EXECUTIVE SUMMARY

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TITLE OF PROJECT: Coroner Investigations of Suspicious Elder Deaths

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Project Description

When an older American dies due to abuse or neglect, not only has a tragedy occurred, but a particularly heinous crime may have been committed. Because disease and death are more likely as adults grow older, those who investigate suspicious deaths have a particular challenge when it comes to deciding which elder deaths to scrutinize. Although crimes resulting in the death of an elder are going undetected, there has been little research on the decision-making process of those who are charged with investigating suspicious elder deaths, the coroner/medical examiner (CME) agencies. This project elucidates that process as it occurs in California CME offices by documenting current practices for deciding to investigate an elder's death, and consolidating data from CA jurisdictions on these investigations and their outcomes. Based on preliminary findings, an intervention to augment the decision-making process was pilot tested in three CME offices. As a result of these activities, the researchers arrived at some new insights and reconfirmed some earlier findings, and these provide some direction for future funding, policy-making and research.

The two primary models for the organization of the CME function involve an (1) elected official, or coroner, as an administrator whose forensic training and qualifications vary widely depending on local

requirements or mandates; or (2) an appointed medical examiner who is a board certified forensic pathologist, highly qualified in death investigation. In California, CME offices exist in each of the 58 counties. CME agencies receive reports of death, usually by phone, from reporting parties such as police officers or medical personnel. At the time of the call they can either release the body (No Jurisdiction Assumed, NJA or "waived" decision), or decide to assume jurisdiction and conduct an investigation. An investigation at the time of the death report may include a death scene visit, bringing in the body for viewing or autopsy, toxicology, or lesser strategies such as phone research and medical records review.

To date, most research that informs CME professionals about how to detect elder suspicious deaths has inquired into deaths of nursing home residents. A 2007 meta-analysis suggests some indicators of fatal neglect, including pressure ulcers, malnutrition and dehydration (Lindbloom et al. 2007, 610-616). In order to differentiate accidental deaths from fatal elder abuse there is a need for more information on accidental, blunt-force trauma induced deaths from nursing homes (Gruszecki et al. 2004, 209-12). A better understanding of these issues would inform those investigating deaths in the community as well.

At least since 1999, coroners and medical examiners have participated in Elder Death Review Teams to study and learn from suspicious elder deaths as well as facilitate communication among public agencies to identify barriers and fill systems gaps (County of Sacramento Elder Death Review Team 2008; County of San Diego Elder Death Review Team 2006, 15; Orange County CA Elder Death Review Team 2003-2008). These efforts are bringing concerns to light and generating local improvements. Some examples of observations and recommendations that focus on the CME agency's decision to investigate a death follow.

- Failure of CMEs to be aware of a suspicious death while the death scene is intact and the body available for autopsy
- The problem of physicians who sign death certificates despite suspicious circumstances
- Acknowledgement that the perpetrator of abuse may report the death and provide false information
- Ensure CME investigators are able to determine if a decedent was an APS client

This study reconfirmed a finding of Elder Death Review Teams: that CME offices are failing to assume jurisdiction over elder deaths that should be investigated. An expert panel reviewed actual cases from three agencies and determined that elderly decedent's remains were being released from investigation (NJA) even though there were signs consistent with abuse or caregiver neglect, as well as when abuse and neglect could not be ruled out based on information provided by reporting parties. The most glaring issue was that many elder deaths were ruled NJA when neither the reporting party nor the CME investigator had viewed the entire body – this was true of a majority of the elder deaths that made up the study sample. In addition, CME decision-makers were especially likely to overlook possible signs of caregiver neglect contributing to an elder death, and some investigators denied in interviews that this potential cause of death was in their purview. Some other concerns uncovered in interviews and from data analyses include (1) some agencies' policy not to investigate all accidental deaths of elders; (2) impediments to getting information from (potentially) the most efficient source of data on the elder deaths, reporting parties already at the death scene; and (3) the lack of data gathering standards among CME agencies complicating any effort to set a baseline or measure future progress toward improving processes for detecting suspicious elder deaths.

These findings appear to be grounded in several areas of concern that are worthy of further funding and study. **First,** the literature on prevalence and forensics of elder deaths from caregiver neglect (rather than self-neglect) and physical abuse is still sparse and therefore the task charged to CME agencies is at least difficult and often impossible. However, the science of elder death investigation is unlikely to advance if CME agencies are not investigating suspicious deaths. **Second**, reporting parties and CME investigators are not receiving training on what little is known about signs and factors associated with caregiver neglect and elder abuse. Some CME agencies were under the mistaken impression that they could rely on clinicians who report deaths to have expertise in elder abuse and neglect. In general, reporting parties are neither required to, nor trained for, providing the information that CME agencies need to make a robust decision. **Third**, CME decision-makers are biased against investigating elder deaths since death is more likely with advanced age. **Finally**,

CME agencies are under pressure because of limited funding and overwhelming workloads and this often leads decision-makers to make an assessment that natural death was likely, rather than confirm that a death was natural.

