

THE NATIONAL ELDER ABUSE INCIDENCE STUDY

Final Report

September 1998

**Prepared for
The Administration for Children and Families and
The Administration on Aging
in The U.S. Department of Health and Human Services**

**by
The National Center on Elder Abuse at
The American Public Human Services Association*
in Collaboration with
Westat, Inc.**

*** Formerly the American Public Welfare Association**

The development of this report was supported by a grant awarded to the American Public Human Services Association (APHSA) jointly by the Administration for Children and Families (ACF) and the Administration on Aging (AoA) of the U.S. Department of Health and Human Services. The grant was a supplement to APHSA's existing cooperative agreement (Grant No. 90-AM-0660) awarded by AoA to create the National Center on Elder Abuse (NCEA). APHSA is the lead agency for NCEA. The views expressed in this report are those of the authors and do not necessarily reflect the policies or views of the grantee organization, its subcontractor (Westat, Inc.), or the funding agencies.

The National Elder Abuse Incidence Study Staff

National Center on Elder Abuse (NCEA)

American Public Human Services Association (APHSA) *

Toshio Tatara, PhD **

Principal Investigator

Lisa Blumerman Kuzmeskus, MA

Research Analyst

Edward Duckhorn

Research Analyst

Leslie Bivens

Administrative Assistant

Westat, Inc.

Cynthia Thomas, PhD

Westat Project Director

Joseph Gertig, MA

Field Director

Kevin Jay

Sentinel Recruitment

Albert Hartley

Programmer

Keith Rust

Statistician

Joseph Croos

Statistician

* Formerly the American Public Welfare Association

** Dr. Tatara retired on March 25, 1998, and Gary Cyphers, Interim NCEA Director at APHSA, became the National Elder Abuse Incidence Study coordinator and report editor.

TABLE OF CONTENTS

<u>Chapter</u>		<u>Page</u>
	EXECUTIVE SUMMARY	1
1	INTRODUCTION	1-1
	The Organization of this Report	1-3
2	BACKGROUND.....	2-1
	2.1 Overview of the Study Design	2-2
	2.2 The Uniqueness of a Sentinel Approach	2-3
3	STUDY DESIGN AND METHODS	3-1
	3.1 Definitions	3-1
	Steps in Establishing Definitions	3-1
	Analysis of Current State Definitions.....	3-1
	Convening of Local Roundtables.....	3-2
	Consensus Meeting.	3-2
	Pilot Testing.....	3-2
	Definitions of Elder Abuse, Neglect, and Exploitation	3-2
	Physical Abuse.....	3-2
	Sexual Abuse	3-3
	Emotional or Psychological Abuse	3-3
	Neglect	3-3
	Abandonment.....	3-3
	Financial or Material Exploitation	3-3
	Self-Neglect	3-3
	3.2 Sampling Counties, Agencies, and Sentinels.....	3-7
	Sampling at the County Level.....	3-7
	Sampling Sentinel Agencies Within Counties	3-7
	Sampling Sentinels Within Agencies	3-12
	Evaluation of the Sample of Counties and the Estimates	3-12
	3.3 Instrument Development	3-14
	Pretesting Data Collection Instruments	3-14
	Institutional Review Board (IRB)	3-15
	3.4 APS Agency and Sentinel Agency Recruitment.....	3-15
	APS Recruitment.....	3-16
	Sentinel Agency Recruitment	3-16
	Selection of Sentinels Within Agencies	3-17
	APS and Sentinel Agency Followup Procedures	3-18
	Adult Protective Services and Sentinel Training	3-19

TABLE OF CONTENTS (Continued)

	Recruitment of Alternate Sentinel Agencies.....	3-21
	Sentinel Agency Refusals and Refusal Conversions.....	3-21
3.5	Data Collection	3-22
	APS Data Collection	3-22
	Sentinel Data Collection.....	3-23
	Site Visits to APS/Aging Agencies and Sentinel Agencies.....	3-23
	Certificates of Appreciation.....	3-25
	Special Procedures in San Diego, California.....	3-25
3.6	Data Receipt.....	3-25
	Keying	3-26
	Coding Data Forms	3-26
3.7	Unduplication.....	3-27
3.8	Participant Tracking	3-29
3.9	Weighting the Responses.....	3-29
	PSU Base Weights	3-29
	Weighting of APS Data.....	3-30
	Annualization.....	3-30
	Agency Weight (non-APS Agencies).....	3-30
	Agency Nonresponse Adjustments (Sentinel Agencies).....	3-31
	Sentinel Weights	3-31
	Sentinel Case-Level Weight	3-31
	Weight Trimming.....	3-34
3.10	Measuring Sampling Variability	3-36
3.11	Interpreting Results in the Presence of Sampling Variability	3-37

4 FINDINGS--INCIDENCE OF ABUSE AND NEGLECT OF THE ELDERLY

4.1	Comparison of Reported and Unreported Abuse and Neglect and Calculation of National Estimates of Abuse and Neglect.....	4-1
4.2	Abuse Reported by APS Agencies.....	4-4
	Outcomes of Investigations	4-4
	Substantiated Reports of Abuse by Others	4-7
	Reporters of Substantiated Abuse by Others	4-7
	Reporters of Substantiated Reports of Self-Neglect.....	4-8
	Three Most Frequent Reporters for Each Maltreatment Type	4-10
	Neglect	4-10
	Emotional/Psychological Abuse	4-10

TABLE OF CONTENTS (Continued)

	Financial/Material Exploitation	4-10
	Physical Abuse.....	4-11
	Abandonment.....	4-11
	Sexual Abuse	4-11
	Outcomes of Investigations for Different Types of Maltreatment	4-11
4.3	Characteristics of Elderly Victims, Reported to APS	4-13
	Ages of Elder Abuse Victims for Selected Types of Maltreatment	4-13
	Neglect	4-14
	Emotional/Psychological Abuse	4-14
	Physical Abuse.....	4-14
	Financial/Material Exploitation	4-14
	Abandonment.....	4-14
	Incomes of Elder Abuse Victims	4-15
	Neglect	4-15
	Emotional/Psychological Abuse	4-15
	Physical Abuse.....	4-16
	Financial/Material Exploitation	4-16
	Abandonment.....	4-16
	Sex of Elder Abuse Victims.....	4-16
	Race/Ethnicity of Elder Abuse Victims.....	4-17
	Physical and Mental Frailty	4-20
	Self Care Ability	4-20
	Confusion	4-20
	Depression	4-21
4.3.1	Characteristics of Perpetrators of Domestic Elder Abuse.....	4-22
	Sex of Perpetrators of Elder Abuse	4-22
	Ages of Perpetrators of Domestic Elder Abuse	4-23
	Race/Ethnicity of Perpetrators of Domestic Elder Abuse.....	4-26
	Relationship of Perpetrators to Victims of Domestic Elder Abuse.....	4-28
4.3.2	Characteristics of Self-Neglecting Elders.....	4-30
	Sex of Self-Neglecting Elders.....	4-30
	Age of Self-Neglecting Elders	4-31
	Race/Ethnicity of Self-Neglecting Elders.....	4-32
	Self Care Ability for Self-Neglecting Elders	4-32
	Confusion for Self-Neglecting Elders	4-33
	Depression for Self-Neglecting Elders.....	4-33
4.4	Abuse Reported By Sentinel Agencies.....	4-34
	Characteristics of Elderly Victims of Non-Reported Abuse and Neglect	4-34
	Age	4-34
	Race/Ethnicity.....	4-35
	Gender	4-36
	Income	4-37

TABLE OF CONTENTS (Continued)

Physical and Mental Frailty	4-37
Self Care Ability	4-38
Confusion	4-38
Depression	4-39
Signs of Physical and Mental Frailty for Specific forms of Abuse and Neglect	4-39
Self Care Ability	4-40
Confusion	4-40
Depression	4-41
Characteristics of Perpetrators of Abuse and Neglect.....	4-42
5. CONCLUSIONS.....	5-1
Overview and “Iceberg” Theory.....	5-1
Summary of Findings.....	5-4
Limitations of NEAIS Research.....	5-6
Implications of NEAIS Findings	5-7
Future Research Questions and Issues	5-9
Conclusion	5-10

REFERENCES

TABLE OF CONTENTS (Continued)

LIST OF APPENDICES

Appendix

A	TECHNICAL BREAKDOWN OF STATE ELDER ABUSE DEFINITIONS
B	ROUNDTABLE OF ELDER ABUSE PROFESSIONALS
C	ADVISORY COMMITTEE MEETING
D	SAMPLING PLAN
E	APS AND SENTINEL TRAINING MATERIALS
F	IRB/CERTIFICATE OF CONFIDENTIALITY
G	LOCATION OF APS PROGRAM OR AGENCY IN STATES
H	APS RECRUITMENT MATERIALS
I	SENTINEL RECRUITMENT MATERIALS
J	SITE VISIT INFORMATION
K	DATA COLLECTION CLOSURE
L	WEIGHTING PLAN
M	TABLES SHOWING STANDARD ERRORS

TABLE OF CONTENTS (Continued)

LIST OF TABLES

<u>Table</u>		<u>Page</u>
3-1	Signs and symptoms of abuse and neglect	3-4
3-2	Sampled counties for the national elder abuse incidence study.....	3-9
3-3	Sentinel agency allocation by agency type.....	3-11
3-4	NEAIS annualized national estimates from APS data in 20 counties by region compared to NCEA's Survey of Domestic Elder Abuse Reports (duplicated totals)	3-13
3-5	APS and sentinel agency pretest dates and number of forms received	3-15
3-6	Sentinel participation status, by agency type.....	3-18
3-7	Participation status, by agency type.....	3-22
3-8	APHSA site visits to APS agencies	3-24
3-9	Westat site visits to sentinel agencies	3-24
3-10	Aggregate sentinel case-level weights by PSU and agency type.....	3-32
3-11	Aggregate weights attached to sentinel forms after weight trimming.....	3-35
4-1	National incidence of abuse, neglect, and self-neglect of persons 60 years and older, 1996 (unduplicated)	4-2
4-2	Types of elder maltreatment substantiated by APS agencies	4-7
4-3	Reporters of substantiated abuse by others	4-8
4-4	Reporters of substantiated reports of self-neglect.....	4-9
4-5	Three most frequent reporters for each maltreatment type.....	4-10
4-6	Outcomes of investigations for different types of maltreatment.....	4-12
4-7	Incomes of elder abuse victims for selected types of maltreatment.....	4-15
4-8	Ability to Care for Self Physically (APS)	4-20
4-9	Confusion (APS).....	4-21

TABLE OF CONTENTS (Continued)

LIST OF TABLES (Continued)

<u>Table</u>		<u>Page</u>
4-10	Depression (APS)	4-21
4-11	Sex of perpetrators of domestic elder abuse for selected types of maltreatment	4-23
4-12	Age of perpetrators of domestic elder abuse for selected types of maltreatment	4-24
4-13	Race/ethnicity of perpetrators of domestic elder abuse for selected types of maltreatment.....	4-27
4-14	Relationship of perpetrators to victims of domestic elder abuse for selected types of maltreatment.....	4-29
4-15	Self-Neglecting Elders -- Ability to Care for Self Physically (APS).....	4-33
4-16	Self-Neglecting Elders – Confusion (APS).....	4-33
4-17	Self-Neglecting Elders – Depression (APS).....	4-34
4-18	Type of abuse, by age: Percentages (Sentinel)	4-35
4-19	Type of abuse, by minority status: Percentages (Sentinel).....	4-36
4-20	Type of abuse, by gender: Percentages (Sentinel)	4-36
4-21	Ability to Care for Self Physically (Sentinel).....	4-38
4-22	Confusion (Sentinel).....	4-39
4-23	Depression (Sentinel).....	4-39
4-24	Ability to Care for Self Physically by Type of Abuse (Sentinel)	4-40
4-25	Confusion by Type of Abuse (Sentinel).....	4-41
4-26	Depression by Type of Abuse (Sentinel).....	4-41
4-27	Relationship of alleged perpetrators of abuse for sentinel data	4-43
4-28	Characteristics of alleged perpetrators of abuse for sentinel data.....	4-44

TABLE OF CONTENTS (Continued)

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
ES-1	Iceberg theory showing NEAIS identified unreported abuse and neglect, excluding self-neglect	ES-17
2-1	Iceberg theory of elder abuse.....	2-4
3-1	States by OBE region, with participating NEAIS states in gray.....	3-8
3-2	Start and stop dates for each participating county	3-19
3-3	Duplicated and unduplicated APS and sentinel reports	3-28
4-1	Outcomes of APS investigations of domestic elder abuse, neglect, and self-neglect reports	4-5
4-2	Substantiated and unsubstantiated reports to APS/aging agencies by OBE region.....	4-6
4-3	Ages of elder abuse victims for selected types of maltreatment.....	4-13
4-4	Sex of elder abuse victims for selected types of maltreatment.....	4-17
4-5	Race/ethnicity of elder abuse victims for selected types of maltreatment.....	4-19
4-6.	Sex of perpetrators of elder abuse.....	4-22
4-7	Ages of perpetrators of domestic elder abuse.....	4-24
4-8	Race/ethnicity of perpetrators of domestic elder abuse.....	4-26
4-9	Relationship of perpetrators to victims of domestic abuse.....	4-28
4-10.	Sex of self-neglecting elders	4-30
4-11	Age of self-neglecting elders.....	4-31
4-12	Race/ethnicity of self-neglecting elders	4-32
5-1	Iceberg theory showing NEAIS identified unreported abuse and neglect, excluding self-neglect	5-4

The National Elder Abuse Incidence Study

Executive Summary

Introduction and Background

America's burgeoning elder population has affected every segment of the social, political, and economic landscape. Public debate of the issues surrounding the special needs of the approximately 44 million persons in this country age 60 years and over has heightened national awareness and concern. As a result, public policies relating to issues such as retirement security, affordable long-term care, and quality of life are changing to meet the unique needs of the aging population. Yet, as the public looks toward improving the lives of the elderly, abuse and neglect of elders living in their own homes have gone largely unidentified and unnoticed. The National Elder Abuse Incidence Study has shed new light on this significant problem with the finding that **approximately 450,000 elderly persons in domestic settings were abused and/or neglected during 1996. When elderly persons who experienced self-neglect are added, the number increases to approximately 551,000 in 1996.** Additionally, through this study we have learned that:

- Female elders are abused at a higher rate than males, after accounting for their larger proportion in the aging population.
- Our oldest elders (80 years and over) are abused and neglected at two to three times their proportion of the elderly population.
- In almost 90 percent of the elder abuse and neglect incidents with a known perpetrator, the perpetrator is a family member, and two-thirds of the perpetrators are adult children or spouses.
- Victims of self-neglect are usually depressed, confused, or extremely frail.

The National Elder Abuse Incidence Study (NEAIS) was conducted by the National Center on Elder Abuse at the American Public Human Services Association (formally known as the American Public Welfare Association) and the Maryland-based social science and survey research firm, Westat. The Administration for Children and Families (ACF) and the Administration on Aging (AoA) in the U.S. Department of Health and Human Services jointly funded this research. The study asked the fundamental

question: **What is the incidence of domestic elder abuse and neglect in the United States today?** In public health and social research, the term “incidence” means the number of new cases occurring over a specific time period. The NEAIS used a rigorous methodology to collect national incidence data on what has been a largely undocumented phenomenon, and it provides the basis to estimate the incidence of domestic elder abuse and neglect among those aged 60 and above in 1996.

The NEAIS originated in 1992 when Congress, through the Family Violence Prevention and Services Act of 1992 (P.L. 102-295), directed that a study of the national incidence of abuse, neglect, and exploitation of elderly persons be conducted under the auspices of the Administration for Children and Families. ACF consulted with the federal Administration on Aging, resulting in the two agencies combining resources and expertise to support the national study. Because the legislative mandate primarily was concerned with the prevention of violence in domestic settings, the study focused only on the maltreatment of non-institutionalized elderly. Elders living in hospitals, nursing homes, assisted-living facilities, or other institutional or group facilities were not included in the study.

In order to maximize the utility of the research, the study also collected and analyzed data about elder self-neglect in domestic settings, and these findings are reported separately from the findings for abuse and neglect. In the NEAIS, the phrase “elder maltreatment” generally refers to the seven types of abuse and neglect that are measured in the study—physical abuse, sexual abuse, emotional or psychological abuse, financial or material exploitation, abandonment, neglect, and self-neglect. An early task of the NEAIS was to develop standardized definitions for each specific type of abuse and neglect, which are provided later in this executive summary.

Prior attempts to generate national data on domestic elder abuse in the United States relied on state-compiled statistics of suspected abuse, with considerable variations in definitions and comprehensiveness of reporting systems. These earlier studies, frequently designed to estimate the prevalence (i.e., the total number of cases at a designated time period) of elder abuse rather than the incidence (i.e., the new cases occurring over a specific period of time), varied considerably in their research questions, methodology, sources of data, analysis, and findings. Accordingly, comparisons of earlier research with the NEAIS findings should be done cautiously.

The NEAIS gathered data on domestic elder abuse, neglect, and self-neglect through a nationally representative sample of 20 counties in 15 states. For each county sampled, the study collected data from two sources: (1) reports from the local Adult Protective Services (APS) agency responsible for receiving and investigating reports in each county; and (2) reports from “sentinels”—specially trained individuals in a variety of community agencies having frequent contact with the elderly. The NEAIS study design and methods are described more fully later in this Executive Summary.

The NEAIS research is groundbreaking because it provides, for the first time, national incidence estimates of elder abuse, which can serve as a baseline for future research and service interventions in this critical problem. Its findings confirm some commonly held theories about elder abuse and neglect, notably that officially reported cases of abuse are only the “tip of the iceberg,” or a partial measure of a much larger, unidentified problem. The NEAIS final report offers insight into critical questions, including: who are the victims of elder abuse and neglect, and who are the perpetrators? Who are the reporters of abuse and neglect? What are the characteristics of self-neglecting elders? What is the extent of the problem of abuse, neglect, and self-neglect in our communities and what forms do they take?

National Elder Abuse Incidence Estimates

To arrive at the most accurate estimate of the national incidence of elder abuse and neglect in 1996, researchers added two numbers: (1) reports submitted to APS agencies and substantiated (i.e., determined to have occurred or be occurring) by those agencies, and (2) reports made by sentinels and presumed to be substantiated. Consistent with three national incidence studies on child abuse and neglect, this methodology assumes the sentinel reports represent substantiated reports. Because the incidence estimate is statistically derived from the nationally representative sample, researchers also calculated the standard error to establish the range of the incidence estimate within a 95 percent confidence interval.¹

Using the identical methodology, researchers also separately calculated the estimated national incidence of elder abuse, neglect, and/or self-neglect in 1996. Both incidence estimates are for unduplicated elderly persons. In other words, individuals are counted only once, even if: (1) they were

¹ The standard error of the estimates of APS agencies is relatively low because of the large number of actual reports (1,466) by those agencies in the sample, while the standard error for the sentinel data is relatively large because of the smaller number of reports (140) in the study sample. The range of the “true” value, at the 95 percent confidence level, for an estimated number is plus and minus two times the standard error.

abused and neglected and/or self-neglecting, (2) more than one report were received about the same incident, or (3) different incidents were reported for the same elderly person during the study period.

Estimated Incidence of Elder Abuse and/or Neglect in 1996

The best national estimate is that a total of 449,924 elderly persons, aged 60 and over, experienced abuse and/or neglect in domestic settings in 1996. Of this total, 70,942 (16 percent) were reported to and substantiated by APS agencies, but the remaining 378,982 (84 percent) were not reported to APS. From these figures, one can conclude that over five times as many new incidents of abuse and neglect were unreported than those that were reported to and substantiated by APS agencies in 1996. The standard error suggests that nationwide as many as 688,948 elders or as few as 210,900 elders could have been victims of abuse and/or neglect in domestic settings in 1996.

Estimated Incidence of Elder Abuse, Neglect, and/or Self-Neglect in 1996

The best national estimate is that a total of 551,011 elderly persons, aged 60 and over, experienced abuse, neglect, and/or self-neglect in domestic settings in 1996. Of this total, 115,110 (21 percent) were reported to and substantiated by APS agencies, with the remaining 435,901 (79 percent) not being reported to APS agencies. One can conclude from these figures that almost four times as many new incidents of elder abuse, neglect, and/or self-neglect were unreported than those that were reported to and substantiated by APS agencies in 1996. The standard error suggests that nationwide as many as 787,027 elders or as few as 314,995 elders could have been abused, neglected, and/or self-neglecting in domestic settings in 1996.

Abuse and Neglect Reported by APS Agencies

Characteristics of Victims of Domestic Elder Abuse

Of 236,479 reports of abuse, neglect, and self-neglect to APS in 1996, 48.7 percent, or 115,110 reports were **substantiated after investigation**, 39.3 percent were unsubstantiated, and 8.2 percent were still under investigation at the end of 1996. The remaining 3.8 percent of reports had other outcomes (e.g., suspected victim died, could not be located, or had moved away).

Of the 115,110 substantiated reports in 1996 for which information was available, 61.6 percent (70,942) were reports of incidents in which elders were maltreated by other people (also called “perpetrators”), while the remaining 38.4 percent (44,168) were incidents of self-neglecting elders. Of the 70,942 unduplicated substantiated reports of elder abuse attributable to perpetrators (which excludes self-neglect), the most common types were: neglect (34,525), emotional/ psychological abuse (25,142), financial/material exploitation (21,427), and physical abuse (18,144).

While the substantiation rate for all types of investigations of elder abuse combined was 48.7 percent, the **substantiation rates for different types of maltreatment** varied considerably, as follows: physical abuse—61.9 percent; abandonment—56.0 percent; emotional/psychological abuse—54.1 percent; financial/material abuse—44.5 percent; and neglect—41.0 percent. (The substantiation rate for sexual abuse was not statistically significant.)

A wide variety of **reporters of domestic elder abuse** were found in the 70,942 substantiated reports of abuse and neglect. The most frequent reporters were family members, who were responsible for 20.0 percent of all reports, followed by hospitals (17.3 percent), and police and sheriffs (11.3 percent). In-home service providers, friends/neighbors, and physician/nurses/clinics each reported between 8 and 10 percent of total reports. The remaining reports were made by out-of-home service providers, banks, public health departments, and other reporters.

Hospitals (19.8 percent) and friends/neighbors (19.1 percent) were the most frequent **reporters of substantiated reports of self-neglect** in 1996. Police/sheriff, in-home service providers, and physicians/nurses/clinics each reported 12 percent of total reports. Out-of-home providers, family members, banks, the victims themselves, and other reporters made the remaining reports.

The report examines the **age of victims** of different types of abuse reported to APS. The oldest elders (those over 80 years of age), who made up about 19 percent of the U.S. elderly population in 1996, were far more likely to be the victims of all categories of abuse, with the exception of abandonment. They accounted for over half the reports of neglect (51.8 percent), and 48.0 percent of financial/material abuse, 43.7 percent of physical abuse, and 41.3 percent of emotional/psychological abuse. In all types of abuse and neglect, elderly victims in the 60–64 and 65–69 age groups accounted for the smallest percentages.

Female elders were more likely to be the victims of all categories of abuse, except for abandonment. While making up about 58 percent of the total national elderly population in 1996, women were the victims in 76.3 percent of emotional/psychological abuse, 71.4 percent of physical abuse, 63.0 percent of financial/material exploitation, and 60.0 percent of neglect, which was the most frequent type of maltreatment. A majority of the victims of abandonment were men (62.2 percent).

In 1996, **white elders** were 84.0 percent of the total elder population, while black elders comprised 8.3 percent, and Hispanic elders were 5.1 percent. While white elders were the victims in eight out of ten reports for most types of maltreatment, black elders were over-represented in neglect (17.2 percent), financial/material exploitation (15.4 percent), and emotional/psychological abuse (14.1 percent). Hispanic elders and those from other racial/ethnic groups were under-represented among victims in all types of maltreatment.

The study found that elders who are **unable to care for themselves** were more likely to suffer from abuse. Approximately one-half (47.9 percent) of the substantiated incidents of elder abuse involved elderly persons who were not able to care for themselves, 28.7 percent were somewhat able to do so, and 22.9 percent were able to care for themselves. For the national elderly population as a whole, the federal government estimates that 14 percent have difficulties with one or more activities of daily living.²

Approximately six out of ten substantiated elder abuse victims experienced some degree of **confusion** (31.6 percent were very confused, or disoriented, and 27.9 percent were sometimes confused). This represents a high degree of potential mental impairment among this group of abused elders, particularly when compared with the estimated 10 percent of the total national elderly population suffering with some form of dementia.

² Nov. 1997 U.S. Census Bureau report on disability status of persons 65 years and older in 1994-95.

About 44 percent of all substantiated abused elders were gauged to be **depressed** at some level, with about 6 percent of them severely depressed. This compares with the estimated 15 percent of all elders nationally who are depressed at any one time. One-third of substantiated elder abuse victims (35.4 percent) displayed no signs of depression.

Characteristics of Perpetrators of Domestic Elder Abuse

Overall, men were the perpetrators of abuse and neglect 52.5 percent of the time. Of the substantiated cases of abuse and neglect, **males were the most frequent perpetrators** for abandonment (83.4 percent), physical abuse (62.6 percent), emotional abuse (60.1 percent) and financial/material exploitation (59.0 percent). Only in cases of neglect were women slightly more frequent (52.4 percent) perpetrators than men.

The **age category** with the most perpetrators was the 41 to 59 age group (38.4 percent), followed by those in the 40 years or less group who were perpetrators in more than one quarter of reports (27.4 percent). About one-third of perpetrators (34.3 percent) were elderly persons themselves (60 and over). Perpetrators of financial/material exploitation were particularly younger compared to other types of abuse, with 45.1 percent being 40 or younger and another 39.5 percent being 41–59 years old. Eighty-five percent of the perpetrators of financial/material exploitation were under age 60.

About three-fourths (77.4 percent) of domestic elder abuse perpetrators in 1996 were white, and less than one-fifth (17.9 percent) were black. Other minority groups accounted for only 2 percent of the perpetrators, while the race of 2.7 percent of perpetrators was unknown.

Data show that **family members** were the perpetrators in nine out of ten (89.7 percent) substantiated incidents of domestic elder abuse and neglect. Adult children of elder abuse victims were the most likely perpetrators of substantiated maltreatment (47.3 percent). Spouses represented the second largest group of perpetrators (19.3 percent). In addition, other relatives and grandchildren, at 8.8 percent and 8.6 percent respectively, were the next largest groups of perpetrators. Non-family perpetrators included friends/neighbors (6.2 percent), in-home service providers (2.8 percent), and out-of home service providers (1.4 percent). The report provides details about the relationship of perpetrators to the victims for the different types of maltreatment.

Characteristics of Self-Neglecting Elders

Self-neglect was included in the NEAIS and a common definition and signs and symptoms were adopted for it, as with all the specific types of abuse and neglect. Self-neglect is characterized as the behaviors of an elderly person that threaten his/her own health or safety. Self-neglect generally manifests itself in an older person's refusal or failure to provide himself or herself with adequate food, water, clothing, shelter, safety, personal hygiene, and medication (when indicated).³

Approximately two-thirds (65.3 percent) of substantiated self-neglecting elders were female, compared with women being 58 percent of the overall elderly population. About two-thirds (65.1 percent) of self-neglecting elders were 75 years or older (or almost twice their proportion of the overall elderly). The largest proportion of self-neglecting elders were in the oldest age category of 80 and over (44.7 percent), while the proportion decreased in each declining age group, with only 6.3 percent of self-neglecting elders being in the 60–64 year age group (compared to their being 23 percent of the total elderly population).

Self-neglecting elders were predominately white (77.4 percent), while 20.9 percent were black and 1.7 percent were other or unknown. The black elderly are two-and-a-half times more likely to be self-neglecting than their proportion of the elderly population.

Not surprisingly, most (93.3 percent) self-neglecting elders have difficulty caring for themselves. Of these elders, 34.3 percent are not capable of caring for themselves, while 59.0 percent are somewhat able to care for themselves. Three out of ten self-neglecting elders (29.9 percent) are very confused or disoriented, while 45.4 percent are sometimes confused. Three-quarters (75.3 percent) of substantiated self-neglecting elders suffer from some degree of confusion.

Abuse and Neglect Reported by Sentinel Agencies

The remaining findings from the NEAIS address elder abuse reported by 1,156 sentinel reporters in the 248 sentinel agencies. Since sentinel data are not officially reported to the APS agencies, they are not officially substantiated. Sentinels were, however, carefully trained to screen out incidents

³ For purposes of this study, the definition of "self-neglect" excludes a situation in which a mentally competent older person (who understands the consequences of her/his decisions) makes a conscious and voluntary decision to engage in acts that threaten her/his health or safety.

that would not be supported. The unduplicated sentinel reports were relatively small in number (140) and, therefore, standard errors are relatively high.

