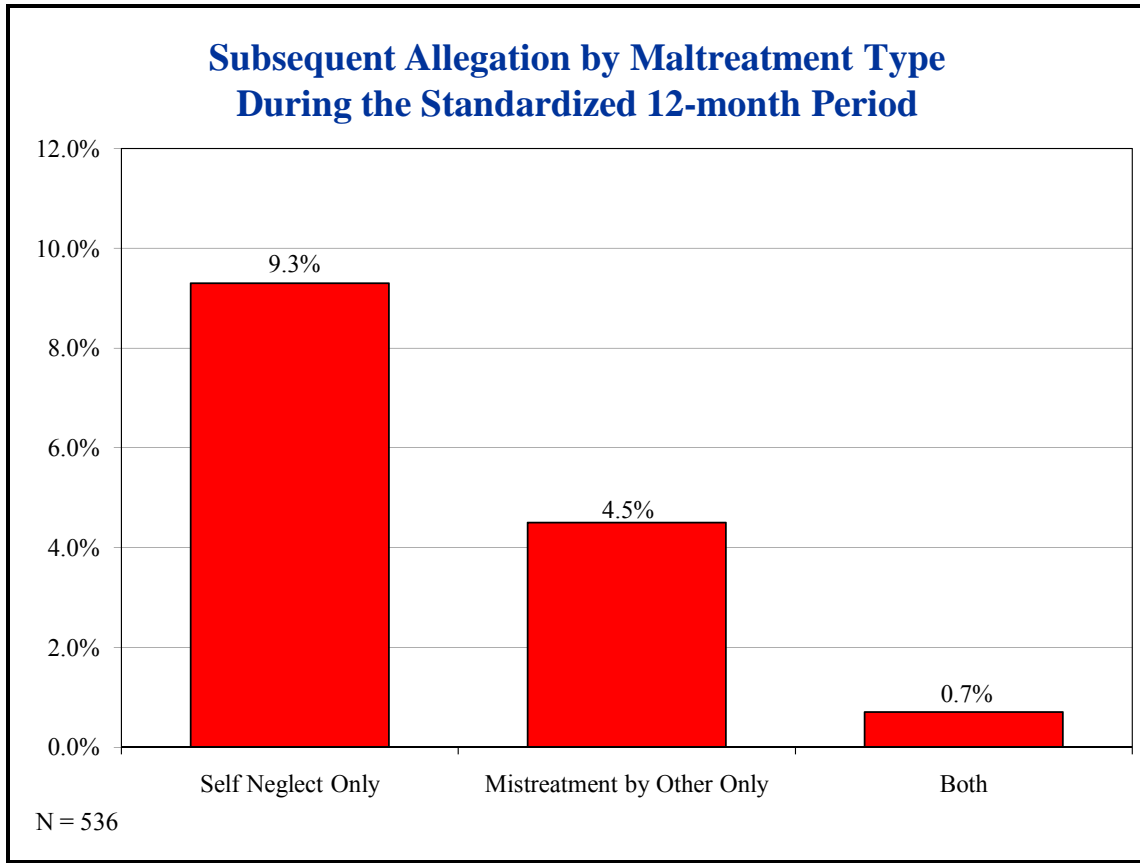
As part of a larger effort to develop a structured, comprehensive case management system for its APS workers, BEAS sought to explore the feasibility of developing an actuarial risk assessment to classify adults by the likelihood of future involvement with the agency. This report summarizes findings of research regarding the feasibility and design of a longitudinal study to develop an actuarial risk assessment.

B. Examination of Administrative Data

The purpose of the data analysis was to examine the characteristics of 536 adults alleged to have been maltreated in New Hampshire and their subsequent involvement with BEAS. Adults with a founded investigation between July 1 and December 31, 2006, were sampled and observed for a standardized 12-month follow-up period. More than half of the 536 sampled adults were female and between the ages of 50 and 79, and only 6.7% were reported to have a developmental disability. Nearly three-fourths (71.5%) of the sampled adults were initially referred for self-neglect; 28.5% were referred for maltreatment by another person; and only two individuals were initially referred for both self-neglect and maltreatment by another person.

An examination of BEAS involvement during a standardized 12-month follow-up period showed that 14.6% of adults with founded maltreatment were re-referred for maltreatment allegations during the subsequent year, and 10.3% were subsequently founded as a maltreatment victim. Among the 536 adults, 9.3% were referred for self-neglect during the follow-up period; 4.5% were referred for mistreatment by another person; and less than 1% were referred for both (see Figure E1).

Figure E1



The review of administrative data raised a number of issues related to risk assessment:

1. A sample of adults founded for maltreatment resulted in an over-representation of referrals for self-neglect and an under-representation of referrals for maltreatment by another person (among investigated adults, 50% were referred for self-neglect; among founded adults, 71.5% were referred for self-neglect). Thus, outcome rates observed for this sample may differ from those of a sample of adults referred to BEAS regardless of finding.
2. The ability to develop an actuarial risk assessment depends on the average rate of outcomes among the population of interest (referred to as a base rate). The base rates observed in this sample are sufficient for a risk assessment validation study.
3. A greater proportion of adults initially referred for self-neglect were re-referred for self-neglect during the follow-up period than adults initially investigated for maltreatment by another person (12.8% and 3.3% respectively), while adults initially referred for maltreatment by another person were more likely than those referred for self-neglect to be subsequently referred for maltreatment by another person (8.5% compared to 3.9%). It may also be the case that risk factors for self-neglect differ from the risk factors for maltreatment by another person. The best actuarial risk assessment for estimating the likelihood of subsequent adult

maltreatment may have separate scales for self-neglect and maltreatment by another person.

4. Actuarial risk assessment requires reliable measures of observable characteristics and outcomes. Income, birth date, and race and ethnicity information were missing for significant proportions of the sample. These characteristics have been identified as risk factors related to subsequent elder maltreatment (Lachs, Williams, O'Brien, Hurst, & Horowitz, 1997), and thus are important to measure.

The design of a valid actuarial risk assessment begins with the construction of a data collection instrument, which will be used by workers to observe and record information about APS clients. This instrument should include items gathered from previous research, informed by existing consensus among APS agencies regarding risk factors. The subsequent validation study using this collected information could then determine which of these items has a strong relationship to the outcomes experienced by the observed APS clients. The remainder of the report concerns the research conducted to identify promising data collection instrument items.

C. Review of Literature and Current CPS Practices

The purposes of reviewing relevant literature and surveying states about risk assessment practices were to identify how other APS agencies derive and use risk assessment information and to develop a data collection form to be completed by workers during a prospective risk validation study. Determining the current status of risk assessment in APS also ensured that design of a validation study was based on up-to-date information on the identification of risk factors. The examination of risk assessment practices involved three sources of data collection:

- A literature review was conducted of relevant peer-reviewed publications to identify research-based risk factors related to adult maltreatment.
- A examination of research related to the reliability and validity of assessments for elder maltreatment was conducted to determine whether any actuarial risk assessments for APS were in existence, and to examine research-based assessments for potential factors to measure in a future study.
- A phone survey was conducted with APS administrators from each state. Thirty-seven states provided information about the use and design of risk assessments. Of the 37 states represented, 26 had a state-sponsored risk assessment to be completed for APS clients. The content of these 26 assessments was reviewed to identify additional potential factors.

The literature review, the examination of existing elder maltreatment assessments, and the survey of state APS agencies provided a comprehensive picture of the status of risk assessment in APS. Findings of note were as follows:

- Identifying risk factors for future elder maltreatment requires a longitudinal study. These studies sample a cohort of elders and observe them during a follow-up period to determine whether characteristics observed at the time of sample are

related to subsequent self-neglect or maltreatment by another party. Only two such longitudinal studies have been conducted, and only one observed adults for an uninterrupted follow-up period. Thus, a risk validation study will be a valuable contribution to the field and current knowledge about risk factors.

- Research has been conducted on ten assessments of elder maltreatment. All but one of these, however, focus on whether maltreatment is currently occurring (as opposed to determining the likelihood of future maltreatment). They are designed to be completed either by medical staff or community providers, or by an alleged maltreatment victim or an alleged victim's caregiver (i.e., self-reported assessment of relevant behaviors). Almost all had been examined for construct validity, which tests whether the assessment measures what it was designed to measure. The instruments' assessments were often compared to prior confirmed maltreatment, expert opinion, the presence of known risk factors, or the findings of other assessments. Very few existing elder maltreatment assessments have been tested for inter-rater reliability, and only two demonstrated high inter-rater reliability. These two instruments, the Indicators of Abuse (IOA) assessment and the Elder Assessment Instrument (EAI), informed development of the BEAS data collection instrument.
- Among the 37 state APS agencies who participated in the survey regarding risk assessment practices, 26 had developed or adopted a risk assessment. Only three states had assessed the reliability of the risk assessment, three had assessed the construct validity, and none had examined the predictive validity of the risk assessment. Thus, this undertaking by BEAS to develop an actuarial risk assessment has the potential to substantially improve the practice of risk assessment in APS.
- A number of states reference some type of standardized assessment to inform an evaluation of cognitive functioning. For example, the Mini-Mental State Exam (MMSE) is used by three states and has been identified as an effective screening assessment by researchers (Crum, Anthony, Bassett, & Folstein, 1993; Folstein, Folstein, & McHugh, 1975).

As mentioned previously, these three data sources informed development of a data collection instrument to be completed during a risk validation study. Table E1 shows that a number of the domains considered for inclusion in the data collection instrument were identified by two or more of these sources.

Table E1			
Domains Included on the Risk Assessment Data Collection Instrument by Relevant Source			
Risk Factor or Domain	Identified by Descriptive Research	Included on Reliable Assessments	Included on Many Consensus-based State Risk Assessments
Characteristics of Elder			
Minority status	X		
Advanced age	X		
Low income/financial status	X	X	X
Social support/relationships with others	X	X	X
Difficulty with ADLs	X	X	X
Living situation (alone/with others)	X		
Depression/mental health issue	X	X	
Physical health	X	X	
Dementia/cognitive abilities*	X		X
Evidence of maltreatment		X	X
Elder characteristics (self-care, substance problem)		X	X
Characteristics of Caregiver			
Difficulty meeting elder's needs		X	X
Caregiver characteristics (mental health and/or substance problem)		X	X
Caregiver-elder relationship		X	X

*Although New Hampshire considers dementia to be a physical condition, many researchers and other state assessments group dementia and cognition together.

The data collection instrument does not include information that should be entered in the BEAS administrative data system. This includes the vulnerable adult's race and ethnicity, birth date, gender, income, activities of daily living (ADL) indicators, domestic violence, living situation, and current allegations. This information should be systematically entered in the BEAS administrative data system to inform development of an actuarial risk assessment.

D. Summary

This report examined the feasibility of a risk assessment validation study and design of a data collection instrument to be completed by workers during a prospective study. The data analysis determined that rates of subsequent maltreatment among adults involved with BEAS were high enough to support a validation study. The review of current literature and state APS risk assessment practices informed study design efforts and development of a data collection instrument. The examination of current knowledge and practice regarding risk assessment for APS clients shows that BEAS's efforts toward developing an actuarial risk assessment to classify adults involved with APS will improve the nature of risk assessment practices and represent a significant contribution to the field.

The most cost-effective approach to a risk validation study is to design a data collection instrument, ask workers to prospectively observe and record information about APS clients, and conduct a validation study based on this systematically collected information. While outcome rates are sufficient to conduct a validation study, successful development of a risk assessment is also dependent on reliable and systematic measurement of risk factors. If possible, completion of the data collection form should be tied to an existing assessment or form (such as an investigation summary) to increase the likelihood that workers will remember to complete it. BEAS may wish to consider monitoring completion rates and reporting findings to workers to help ensure a high quality of implementation.

I. INTRODUCTION

The New Hampshire Bureau of Elderly and Adult Services (BEAS) asked the National Council on Crime and Delinquency (NCCD) to examine the feasibility of developing and implementing an actuarial risk assessment to be completed by adult protective services (APS) workers. While actuarial risk assessment has not been used in APS, a number of child protection and corrections agencies have implemented simple, objective, and reliable actuarial risk assessment instruments to help workers identify high risk clients and prioritize them for service intervention at the close of an investigation. Assessments used in corrections help identify offenders who are at higher risk of committing another crime. Studies in both adult corrections and child welfare have demonstrated that active service intervention with high risk clients can reduce criminal recidivism and the recurrence of child maltreatment.² Actuarial risk assessment may serve a similar objective for APS agencies by enhancing their ability to reduce maltreatment of their most vulnerable clients.

A. The Need for Actuarial Risk Assessment in APS

The first APS programs in the United States were initiated in the 1960s, but it was not until 1985 that every state had adopted procedures to process allegations of adult maltreatment and to conduct field investigations to substantiate them (Otto, 2000; Mixson, 1996). It is estimated that over 500,000 incidents of adult maltreatment occur in the U.S. each year, but only a small percentage may be formally reported to state APS agencies responsible for investigating them (Jogerst et al., 2003). The number of reported incidents is steadily increasing as more states require mandatory reporting by social workers or medical service providers and the U.S.

² For example, a CPS pilot study in Michigan found that accurate identification of high risk families followed by active service intervention can reduce subsequent child abuse or neglect (Wagner, Hull, & Luttrell, 1995). In corrections, criminal activity among the maximum risk offenders receiving multiple monthly contacts was reduced by nearly 50% (Eisenberg & Markley, 1987; Baird, Heinz, & Bemus, 1981).

population ages (Jogerst et al., 2003). In addition, the Administration on Aging estimates that the population of adults age 65 and older will increase 36% by the year 2020, to total an estimated 55 million. In 2030, the number of adults age 65 or older will be 71.5 million, twice what it was in 2005 (Administration on Aging, 2007). While APS is a relatively new human services area, the need for such services is growing and will require effective case management procedures to improve service delivery.

States have developed their own APS policies and procedures, but all agencies are faced with very similar case management decisions (Otto, 2000). They must decide whether the adult maltreatment reports they receive should be investigated; how quickly an investigation should be initiated; and whether to offer protective services at the close of each investigation. APS workers must evaluate the current safety of their clients as well as the risk to their clients' future well-being. Then they may develop a service plan to address individual client needs.