Scope and methodology

The ultimate goal of this project was to recommend improvements to the process by which coroner's and medical examiner's offices decide to assume jurisdiction over suspicious elder deaths. The project called for a solution simple enough to be broadly applicable in the diverse settings that county CME offices inhabit. In addition, the project attempted to address a related, but secondary issue: the lack of a data repository for both studying this issue and evaluating the effectiveness of attempted solutions. For this reason, a secondary goal was to build a body of information on suspicious elder deaths to aid in describing the current state of elder death investigation and provide a foundation for suggesting and testing improvements to the system. The study sites were the geographic, socioeconomic and culturally diverse counties of California, each with its own CME office.

The study objectives were addressed in two data collection phases. In Phase 1, the research team (1) compiled and analyzed data associated with elder deaths collected by California CME Offices; (2) compiled the set of processes employed by California CME Offices in making the decision to take jurisdiction when an elder death occurs, and (3) developed a 'best practice' brief questionnaire [the Elder Suspicious Death Field Screen (ESDFS)] to assist CME Offices in their decision making regarding taking jurisdiction and investigating an elder death. The research questions for phase 1, addressed (1) the proportion of elder deaths in California investigated by CME Investigators, and (2) autopsied by county CME agencies, as well as (3) the autopsy outcomes, including the (4) number resulting in homicide, abuse or neglect findings. Other questions related to variability across California counties both in data elements collected and also in findings for the first four

questions. In addition, by means of interviews, the project team documented strategies in current use for deciding to take jurisdiction in the case of an elder death, and designed the ESDFS to learn more about and improve upon that decision process. In Phase 2, the research team pilot tested and evaluated the effectiveness of the ESDFS in three California counties.

A Multidisciplinary Advisory Board for the project consisted of two coroners and two medical examiners, as well as a district attorney, a police detective and geriatrician with expertise in elder abuse and neglect. They met to review progress against study objectives and provide input to study procedures and questionnaires. Methods employed in Phase 1 included phone interviews with CA CME agencies, structured face-to-face interviews and on site observation at selected agencies, as well as collection and compilation of computer-based data on elder death investigations provided by county agencies.

The phase two pilot study was implemented in 3 sites, two organized under the coroner model and the other with a medical examiner structure. This involved training decision-makers who were CME investigators in using the ESDFS, collecting data on ESDFS forms and additional case data on outcomes, and interviewing investigators at the conclusion of the pilot. An expert team consisting of a geriatrician who directs an EDRT and a recently retired medical examiner reviewed a selected sample of pilot study cases to determine the appropriateness of CME agency decisions made based on all available data.

Detailed findings and analyses

In Phase 1, 46 of the 58 CME offices in California participated in phone interviews and 30 of these provided data on elder death investigations. There were five county CME office site visits, and three agreed to participate in the Phase 2 pilot study. A total of 28 CME Investigators from the three sites were trained to participate in Phase 2. The complete sample of ESDFS cases consisted of 115 from the 3 sites, and 55 of these were selected for expert panel review. After the pilot study, 18 Satisfaction Survey Interviews were conducted with CME Investigators.

Findings from the compiled agency data were limited by the diversity of computer and paper-based systems for storing data, as well as inconsistencies in data elements provided. Compiled data were normalized by creation of ratios of the numbers of investigations, autopsies, etc., to the number of elder deaths in each county over the same period, and ranges and standard deviations of these ratios showed wide variability across counties (See Figures in the Final Technical Report.). For the most part, the findings were not related to the size (based on population groupings) of the county or the organization of the CME agency. Some inconsistencies in the data were implied rather than confirmed, for example whether the recorded cause of death was always an autopsy result, and what level of investigation was required for an agency to count a reported death as a death investigation.

The overriding lesson from collected data was that there is not sufficient standardization among CME offices to confidently compare or rely on the available data to represent elder suspicious deaths in CA. Secondary findings included the fact that at least two counties do not investigate all accidental elder deaths, having physicians sign off on some of these instead, and no counties provided counts of deaths for which elder abuse or neglect were the cause or a contributing factor. Instead these events are subsumed in the homicide results. Of the 30 counties providing homicide data, 18 (60%) reported no elder homicides during a calendar year.

The CME function in CA for the 46 participating counties is organized with 41 (89%) having a coroner system, medical examiner system for 2 (4%) and hybrid for 3 (7%). Regarding the decision-making process, CME Investigators make the NJA decision in 30 (65%) counties. Screening processes varied and were difficult to categorize with over half of the agencies claiming they do not have a screening process. However, most mentioned CA Government Code 27491 that lists events that require a death investigation, with some events mentioned more than others (e.g. accident, unattended death, homicide, suicide, contagious disease) and those that relate directly to elder neglect not mentioned at all (i.e. . exposure, starvation). Only 4 counties (9%) contact APS when a case is not otherwise suspicious. Most employ administrative systems that use both

paper and computers [34 (74%)]. When asked about the "level of interest" of "the prosecutors in your county .. in prosecuting cases that you deem to be suspicious," 16 (35%) stated either "no comment" or "low to medium."

Site visit structured interviews were analyzed qualitatively and the emergent themes included the following.