Characteristics of Elderly Victims of Nonreported Domestic Abuse and Neglect (Sentinel)

Neglect was highest among those 80 years and over (60.0 percent). Physical, emotional, and financial abuse were found at higher rates among those aged 60 to 70 than among those 80 and older.

As with APS reports, a majority of victims of all types of abuse were women, as reported by sentinels. Although women represented about 58 percent of the total U.S. elderly population in 1996, over 80 percent of the physical abuse recognized by sentinels, over 90 percent of the financial abuse, over 70 percent of the emotional abuse, and over 65 percent of the neglect cases was found among women rather than men. Abandonment was also more frequent for women (65.4 percent), in contrast to substantiated APS reports, which show men were more likely to be abandoned (62.2 percent).

The data do not show that rates of unreported abuse and neglect are higher among minorities than among nonminorities. Rather, minorities, which collectively accounted for 15.5 percent of the total elderly population in 1996, were victims of abuse, as reported by sentinels, between 3.6 and 7.6 percent depending on the type of abuse.

Data from sentinel reports reveal that only one-third (33.8 percent) of the victims were **able to care for themselves**, another one-third (33.1 percent) were somewhat able to care for themselves, and 18.8 percent were not able to care for themselves. (Sentinels were unable to make a determination 14.2 percent of the time.) Individuals experiencing neglect, abandonment, and self-neglect were most often reported by sentinels as not able or only somewhat able to care for themselves. Two-thirds (67.7 percent) of those that were physically abused were thought to have the ability to care for themselves, suggesting that such abuse is not perpetrated on just the most vulnerable individuals.

Sentinels reported, through observation not diagnosis, that over one-third (36.6 percent) of alleged victims were not **confused**, about an equal proportion (37.9 percent) were sometimes confused, and a relatively small percentage (7.5 percent) were very confused or disoriented. Sentinels were unable

to make one of these choices 18.0 percent of the time. Confusion was most common among those who experienced neglect, abandonment, and self-neglect.

In noting observations of **depression**, sentinels were unable to make a determination for a third of the elders they saw. Sentinel data show that 20.0 percent of the alleged victims were not depressed, 41.4 percent seemed to be moderately depressed, and a relatively small proportion (5.5 percent) appeared severely depressed. Signs and symptoms of moderate or severe depression were relatively high across all forms of abuse and neglect, but did not stand out for any one category when standard errors are taken into account.

Characteristics of Perpetrators of Nonreported Abuse and Neglect (Sentinel)

As with APS reports, perpetrators reported by sentinels were most frequently **family members** (89.6 percent), including the adult children (30.8 percent), spouses (30.3 percent), and a parent (24.0 percent). Parents are possible abusers of elders because elders were defined as persons aged 60 and over, and some persons in their 60s and 70s had parents in their late 70s and 80s.

Friends, neighbors, and service providers were believed to be responsible for the abuse and neglect 10 percent of the time.

The most common age range for perpetrators was the middle years, ages 36 to 59 (45.5 percent), with 28.6 percent of abuse being committed by people 60 and older, and 15.3 percent by those 35 and younger.

Nearly twice as many men as women were reported as perpetrators of abuse and neglect by sentinels (63.1 percent compared to 35.4 percent).

NEAIS Study Design and Methods

The National Elder Abuse Incidence Study gathered data on domestic elder abuse, neglect, and self-neglect through a nationally representative sample of 20 counties. For each county sampled, the study collected data from two sources: (1) reports from the local Adult Protective Service (APS) agency

responsible for receiving and investigating reports in each county; and (2) reports from approximately 1,100 “sentinels”—specially trained individuals in a variety of community agencies having frequent contact with the elderly. Many sentinels were mandatory or voluntary reporters of elder abuse, as defined by state laws. The sentinel approach to collecting data is an alternative to more costly general population surveys and has been used successfully in all three National Incidence Studies of Child Abuse commissioned by the federal government. This method was pioneered nearly 20 years ago by Westat, APHSA’s collaborative partner for the NEAIS study, in the nation’s first-ever incidence study on child abuse. The approach is based upon the hypothesis that officially reported cases of abuse represent only a small proportion of actual episodes of abuse in the community.

Establishing Definitions

Historically, a major impediment to collecting uniform data on elder maltreatment nationally has been a lack of comparability of definitions of abuse, neglect, and exploitation. In addition to differences among states, recognized elder experts themselves continue to disagree on definitions. Accordingly, the first task of NEAIS was to develop standardized definitions of elder maltreatment, thus ensuring greater comparability and reliability of results. The process involved several steps:

- Analysis of Current State Definitions—The existing state laws defining abuse, neglect, and exploitation were compiled and analyzed for all states and territories, and the most common components of the definitions across states were selected as potential definitions.
- Convening of Local Roundtables—Two roundtables of representative local professionals who deal with elder abuse, neglect, and exploitation were convened to obtain firsthand, community-level information on how elder abuse is detected, reported, and investigated, which aided in the development of the standardized definitions.
- Consensus Meeting—A group of elder abuse experts and researchers, including NCEA and NEAIS advisory committee members, provided an in-depth analysis of the draft definitions and revised and prepared them for pilot-testing. The final definitions included:
 - **Physical abuse** was defined as the use of physical force that may result in bodily injury, physical pain, or impairment. Physical punishments of any kind were examples of physical abuse.
 - **Sexual abuse** was defined as non-consensual sexual contact of any kind with an elderly person.
 - **Emotional or psychological abuse** was defined as the infliction of anguish, pain, or distress.

- **Financial or material exploitation** was defined as the illegal or improper use of an elder's funds, property, or assets.
 - **Abandonment** was defined as the desertion of an elderly person by an individual who had physical custody or otherwise had assumed responsibility for providing care for an elder or by a person with physical custody of an elder.
 - **Neglect** was defined as the refusal or failure to fulfill any part of a person's obligations or duties to an elder.
 - **Self-neglect** was characterized as the behaviors of an elderly person that threaten his/her own health or safety. The definition of self-neglect excludes a situation in which a mentally competent older person (who understands the consequences of his/her decisions) makes a conscious and voluntary decision to engage in acts that threaten his/her health or safety.
- **Pilot-Testing**—Two Adult Protective Services agencies and seven local sentinel agencies (in the Washington, D.C., area, but not involved in the study) field pilot-tested the definitions and data collection instruments, which were revised based on the results of the tests. (The full definition and signs and symptoms for each type of abuse and neglect are provided in detail in the full report.)

Sampling Counties and Evaluation of Sample

NEAIS employed a stratified, multistage sample of 20 nationally representative counties, selected with probability proportional to the number of elders living in these areas. The counties were stratified by five variables: geographic region, metropolitan area, elder abuse reporting requirements (mandatory and nonmandatory), percentage of elders, and percentage of poor elders. The use of the probability proportional to size method ensures an approximately self-weighting sample—that is, every abused elder in the county has approximately the same chance of being identified, regardless of location, when the measure of size is the number of elders in the county. This methodology produced a sample of 20 counties in 15 states, with five counties in each of the four major geographic regions of the country. The sample also was reflective of the other four stratification variables.

Because the sample was based on 20 out of about 3,000 counties in the country, it was important to examine the accuracy of the elder abuse estimates using outside sources, to the extent possible. The National Center on Elder Abuse (NCEA), in spring 1997, conducted *A Survey of State APS and Aging Agencies on Domestic Abuse for FY 95 and 96*. All states shared counts of all domestic elder abuse reports to state report-receiving agencies and these data were compiled to be comparable to that

collected by the NEAIS. Using rigorous estimation methods, data were weighted to represent national totals and annualized. The numbers of cases in the data obtained from the states by NCEA were very close to the NEAIS national estimates. The total number of actual reports obtained from the states by NCEA was only 1.4 percent greater than the NEAIS estimated total. The statistical procedures used to produce the national estimates in this NEAIS appear to be extremely accurate.

Sampling Sentinel Agencies and Sentinels

One of the most important elements of the NEAIS was the selection of four types of community agencies from which community sentinels would be selected: law enforcement agencies (sheriff's departments and municipal police departments); hospitals (including public health departments); elder care providers (adult day care centers, senior centers, and home health care agencies); financial institutions (banks). Using the best sources of agency listings for each sentinel type, a sample was drawn for each of the 20 sampled counties, usually averaging 12–13 agencies per county. Two banks per county were selected to ensure that possible incidents of financial exploitation of elders would be identified. The remaining agencies were distributed among the other categories of agencies proportional to the number of agencies available in each county, resulting in a total of 248 sentinel agencies in the 20 counties participating in the study.

A rigorous methodology was used to select the actual sentinels within the designated sentinel agencies. To be eligible, individuals had to have frequent contact with the elderly and had to be able to identify abuse if they encountered it. A computer software program was used to randomly pick every *nth* sentinel from a roster of eligible sentinel candidates provided by the agency. The number of sentinels selected per agency was typically four to six, with a total of about 50 sentinels per county. This resulted in a total of 1,158 sentinels participating in the study across the 20 counties.

The designation of Adult Protective Services (APS) agencies, on the other hand, is made by each state, and the designated agency varies by state. For the 20 sampled counties, the distribution of APS agencies participating in the study were: 10 in the state human services agency; six in the state unit on aging, but within the human services agency; and four in the state unit on aging and outside the human services agency.

Data Forms and Training

The data collection forms for both the APS caseworkers and sentinel agency staff were designed to be easy to complete and to require as few references as possible to other documents. As with the abuse and neglect definitions, several versions of the instruments were extensively pilot-tested with local APS and service agency staff. The APS and sentinel data forms were identical with two exceptions: the APS instrument included sections for documenting the source of the report to the agency and for the disposition of the case following investigation (i.e., substantiated or unsubstantiated), while the sentinel forms did not.

In order to increase valid and reliable reporting across all 20 counties, an innovative approach was developed for training sentinels and APS agency personnel using a specially designed participant guide book and instructional videos. The training focused on identifying elder abuse according to the standardized definitions and related signs and symptoms, and recording data on the specially designed forms. Additionally, an “800” telephone number was available for APS and sentinel participants to call study staff with any questions about data collection procedures or client eligibility.

Data Collection, Receipt, and Management

Sentinel and APS data collection took place over an eight-week period. Starting in January 1996, all reporters in one or two counties started data collection each month, according to a preset schedule. Staggering reporting periods throughout this 12-month period (calendar year 1996) allowed the study to account for possible seasonal variations that might occur in elder abuse.

Sentinel data collection procedures were similar to APS agencies; however, sentinels were asked to forward reports of suspected cases of elder abuse to the NEAIS research staff as soon as possible after observing the suspected abuse. To encourage candid, confidential reporting, the designated coordinator in each sentinel agency did not review or edit forms completed by the individual sentinels. Sentinels also did not attempt to substantiate incidents of abuse. Sentinels, however, were carefully trained to screen out incidents that would not be supported as elder abuse or neglect. In contrast, all reports of suspected abuse received by the APS agencies were investigated and a determination of substantiation or nonsubstantiation made, as required by the laws of each state. It should be noted, however, that an APS agency’s determination of nonsubstantiation of a report of abuse or neglect does

not mean conclusively that abuse or neglect did *not* happen. Rather, nonsubstantiation of a report can mean that the level of proof required by that state was not met, despite indications that abuse or neglect *may* have occurred.

NEAIS staff received and reviewed all submitted data collection forms for completeness and called the sending agency coordinators to discuss any missing or unclear data. Both APS and sentinel data forms required respondents to provide a brief narrative describing the maltreatment events. This maltreatment information was evaluated according to the study definitions and eligibility criteria, and reports that did not meet the study definitions were excluded from the database (e.g., victim lived in institutional setting; incident not based on common definitions).

Unduplication

The formal process of eliminating duplication in survey research data is called “unduplication.” The NEAIS was interested in determining the number of new unduplicated elderly persons who were abused or neglected during 1996 in order to arrive at estimates of reported and unreported abuse and neglect. Sometimes more than one data form was received for the same maltreated elder, describing either the same or different abusive incidents. It was necessary to identify such duplicates and count each person only once for purposes of this study. Out of a total of 1,699 APS and sentinel reports, study staff identified 93 sets of genuine duplicates, resulting in 1,606 unduplicated reports (1,466 APS and 140 sentinel). Duplicate cases reported both to APS and sentinel agencies were removed from the sentinel data file, so that duplicated instances of abuse and neglect were counted as reports to APS. Duplicate sentinel reports were assigned to the sentinel agency that first sent in the form.

Obtaining National Estimates from the Study Data

The samples of agencies and sentinels who participated in the NEAIS were selected using scientific probability sampling methods to obtain a nationally representative sample. As a result, it is possible to make valid projections from the NEAIS data, to make national estimates of the numbers of elders who have been abused and neglected, and to describe their characteristics.

This estimation of national and subgroup totals and proportions is achieved by applying sample weights to each of the cases in the study. The weight applied to each elder abuse report can be thought of as indicating the number of cases nationally that are represented by the individual case in the study. By aggregating these sample weights for the relevant study cases, national and subgroup estimates are obtained, both of total numbers of elders, and their characteristics.

This methodology is routinely applied in national samples to measure social and economic issues. The Current Population Survey, which (among other things) produces the official U.S. monthly national estimates of unemployment and employment, is one well-known example. Another is the Health Interview Survey, which produces periodic national estimates for a wide range of health measures.

There were a number of steps involved in the process of developing weights for the NEAIS data. These are described in Chapter 3 of the full report, and in Appendix L.⁴

Interpreting Results in the Presence of Sampling Variability

A common technique used to present and interpret statistical data that are subject to sampling variability is through the use of confidence bands. A frequently used convention is to determine a 95 percent confidence band for each estimate. The statistical interpretation of a 95 percent confidence band is that, if such a band were constructed from all possible samples that might have been selected, 95 percent of such bands would contain the true answer.

If the confidence band for an estimate is wide, relative to the size of the estimate itself, then this indicates that there is considerable uncertainty as to what the true value actually is. If, however, the band is narrow, then there can be confidence that the estimate is close to the true answer. Thus, for example, consider an estimate that a certain population characteristic is at the 10 percent level. If the confidence band for this estimate ranges from 1 percent to 19 percent, we can have confidence that the true level is something below 20 percent, but cannot draw any other inference with confidence. If an

⁴ The most important steps are the determination of overall probabilities of selection, calculation of nonresponse adjustments, and development of replicate weights. Unlike the sentinel records, there are no further sampling or nonresponse adjustments for the APS data, since all APS agencies in the sampled counties participated. One straightforward calculation is the annualization of the data. The staggering of different-sized counties throughout 1996 minimized the potential for seasonal affect to bias the estimates. Accordingly, this estimate of elder abuse over these two-month periods was transformed to an estimate for the full 1996-study year by multiplying the factor by six.

estimate of 10 percent is accompanied by a confidence band that ranges from 9 percent to 11 percent, then we can be confident that the true figure is little different from 10 percent.

Because the NEAIS sampled a relatively small number of counties, agencies, and sentinels, for many of the rarer characteristics described in this report the confidence bands are relatively wide (like in the first example given in the previous paragraph). When this has occurred, the estimates presented in the report are duly noted as having this characteristic.

Conclusions

The results of the National Elder Abuse Incidence Study (NEAIS) strongly confirm the validity of the “iceberg” theory of elder abuse that has been accepted in the aging research community for 20 years or more. The contribution the NEAIS has made to our understanding of the extent of elder abuse and neglect is graphically depicted by the large new middle area in Figure ES-1 below.

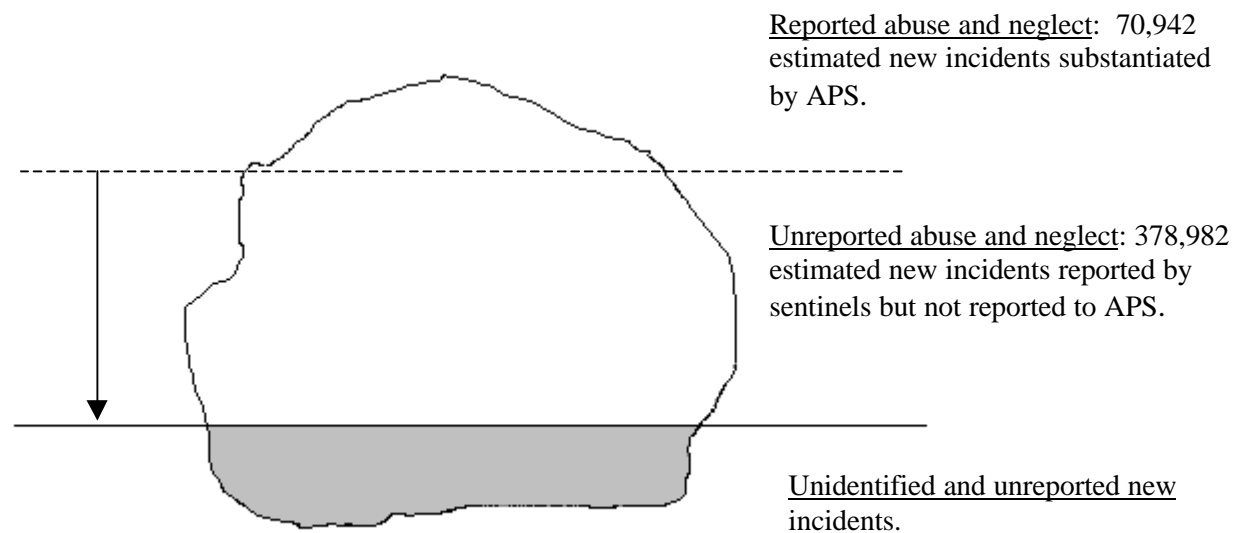


Figure ES-1. Iceberg theory showing NEAIS identified unreported abuse and neglect, excluding self-neglect

The NEAIS findings lead to the following conclusions:

- ❑ Domestic elder abuse and neglect is a significant problem. NEAIS research shows that about 450,000 unduplicated elders experienced abuse and neglect in domestic settings in 1996. More than five times as many of these incidents of abuse and neglect were unreported than were reported to and substantiated by APS agencies.⁵
- ❑ When elders who experienced only self-neglect are included with those that were abused and neglected, the number increases to 551,000 unduplicated elder persons in 1996. Almost four times as many of these incidents were unreported than were reported to and substantiated by APS agencies.⁶
- ❑ The NEAIS has measured a large and previously unidentified and unreported portion of elder abuse and neglect, and also has learned much about the characteristics of the victims and perpetrators of abuse and neglect.
- ❑ At the same time, it was not possible to identify and report on all previously hidden domestic elder abuse and neglect. Clearly, the NEAIS has not measured abuse, neglect, and self-neglect among those most isolated elders who do not leave their homes or who rarely come in contact with others in the community.
- ❑ Several of the characteristics of abused and neglected elderly persons are particularly worrisome and challenge us to prevent and intervene in this tragedy:
 - Our oldest elders (80 and over) are abused and neglected at two to three times their proportion of the elderly population.
 - Female elders are abused at a higher rate than males.
 - Almost half of substantiated abused and neglected elderly were not physically able to care for themselves.
 - In almost nine out of ten incidents of domestic elder abuse and neglect, the perpetrator is a family member. Adult children are responsible for almost half of elder abuse and neglect.
- ❑ Elderly self-neglect also is a problem, as evidenced by about 139,000 unduplicated reports (some of the self-neglecting elderly may also be counted as being abused and/or neglected). Most victims of self-neglect are unable to care for themselves and are confused. This is a difficult and troubling problem, which warrants further research and study.

⁵ Using precisely developed standard errors, the NEAIS estimates that as many as 688,948 or as few as 210,900 elder persons may have been abused and/or neglected in domestic settings in 1996.

⁶ When self-neglecting elders are added, the estimate range is that as many as 787,027 or as few as 314,995 elder persons may have been abused, neglected, and/or self-neglecting in domestic settings in 1996.

- Despite the study’s identification of over five times as many unreported incidents of elder abuse and neglect as incidents that were reported to and substantiated by APS agencies, some professionals and researchers in the aging field may have expected this multiplier to be larger than NEAIS found. The NEAIS estimate may be lower than those expectations because:
 - Elder abuse and neglect are not as hidden and under-reported to APS agencies as they were at the time of earlier studies. Between 1986 and 1996, for example, official reports of abuse and neglect made to APS agencies throughout the country increased by 150 percent, while the total number of elderly persons aged 60 and over increased by only 10 percent. A much larger proportion of new incidents of domestic elder abuse and neglect was reported to official APS agencies in 1996 than was reported 10 years ago.
 - Still more of the unidentified and unreported area of the iceberg remains to be revealed, especially instances of abuse and neglect among seriously isolated elderly persons and those with little contact with community organizations.

Limitations of NEAIS

The NEAIS study design had some limitations that prevented it from making a definitive estimate of all incidents of elder abuse and neglect, including:

- The sentinel approach tends to cause a certain amount of “undercount” in the detection of domestic elder abuse because there are no community institutions in which most elders regularly assemble and from which sentinels can be chosen and elders observed (unlike schools in child abuse research).
- Sentinels cannot observe and report abuse and neglect of elders who are isolated and/or have no or very limited contact with any community organizations.
- Resource constraints for conducting the NEAIS limited the number of counties and sentinels sampled and the length of the reporting period. Consequently, the relatively small number of sentinel reports resulted in incidence estimates with wide confidence bands. Increasing the sample size and reporting period in future such studies would further improve the precision of incidence estimates through the calculation of narrower confidence bands.

Implications of Findings and Future Research Questions and Issues

The findings of the NEAIS suggest a number of important issues for policy development, practice, and training in addressing the problems of elder abuse, neglect, and self-neglect. Because states and localities historically have had responsibility for elder abuse reporting, investigation, and services, most of the implications are for state and local governments. These issues are discussed in the full report. Finally, the report raises a number of research questions and issues for researchers and service providers, including suggesting areas for future research of the incidence and nature of elder abuse and neglect.

Conclusion

The NEAIS has documented the existence of a previously unidentified and unreported stratum of elder abuse and neglect, thus confirming and advancing our understanding of the “iceberg” theory of elder abuse. NEAIS estimates that for every abused and/or neglected elder reported to and substantiated by APS, there are over five abused and/or neglected elders that are not reported. The study also documents similar patterns of underreporting of self-neglecting elders. NEAIS acknowledges that it did not measure all unreported abuse and neglect. Our collective challenge—as policy makers, service providers, advocates, researchers, and our society as a whole, is to utilize this information to better the lives of our elderly citizens.

1. INTRODUCTION

Congress, under the Family Violence Prevention and Services Act of 1992 (P.L. 102-295), required that a study of the national incidence of abuse, neglect, and exploitation of elderly persons be conducted. The Administration for Children and Families (ACF) has responsibility for administering the provisions of this legislation. The ACF combined resources and expertise with the Administration on Aging (AoA) and jointly funded the study as a research activity of the AoA-supported National Center on Elder Abuse (NCEA).

The American Public Welfare Association,¹ the lead organization for the NCEA, and its subcontractor, Westat, Inc., a survey research company located in Rockville, Maryland, conducted the study between October 1994 and December 1997. Because the legislative mandate primarily was concerned with the prevention of violence in domestic settings, the study focused only on the maltreatment of non-institutionalized elderly. Elders living in hospitals, nursing homes, assisted living facilities, or other institutional or group facilities were not included in the report.

The National Elder Abuse Incidence Study (NEAIS) utilized a sentinel research design. This methodology for collecting data from nationally representative samples was new to the field of elder abuse, but this methodology already had been used for federally supported national incidence studies of child abuse and neglect, for example the Third National Incidence Study of Child Abuse and Neglect (NIS-3) by Westat for the National Center on Child Abuse and Neglect in ACF. Within ACF and other professional communities, the sentinel data collection approach has been accepted as a less costly alternative to a general population survey.

Accordingly, using a sentinel methodology, NEAIS collected data from two different sources in a nationally representative probability sample of 20 counties: (1) local Adult Protective Services (APS) agencies or the Area Agencies on Aging (AAA); and (2) approximately 1,100 trained "sentinels" from public and private agencies that had frequent contact with elderly community residents. The function of the sentinels was to be on the lookout for incidents of elder abuse and to document each event that met the study's definitions. Many sentinels were mandatory or voluntary reporters of elder abuse as defined by

¹ Association members voted to change the name of the American Public Welfare Association to the American Public Human Services Association in July 1998, and it is hereafter referred to as APHSA.

state laws and were employed by a variety of organizations (e.g., elder care providers, hospitals and clinics, law enforcement agencies, and financial institutions).

Most previous attempts to generate national data on domestic elder abuse in the United States relied on statistics of suspected elder abuse compiled by states. Over the past 20 years, states have become increasingly concerned with the problem of elder abuse, both domestic and institutional, and have enacted laws to prevent and treat the problem. As a result, all states now have statutes addressing elder abuse. Most elder abuse laws require that certain professionals report all suspected incidents of elder maltreatment to officially designated report-receiving agencies. Eight states (Colorado, Illinois, New Jersey, New York, North Dakota, Pennsylvania, South Dakota, and Wisconsin) administer domestic elder abuse laws, but make elder abuse reporting voluntary. In some states, like Massachusetts, the elder for whom a report of suspected abuse has been made may refuse an investigation. Both the states with laws on mandatory reporting and those where reporting is voluntary regularly gather statistics on reports of elder abuse, although the comprehensiveness of elder abuse information systems varies considerably from state to state.

The National Center on Elder Abuse, in a 1995 report (Tatara, 1995), documented 71 laws in the 50 states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands that address abuse, neglect, and exploitation of elders. Across these 71 state laws, the five most common information elements are: (1) type of person covered by the law; (2) definitions of elder abuse, (3) reporter immunity, (4) age of persons covered by the law, and (5) agency designated to receive reports. Other elements include: the timing/method of reporting, mandatory reporting requirements, mandatory reporters, involvement of law enforcement, and confidentiality of client information.

Following the intake of a report of alleged abuse in an agency designated to receive these reports, such as APS, the case is assigned to a protective service worker for investigation. The length of time that elapses prior to the investigation varies both by state and by the nature of the abuse. Thirty states currently have laws that include provisions concerning the timing of investigating elder abuse reports. Five states (Alabama, District of Columbia, Florida, Idaho, and New Hampshire) require that reports involving a life-threatening or emergency situation be investigated immediately; five states (Guam, Kansas, Maryland, Minnesota, and Virgin Islands) specify that a report involving a life-threatening situation must be investigated within 24 hours; and 13 states (Alaska, Arkansas, California, Colorado, Kentucky, Louisiana, Maine, North Carolina, North Dakota, Oklahoma, Oregon, Tennessee, and Virginia) have laws requiring that all reports must be investigated "as soon as possible," but do not specify a particular amount of time.

Once an investigation of an alleged elder abuse incident has begun, a case still may be "referred" to another agency for intervention or services. A case may be found substantiated, unsubstantiated, or in some states, "indicated but not confirmed." The requirements for case disposition vary by state.

This study explicitly has been designed to measure the incidence of elder abuse and neglect rather than prevalence. The term incidence refers to new cases occurring during a specific period of time (Freeman and Sherwood, 1970). In contrast to incidence, prevalence refers to the total number of ongoing cases in a given population at a designated point in time. Prevalence is similar to a census and does not address when the abuse or neglect occurred. The NEAIS examines the incidence of newly filed reports of abuse and neglect during calendar year 1996. Ongoing cases which were not reported or identified during the study period (e.g., the abuse occurred prior to 1996) are not counted.

In order to maximize the utility of the research, the study also collected and analyzed data about elder self-neglect in domestic settings, and these findings generally are reported separately from the findings for abuse and neglect. In the NEAIS, the phrase "elder maltreatment" refers to the seven types of abuse and neglect that are measured in the study, which are carefully defined later in this report. The incidence estimates calculated are for unduplicated elderly persons. In other words, individuals are counted only once, even if: (1) they were abused and neglected and/or self-neglecting, (2) more than one report were received about the same incident, or (3) different incidents were reported for the same elderly person during the study period

The Organization of This Report

This final report of the National Elder Abuse Incidence Study (NEAIS) contains estimates of the national incidence of abuse, neglect, and exploitation of older people in domestic settings and information about the characteristics of elder abuse perpetrators and victims, including self-neglecting elders. The report is organized into four additional chapters:

Chapter Two provides background about prior efforts to measure elder abuse and neglect.