Determining which clients require subsequent service planning—one of the goals of risk assessment—is a necessary step common to processes in all states. Unfortunately, caseworkers are not always able to accurately assess risk. Research shows that case decisions based on clinical judgment alone have little predictive validity (Andrews, Bonta, & Wormith, 2006) and are unreliable among even the most qualified and experienced workers. Rossi, Schuerman, and Budde (1996) conducted inter-rater reliability testing for key decisions made by child protective services (CPS) workers regarding family services and removing children from their homes. They compared the case recommendations of 103 caseworkers, all with 25 or more years of experience, and found a low percentage of agreement regarding the decision whether or not to remove a child from the family home. The percentage of agreement declined when in-home services were added as an option. A similar study showed that while workers from a community-based mental health center varied widely in their treatment recommendations

(outpatient versus inpatient treatment), all were very confident in the accuracy of their decision making (Hendryx & Rohland, 1997).

Research also shows how influential the decisions made by APS workers can be. An extensive longitudinal study sampled 2,812 adults 65 years or older living in New Haven, Connecticut, and observed them for nine years. The study showed that adults who had been maltreated were four times more likely to be placed in a nursing care facility even after controlling for other conditions related to institutionalization such as mental illness, physical health, and cognitive impairments (Lachs, Williams, O'Brien, & Pillemer, 2002). The implication of unreliable and/or inaccurate case assessments is that families may receive very different treatment recommendations based on the worker assigned to their case. Even when structured by the use of consensus-based assessments, case decisions based on clinical judgment have little predictive validity (Andrews et al., 2006).

Since the capacity of agencies to provide services is limited and complicated by a chronic lack of resources (Otto, 2000), risk assessment is becoming a more common component of decision making in APS, just as it has in CPS and adult and juvenile corrections. Unlike in CPS or correctional agencies, however, APS risk assessments are based on clinical consensus rather than actuarial research (Wolf, 2000). While some formal APS risk assessment procedures used by state agencies were tested for reliability and construct validity, very few have been tested for predictive validity (Goodrich, 1997).³ Without demonstrated predictive validity, it is unknown whether the assessments accurately estimate future adult maltreatment.

By comparison, state CPS agencies, which perform similar investigation and case management tasks, to APS have developed validated actuarial risk assessments that can

³ Predictive validity is tested by answering the question, do the assessment's findings successfully predict outcomes? Essentially, the assessment is used to evaluate the group of interest, and the group is then observed for a period of time afterwards to determine the relationship between the overall assessment score and the outcomes of interest. A positive finding for predictive validity requires a strong relationship between assessment items and subsequent outcomes.

accurately identify families who have very high and very low probabilities of future maltreatment at the close of a field investigation. Research findings indicate that high risk families are often four times more likely to maltreat children within a one-year follow-up period than low risk families (Baird & Wagner, 2000). Agencies can use actuarial risk assessment findings to prioritize families for service intervention with some confidence (Shlonsky & Wagner, 2004). In effect, actuarial risk assessment helps CPS agencies focus service interventions on the families most likely to maltreat their children, which increases their ability to reduce subsequent child maltreatment. Successful development of an actuarial risk assessment for APS can help improve and support the decisions that APS workers in the field make at the close of each investigation (i.e., which clients are at greatest risk of subsequent maltreatment and which cases require service intervention) by providing a simple method for accurately estimating the likelihood of future maltreatment.

B. Actuarial Risk Assessment in Public Service Agencies

The purpose of actuarial risk assessment is to classify individuals by the likelihood of a specific outcome based on observed group characteristics. Actuarial assessment methods were first applied to decision making in public service agencies in the early part of the twentieth century (Burgess, 1928) to estimate the likelihood that a prisoner, once released, would commit another crime. Risk assessment findings informed decisions about whether or not to grant parole as well as and how intensively someone should be supervised by a parole officer after release from prison. Many physicians use actuarial risk assessments to make decisions about further screening for health problems and to determine the best course for treatment. For example, an actuarial risk assessment can estimate the likelihood of breast cancer recurrence based on characteristics of the existing tumor (Silverstein & Lagois, 1997). Women at high risk of

recurrence are given more aggressive treatment options. Another actuarial risk assessment classifies mental health patients by their likelihood of committing violent acts toward others, and this information informs the choice of service interventions or other relevant case actions (Appelbaum, Robbins, & Monahan, 2000).

The reliability and validity of caseworker decisions may increase if those decisions are informed by actuarial risk assessments. Evidence from CPS suggests that actuarial risk assessments have greater inter-rater reliability (Baird, Wagner, Healy, & Johnson, 1999) and predictive validity (Baird & Wagner, 2000) than consensus-based assessments. Findings from experimental psychology support the conclusion that actuarial instruments can predict future behavior more accurately than an individual decision maker, even those who have had extensive clinical training (Andrews et al., 2006; Dawes, Faust, & Meehl, 1989; and Meehl, 1954).

Implementing an actuarial risk assessment to estimate the likelihood of future maltreatment or future allegations can inform worker decisions about case actions, and allow the agency to allocate limited resources more effectively to the individuals most likely to be subsequently maltreated. It can also help workers decide whether to make extra attempts to engage high risk clients who refuse protective services involvement. For example, risk assessment was introduced in CPS approximately 20 years ago to estimate the likelihood that a parent would subsequently abuse or neglect a child. A risk assessment is developed by conducting a longitudinal study that observes characteristics of an individual and situation at the relevant decision point, as well as outcomes during a standardized follow-up period. This observation is followed by an analysis to determine which combination of characteristics best assesses the likelihood of the outcome in question. For example, the CPS risk assessment procedure is completed by a worker at the close of a child maltreatment investigation. Simple actuarial risk indices were designed using easily observable child and family characteristics that

can be employed by child protection workers to estimate the likelihood that abuse or neglect will occur in the future. Workers complete these assessments to classify families as being at high, medium, or low risk of future child maltreatment. The risk level then informs worker decisions about whether or not to offer a family services, and if a case is opened, how often to have face-to-face contact with the family.

A caseworker can, however, sense things that an actuarial instrument would ignore or could not employ. Many characteristics of human subjects simply cannot be quantified empirically, and actuarial models cannot easily account for rare events. The point of actuarial assessment in case management is not to substitute an actuarial procedure for the discretionary judgment or skill of social workers. The goal is to assess families more accurately and prioritize them for services more effectively by integrating an actuarial assessment tool into current case assessment procedures (Shlonsky & Wagner, 2005). This practice may prove more effective than clinical judgment or consensus-based tools because the actuarial assessment model helps practitioners focus their initial assessment on the relatively small set of case characteristics that have a demonstrated strong statistical relationship to future maltreatment. After having made this objective assessment, they may exercise discretionary judgment more effectively in each case.

C. Description of the Current Research Effort

As part of a larger effort to develop a structured, comprehensive case management system for its APS workers, New Hampshire BEAS sought to explore the feasibility of developing an actuarial risk assessment to classify adults by the likelihood of future involvement with the agency. This report summarizes findings of research regarding the feasibility and design of a longitudinal study to develop an actuarial risk assessment.

The first section describes a comprehensive analysis of BEAS APS data used to determine whether a risk assessment validation study is possible given the rates of subsequent maltreatment among adults involved with APS. A sample of adults involved with BEAS during the last six months of 2006 was observed for a 12-month period following the investigation of the alleged maltreatment. The rates of subsequent involvement with the agency, as well as the characteristics of the investigation and the adult, are reviewed.

The second section reviews the status of risk assessment in APS to ensure that design of a validation study is based on up-to-date information on the identification and assessment of risk factors. The purposes of reviewing relevant literature and surveying states about risk assessment practices were to identify how other APS agencies derive and use risk assessment information and to develop a data collection form to be completed by workers during a prospective risk validation study. This examination of risk assessment practices involved three sources of data collection:

- A literature review of relevant peer-reviewed publications to identify research-based risk factors related to adult maltreatment.
- An examination of research related to the reliability and validity of assessments for elder maltreatment to determine whether any actuarial risk assessments for APS were in existence, and to examine research-based assessments for potential factors to measure in a future study.
- A phone survey with APS administrators from each state. Thirty-seven states provided information about the use and design of risk assessments. Of the 37 states represented, 26 had a state-sponsored risk assessment to be completed for APS clients. The content of these 26 assessments was reviewed to identify additional potential factors.

The literature review, the examination of existing elder maltreatment assessments, and the survey of state APS agencies, provided information about the use of risk assessment in practice and also

helped narrow down the list of potential factors to measure during a prospective risk assessment validation study.

The discussion section of the report reviews overall findings from the research effort and suggests next steps in planning for a risk assessment validation study.

II. EXAMINATION OF ADMINISTRATIVE DATA

The purpose of data analysis was to examine the characteristics of adults alleged to have been maltreated in New Hampshire and observe each alleged victim's behavior during a subsequent 12-month period. The effort determined the following:

- What proportion of adult victims of maltreatment were re-investigated by BEAS during the following year;
- What type of maltreatment was alleged for those individuals repeatedly involved with BEAS;
- Whether the rate of re-investigation and subsequent founded maltreatment differed by the type of maltreatment initially alleged; and
- Whether outcomes differed by characteristics observed at the time of the initial contact with BEAS.

A. Description of Methods

This research was conducted using information available in the BEAS administrative database. Information used included data describing the type of abuse or neglect alleged and substantiated, demographic characteristics of the alleged victim, and the outcome of the investigation.

The sample consisted of 536 adults with a founded investigation between July 1 and December 31, 2006.⁴ By law, unfounded investigations are purged from administrative data after six months, while founded investigations are purged every seven years.⁵ Therefore, in order to observe outcomes for longer than six months, only founded investigations could be sampled.

⁴ If an adult was investigated more than once during the sample period, the first investigation during the period was selected as the sample incident.

⁵ This purge schedule was implemented in May 2007. Prior to this date, all investigations were purged after six months from case closure unless another case was opened during the interim period.

Data describing subsequent BEAS involvement were observed for each alleged victim during a standardized follow-up period of 12 months after his or her sample assessment. The outcome measures included investigations as well as determinations of maltreatment allegations. Given that BEAS routinely purges unfounded investigations, subsequent investigations may be under-estimated. Thus, the sample may contain individuals who had no observed outcome but who had a subsequent unfounded investigation that was purged. Because founded investigations were not purged during the 12-month follow-up period, subsequent founded investigation is a more reliable outcome measure.

Note that BEAS serves any incapacitated adult 18 years of age or older who is suspected to be or is unable to manage affairs or unable to delegate responsibility to a support person. The sample was therefore not limited by an adult's age.

B. Description of the Sample

Table 1 reviews the characteristics of the 536 adults determined to have been maltreated in the last six months of 2006. More than half (57.1%) were female and between the ages of 50 and 79 (55%). Only 6.7% were reported to have a developmental disability. One-third (33.8%) lived in a home with one or more other people, and 43.1% lived alone in their own home. Approximately one-fourth (28.9%) of the adults had a monthly income below \$750. Income data were missing for 41% of the adults in the sample.

Race and ethnicity data were gathered from two different sources within the administrative database. However, ethnicity was not recorded for half of the adults in the sample. While an age range was recorded for most adults, birth date (and thus exact age) was missing for approximately 75% of the sample. Income, exact age, and race and ethnicity have

been identified as risk factors related to subsequent elder maltreatment (Lachs et al., 1997), and thus are important characteristics to measure.

Table 1			
Characteristics of the Alleged Victim			
		N	%
Total Sample		536	100.0%
Gender	Female	306	57.1%
	Male	224	41.8%
	Missing	1	0.2%
Age	18 – 29	18	3.4%
	30 – 39	22	4.1%
	40 – 49	56	10.4%
	50 – 59	68	12.7%
	60 – 69	104	19.4%
	70 – 79	123	22.9%
	80 – 89	108	20.1%
	90 – 99	32	6.0%
	Above 100	1	0.2%
Missing	4	0.7%	
Race/Ethnicity of Parent/Guardian	White	260	48.5%
	American Indian/Alaskan Native	3	0.6%
	Asian/Pacific Islander	2	0.4%
	Hispanic/Latino	-	-
	Black or African American	-	-
	Missing	271	50.6%
Developmental Disability	Yes	36	6.7%
	No	468	87.3%
	Missing	32	6.0%
Income	None – \$499	70	13.1%
	\$500 – \$624	47	8.8%
	\$625 – \$749	38	7.1%
	\$750 – \$849	25	4.7%
	\$850 – \$949	39	7.3%
	\$950+	98	18.3%
	Missing	219	40.9%
Living Arrangement	Own home alone	231	43.1%
	Own home with spouse, relative, friend	181	33.8%
	Nursing facility, Glencliff	49	9.1%
	Public housing, motel	30	5.6%

Table 1		
Characteristics of the Alleged Victim		
	N	%
Total Sample	536	100.0%
Other	45	8.4%

Table 2 shows the characteristics of the sample investigations of founded maltreatment. The majority (26.1%) of reports originated from social service agencies such as Health and Human Services, the Division of Mental Health and Developmental Services, a home health agency, or another social service agency. An additional 11.0% of reports originated from public agencies such as law enforcement, utility companies, or a housing authority. Workers indicated that approximately 10% of investigations were emergencies.

Investigations varied in length. The average investigation was open for 96 days (with a standard deviation of 86 days), and the median was 73 days (not shown). Approximately two thirds (66.9%) of the investigations were closed within two months or less.

Just over one third (35.4%) of investigations were opened or extended for continuing services. Workers indicated that the problem was resolved in 41.0% of the sampled founded investigations, and that 17.0% of adults refused any additional services (see Table 2).

Table 2			
Characteristics of the Sample Investigation			
	N	%	
Total Sample	536	100.0%	
Reporting Source	Social service agency	140	26.1%
	Other public agency	59	11.0%
	Medical or hospital staff	80	14.9%
	Facility staff	71	13.2%
	Friend, family, or community member	76	14.2%
	Other, anonymous	46	8.6%
	Missing	64	11.9%
Emergency Indicator	Yes	53	9.9%
	No	483	90.1%
Length of Investigation in Months	Less than one	71	13.2%
	One	125	23.3%
	Two	163	30.4%
	Three	69	12.9%
	4 – 6	62	11.6%
	7 – 9	21	3.9%
	10+	25	4.7%
Domestic Violence Indicator	Yes	10	1.9%
	No	526	98.1%
Investigation Outcome	Adult refused services	91	17.0%
	Continue active case	28	5.2%
	Open protection case	162	30.2%
	Other action taken/application open	5	0.9%
	Referral made, not opened	30	5.6%
	Problem resolved, not opened	220	41.0%

Table 3 reviews the allegations investigated during the sampled investigation. Nearly three-fourths (71.5%) of the sampled adults were alleged to be self-neglect cases. The remaining adults were referred to the agency for a variety of types of mistreatment by another person. Fewer than 10% of adults were referred for financial exploitation allegations, 8.2% were referred for emotional abuse, and 7.5% were referred for physical abuse.⁶ Table 3 shows that only two individuals were alleged for both self-neglect and maltreatment by another person.