1) **Reliance on the reporting party** as the "eyes and ears" of the NJA decision maker. Interviewees stated a range of perceptions of the reporting party from medical personnel they thought were well qualified to distinguish abuse and neglect, to uncooperative or unqualified personnel who complicated their decision process.
2) **The value of APS information** as a trigger for investigation. Yet this information was seldom available nor were all types of APS investigations (e.g. financial abuse) seen as relevant to the decision.
3) **Disagreement about** whether pressure sores and filthy living conditions constitute **evidence of neglect.** (Experts also disagree.)
4) **The elderly age of a decedent** as influencing investigators toward a decision to assume the death was natural.
5) **Reluctance to seek out caregiver neglect cases**, driven by the difficulty of differentiating them from self neglect cases which are prevalent, and a perception by some CME investigators that neglect is not within the purview of CME agencies.

Another key finding was that counts of "waived" (NJA) cases that are later investigated are available from some counties, and these "come back" cases represent the failure of screening processes to select a suspicious elder death for investigation. Data collected from three counties for a recent year (Dec. 2010- Nov. 2011), confirmed that 0% (the smallest county), 1.3% and 6.9% of the total waived cases were later

investigated. Of even greater concern are the waived cases that should have been investigated and were never discovered.

The ESDFS questions (Appendix to the Final Technical Report) were based on the expertise of the project team, modified by Phase 1 findings and augmented by the Advisory Board. Their focus is on assessing caregiver neglect situations, since interviews showed a lack of concentration on this area. Some of the key design points included determining (1) whether or not the decedent had a responsible caregiver, (2) which activities of daily living (ADLs) were impaired before death to draw attention to whether the caregiver was addressing the impairment, and (3) whether the reporting party had viewed the entire body, and if not, which parts were not viewed. Reporting parties are not required by law to uncover or turn the body (Harruff 2008), so they may not see marks on the body consistent with neglect (e.g., bedsores) or physical abuse (e.g., bruises). The ESDFS body maps (See Appendix) were an attempt to understand the impact of this issue.

For the six month pilot study, two of the three sites discontinued used of the ESDFS prematurely, and the total number of cases (N=115) made up a small sample. Both participating and non-participating investigators were interviewed to better understand the early terminations of the pilot study. All items on the form were used, yet some reporting parties (especially hospital-based reporters) were not present at the death scene and responded "unknown" to many items. Significant differences among the three sites were likely due to sample selection bias in that most ESDFS forms from the sites with poor participation were filled out by only a few, specialized CME investigators. For the body maps for the entire sample, the average proportion of body sites viewed [ratio of the number of sites viewed to the total number of sites (36)] was 74%±33% (or by site 86±26, 68±37 and 53±26, with the lower values coming from the two sites that discontinued the study early). Anterior sites were more likely to be viewed than posterior cites, indicating that bodies were not rolled over for viewing. Though some of the cases had been investigated by phone, **none resulted in dispatching a CME Investigator to the site nor were any autopsies ordered within the sample.**

A total of 55 case files (Exhibit 1) were reviewed by the expert panel. For 37 (67.3%) of these, the panel agreed that some investigation (rather than none) or a higher level of investigation than was undertaken was appropriate (e.g., external examination of the body in addition to viewing of medical records). Similarly, the panel members found that someone should have viewed the entire body to confirm the finding for an apparent natural death for a large proportion (30% –73.3%) of each site's cases. The two panel members were consistent in their findings regarding the appropriateness of the decision not to investigate further (kappa=.858). The two experts agreed that the entire body was not viewed, and it should have been viewed to rule out neglect or physical abuse in 29 (53%; kappa=.930). Although the ESDFS had no apparent impact on the CME Investigators' decision-making processes, from the point of view of the expert panel, the ESDFS identified a number of cases that they felt were insufficiently investigated or inappropriately 'waived' for investigation.

Exhibit 1: Site comparison for cases reviewed by the expert panel (N=55)[1]

Variables	Site 1 N=20	Site 2 N=20	Site 3 N=15	Signif. [2]
	Mean ± SD or n (%)			
Age	84.5 ± 7.9	85.5 ± 8.8	84.6 ± 8.6	.895
Gender (female)	13 (65.0)	13 (65.0)	10 (66.7)	.993
Reporting party (hospital nurse)	5 (25.0)	14 (70.0)	2 (13.3)	p<.001
Location of death (hospital)	4 (20.0)	16 (80.0)	2 (13.3)	p<.001
Responsible caregiver (yes)	18 (90.0)	12 (60.0)	10 (66.7)	.232
Relationship to decedent (paid)	14 (77.8)	7 (70.0)	4 (50.0)	.365
Overall body condition (excellent hygiene)	12(63.2)	9(47.4)	7(46.7)	.070
Overall scene condition (neat-well kept)	10 (50.0)	11 (55.0)	10 (71.4)	.141
Activity of Daily Living (impaired)				
bathing, dressing	16 (80.0)	6 (31.6)	6 (40.0)	.020
toileting	15 (75.0)	6 (31.6)	4 (26.7)	.019
transferring	17 (85.0)	6 (31.6)	7 (46.7)	.001
ambulation	11 (55.0)	3 (15.8)	3 (20.0)	.002
eating and hydration	13 (65.0)	6 (31.6)	2 (13.3)	.018
APS involvement	3 (15.8)	0 (0.0)	0 (0.0)	
Proportion of body sites viewed	76.3 ± 32.2	51.4 ± 36.4	53.0 ± 26.2	.035
Expert Panel Findings	n (%) / # panel was 'Unable to assess'			
Evidence of Neglect (yes)	6(25.0) / 12	0(0.0)/ 13	0(0.0) / 11	
Appropriateness of Investigation (Did not occur and should have occurred)	11 (55.0)	7 (35.0)/ 5	11(73.3)/ 1	.210
Appears to be a natural death, but they should have looked at the body	6 (30.0)	10 (50.0)	11 (73.3)	.060

1. For details regarding missing and unknown data, see Table 4 of the Final Technical Report.
2. Pearson's Chi Square for nominal variables (all but 'age' and 'proportion of body sites viewed'); for continuous variables, Kruskall-Wallis non-parametric test for independent samples.