Chapter Three details the inception of the National Elder Abuse Incidence Study and the reasons for conducting this important research. This chapter also provides an overview of the study design

and discusses why a sentinel approach was used. Definitions of elder abuse, neglect, exploitation, and self-neglect are presented, as are the sampling plan for the study, instrument development, and recruitment and training procedures for APS and sentinel agencies. In addition, data collection processes and data handling are discussed, along with methods for weighting the data.

Chapter Four provides the findings from the NEAIS, from the estimated national incidence of abuse and neglect of elderly people, to in-depth analyses of characteristics of the abused, neglected, and self-neglecting elderly, those who were perpetrators of this abuse and neglect, and those who reported this abuse or neglect.

Chapter Five provides the summary, recommendations, and conclusions of this study.

2. BACKGROUND

Studies designed to estimate the prevalence or incidence of the maltreatment of non-institutionalized elders, or "elder abuse in domestic settings," have varied considerably in their research methodologies and sources of data. A review of these earlier studies reveals that one or more of the following five sources of data have been used to explore the extent and nature of elder abuse in domestic settings: (1) elderly people receiving services from an agency; (2) professionals and paraprofessionals working with elderly clients; (3) case records or reports of elderly clients prepared by professionals; (4) reports of alleged elder abuse received by Adult Protective Services (APS) or aging agencies; and (5) a probability sample of the elderly taken from the population in a specific geographic location. Study purposes and goals, age and abuse definitions, sample sizes, data-gathering methods, analytic tools, and results and their implications differ from one study to another. Some of these studies attempted to generate national estimates of the prevalence or incidence of domestic elder abuse, while others confined the discussion of results to the population from which data were drawn. The prevalence or incidence of domestic elder abuse estimated by these early studies ranged from one to nearly ten percent of the study sample or of the national elder population.

Gioglio and Blakemore (1982) found that only one percent of the elderly respondents of a random sample of elders in New Jersey were victims of some form of elder abuse. After examining the records of elderly patients served by a Chronic Illness Center in Cleveland, Ohio, Lau and Kosberg (1979) reported that 9.6 percent of 404 patients showed symptoms of abuse. Further, Block and Sinnott (1979) investigated the "battered elder syndrome" in Maryland and found 4.1 percent of the elderly survey respondents were being abused. Other researchers have surveyed or interviewed social workers serving the elderly (Dolon and Blakely, 1989; Douglas, Hickey, and Noel, 1980; O'Malley, Segars, Perez, Mitchell, and Knuepfel, 1979; Sengstock and Liang, 1982) about the abuse of noninstitutionalized elderly. These researchers, however, did not translate their findings into national elder abuse prevalence rates.

Based on a survey of state human service agencies and a review of secondary data, the House Select Committee on Aging (1981) released a statement that "some four percent of the Nation's elderly may be victims of some sort of abuse, ranging from moderate to severe." This estimate suggests that one out of every 25 older Americans, or about one million people in the early 1980s, were abused each year.

In another study conducted by Pillemer and Finkelhor in 1986, one of the main objectives was to generate a national prevalence rate of domestic elder abuse. After conducting interviews with a random

sample of more than 2,000 elderly people in the Boston metropolitan area, these researchers (1988) reported that the prevalence of domestic elder abuse (excluding self-neglect and financial exploitation) was 32 per every 1,000 elders (or 3.2 percent). Using this rate, the researchers calculated an estimated prevalence number of abused elders in the United States, which ranged between 701,000 and 1,093,560.

Tatara (1989, 1990, 1993, Tatara and Blumerman, 1996, and Tatara and Kuzmeskus, 1997) disseminated national elder abuse data, primarily using state statistics for reports of alleged elder abuse. To help states achieve greater compatibility in definitions, reporting methods, and information management practices, Tatara published *Suggested State Guidelines for Gathering and Reporting Domestic Elder Abuse Statistics for Compiling National Data* (1990). Tatara began providing national data on domestic elder abuse about 10 years ago, but has recently analyzed national data on domestic elder abuse for 1995 and 1996 (Tatara and Kuzmeskus, 1997). These data indicated that there were 293,000 reports of domestic elder abuse to state Adult Protective Services in the United States for 1996, a 150 percent increase from the 117,000 reports in 1986, the first year a national estimate of domestic elder abuse reports was calculated.

Although these past studies have contributed to an increased understanding of the nature and extent of the maltreatment of non-institutionalized elders in this country, they were based on relatively small samples and did not provide national estimates of elder abuse incidence. The study described in this report provides, for the first time, national incidence estimates (i.e., new incidents occurring during 1996) of elder abuse that will serve as a baseline for future research in this important area.

2.1 Overview of the Study Design

The National Elder Abuse Incidence Study (NEAIS) gathered data on domestic elder abuse and neglect, using standardized definitions and data collection forms, in a nationally representative sample of 20 counties. The standardized abuse and neglect definitions used for the study were developed through the following steps: (1) an analysis of the current state definitions of domestic elder abuse; (2) the convening of roundtables of professionals working with elderly people to gather firsthand information about how domestic elder abuse is detected, reported, and investigated; and (3) the establishment of study definitions of elder abuse by a group of elder abuse experts. The definitions, along with data collection forms, were pilot tested in several local sites before being finalized.

In each sampled county, data were collected from two sources: (1) the local officially designated APS agency or the Area Agency on Aging; and (2) professionals and nonprofessionals, called "sentinels." Using random selection procedures, approximately 1,100 sentinels were chosen from 248 agencies across the 20 sampled counties. The agencies chosen for the study were organizations that regularly work with the elderly (e.g., senior citizen centers and home health care providers), as well as others that serve everyone in the community (e.g., hospitals and clinics, law enforcement agencies, and banks).

Using a specially made video and instructional guide, APS and sentinel reporters were trained to identify elder abuse according to study definitions and specific signs and symptoms and to record data on specially designed forms. Sentinels reported on abuse in each sampled county over a 2-month period on a staggered, 12-month schedule. APS agencies supplied information on all incidents reported to them over comparable time periods. This plan permitted the study to account for possible seasonal affects in the occurrence of elder abuse. Duplicate reports by sentinel agencies and between sentinel agencies and APS agencies were removed to avoid overcounting the true number of incidents. Finally, the unduplicated cases were weighted to arrive at national estimates.

2.2 The Uniqueness of a Sentinel Approach

The method of collecting data used for this study is known as a "sentinel approach." Developed by Westat almost 20 years ago, this Maryland-based survey research company conducted the nation's first child abuse incidence study. The sentinel approach was proposed as an alternative to more costly studies of general population surveys and has been used for all three national incidence studies of child abuse commissioned by the Federal government, with the most recent one completed in 1997. A sentinel approach is based upon the assumption that officially reported cases of abuse represent only the tip of an iceberg and that many more abuse incidents take place in the community. Whatever the reasons, many incidents are not reported to authorities. The supposition that reported cases of child abuse and elder abuse are only the tip of a much larger unidentified and unreported problem is well accepted by both child and elder abuse professionals. Figure 2-1 on the next page depicts the iceberg theory of elder abuse.

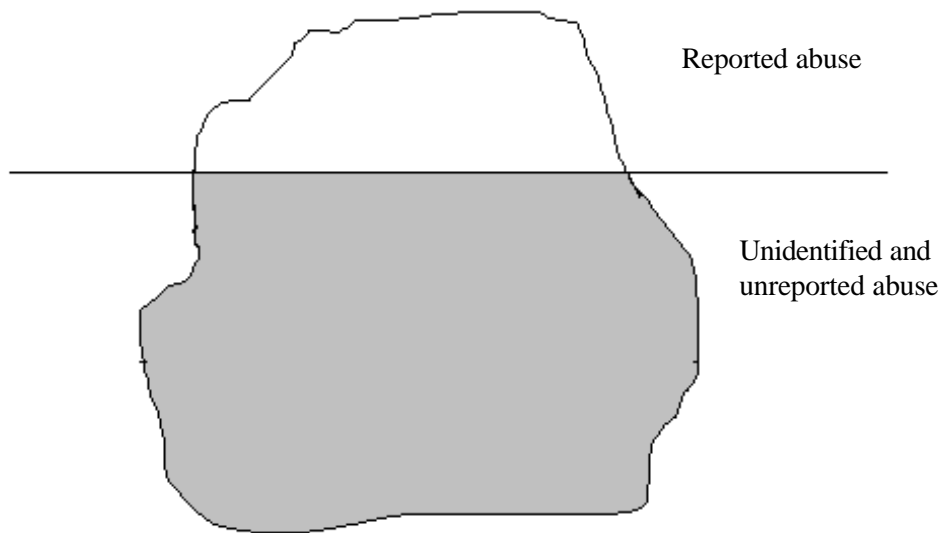


Figure 2-1. Iceberg theory of elder abuse

Using a sentinel approach, better information about unreported abuse can be obtained from individuals who are close to the victims by training them to be on the lookout for abuse incidents. With the strategic use of APS/aging professionals and well-trained sentinels from programs such as visiting nurses, home health care professionals, and hospital emergency room staff, this approach is capable of identifying many domestic elder abuse incidents that would not have been reported previously.

3. STUDY DESIGN AND METHODS

Chapter Three presents the study design and methodology used in the National Elder Abuse Incidence Study (NEAIS). The chapter begins with the definitions of elder abuse, neglect, and exploitation. It then presents the sampling methodology for both Adult Protective Services (APS) and sentinel agencies, and agency recruitment and training procedures. This chapter then describes the data collection methodology, the unduplication of reports, and weighting of final results. Finally, a brief discussion of interpreting research results in the presence of sampling variability is provided to assist the reader in understanding the study findings, which follow in the next chapter.

3.1 Definitions

One of the problems in collecting data on elder maltreatment from states is a lack of comparability in the definitions of abuse, neglect, and exploitation. This lack of comparability stems largely from the fact that ours is a federal system of 50 semi-sovereign states. In addition to the variability among state laws, experts continue to disagree on definitions; for example, there has not been a universal acceptance of the federal definitions of elder abuse found in the Older Americans Act. A common set of definitions across jurisdictions is essential for a national study. For this reason, NEAIS developed a set of standardized definitions of elder mistreatment for the study. The use of these standardized definitions, along with thorough training of the people who collected data in the study sites, ensured greater comparability and reliability of results.

Steps in Establishing Definitions

The development of standardized elder abuse definitions involved several steps, including (1) an initial analysis of current state definitions of domestic elder abuse; (2) the convening of local roundtables of practicing professionals to gather firsthand information about how elder abuse is detected, reported, and investigated; (3) a critical review of preliminary definitions by a group of elder abuse experts; and, finally, (4) pilot testing the consensus definitions in both APS and sentinel agencies.

Analysis of Current State Definitions. A table that documented the frequencies of the components of the definitions (see Appendix A) was prepared, following the analysis of existing state laws defining abuse, neglect, and exploitation. The components of the definitions were categorized by type of abuse and state. The specific types of abuse, and any subcategories, were identified. The most common components across the states were selected as potential elements of NEAIS definitions.

Convening of Local Roundtables. Two roundtables of local professionals who deal with elder abuse, neglect, and exploitation were convened in February 1995 in San Francisco and in Washington, DC. The purpose of these roundtables was to obtain firsthand information from professionals working at the community level regarding how elder abuse is detected, reported, and investigated. The information obtained from these roundtables aided in the development of the standardized elder abuse definitions. (See Appendix B.)

Consensus Meeting. A consensus meeting was held in Washington, DC, on May 1 and 2, 1995. Participants included the members of the advisory committees of both the National Elder Abuse Incidence Study and the National Center on Elder Abuse, the APWA staff of the National Center on Elder Abuse (NCEA), the staff of NCEA's Consortium organizations, and Westat. Participants discussed the design of the study and provided an in-depth analysis of the draft definitions. Based on the discussion at this meeting, the definitions were revised and prepared for pre-testing. (See Appendix C.)

Pilot-Testing. The definitions were pilot-tested in local Adult Protective Services (APS) and sentinel agencies and revised through iteration, based on the results of the tests. The pilot testing process is discussed in greater detail in a later section of this report.

Definitions of Elder Abuse, Neglect, and Exploitation

The following definitions of domestic elder abuse, neglect, and exploitation developed for the study pertain to elders living in non-institutionalized settings.

Physical abuse is the use of physical force that may result in bodily injury, physical pain, or impairment. Physical abuse may include but is not limited to such acts of violence as striking (with or without an object), hitting, beating, pushing, shoving, shaking, slapping, kicking, pinching, and burning.

The unwarranted administration of drugs and physical restraints, force-feeding, and physical punishment of any kind also are examples of physical abuse.

Sexual abuse is nonconsensual sexual contact of any kind with an elderly person. Sexual contact with any person incapable of giving consent also is considered sexual abuse; it includes but is not limited to unwanted touching, all types of sexual assault or battery such as rape, sodomy, coerced nudity, and sexually explicit photographing.

Emotional or psychological abuse is the infliction of anguish, emotional pain, or distress. Emotional or psychological abuse includes but is not limited to verbal assaults, insults, threats, intimidation, humiliation, and harassment. In addition, treating an older person like an infant; isolating an elderly person from family, friends, or regular activities; giving an older person a "silent treatment"; and enforced social isolation also are examples of emotional or psychological abuse.

Neglect is the refusal or failure to fulfill any part of a person's obligations or duties to an elder. Neglect may also include a refusal or failure by a person who has fiduciary responsibilities to provide care for an elder (e.g., failure to pay for necessary home care service, or the failure on the part of an in-home service provider to provide necessary care). Neglect typically means the refusal or failure to provide an elderly person with such life necessities as food, water, clothing, shelter, personal hygiene, medicine, comfort, personal safety, and other essentials included as a responsibility or an agreement.

Abandonment is the desertion of an elderly person by an individual who has assumed responsibility for providing care or by a person with physical custody of an elder.

Financial or material exploitation is the illegal or improper use of an elder's funds, property, or assets. Examples include but are not limited to cashing checks without authorization or permission; forging an older person's signature; misusing or stealing an older person's money or possessions; coercing or deceiving an older person into signing a document (e.g., contracts or a will); and the improper use of conservatorship, guardianship, or power of attorney.

Self-neglect is characterized as the behaviors of an elderly person that threaten his/her own health or safety. Self-neglect generally manifests itself in an older person's refusal or failure to provide himself/herself with adequate food, water, clothing, shelter, safety, personal hygiene, and medication

(when indicated). For the purpose of this study, the definition of self-neglect **excludes** a situation in which a mentally competent older person (who understands the consequences of his/her decisions) makes a conscious and voluntary decision to engage in acts that threaten his/her health or safety.

The signs and symptoms of the seven kinds of abuse and neglect are summarized in Table 3-1. It should be noted that some signs and symptoms characterize several kinds of maltreatment. The most important of these are the following:

- Frequent unexplained crying; and
- Unexplained fear of or suspicion of particular person(s) in the home.

Table 3-1. Signs and symptoms of abuse and neglect

Physical Abuse
■ Bruises, black eyes, welts, lacerations, and rope marks
■ Bone fractures, broken bones, and skull fractures
■ Open wounds, cuts, punctures, untreated injuries, and injuries in various stages of healing
■ Stains, dislocations, and internal injuries/bleeding
■ Broken eyeglasses/frames, physical signs of being subjected to punishment, and signs of being restrained
■ Laboratory findings of medication overdose or under utilization of prescribed drugs
■ An elder's report of being hit, slapped, kicked, or mistreated
■ An elder's sudden change in behavior
■ A caregiver's refusal to allow visitors to see an elder alone

Table 3-1. Signs and symptoms of abuse and neglect (continued)

Sexual Abuse
<ul style="list-style-type: none">■ Bruises around the breasts or genital area■ Unexplained venereal disease or genital infections■ Unexplained vaginal or anal bleeding■ Torn, stained, or bloody underclothing■ An elder's report of being sexually assaulted or raped

Emotional/Psychological Abuse
<ul style="list-style-type: none">■ Emotional upset or agitation■ Extreme withdrawal and non-communication or non-responsiveness■ An elder's report of being verbally or emotionally mistreated

Neglect
<ul style="list-style-type: none">■ Dehydration, malnutrition, untreated bedsores, and poor personal hygiene■ Unattended or untreated health problems■ Hazardous or unsafe living conditions (e.g., improper wiring, no heat or no running water)■ Unsanitary or unclean living conditions (e.g., dirt, fleas, lice on person, soiled bedding, fecal/urine smell, inadequate clothing)■ An elder's report of being neglected

Abandonment
<ul style="list-style-type: none">■ The desertion of an elder at a hospital, nursing facility, or other similar institution■ The desertion of an elder at a shopping center or other public location■ An elder's own report of being abandoned

Table 3-1. Signs and symptoms of abuse and neglect (continued)

Financial or Material Exploitation
<ul style="list-style-type: none">■ Sudden changes in a bank account or banking practice, including an unexplained withdrawal of large sums of money by a person accompanying the elder■ The inclusion of additional names on an elder's bank signature card■ Unauthorized withdrawal of funds using an elder's ATM card■ Abrupt changes in a will or in other financial documents■ Unexplained disappearance of funds or valuable possessions■ Provisions of substandard care or bills unpaid despite the availability of adequate financial resources■ The provision of services that are not necessary■ Discovery of an elder's signature forged for financial transactions or for the titles of the elder's possessions■ Sudden appearance of previously uninvolved relatives claiming rights to an elder's affairs and possessions■ Unexplained sudden transfer of assets to a family member or someone outside the family■ An elder's report of financial exploitation
Self-Neglect
<ul style="list-style-type: none">■ Dehydration, malnutrition, untreated or improperly attended medical conditions, and poor personal hygiene■ Hazardous or unsafe living conditions (e.g., improper wiring, no indoor plumbing, no heat or no running water)■ Unsanitary or unclean living quarters (e.g., animal/insect infestation, no functioning toilet, fecal/urine smell)■ Inappropriate and/or inadequate clothing, lack of necessary medical aids (e.g., eyeglasses, hearing aid, dentures)■ Grossly inadequate housing or homelessness

3.2 Sampling Counties, Agencies, and Sentinels

Sampling at the County Level

The design for NEAIS employed a stratified multistage sample of 20 nationally representative counties, selected with probability proportional to the number of elders living in these areas. These counties, called Primary Sampling Units (PSUs), were stratified by five variables: geographic region, metropolitan area, elder abuse reporting requirements (mandatory and non-mandatory), percentage of elders, and percentage of poor elders. The use of probability proportional to size (PPS) ensures an approximately self-weighting sample—that is, every abused elder in the country has approximately the same chance of being identified, regardless of location, when the measure of size is the number of elders in the PSU.

This methodology produced the sample presented in Table 3-2 on page 3-9. Note that five counties were selected in each of four regions defined by the Office of Business Economics (OBE). These four regions have approximately equal populations. Five counties were from non-metropolitan areas, and five were from non-mandatory reporting states (i.e., where there is no state law requiring professionals to report suspected elder abuse). Note also that the numbers and percentages of elders are shown, as well as the percentage of the total county population that is made up of persons 60 years of age and older. The description of sampling methodology, presented in Appendix D, provides additional details on the distribution of counties in each of these strata.

Figure 3-1 on the next page shows the states participating in the NEAIS separated into the four OBE regions: Northeast (Region 1); Southeast (Region 2); Central (Region 3), and West (Region 4).

Sampling Sentinel Agencies within Counties

The sentinel agencies were divided into four major categories: financial institutions (banks); law enforcement agencies (sheriff's departments and municipal police departments); hospitals (including public health departments); and elder care providers (ECPs), (e.g., adult day care centers, senior centers, home health care agencies). The sources for identifying sentinel agencies included the following:

- Law enforcement—National Directory of Law Enforcement Administrators;
- Hospitals—American Hospital Association Guide;
- Public Health Departments—National Directory of Local Health Departments;
- Banks—Dun & Bradstreet; and
- Elder care providers—National Directory for Eldercare Information and Referral and local Area Agency on Aging (AAA) Directories of Elder Care Providers.

Figure 3-1. States by OBE region, with participating NEAIS states in gray



Table 3-2. Sampled counties for the National Elder Abuse Incidence Study

OBE Region	County	State	Metro status	Mandatory reporting	Number of elders (% of population of the county ¹)	% of poorer elders ²	PSU probability
1	Delaware County	PA	metro	no	113,225(20.67%)	6.99%	0.05418
1	Fayette County	PA	metro	no	34776(23.93%)	14.26%	0.01664
1	Bristol County	MA	metro	yes	96,576(19.07%)	10.40%	0.04621
1	Mercer County	NJ	metro	no	57,195(17.55%)	6.96%	0.02737
1	York County	ME	nonmetro	yes	27,911(16.96%)	9.28%	0.01336
2	Pulaski County	AR	metro	yes	54,111(15.48%)	14.10%	0.02607
2	Pinellas County	FL	metro	yes	271,330(31.86%)	7.70%	0.13071
2	Cleveland County	NC	nonmetro	yes	15,351(18.12%)	16.38%	0.00740
2	Madison County	NC	metro	yes	3,644(21.49%)	32.52%	0.00176
2	Giles County	TN	nonmetro	yes	5,311(20.63%)	21.79%	0.00256
3	Dupage County	IL	metro	no	95,655(12.24%)	3.67%	0.04624
3	St. Clair County	IL	metro	no	44,998(17.12%)	11.21%	0.02175
3	Platte County	MO	metro	yes	6,585(11.38%)	6.50%	0.00318
3	Bay County	MI	metro	yes	20,125(18.01%)	9.74%	0.00973
3	Presque Isle County	MI	nonmetro	yes	3,680(26.78%)	16.49%	0.00178
4	San Diego County	CA	metro	yes	360,842(14.45%)	6.00%	0.17265
4	Maricopa County	AZ	metro	yes	347,277(16.37%)	8.50%	0.16616
4	Grayson County	TX	metro	yes	20,088(21.14%)	15.47%	0.00961
4	Multnomah County	OR	metro	yes	101,659(17.41%)	10.08%	0.04864
4	Rusk County	TX	nonmetro	yes	9,575(21.89%)	19.57%	0.00458

¹ The regional average percentage of elders is 18.2 percent in Northeast, 18.3 percent in Southeast, 20.2 percent in the Central United States, and 17.7 percent in the West.

² Below the poverty line in 1989 as defined by the U.S. Bureau of the Census (1990 Census Population Data).

A sample of sentinel agencies was drawn from the 20 counties. In two rural counties, Rusk and Presque Isle, there were fewer than 12 eligible agencies (other than banks). Otherwise, on average, 12 to 13 agencies per county were selected. Two banks per county were selected to ensure that possible incidents of financial exploitation of elders would be identified. The remaining agencies were distributed among the other three categories proportional to the number of agencies available in each county. Proportional allocation methodology was based on a simple logic that different categories of agencies should be appropriately represented in the pool of agencies sampled.

Whenever possible, agencies were selected using a stratified probability proportional to the size of the agency. When a reasonable measure of size could not be ascertained, an equal probability sample of agencies was selected. A measure of size was available for most of the law enforcement agencies, hospitals, and banks, but not for the aging service providers. With slight modification for some sentinel agencies recruited late in the data collection period, the allocation of agencies in each county followed the following pattern:

- Two banks;
- At least one law enforcement agency;
- No more than two municipal police departments;
- No more than three law enforcement agencies (i.e., municipal police and sheriff's departments);
- At least three hospitals;
- Public health departments with certainty in small counties, if available; and
- Sheriff's departments with certainty in small counties.

Small counties, with fewer than 10,000 elders, included Madison, Giles, Presque Isle, and Rusk. These counties had too few agencies of one or more types required for the study. Rusk County did not have a public health department. Although the study design called for at least three hospitals per county, Bay County had only two hospitals; there was one each in Madison, Giles, Presque Isle, and Platt. There were no hospitals in Rusk County, and no banks in Presque Isle.

Table 3-3 contains the available number of agencies by type, along with the number selected. Using PPS sampling by strata, an average of 12.4 sentinel agencies were selected in each county. Agencies chosen to replace agencies that had refused to participate were selected with the same probability as the sampled agencies. A description of sampling procedures for each type of agency and its potential replacements can be found in Appendix D.

Table 3-3. Sentinel agency allocation by agency type

County	Available Banks	Banks Participating	Available law enforcement agencies	Law enforcement agencies Participating	Available hospitals/public health (PH)	Hospitals/ (PH) Participating	Available elder care providers (ECPs)	ECPs Participating	Total Participating agencies
Maricopa	25	2	19	1	27	3	99	7	13
Rusk	7	2	4	3	0	0	3	3	8
Bay	30	2	6	3	2	2	5	5	12
Pinellas	23	2	23	2	25	3	105	6	13
Bristol	36	2	20	2	25	3	45	6	13
San Diego	34	2	20	2	20	3	90	7	13
Madison	6	2	2	2	1	1	18	8	13
St. Clair	24	2	20	2	24	4	59	6	13
Mercer	18	2	11	1	14	3	88	7	13
Giles	4	2	2	2	2	2	18	7	13
Fayette	12	2	13	3	3	3	25	5	13
Grayson	8	2	7	1	5	3	70	7	13
Multnomah	37	2	5	1	12	3	58	7	13
York	15	2	14	3	3	3	19	5	13
Presque Isle	0	0	3	3	1	1	4	4	8
Delaware	36	2	37	2	18	3	51	6	13
Dupage	29	2	31	2	9	3	116	6	13
Cleveland	2	2	4	1	4	3	18	6	12
Platte	6	2	6	3	1	1	19	7	13

Pulaski	28	2	5	1	15	3	63	7	13
Total	380	38	251	39	182	49	973	122	248

Sampling Sentinels within Agencies

In the absence of knowledge of the propensity to observe elder abuse by different types of sentinels within a county, a self-weighting sample of 50 sentinels per county was proposed. This yielded a targeted total of 1,000 sentinels. One disadvantage of this self-weighting design was the possibility of overburdening some agencies, that is, attempting to recruit sentinels at a very high rate in counties with a small number of eligible agencies. One elder care provider, for example, had 78 eligible sentinels and, under the self-weighting design, almost all of these sentinels should have been sampled. Only 11 were recruited at that atypical agency, however, in order to distribute the respondent burden evenly. The following guidelines were used:

- Recruit at least one sentinel per agency;
- Recruit no more than eight sentinels per agency (except in unusually large agencies);
- On average, recruit four sentinels per agency; and
- Recruit about 250 sentinels per agency type (across all 20 counties).

If, during sentinel recruitment, it was learned that some potential types of sentinels were more likely to encounter abuse than others (e.g., the Elder Abuse task force in a police department), the self-weighting design was not used. Such special groups of sentinels were selected either with certainty or at a higher rate. During data collection it was learned that banks had fewer contacts with elders than ECPs; rates of sentinel recruitment were adjusted accordingly.

Evaluation of the Sample of Counties and the Estimates

Twenty counties (in 15 states) were selected to represent similar places across the continental United States, according to criteria discussed above and based on data from the 1990 Census. Altogether, there are more than 3,000 counties in the United States and, on average, more than 60 per state. The study's national annualized estimates are based on data obtained from a small fraction of these counties

and, in addition, are derived from only 2 months of data. It is, therefore, important to examine the accuracy of the estimates using outside sources, to the extent possible.

The National Center on Elder Abuse, in the spring of 1997, conducted *A Survey of State APS and Aging Agencies on Domestic Elder Abuse [Data] for FY 95 and FY 96*. A survey instrument, designed to collect aggregate statistics for domestic elder abuse, was sent to state APS agencies and State Units on Aging. Figures received from states in this survey represent counts of domestic elder abuse reports to state report-receiving agencies. A report may involve more than one elderly person and, similarly, one person may be reported more than once as an alleged victim of abuse.

Data of similar character were collected from each of the county APS agencies in NEAIS for a 2-month period. These data were compiled to be comparable to the NCEA survey of domestic elder abuse reports, leaving duplicate and unsubstantiated cases in the totals. Then, using estimation methods described later, data were weighted to represent national totals and annualized. Table 3-4 below compares these annualized national estimates of APS data from NEAIS with totals obtained from the 48 contiguous states, by region. In each of the four regions, the proportion of cases in the data obtained from states by NCEA is very close to the national estimates. It was estimated, for example, that 16 percent of the weighted incidents reported by APS to the study came from Region 1, the Northeast; 17.5 percent of the reports from the states to NCEA were contributed by states in Region 1. Across the other three regions, there are differences of only a few percentage points between the NEAIS estimates and the NCEA actual totals. Furthermore, the total number of reports obtained directly from the states is fewer than 4,000 cases, (less than 1.5 percent) greater than the estimated total. The statistical procedures used to produce the national estimate appear to be extremely accurate.