It is important to note that this sample of founded investigations results in an over-representation of self-neglect cases. During the sample period, 989 adults were investigated as alleged victims by BEAS. Of these, approximately 50% were alleged to be self-neglecting and 50% were alleged to have been mistreated by another person (data not shown).⁷ The sample of founded investigations resulted in a greater proportion of self-neglect cases than would a sample of all investigations.

Table 3			
Allegations and Finding for Sample Investigation			
		N	%
Total Sample		536	100.0%
Allegations	Self-neglect	383	71.5%
	Neglect by another	30	5.6%
	Physical abuse	40	7.5%
	Emotional abuse	44	8.2%
	Sexual abuse	2	0.4%
	Financial exploitation	48	9.0%
Allegation Types	Self-neglect only	381	71.1%
	Maltreatment by another only	153	28.5%
	Both self-neglect and maltreatment	2	0.4%

⁶ The proportions of founded allegations were very similar.

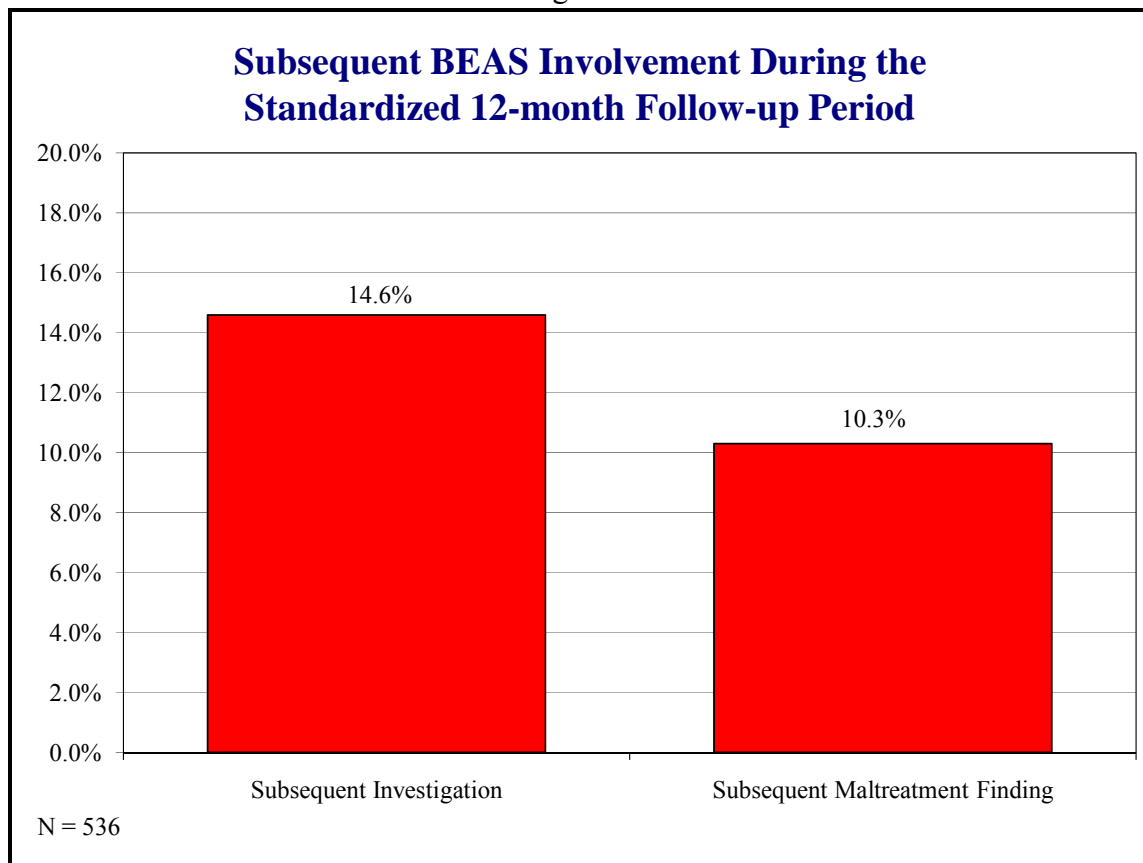
⁷ Of 989 adults, 494 were referred for self-neglect, 492 for maltreatment by another, and three for both types of allegations.

C. Subsequent BEAS Involvement Among Sampled Adults

Outcomes consisted of subsequent BEAS involvement observed for each adult during the 12 months following the sampled investigation. This standardized follow-up period ensured that each adult in the sample had the same opportunity for subsequent involvement with BEAS, including any assigned investigation of allegations and determinations of maltreatment.

Figure 1 shows that at least 14.6% of the 536 adults in the sample were the subject of another investigation during the standardized 12-month follow-up period.⁸ In addition, 10.3% were founded for either self-neglect or mistreatment by another person.

Figure 1



⁸ As mentioned previously, the actual rate may be higher than what was observed for this sample because unfounded investigations are purged after six months.

Figure 2 shows that more adults in the sample were re-investigated for self-neglect than for other types of maltreatment. These outcome rates may not be representative, however, given that the current sample is an over-representation of adults initially investigated for self-neglect and an under-representation of adults initially referred for other types of maltreatment.

Figure 2

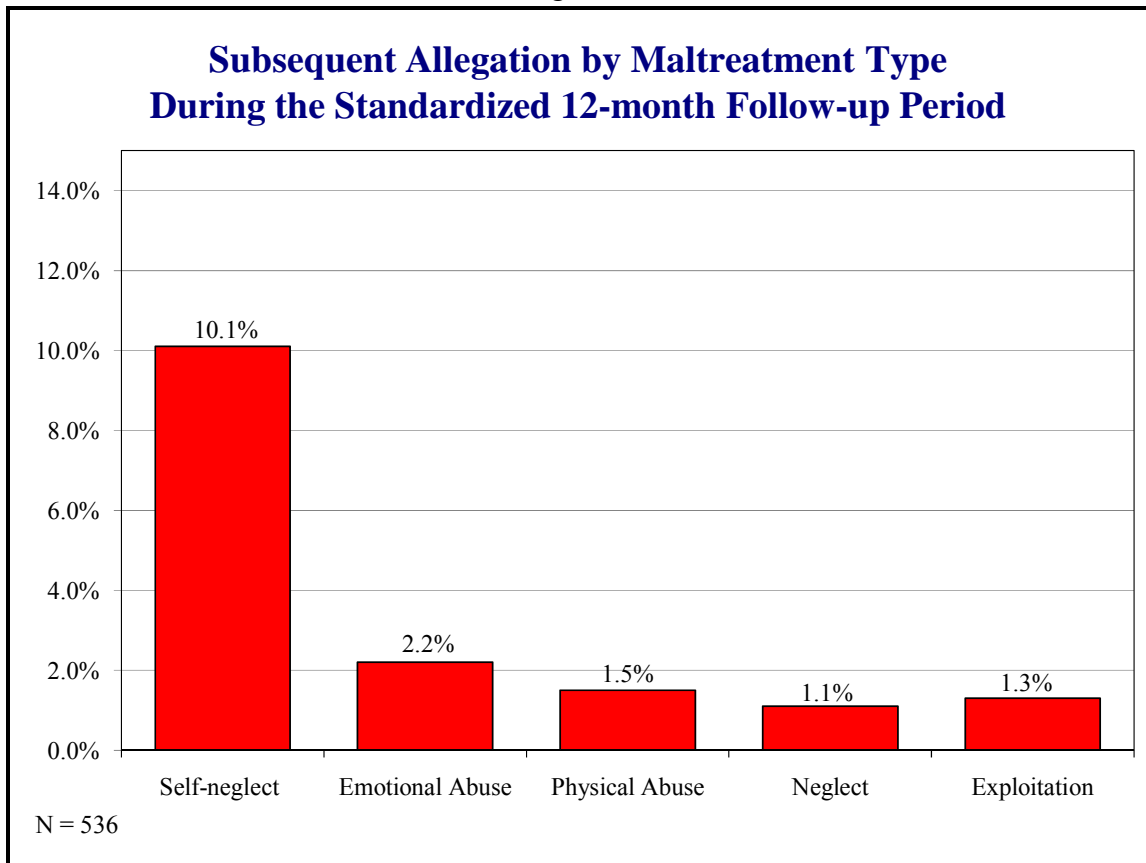


Figure 3 shows that among adults subsequently involved with BEAS during the standardized 12-month follow-up period, most were referred for either self-neglect or maltreatment by another person. Among the 536 adults, 9.3% were referred for self-neglect during the follow-up period, 4.5% were referred for maltreatment by another person, and less than 1% (0.7%) were referred for both.

Figure 3

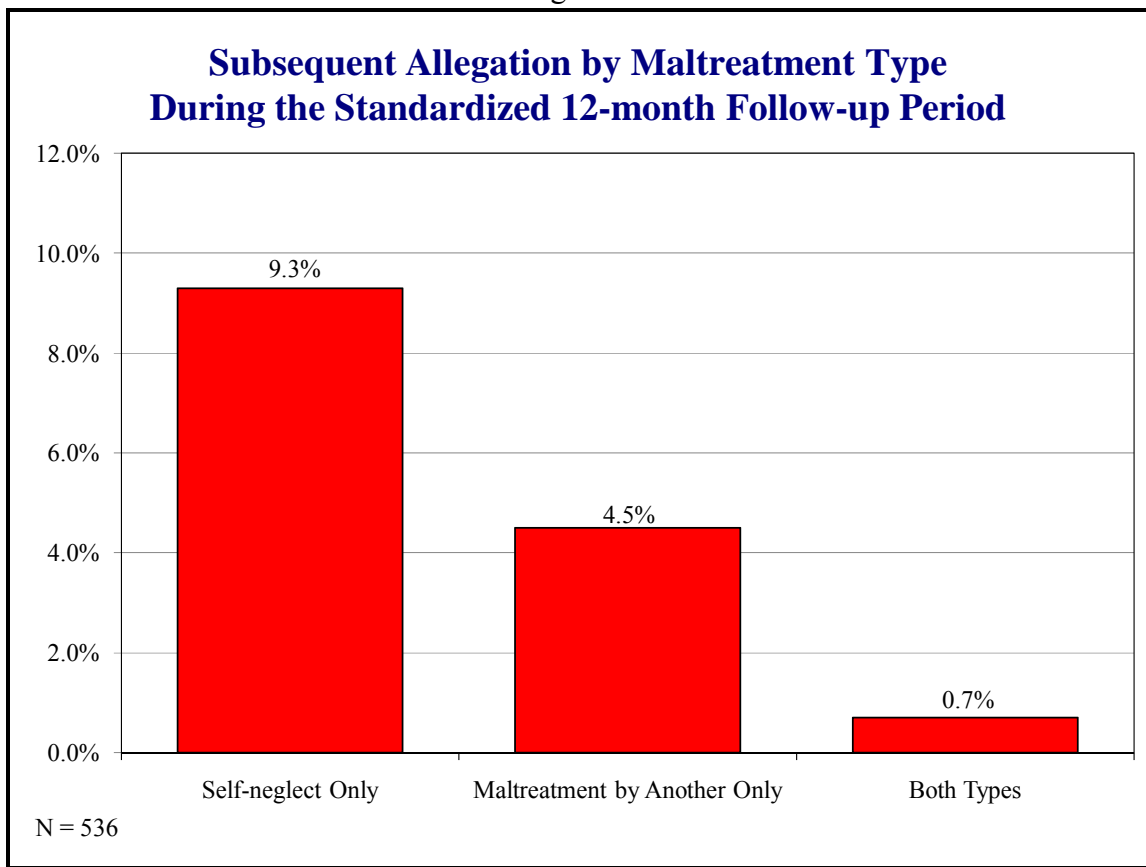


Figure 4 compares the adults' initial (sample) investigation type (self-neglect or other maltreatment) to the type of subsequent allegation investigated in the follow-up period. Among the 383 adults initially investigated for self-neglect, 12.8% were subsequently investigated for self-neglect and 3.9% were subsequently investigated for other types of maltreatment. Among the 153 adults initially investigated for maltreatment by others, 8.5% were subsequently investigated for maltreatment by others as compared to subsequent self-neglect (3.3%).

Figure 4

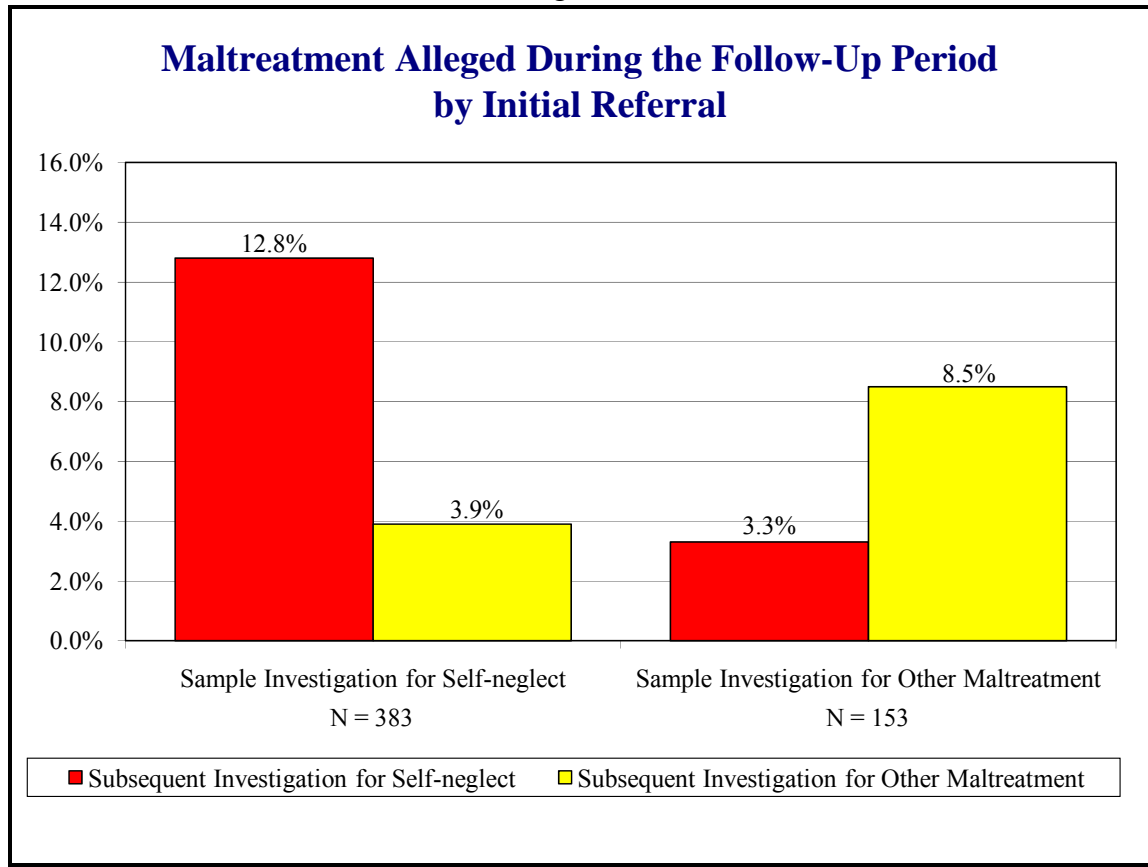


Table 4 reviews rates of subsequent involvement with BEAS by characteristics of the investigation and of the sampled adults founded for maltreatment. Outcome rates were slightly higher for males compared to females. Rates were also higher for adults between the ages of 50 and 79 years, with the exception of subsequent allegations of maltreatment by another party. A

greater proportion of adults less than 50 years of age were re-referred for maltreatment by another person, compared to older adults.