In order to better comprehend resistance to use of the ESDFS, the research team conducted interviews. Several themes were similar to those already elicited from site interviews (i.e., reluctance to conduct elder investigations or seek out neglect cases, and inability to differentiate self-neglect cases or rely on reporting parties for good information) . Additional findings include the following.

1) CME Investigators felt their workloads were already overwhelming and therefore were inclined to release cases **if there is a likely natural cause** behind the death. Some complained of burnout.
2) Workflow was hampered by the ESDFS since it was poorly integrated with current automated workflows. Others stated that ESDFS questions were redundant with current screening items.
3) Investigators questioned the purpose/ownership over the study, and saw no benefit to their function or to society as a whole.

Discussion, conclusions and implications of findings

The findings from this study are robust based on the cooperation of 79% (46) of CA CME offices in phone interviews, 52% (30) sharing data on elder death investigations, and five of these offices hosting site visits. They are also limited by poor cooperation at two out of three sites involved in a pilot study. The findings from the interviews and data uncovered a number of areas that could be addressed to improve the process for assuming jurisdiction of elder suspicious deaths. The lack of cooperation in the pilot study is itself a key result. CME offices do not have the resources to deal with the issue of deaths involving elder mistreatment. That the two sites dropped the study after previously committing to it supports an overall finding that CME offices are not in a position to cope with investigation of elder suspicious deaths on the scale that is needed to ensure that elder neglect and abuse are detected. Discovering elder mistreatment post mortem is problematic in part because the resources are inadequate and the personnel inadequately trained for the purpose, but also, and perhaps primarily, because the science of differentiating abuse and neglect from natural causes of death is in its infancy. The prevalence of these occurrences is unknown and as long as they go undetected, it will remain so. That CME offices will need more resources and training to do the job "right" is clear, but unless the science of detection is advanced, those resources will never be sufficient and the shortcuts and inverted logic that go into decisions not to investigate deaths that could be suspicious is likely to continue.

At least one other country has developed standards that improve communication and data collection about death investigation (National Coroners Information System 2007). As long as the CME function remains decentralized in this country, it is not clear that there is an incentive to address this issue. However, the drawbacks in the current CME system have been arousing media attention (Thompson 2011), and perhaps concern about undetected elder homicides will also draw the attention of funding sources and enter the national consciousness as well.

The following recommendations were derived from the results of this study.

- Adequately fund CME agencies so that they can afford to take a proactive position toward investigating suspicious deaths of older adults.
- Promote research and other initiatives that move in the direction of standardizing definitions for language CME agencies use to describe death investigations.
- Require CME offices to investigate when an elder death is apparently due to an accident.
- Consider modifying regulations to make it clear that CME offices are responsible for investigating deaths when caregiver neglect is suspected.
- Introduce regulations that require CME offices to report the number of investigations that result in findings that elder abuse or caregiver neglect of an elder caused or contributed to an elder's death. Otherwise encourage CME agencies to develop more aggressive decision criteria for finding elder abuse or caregiver neglect.
- Train CME investigators to recognize signs, symptoms and factors associated with abuse and neglect of older adults. Examples of these are prior APS reports of financial abuse and presence of a caregiver (especially a paid caregiver) concurrent with other evidence at the scene or on the body.
- Promote communications between CME and APS offices, similar to the programs already implemented in many locales that have an Elder Death Review Team. CME agencies need to be able to find

out quickly if an older or disabled decedent was an APS client, and any history as an APS client should trigger further investigation.

- Train first responders, hospice and hospital staff who report deaths so that they understand the reasons for and importance of viewing the body and the other information they provide to CME staff. Focus the training on signs of elder abuse and neglect and viewing the body. Consider certification of the death reporting function as a long term goal.
- Eliminate impediments to having the reporting party uncover and turn over a body. When no one views the entire body for signs of abuse and neglect such as inflicted injuries and bedsores, cases of abuse and neglect are missed or detected too late to recover evidence at the scene.
- Fund research that partners with CME offices to discover prevalence of elder abuse and caregiver neglect contributing to or causing an elder's death and to advance the science for discriminating elder's natural deaths from homicides due to abuse and caregiver neglect.