Table 3-4. NEAIS annualized national estimates from APS data in 20 counties by region compared to NCEA's Survey of Domestic Elder Abuse Reports (duplicated totals)

Region	NCEA survey	NEAIS
	State-by-state totals 1996	National estimates 1996
1	50,746 (17.5%)	46,403 (16%)
2	74,881 (25.6%)	64,156 (22%)

3	47,368 (16.3%)	56,868 (20%)
4	117,318 (40.4%)	119,016 (42%)
Total	290,314 (100%)	286,443 (100%)

3.3 Instrument Development

Since APS case workers and sentinel agency staff, rather than professional interviewers, would be completing data forms, their design had to be simple, requiring as few references as possible to other documents. Several versions of instruments were pretested with local APS and service agency staff to fine tune them and simplify procedures as much as possible.

The APS and sentinel instruments were identical with two exceptions: the APS instrument included sections for reporting the sources of the report to the agency and for the disposition of the case. These items were not applicable to the sentinel instrument. Appendix E contains the data forms for APS and sentinel agencies. Insert pages ("Additional Parts A") were created for circumstances in which more than one elder in the household was abused. An additional Part A is also included in Appendix E. The final version of each instrument was a single 11" x 17" page printed back to back and folded in the middle.

Pretesting Data Collection Instruments

Pretests were conducted at six sentinel agencies and in two APS sites during the months of May, June, July, and August 1995. Participants were briefed in person on the purpose of the study and then asked to review each item on the form to see if the wording was clear and if the requested information was available in the records at the pretest location. Pretest participants were encouraged to critique the format and question order as well. Participants were given one or more forms and asked to complete them and return them to Westat by mail or fax. Eight APS forms and ten sentinel forms were received. Table 3-5 below summarizes the pretest dates and number of forms received from each agency.

Both APS and sentinel pretest offered many constructive comments agencies. During the 2½ months of pre-testing, the instruments were revised four times. Where appropriate, pre-testers' suggestions were incorporated into the final instruments.

Table 3-5. APS and sentinel agency pretest dates and number of forms received

Agency	Date completed	Number of forms received
Adult Protective Services		
Montgomery County	6/8/95	3
Fairfax County	6/27/95	5
Sentinel agencies		
The Support Group	5/23/95	4
Potomac Home Care	7/13/95	1
Fastran Transportation	5/31/95	1
Crestar Bank	7/31/95	1
Meals on Wheels	7/21/95	1
In-home Hospice Care	8/25/95	2
Total		18

Institutional Review Board (IRB)

The NEAIS study design and data collection forms and procedures were reviewed by the IRB at Westat on June 13, 1995, and twice annually after that. The project qualified for an exemption from the requirement to obtain informed consent because no identifiable information about victims of abuse, alleged maltreaters, or reporters of the abuse were recorded on any of the data collection forms. Because of the confidential nature of the information, however, the IRB cautioned that the data be safeguarded from any possibility of identifying the subjects of the reports or the reporters, and recommended several modifications to the forms and data collection procedures. (See Appendix F for IRB approval letter.) The final data set must be prepared in a format that eliminates the possibility of identifying counties, agencies, sentinels, or alleged victims.

3.4 APS Agency and Sentinel Agency Recruitment

Agency recruitment followed two different tracks: recruitment of APS agencies was the responsibility of APHSA; recruitment of sentinel agencies was the responsibility of Westat. Recruitment procedures for each type of agency are described below.

APS Recruitment

Adult Protective Services are provided by various agencies across the United States. The designation of the agency responsible for handling protective services is made at the state level, and the designated agency varies by state. In 29 states, the APS agency is located in the social services agency in the state. In 19 states, the APS program is located in the state unit on aging, but within the social service agency. In 6 states, the APS program is located in the state unit on aging and outside the social service agency. While the staff of most APS agencies receive and conduct investigations directly, in some states the APS agencies contract with local non-profit agencies to conduct elder abuse investigations and related activities (e.g., California and Illinois). These organizational variations mean that the NEAIS recruitment procedures involved different agencies in each state. (See Appendix G for the location of APS agencies by state.) Regardless of their locations in the state structure, many APS agencies limit their protective services to vulnerable elders (e.g., dependent, impaired, or incapacitated persons).

The recruitment of APS agencies involved several steps. In mid-April of 1995, a letter of introduction and an agreement form was sent to APS/aging agency directors in each sampled county. The agreement form, once signed by the agency director, committed an agency to participate in the study and designated a "local contact person." Between April and August of 1995, agreements to participate were received from 19 of the 20 sampled counties. During August of 1995, a letter and questionnaire were sent to designated local contact persons. The questionnaires were used to collect baseline data for each county, as well as information helpful in the design of the data collection forms and training materials. By December 1995, after determining that the remaining agency, Westchester County, NY, would not participate in the study, Delaware County, PA, was selected as a replacement. Delaware County was selected randomly from counties with characteristics as similar as possible to Westchester County. Delaware County agreed to participate in January 1996.

Sentinel Agency Recruitment

Local service agency directories typically did not include names of directors or agency employees. When such names were provided, they were not necessarily current or might not be the appropriate contact person. Accordingly, Westat staff contacted each sentinel agency and asked for the name and title of the person who would be able to decide about the agency's participation in a national

study on elder abuse. Westat then confirmed the decision-maker's telephone number, fax number, and street address.

The initial contact letters were sent sufficiently early to allow recruitment to be completed before the start of data collection. Two different contact procedures were utilized, depending on the type of agency. For smaller agencies, contact letters were sent 4 to 6 weeks before the beginning of data collection. For larger agencies or agencies likely to have several levels of bureaucracy, 6 to 8 weeks of lead time was allowed; for example, hospitals often referred our recruiters to three or four people before the decision maker could be identified. Even then, many required the approval of legal departments, research committees, or approval through their own IRB.

Selection of Sentinels within Agencies

If possible, sentinels were sampled during the recruitment telephone conversation with the person designated by the sentinel agency to be the point of contact with NEAIS. To be eligible for the sample frame of sentinels from the agency, persons had to have frequent contact with the elderly and had to be able to identify abuse if they encountered it. Each attempted call to an agency and the outcome of the call were recorded on a telephone log. When the person listed as the addressee or another person who could make a decision concerning the agency's participation was successfully contacted, a recruitment script was used to ask a series of questions on the structure and size of the agency. Because the kinds of agencies participating in the study had very different organizational features, different scripts were developed for different kinds of organizations such as law enforcement agencies, in-home service providers, out-of-home providers, senior centers, and banks.

A Microsoft Excel program was used to randomly pick every *n*th sentinel from a roster of sentinel candidates provided by the agency. Part-time as well as full-time agency staff were eligible for consideration. Professional staff were preferred, although volunteers were selected occasionally when professional staff were not available. The number of sentinels selected per agency was typically four to six, according to sampling guidance received from project statisticians. In some instances, an agency's participation was contingent on taking all eligible staff (e.g., an entire emergency room staff at a hospital). In such cases, the project accepted the agency's designated participants and noted the special circumstances so that proper weighting could be attached to these unusual agencies. Table 3-6 shows the numbers and percentages of sentinels who were sampled and who participated, after accounting for refusals and sentinels

who left the agency. Among the 1,158 sentinels who were asked to participate in the study, only 4 refused to do so.

APS and Sentinel Agency Followup Procedures

Data collection took place over a 12-month period, according to the schedule presented in Figure 3-2, with either one or two counties starting data collection each month for 12 months. Sentinel data collection took place over an 8-week period, while for APS agencies in the same counties, data collection extended 2 weeks beyond the second month so that any instances of abuse or neglect identified by sentinels at the end of the data collection period could be included in the APS database, if reported to the local APS agency.

Table 3-6. Sentinel participation status, by agency type

Sentinel Status	Agency type						Total
	Sheriffs	Municipal police	Public health departments	Hospitals	Banks	Service providers	
Total selected	51 4.38%	230 19.74%	18 1.55%	192 16.48%	72 6.18%	602 51.67%	1165 100.00%
Left agency ¹	0 0.00	2 0.17%	0 0.00	1 0.09%	0 0.00	0 0.00	3 0.26%
Refused	0 0.00	2 0.17%	0 0.00	1 0.09%	0 0.00	1 0.09%	4 0.34%
Active participant	51 4.38%	226 19.40%	18 1.55%	190 16.31%	72 6.18%	601 51.59%	1158 99.40%
Participation rate	100%	99%	100%	99%	100%	99.8%	

¹ Excluded from participation rate

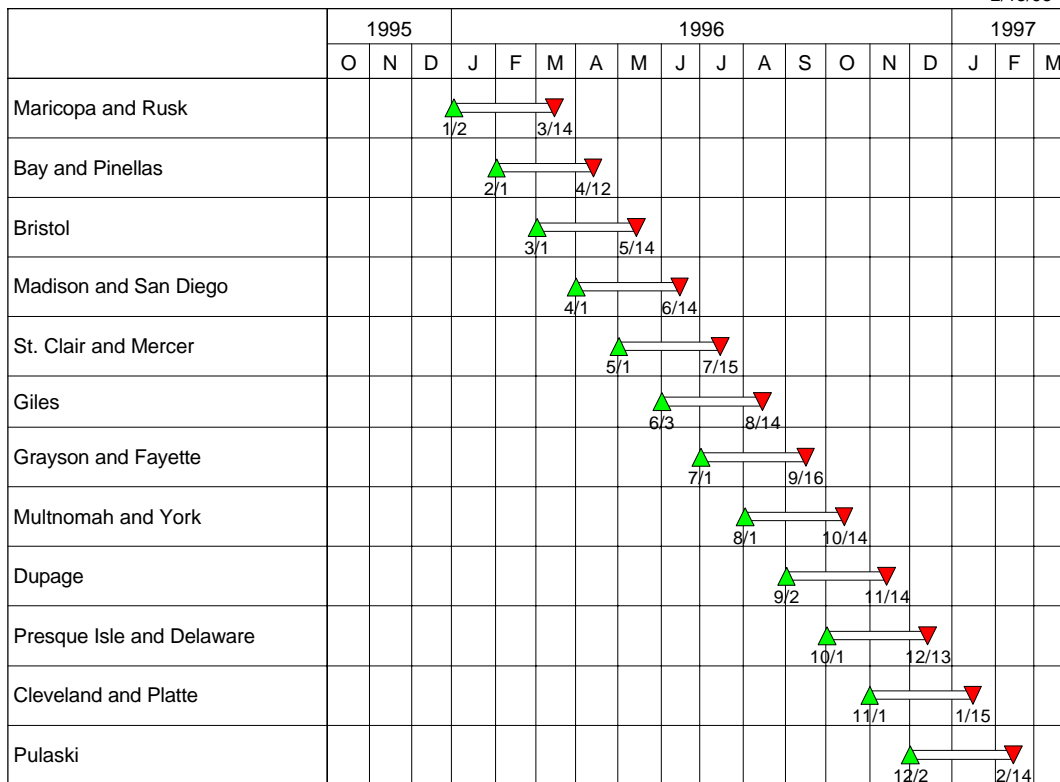


Figure 3-2. Start and stop dates for each participating county

Because of the substantial time lag between recruitment and data collection in many counties, it was important to remind agencies not currently involved in the study of their commitment to participate. For APS agencies, this was done by periodically sending a reminder letter and an incentive, for example, complimentary copies of *Elder Abuse: Questions and Answers An Information Guide for Professionals and Concerned Citizens*, the *NCEA Exchange*, and *Fact Sheets*. Sentinel agency contacts were called periodically to remind them of the upcoming data collection schedule and to alert them to expect an express package containing training materials and data collection forms.

Adult Protective Services and Sentinel Training

An innovative approach was developed for training sentinels and APS agency personnel using specially designed materials and a video. Training included the following items:

- An attractive 17-page participant guide book (see Appendix E) provided information on the study design, confidentiality, responsibilities of study participants, definitions of elder abuse, and procedures for returning completed data forms;
- Two 35-minute videos were developed—one for APS staff and the other for sentinel agencies; and
- An "800" telephone number was available for participants to call with any questions about data collection procedures or client eligibility.

Except for small differences in items on reporting sources and disposition of reported cases, the APS and sentinel videos shared the same core material. Westat prepared the scripts, with revisions suggested by the American Public Welfare Association (APWA) and the Administration on Aging (AoA) Project Officer. Two professional readers recorded the revised script in a professional sound studio. Next, Westat's graphics department merged the sound track with artwork produced in-house, making master tapes that were then copied onto VHS videotapes for distribution to APS and sentinel agencies during recruitment.

In addition to being more cost effective than in-person training, a video approach has several other advantages. A training video is a reference tool that can be used to refresh the memories of sentinels and agency contact persons. In addition, it is easier to maintain the anonymity of participating sentinels and sentinel agencies through video training.

Several weeks before data collection in a particular county, a call or letter reminded the local contact person that data collection would begin the following month. Approximately 1 week later, the following training package and data collection materials were sent:

- A letter reconfirming the agreement to participate in the study;
- A letter from the Assistant Secretary for Aging, AoA, Fernando Torres-Gil
- A packing slip;
- Training videotapes (typically, one for each of four participants);
- Sentinel and APS/aging agency guidebooks (one copy for each participant, employee, or sentinel participating in the study);
- Video viewing instructions;
- Data collection forms;

- Additional Parts A;
- Transmittal sheets;
- Pre-addressed/pre-stamped mailers;
- Additional instructions for APS employees; and
- Label sheets.

The day after the training materials were scheduled to be received, the local contact person was called to ensure that the package had arrived and to schedule a conference call after APS workers and sentinels had an opportunity to view the training video and read the guide. See Appendices H and I for the Adult Protective Services/aging agencies training materials.

The discussion of the contents of the video typically took place 1 week before the beginning of data collection. Site visits were scheduled midway through the data collection period at the first data collection site and at several others where assistance was needed.

Recruitment of Alternate Sentinel Agencies

Recruiters, project staff trained to persuade agencies to participate in the study, sometimes discovered during attempts to contact administrators that agencies had gone out of business, merged with another agency, or did not serve elderly clients. In such instances, an alternate agency was selected from a list of randomly assigned substitutes. The substitute agency was contacted after a recruitment package had been forwarded, as described above.

Sentinel Agency Refusals and Refusal Conversions

Several strategies were employed for "refusal agencies." These included, depending on the reason for the refusal, (1) express mailing a package with a persuasive letter and with the training video; (2) faxing a copy of the data collection instrument; (3) reassigning the agency to another recruiter; and (4) assigning the agency to senior project staff. Attempts to recruit a single refusal agency might employ all four strategies. Unless the refusal came from the most senior person at an agency, recruiters tried to persuade the contact person to identify someone else more senior to whom the recruiter or senior staff could

speak. During weekly staff meetings, project staff discussed alternative recruitment strategies, and a plan of action was developed for each refusal. A replacement agency was selected only after all recruitment efforts had been exhausted. Bank participation rates were particularly low. Most banks declined to participate on the advice of corporate counsel or senior bank staff. Efforts to secure a letter of endorsement from the American Bankers Association were unsuccessful. It is noteworthy that only one completed form was returned from a bank sentinel among the 16 participating banks. Agency participation status by type of agency is shown in Table 3-7.

Table 3-7. Participation status, by agency type

Status	Agency type						Total
	Sheriffs	Municipal police	Public health departments	Hospitals	Banks	Service providers	
Total selection	13	41	13	58	59	280	464 (405)
Ineligible/ Merged	1 (7.6%)	1 (2.4%)	8 (61.5%)	7 (12.1%)	6 (10.2%)	109 (39%)	132 (126)
Refused	1	3	0	10	37	35	86 (49)
Participating agencies	11 (91.6%)	37 (92.5%)	5 (100%)	41 (80.4%)	16 (30%)	136 (80%)	246 (230)

Participation Rate: Seventy-four percent including banks; 82.4 percent without banks. Total numbers in parentheses exclude banks. Total percentages in parentheses exclude ineligible or merged agencies.

3.5 Data Collection

As described earlier, data collection was spread over 12 months, beginning in January 1996, following the pattern presented in Figure 3-2. APS and sentinel procedures are described below.

APS Data Collection

On the first scheduled day for data collection in each county, a telephone call was made to remind the local contact person in the APS agency and to answer last-minute questions. Approximately every 10 days, the contact person was called to determine how many reports had been received by the agency and how many forms had been completed. These telephone calls provided continuous monitoring of the progress of the agency and allowed study staff to estimate the number of expected data forms. Finally, they provided the study participants with another opportunity to ask questions.

The local contact person was reminded when 1 week remained in the data collection period. On the last day, the local contact person was asked to send in all completed forms. Within a month after the end of data collection in each county, forms received from the APS/aging agency were reviewed, coded, and entered into the database. Similar procedures were followed with sentinel agencies, in addition to the procedures noted below.

Sentinel Data Collection

Sentinel data collection procedures were similar to APS agencies; however, sentinels were asked to send reports without the approval or review by the agency contact. This procedure ensured that the agency contact—the person with responsibility for disseminating the data collection materials and talking weekly to Westat's home office about sentinel absences or replacements—did not inhibit the sentinel from forwarding cases. Information about sentinel absences or replacements obtained during these periodic telephone calls was used in weighting the data. Sentinels were also asked to forward reports of suspected cases of elder abuse as soon as possible after observing the suspected abuse. Sentinels did not attempt to substantiate incidents of abuse.

Site Visits to APS/Aging Agencies and Sentinel Agencies

Site visits to APS agencies were conducted for several reasons. Maricopa and Rusk were the first sites to begin data collection, and APHSA wanted to monitor how the study was being implemented. Bristol and San Diego Counties were visited at the request of the APS agencies. Multnomah was visited because a large number of cases were expected there. Madison County, on the other hand, was a very

small county and APHSA wanted to observe any differences from larger sites in the implementation of the study.

Table 3-8 shows the location and dates of site visits to six counties that were made to APS/aging agencies.

Table 3-8. APHSA site visits to APS agencies

County/state	Site visit dates
Maricopa County, Arizona	02/05/96 thru 02/09/96
Rusk County, Texas	02/05/96 thru 02/09/96
Bristol County, Massachusetts	03/13/96 thru 3/15/96
San Diego County, California	04/10/96
Madison County, North Carolina	04/30/96
Multnomah County, Oregon	08/16/96

Table 3-9 shows the location and dates of site visits conducted by Westat to five counties. These visits included the first (Maricopa and Rusk) and last (Pulaski) participating counties. Multnomah was visited because a large number of forms were expected from Multnomah sentinels. Cleveland County was visited because it was a nonmetropolitan county with a large percentage of elderly residents. Project staff met with sentinels and agency contacts at nearly all participating agencies in the five counties. Site visits were conducted to determine if sentinel agencies were following the procedures presented in the training video and APS/sentinel guide, to answer any questions from sentinels and agency contacts, and to gauge the degree of interest in the study by the participating agencies. Project staff found great interest in the study and diligence in following study procedures. (See Appendix J for site visit information.)

Table 3-9. Westat site visits to sentinel agencies

County/state	Site visit dates	Number of agencies visited
Maricopa County, Arizona	02/05/96 thru 02/09/96	12
Rusk County, Texas	02/05/96 thru 02/09/96	8

Multnomah County, Oregon	08/26/96 thru 08/28/96	11
Cleveland County, North Carolina	11/18/96 thru 11/19/96	12
Pulaski, Arkansas	01/06/97 thru 01/08/97	13

Certificates of Appreciation

After data collection was completed in each county, a certificate of appreciation was mailed to each sentinel and sentinel agency contact, and to APS/aging agency staff. The certificates were produced on high-quality bond paper, with a gold, embossed seal certifying that the recipient had participated in the NEAIS. An example of the certificate is included in Appendix K.

Special Procedures in San Diego, California

San Diego County sentinel agencies required special data collection procedures because of difficulty in getting sentinel agencies there to return completed forms. Westat employed an experienced interviewer, who visited each agency to assist sentinels in completing and collecting forms. Prior to the interviewer's visit, a letter was sent to each agency contact informing that person of the data collector's visit. Despite the diligence of the interviewers, this procedure resulted in only three completed forms. It was not necessary to use in-person data collection visits in the other 19 participating counties.

3.6 Data Receipt

Data collection forms from both APS and sentinel agencies were sent to Westat. Westat staff reviewed sentinel forms for completeness and called the sending sentinel directly if there were any questions. Similarly, APHSA staff reviewed APS data forms and called the APS agency contacts to discuss missing or unclear data.

APS agencies followed specific procedures for transmitting completed data forms to the home office, as detailed in the training video. The local contact person at the APS/aging agency was responsible for the collection and transmission of completed APS data forms. Following a review of the forms, the contact person then completed a two-ply transmittal form, kept a copy for his/her records, and forwarded

the completed forms and transmittal sheet in a prestamped, pre-addressed envelope. Procedures varied slightly between the larger and smaller agencies. In larger APS agencies, several staff members checked the completed forms before the contact person sent them to the home office. In the smaller agencies, the data forms were often photocopied before the originals were sent to the home office.

Sentinels followed procedures similar to those for APS agencies. The principal difference was that the role of the sentinel agency contact was limited to providing information to sentinels, training them, and distributing study materials. To encourage candid, confidential reporting, we asked agency contacts not to review or edit the forms completed by the sentinels. Moreover, sentinels were instructed to send forms directly to the home office, further insulating them from the possibility of influence by the agency contact. Sentinels were asked to complete and mail the data form on the same day a case was identified to minimize the possibility that events surrounding the abuse might be forgotten or incorrectly recollected. Sentinels kept a copy of the transmittal sheet and sent the forms in a pre-addressed prepaid mailer.

Keying

Both APS and sentinel data forms were entered into a data receipt system according to ID number, form type (APS or sentinel), and date of receipt; they were then batched in groups of 20. After batching, forms were keyed directly into a data entry program created in Microsoft Access. The data were entered using PCs with screens that mirrored the data collection instrument.

Coding Data Forms

Both APS and sentinel data forms required respondents to provide a brief narrative describing the maltreatment events. After keying, this maltreatment information was evaluated according to the study definitions and eligibility criteria.

Cases that did not meet the study definitions were excluded from the database. A case was excluded for the following reasons:

- Victim resides in an institutional setting (e.g., nursing home, foster care);
- Victim is under 60 years of age;

- Victim resides outside county; or
- The incident was not abuse by definitions used in NEAIS.

In some instances, additional categories of maltreatment, other than the one coded by the respondent, were indicated based on the description of the alleged incident. A second trained staff person reviewed any proposed change in code before a final change was made. If necessary, miscoded items were reclassified into the proper category.

A review of the APS data forms resulted in recording the maltreatment codes in 180 cases. During coding, 41 APS data forms were removed from the database for not meeting any of the seven definitions of elder abuse described earlier in this report. Only five sentinel forms were removed because they did not meet criteria.

3.7 Unduplication

Sometimes more than one data form was received for the same alleged maltreated elder describing either the same or different abusive incidents. It was necessary to identify such duplicates and count each person only once for purposes of this study. This process is known as “unduplication.”

Various types of duplicate reports were submitted to the study concerning the same alleged maltreated elder. The first type was **APS-APS duplication**, in which an APS agency submitted two or more data forms on the same person. The second was **sentinel-sentinel duplication**, in which two or more sentinel forms were received on the same alleged maltreated elder. The forms could have come from the same sentinel or from different sentinels and/or from different participating agencies (e.g., a police station and a hospital). The third type was **APS-sentinel duplication**, which occurred either because the sentinel forwarded the incident to APS and both agencies subsequently submitted a data form to the study, or because the same incident was reported independently to APS by another source.

To accommodate all possibilities for duplicate reporting, the data collected on the forms were sorted across three different groups using Microsoft Access, comparing elder's first name, last initial, date of birth, and age:

- Exclusively across all APS data forms;

- Exclusively across all sentinel forms; and
- Crossing APS and sentinel forms.

Possible duplicate cases across all possible combinations were identified after comments and other key data associated with the duplicate reports had been reviewed. Ninety-three sets of reports were determined to be genuine duplicates. Extra or duplicate cases reported both to APS and sentinel agencies were removed from the sentinel data file, so that such duplicated instances of abuse and neglect were counted as reports to APS. The largest number of duplicates (57 of the 93) were this type. Duplicate sentinel reports were assigned to the sentinel agency that first sent in the form. These numbers are presented graphically in Figure 3-3.

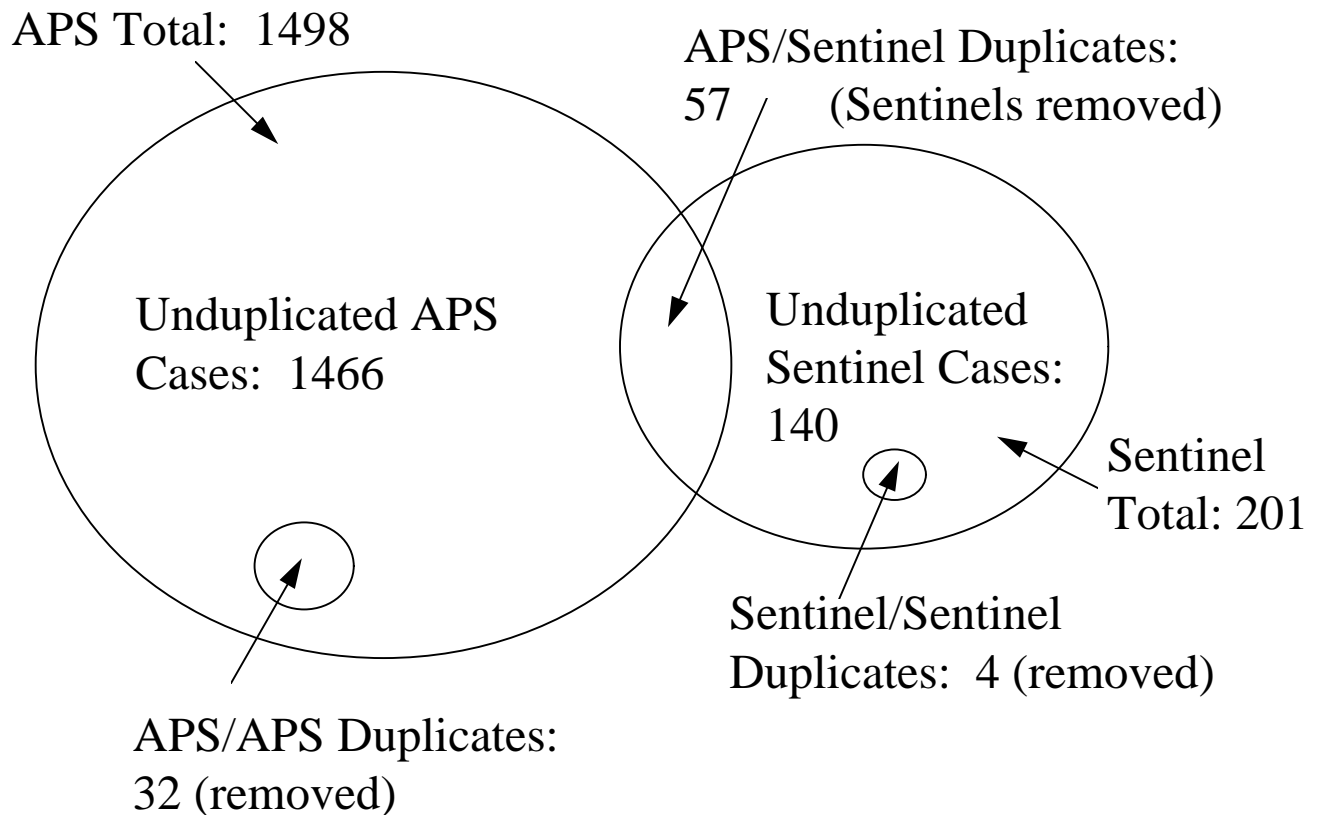


Figure 3-3. Duplicated and unduplicated APS and sentinel reports

3.8 Participant Tracking

During the 2-month data collection period, sentinel agencies were called each week to confirm that the sampled sentinels were present on the job and thus were able to observe elder abuse if they encountered it. The outcome of each call was recorded in a database using a specially designed program that summarized information for each week. The information included whether the sentinel was a part-time or full-time sentinel during the week, and whether the sentinel was present most of the time or part of the time during scheduled hours. Sentinel tracking data were used in weighting the data.

APS agencies were not tracked, since data were not collected from individuals within the agency, and the APS agency was presumed to be open during normal business hours. Nevertheless, APWA staff made frequent calls to APS agency contacts to monitor the progress of cases that were still under review to determine whether or not they had been substantiated.