Rates of subsequent founded maltreatment of any type were similar regardless of the outcome of the initial sampled investigation. Adults who refused services at the time of the sample incident, however, had higher rates of subsequent alleged self-neglect, while adults referred to other agencies at the time of the sample incident were slightly more likely to be re-referred for maltreatment by another. Compared to adults living alone, adults living with someone else during the sample incident had higher rates of subsequent investigation and founded maltreatment, as well as a higher rate of alleged maltreatment by another. Rates of alleged self-neglect, however, were similar whether the alleged victim lived alone or not.

Table 4					
Subsequent CPS Assessments of Sampled Families During a Standardized 18-month Follow-up Period by Allegation Type					
Sample Characteristics	Sample	BEAS Involvement During 12-month Follow-up Period			
		Alleged Maltreatment Any Type	Founded Maltreatment Any Type	Alleged Self-neglect	Alleged Maltreatment by Another
Total Sample	536	14.6%	10.3%	10.1%	5.2%
Gender⁹					
Female	306	14.4%	8.8%	9.2%	6.2%
Male	224	15.2%	12.5%	11.6%	4.0%
Age Range¹⁰					
Less than 50	96	15.6%	10.4%	6.3%	10.4%
50 – 79	295	18.0%	12.9%	13.9%	5.1%
80+	141	7.1%	5.0%	5.0%	2.1%
Investigation Outcome					
Adult refused services	91	20.9%	14.3%	17.6%	4.4%
Continue/open case	190	17.9%	13.2%	13.2%	6.3%
Other action taken/referral made	35	20.0%	14.3%	11.4%	8.6%
Problem resolved, not opened	220	8.2%	5.5%	4.1%	4.1%
Living Arrangement					
Own home alone	231	13.9%	10.4%	11.3%	3.5%
Own home with someone	181	18.2%	13.8%	11.6%	7.2%
Other	124	10.5%	4.8%	5.6%	5.6%

D. Summary of Findings From the Analysis of Administrative Data

Adults with a founded investigation between July 1 and December 31, 2006, were sampled and observed for a standardized 12-month follow-up period. More than half of the 536 adults were female and between the ages of 50 and 79, and only 6.7% were reported to have a developmental disability. Nearly three-fourths (71.5%) of the sampled adults were initially

⁹ Gender was missing for six individuals, none of whom were subsequently involved with BEAS.

¹⁰ The age range was missing for four individuals, none of whom were subsequently involved with BEAS.

referred for self-neglect, 28.5% were referred for maltreatment by another, and only two individuals were initially referred for both self-neglect and maltreatment by another person.

During the standardized 12-month follow-up period, 14.6% of the sampled adults were the subject of subsequent investigations, and 10.3% were founded for additional maltreatment. Among the 536 adults, 9.3% were referred for self-neglect during the follow-up period, 4.5% were referred for maltreatment by another person, and less than 1% were referred for both.

This review raised a number of issues related to risk assessment:

1. A sample of adults founded for maltreatment resulted in an over-representation of referrals for self-neglect and an under-representation of referrals for maltreatment by another person. Thus, outcome rates observed for this sample may differ from those of a sample of adults referred to BEAS regardless of finding.
2. The ability to develop an actuarial risk assessment depends on the average rate of outcomes among the population of interest (referred to as a base rate). Accurate risk assessment classification is much more difficult when the base rate of the outcome being estimated is very low (Goodie & Fantino, 1999; Schönemann & Thompson, 1996). The base rates observed in this sample are sufficient for a risk assessment validation study.
3. A greater proportion of adults initially referred for self-neglect were re-referred for self-neglect during the follow-up period than adults who were initially investigated for maltreatment by another person (12.8% and 3.3% respectively), while adults initially referred for maltreatment by another were more likely than those referred for self-neglect to be subsequently referred for maltreatment by another party (8.5% compared to 3.9%). It may also be the case that risk factors for self-neglect differ from the risk factors for maltreatment by another person. The best actuarial risk assessment for estimating the likelihood of subsequent adult maltreatment may have separate scales for self-neglect and maltreatment by another.
4. Actuarial risk assessment requires reliable measures of observable outcomes. Income, birth date, and race and ethnicity information were missing for significant proportions of the sample. These characteristics have been identified as risk factors related to subsequent elder maltreatment (Lachs et al., 1997), and thus are important to measure.

The design of a valid actuarial risk assessment begins with the construction of a data collection instrument, which will be used by workers to observe and record information about

APS clients. This instrument should include items gathered from previous research, informed by existing consensus among APS agencies regarding risk factors. The subsequent validation study using this collected information could then determine which of these items has a strong relationship to the outcomes experienced by the observed APS clients. The remainder of the report concerns the research conducted to identify promising data collection instrument items.

III. REVIEW OF LITERATURE AND CURRENT APS RISK ASSESSMENT PRACTICES

This research effort regarding risk assessment practices involved three sources of data collection. The first section describes recent research published in peer-reviewed journals regarding the maltreatment of elders. The second section reviews existing elder maltreatment assessments and research related to their reliability and validity. The third source of information was a telephone survey conducted with APS administrators from 37 states regarding risk assessment practices. These three data sources provide a comprehensive review of risk assessment practices in APS, and informed development of a data collection instrument to be implemented during a prospective risk validation study.

A. Review of Descriptive Studies

In 1975, Burston and Butler both identified elder maltreatment and self-neglect as a social problem. Since then, a number of studies have investigated the incidence, nature, and causes of elder abuse (Choi & Mayer, 2000). Most of this research, however, consists of cross-sectional studies that observe adults at a single point in time. For example, Choi and Mayer (2000) sampled 307 adults founded for maltreatment by a New York APS agency and compared them by maltreatment type. They found that elders with physical health problems were more likely to be abused or exploited by others, while elders with alcohol or drug problems were more

likely to be founded for self-neglect. These studies described the characteristics of self-neglecting or maltreated adults, and identified those attributes related to current maltreatment. They did not, however, indicate whether these observed characteristics were predictive of future adult maltreatment.

Identifying the risk factors predictive of future adult maltreatment requires a longitudinal study design. A longitudinal study samples a cohort of adults and observes them for a standardized follow-up period. This enables researchers to determine which characteristics present at the time of sampling are related to events that occur during the follow-up period. Identifying the risk factors related to subsequent adult self-neglect or maltreatment by another party can then be used by providers to identify the adults most at risk of future maltreatment and engage them in services.

The most extensive longitudinal study of elder maltreatment sampled 2,812 adults over the age of 65 years living in New Haven, Connecticut, and followed them for up to nine years. Initial findings showed that functional disabilities (such as requiring assistance for feeding), minority ethnic status, and/or age over 75 years were related to a higher likelihood of being referred to APS for maltreatment allegations during a two-year follow-up period (Lachs, Berkman, Fulmer, & Horwitz, 1994; see Appendix B, Table B1, for additional study details). Further studies observed this cohort for a nine-year follow-up period. Analysis showed that elders living with someone else; from a minority ethnic group; having a low income; having a cognitive disability; and/or having chronic health conditions have greater odds of subsequent maltreatment by another person (Lachs et al., 1997). Elders with clinical levels of depression and cognitive impairments at baseline, elders who live alone, and elders who have a history of hip fracture and/or a history of stroke had increased odds of subsequent self-neglect (Abrams, Lachs, McAvay, Keohane, & Bruce, 2002).

The only other longitudinal study published in peer-reviewed journals sampled 1,797 adults living in Amsterdam, the Netherlands. The authors observed the sampled adults' characteristics in 1990, and then observed whether any characteristics were related to maltreatment reported in 1994 (Comjris, Smit, Pot, Bouter, & Jonker, 1998). The authors found that the risk factors associated with financial maltreatment differed from the risk factors associated with physical or verbal aggression. Living alone, being male, having symptoms of depression and/or requiring physical assistance were associated with subsequent financial exploitation, while symptoms of depression, living with someone else, and/or being in poor health were associated with physical and/or verbal aggression.

These studies identified a number of risk factors that should be collected during a risk validation study. Table 5 reviews the factors by the relevant outcome and the study that provided evidence of the relationship to subsequent adult maltreatment. The outcomes reviewed are not mutually exclusive, but rather are specific to the studies. For example, two of the studies examined abuse or neglect by another person as one outcome.

Table 5				
Risk Factors Identified by Empirical Studies of Elder Maltreatment				
Risk Factor Identified	Abuse/Neglect Outcome			
	Abuse/Neglect by Another¹¹	Self-neglect¹²	Verbal Aggression¹³	Financial Exploitation¹⁴
Minority status	Lachs et al. (1994) ^r Lachs et al. (1997) ^{b,r}	Lachs et al. (1994) ^r		
Advanced age (over 75)	Lachs et al. (1994) ^r Lachs et al. (1997) ^b	Lachs et al. (1994) ^r Abrams et al. (2002) ^r		
Low income/ socioeconomic status	Lachs et al. (1997) ^b	Abrams et al. (2002) ^r		
Low social support ¹⁵	Lachs et al. (1994) ^r Lachs et al. (1997) ^b	Lachs et al. (1994) ^r Abrams et al. (2002) ^r		
Difficulty with ADLs Feeding Number of ADLs Housework Climbing stairs Writing Change in ADLs	Lachs et al. (1994) ^r Lachs et al. (1997) ^{b,r} Lachs et al. (1997) ^b Lachs et al. (1997) ^b Lachs et al. (1997) ^b Lachs et al. (1997) ^b Lachs et al. (1997) ^r	Lachs et al. (1994) ^r		Comjjs et al. (1998) ^r
Lives with someone ¹⁶	Lachs et al. (1997) ^b Comjjs et al. (1998) ^r		Comjjs et al. (1998) ^r	
Lives alone	Lachs et al. (1997) ^r	Abrams et al. (2002) ^r		Comjjs et al. (1998) ^r
Depression	Comjjs et al. (1998) ^r	Abrams et al. (2002) ^r		Comjjs et al. (1998) ^r
Poor physical health			Comjjs et al. (1998) ^r	
Cognitive impairment/ dementia ¹⁷	Lachs et al. (1997) ^{b,r}			

* Although New Hampshire considers dementia to be a physical condition, many researchers and other state assessments group dementia and cognition together.

Note: The superscript letters next to each study indicate whether the relationship between the risk factor and the outcome is based on bivariate or multivariate analyses (^b for bivariate, ^r for regression analysis).

¹¹ In Lachs et al. (1994), this includes abuse, neglect by another, abandonment, and exploitation. In Lachs et al. (1997), this category includes neglect by another, abuse, and exploitation. In Comjjs et al. (1998), this includes only physical aggression.

¹² Lachs et al. (1994) grouped self-neglect and abuse/neglect by another into one outcome. Therefore, that study is represented in both columns. Abrams et al. (2002) looked specifically at self-neglect, so that study is not represented in the Abuse/Neglect by Another column. Comjjs et al. (1998) did not look at self-neglect.

¹³ Verbal aggression was identified as a separate outcome in Comjjs et al. (1998).

¹⁴ Financial exploitation was identified as a separate outcome in Comjjs et al. (1998). It was included in abuse/neglect by another in Lachs et al. (1994) and Lachs et al. (1997).

¹⁵ Defined by Lachs et al. (1994) as having a social network index less than three.

¹⁶ In Lachs et al. (1997), lives with someone is defined as living with someone at cohort inception.

¹⁷ In Lachs et al. (1997) risk of abuse/neglect was shown to increase as cognitive impairments increased, although the relationship was not significant when adjusted for age and race. However, older adults who entered the cohort with no impairment and developed one over the nine-year follow-up were significantly more likely to have an investigation for abuse/neglect.

The previously reviewed longitudinal studies identified risk factors for subsequent adult maltreatment that should be collected as part of future risk validation studies. These include demographic characteristics including age, race and ethnicity, gender, and living situation, as well as other characteristics such as evidence of depression, chronic health problems, difficulties with ADLs, and cognitive impairments.

B. Review of Research on Adult Maltreatment Screening Assessments

NCCD staff also reviewed studies that evaluated existing elder maltreatment assessments. This review examined the purpose of and intended audience for each assessment, evidence of reliability and validity, and then identified whether any existing assessments were sources of potential items to collect during a validation study.

Research has been conducted on ten assessments of elder maltreatment. All but one of these, however, focused on whether maltreatment was currently occurring (as opposed to determining the likelihood of future maltreatment). One assessment was designed to help caregivers assess their likelihood of future elder maltreatment, but this assessment was not tested for predictive validity. The majority of assessments were designed to be completed either by medical staff or community providers as screening tools to help determine whether or not maltreatment should be reported, or to be completed by alleged maltreatment victims or their caregivers to help them identify the current risk of maltreatment (i.e., self-reported assessment of relevant behaviors).

Almost all of the assessments had been examined for construct validity, which tests whether the assessment measures what it was designed to measure. The instruments' assessments were often compared to prior confirmed maltreatment, expert opinion, the presence of known risk factors, or the findings of other assessments. None of the assessments had been tested for predictive validity.

Inter-rater reliability measures the degree to which different individuals presented with the same information will complete an assessment similarly. Only two of the elder maltreatment screening assessments were tested for and demonstrated high inter-rater reliability. These two instruments, the Indicators of Abuse (IOA) assessment and the Elder Assessment Instrument (EAI), informed development of the BEAS data collection instrument. Both assessments also demonstrated strong construct validity (see Appendix C, Table C1, for detailed information).