The current study has produced significant new insights into understanding how CME offices deal with elder deaths. It also pilot tested a screening questionnaire for improving the way decisions are made to investigate elder deaths, specifically by targeting potential evidence of caregiver neglect. Without timely evidence - death scene investigations and autopsy reports - homicides that are difficult to prove cannot be brought to justice. Suspicious elder deaths due to abuse and neglect of vulnerable older Americans are being systematically ignored by most CME agencies. The study findings include recommendations that will alter CME and first responder policies and practices from the bottom up, including suggested regulatory changes. This study documents current practices that overlook potential suspicious elder deaths and suggests further basic detection research as well as training for reporting parties and CME Investigators so that they may better detect these crimes.

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DRAFT FINAL TECHNICAL REPORT

PRINCIPAL INVESTIGATOR: Laura Mosqueda, M.D.
INSTITUTION: The Regents of the University of California, UC, Irvine, School of Medicine, Program in Geriatrics
GRANT NUMBER: 2008-MU-MU-0021
TITLE OF PROJECT: Coroner Investigations of Suspicious Elder Deaths
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Table of Contents

Abstract

Purpose: When an older American dies due to abuse or neglect, not only has a tragedy occurred, but a particularly heinous crime may have been committed. Because disease and death are more likely as adults grow older, those who investigate suspicious deaths have a particular challenge when it comes to deciding which elder deaths to scrutinize. Although crimes resulting in the death of an elder are going undetected, there is little research on the decision-making process of those who are charged with investigating suspicious elder deaths, the coroner/medical examiner (CME) offices. This project was designed to elucidate that process as it occurs in California CME offices by documenting what is currently known. Based on those findings, an intervention to augment the decision-making process was pilot tested in three CME offices.

Design & Methods: The researchers collected and analyzed data associated with elder deaths as well as the processes currently employed by each county office to decide whether or not to assume jurisdiction in a case. The data consisted of case data shared by participating CME offices, publicly available data on elder deaths and both phone and in-person interviews with CME investigators from participating offices. Drawing on the knowledge gained, the researchers, assisted by a Multidisciplinary Advisory Board, developed a brief screening tool to be used by CME employees fielding reports of elder deaths. The Elder Suspicious Death Field Screen (ESDFS) was implemented in three counties for a six-month data collection period. An expert panel reviewed a subsample of cases to assess whether CME investigators made appropriate decisions to investigate or not.

Results: CME Investigators in 46 of 58 California coroners' offices were interviewed for information about organization and practices across counties. Thirty counties shared data on suspicious elder deaths to allow comparison of numbers of investigations, autopsies and autopsy findings across counties. The standardized data (as ratios with the total number of older adult deaths in the county for the same time period) are provided to show their range. Qualitative analyses of interviews revealed CME Investigators were unlikely to investigate suspicious deaths due to elder neglect. To address this issue, the ESDFS was designed to focus on questions that would expose evidence of neglect as a supplement the counties' usual decision-making procedures. Data collected on the EFDFS form included involvement of a caregiver, signs of neglect visible at the scene of death, vulnerability of the decedent due to functional impairments, APS involvement and signs of injury to the body. In addition, the Investigators participating in the pilot study were trained to indicate if parts of the body were not viewed by the reporting party. The expert panel reviewed a subsample of cases including ESDFS data and case file data abstracted from CME office records. The panel concluded that two thirds of the cases reviewed required additional investigation, often because the body should have been viewed to rule out neglect or covert physical abuse. Overall participation by CME Investigators in the pilot study was disappointing with only 115 total ESDFS forms received from the three participating counties. In follow-up interviews, CME Investigator's gave many reasons for failure to participate, for example, having an overwhelming workload, lack of knowledge or cooperation of reporting parties, reluctance to put additional effort into investigating elder deaths (rather than deaths of younger people) and that neglect is not on their list of reasons for taking jurisdiction over a death.

Implications: CME offices in California differ in their practices and approaches to complying with the statutes that govern their responsibilities. However, county CME offices' decision-making processes for assuming jurisdiction over a suspicious elder death fail to sufficiently consider the possibility of criminal elder neglect and abuse. It is a common practice for reporting parties to fail to view the body and CME

Investigators are reluctant to add these procedures to their already busy schedules. Potential cases of elder death due to physical abuse or neglect are not being investigated.

I. Introduction

Coroners and Medical Examiners (CMEs) have a challenge when it comes to doing an effective and efficient job of identifying suspicious elder deaths. Research indicating that there is insufficient investigation of nursing home deaths (Corey, Weakley-Jones, Nichols, & Theuer, 1992; Gruszecki, Edwards, Powers, & Davis, 2004; Weiler & Cooper, 1990) leaves them torn between calls to examine all nursing home deaths, a costly and inefficient use of resources, or examining almost none because they lack information that would point them towards the ones worthy of investigating. In addition, investigation and autopsy of elder deaths that are unrelated to abuse or neglect puts an unnecessary emotional burden on grieving families, delays burials and potentially interferes with religious practices, as well as encumbering and interfering with operation of long term care facilities. However these impacts must be weighed against missing actual cases of elder abuse and neglect and leaving the criminals who commit these acts at large to mistreat others. This project has further clarified the dilemmas faced by CME offices as they consider taking jurisdiction of elder suspicious deaths.