3.9 Weighting the Responses

The process of weighting involves the computation of case-specific sampling weights used to produce unbiased estimates of the population parameters of interest. The weights are needed in the statistical analysis to compensate for the variable probabilities of inclusion in the sample. Even for samples in which units are selected with equal probabilities, weighting may still be necessary to compensate for differential rates of nonresponse and deficiencies in the sampling frame. Weighting complex survey data, such as the data from NEAIS, generally involves many steps. The most important steps are the determination of overall probabilities of selection, calculation of base weights, calculation of nonresponse adjustments, and development of replicate weights. A detailed explanation of the following components is provided in Appendix L.

PSU Base Weights

The base weight of a sampled county is defined as the reciprocal of the probability of selecting that county. The base weights are unbiased in that the expected value of a weighted estimate, based on the sample data, is equal to the corresponding population value that would have been obtained if

all the counties (rather than a sample) in the United States were surveyed. The base weights of the sampled counties ranged from 5.79 (San Diego County, California) to 569.66 (Madison County, North Carolina).

Weighting of APS Data

Unlike the sentinel records, there are no further sampling stages for the APS data. In addition, there is no nonresponse adjustment, since all APS agencies in the sampled counties participated in the study. Therefore, all the records received from the APS agencies were assigned their respective PSU base weight and multiplied by an annualization factor of six (described below), to give the full sample final weight.

Annualization

The NEAIS data collection period extended from January 2, 1996, to February 2, 1997. Data were collected over a period of 2 months in each of the sampled counties. The counties were distributed in such a way that there were four or five counties reporting in any particular month, except at the beginning and the end of this period. In addition, a start date was assigned such that in most months, two large counties and two small counties were reporting, except at the beginning and the end of the study. This approach minimized the potential for a seasonal affect to bias the estimate of the incidence of elder abuse. The estimate of elder abuse over these 2-month periods was transformed to an estimate for the study year by multiplying by a factor of six.

Agency Weight (non-APS Agencies)

The agency base weight (ABW) of each non-APS agency is, in most cases, the inverse of the probability of selection. As described in the agency sampling description in Section 3.2, the probability of selection, in most cases, was obtained from the WESSAMP output. Within each county the selection probability was proportional to a measure of size of the agency so that the ABW was inversely proportional to the agency size.

However, the selection probabilities of the elder care provider agencies were adjusted to account for the fact that there was deliberate oversampling in anticipation of many non-existent or ineligible agencies, since it was not possible to construct a completely reliable frame.

Agency Nonresponse Adjustments (Sentinel Agencies)

The base weights are unbiased weights that inflate the sample data to population levels. Nonresponse in the study results in losses in the sample data that must be compensated for in the weights. In this case, the sentinel agency weights must be adjusted to compensate for the reduction in sample size. If nonresponse occurs at random, such adjustments are unbiased; however, nonresponse almost never occurs randomly. Consequently, such adjustments are typically made within classes that are internally as homogeneous as possible with respect to the agency characteristics. Thus, nonresponse adjustments are used to attenuate the biases that result from the likelihood that reports supplied by the nonrespondents (if they had been obtained) would have been different from those of the respondents.

Sentinel Weights

Because an equal probability scheme was used to select the sentinels, within each agency the sentinel base weight for each participating sentinel is the simple ratio of number of eligible sentinels divided by the number of participating sentinels. The sentinel base weight was inflated by the rate of participation (or percentage of coverage). The rationale behind this is the assumption that a sentinel participating 50 percent of the time would have witnessed twice as many elder abuse incidents if he/she had participated 100 percent of the time.

Sentinel Case-Level Weight

There were 140 forms returned (after unduplication) by 74 reporting sentinels from 53 agencies. Each form was assigned a sentinel case-level weight. The aggregate weight distribution by agency type, during the reporting period of 2 months, is presented in Table 3-10 for the sentinel case-level weights.

Table 3-10. Aggregate sentinel case-level weights by PSU and agency type

OBE region	Site ID (fielding order)	County	Agency type*	Reporting agencies	Reporting sentinels	Forms returned (RR)	Aggregate weight (W)	W percentage	W percentage within OBE
1	05	Bristol	03	1	1	9	6,628	7.6%	37.0%
1	05	Bristol	05	1	1	2	165	0.2%	0.9%
1	05	Bristol	07	2	3	3	1,856	2.1%	10.4%
1	09	Mercer	05	1	1	1	232	0.3%	1.3%
1	09	Mercer	07	2	3	3	1,418	1.6%	7.9%
1	12	Fayette	07	2	3	3	867	1.0%	4.8%
1	14	York	03	1	1	1	1,275	1.5%	7.1%
1	14	York	07	2	5	9	5,168	5.9%	28.9%
1	17	Delaware	05	3	5	9	299	0.3%	1.7%
2	04	Pinellas	05	1	1	1	88	0.1%	0.5%
2	04	Pinellas	07	1	1	3	565	0.6%	2.9%
2	06	Madison	07	1	1	1	14,608	16.7%	76.3%
2	10	Giles	07	1	1	2	2,093	2.4%	10.9%
2	18	Cleveland	07	2	4	5	896	1.0%	4.7%
2	20	Pulaski	02	1	1	1	48	0.1%	0.2%
2	20	Pulaski	05	2	2	3	168	0.2%	0.9%
2	20	Pulaski	06	1	2	3	570	0.7%	3.0%
2	20	Pulaski	07	2	2	2	113	0.1%	0.6%
3	03	Bay	04	1	3	5	1,571	1.8%	4.0%
3	03	Bay	05	1	1	1	785	0.9%	2.0%
3	03	Bay	07	1	1	1	1,087	1.2%	2.7%

Table 3-10. Aggregate sentinel case-level weights by PSU and agency type (continued)

OBE region	Site ID (fielding order)	County	Agency type*	Reporting agencies	Reporting sentinels	Forms returned (RR)	Aggregate weight (W)	W percentage	W percentage within OBE
3	08	St. Clair	07	1	1	1	327	0.4%	0.8%
3	15	DuPage	07	2	2	5	25,388	29.1%	64.2%
3	16	Presque Isle	07	1	1	2	8,222	9.4%	20.8%
3	19	Platte	03	1	1	1	1,204	1.4%	3.0%
3	19	Platte	07	1	1	3	972	1.1%	2.5%
4	01	Maricopa	03	1	1	2	1,019	1.2%	9.5%
4	01	Maricopa	05	3	4	5	765	0.9%	7.1%
4	01	Maricopa	07	2	2	6	1,518	1.7%	14.1%
4	02	Rusk	03	1	1	1	218	0.2%	2.0%
4	02	Rusk	07	1	2	2	489	0.6%	4.6%
4	07	San Diego	05	1	2	2	53	0.1%	0.5%
4	07	San Diego	07	1	1	1	59	0.1%	0.5%
4	11	Grayson	03	1	1	1	1,241	1.4%	11.5%
4	11	Grayson	07	3	4	9	2,719	3.1%	25.3%
4	13	Multnomah	03	1	5	27	2,329	2.7%	21.7%
4	13	Multnomah	04	1	1	3	179	0.2%	1.7%
4	13	Multnomah	07	1	1	1	153	0.2%	1.4%
Total				53	74	140	87,356	100.0%	

* Agency Type Codes: 02=County Sheriffs 05=Hospitals
03=Municipal Police 06=Banks
04=Public Health Depts. 07=Elder Care Providers

Weight Trimming

It was observed that six forms (one from Madison County and five from Dupage County) contributed to nearly 46 percent of the aggregate weights; that is, the national estimate of unreported (not reported to APS) elder abuse incidents was heavily influenced by these six forms.

When just a few cases contribute such a large proportion of the total weight, national estimates became very unstable; that is, they have high sampling error. Thus, it is desirable to consider reducing the size of these extreme weights before carrying out analyses. The very slight bias that this procedure introduces into the estimates is of little consequence compared to the gains in sampling precision that result from weight trimming.

The next step was to determine suitable trimming factors to apply. The typical number of forms returned by sentinels from elder care providers (ECP) in metropolitan counties was determined, since sentinels from such agencies reported all six cases with extreme weights. The median number of reports per sentinel was found to be 0.41667. It was decided to adjust the weights of these six cases so that, after weighting, the average number of cases per sentinel did not exceed 0.41667. Under this criterion, four of the five cases from DuPage County received a trimming factor of 0.41667. The fifth case from DuPage and the one case from Madison County received trimming factors of 1.0 (i.e., no trimming was applied).

Even after this trimming process, a few cases contributed a large proportion of the total weight. One case from Madison County contributes 20 percent of the total, 28 times as large as the mean weight. Some records dominate the estimates in the study because suitable size measures for the ECP agencies included on the sampling frames were not available. Any further attempt to trim the weights would likely have led to a significant underrepresentation of reports from sentinels in relatively large ECP agencies. We judged that further trimming might introduce significant biases into the results.

Table 3-11 presents the aggregate weights of the reporting forms after weight trimming.

Table 3-11. Aggregate weights attached to sentinel forms after weight trimming

OBE region	Site ID (fielding order)	County	Agency type	Reporting agencies	Reporting sentinels	Forms returned (RR)	Aggregate weight (W)	W percentage	W percentage within OBE
1	05	Bristol	03	1	1	9	6,628	9.1%	37.0%
1	05	Bristol	05	1	1	2	165	0.2%	0.9%
1	05	Bristol	07	2	3	3	1,856	2.5%	10.4%
1	09	Mercer	05	1	1	1	232	0.3%	1.3%
1	09	Mercer	07	2	3	3	1,418	1.9%	7.9%
1	12	Fayette	07	2	3	3	867	1.2%	4.8%
1	14	York	03	1	1	1	1,275	1.7%	7.1%
1	14	York	07	2	5	9	5,168	7.1%	28.9%
1	17	Delaware	05	3	5	9	299	0.4%	1.7%
2	04	Pinellas	05	1	1	1	88	0.1%	0.5%
2	04	Pinellas	07	1	1	3	565	0.8%	2.9%
2	06	Madison	07	1	1	1	14,608	20.0%	76.3%
2	10	Giles	07	1	1	2	2,093	2.9%	10.9%
2	18	Cleveland	07	2	4	5	896	1.2%	4.7%
2	20	Pulaski	02	1	1	1	48	0.1%	0.2%
2	20	Pulaski	05	2	2	3	168	0.2%	0.9%
2	20	Pulaski	06	1	2	3	570	0.8%	3.0%
2	20	Pulaski	07	2	2	2	113	0.2%	0.6%
3	03	Bay	04	1	3	5	1,571	2.2%	6.2%
3	03	Bay	05	1	1	1	785	1.1%	3.1%
3	03	Bay	07	1	1	1	1,087	1.5%	4.3%
3	08	St. Clair	07	1	1	1	327	0.4%	1.3%
3	15	Dupage	07	2	2	5	11,026	15.1%	43.8%
3	16	Presque Isle	07	1	1	2	8,222	11.3%	32.6%
3	19	Platte	03	1	1	1	1,204	1.6%	4.8%
3	19	Platte	07	1	1	3	972	1.3%	3.9%
4	01	Maricopa	03	1	1	2	1,019	1.4%	9.5%
4	01	Maricopa	05	3	4	5	765	1.0%	7.1%
4	01	Maricopa	07	2	2	6	1,518	2.1%	14.1%
4	02	Rusk	03	1	1	1	218	0.3%	2.0%
4	02	Rusk	07	1	2	2	489	0.7%	4.6%
4	07	San Diego	05	1	2	2	53	0.1%	0.5%
4	07	San Diego	07	1	1	1	59	0.1%	0.5%
4	11	Grayson	03	1	1	1	1,241	1.7%	11.5%
4	11	Grayson	07	3	4	9	2,719	3.7%	25.3%
4	13	Multnomah	03	1	5	27	2,329	3.2%	21.7%
4	13	Multnomah	04	1	1	3	179	0.2%	1.7%
4	13	Multnomah	07	1	1	1	153	0.2%	1.4%
Total				53	74	140	72,994	100.0%	

3.10 Measuring Sampling Variability

Because the statistics presented in this report are estimates of national and subgroup characteristics and population sizes, based on samples of reports and sentinels, there is a degree of uncertainty in them. Had by chance a different sample been drawn, somewhat different results would have been achieved. This uncertainty in the results is referred to as sampling variability, or sampling variance. The degree of sampling variability present as a result of using a sample can be assessed from the sample data itself. For a particular estimate from the study, the associated measure of sampling variability is known as the standard error.

Because the study used a complex sampling design, conventional formulae for estimating sampling variability (that assume a simple random sampling procedure) are inappropriate. The standard errors presented in this report have been calculated using a technique known as jackknife replicated variance estimation. For a full presentation of the methods and properties of the jackknife procedure, see Wolter (1985) or Lehtonen and Pahkinen (1996).

When data are collected as part of a complex sample survey, there is often no easy way to produce approximately unbiased and design-consistent estimates of variance. The variance of survey statistics, including means and proportions, using standard statistical packages such as SAS or SPSS, are inappropriate and usually too small. A class of techniques called **replication methods** provides a general method of estimating variances for the types of complex sample designs and weighting procedures usually encountered in practice. The replication approach selects subsamples repeatedly from the whole sample, calculates the statistic of interest for each of these subsamples, and then uses the variability among these subsample or replicate statistics to estimate the variance of the full sample statistics. There are different ways of creating subsamples from the full sample. The subsamples are called **replicates** and the statistics calculated from these replicates are called **replicate estimates**.

Replication is not the only way to compute the variance of statistics from complex samples; however, replication is able to handle complex sampling designs, complex estimates, and complex weighting schemes. Replication can be used when other methods are not easily applicable. This method also has advantages even when other methods, such as Taylor series approximation, can be applied.

One of the main advantages of the replication approach is its ease of use during analysis. The same estimation procedure is used for the full sample and for each replicate. The variance estimates are then readily computed by a simple procedure. Furthermore, the same procedure is applicable to statistics such as means, percentages, ratios, and correlations. These estimates can also be calculated for analytic groups or subpopulations. It is not necessary for the analyst to understand the sampling or estimation methods if the replicate weights are included with the data.

The replication procedure used to estimate sampling variance for NEAIS data was a stratified jackknife procedure. The four OBE regions used as primary stratifiers in the sample design were used to define four strata for variance estimation purposes. Thus, within each stratum there were five county PSUs. A detailed description of variance procedures is included with the description of weighting in Appendix L.

3.11 Interpreting Results in the Presence of Sampling Variability

A common technique used to present and interpret statistical data that are subject to sampling variability is through the use of confidence bands. A 95 percent confidence band for an estimate is obtained by adding twice the standard error to the estimate of interest, to give the upper bound, and subtracting twice the standard error from the estimate of interest, to obtain the lower bound. The statistical interpretation of a 95 percent confidence band is that, if such a band were constructed from all possible samples that might have been selected, 95 percent of such bands would contain the true answer.

If the confidence band for an estimate is wide, relative to the size of the estimate itself, then this indicates that there is considerable uncertainty as to what the true value actually is. If, however, the band is narrow, then there can be confidence that the estimate is close to the true answer. Thus, for example, consider an estimate that a certain population characteristic is at the 10 percent level. If the confidence band for this estimate ranges from 1 percent to 19 percent, we can have confidence that the true level is something below 20 percent, but cannot draw any other inference with confidence. If an estimate of 10 percent is accompanied by a confidence band that ranges from 9 percent to 11 percent, then we can be confident that the true figure is little different from 10 percent.

Because the NEAIS sampled a relatively small number of counties, agencies, and sentinels, for many of the rarer characteristics described in this report, the confidence bands are relatively wide, like in the first example given in the previous paragraph. When this has occurred, the estimates presented in the report are duly noted as having this characteristic.

The width of the confidence band does depend to some extent upon the size of the estimate itself, but for a complex sample design such as this, there are several other factors involved as well. Thus two estimates of different characteristics, that happen to be of similar size, can well have quite different confidence bandwidths, and this happens in many cases for the results included in this report. A key factor that determines the width of the confidence interval is the extent to which the characteristic of interest varies from county to county, and from agency to agency and sentinel to sentinel in the non-APS sector of the study. Estimates for those characteristics that tend to vary little across these domains will tend to have smaller standard errors, and thus narrower confidence bands, than those characteristics that are highly variable across counties, agencies, and sentinels.

4. FINDINGS—INCIDENCE OF ABUSE AND NEGLECT OF THE ELDERLY

Chapter Four presents the findings of the National Elder Abuse Incidence Study (NEAIS). First, the numbers of reports of abuse, neglect, and self-neglect of elders over 60 that are not reported are compared with those that are reported to official agencies. Two national incidence estimates of abuse and neglect of elders 60 years and older in domestic settings in 1996 are then calculated—one without self-neglect and one with self-neglect included. Then, characteristics of victims, reporters and perpetrators known to Adult Protective Services (APS) agencies are described. Abuse reported by sentinel agencies is presented next, with a focus on the characteristics of elderly victims and perpetrators.

4.1 Comparison of Reported and Unreported Abuse and Neglect and Calculation of National Estimates of the Incidence of Abuse and Neglect During 1996

Table 4-1 provides important data for calculating the national incidence of domestic abuse, neglect, and self-neglect of elderly people in the continental United States in 1996 (Hawaii, Alaska, and the U.S. territories were not included in the study). Numbers represent new unduplicated reports to agency sentinels (column one) and to APS agencies (column two) during 1996. Column three is the number of those reports to APS agencies that were substantiated after an investigation. Column four is the sum of columns one and three. Standard errors, representing 95 percent confidence intervals, are shown in parentheses for all figures. The standard errors of the estimates for APS agencies are relatively low because of the large number of actual reports received by those agencies (1,466), while the standard errors for the sentinel data are relatively large because of the smaller number of actual reports (140 after duplicates were removed).

If a report on the same individual was obtained from both an APS agency and from a sentinel, the case was included in the APS total, but not in the sentinel totals. Consequently, the numbers shown in the table in column one represent only those individuals reported uniquely by sentinel agencies. The term “incident” is also used and represents a report for only one individual for the calendar year, regardless of how many times other episodes of abuse were reported for that person. Typically, APS data include more than one report during a year for some victims. Since the numbers routinely reported by the states for the APS agencies within their boundaries do not represent individuals, total counts of abuse and

neglect based on such data will be higher than the unduplicated estimates presented in this report. Because there is no duplication in the NEAIS data, the terms “incident” and “elder” are used interchangeably.

Table 4-1. National estimates of the incidence of abuse, neglect, and self-neglect of persons 60 years and older, 1996 (unduplicated)

	Estimated Number of Elderly ¹			(4) Total: Columns (1) and (3)
	(1) Reported by Sentinels	(2) Reported to APS	(3) Reported to APS: Substantiated Only	
Total Abuse, Neglect and Self Neglect (Standard error)	435,901 (114,887)	236,479 (34,298)	115,110 (20,326) 48.7%	551,011 (118,008)
Total Abuse and Neglect (Standard error)	378,982 (117,758)	151,408 (18,999)	70,942 (11,881) 46.9%	449,924 (119,512)
Abuse (Standard error)	355,218 (116,875)	95,761 (15,579)	47,069 (9,814) 49.2%	402,287 (116,084)
Neglect ² (Standard error)	147,035 (52,290)	85,143 (12,966)	35,333 (6,706) 41.5%	182,368 (58,743)
Self-Neglect (Standard error)	81,635 (21,966)	113,573 (28,907)	57,345 (15,350) 50.5%	138,980 (24,232)

¹ Subtotals do not add to totals because more than one type of abuse was reported for some cases.

² Includes abandonment.

To arrive at the most accurate estimate of the national incidence of elder abuse and neglect in 1996, researchers added two numbers: reports submitted to APS agencies and substantiated by those agencies [column 3], and reports made by sentinels and presumed to be substantiated [column 1]. Sentinel reports are treated as substantiated incidents for three reasons. First, the sentinels were selected because they had frequent daily contact with the elderly and had the ability to identify abuse if they encountered it. Second, the sentinels were trained carefully to carry out this role in a rigorous manner, including having an “800” telephone contact to call with any questions about client eligibility or data

collection. The third reason is that only those incidents the sentinels believed met the definition of elder abuse and neglect were reported. In contrast, APS agencies receive reports from any and all sources, all of which must be investigated and many of which are not substantiated.

Two separate incidence estimates are calculated—one without self-neglect and one with self-neglect included:

Estimated Incidence of Elder Abuse and/or Neglect in 1996

The best national estimate is that a total of 449,924 elderly persons, aged 60 and over, experienced abuse and/or neglect in domestic settings in 1996. Of this total, 70,942 (16 percent) were reported to and substantiated by APS agencies, but the remaining 378,982 (84 percent) were not reported to APS. From these figures, one can conclude that over five times (5.3) as many new incidents of abuse and neglect were unreported than those that were reported to and substantiated by APS agencies in 1996. The standard error suggests that nationwide as many as 688,948 elders or as few as 210,900 elders could have been victims of abuse and/or neglect in domestic settings in 1996. This range indicates that between 1.7 and 9.0 times as many elders were abused and neglected and not reported to APS agencies as were reported to and substantiated by APS agencies.

Estimated Incidence of Elder Abuse, Neglect, and/or Self-Neglect in 1996

The best national estimate is that a total of 551,011 elderly persons, aged 60 and over, experienced abuse, neglect, and/or self-neglect in domestic settings in 1996. Of this total, 115,110 (21 percent) were reported to and substantiated by APS agencies, with the remaining 435,901 (79 percent) not being reported to APS agencies. One can conclude from these figures that almost four times (3.8) as many new incidents of elder abuse, neglect, and/or self-neglect were unreported than those that were reported to and substantiated by APS agencies in 1996. The standard error suggests that nationwide as many as 787,027 elders or as few as 314,995 elders could have been abused, neglected, and/or self-neglecting in domestic settings in 1996. This range indicates that between 1.4 and 6.2 times as many elders were abused, neglected, and/or self-neglecting and not reported to APS as were reported to and substantiated by APS agencies.

Table 4-1 also shows the incidence of abuse and neglect by category: abuse only, including physical, sexual, emotional, and financial; neglect by caretakers (including abandonment); and self-neglect. More than three times as many incidents of abuse were observed by sentinels as were reported to APS. Self-neglect, on the other hand, was more commonly reported to APS agencies, at a rate of 1.4 to 1. Nearly one-half of all the incidents reported to APS (48.7%) were substantiated overall. Cases of neglect were somewhat less likely to be substantiated than other forms of abuse or neglect (41.5%).

Please note: Throughout the following discussion of the NEAIS findings, there is frequent reference to “confidence bands,” as described on pages 3-37 and 38 of this report. This is an important and appropriate way of communicating information to the reader about the degree of certainty for specific data findings. While asterisks (*) are used in the tables included in this chapter to signify wide confidence bands, the actual numerical standard errors for all data elements for each table are included in Appendix M.

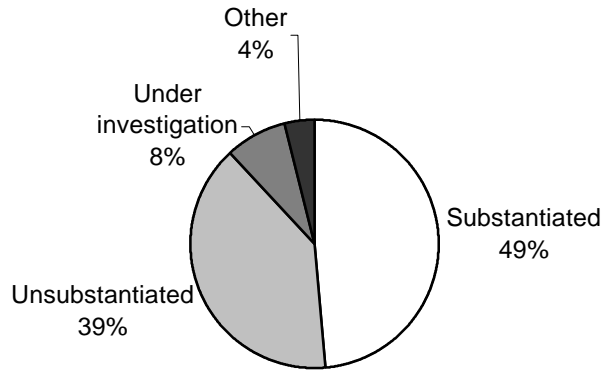
4.2 Abuse Reported by APS Agencies

Outcomes of Investigations

As noted above, the total (unduplicated) estimated number of domestic elder abuse, neglect, and/or self-neglect reports investigated by APS agencies during 1996, nationwide, was 236,479. Each APS agency utilized the investigation process and criteria already in place in that state for determining whether a report was substantiated. Of these total reports, 115,110 (or nearly one-half – 48.7 percent) were substantiated after investigations, while almost another two-fifths (39.3 percent) were unsubstantiated, as shown in Figure 4-1 on the next page. In addition, nearly one-tenth (8.2 percent) of the reports were still under investigation at the end of 1996, and a small portion of the reports (3.8 percent) had other outcomes (e.g., the alleged victim died, refused an investigation, could not be located, or had moved out of the area).

It should be noted that an APS agency’s determination of non-substantiation of a report of suspected abuse or neglect does not conclusively mean that abuse or neglect did *not* happen. Rather an unsubstantiated report can mean that the level of proof required by that state was not sufficiently met, despite indications that abuse or neglect *may have occurred* (e.g., there is a reason to suspect abuse or neglect).

Figure 4-1. Outcomes of APS investigations of domestic elder abuse, neglect, and self-neglect ¹

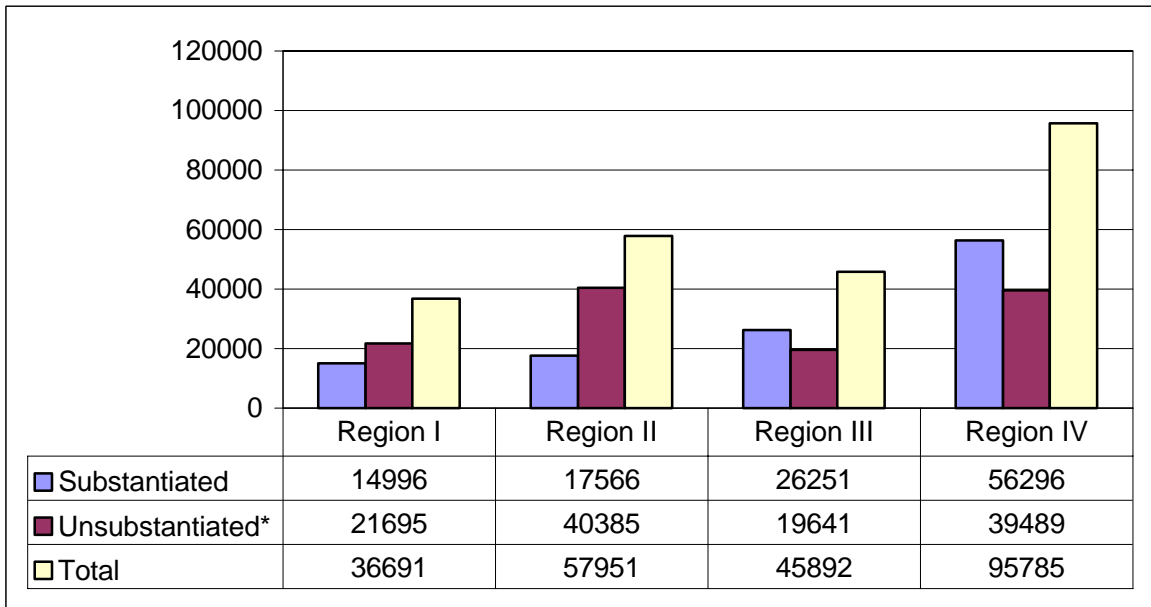


Outcomes	Estimated number of reports
Substantiated	115,110
Unsubstantiated	92,796
Still under investigation	19,440
Other	8,976
Total	236,322

¹ Unduplicated estimate of elderly victims reported to APS agencies, 1996.

Figure 4-2 shows substantiated and unsubstantiated reports by Office of Business Economics (OBE) Region. The largest number of incidents was reported in Region IV, the Western United States. A total of 95,875 incidents (weighted and annualized), or 40 percent of the national total, were supplied by APS agencies from this region. The West also had the highest rate of substantiation, 58.8 percent. Region III, the Central United States, had the next highest proportion of substantiated incidents (57.2 percent). Region II, in the Southeast, had the lowest substantiation rate of the four regions, 30.3 percent. Keeping in mind that these regions are equal in total population, the West clearly leads the other areas of the country on a per capita basis in total reports of elder abuse and neglect and rates of substantiation. This may be due to a heightened awareness of elder abuse in this part of the country and this possibility warrants further study.

Figure 4-2. Substantiated and unsubstantiated reports to APS/aging agencies by OBE region



*Includes cases under investigation and other cases with undetermined outcomes.

Substantiated Reports of Abuse by Others

As shown in Table 4-2, nearly one-half of substantiated reported incidents (48.7 percent) involved neglect, while slightly more than one-third (35.4 percent) were concerned with emotional/psychological abuse. Next, financial/material exploitation accounted for somewhat less than one-third (30.2 percent) of all substantiated reports. Approximately one-fourth (25.6%) of substantiated reports involved physical abuse. Findings on abandonment (3.6 percent), sexual abuse (0.3 percent), and other types of maltreatment (1.4 percent) had wide confidence bands.