The IOA and the EAI demonstrated inter-rater reliability and construct validity, but are too lengthy to have APS workers complete for each investigation. The IOA has 27 items and the EAI is composed of 41 items. When assessing items for inclusion in the BEAS instrument, similar risk items were collapsed into domain areas, and more objective, measurable items were selected over more subjective ones. Both assessments used a Likert scale construction (four and five categories, respectively), which were collapsed into dichotomous measures. Table 6 reviews risk domains included on the IOA or EAI (the table also notes whether each item is included on any other assessments) and therefore considered for inclusion in the BEAS data collection instrument.

Table 6

Risk Items Identified in Screening Assessments With High Inter-Rater Reliability

Domain	Item	Tool
Evidence of maltreatment	Elder discloses abandonment, abuse, exploitation, or neglect.	EAI
	Observed evidence of maltreatment such as bruising, fractures, lacerations, abandonment, injuries in various stages of healing, or other evidence of abuse, exploitation, neglect, or sexual abuse.	EAI
	Evidence that caregiver has withdrawn care precipitously without alternative arrangements, or that an elder is left alone involuntarily or in an unsafe environment for extended periods.	EAI/EPAS
	Evidence that there has been no response to an elder health alert or that caregiver has not responded to warning of obvious disease.	EPAS/EIA
Caregiver difficulty in meeting elder needs	Assessment of caregiver’s understanding and willingness to provide care (experience in caregiving, understanding of medical condition, caregiving reluctance, expectations of elder).	IOA
Caregiver characteristics	Caregiver has problems with alcohol or other drugs.	IOA/SIT
	Caregiver has behavioral problems or mental/emotional difficulties.	IOA
	Caregiver has poor current or prior relationships with others.	IOA
	Caregiver takes pleasure in blaming others or habitually blames others.	IOA
	Caregiver has conflict in marital or family relationships.	IOA
Caregiver/elder relationship	Caregiver is financially dependent upon elder.	IOA/SIT
	Elder has unrealistic expectations or expresses dissatisfaction toward caregiver.	IOA/EPAS
Elder’s ability to care for self	Elder is able to understand medical information, take medications, and get around without assistance.	HSEAST/ VASS/IOA
Elder characteristics	Elder has been abused in the past.	IOA
	Elder has behavior problems, including but not limited to difficulties with temper or aggression or an unreasonably inflexible viewpoint.	IOA/CASE/ EPAS
	Elder has fallen down several times or has suspicious injuries.	SIT/IOA
	Elder has poor hygiene.	EAI
	Elder wears inadequate clothing for the time of year.	SIT/ EAI
	Elder takes pleasure in blaming or habitually blames others.	IOA/EPAS
	Elder has an alcohol, medication, or drug problem.	IOA
Elder financial situation	Elder is financially dependent on others.	IOA/EPAS
	Elder is unable to account for money/property or there is evidence that elder’s money has been misused.	EAI
	Goods have been demanded in exchange for services to elder.	EAI
Elder medical condition/ health status	Elder shows evidence of poor health or poor physical condition, including contractures, decubiti, dehydration, diarrhea, impaction, malnutrition, poor skin integrity, or urine burns.	EAI
	Elder has no regular doctor.	IOA
	Elder takes inappropriate medications for unknown reasons.	EAI/EPAS
	Elder has history of repetitive hospital admissions.	EAI
Elder mental health	Elder has mental/emotional difficulties, including depression; frequent feelings of sadness or loneliness; periods of being confused, dispirited, and anxious; or unexplained irritability.	IOA/HSEAST/ VASS/EAI/ EPAS
	Elder is emotionally dependent.	IOA
Elder relations with others	Elder has conflictive family relationships.	SIT/IOA
	Elder has poor current relationships	IOA
	Elder is socially isolated or lacks social support and/or is unwilling to talk to others.	IOA/EPAS

C. Review of Risk Assessment Practices in State APS Agencies

In the summer of 2007, NCCD contacted state APS agencies to survey them about their risk assessment practices. The survey content included whether or not a state risk assessment form existed, what research had been conducted during development, when workers completed the risk assessment, and what decision it informed. Finally, the content of the state risk assessment forms was analyzed.

Thirty-seven states participated in the research effort, and 26 had a state-sponsored risk assessment form.¹⁸ Seven state representatives indicated that their risk assessments were currently under review or being revised. Very few states had conducted reliability research to ensure that the risk assessment resulted in consistent decisions, or validity research to ensure that the risk assessment measured what it was designed to measure. Only three states reported testing their assessments for reliability (Tennessee, New Jersey, Minnesota), and three reported testing construct validity (Minnesota, Texas, and Arkansas). No states tested the predictive validity of their risk assessment to determine how well the assessment classifies alleged victims by the likelihood of future harm.

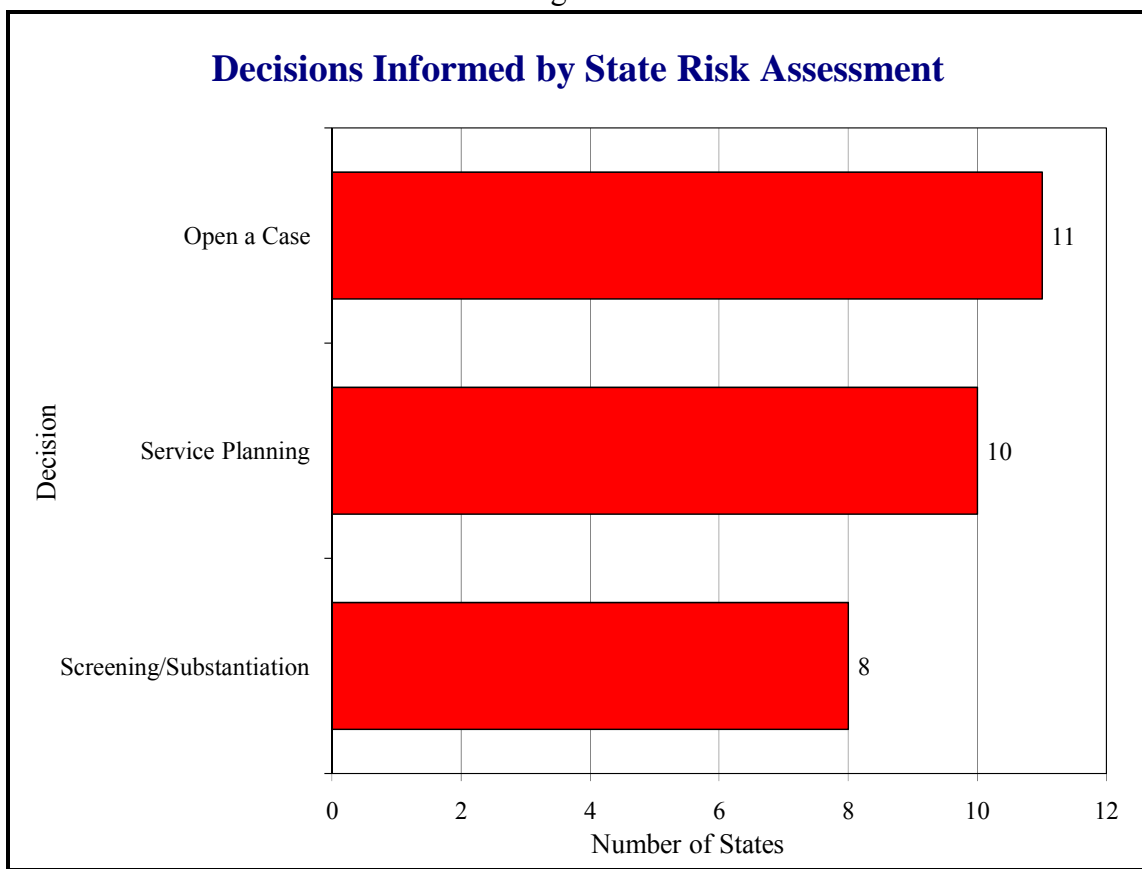
The 26 states using a standardized risk assessment varied in when the form was completed as well as what decision it informed. In over half (16) of the states, workers completed the risk assessment after the first face-to-face meeting with the client, and in 17 states workers completed the assessment at the substantiation decision point or at the close of the investigation. Six states also had workers complete the risk assessments at additional points during the case process (four as a reassessment of risk at a fixed time interval or after a change in

¹⁸ North Dakota, Oklahoma, and Wyoming use the same assessment, although each has its own layout. Although this finding reduces the number of *unique* assessments to 24, 26 states was used as the basis of analysis. This section seeks to identify areas of *consensus* among the states, and the use of one assessment by three states indicates an area of consensus.

circumstances; two used the assessment throughout the case).¹⁹ Eleven states had workers complete the risk assessment at multiple points during the case process.

Eleven states reported that the risk assessment informed the decision to open a case or not (see Figure 5). Most states, however, reference the risk assessment for some other purpose, including screening/substantiation and service planning.

Figure 5



It appears that many state agencies are using their risk assessment at multiple points in the case to inform a variety of decisions. For example, four state representatives indicated that the risk assessment helped determine whether or not a case should be opened, but workers

¹⁹ Responses will sum to more than 26 because states were able to provide more than one answer to this item. For example, Illinois used the risk assessment at the close of the investigation and at three-month intervals thereafter to reassess risk.

completed the assessment only after the first face-to-face contact. Requiring that one assessment inform multiple decisions may result in a less efficient assessment, and could adversely impact the accuracy of decisions. In Structured Decision Making[®] (SDM) systems, risk is assessed at the end of an investigation so that the accumulated evidence may be used to decide if services should be offered. In contrast, safety is assessed at the first face-to-face contact (the point when 16 states report assessing “risk”) to determine imminent threat of harm. States’ reports of their use of risk assessment suggest that these assessments are multi-purpose rather than specialized.

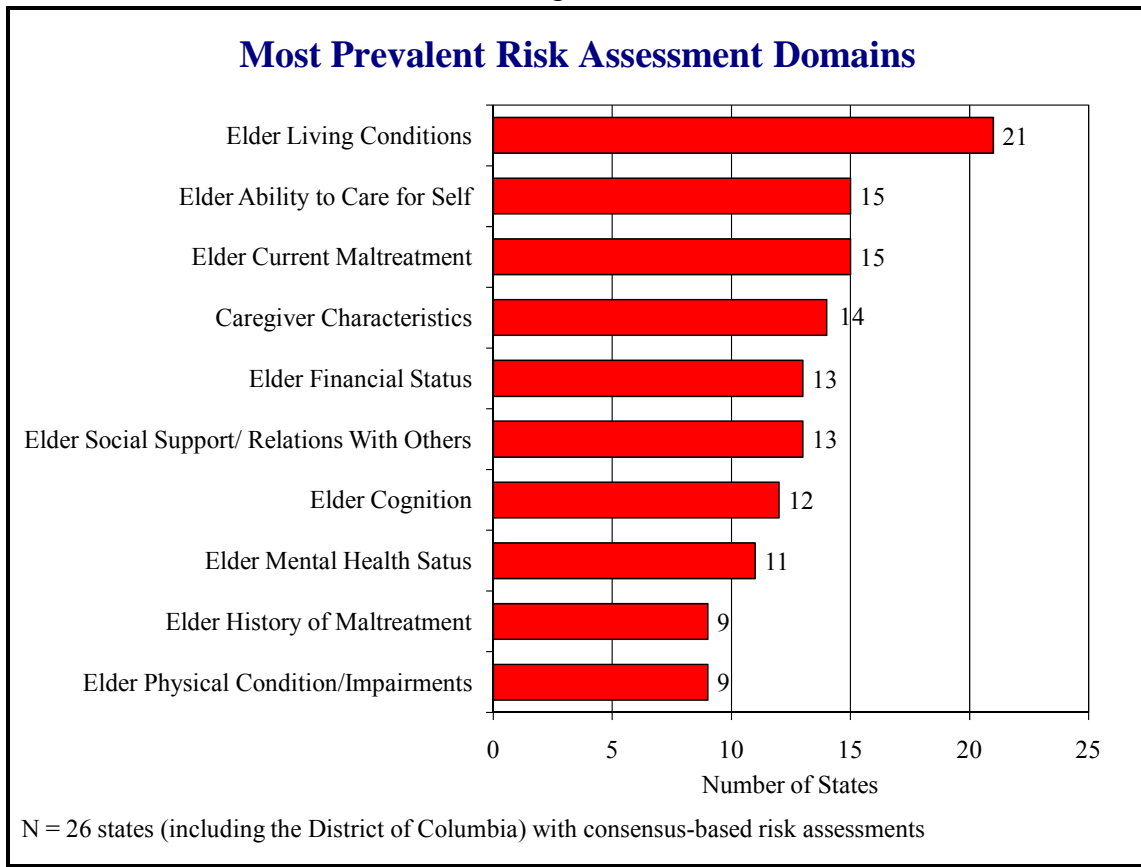
Risk assessment formats also differed. Most assessments contained items that could be answered yes/no (nine states), on a scale (nine states), or used a combination of yes/no and scaled items (five states).²⁰ A few states had definitions embedded in the risk assessment form, but many lacked item definitions. States also varied in whether and how workers obtained an overall risk level. Only seven states calculated an overall risk level by summing the scores of individual items. Seventeen states had workers make a clinical judgment based on their answers to the items.²¹

While states varied in how they applied the risk assessment, the domains addressed in the risk assessment forms were fairly consistent. Figure 6 shows that the most common risk domains were the elder’s living conditions, ability to care for oneself, evidence of current maltreatment, and the characteristics of the caregiver. These domains were considered for inclusion on the BEAS data collection instrument.

²⁰ Most states using this format asked workers to evaluate the item on a low-moderate-high scale. Items were rated on scales with three to five options.

²¹ Two states, Tennessee and Utah, did not include overall risk level information in their assessment instructions.

Figure 6



D. Summary

The goals of these reviewed efforts were to identify how APS agencies derive and use risk assessment information, and to develop a data collection form to be completed by workers during a prospective risk validation study. The examination of risk assessment practices involved three sources of data collection: a review of descriptive studies, an examination of existing elder maltreatment screening assessments, and a survey of state APS agencies. Findings of note included the following:

- A validation study is a form of longitudinal study, which samples a cohort of elders and observes them during a follow-up period to determine whether characteristics observed at the time of sample are related to subsequent self-neglect or maltreatment by another party. Only two such longitudinal studies have been conducted, and only one observed adults for an uninterrupted follow-up

period. Thus, a risk validation study will be a valuable contribution to the field and current knowledge about risk factors.