Recent multidisciplinary efforts to address elder abuse, such as vulnerable adult medical response teams, Elder Abuse Forensic Centers and Elder Death Review Teams (EDRT) have led to improved cooperative strategies for investigating and prosecuting crimes of elder abuse and neglect (County of Sacramento Elder Death Review Team, 2008; Navarro, Wilber, Yonashiro, & Homeier, 2010; Wiglesworth, Mosqueda, Burnight, Younglove, & Jeske, 2006). Although improved collection of timely evidence in cases of elder deaths has been a key objective of every EDRT, this issue is particularly difficult to address. One strategy calls for improved communications between Adult Protective Services (APS) and CMEs to draw attention to suspicious cases that resulted in the elder's death. In addition, medical examiners and pathologists are beginning to receive specialized training from clinicians and researchers who focus on the forensic markers of elder abuse, although this field of knowledge is very limited to date and largely dependent on medically-based theory rather than direct research. Similarly, police officers who are schooled to recognize differences between a natural death of an older adult and a suspicious death that has clear signs of abuse and neglect are better able to report from a death scene and encourage a death investigation by their county CME. Although these training efforts are making inroads, they are proving insufficient. The remaining roadblocks are significant.

In the United States, the public function of suspicious death investigation is the purview, for the most part, of county rather than state government. There are two primary models for the organization of this function, and a great deal of diversity in their application. An elected official, or coroner, is an administrator and may or may not be required have any special training or qualifications for the position. In some jurisdictions, the coroner's position is evolving to require forensic certification. On the other hand, an appointed medical examiner (ME) is a board certified forensic pathologist, and highly qualified in death investigation. Nearly every county in the US has either a Coroner or a Medical Examiner function or a mixture of these two *de facto* standards. Sometimes this department reports directly to county executives; often it is placed within a county prosecutor's, sheriff's or health department.(Harruff, 2008; Hickman, Hughes, Strom, & Ropero-Miller, 2007)

Clearly there should be no reason to investigate most deaths that occur in a county, and part of the CME function is to determine whether to assume jurisdiction over a death and proceed with an investigation. Many chronic illnesses that accompany aging can mimic and hide abuse or neglect: falls with resultant

hip fractures, pressure sores in people with end-stage dementia, bruising in people who take Coumadin to treat their atrial fibrillation. How does one know when to ask if the elderly woman with the fracture, pressure sore or bruise was pushed, neglected, or beaten? Further complicating the matter, the "sudden" death of an older, frail person may also be "expected." (Harruff, 2008) Better understanding of these important issues is needed.

The autonomy and diversity of the CME offices ensure diversity in processes, practices and data collection associated with death investigation. Not only is there no central repository of information on death investigations in the U.S., or even at the state level for the most part, but there are few standards for what data must be maintained. There may be no data other than what is on the face of the death certificate and other legal paper records, or there may be a sophisticated electronic data base. Furthermore, there is little or no published information regarding how to decide to take jurisdiction in cases of an elder death and there is no known repository of best practices for making this determination. Individual CMEs, often inspired by their participation in an EDRT are motivated to improve the decision process. These multidisciplinary collaborations are rare, and yet there is a growing belief that elder deaths by unnatural causes go undetected. Certainly prosecution of elder abuse and neglect crimes resulting in death is still rare, and yet, more and more such cases come to the attention of an EDRT months later, too late to investigate. (EDRT Report Subcommittee, 2006; Mosqueda, Burnight, & Heath, 2001; Orange County CA Elder Death Review Team, 2003-2008) Outrage over this kind of oversight led one state, Arkansas, to call for CME's investigations of all nursing home deaths. The cost and potential for overwhelming the death investigation system have deterred others states or counties from following suit. Clearly the best practice for assuming jurisdiction for an elder case would be both economical and thorough, but to be both it must have high sensitivity and specificity for identifying unnatural deaths at the time the death is discovered.

The ultimate goal of this project was recommend improvements to the process by which coroner's and medical examiner's offices decide to assume jurisdiction over suspicious elder deaths. The project called for a solution simple enough to be broadly applicable in diverse settings: county CME offices. In addition, the project attempted to address a related, but secondary issue: the lack of a data repository for both studying this issue and evaluating the effectiveness of attempted solutions. For this reason, **a secondary goal was to build a body of information on suspicious elder deaths to aid in describing the current state of elder death investigation and provide a foundation for suggesting and testing improvements to the system.** The study sites were the geographical, socioeconomic and culturally diverse counties of California, each with its own CME office.

The study objectives were addressed in two data collection phases.
Phase I

1. Compile and analyze data associated with elder deaths collected by California County Coroner's Offices.
2. Compile the set of processes employed by California County Coroner's Offices in making the decision to take jurisdiction when an elder death occurs, along with any information evaluating the success of these processes.
3. Develop a 'best practice' brief questionnaire [or Elder Suspicious Death Field Screen (ESDFS)] to assist County Coroner's Offices in their decision making regarding taking jurisdiction and investigating an elder death.

Phase II

4. Pilot test and evaluate the effectiveness of the ESDFS in a selected subset of California counties.

The following **research questions** were addressed.