Table 4-2. Types of elder maltreatment substantiated by APS agencies.

Maltreatment	Number of Reports	Percentages ¹
Neglect	34,525	(48.7%)
Emotional/psychological abuse	25,142	(35.4%)
Financial/material exploitation	21,427	(30.2%)
Physical abuse	18,144	(25.6%)
Abandonment	2,560*	(3.6%)
Sexual abuse	219*	(0.3%)
Other	994*	(1.4%)
Total incidents	70,942**	

¹ Estimated number of substantiated reports of domestic elder abuse with each type of maltreatment, 1996. Cases of self-neglect only are excluded.

* The confidence band for this number is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

** Total incidents do not equal totals across abuse categories because more than one substantiated type of abuse was often reported for an incident.

Reporters of Substantiated Abuse by Others

As presented in Table 4-3, family members of victims reported one-fifth (20.0 percent) of the 70,942 substantiated reports of domestic elder abuse and neglect in 1996. Hospitals (17.3 percent) and police/sheriff's departments (11.3 percent) followed. In addition, in-home service providers (9.6 percent), friends/neighbors (9.1 percent), victims (8.8 percent), and physicians, nurses, and clinics (8.4 percent) each accounted for slightly less than one-tenth of the substantiated domestic elder abuse reports where elders were abused by perpetrators. Further, banks (0.4 percent) and public health departments

(0.1 percent) were responsible for small percentages of the substantiated reports, but the numbers of their reports are negligible and may not be much greater than zero.

Table 4-3. Reporters of substantiated abuse by others

Reporter	Number of reports (percentage) ¹		Reporter	Number of reports (percentage) ¹	
Family members	14,169	(20.0%)	Physician, nurse, clinic	5,925	(8.4%)
Hospital	12,290	(17.3%)	Out-of-home service provider	3,716	(5.2%)
Police/sheriff	8,031	(11.3%)	Bank	305*	(0.4%)
In-home service Provider	6,816	(9.6%)	Public health department	35*	(0.1%)
Friend/neighbor	6,476	(9.1%)	Other	10,729	(15.1%)
Victim	6,216	(8.8%)			
			Total	70,942**	

¹ Estimated number of substantiated elder abuse reports, by type of reporter 1996. Cases of self-neglect only are excluded.

* The confidence band for this number is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

** Respondents recorded one or more reporters for each incident.

Reporters of Substantiated Reports of Self-Neglect

As shown in Table 4-4, hospitals (19.8 percent) and friends/neighbors (19.1 percent) were the most frequent reporters of the substantiated reports of self-neglect in 1996, followed by police/sheriff's department (11.7 percent), and family members (6.5 percent). Other reporters, who account for 26.5 percent, involved a long list including churches, apartment managers, fire departments, landlords, residential facilities, utility companies, and anonymous reporters. (Some incidents were reported by more than one reporter.)

Table 4-4. Reporters of substantiated reports of self-neglect¹

Reporter	Number of reports (percentage)		Reporter	Number of reports (percentage)	
Hospital	8,727	(19.8%)	Out-of-home service provider	3,431*	(7.8%)
Friend/neighbor	8,433	(19.1%)	Victim	624*	(1.4%)
Police/sheriff	5,152	(11.7%)	Bank	247*	(0.6%)
Family member	2,877	(6.5%)	Public health department	0*	(0.0%)
In-home service Provider	5,435*	(12.3%)	Other	11,685	(26.5%)
Physician, nurse, clinic	5,076*	(11.5%)			
			Total	44,168**	

¹ Estimated number of substantiated incidents of self-neglect by type of reporter.

* The confidence band for this number is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

** Total number of substantiated incidents of self-neglect includes one or more reports by type of reporter.

Three Most Frequent Reporters for Each Maltreatment Type

The three most frequent reporters for each type of substantiated maltreatment with perpetrators (i.e., excluding self-neglect) are shown in Table 4-5.

Table 4-5. Three most frequent reporters for each maltreatment type¹

Reporter	Neglect	Emotional/ Psychological	Financial/ material	Physical	Abandonment	Sexual abuse
Family member	24.3%		14.0%			
Hospital	16.1%	17.9%	14.2%	11.8%	56.2%*	
Friend/neighbor	14.1%*		15.0%		12.4%*	
Victim		17.8%				
In-home service		16.9%*		23.9%		100.0%
Police/sheriff				24.3%		
Physician, nurse, clinic					17.6%*	

¹ This table is based on estimated 70,942 substantiated reports of domestic elder abuse, where perpetrators maltreated elders in 1996. The substantiated reports of self-neglect are not included.

* The confidence band for this number is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Neglect. Family members (24.3 percent), hospitals (16.1 percent), and friends/neighbors (14.1 percent) together accounted for more than half of the reports of neglect substantiated in 1996.

Emotional/psychological abuse. Hospitals (17.9 percent), victims (17.8 percent), and in-home service providers (16.9 percent) were the three most frequent reporters of substantiated emotional/psychological abuse.

Financial/material exploitation. Friends/neighbors (15.0 percent), hospitals (14.2 percent), and family members (14.0 percent) were the three most frequent reporters of substantiated financial/material exploitation.

Physical abuse. Police/sheriff's departments (24.3 percent), in-home service providers (23.9 percent), and hospitals (11.8 percent) were the most frequent reporters of the substantiated reports of physical abuse.

Abandonment. Hospitals alone accounted for 56.2 percent of the substantiated reports of abandonment. In addition, physicians, nurses, and clinics (17.6 percent) and friends/neighbors (12.4 percent) constituted the second and third most frequent reporters of the substantiated reports of abandonment, respectively.

Sexual abuse. In-home service providers reported all of the substantiated reports of sexual abuse.

Outcomes of Investigations for Different Types of Maltreatment

As noted earlier, the overall substantiation rate of domestic elder abuse and neglect reports was 48.7 percent in 1996. Table 4-6 on the next page presents the outcomes of investigations for different types of maltreatment. As the table shows, slightly more than three-fifths (61.9 percent) of the reports of physical abuse were substantiated after investigations, and this type of maltreatment marked the highest substantiation rate. Abandonment recorded the second highest substantiated rate, with somewhat over one-half (56.0 percent) of the reports of abandonment substantiated. Emotional/psychological abuse followed closely with the third highest substantiation rate (54.1 percent). Next, financial/material exploitation (44.5 percent) and neglect (41 percent) shared similar substantiation rates. The "other" category includes persons with unclassified abuse, some of whom died.

Table 4-6. Outcomes of investigations for different types of maltreatment¹

Maltreatment type	Substantiated	Unsubstantiated	Still under Investigation	Other
Physical abuse	61.9%	33.6%	3.9%*	0.5%*
Abandonment	56.0%	36.8%	4.5%*	2.7%*
Emotional/psychological	54.1%	31.6%	12.9%	1.4%*
Financial/material	44.5%	35.8%	13.4%	6.3%*
Neglect	41.0%	44.6%	7.7%	6.1%
Sexual abuse	7.4%*	84.8%*	0.0%	7.8%*
Other	89.0%	11.0%	0.0%	0.0%

¹ Based on estimated 151,408 weighted reports of "abuse by others" category.

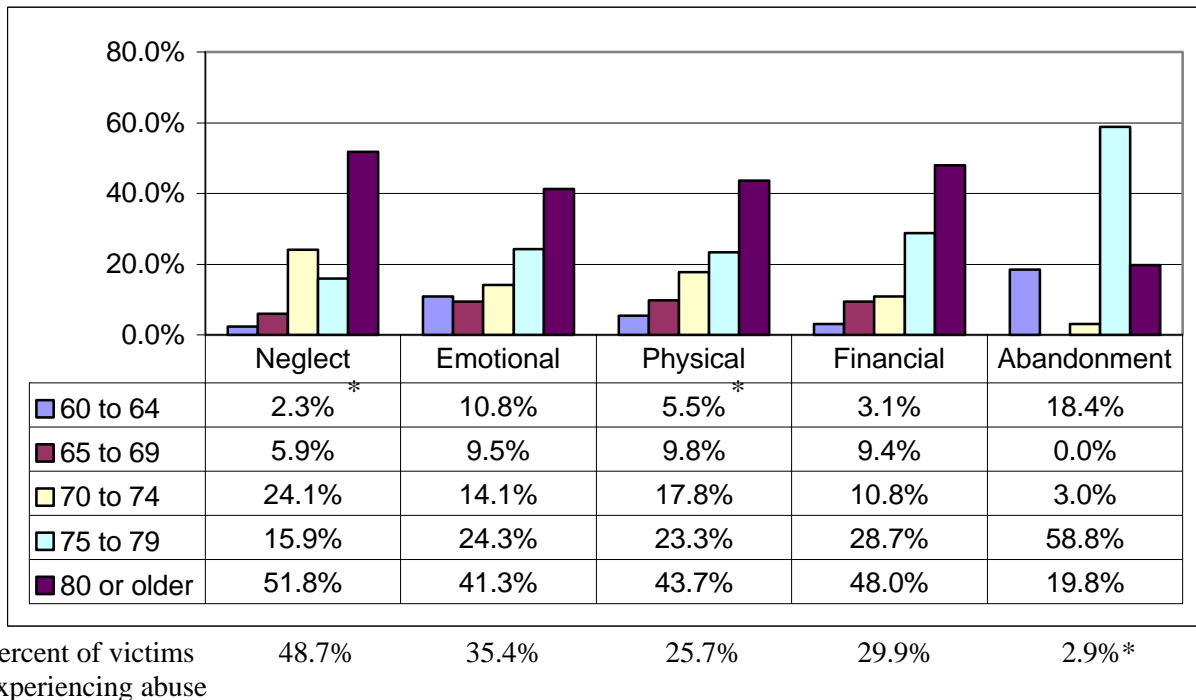
* The confidence band for this number is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

4.3 Characteristics of Elderly Victims, Reported to APS

Ages of Elder Abuse Victims for Selected Types of Maltreatment

An analysis of substantiated reports of domestic elder abuse (where perpetrators were present) reveals information about the ages of victims of different types of maltreatment as shown in Figure 4-3. Nationwide in 1996, approximately 23% of elders 60 and over were age 60-64. This proportion declines gradually in each 5-year interval until ages 85+, representing only 8.5 percent of elders.

Figure 4.3 Ages of elder abuse victims for selected types of maltreatment¹



¹Based on estimated 70,556 substantiated incidents of elder abuse. Some entries have missing values

* The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Neglect. More than one-half (51.8 percent) of the victims of neglect were 80 years of age and older in 1996, while almost one-fourth (24.1 percent) were between 70 and 74 years of age. Next, those who were between 75 and 79 years of age and those who were between 65 and 69 years of age accounted for 15.9 percent and 5.9 percent, respectively. Only 2.3 percent of neglect victims were between 60 and 64 years of age, but this has a wide confidence band.

Emotional/psychological abuse. Like neglect, the largest age group of victims of emotional/psychological abuse was elders who were 80 years of age and older (41.3 percent). In addition, almost one-fourth of the victims (24.3 percent) were between 75 and 79 years of age, and another one-seventh (14.1 percent) were between 70 and 74. Next, two other age groups each accounted for approximately one-tenth of the victims, as follows: the 60 to 64 group (10.8 percent) and the 65 to 69 group (9.5 percent).

Physical abuse. More than two-fifths (43.7 percent) of the victims of physical abuse were 80 years of age and older, while somewhat less than one-fourth (23.3 percent) were between 75 and 79 years of age. In addition, those who were between 70 and 74 and between 65 and 69 accounted for 17.8 percent and 9.8 percent, respectively. Only 5.5 percent of physical abuse victims were between 60 and 64 years old, but this has a wide confidence band.

Financial/material exploitation. Nearly one-half (48.0 percent) of the victims of financial/material exploitation were 80 years of age and older, while another 28.7 percent were between 75 and 79 years of age. Next, the elderly victims between 70 and 74 years of age and those between 65 and 69 accounted for 10.8 percent and 9.4 percent, respectively. Victims between 60 and 64 years old accounted for 3.1 percent of financial/material exploitation.

Abandonment. The victims of abandonment appear to be somewhat younger than the victims of other types of maltreatment, as the percentages in the table show; however, because most of these analytical findings have wide confidence bands it is not possible to confirm what the table suggests.

Incomes of Elder Abuse Victims

The APS data form asked for an estimate of the income of the maltreated elder and spouse (if any). For 71 percent of the elders, the APS worker was able to make this estimate, while in 29 percent of the reports, the worker was not able to do so. Due to the sensitivity of the issue and the focus on recording other important information, the APS worker did not attempt to gather additional information on income from other sources. An analysis of 53,667 substantiated reports of domestic elder abuse (excluding reports of self-neglect), for which income information was available, was performed. The data are shown in Table 4-7.

Table 4-7. Incomes of elder abuse victims for selected types of maltreatment¹

Income category	Neglect	Emotional/ psychological	Physical abuse	Financial/ material	Abandonment
Less than \$5,000	2.4%*	6.2%*	7.6%*	1.9%*	0.0%
\$5,000-\$9,999	66.8%	37.8%	49.5%	46.0%	96.1%
\$10,000-\$14,999	21.4%	31.0%	18.5%*	29.8%	3.9%*
15,000 and up	9.5%	25.0%	24.5%*	22.4%	0.0%
Total	100%	100%	100%	100%	100%
Percentage of victims experiencing abuse	51.8%	34.9%	23.9%	30.7%	3.5%*

¹ Based on an estimated 53,667 substantiated incidents of elder abuse. Income was missing for 28.8 percent of reports.

* The confidence band for this number is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Neglect. Two-thirds (66.8 percent) of the victims of neglect had annual incomes that were between \$5,000 and \$9,999, and another slightly more than one-fifth (21.4 percent) had annual incomes that fell between \$10,000 and \$14,999. In addition, the annual incomes of nearly one-tenth (9.5 percent) of neglect victims were \$15,000 or higher.

Emotional/psychological abuse. Somewhat less than two-fifths (37.8 percent) of the victims had incomes that were between \$5,000 and \$9,999, while nearly one-third (31.0 percent) were those whose incomes fell between \$10,000 and \$14,999. In addition, exactly one-fourth (25.0 percent) of

the victims of emotional/psychological abuse had incomes of \$15,000 or more. All of these findings were statistically significant.

Physical abuse. Like the victims of neglect and emotional/psychological abuse, the largest portion (49.5 percent) of physical abuse victims had incomes between \$5,000 and \$9,999. All other findings on victims' incomes in this maltreatment category had wide confidence bands.

Financial/material exploitation. Nearly one-half (46.0 percent) of the elder victims had incomes between \$5,000 and \$9,999, while almost one-third (29.8 percent) were those whose incomes fell between \$10,000 and \$14,999. In addition, slightly more than one-fifth (22.4 percent) of financial/material exploitation victims had incomes that were \$15,000 or more.

Abandonment. Almost all victims (96.1 percent) of abandonment had incomes that were between \$5,000 and \$9,999, and this finding was statistically significant ($p < .05$).

Sex of Elder Abuse Victims

Nationwide, females comprised 57.6 percent of the elderly population over 60 years old in 1996; males were 42.4 percent. Consequently, percentages of females over 58% in any category may indicate that they are over represented; lower proportions do not.¹

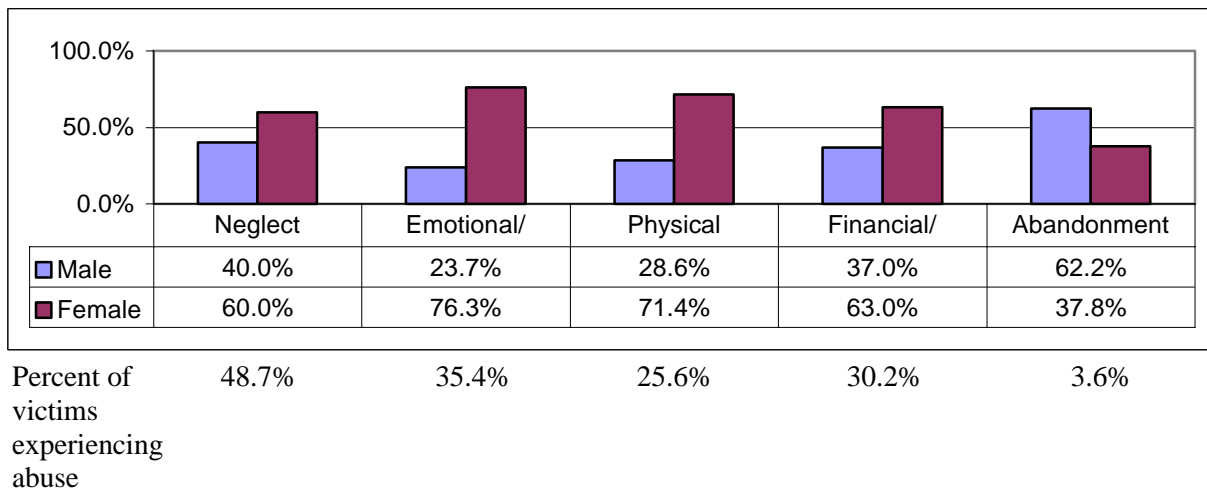
Neglect was the most frequent type of maltreatment, affecting 48.7 percent of all victims of elder abuse, as presented in Figure 4-4. More than one-half (60.0 percent) of the victims of neglect were female elders, while the remaining neglect victims (40.0 percent) were male elders. Next, emotional/psychological abuse was the second most frequent type, with 35.4 percent of the victims. Data show that about three-quarters (76.3 percent) of the victims of this type of maltreatment were female elders, while the remaining 23.7 percent were male elders. Emotional abuse is the category of abuse in which women are most heavily over-represented compared to their portion of the total elderly population (76.3 vs. 57.6 percent).

¹ Source: U.S. Bureau of the Census, Population Paper Listing 57.

Financial/material exploitation was the third most frequent type involving 30.2 percent of the victims. Female elders were victims of financial/material exploitation somewhat more than their proportion of the elder population (63.0 percent vs. 57.6 percent), while male elders were victims of exploitation 37.0 percent of the time. Physical abuse was the fourth most frequent type of elder maltreatment, accounting for 25.6 percent of all victims. Over two-thirds (71.4 percent) of the victims of physical abuse were female elders, while the remaining one-third (28.6 percent) were male elders. Physical abuse is the second category in which women are most over represented as victims compared to overall population statistics (71.4 vs. 57.6 percent).

Abandonment only accounted for 3.6 percent of all victims of abuse, but men were disproportionately represented compared with their proportion of the elderly population (62.2 vs. 42.4 percent).

Figure 4-4. Sex of elder abuse victims for selected types of maltreatment



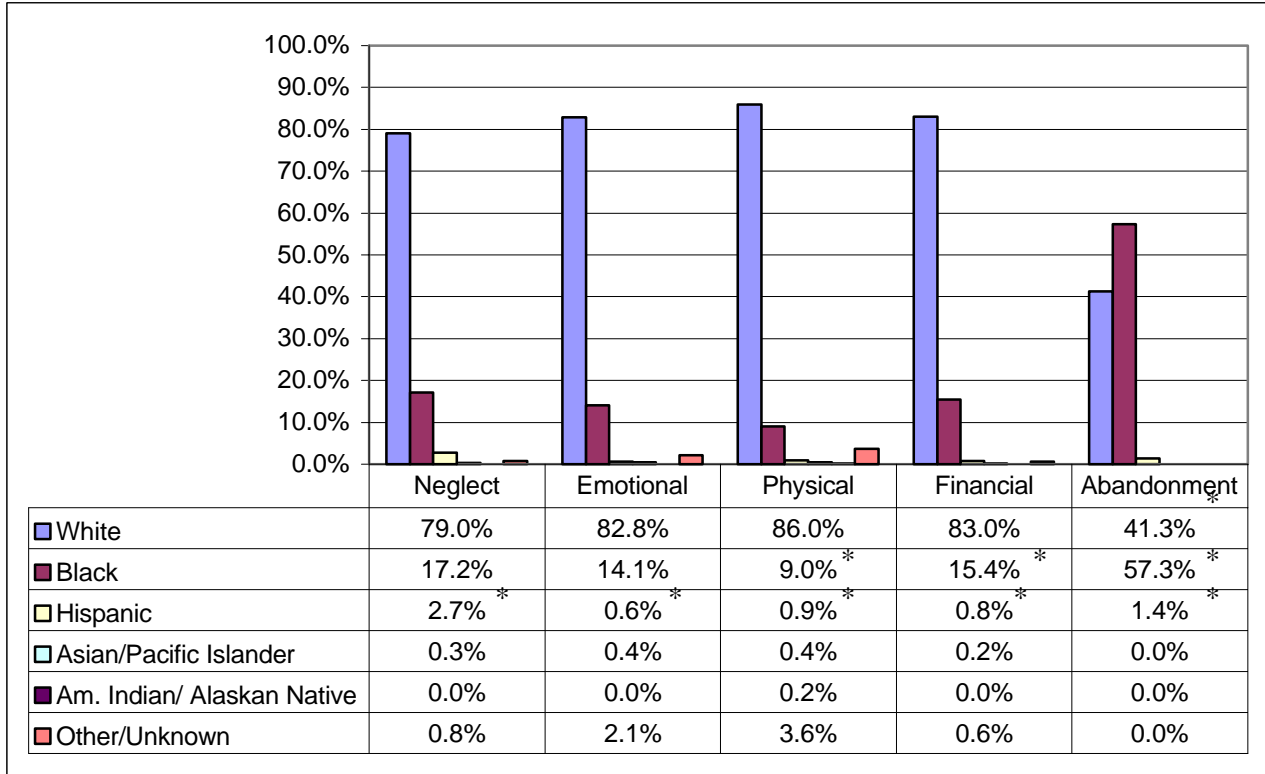
Race/Ethnicity of Elder Abuse Victims

Figure 4-5 on the next page presents the race/ethnicity of elder abuse victims for selected types of maltreatment. Nationwide in 1996 among those 60 and older, 84 percent were White, 8.3 percent were Black, 5.1 percent were Hispanic, 2.1 percent were Asian or Pacific Islander, and 0.4 percent were

American Indian or Alaskan Natives. White elders account for 79.0 percent of the victims of neglect, which was the most frequent type of maltreatment, affecting 48.7 percent of all abuse victims. Black elders accounted for 17.2 percent of neglect victims. Elders from other racial/ethnic groups, however, were underrepresented among the victims of neglect, as shown in Figure 4-5. Emotional/psychological abuse was the second most frequent type of maltreatment, with 35.5 percent of victims. Over four-fifths (82.8 percent) of the victims of this type of maltreatment were white elders, while 14.1 percent were black. Physical abuse was the third most frequent type of elder maltreatment, with 25.6 percent of abuse victims. White elders represented 86.0 percent of victims of physical abuse, while black elders comprised approximately 9.0 percent. Elders from other racial/ethnic categories were underrepresented.

Financial/material exploitation was the fourth most frequent type of maltreatment, with 30.2 percent of all elder abuse victims. The proportion of white victims of this type of elder maltreatment was 83.0 percent. Black elders comprised 15.4 percent of abuse victims of this type. Again, elders from other racial/ethnic groups were underrepresented among victims. Abandonment accounted for only 3.6 percent of all victims of elder abuse. Interestingly, the percentages of white victims (41.3 percent) and black victims (57.3 percent) for this type of abuse were very close, but with the black population significantly over-represented than its proportion of the elderly population (8.3 percent). In addition, abandonment was the only type of abuse for which the racial/ethnic breakdown data had wide confidence bands in every category.

Figure 4-5. Race/ethnicity of elder abuse victims for selected types of maltreatment



Percent of victims experiencing abuse

48.6%

35.5%

25.6%

30.2%

3.6%

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Physical and Mental Frailty

Elderly people with physical and mental frailties are more likely to be vulnerable to abusive behavior. Nationwide, approximately 15 percent of older people are depressed at any one time; 10 percent suffer from some form of dementia, and approximately 14 percent have difficulties with one or more activities of daily living.² While rates of depression remain fairly stable across the adult life span, physical and mental frailties increase, especially among those over the age of 85. It has long been suspected that these impairments are more common among elders who are victims of abuse and neglect, although no such estimates are available. The NEAIS obtained estimates of these frailty measures.

Self-Care Ability. The data suggest that a large proportion—about three out of four--of elder abuse and neglect victims suffer from physical frailty. Approximately one half (47.9 percent) of the substantiated incidents of abuse and neglect involved elderly persons who were not physically able to care for themselves. Another 28.7 percent of elders were only somewhat able to care for themselves, while only about one in five (22.9 percent) elders were judged able to care for themselves, as shown below.

Table 4-8. Ability to Care for Self Physically (APS)¹

Characteristics of Maltreated Elders	Number of Estimated Reports	Percentage
Not Able to Care for Self	34,009	47.9
Somewhat Able to Care for Self	20,380	28.7
Able to Care for Self	16,259	22.9
Don't Know, Cannot Determine	294*	0.4*

¹Based on an estimated 70,942 substantiated cases of abuse, excluding self-neglecting elders.

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Confusion. Six out of 10 elder abuse victims experienced some degree of confusion, which represents a high degree of mental impairment among this group of elders. Approximately one third (31.6 percent) of these elders were very confused or disoriented. Another more than one quarter (27.9 percent) was sometimes confused, while 38.7 percent were not confused, as shown in Table 4-9 on the next page.

² Disability in the United States: Prevalence and causes, 1992, U.S. Department of Education Cases and Rehabilitative Services, July 1996, Table 3, p.75; and U.S. Census Bureau Report on Disability Status of Persons 65 Years and Older in 1994-95, November 1997.

Table 4-9. Confusion (APS)¹

Characteristics of Maltreated Elders	Number of Estimated Reports	Percentage
Not Confused	27,425	38.7
Sometimes Confused	19,820	27.9
Very Confused, Disoriented	22,417	31.6
Don't Know, Cannot Determine	1,279*	1.8*

¹Based on an estimated 70,942 substantiated cases of abuse, excluding self-neglecting elders.

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Depression. The data on depression among victims of abuse and neglect are less conclusive, but do suggest a somewhat smaller problem than self-care ability and confusion. In 21.1 percent of the incidents of substantiated elder abuse and neglect, the APS agency was not able to determine whether depression was present or not. About 45 percent of the total group had some degree of depression (6.3 percent severe and 37.3 percent moderate) and about one third (35.4 percent) were not depressed.

Table 4-10 Depression (APS)¹

Characteristics of Maltreated Elders	Number of Estimated Reports	Percentage
Not Depressed	25,051	35.4
Moderate Depression	26,407	37.3
Severe Depression	4,424	6.3
Don't Know, Cannot Determine	14,915	21.1

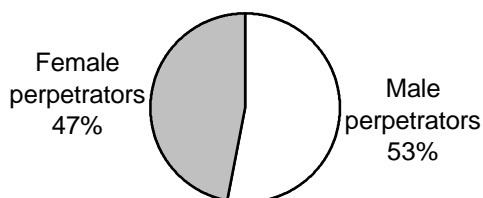
¹Based on an estimated 70,797 substantiated cases of abuse, excluding self-neglecting elders.

4.3.1 Characteristics of Perpetrators of Domestic Elder Abuse

Sex of Perpetrators of Elder Abuse

An analysis of the substantiated incidents of elder abuse reveals that 52.5 percent of the incidents involved male perpetrators, while the remaining 47.5 percent were female perpetrators, as shown below in Figure 4-6:

Figure 4-6. Sex of perpetrators of elder abuse



Total: 59,979; male perpetrators: 31,499; female perpetrators: 28,450.

Neglect was the most frequent type of maltreatment committed, as presented in Table 4-11. Slightly more than one-half (52.4 percent) of the perpetrators of neglect were female, while the remaining perpetrators (47.6 percent) were male. Emotional/psychological abuse was the second most frequent type of maltreatment. Data show that just over one-half of the perpetrators were male (60.1 percent) while the remainder were female (39.9 percent). Financial/material exploitation was the next most frequent type of abuse perpetrated. Perpetrators of this type of abuse were approximately 60 percent male, while the remaining were females. Almost two-thirds of the perpetrators of physical abuse were males (62.6 percent) while the remaining one-third (37.5 percent) were females. Abandonment was predominately perpetrated by males (83.4%) while the remainder was females. Interestingly, neglect is the only type of maltreatment that was committed with approximately equal frequency by females and males. For the remainder of the maltreatment types, males clearly were more likely to commit abuse and neglect.