- Research has been conducted on ten assessments of elder maltreatment. All but one of these, however, focus on whether maltreatment is currently occurring (as opposed to determining the likelihood of future maltreatment). They are designed to be completed either by medical staff or community providers, or by an alleged maltreatment victim or an alleged victim's caregiver (i.e., self-reported assessment of relevant behaviors). Almost all have been examined for construct validity, which tests whether the assessment measures what it was designed to measure. The instruments' assessments were often compared to prior confirmed maltreatment, expert opinion, the presence of known risk factors, or the findings of other assessments. Very few existing elder maltreatment assessments have been tested for inter-rater reliability, and only two demonstrated high inter-rater reliability. These two instruments, the Indicators of Abuse (IOA) assessment and the Elder Assessment Instrument (EAI), informed development of the BEAS data collection instrument.
- Among the 37 state APS agencies who participated in the survey regarding risk assessment practices, 26 had developed or adopted a risk assessment. Only three states had assessed the reliability of the risk assessment, three had assessed the construct validity, and none had examined the predictive validity of the risk assessment. Thus, this undertaking by BEAS to develop an actuarial risk assessment has the potential to substantially improve the practice of risk assessment in APS.
- A number of states reference some type of standardized assessment to inform an evaluation of cognitive functioning. For example, the Mini-Mental State Exam (MMSE) is used by three states and has been identified as an effective screening assessment by researchers (Crum, Anthony, Bassett, & Folstein, 1993; Folstein, Folstein, & McHugh, 1975).

E. Data Collection Instrument

All risk factors and domains considered for inclusion on the BEAS data collection instrument were identified by longitudinal research, assessment research, and/or frequency of inclusion on consensus-based risk assessments developed by state APS agencies. Table 8 shows the risk factors or domains considered for inclusion in the data collection instrument. As illustrated, a number of the domains were identified by two or more sources. For example, social support/relationships with others was identified as a risk factor for elder maltreatment in

descriptive research (in this case, a longitudinal study), elder maltreatment assessments, and the majority of consensus-based risk assessments currently used in the U.S.

Table 8			
Risk Domains Considered for Inclusion on the Data Collection Instrument by Source			
Risk Factor or Domain	Identified by Descriptive Research	Included on Reliable Assessments	Included on Many Consensus-Based State Risk Assessments
Characteristics of Elder			
Minority status	X		
Advanced age	X		
Low income/financial status	X	X	X
Social support/relationships with others	X	X	X
Difficulty with ADLs	X	X	X
Living situation (alone/with others)	X		
Depression/mental health issue	X	X	
Physical health	X	X	
Dementia/cognitive abilities*	X		X
Evidence of maltreatment		X	X
Elder characteristics (self-care, substance problem)		X	X
Living conditions			X
Characteristics of Caregiver			
Difficulty meeting elder's needs		X	X
Caregiver characteristics (mental health and/or substance problem)		X	X
Caregiver-elder relationship		X	X

* Although New Hampshire considers dementia to be a physical condition, many researchers and other state assessments group dementia and cognition together.

The data collection instrument provided in this report included all risk factors identified in longitudinal studies or on assessments with good inter-rater reliability (see Appendix A to view the data collection instrument and item definitions). An elder's living conditions was not included as a data collection item because it is an item on the SDM[®] safety assessment currently used by BEAS workers and therefore measured elsewhere.

The data collection instrument also does not include information that should be entered in the BEAS administrative data system. This includes the vulnerable adult's race and ethnicity, birth date, gender, income, ADL indicators, domestic violence, living situation, and current allegations. This information should be systematically entered in the BEAS administrative data system to inform development of an actuarial risk assessment.

IV. SUMMARY

This report examined the feasibility of a risk assessment validation study and design of a data collection instrument to be completed by workers during a prospective study. The data analysis determined that rates of subsequent maltreatment among adults involved with BEAS were high enough to support a validation study. The review of current literature and state APS risk assessment practices informed study design efforts and development of a data collection instrument. The examination of current knowledge and practice regarding risk assessment for APS clients shows that BEAS's efforts toward developing an actuarial risk assessment to classify adults involved with APS will improve the nature of risk assessment practices and represent a significant contribution to the field.

The most cost-effective approach to a risk validation study is to design a data collection instrument, ask workers to prospectively observe and record information about APS clients, and conduct a validation study based on this systematically collected information. While outcome rates are sufficient to conduct a validation study, successful development of a risk assessment is also dependent on reliable and systematic measurement of risk factors. If possible, completion of the data collection form should be tied to an existing assessment or form (such as an investigation summary) to increase the likelihood that workers will remember to complete it.

BEAS may wish to consider monitoring completion rates and reporting findings to workers to help ensure a high quality of implementation.

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APPENDIX A

Data Collection Form and Definitions

NEW HAMPSHIRE BUREAU OF ELDERLY AND ADULT SERVICES
ADULT PROTECTIVE SERVICES (APS)
RISK ASSESSMENT DATA COLLECTION INSTRUMENT

r: 04/05/08

Alleged Victim Name: _____ Office: _____

Alleged Victim DOB: ____/____/____ Estimated Age (if DOB unknown): _____ Report Date: ____/____/____

Options Individual ID#: _____

Section I. Alleged Victim Characteristics. Mark yes or no for each characteristic as it applies to the alleged victim.

Relationships With Adults

Yes No

- Has problematic adult relationships other than domestic violence
- Has been involved in domestic violence within the past 12 months (*mark all that apply*)
 As a victim
 As a perpetrator
- Has been involved in domestic violence prior to the past 12 months (*mark all that apply*)
 As a victim
 As a perpetrator
- Has unrealistic expectations of primary support person

Physical Health

Number of emergency room visits in the past 12 months _____

Number of inpatient hospital stays in the past 12 months _____

Yes No

- Has regular physician
- Is able to understand medical information
- Is able to take medication appropriately
- Experiences poor physical health
- Is diagnosed with dementia
- Has a Mini-Mental State Exam (MMSE) score under 26²²; MMSE score _____
- Requires assistance with ambulation, feeding, housework, or writing
- Requires continuous treatment/care

Mental Health

Yes No

- Had mental health problem within the past 12 months
- Had mental health problem prior to the past 12 months

Drugs and/or Alcohol

Yes No

- Had drug problem, excluding alcohol, within the past 12 months
- Had drug problem, excluding alcohol, prior to the past 12 months
- Had alcohol problem within the past 12 months
- Had alcohol problem prior to the past 12 months

²² Crum, R.M., Anthony, J.C., Bassett, S.S., & Folstein, M.F. (1993). Population-based norms for the Mini-Mental State Examination by age and educational level. *JAMA*, 269(18), 86-91.

Social Support/Isolation

Number of face-to-face contacts with family members/friends outside of household in the past week _____

Number of times alleged victim participated in a social group/activity during the past month _____

Yes No

- Has no friends or family members
- Has friends and/or family, but they are unwilling to provide social support
- Is geographically isolated
- Perceives that he/she has insufficient support outside of the home
- Refuses resources/services

Finances

Yes No

- Has insufficient financial resources
- Is financially dependent upon others
- Mismanages finances

Maltreatment History

Yes No

- Was maltreated as a child
- Was maltreated as an adult
- Has a history of self-neglect
- Perpetrated maltreatment on another (child or adult) as an adult

Section II. Primary Support Person Characteristics. *Mark yes or no for each characteristic as it applies to the primary support person.*

- Not applicable—there is no primary support person

Relationships With Adults

Yes No

- Has problematic adult relationships other than domestic violence
- Has been involved in domestic violence within the past 12 months (*mark all that apply*)
 - As a victim
 - As a perpetrator
- Has been involved in domestic violence prior to the past 12 months (*mark all that apply*)
 - As a victim
 - As a perpetrator
- Has unrealistic expectations of alleged victim

Drugs and/or Alcohol

Yes No

- Had drug problem, excluding alcohol, within the past 12 months
- Had drug problem, excluding alcohol, prior to the past 12 months
- Had alcohol problem within the past 12 months
- Had alcohol problem prior to the past 12 months

Mental Health

Yes No

- Had mental health problem within the past 12 months
- Had mental health problem prior to the past 12 months

Quality of Care/Ability to Provide Care

Yes No

- Lacks skills needed for the caregiving role
- Demonstrates poor knowledge of the alleged victim's needs and abilities
- Is physically unable to perform caregiving tasks
- Experiences a high level of stress according to the AMA's "Caregiver Self-assessment Questionnaire"²³
- Appears or states he/she is overwhelmed

Perception of the Current Situation

Yes No

- Refuses to cooperate with the APS investigation
- Denies obvious problems related to the alleged victim's safety or care needs

Resources/Alternative Care

Yes No

- Resources unavailable (mark all that apply)
 - Geographic barriers
 - Financial barriers
 - Insufficient services
- Is reluctant or refuses to use available resources

Finances

Yes No

- Is financially dependent on the alleged victim
- Has access to alleged victim's finances/assets

Maltreatment History

Yes No

- Was maltreated as a child
- Was maltreated as an adult
- Perpetrated maltreatment on another (child or adult) as an adult

²³ Found at http://www.ama-assn.org/ama1/pub/upload/mm/433/caregiver_english.pdf.

NEW HAMPSHIRE BUREAU OF ELDERLY AND ADULT SERVICES
ADULT PROTECTIVE SERVICES (APS)
RISK ASSESSMENT DATA COLLECTION INSTRUMENT
DEFINITIONS

r: 04/05/08

Section I. Alleged Victim Characteristics

Relationships With Adults

Has problematic adult relationships other than domestic violence. Alleged victim has problematic or conflictual relationships with other adults in his/her life, including primary support person, family, and/or friends. Do not include incidents of domestic violence.

Has been involved in domestic violence within the past 12 months. The alleged victim has been involved in two or more physical assaults or multiple periods of intimidation/threats/harassment during the past 12 months. If domestic violence is present, indicate whether the alleged victim was the victim of domestic violence, the perpetrator, or both.

Has been involved in domestic violence prior to the past 12 months. The alleged victim has been involved in two or more physical assaults or multiple periods of intimidation/threats/harassment prior to the past 12 months. If domestic violence was present, indicate whether the alleged victim was the victim of domestic violence, the perpetrator, or both.

Has unrealistic expectations of primary support person. Alleged victim has shown unrealistic expectations of primary support person, either in the past or currently, as evidenced by the following:

- The primary support person is expected to behave or perform in ways that cannot reasonably be expected given the primary support person's education, physical and/or mental capabilities, or the alleged victim's condition. For example, primary support persons with physical limitations may be unrealistically expected to help alleged victims transfer.
- Alleged victim may expect primary support person to refrain from necessary care at the request of the alleged victim. For example, physically limited alleged victims may unrealistically expect primary support person to refrain from assisting with activities of daily living even though alleged victim requires assistance.

Physical Health

Number of emergency room visits in the past 12 months. Record the number of times the alleged victim has visited the emergency room during the past 12 months, regardless of whether he/she was admitted.

Number of inpatient hospital stays in the past 12 months. Record the number of times the alleged victim has been admitted to the hospital during the past 12 months for physical health issues.

Has regular physician. The alleged victim has a physician (or physician group) who is familiar with the alleged victim's current medical conditions, medications, etc., and whom he/she has seen on a regular basis, including at least one visit in the past 12 months.

Is able to understand medical information. The alleged victim is able to understand basic medical information related to his/her health condition(s), including instructions for caring for injuries, directions for taking medications correctly, and the necessity of engaging in or refraining from activities at physician's instruction. Alleged victim is able to name and/or describe current medical conditions and related treatments.

Is able to take medication appropriately. The alleged victim demonstrates the ability to take medication in appropriate dosages at the correct time on a consistent basis. Examples of inappropriate medication include but are not limited to the following:

- Not taking prescribed/advised medications.
- Consistently taking medications at the wrong time of day.
- Forgetting to take medications or inability to remember if medications have been taken.
- "Making up" for missed doses by increasing subsequent dosage.

Experiences poor physical health. The alleged victim has physical health problems, including severe, untreated allergies that are exacerbated by the alleged victim's current environment; broken hip or bones; pressure ulcer(s); skin breakdown; dehydration; malnutrition; frequent dizziness; and problems with eyesight, hearing, speech, teeth, chewing, swallowing, bladder or bowel control, or breathing. Include information gathered from medical records, self-report, or worker's clinical observation.

Is diagnosed with dementia. The alleged victim has been diagnosed by a physician as having dementia. Diagnoses may include Alzheimer's disease, Pick's disease, dementia caused by stroke, or Parkinson's disease.

Has a Mini-Mental State Exam (MMSE) score under 26. The alleged victim has an MMSE score under 26. Indicate the most recent MMSE score. A score of 20–26 indicates mild dementia, 10–19 indicates moderate dementia, and a score less than 10 indicates severe dementia.

Requires assistance with ambulation, feeding, housework, or writing. The alleged victim has difficulty with use of limbs and requires a walker, wheelchair, or hands-on assistance in order to be ambulatory, but does not require continuous care; and/or alleged victim requires assistance with activities of daily living (ADLs) or instrumental activities of daily living (IADLs). Examples of ADLs include bathing, dressing, eating, transferring, and using the toilet. Examples of IADLs include communication, use of transportation, meal preparation, shopping, doing laundry, or housekeeping.

Requires continuous treatment/care. The alleged victim is bedridden, has an uncontrolled or debilitating chronic disease, or has deteriorating functional ability that causes him/her to be completely dependent on others for care.

Mental Health

Had a mental health problem within the past 12 months. Alleged victim or others have made verifiable statements that indicate that within the past 12 months, the alleged victim:

- Has been diagnosed as having a significant mental health disorder (based on DSM-IV criteria) by a mental health clinician or medical physician;
- Had repeated referrals for mental health/psychological evaluations; or
- Was recommended for treatment/hospitalization or was treated/hospitalized for mental health problems.

Had a mental health problem prior to the past 12 months. Alleged victim had a mental health problem as defined above that was present prior to the last 12 months.

Drugs and/or Alcohol

The alleged victim had drug or alcohol problem that interfered with daily functioning. Interference is evidenced by the following:

- Drug/alcohol use that affects marital or family relationships
- Inability to care for self or other adult/child living in the home
- Self-report of a problem
- Hospitalization for a drug/alcohol problem
- Health/medical problems caused by a drug/alcohol problem

Indicate whether a problem with drugs or alcohol was/is present DURING the past 12 months AND/OR was present prior to the last 12 months.