Phase I

Based on a data from a recent year collected from California County Coroner's Offices:

1) What proportion of elder deaths in California is investigated by CME Investigators?
2) What proportion of elder deaths in California goes to autopsy by county coroner and medical examiner offices?
3) What are the outcomes of elder death autopsies performed under the auspices of county coroner's in California (cause, manner and circumstances of death, other medical conditions)?
4) How many autopsies resulted in a finding of elder death by homicide, abuse or neglect?
5) How do the data elements on elder deaths that are collected and maintained by California County Coroners vary from one county to the next?
6) After adapting the data based on elder population by county, how much variability is there from county to county for 1-4?

Based on interviews with California Coroners' Offices:

1. What strategies are used in deciding which elder deaths to investigate, specifically when to assume jurisdiction in a death and assign a CME Investigator to the case?
2. What questions should be included on an Elder Suspicious Death Field Screen (ESDFS) to be used by county coroner's office intake workers or dispatchers to effectively shed light on the decision to assume jurisdiction for an elder death?

Phase II

Based on a pilot test of the Elder Suspicious Death Field Screen (ESDFS):

1. Did use of the ESDFS result in more effective selection of suspicious elder deaths?
2. Which ESDSF questions were most effective in selecting suspicious elder deaths for investigation by county coroner's offices?

II. Background and Review of the Literature

A. Elder death and Elder Death Review Teams (EDRT)

Death is inevitable and for elders it is often anticipated, and yet, individual life expectancy at older ages varies a great deal. It is the job of the CME function in every county to judge whether an elder death was expected and due to natural causes, or unnatural and therefore in need of investigation and, possibly, autopsy. Many issues complicate this decision: the right to die through refusal of sustenance or life-prolonging devices, cognitive impairment and issues of capacity to consent, the potential for rapid deterioration through natural means, and the prevalence of isolation and self neglect with advanced age. In addition, research identifying forensic markers of abuse is in its infancy, and there is widespread misunderstanding that likely signs and symptoms of abuse, such as emaciation or deep, untreated

pressure ulcers, are natural consequences of decline unto death for elders. As we gain understanding of these issues, the need to alter the systems currently in place is also clear.

At least since 1999, CMEs have participated in Elder Death Review Teams to study and learn from suspicious elder deaths as well as facilitate communication among agencies involved in elder deaths to identify barriers and fill systems gaps (Sacramento County Department of Health and Human Services, 2004). Meetings center on case reviews with attendees sharing information from the perspective of their discipline and role in the case (County of San Diego Elder Death Review Team, 2006). These efforts are generating new lines of communication, training initiatives, and recommendations for systems improvements that will enhance interdisciplinary responses to elder abuse and neglect. Some examples of observations and recommendations that focus on the CME decision to investigate a death:

- Failure of CMEs to be made aware of a suspicious death while the death scene is intact and the body available for autopsy
- The problem of physicians who sign death certificates despite suspicious circumstances
- Acknowledgement that the perpetrator of abuse may report the death and provide false information (Orange County CA Elder Death Review Team, 2003-2008)
- If the deceased was unable to communicate due to disability or dementia, a higher level of scrutiny is warranted
- Assumption that accidental deaths are underreported in licensed care facilities. (Sacramento County Department of Health and Human Services, 2004)

B. Reports of Death to CME

The parties that usually report elder deaths to CME offices are police called to the scene by a 911 call or employees of hospitals, nursing homes and other acute or residential care facilities. Families and funeral homes may also make the call to the coroner's office. In the case of a natural death (not an accident, suicide or homicide) a physician usually signs the death certificate. The process may require the reporting party to call the CME office and make the case for a NJA (no jurisdiction assumed) decision. With the NJA, the body is released to a funeral home. On the other hand, unnatural elder deaths, deaths not involving a physician who can sign a death certificate and certain other conditions become the responsibility of the CME (e.g., death by infectious disease, recent injuries such as hip fracture or subdural hematoma, suspicions of homicide or caregiver maltreatment, ongoing investigation by APS or Law Enforcement, or the family is concerned). When these conditions are known, the intake worker or dispatcher informs the caller that the CME will assume jurisdiction over the death, and a coroner investigator is dispatched to the scene. The caller typically has no medical background and is not allowed to disturb the scene prior to receiving the NJA. This limits the reporter's ability to provide information to the CME; for example, a police officer at the scene may be unaware of pressure ulcers or other injuries covered by clothing. (Harruff, 2008)

C. Investigation of Suspicious Deaths

A number of studies have uncovered evidence that the rate of suspicious elder death investigations of nursing home deaths is too low, with suspicious deaths coming to light many months after the death. Both institutional and longitudinal studies have drawn this conclusion, and some have backed it up by comparing CME data with individual medical records. (Corey et al., 1992; Gruszecki et al., 2004; Lindner et al., 2007; Weiler & Cooper, 1990) The same issue regarding deaths of elders living in the community

has been more difficult to address, and studies focused on elder deaths reported to CME offices are not going to resolve this question – since they do not address the one's that "got away," i.e., suspicious elder deaths that did not get investigated. However, indirect evidence and the experience of EDRTs point to a number of issues related to investigation of suspicious elder deaths.