Table 4-11. Sex of perpetrators of domestic elder abuse for selected types of maltreatment¹

Sex	Neglect	Emotional/ Psychological	Physical abuse	Financial/ material	Abandonment
Male	47.6%	60.1%	62.6%	59.0%	83.4%
Female	52.4%	39.9%	37.4%	41.0%	16.6%*
Total	100%	100%	100%	100%	100%
Percentage of victims experiencing abuse.	47.4%	35.8%	27.0%	30.8%	4.2%*

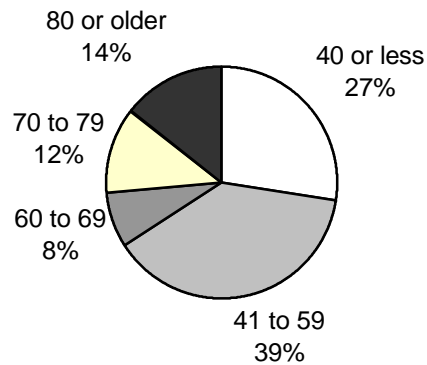
¹ Based on an estimated 59,672 substantiated incidents of elder abuse. Some entries have missing values.

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Ages of Perpetrators of Domestic Elder Abuse

The distribution of perpetrators of domestic abuse by age is shown in Figure 4-7 on the next page. The majority of elder abuse perpetrators were younger than 60 years of age. Approximately two-thirds (65.8 percent) of the perpetrators of elder abuse were persons who were 59 years old and younger, while approximately 25 percent of the perpetrators were persons who were 70 and older. In addition, slightly less than 10 percent of the perpetrators were between the ages of 60 and 69.

Figure 4-7. Ages of perpetrators of domestic elder abuse



The ages of the perpetrators of domestic elder abuse reveal an interesting relationship. The majority of perpetrators, as shown above, are in the youngest age groups; however, there is a relatively large proportion of perpetrators in the oldest age group. This relationship becomes more visible when the ages of perpetrators are examined for selected types of maltreatment. Table 4-12 presents this relationship.

Table 4-12. Age of perpetrators of domestic elder abuse for selected types of maltreatment¹

Age	Neglect	Emotional/ Psychological	Physical abuse	Financial/ material	Abandonment
40 and under	20.1%	34.3%	20.3%	45.1%	1.4%*
41 to 59	34.2%	42.4%	41.9%	39.5%	67.5%
60 to 69	9.2%*	10.4%*	8.1%*	3.4%*	0.0%*
70 to 79	18.9%*	4.8%*	12.4%*	1.6%*	1.5%*
80/older	17.7%	8.2%	17.4%*	10.4%*	29.6%*
Total	100%	100%	100%	100%	100%
Percentage of victims experiencing abuse	48.5%	34.8%	26.9%*	30.2%*	4.3%*

¹ Based on an estimated 57,933 substantiated incidents of elder abuse. Some entries have missing values.

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

For the majority of maltreatment types, the perpetrators are concentrated in two age groups-- those younger than age 40 and those older than age 80. However, when the specific age groups are examined by type of abuse, no two types follow the same pattern. Perpetrators of neglect were relatively evenly distributed across all age groups. Approximately one-fifth (20.1 percent) of the perpetrators of neglect were younger than age 40, while one-third (34.2 percent) of the perpetrators were between the ages of 41 and 59. It is worth noting that confidence bands are such that values may not be much greater than zero for all except these two age groups. A small proportion (9.2 percent) of the perpetrators of neglect was between the ages of 60 and 69. Further, the age groups of 70 to 79 and 80 and older each had nearly one-fifth of the perpetrators (70 to 79, with 18.9 percent; 80 and older with 17.7 percent).

Perpetrators of emotional/psychological abuse were concentrated among the younger age groups. Approximately one-third (34.3 percent) of the perpetrators of emotional/psychological abuse were younger than age 40 and 42.4 percent of the perpetrators were between the ages of 41 and 59. Again, it is only the younger age groups for which the data are significant. A small proportion (10.4 percent) of the perpetrators of emotional/psychological abuse was between the ages of 60 and 69. The proportions of perpetrators of emotional/psychological abuse in other age categories were very small. Of the perpetrators of physical abuse, 41.9 percent were between the ages of 41 and 59. An additional 20.3 percent were in the youngest age category—younger than 40. A small proportion of perpetrators of physical abuse was between the ages of 60 and 69, while 12.4 percent of the perpetrators were between the ages of 70 and 79. Last, 17.4 percent of the perpetrators of physical abuse were older than 80 years of age.

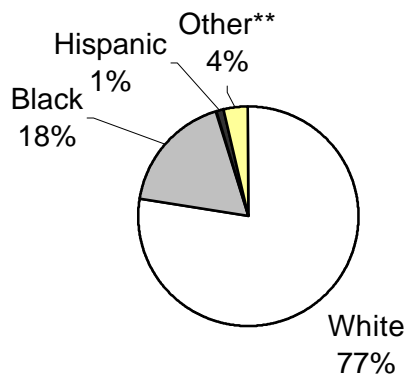
Perpetrators of financial/material exploitation were generally concentrated in the youngest age categories. Approximately 45 percent of the perpetrators were below the age of 40, while an additional 39.5 percent of the perpetrators were between the ages of 41 and 59. In addition, 3.5 percent of the perpetrators of financial/material exploitation were between the ages of 60 and 69, and 1.6 percent of the perpetrators were between the ages of 70 and 79. Last, 10.4 of the perpetrators were older than 80 years of age. For the older age groups of perpetrators, those older than 60, confidence bands are wide and values may not differ significantly from zero. Perpetrators of abandonment accounted for only 4.3

percent of all perpetrators of elder abuse. Approximately two-thirds (67.5 percent) of the abandonment perpetrators were between the ages of 41 and 59, while the remainder were older than 80 years of age. The age categories of less than 40 and 70 to 79 each comprised about 1.5 percent of the perpetrators of abandonment.

Race/Ethnicity of Perpetrators of Domestic Elder Abuse

Approximately three-fourths (77.4 percent) of elder abuse perpetrators in the substantiated cases in 1996 were white, and somewhat less than one-fifth (17.9 percent) were black, as shown below in Figure 4-8; however, only small percentages of persons from other racial/ethnic groups were represented among the perpetrators of elder maltreatment.

Figure 4-8. Race/ethnicity of perpetrators of domestic elder abuse*



*Based on an estimated 44,168 substantiated incidents of elder abuse.

**Includes American Indian/Alaskan Native, Asian/Pacific Islander, and other/unknown.

Table 4-13 on the next page presents the race/ethnicity of perpetrators of domestic elder abuse for selected types of maltreatment. White perpetrators account for 76.6 percent of the perpetrators of neglect, while 20.4 percent of the perpetrators of neglect were black. Percentages of perpetrators of neglect from other racial/ethnic groups were very small, as shown in the table.

Table 4-13. Race/ethnicity of perpetrators of domestic elder abuse for selected types of maltreatment¹

Race/ Ethnicity	Neglect	Emotional/ Psychological	Physical abuse	Financial/ material	Abandonment
White	76.6%	77.3%	83.0%	77.1%	34.4%*
Black	20.4%	17.8%*	11.3%*	18.7%*	59.0%*
Hispanic	0.8%*	0.8%*	1.4%*	0.8%*	1.4%*
Asian/Pacific Islander	0.3%*	0.5%*	0.3%*	0.2%*	0.0%*
Am. Indian/ Alaskan Native	0.1%*	0.0%*	0.1%*	1.5%*	0.0%*
Other/unknown	1.9%*	3.6%*	3.8%*	1.7%*	5.2%*
Percentage of total perpetrators	47.5%	35.4%	26.9%	31.0%	4.2%*

¹ Based on an estimated 59,517 substantiated incidents of elder abuse. Some entries have missing values.

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

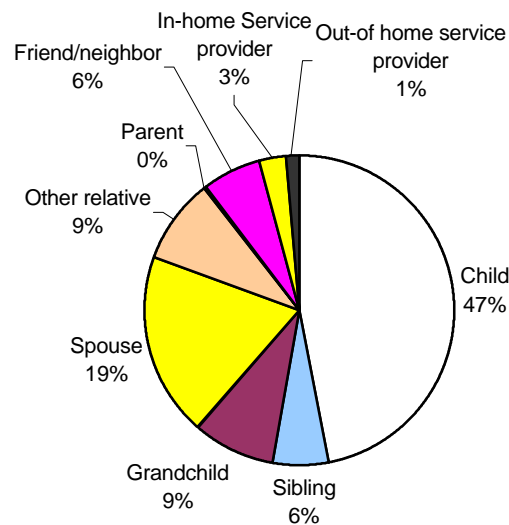
Emotional/psychological abuse was the second most frequent type of elder maltreatment, with 35.4 percent of perpetrators involved with it. Over three-quarters (77.3 percent) of the perpetrators of this type of maltreatment were white, while 17.8 percent were black. Once again, percentages of perpetrators of emotional/psychological abuse from other racial/ethnic groups were very small. Financial/material exploitation was the next most frequent type of maltreatment under this analysis. The proportion of white perpetrators in this type of elder maltreatment was 77.1 percent. About 19 percent of the perpetrators of emotional/psychological abuse were black, and the perpetrators from other racial/ethnic populations were greatly underrepresented among the perpetrators of financial/material exploitation.

Of the perpetrators of physical abuse, 83.0 percent were white, while black perpetrators accounted for 11.3 percent. The remaining racial/ethnic groups all comprised less than 5 percent of the perpetrators. Perpetrators of abandonment accounted for only 4.2 percent of all perpetrators of elder abuse. Just over one-half (59.0 percent) of the abandonment perpetrators were black, while one-third of the perpetrators (34.4 percent) were white. Hispanic elders accounted for 1.4 percent of the victims of abandonment. Because of the high standard errors, the data overall should be regarded as tentative.

Relationship of Perpetrators to Victims of Domestic Elder Abuse

The largest category of perpetrators (47.3 percent) of the substantiated incidents of elder abuse was the adult children of the victims. Spouses represented the second largest group of perpetrators comprising 19.3 percent. In addition, other relatives were the third most frequent category of perpetrators (8.8 percent), with grandchildren following closely (8.6 percent).

Figure 4-9. Relationship of perpetrators to victims of domestic abuse



When the relationship of perpetrator of domestic elder abuse to victim is examined by type of abuse, it is apparent that children are the most likely perpetrators of all types of maltreatment. Neglect is the most frequent type of maltreatment, and children accounted for 43.2 percent of the perpetrators. Spouses were the next category most likely to neglect victims (30.3 percent). Siblings and grandchildren each represented about 9 percent of the perpetrators of neglect. The remainder of the categories of perpetrators all represented less than 5 percent of the perpetrators of neglect.

Perpetrators of emotional/psychological abuse were again most likely to be the children of the victim (53.9 percent) followed by the victim's spouse (12.6 percent). Other relatives and friends/neighbors were almost equally as likely to be perpetrators of emotional/psychological abuse (11.7 and 10.3 percent respectively). Grandchildren comprised 8.9 percent of the perpetrators of

emotional/psychological abuse. The remainder of the perpetrators all represented less than 1 percent. Physical abuse was most likely to be committed by adult children (48.6 percent) of the victims of domestic elder abuse. The victim's spouse was the next most likely perpetrator of abuse (23.4 percent), and friends/neighbors represented one-tenth of the perpetrators of physical abuse (10.2 percent).

Perpetrators of financial/material exploitation were, again, most likely to be the adult children (60.4 percent). The victim's other relative, grandchild, and friends/neighbors were almost equally as likely to be perpetrators of financial/material exploitation (9.7 percent, 9.2 percent, and 8.7 percent respectively). The remainder of perpetrators all represented less than 5 percent of the perpetrators of neglect. Perpetrators of abandonment were related to victims of domestic elder abuse in four ways. The perpetrators were the adult children (79.5 percent), in-home service providers (7.4 percent), grandchildren (6.6 percent), and other relatives (6.4 percent). The confidence bands for estimates of most categories of perpetrators (other than children) were too wide to be confident that they are much greater than zero, however. Table 4-14 summarizes these findings.

Table 4-14. Relationship of perpetrators to victims of domestic elder abuse for selected types of maltreatment¹

Income Category	Neglect	Emotional/ Psychological	Physical abuse	Financial/ material	Abandonment
Child	43.2%	53.9%	48.6%	60.4%	79.5%*
Sibling	8.7%*	1.8%*	4.7%*	1.3%*	0.0%
Grandchild	8.8%*	8.9%*	5.6%*	9.2%*	6.6%*
Parent	0.5%*	0.0%*	0.8%*	0.0%*	0.0%*
Spouse	30.3%*	12.6%	23.4%	4.9%*	6.4%*
Other relative	3.7%*	11.7%*	5.4%*	9.7%*	0.0%*
Friend/neighbor	0.6%*	10.3%	10.2%	8.7%*	0.0%*
In-home service provider	4.2%*	0.9%*	0.2%*	1.7%*	7.4%*
Out-of-home service provider	0.0%*	0.0%*	1.2%*	4.1%*	0.0%*
Percentage of total perpetrators	47.8%	36.1%	26.9%	30.4%	4.2%*

¹ Based on an estimated 59,218 substantiated incidents of elder abuse. Some entries have missing values.

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

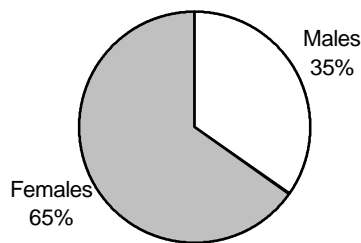
The nature of caregiving relationships among family members is an important and complex issue with regard to the perpetrators of elder abuse and neglect. The NEAIS was not able to explore this issue, however, due to the type and scope of data being gathered by the APS workers and sentinels. While a broad range of information was collected through interviews and observations, more in-depth interviews with both the abused or neglected elders and their family members and caregivers, which are necessary to appropriately explore caregiving relationships, were not included in the design of the NEAIS. This is certainly an area worthy of a future study that is specifically designed and conducted to gather such interview and case study data.

4.3.2 Characteristics of Self-Neglecting Elders

Sex of Self-Neglecting Elders

The data on the substantiated incidents of self-neglect reveal that approximately two-thirds of the self-neglecting elders were female, while one-third were male, as shown below in Figure 4-10. This is somewhat higher than the 58 percent representation of females in the total elderly population.

Figure 4-10. Sex of self-neglecting elders*



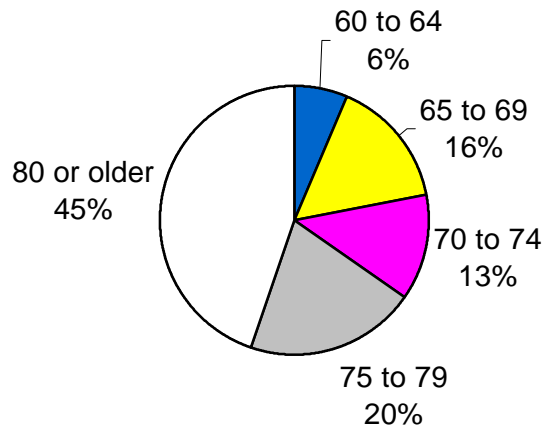
Males, 15,341; females, 28,827

*Based on an estimated 44,168 substantiated incidents of elder abuse.

Age of Self-Neglecting Elders

The largest proportions of self-neglecting elders are in the oldest age category (80 and older), as the data on the substantiated incidents of self-neglect indicate. As shown in Figure 4-11, slightly less than one-half (44.7 percent) of the self-neglecting elders were age 80 and older, compared with only six percent who were between 60 and 64 years old. This disparity is strengthened when the age breakdown of self-neglecting elders is compared with the age breakdown of the elderly population in general. For each of the first three age categories (i.e., 60-64, 65-69, and 70-74), self-neglecting elders are under-represented. For example, while 60 to 64 year olds comprise 23 percent of the elderly population, they are only 6 percent of self-neglecting elders. This pattern of under-representation changes with the 75 to 79 year olds, which make up 16 percent of the elderly population, but are 20 percent of self-neglecting elders. The starkest, yet predictable finding was that elders aged 80 or older, who comprise 19 percent of the elder population, make-up 45 percent of self-neglecting elders. The older an elderly person gets, the more likely it is that she/he will be self-neglecting.

Figure 4-11. Age of self-neglecting elders*

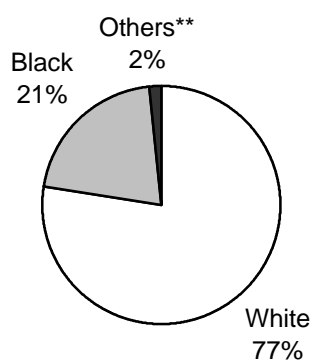


*Based on an estimated 44,168 substantiated incidents of elder abuse.

Race/Ethnicity of Self-Neglecting Elders

Figure 4-12 shows that self-neglecting elders fell predominately into three racial/ethnic groups. Approximately three-quarters (77.4 percent) of the self-neglecting elders were white. Black self-neglecting elders accounted for 20.9 percent of this population, while American Indians/Alaskan Natives and others accounted for 1.7 percent. It should be noted that, because of the large standard errors for this variable, the findings presented below should be regarded as tentative.

Figure 4-12. Race/ethnicity of self-neglecting elders*



*Based on the 44,168 estimated substantiated incidents of elder abuse for which the necessary information was available.

**Includes American Indian/Alaskan Native, 1.1%; other/unknown, 0.6%; Hispanic and Asian/Pacific Islander categories were not represented

Self Care Ability of Self-Neglecting Elders

An extremely high proportion (93.4 percent) of elders with substantiated self-neglect has some difficulty caring for themselves, with one-third overall not being able to care for themselves. Six out of ten were only somewhat able to care for themselves. Only five percent were judged as able to care for themselves. These data, shown in Table 4-15, strongly confirm the extremely high, almost totally overlapping, relationship between self-neglect and inability to care for one self.

Table 4-15. Self-Neglecting Elders -- Ability to Care for Self Physically (APS)¹

Characteristics of Maltreated Elders	Number of Estimated Reports	Percentage
Not Able to Care for Self	14,925	34.3
Somewhat Able to Care for Self	25,708	59.0
Able to Care for Self	2,149	4.9*
Don't Know, Cannot Determine	762*	1.8*

¹This table is based on an estimated 43,544 substantiated incidents of self-neglect. Some entries have missing values.

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Confusion of Self-Neglecting Elders

Three quarters of substantiated self-neglecting elders suffer from some degree of confusion. Three out of ten such elders are very confused or disoriented, while another 45.4 percent are sometimes confused. Approximately one quarter (23.6 percent) is not confused and appears to be aware of their actions.

Table 4-16. Self-Neglecting Elders -- Confusion (APS)¹

Characteristics of Maltreated Elders	Number of Estimated Reports	Percentage
Not Confused	9,815*	23.6
Sometimes Confused	18,890	45.4
Very Confused, Disoriented	12,455	29.9
Don't Know, Cannot Determine	498*	1.2*

¹This table is based on an estimated 41,659 substantiated incidents of self-neglect. Some entries have missing values.

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Depression of Self-Neglecting Elders

In 28.4 percent of the incidents of substantiated self-neglect, the APS agency was not able to determine whether depression was present or not. Over half (53.9 percent) of the self-neglecting elders were assessed to not be depressed, while 14.7 percent were judged as moderately depressed. Only a relatively small proportion (3.1 percent) was severely depressed.

Table 4-17. Self-Neglecting Elders – Depression (APS)¹

Characteristics of Maltreated Elders	Number of Estimated Reports	Percentage
Not Depressed	23,387	53.9
Moderate Depression	6,366	14.7
Severe Depression	1,333*	3.1*
Don't Know, Cannot Determine	12,335	28.4

¹This table is based on an estimated 43,421 substantiated incidents of self-neglect. Some entries have missing values.

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

4.4 Abuse and Neglect Reported by Sentinel Agencies

Characteristics of Elderly Victims of Non-Reported Abuse and Neglect

Overall, sentinels submitted 201 data forms describing incidents they observed during their daily work activities. Sentinels were carefully trained to complete forms only for events that met study definitions and conformed to specific signs and symptoms. Of these 201 incidents, two different sentinels reported four, and 57 were also reported to APS agencies. The duplicate incidents were assigned to APS agencies leaving 140 incidents reported only by sentinels. These 140 reports were weighted to provide national, annualized estimates of unreported abuse, neglect, and/or self-neglect which extrapolated to 435,901 new unduplicated incidents during 1996.

The following tables present data on types of abuse and neglect by age, minority group status, gender, and according to physical and mental frailty for incidents reported by the 1,158 sentinels in the study counties. Although the weighted numbers estimated from the forms that were collected are relatively large, they are based on a small number of actual reports. Consequently, only two or three descriptive categories are presented in the tables below. These small numbers also result in large standard errors for many values.

Age. Of the three age categories shown in Table 4-18, the oldest old (those over 80) were most likely to suffer from neglect. Sixty percent of the neglected elderly were 80 years or older compared to their being 19 percent of the total elderly population (i.e., four times their proportion of the total elderly population). Elders aged 80 and over also are over represented in self-neglect and financial exploitation. Several forms of abuse and neglect were more commonly experienced by the youngest elderly, aged 60 to

70. Physical abuse was particularly noteworthy, with 60-70 year olds comprising almost 70 percent despite being only approximately 45 percent of the elderly population. This age group is also slightly over represented in financial and emotional abuse. Given the large standard errors, however, these estimates should be considered tentative.

Table 4-18. Type of abuse by age: Percentages (Sentinel)

Type of abuse	Age			Total
	60-70	71-80	80+	
Physical	69.0*	10.1*	20.1*	100%
Emotional	47.2*	30.2	21.9	100%
Financial	49.3*	24.3*	25.3*	100%
Neglect	23.5*	25.6*	60.0	100%
Abandonment	.88*	39.1*	6.0*	100%
Self-neglect	35.7	28.9*	35.5	100%

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Race/Ethnicity. The data do not show that rates of unreported abuse and neglect are higher in nonminority communities than among minorities. Blacks, Hispanics, and other minorities were combined into one category in Table 4-19 (on the next page) because of the small numbers of reports received about these groups. Altogether, across the counties in the sample, the Census Bureau classified 15.5 percent of the population as minority in 1990. Given the relatively high rate of increase in minorities throughout the United States since 1990, there is no reason to expect this average percentage to have declined substantially in the study counties or, indeed, at all. If minorities were represented proportionately in sentinel reports of abuse and neglect, rates of abuse across all categories should be close to 15.5. For all five types of abuse and neglect with known perpetrators, the proportion of minority victims identified by sentinels ranged between 3.6 and 7.6 percent, whereas the proportion of nonminority victims was always greater than 90 percent. Figures for nonminorities have small confidence bands.

Table 4-19. Type of abuse, by minority status: Percentages (Sentinel)

Type of Abuse	Minority status	
	Minority	Nonminority
Physical	3.9*	96.1
Emotional	4.1*	95.9
Financial	7.6*	92.4
Neglect	3.6*	96.4
Abandonment	5.4*	94.6
Self-neglect	12.1*	88.1

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Gender. When the data are examined by category of abuse, a majority of victims of all types of abuse were women. Over 80 percent of the physical abuse recognized by sentinels, over 90 percent of the financial abuse, over 70 percent of the emotional/psychological abuse, and over 65 percent of neglect cases were found among women rather than men, as shown in Table 4-20. This is a high level of over-representation by women, who comprised only 58 percent of the total elderly population in 1996. Although rates of abandonment have wide confidence bands, they also show higher proportions of women than men do. Cases of self-neglect are more nearly divided exactly as men and women comprised the total elderly population.

Table 4-20. Type of abuse, by gender: Percentages (Sentinel)

Type of abuse	Gender		
	Female	Male	Total
Physical	83.2	16.9*	100%
Emotional	72.7	27.3	100%
Financial	91.8	8.2*	100%
Neglect	67.2	32.8	100%
Abandonment	65.4*	34.6*	100%
Self-neglect	57.0	43.0	100%

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Income. The sentinel data form asked for an estimate of the income of the maltreated elder and spouse (if any). Sentinels had sufficient information to make this estimate in only a small number of reports, and therefore reliable national estimates could not be made. Sentinels were reporting only initial information and observations, as compared with more in-depth information gathered during an APS worker's investigation of abuse or neglect, which allowed APS workers to estimate income 71 percent of the time. Sentinels also had less experience than APS reporters did in making income estimates based on partial information, for example about Social Security benefits and other complex pension arrangements. It is not surprising, therefore, that income estimates from sentinels were not feasible. The economic condition of victims of elder abuse and neglect is an important issue and is worthy of future research that will specifically gather reliable income and financial resource data.

Physical and Mental Frailty

Sentinel reporters were trained to identify the level of depression and confusion of elderly victims, where appropriate, as well as their ability to care for themselves. Many professionals in contact with elderly clients are accustomed to paying attention to limitations in abilities to perform activities of daily living, and to look for signs of confusion and depression. Along any particular dimension of frailty, people may not show evidence of symptoms at all times. It may be necessary to observe a person for a considerable period of time or to ask specific questions to determine the presence of symptoms. Sentinels were asked only to report on what they observed, and not to ask probing questions. They also were asked to indicate when they were not able to determine the presence of symptoms by answering "don't know."

Depression is probably the most difficult of the three characteristics to diagnose by observation only, since a relatively long term, underlying mood may not be manifested in outward behavior. It has been reported that the proportion of elders believed to be depressed ranges from 9.6 to 12.6 percent.³ Not surprisingly, approximately a third of the time the sentinels in our study were unable to judge whether the person they suspected to be abused seemed depressed.

³ Cynthia Thomas, et al., "Depressive Symptoms and Mortality in Elderly People," *Journal of Gerontology, Social Sciences* 1992, Vol. 47, Number 2, 580-87.

Self-Care Ability. Sentinels were given three choices of descriptors of an alleged victim’s ability to care for himself. Persons could be described as “able to care for self,” “somewhat able to care for self,” or “not able to care for self.” Sentinels were unable to make one of these choices 14 percent of the time. Half of all persons (51.9 percent) were described either as somewhat able or not able to take care of physical needs. Only a third of all persons appeared to be able to take care of themselves (33.8 percent). See table 4-21. This suggests a high rate of physical frailty among these victims.

Table 4-21. Ability to Care for Self Physically (Sentinel)

Characteristics of Maltreated Elder	Number of Estimated Report	Percentages
Not Able To Care For Self	81,981	18.8%*
Somewhat Able To Care For Self	144,432	33.1%
Able to Care For Self	147,446	33.8%*
Don’t Know, Cannot Determine	62,042	14.2%*

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Confusion. Brief mental impairment tests often are required to assess whether elderly people are able to perform mental activities at an appropriate level of competence. Older persons often can compensate for minor difficulties, or conceal problems in the early stages of impairment. Furthermore, mental impairments may not manifest themselves in all situations. Sentinels were asked to look for “confusion” rather than to diagnose an “impairment,” since such a diagnosis would require testing. Sentinels were unable to assess whether or not persons were confused for only 18 percent of their observations. Nearly half (45.5 percent) of the persons they reported to us were described as “sometimes” or “very” confused. Only a third of the time (36.6 percent) did sentinels indicate that no confusion appeared to be present. (See Table 4-22 on the next page.) This represents an extremely high rate of potential mental impairment among this group of older people.

Table 4-22. Confusion (Sentinel)

Characteristics of Maltreated Elder	Number of Estimated Reports	Percentages
Not Confused	159,498*	36.6%
Sometimes Confused	165,232	37.9%
Very Confused, Disoriented	32,777	7.5%
Don't Know, Cannot Determine	78,394	18.0%

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Depression. Sentinels were asked to observe whether the victims they reported to us appeared to be experiencing “severe depression,” “moderate depression,” or seemed “not depressed.” As noted above, they were unable to determine whether depression was present in a third of the cases they saw. Nearly half of the elders (46.9 percent), however, seemed to be depressed to some extent (46.9 percent). Only 20 percent showed no signs of depression in the presence of the sentinel. See Table 4-23.

Table 4-23. Depression (Sentinel)

Characteristics of Maltreated Elder	Number of Estimated Reports	Percentage
Not Depressed	87,315	20.0%
Moderate Depression	180,278	41.4%
Severe Depression	24,036*	5.5%*
Don't Know, Cannot Determine	144,273	33.1%

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Signs of Physical and Mental Frailty for Specific Forms of Abuse and Neglect

Tables 4-24 through 4-26 present information on self care ability, confusion and depression across all six categories of reported abuse and neglect. Because the number of cases in any one category is small, resulting in large standard errors, these estimates need to be considered altogether according to

the patterns they display, rather than by each single measure. The numbers are discussed here according to whether there is any apparent indication of frailty, or not, for each type of abuse or neglect.