Social Support/Isolation

Number of face-to-face contacts with family members/friends outside of the household in the past week. Record the number of face-to-face contacts the alleged victim had with friends and family members outside of the home during the past week.

Number of times alleged victim participated in a social group/activity during the past month. Record the number of times the alleged victim participated in a social group or activity during the past month. This can include activities in the alleged victim's home with people that live outside the home or activities in the community that the alleged victim attended, including church or senior center activities, clubs, meetings, or scheduled visits with friends or family members.

Has no friends or family members. Alleged victim has no friends or immediate family members.

Has friends and/or family, but they are unwilling to provide social support. Alleged victim's family members and/or friends are unwilling to provide social support.

Is geographically isolated. Alleged victim is geographically isolated from a community or family/friends with whom he/she can socialize.

Perceives that he/she has insufficient support outside of the home. The alleged victim perceives that he/she has insufficient support outside of the home, although he/she may have social contact with others outside the home.

Refuses resources/services. The alleged victim is capable of accepting and/or accessing needed resources or services, but chooses not to do so.

Finances

Has insufficient financial resources. The alleged victim is without the income, savings, or other financial resources to meet basic needs for food, clothing, shelter, or medically necessary goods and services.

Is financially dependent upon others. The alleged victim depends on others for money and/or resources to meet basic needs for food, clothing, shelter, or medically necessary goods and services. Include only financial dependence on individuals. If alleged victim is dependent upon government assistance or other aid from public/private organizations, answer this item "no."

Mismanages finances. The alleged victim is unable to meet basic needs because available income, savings, or other financial resources have been mismanaged by him/herself or another person. The alleged victim may be unable to account for his/her money or property.

Maltreatment History

Was maltreated as a child. Alleged victim was maltreated by a parent/caregiver when alleged victim was a child, including physical, sexual, emotional abuse and/or neglect.

Was maltreated as an adult. Alleged victim has been maltreated as an adult. Include prior substantiated reports of maltreatment to APS and/or credible evidence or disclosure of maltreatment that occurred but was not officially reported (do not include incidents of domestic violence or self-neglect).

Has a history of self-neglect. The alleged victim has a known history of self-neglect. Include prior substantiated reports of self-neglect that were investigated by APS and/or credible statements or reports from the alleged victim or others regarding prior self-neglect.

Perpetrated maltreatment on another (child or adult) as an adult. Alleged victim perpetrated maltreatment on a child and/or other adult. Include credible reports of maltreatment that were not reported to APS/CPS, law enforcement, etc.

Section II. Primary Support Person Characteristics

Relationships With Adults

Has problematic adult relationships other than domestic violence. Primary support person has problematic or conflictual relationships with other adults in primary support person's life, including alleged victim, family, and/or friends. Primary support person has difficulty making friends or maintaining relationships with adults in his/her life. Do not include incidents of domestic violence.

Has been involved in domestic violence within the past 12 months. The primary support person has been involved in two or more physical assaults or multiple periods of intimidation/threats/harassment in the current household or any other household of which he/she was a part during the past 12 months. If domestic violence is present, indicate whether the primary support person was the victim of domestic violence, the perpetrator, or both.

Has been involved in domestic violence prior to the past 12 months. The primary support person has been involved in two or more physical assaults or multiple periods of intimidation/threats/harassment in the current household or any other household of which he/she was a part prior to the past 12 months. If domestic violence was present, indicate whether the primary support person was the victim of domestic violence, the perpetrator, or both.

Has unrealistic expectations of alleged victim. The primary support person has shown unrealistic expectations of the alleged victim, either in the past or currently, as evidenced by the following:

- Alleged victim is expected to behave or perform in ways that are unreasonable given the alleged victim's physical and/or mental/cognitive capabilities.
- Alleged victim may be expected to perform self-care responsibilities beyond his/her abilities.
- Alleged victim may not be allowed to engage in self-care activities.

Examples include but are not limited to the following:

- Alleged victim has physical limitations and is expected to move between rooms independently or more quickly than his/her condition allows.
- Alleged victim has diagnosed dementia and is expected to remember instructions for taking medication.
- Alleged victim does not have significant limitations but is confined to bed or to the home.

Drugs and/or Alcohol

The primary support person has a past or current drug/alcohol problem that interferes with daily functioning. Interference is evidenced by the following:

- Drug/alcohol use that affects marital or family relationships
- Inability to care for self or other adult/child living in home
- Self-report of a problem
- Hospitalization for drug/alcohol problem
- Health/medical problems caused by drug/alcohol problem

Indicate whether a problem with drugs or alcohol was/is present DURING the past 12 months AND/OR was present prior to the last 12 months.

Mental Health

Had a mental health problem within the past 12 months. The primary support person or others have made verifiable statements that indicate that within the past 12 months the primary support person:

- Has been diagnosed as having a significant mental health disorder (based on DSM-IV criteria) by a mental health clinician or medical physician;
- Had repeated referrals for mental health/psychological evaluations; or
- Was recommended for treatment/hospitalization or treated/hospitalized for mental health problems.

Had a mental health problem prior to the past 12 months. The primary support person had a mental health problem as defined above that was present prior to the last 12 months.

Quality of Care/Ability to Provide Care

Lacks skills needed for the caregiving role. The primary support person lacks the skills/training to perform specific caregiving tasks (e.g., personal hygiene requirements, transferring, etc.) at the level required to care for the alleged victim.

Demonstrates poor knowledge of the alleged victim's needs and abilities. The primary support person demonstrates poor knowledge of the alleged victim's needs and abilities, as evidenced by lack of knowledge regarding alleged victim's illness, disability, and/or care required, and primary support person does not appear willing to gain the knowledge required to provide the care required by the alleged victim.

Is physically unable to perform caregiving tasks. Primary support person is physically incapable of providing necessary care due to a physical disability or other physical limitation (e.g., is not disabled, but lacks the physical strength required to lift/transfer a non-ambulatory alleged victim).

Experiences a high level of stress according to the AMA's "Caregiver Self-assessment Questionnaire." The primary support person experiences a high level of caregiving stress according to the American Medical Association's (AMA) "Caregiver Self-assessment

Questionnaire” (see Appendix). Primary support person answered “yes” to either or both questions 4 and 11; or the total “yes” score was 10 or more; or the primary support person’s score on question 17 was 6 or higher; or the score for question 18 was 6 or higher.

Appears or states he/she is overwhelmed. Clear evidence demonstrates that the primary support person is experiencing stress or burnout (i.e., has physical, financial, or psychological strain as well as marital, parental, or work obligations that compete with alleged victim’s care). Examples include but are not limited to the following:

- Primary support person is easily frustrated, irritated, or angered by alleged victim.
- Primary support person states he/she doesn’t have the time or desire to meet caregiving needs.
- Primary support person reports changes in appetite, persistent fatigue, sleep disturbances, or feeling too exhausted to meet alleged victim’s needs.
- Primary support person reports sometimes feeling forced to act out of character or to do things he/she feels bad about.
- Primary support person reports feeling that he/she can’t do what is really necessary or what should be done for alleged victim.

Perception of the Current Situation

Refuses to cooperate with the APS investigation. The primary support person refuses to cooperate with the worker(s) during the investigation or is difficult or impossible to contact. Note that the primary support person may initially be reluctant to participate in the investigation and/or services. This item should be marked “yes” only if the primary support person shows initial reluctance *and* continues to be uncooperative throughout the investigation.

Denies obvious problems related to the alleged victim’s safety or care needs. The primary support person denies that problems related to alleged victim’s safety or care exist, and maintains this belief throughout the investigation.

Resources/Alternative Care

Resources unavailable. Resources are geographically unavailable, or existing resources do not meet the needs of the alleged victim and/or primary support person. Resources may be available but financially unattainable for alleged victim and/or primary support person. If resources are unavailable, indicate the condition that makes them unavailable (geographic barriers, financial barriers, or insufficient services).

Is reluctant or refuses to use available resources. Resources are available, but the primary support person refuses assistance. The primary support person refuses services to assist him/her

and/or poses a barrier to the provision of services to the alleged victim that are recommended to mitigate concerns about the alleged victim's safety and well-being.

Finances

Is financially dependent on the alleged victim. The primary support person is dependent on alleged victim's income or assets to maintain current housing, utilities, transportation, or to provide food.

Has access to the alleged victim's finances/assets. Evidence of the primary support person's access to alleged victim's finances/assets includes the following:

- Primary support person is listed on the alleged victim's financial accounts (e.g., checking and savings accounts).
- Primary support person can access alleged victim's finances without alleged victim's knowledge.
- Primary support person has power of attorney for financial matters on behalf of the alleged victim.

Maltreatment History

Was maltreated as a child. Primary support person was maltreated by a parent or caregiver when primary support person was a child, including physical, sexual, emotional abuse and/or neglect.

Was maltreated as an adult. Primary support person has been maltreated as an adult. Include prior substantiated reports of maltreatment to APS and/or maltreatment that occurred but was not officially reported (do not include incidents of domestic violence or self-neglect).

Perpetrated maltreatment on another (child or adult) as an adult. Primary support person perpetrated maltreatment on a child and/or other adult. Include credible reports of maltreatment that were not reported to APS/CPS, law enforcement, etc.

APPENDIX B

Longitudinal Studies That Identified Risk Factors for Elder Maltreatment

Table B1

Longitudinal Studies That Identified Risk Factors for Elder Maltreatment

Description	Findings	Citation
<p>Population: Population-based sample of 2,812 community-dwelling adults over age 65 living in New Haven, CT, in 1982.</p> <p>Follow-up Period: Two years, non-continuous (1985–86).</p> <p>Synopsis: Pilot study to examine potential risk factors that lead to an investigation of abuse or neglect of an older adult (over age 65). Data describing the cohort were obtained from the New Haven Established Population for Epidemiologic Study of the Elderly (EPESE), and outcome data were from state records of abuse/neglect investigations that occurred in 1985–86. The study identified characteristics that were significantly related to subsequent investigations of elder maltreatment by self or others.</p> <p>Abuse/Neglect Outcomes Included: Investigations of self-neglect, neglect by another person, abuse, abandonment, and exploitation allegations.</p>	<p>2.4% (68 of 2,812 cohort members) received an investigation for abuse/neglect during 1985–86.</p>	<p>Lachs et al. (1994)</p>
<p>Population: Population-based sample of 2,812 community-dwelling adults over age 65 living in New Haven, CT, in 1982.</p> <p>Follow-up Period: Nine-year period from 1982 to 1991.</p> <p>Synopsis: Follow-up to the Lachs et al. (1994) study. This study examined risk factors of subsequent abuse/neglect investigations for a continuous, longer follow-up period. The study identified characteristics that were significantly related to subsequent investigations of elder maltreatment perpetrated by others during a nine-year follow-up period.</p> <p>Abuse/Neglect Outcomes Included: Neglect, abuse, or exploitation by another.</p>	<p>1.7% (n = 47) were investigated for abuse/neglect incidents:</p> <ul style="list-style-type: none"> • 30 for neglect by another person • 9 for abuse • 8 for exploitation <p>Adult children were perpetrators in 45% of investigations and spouses were perpetrators in 26% of investigations.</p>	<p>Lachs et al. (1997)</p>
<p>Population: Population-based sample of 2,161 older adults drawn from the EPESE cohort in New Haven, CT, in 1982.</p> <p>Follow-up Period: Nine-year period from 1982 to 1991.</p> <p>Synopsis: This study looked specifically at risk factors that are likely to lead to investigation/corroborated reports of self-neglect. The primary factors examined were clinically depressive symptoms and cognitive impairments, but other factors were considered.</p> <p>Abuse/Neglect Outcomes Included: Self-neglect.</p>	<p>Among the 2,161 cohort members included in this study, corroborated incidents of self-neglect occurred in 92 (4.3%) cases during the follow-up period.</p>	<p>Abrams et al. (2002)</p>
<p>Population: Community-based sample of 1,797 community-dwelling adults over age 65 living in Amsterdam, the Netherlands, in 1990.</p> <p>Follow-up Period: One-year period, non-continuous (1994).</p> <p>Synopsis: This study examined risk factors for subsequent abuse/neglect investigations for a continuous, longer follow-up period. The study identified characteristics that were significantly related to subsequent investigations of elder maltreatment perpetrated by others during a one-year follow-up period.</p> <p>Abuse/Neglect Outcomes Included: Chronic verbal aggression, physical aggression, financial mistreatment.</p>	<p>One-year prevalence of self-reported abuse/neglect:</p> <ul style="list-style-type: none"> • 5.6% overall; • 3.2% chronic verbal aggression; • 1.2% physical aggression; and • 1.4% financial mistreatment. 	<p>Comjjs et al. (1998)</p>

APPENDIX C

Elder Maltreatment Assessments Identified in Literature Review

Table C1

Elder Maltreatment Assessments Identified in Literature Review

Tool	Description	Findings	Citations
Indicators of Abuse (IOA)	<p>Focus: Identifying current harm.</p> <p>Scope: Includes physical, emotional, and financial abuse, and neglect. Excludes sexual abuse and self-neglect.</p> <p>Completed by: Social worker or health care professional.</p> <p>Length/Format: 27 items with each item completed on a 0–4 scale (0 = nonexistent, 1 = slight, 2 = moderate, 3 = probably/moderately severe, 4 = yes/severe). Scored by summing item scores; any score above 16 should be considered to indicate maltreatment.</p>	<p>Reliability: Good 93% agreement was found between two reviewers when considering ten cases.</p> <p>Validity: Good Internal consistency was found to be high (Cronbach’s alpha = 0.91). Construct and convergent validity were tested and found to be significant through comparisons of IOA sum score with known previous abuse (χ^2 (1df) = 14.91; λ = .43; Canonical correlation = .73, $p < .001$), with evident signs of abuse (χ^2 (18df) = 98.60; λ = .37; Canonical correlation = .80, $p < .001$), and with an expert committee determination of whether or not abuse had occurred (χ^2 (28df) = 43.19, $p < .05$; Canonical correlation = .73).</p>	<p>Cohen et al. (2006)</p> <p>Cohen et al. (2007)</p> <p>Reis & Nahmiash (1998)</p>
Elder Assessment Instrument (EAI)	<p>Focus: Identifying current harm.</p> <p>Scope: Includes physical, emotional, and financial abuse, and neglect. Excludes sexual abuse and self-neglect.</p> <p>Completed by: Social worker or health care professional.</p> <p>Length/Format: 41-item Likert scale (no evidence; possible evidence; probable evidence; definite evidence; unable to assess) organized around seven areas: general assessment, neglect assessment, usual lifestyle, social assessment, medical assessment, emotional and/or psychological neglect, and summary assessment. This instrument is not scored; summary assessment is based on clinical judgment regarding previous items.</p>	<p>Reliability: Good Inter-rater reliability was tested with two nurses assessing 20 patients and found to be satisfactory (Krippendorf’s alpha = 0.88).</p> <p>Validity: Good Construct validity was tested with assessment agreement with an expert panel’s determination. Agreement was found 71% of the time. (Fisher’s exact test was also conducted; p-values range from .001 to .074 for items found to be significant.)</p>	<p>Fulmer et al. (2005)</p> <p>Fulmer et al (2000)</p>
Caregiver Abuse Screen (CASE)	<p>Focus: Identifying current harm.</p> <p>Scope: Includes physical, emotional, and financial abuse, and neglect. Excludes sexual abuse and self-neglect.</p> <p>Completed by: Caregiver.</p> <p>Length/Format: Eight yes/no items relate to the caregiver’s perception of his/her interactions with the elder. The tool is scored by summing the yes responses.</p>	<p>Reliability: Unknown No reliability testing data.</p> <p>Validity: Good Convergent validity between sum score and prior maltreatment as well as HSEAST and IOA instruments (ANOVA: $F = 7.17$, $df = 2$, $p < .001$).</p>	<p>Reis & Nahmiash (1995)</p>

Table C1

Elder Maltreatment Assessments Identified in Literature Review

Tool	Description	Findings	Citations
<p>Impulsive Feelings to Commit Elder Abuse (IFCEA)</p>	<p>Focus: Likelihood of future harm.</p> <p>Scope: Includes physical and emotional abuse. Excludes financial and sexual abuse, neglect, and self-neglect.</p> <p>Completed by: Caregiver.</p> <p>Length/Format: Ten items (five focused on physical abuse and five on emotional abuse) about the frequency of the desire to harm (1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 =almost always). Scoring information is not provided.</p> <p>Based on the Potentially Harmful Behavior scale and designed to measure caregivers' inclination towards maltreatment of the elders in their care.</p>	<p>Reliability: Unknown No reliability testing data.</p> <p>Validity: Good Internal consistency was found to be high (Cronbach's alpha = 0.95). Convergent validity was tested by comparing the scale score to measures of other related measures for caregiving involvement (0.203, Pearson correlation coefficient, $p < .0125$, two-tailed), ADLs (0.216), cognitive impairment (0.301), and problem behaviors (0.330).</p>	<p>Lee & Kolomer (2007)</p>
<p>Hwalek-Sengstock Elder Abuse Screening Tool (HSEAST)</p>	<p>Focus: Identifying current harm.</p> <p>Scope: Includes physical, emotional, and financial abuse. Excludes sexual abuse, neglect, and self-neglect.</p> <p>Completed by: Elder.</p> <p>Length/Format: 15-item instrument in which each item is a yes/no question, and the items are organized into three conceptual categories: overt violations of personal rights or direct abuse, characteristics of the elder that make him/her vulnerable to abuse, and characteristics of a potentially abusive situation. Some items receive a score for a yes response, others for a no response, and sum scores determine the tool outcome.</p>	<p>Reliability: Unknown No reliability testing data.</p> <p>Validity: Fair Internal consistency, the relationship among scale items, is low (Cronbach's alpha = 0.46). Construct validity was measured by comparing responses on each item from previously abused and previously not-abused elders. Nine items were found to be significant when differentiating between the two groups (chi-square analysis, $p < 0.05$). When sum scores were considered, the difference between abused and non-abused elders was significant (independent t-test, $p = 0.049$).</p>	<p>Moody, Voss, & Lengacher (2000)</p> <p>Neale, et al. (1991)</p>

Table C1

Elder Maltreatment Assessments Identified in Literature Review

Tool	Description	Findings	Citations
<p>Vulnerability to Abuse Screening Scale (VASS)</p>	<p>Focus: Identifying current harm.</p> <p>Scope: Includes physical, emotional, and financial abuse. Excludes sexual abuse, neglect, and self-neglect.</p> <p>Completed by: Elder.</p> <p>Length/Format: Ten HSEAST items and two new items. This is a 12-item scale divided into four sections (vulnerability, dependence, dejection, and coercion). Some items receive a score for a yes response, others for a no response, and sum scores determine the tool outcome.</p>	<p>Reliability: Unknown No reliability testing data.</p> <p>Validity: Fair Internal consistency varies by the sub-scale considered, from high consistency for dependence (Cronbach’s alpha = 0.74) to low for vulnerability (0.45), dejection (0.44), and coercion (0.31). When compared to elder’s reports of violence, relationship, and health or living condition change events in the previous 12 months, the dejection scale was most consistently significantly correlated, as expected. The dependence, vulnerability, and coercion scales were correlated with only some of the life events as expected, but these correlations were significant.</p>	<p>Schofield & Mishra (2003)</p>
<p>QUALCARE</p>	<p>Focus: Identifying current harm.</p> <p>Scope: Includes physical, emotional, and financial abuse, and neglect. Excludes sexual abuse and self-neglect.</p> <p>Completed by: Social worker or health care professional.</p> <p>Length/Format: 52 items in six subscales: environmental, physical, medical, psychosocial, human rights, and financial. Each item is evaluated on a best-worst five-point anchored scale. Scoring information is not provided.</p>	<p>Reliability: Poor Inter-rater reliability was tested with two nurses trained in the use of the scale. The nurses agreed on item scores 66% of the time on average. (Inter-class correlation coefficient, 95% confidence interval = 0.51, c.i. .23, to .72.)</p> <p>Validity: Good Internal consistency of the scale was high (Cronbach’s alpha = .96). The QUALCARE score was compared to the judgment of two professionals as to the likelihood of current maltreatment. This test of construct validity was found to be significant for the total scale and for each subscale except for environmental (ANOVA, one-way, p<.06).</p>	<p>Bravo et al. (1995)</p>
<p>Scale of Inadequate Treatment (SIT)</p>	<p>Focus: Identifying current harm.</p> <p>Scope: Includes physical, emotional, and financial abuse; neglect; and self-neglect. Excludes sexual abuse.</p> <p>Completed by: Social worker or health care professional.</p> <p>Length/Format: 76-item assessment in which each item is rated on a five-point scale. Scoring information is not provided.</p>	<p>Reliability: Fair Reliability was assessed using test-retest methodology in which trained raters visited the same elder-caregiver pairs twice (one month between visits). Approximately 78% of all items showed significant test-retest correlations, meaning that the second scoring was closely related to the first score.</p> <p>Validity: Good Convergent validity was tested by comparing scores to the determination of professionals that abuse was or was not suspected. Significant results are reported for 23 items (two-tailed significance testing, p<0.041) and the scale overall (Mann-Whitney U = 52.5, p = .002).</p>	<p>Touza, Segura, & Prado (2004)</p>

Table C1

Elder Maltreatment Assessments Identified in Literature Review

Tool	Description	Findings	Citations
Kohlman Evaluation of Living Skills (KELS)	<p>Focus: Identifying current harm.</p> <p>Scope: Includes self-neglect. Excludes physical, emotional, financial, and sexual abuse, and neglect.</p> <p>Completed by: Social worker or health care professional.</p> <p>Length/Format: Assessment of performance at instrumental and basic ADLs divided into five sections: self-care, safety and health, money management, transportation and telephone, and work and leisure. Final scores range between 0 and 16, and a score higher than 6 indicates failure.</p>	<p>Reliability: Unknown No reliability testing data.</p> <p>Validity: Good Convergent validity was tested, comparing KELS scores to APS determination of self-neglect, and self-neglectors were found to be more likely to fail the KELS ($\chi^2 = 5.0$; $p = .025$).</p>	Pickens, Naik, Burnett, Kelly, Gleason, & Dyer (2007)
Elders' Psychological Abuse Scale (EPAS)	<p>Focus: Identifying current harm.</p> <p>Scope: Includes emotional abuse. Excludes physical, financial, and sexual abuse; neglect; and self-neglect.</p> <p>Completed by: Social worker or health care professional.</p> <p>Length/Format: 32 yes/no items designed to detect psychological abuse. Items are answered by professional based on interview with elder and observation. The final score is the sum of all yes answers with scores above 10 indicating abuse.</p>	<p>Reliability: Fair Test-retest reliability was determined using two assessments two weeks apart on 29 elders. Seven indicators had 100% agreement, and the lowest score was one item with 79% agreement. (Agreement was significant for most items.)</p> <p>Validity: Good Concurrent validity was tested by comparing scale scores with two standard assessments for cognitive impairment and functional dependence. Significant correlations ($r = -0.362$, $p < .001$) were found with both.</p>	Wang, Tseng, & Chen (2007)

APPENDIX D

MMSE Tool and Caregiver Self-assessment Questionnaire

The Mini Mental State Examination (MMSE)

By: Lenore Kurlowicz, PhD, RN, CS and Meredith Wallace, PhD, RN, MSN

WHY: Cognitive impairment is no longer considered a normal and inevitable change of aging. Although older adults are at higher risk than the rest of the population, changes in cognitive function often call for prompt and aggressive action. In older patients, cognitive functioning is especially likely to decline during illness or injury. The nurses' assessment of an older adult's cognitive status is instrumental in identifying early changes in physiological status, ability to learn, and evaluating responses to treatment.

BEST TOOL: The Mini Mental State Examination (MMSE) is a tool that can be used to systematically and thoroughly assess mental status. It is an 11-question measure that tests five areas of cognitive function: orientation, registration, attention and calculation, recall, and language. The maximum score is 30. A score of 23 or lower is indicative of cognitive impairment. The MMSE takes only 5-10 minutes to administer and is therefore practical to use repeatedly and routinely.

TARGET POPULATION: The MMSE is effective as a screening tool for cognitive impairment with older, community dwelling, hospitalized and institutionalized adults. Assessment of an older adult's cognitive function is best achieved when it is done routinely, systematically and thoroughly.

VALIDITY/RELIABILITY: Since its creation in 1975, the MMSE has been validated and extensively used in both clinical practice and research.

STRENGTHS AND LIMITATIONS: The MMSE is effective as a screening instrument to separate patients with cognitive impairment from those without it. In addition, when used repeatedly the instrument is able to measure changes in cognitive status that may benefit from intervention. However, the tool is not able to diagnose the cause for changes in cognitive function and should not replace a complete clinical assessment of mental status. In addition, the instrument relies heavily on verbal response and reading and writing. Therefore, patients that are hearing and visually impaired, intubated, have low English literacy, or those with other communication disorders may perform poorly even when cognitively intact.

MORE ON THE TOPIC:

Folstein, M., Folstein, S.E., McHugh, P.R. (1975). "Mini-Mental State" a Practical Method for Grading the Cognitive State of Patients for the Clinician. *Journal of Psychiatric Research*, 12(3); 189-198.

Foreman, M.D., Grabowski, R. (1992). Diagnostic Dilemma: Cognitive Impairment in the Elderly. *Journal of Gerontological Nursing*, 18; 5-12.

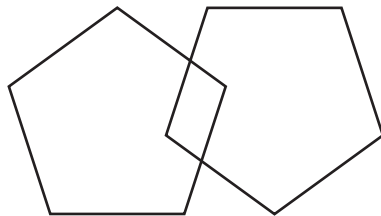
Foreman, M.D., Fletcher, K., Mion, L.C., & Simon, L. (1996). Assessing Cognitive Function. *Geriatric Nursing*, 17; 228-233.

The Mini-Mental State Exam

Patient _____ Examiner _____ Date _____

Maximum Score

- | | | |
|----------------------------------|-----|---|
| 5 | () | Orientation |
| 5 | () | What is the (year) (season) (date) (day) (month)?
Where are we (state) (country) (town) (hospital) (floor)? |
| Registration | | |
| 3 | () | Name 3 objects: 1 second to say each. Then ask the patient all 3 after you have said them. Give 1 point for each correct answer. Then repeat them until he/she learns all 3. Count trials and record.
Trials _____ |
| Attention and Calculation | | |
| 5 | () | Serial 7's. 1 point for each correct answer. Stop after 5 answers.
Alternatively spell "world" backward. |
| Recall | | |
| 3 | () | Ask for the 3 objects repeated above. Give 1 point for each correct answer. |
| Language | | |
| 2 | () | Name a pencil and watch. |
| 1 | () | Repeat the following "No ifs, ands, or buts" |
| 3 | () | Follow a 3-stage command:
"Take a paper in your hand, fold it in half, and put it on the floor." |
| 1 | () | Read and obey the following: CLOSE YOUR EYES |
| 1 | () | Write a sentence. |
| 1 | () | Copy the design shown. |



_____ Total Score
ASSESS level of consciousness along a continuum _____
Alert Drowsy Stupor Coma

"MINI-MENTAL STATE." A PRACTICAL METHOD FOR GRADING THE COGNITIVE STATE OF PATIENTS FOR THE CLINICIAN. *Journal of Psychiatric Research*, 12(3): 189-198, 1975. Used by permission.

Caregiver self-assessment questionnaire

How are YOU?

Caregivers are often so concerned with caring for their relative's needs that they lose sight of their own well-being. Please take just a moment to answer the following questions. Once you have answered the questions, turn the page to do a self-evaluation.

During the past week or so, I have ...

- | | |
|--|---|
| <p>1. Had trouble keeping my mind on what I was doing <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. Felt that I couldn't leave my relative alone <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>3. Had difficulty making decisions <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>4. Felt completely overwhelmed <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>5. Felt useful and needed..... <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>6. Felt lonely..... <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>7. Been upset that my relative has changed so much from his/her former self <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>8. Felt a loss of privacy and/or personal time <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>9. Been edgy or irritable..... <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>10. Had sleep disturbed because of caring for my relative <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>11. Had a crying spell(s)..... <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>12. Felt strained between work and family responsibilities..... <input type="checkbox"/> Yes <input type="checkbox"/> No</p> | <p>13. Had back pain..... <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>14. Felt ill (<i>headaches, stomach problems or common cold</i>)..... <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>15. Been satisfied with the support my family has given me..... <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>16. Found my relative's living situation to be inconvenient or a barrier to care..... <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>17. On a scale of 1 to 10, with 1 being "not stressful" to 10 being "extremely stressful," please rate your current level of stress.
_____</p> <p>18. On a scale of 1 to 10, with 1 being "very healthy" to 10 being "very ill," please rate your current health compared to what it was this time last year. _____</p> |
|--|---|

Comments:

(Please feel free to comment or provide feedback.)