Self-Care Ability. Cases of self neglect are often difficult to classify, since, strictly speaking, an individual believed to have the physical and mental resources to manage his own personal care was not defined by the study as self-neglectful. Persons experiencing neglect, abandonment, and self-neglect were most often reported as not able or only somewhat able to take care of themselves. Very few of those classified as self-neglecting were reported to be physically independent (11.2 percent). Two-thirds of those alleged to have been physically abused were thought to have the ability to care for themselves, suggesting that such abuse is not just perpetrated on the very weakest persons. Somewhat around half of those facing financial or emotional abuse were considered able to take physical care of themselves. Standard errors are large for most categories. See Table 4-24.

Table 4-24. Ability to Care for Self Physically by Type of Abuse (Sentinel)

Forms of Abuse	Not Able to Care For Self	Somewhat Able To Care For Self	Able to Care for Self	Don't Know, Cannot Determine
Physical	16.1%*	12.6%*	67.6%*	3.8%*
Emotional	17.8%*	26.3%	40.7%*	15.3%*
Financial	23.5%*	19.9%*	52.9%*	3.8%*
Neglect	47.7%*	26.8%*	1.4%*	24.2%*
Abandonment	64.9%*	35.1%*	0.0%	0.0%
Self-Neglect	26.2%*	60.2%	11.2%*	2.4%*

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Confusion. Confusion was most common among those who experienced neglect, abandonment, and self-neglect. Very few of those who were abandoned were free from confusion (only 1.3 percent). Only 7 percent of those reported to have been neglected, and 20 percent of persons who were victims of self-neglect evidenced no signs of confusion. Most of those who were reported to have been physically abused (66.8 percent) did not appear to be confused. Half of those subjected to financial

abuse, however, were thought to be confused at least some of the time. Standard errors for most table values are large. (See Table 4-25).

Table 4-25. Confusion by Type of Abuse (Sentinel)

Forms of Abuse	Not Confused	Sometimes Confused	Very Confused, Disoriented	Don't Know, Cannot Determine
Physical	66.8%*	10.0%*	14.6%*	8.7%*
Emotional	43.8%*	34.5%*	3.3%*	18.5%*
Financial	51.7%*	33.4%*	11.9%*	3.1%*
Neglect	7.1%*	46.8%	21.7%*	24.4%*
Abandonment	1.3%*	34.6%*	64.0%*	0.0%
Self-Neglect	19.5%	68.8%	2.1%*	9.6%*

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Depression. Rates of signs and symptoms of depression were high across all forms of abuse and neglect, but standard errors were large for all except two categories. Among those who were abandoned, only 1.3 percent was seen as moderately depressed; however, no determination could be made as to depression status for nearly two-thirds of them. Except for abandonment, between 35 and 70 percent of alleged victims of abuse were believed to show signs of moderate or severe depression. In only 11 – 35 percent of instances were sentinels able to say that they did not think the victim of abuse was depressed. (See Table 4-26).

Table 4-26. Depression by Type of Abuse (Sentinel)

Forms of Abuse	Not Depressed	Moderate Depression	Severe Depression	Don't Know, Cannot Determine
Physical	11.1%*	62.9%*	0.8%*	25.2%*
Emotional	22.7%	46.1%*	7.0%*	24.2%*
Financial	10.8%*	61.4%*	8.5%*	19.3%*
Neglect	21.0%*	20.3%*	12.4%*	46.3%
Abandonment	34.6%*	1.3%*	0.0%	64.0%
Self-Neglect	18.5%*	52.8%	4.6%*	24.0%

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Characteristics of Perpetrators of Abuse and Neglect Reported by Sentinels

Approximately 85 percent of incidents of abuse and neglect reported by sentinels had one or more alleged perpetrators (10.4 percent had more than one perpetrator). Sentinels were asked to supply information about the sex, age, and ethnicity of the person(s) alleged to have committed the abuse, as well as the relationship to the victim. Sentinels did not always have complete information about the suspected perpetrator. They were most likely to be able to identify the relationship of the person alleged as the abuser, which they did for all but .6 percent of the instances, and least likely to report age (10.8 percent), according to the weighted numbers. Tables 4-27 and 4-28 present information about the characteristics of these alleged perpetrators. Although standard errors are large so that many absolute values of percentages are not reliable, the rank order of characteristics is of interest.

As shown in Table 4-27, family members accounted for most of the suspected perpetrators, with spouses (30.3 percent), children (30.8 percent), and parents (24.0 percent) representing 85 percent. Although the percentage of alleged parental perpetrators is relatively large, at 24 percent, the confidence band is wide, indicating that this estimate is unreliable. Table 4-28 shows that only 29 percent of perpetrators with known ages (11 percent of ages are unknown) were at least 60 years old and over. (This percentage also has a wide confidence band.) Since parents are likely to be at least 15 years older than their children are, these numbers together suggest that very few parents are likely to have perpetrated abuse or neglect.

In small proportions of cases, siblings and grandchildren were involved. Friends, neighbors, and service providers in the home were believed to be responsible 10 percent of the time. Data reported for most individual categories of people alleged as abusers have large standard errors. Children, however, accounted for a significant proportion of alleged abusers, at 30.8 percent.

Table 4-27. Relationship of alleged perpetrators of abuse for sentinel data

Relationship	Percentage
Child	30.8
Spouse	30.3*
Parent	24.0*
Friend/Neighbor	5.7*
Grandchild	4.2*
Service Provider	4.2*
Sibling	.3*
Not determined	.6*

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

The most common age range for perpetrators was the middle years (ages 36 to 59), which accounted for 45.4 percent of perpetrators, with close to 30 percent being age 60 and over, and 15 percent under age 35, as shown in Table 4-28. Age was not known 10 percent of the time. Nearly twice as many were reported perpetrators were men as women (63 percent versus 35 percent). Approximately two-thirds of the perpetrators were identified as nonminorities.

Table 4-28. Characteristics of alleged perpetrators of abuse for sentinel data

Age	Percentage
35 and under	15.3*
36-59	45.4
60 and over	28.6*
Not determined	10.8*

Sex	Percentage
Male	63.1
Female	35.4
Not determined	1.5*

Ethnicity	Percentage
Minority	36.5*
Nonminority	63.5

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Sentinel reports represent nearly 80 percent of the total number of incidents, nationwide (and would represent an even higher proportion, if the duplicates had been “assigned” to sentinels rather than to APS). However, specific characteristics of victims and of perpetrators often have large confidence bands due to the relatively small number of events upon which the estimates were based. Nonetheless, these results complement and support the data supplied by APS.

5. CONCLUSIONS

Overview and “Iceberg” Theory

The results of the National Elder Abuse Incidence Study (NEAIS) confirm the validity of the “iceberg” theory of elder abuse that has been accepted in the aging research community for 20 years or more. According to this theory, official reporting sources (e.g., Adult Protective Services), receive reports about the most visible types of abuse and neglect, but a large number of other incidents are unidentified and unreported. Community sentinels, solicited by the study for information on their professional encounters with elderly clients and contacts, observed such abuse and neglect and learned of incidents that are less obvious and that would not be reported to an official agency.

The best national estimate is that a total of 449,924 elderly persons, aged 60 and over, experienced abuse and/or neglect in domestic settings in 1996. Of this total, 70,942 (16 percent) were reported to and substantiated by APS agencies, but the remaining 378,982 (84 percent) were not reported to APS. From these figures, one can conclude that over five times as many new incidents of abuse and neglect were unreported than those that were reported to and substantiated by APS agencies in 1996.¹

The best national estimate is that a total of 551,011 elderly persons, aged 60 and over, experienced abuse, neglect, and/or self-neglect in domestic settings in 1996. Of this total, 115,110 (21 percent) were reported to and substantiated by APS agencies, with the remaining 435,901 (79 percent) not being reported to APS agencies. One can conclude from these figures that almost four times as many new incidents of elder abuse, neglect, and/or self-neglect were unreported than those that were reported to and substantiated by APS agencies in 1996.²

¹ The standard error suggests that nationwide as many as 688,948 elders or as few as 210,900 elders could have been victims of abuse and/or neglect in domestic settings in 1996.

² The standard error suggests that nationwide as many as 787,027 elders or as few as 314,995 elders could have been abused, neglected, and/or self-neglecting in domestic settings in 1996.

These estimates of the incidence of abuse and neglect (i.e., new incidents) during 1996 from the NEAIS are lower than other previous estimates. However, it is difficult to compare results across these various studies directly because of significant differences in research objectives, designs and methodologies. Some studies have examined the prevalence of elder abuse (i.e., the total number of cases of abuse in a given population at a designated time), while others have explored the incidence (i.e., the number of new cases of abuse occurring over a specified period of time). Prevalence studies, by their very definition, produce larger estimates. The geographic coverage of studies has differed, with some studies extrapolating to larger areas on the basis of selected, but non-random smaller areas. Also, definitions of abuse and neglect and research time frames vary considerably across studies, making direct comparison impossible.

It is also important to acknowledge that there has been a very substantial increase in the number of official APS elder abuse and neglect reports over the past ten years. In 1986, a total of 117,000 reports (not unduplicated elderly) were received by APS agencies in the states for elders age 60 and over. Ten years later in 1996, a total of 293,000 reports (not unduplicated elderly) were received by these APS agencies throughout the country for this age group (Tatara and Kuzmeskus, 1997). This is an increase of 150 percent over this ten-year period. The elderly population, of course, also increased during this time period, and if the rate of reporting to APS agencies had simply remained the same the number of reports would have increased just because there was a larger elderly cohort that potentially might be abused or neglected. The elderly population 60 years old and over did increase by 10 percent between 1986 and 1996, from 38.9 to 43.9 million. (These numbers are for all elders, including those in institutional settings.)

Clearly, however, the increase in the total number of elder persons in the country explains very little of the phenomenal increase in official APS reporting. Had APS reports simply grown in the same proportion as the increase in the size of the elder population itself between 1986 and 1996 we could expect 128,700 reports, not 293,000. Even accounting for population growth, the number of APS reports increased by 128 percent in these ten years. In short, by 1996 a much larger proportion of new incidents of domestic elder abuse and neglect was reported to official APS agencies than was reported in 1986. Elder abuse and neglect were not as hidden and under-reported to APS as they were earlier.

This study is the first to attempt to estimate the number of elders abused or neglected during a particular year in the United States, whether officially reported to Adult

Protective Services agencies or unreported and perhaps largely unnoticed or ignored by the general population. APS agencies keep data on the total number of cases that they accept for investigation each year, but generally they count each report they receive as a separate incident. Often, the same event is reported more than once, but these duplicate cases are not removed from the counts. Consequently, APS totals overestimate the number of individuals who are reported to them as abused or neglected each year. The NEAIS estimates provide data on unduplicated numbers of abused, neglected, and self-neglecting elders recognized by these official sources.

At the same time, as described in the report, most incidents are never reported to APS, probably for many different reasons, some of which were mentioned to the field research staff during the course of the study. Some NEAIS sentinels claimed they have attempted to report cases to APS and, if appropriate actions are not taken, they do not provide additional reports. Some of this problem is inherent in the APS process itself because reporters generally are not apprised of the outcome of investigations of abuse. Other NEAIS sentinels noted that they often encounter situations where elderly persons do not want incidents reported because relatives might be implicated who are their only source of support or because they might risk abandonment or reprisals.

Overall, elder abuse is even more difficult to detect than child abuse, since the social isolation of some elderly persons may increase both the risk of maltreatment itself and the difficulty of identifying that maltreatment. Approximately a quarter of elders live alone, and many others interact primarily with family members and see very few outsiders. Children, in contrast, never live alone and, furthermore, are required by law to attend school from age 5 until 16. Consequently, by kindergarten, children come into contact with at least one institution outside the home almost daily during much of the year for most of their childhood. Although community sentinels are valuable sources of information about abuse and neglect of elders, neither they nor other reporting sources can conclusively account for victims of domestic abuse and neglect who do not leave their homes and who rarely come in contact with others. Consequently, the NEAIS undoubtedly undercounts abuse, neglect, and self-neglect among isolated elderly people in domestic settings.

Figure 5.1 depicts the impact of the NEAIS findings on the “iceberg” theory of elder abuse. The NEAIS data represent the measurement, or mapping, of a large and previously unknown segment of the elder abuse iceberg under the water line. A significant, submerged area

of previously unidentified and unreported elder abuse has been exposed and estimated. NEAIS has found that there were over five times as many new incidents of elder abuse and neglect previously unidentified and unreported as those that were reported to and substantiated by APS. NEAIS researchers also acknowledge that the sentinel methodology (or any methodology) cannot identify and report on all hidden domestic abuse and neglect, and that a submerged core of abuse and neglect remains unidentified, unreported, and inestimable at this time. The continued “mapping” of this final terrain represents a challenge for future research on elder abuse.

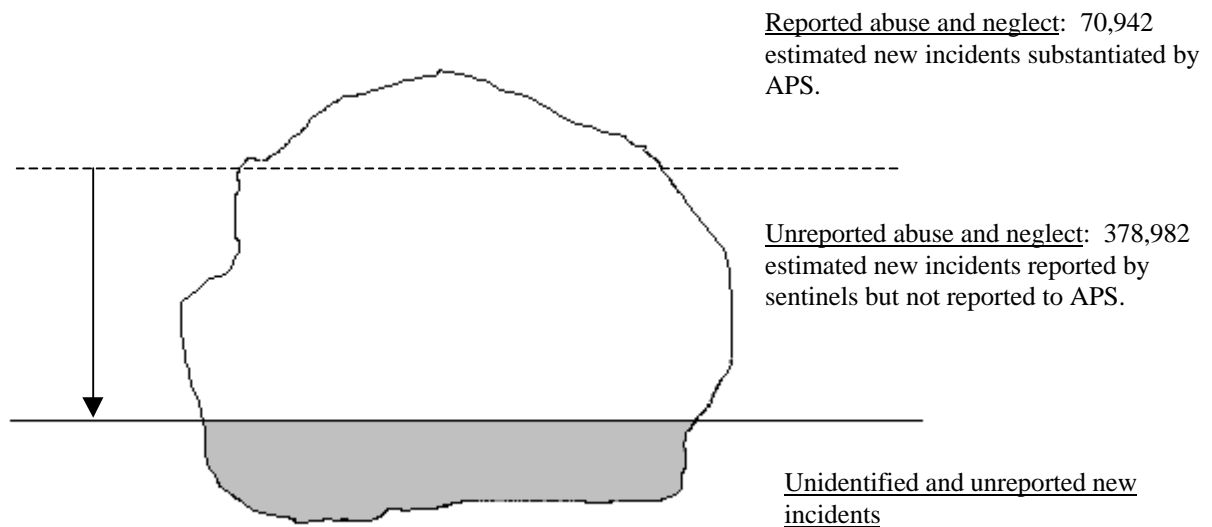


Figure 5-1. Iceberg theory showing NEAIS identified unreported abuse and neglect, excluding self-neglect

Summary of Findings

Victims of Abuse, Neglect, and Self-Neglect

Victims reported to APS resemble the characteristics of victims identified by sentinel agencies, for many categories of abuse and neglect. Women are disproportionately represented as victims, according to reports from both APS and sentinel sources. In APS reports, women represent from 60 percent to 76 percent of those subjected to all forms of abuse and neglect except abandonment, even though, overall, women represent only 58 percent of the elderly population (over 60 years of age). In reports received exclusively from sentinels, from 67 percent to 92 percent of those reported as abused were women, depending on the type of abuse.

The greatest disparity between men and women was in reported rates of emotional or psychological abuse, according to APS data. Three-fourths of those subjected to this form of abuse were women rather than men. According to sentinel reports, the greatest disparity between men and women was in the category of financial abuse, in which 92 percent of the victims were women.

A substantial proportion of the victims of neglect was the oldest old (age 80 and over), according to both APS and sentinel reports. APS reports showed that 52 percent of neglect victims were over age 80. Sentinels found 60 percent in this oldest age range. APS reports also suggest that this older category was disproportionately subjected to physical abuse, emotional abuse, and financial exploitation. Overall, our oldest elders are abused and neglected at two to three times their proportion of the elderly population.

Sentinel data show that of those subjected to any form of abuse, fewer than 10 percent were minorities (including Blacks, Hispanics, Asians, Pacific Islanders and others). On the other hand, higher proportions of victims of most forms of abuse and neglect reported to APS agencies were Black, ranging from 9 percent for physical abuse, the lowest, to 17 percent for neglect. Only small proportions of Hispanics and other minorities are represented in most categories of abuse reported to APS, generally less than 3 percent altogether. These low proportions for these other minorities are supported by the sentinel data. Further research is needed to ascertain whether low rates for Hispanics in particular are due to lower rates of reporting and detection of abuse and neglect, perhaps because of language barriers, or are due to lower rates of actual abuse in these communities.

Elderly self-neglect also is a serious problem, with about 139,000 new unduplicated reports in 1996. (Some of those described as self-neglecting were also subjected to other forms of abuse.) Approximately two thirds of self-neglecting elders reported to APS were women. In addition, 45 percent of them were over the age of 80. Most victims of self-neglect are unable to care for themselves and/or are confused; many are depressed. This is a difficult and troubling finding, which warrants attention as well as further research.

Perpetrators of Abuse and neglect

Across all categories of abuse and neglect, the distribution of perpetrators by gender is almost equal, according to reports received by APS. However, this overall equity is due to the preponderance of neglect as a category and the somewhat greater frequency of neglect perpetrated by women (52 percent versus 48 percent by men). For all other categories of abuse reported to APS, men outnumbered women as perpetrators by at least 3 to 2. Among reports by sentinels, which are not broken down by type of abuse because the numbers are too small, male perpetrators outnumbered female perpetrators by 1.8 to 1. This preponderance of abuse by men is significant both in reports obtained from APS and in sentinel data.

According to reports received by APS and data supplied by sentinels, most perpetrators were younger than their victims. According to information supplied by APS, 65 percent of total perpetrators were under age 60; close to the same percentage of perpetrators identified by sentinels were under age 60. Of course, even perpetrators who are older than 60 may still be younger than the persons they abuse are. Among reports to APS, the relative “youth” of perpetrators of financial abuse is particularly striking compared to other types of abuse, with 45 percent being 40 or younger and another 40 percent being 41–59 years old.

Relatives or spouses of the victims commit most domestic elder abuse according to reports supplied both by APS and sentinels. Approximately 90 percent of alleged abusers, according to both types of sources, were related to victims. APS data suggest that adult children are the largest category of abusers, across all forms of abuse, with proportions ranging from 43 percent for cases of neglect to nearly 80 percent for abandonment, although there were relatively few reported instances of abandonment. Adult children also account for the largest category of alleged abusers in sentinel reports (39 percent). Since family members are frequently the primary caregivers for elderly relatives in domestic settings, this finding that family members are the primary perpetrators of elderly abuse is not surprising.

Limitations of NEAIS Research

The NEAIS study design had some limitations that prevented it from making an estimate of all new incidents of elder abuse and neglect in 1996. First, the sentinel approach tends to cause a certain amount of “undercount” in the detection of domestic elder abuse because there are no community institutions in which all elders regularly assemble and from which

sentinels can be chosen and elders observed. In the case of child abuse research, on the other hand, schools serve as such a community institution from which primary sentinels are selected. The NEAIS was aware of this inherent limitation in the sentinel research design and tried to ameliorate this challenge by assigning as many sentinels as appropriate from the four large categories of professionals most regularly in contact with elderly people.

A second and related inherent limitation of the sentinel research design is that sentinels cannot observe and report abuse and neglect of elders that are isolated or do not have any (or very limited) contact with any community organizations. The sentinel method is most effective when well-trained sentinel reporters (which NEAIS's were) have opportunities to observe the same elders over a reasonable period of time. If there is minimal contact between the elderly person and sentinels, the opportunities for observing the signs and symptoms of abuse and neglect are lessened.

Finally, limitations in resources available to the NEAIS may have limited the total count of elders and the precision of the results. With more resources, it would have been possible to sample a larger number of study counties and to follow events in each of them for a longer time period. Estimates of child abuse and neglect for the third federally funded incidence study, for example, were obtained in 40 primary sampling units (i.e., counties) using more than 3,000 sentinels over a three-month period, rather than in NEAIS's 20 sampling units, with 1,200 sentinels in two months. One of the effects of the smaller number of counties, sentinels, and months of reporting was the smaller number of total sentinel reports and the resulting relatively large standard errors and wide confidence bands used in calculating the incidence estimates. With smaller standard errors, the NEAIS findings could be more definitive, or precise.

Implications of NEAIS Findings

The findings of the NEAIS raise a number of important issues for policy development, practice, and training in addressing the problems of elder abuse, neglect, and self-neglect. Study findings can provide a basis for designing new and enlightened public policies and practices, which are programmatically responsible, fiscally sound, and compassionate. This report also presents data to support practitioners, caregivers, social researchers and others in identifying new approaches to reduce and prevent abuse, neglect, exploitation, and self-neglect of

the elderly. Because states and localities historically have had responsibility for elder abuse reporting, investigation, intervention, and services, most of the following implications are for state and local governments:

- An important target for policy planners is the abuse and neglect among the oldest elders, which becomes ever more urgent since those aged 85 and over are the most rapidly growing elderly age group.
- Elderly persons who are unable to care for themselves, and/or are mentally confused and depressed are especially vulnerable to abuse and neglect as well as self-neglect. Perhaps our local community organizations and corporations can be mobilized to recognize such potential problems and provide support (e.g., by mobilizing neighborhood programs; by educating and sensitizing employees about elder abuse and neglect).
- Given the large number of incidents of abuse and neglect that are unidentified and unreported, service providers, caregivers, and all citizens who relate to elderly people need to be alerted to the problem of abuse and neglect, taught to recognize it, and encouraged to report suspected abuse.
- Maintain a comprehensive system of services to respond to reports of elder abuse and to provide follow-up services to elder abuse victims.
- Physicians and health care workers may be especially well placed to detect instances of abuse, neglect, and self-neglect given that even the most isolated elderly persons come in contact with the health care system at some point. The education of physicians, nurses, and other health care workers should be focused on how to recognize and report signs and symptoms of elder abuse, neglect, and self-neglect and where to refer victims for other human and support services.
- Increased standardization of state definitions and general reporting procedures for elder abuse and neglect would allow the more meaningful and expedited collection and analysis of data about elder abuse, including monitoring national trends in incidence over time.
- The Western region of the country reported the largest number of reports to APS of any of the regions. With approximately 25 percent of the U.S. population, the Western region was the source of 40 percent of the reports. Additionally, almost 60 percent of the Western region reports were substantiated, in contrast to an overall substantiation rate of 49 percent. More detailed study of these Western states may provide information on promising policies and practices for identifying and reporting abuse that can be replicated elsewhere in the country.

Future Research Questions and Issues

The findings of the NEAIS raise a number of questions and issues for researchers and service providers to think about in addressing the problems of elder abuse, neglect, and self-neglect. Clearly some of these complex issues will require additional research:

- The confluence of a high proportion of adult children, spouses, and particularly parents being perpetrators, along with the high proportion of perpetrators being 80 and over, suggests that the following may be important areas for further study:
 - the relationship between abusive family members and caregiving responsibilities;
 - the relationship between abusive spouses and parents and their caregiving responsibilities, particularly for neglect; and
 - the relationship between 80+ year old perpetrators and caregiving responsibilities.
- Are there characteristics of the perpetrators, aged 60 and over, that aging service providers could affect by reaching out and providing services so that abuse committed by perpetrators aged 60+ is reduced?
- Are there characteristics of the caregiving relationships among younger family members who financially exploit their older relatives that could be affected by service interventions for the perpetrators? What are those interventions? Are there services or education for persons aged 60+ that would help them from becoming victims of financial abuse, particularly by younger family members?
- What is the economic condition of victims of abuse and neglect compared with elders overall?
- In-home service providers reported all substantiated sexual abuse cases. Why is this so? What do they know/see that other reporters do not? How can we capitalize on their knowledge?
- Why are black elders more likely to be self-neglecters (18 percent of the substantiated APS reports compared to being 8 percent of the elder population)?
- Why do sentinels recognize abuse among women at a much higher rate than is reflected among APS reports? Do we need to train people better to recognize and detect abuse among men?
- Why do sentinels not see more self-neglect cases than are reported to APS agencies, as sentinels do for abuse and neglect?
- How can employees of banks be educated and encouraged to identify and report incidents of financial exploitation that may come to their attention while serving elderly customers? Although the NEAIS was not very successful in obtaining reports from bank sentinels, banks are in a good position to observe financial abuse and concerted attention should be given to how to better involve them in future research on elder abuse incidence. States and communities with particularly strong bank reporting of financial exploitation (e.g., Massachusetts and San Diego) may provide promising practices for such larger replication.

Conclusion

In conclusion, the NEAIS has documented the existence of a previously unidentified and unreported stratum of elder abuse and neglect, thus confirming and advancing our understanding of the “iceberg” theory of elder abuse. NEAIS estimates that for every abused and neglected elder reported to and substantiated by APS, there are over five additional abused and neglected elders that are not reported. NEAIS also acknowledges that it did not measure all unreported abuse and neglect. Our collective challenge — as policy makers, service providers, advocates, researchers, and society as a whole, is to utilize this information to better the lives of our elder citizens.

REFERENCES

- Block, M.R. and Sinnott, J.D. (Eds.) (1979). *The battered elder syndrome: An exploratory study*. College Park, Maryland: University of Maryland Center on Aging.
- Dolon, R. and Blakely, B. (1989). "Elder abuse and neglect: A study of adult protective service workers in the United States. *Journal of elder abuse and neglect, I*, 31-49.
- Douglas, R.L., Hickey, T., and Noel, C. (1980). *A study of maltreatment of the elderly and other vulnerable adults*. Ann Arbor, Michigan: University of Michigan Institute of Gerontology.
- Gioglio, G.R. and Blakemore, P. (1982). *Elder abuse in New Jersey: The knowledge and experience of abuse among older New Jerseyans*. Trenton, New Jersey: New Jersey Department of Human Resources.
- Lau, E. and Kosberg, J.I. (1979). Abuse of the elderly by informal care providers. *Aging* (September/October), 11-15.
- Lehtonen, R., and Pahkinen, E.J. (1996). *Practical Methods for Design and Analysis of Complex Survey*, Revised edition. Chichester: Wiley.
- O'Malley, H., Segars, H., Perez, R., Mitchell, V., and Knuepfel, G. (1979). *Elder abuse in Massachusetts: A survey of professionals and paraprofessionals*. Boston, Massachusetts: Legal Research and Service for the Elderly.
- Pillemer, K. and Finkelhor, D. (1988). The prevalence of elder abuse: a random sample survey. *The Gerontologist, 28*, 51-57.
- Sengstock, M.C. and Liang, J. (1982). *Identifying and characterizing elder abuse*. Detroit, Michigan: Wayne State University Institute of Gerontology.
- Steinmetz, S.K. (1981). Elder abuse. *Aging* (January-February), 6-10.
- Tatara, T. (1989). Toward development of estimates of the national incidence of elder abuse based on currently available data: An exploratory study. In Filison and Ingram (Eds.), *Elder abuse: Practice and policy*, 153-165. New York: Human Services Press.
- Tatara, T. (1990). *NARCEA's suggested state guidelines for gathering and reporting domestic elder abuse statistics for compiling national data*. Washington, DC: NARCEA.
- Tatara, T. (1990). *Summaries of national elder abuse data: An exploratory study of state statistics*. Washington, DC: NARCEA.
- Tatara, T. (1993). *Summaries of the statistical data on elder abuse in domestic settings for FY 90 and FY 91*. Washington, DC: NARCEA.
- Tatara, Toshio (1995). *An analysis of state laws addressing elder abuse, neglect, and exploitation*. Washington, DC: NCEA.

- Tatara, T. and Blumerman, L. (1996). *Summaries of the statistical data on elder abuse in domestic settings: An exploratory study of state statistics for FY 93 and FY 94*. Washington, DC: NCEA.
- Tatara, T. and Kuzmeskus, L. (1997). *Summaries of the statistical data on elder abuse in domestic settings: An exploratory study of staff statistics for FY 95 and 96*. Washington, DC: NCEA.
- Thomas, Cynthia et al., "Depressive Symptoms and Mortality in Elderly People," *Journal of Gerontology, Social Sciences* 1992, Vol 47, Number 2, 580-87
- U.S. House of Representatives, Subcommittee on Health and Long Term Care, Select Committee on Aging. (1981). *Elder abuse: An examination of a hidden problem* (Publication No. 97-277). Washington, DC: U.S. Government Printing Office.
- Wolter, K.M. (1985). *Introduction to Variance Estimation*. New York: Springer-Verlag