One study that matched emergency room and CME records indicated bias toward CME investigation of younger adult deaths. (Cherpitel, 1994). There may also be evidence of CME bias against identifying elder abuse even among suspicious deaths (Falzon & Davis, 1998) and this conforms with EDRT findings (Orange County CA Elder Death Review Team, 2003-2008). Perpetrated elder mistreatment, as defined by most state laws, can be physical, psychological or financial abuse or caregiver neglect; the perpetrator violates a position of trust with a vulnerable or isolated elder, and the categories of abuse frequently co-occur (National Research Council, 2003). Elder homicides tend to be in or near the home, to occur in the context of arguments and robberies where the perpetrator is related or otherwise known to the victim (Collins & Presnell, 2006) – features consistent with elder abuse. A study of autopsied nursing home deaths found that most are accidental and most of these due to blunt force trauma - findings that raise as many questions as they answer (Lindner et al., 2007). Violent assault toward an elder is more likely to result in death than in younger patients (Schwab, Shapiro, & Kauder, 2000). Of 150 elder homicides in a 15 year study of CME records in an Alabama County, only three were said to be due to abuse (2%). Over 70% were in the home, and 37% were during robberies (Falzon & Davis, 1998). On the other hand, a review of 121 autopsies of Japanese elders, half were accidental, 13 (>10%) due to maltreatment, another two by self neglect, seven were homicides and nine were suicides, sharply contrasting the proportion of elder abuse cases to homicides in the Alabama study of elder homicides alone (Zhu et al., 2000).

Out of concern for underreporting of suspicious deaths in nursing homes, it has been proposed that CME offices conduct more autopsies of nursing home mortalities (Gruszecki et al., 2004). Influenced by other studies, Arkansas legislators required universal autopsy of nursing home deaths. That experiment yielded interesting findings on potential markers for suspicious deaths, but could not justify continuing the practice of universal autopsy. Instead, and consistent with the goals of this project, additional research and development of criteria to aid in determining whether the death of an individual elder was unnatural was advocated (E. Lindbloom et al., 2008). A rational approach to this issue is needed.

D. Using CME data for research purposes

Retrospective review of CME data, such as death certificates and autopsy reports, has shed light on suspicious elder deaths, especially homicides. Findings are often limited by inclusion of very restricted geographies from only one jurisdiction or county, making up for small numbers of deaths by extending the study over 5-20 years (Abrams, Leon, Tardiff, Marzuk, & Sutherland, 2007; Collins & Presnell, 2006; Falzon & Davis, 1998; Gruszecki et al., 2004; S. A. Koehler, Shakir, & Omalu, 2006; Lindner et al., 2007; Zhu et al., 2000). The earliest studies focused on a single institution or facility, allowing them to compare CME with institutional medical records (Cherpitel, 1994; Corey et al., 1992; Weiler & Cooper, 1990) Another study consolidated data from 7 counties in 2 regions of one state (Cohen, Llorente, & Eisdorfer, 1998). A larger scale study, conducted by mail with phone and in-person follow-up obtained data from 39 of 55 jurisdictions (Kung, Parrish, & Spitler, 1996) while still another contacted every CME office

(2995) in the US by mail, gaining participation and data from about one fifth of them (Schraeder, Delin, McClelland, & Sod, 2006). The latter study challenged the notion that variability of skills and organization of the CME function would undermine consolidation of data across states and counties within states. It concluded that although structured data collection forms were successful regardless of the data source, ME offices provided better technical data on the diagnosis of interest to that study (Schraeder et al., 2006). Another report claimed that clinical medical skills, such as those of a forensic nurse lend credibility to the results of a study of CME records (S. A. Koehler, 2005).

Much of the data used in these studies was available on paper forms and multiple types of reports [e.g., autopsy report, toxicology report, death certificate and death investigation report (Koehler et al., 2006)]. By contrast, Australia has implemented a fully automated, national database of information from coroner investigations (*Data Dictionary for the National Coroners Information System: Version 2,* 2007). The state of automation of CME data in the US is growing, with software vendors competing for a market consisting of thousands of agencies (an internet search at the outset of this study yielded three CME computer software options, many more came to light during the study), while small jurisdictions with little or no automation are known as well. A side benefit of the current project was an inventory of the state of automation in participating California CME offices, made clear by the participants' ability to provide automated CME data.

E. Factors associated with elder suspicious deaths in nursing homes

A 2007 meta-analysis addresses the vulnerability of nursing home residents to mistreatment (Lindbloom, Brandt, Hough, & Meadows, 2007). Nursing homes with low staffing and high burnout are more likely sites of physical abuse. Accidental deaths can result from inappropriate physical restraint. Indicators of serious or fatal neglect include pressure sores (especially if acquired since admission), malnutrition and dehydration. Malnutrition may result from dysphagia that is inadequately addressed with culturally and medically appropriate foods (Lindbloom et al., 2007). There is a need for more information on accidental, blunt force trauma induced deaths from nursing homes (Gruszecki et al., 2004; Lindner et al., 2007).

F. CME survey methods

Prior surveys of a large subset of CME offices have focused on mailings, supplemented by phone, internet and in-person options (Hickman et al., 2007; Kung et al., 1996; Schraeder et al., 2006). In a study of California county Adult Protective Services data, the researchers for the current project elicited the participation of 54 out of 58 counties in a recorded phone interview and 47 of 58 participated in an internet based survey (KeslerWest, Wiglesworth, & Mosqueda, 2008).

G. LEAD Methodology

LEAD (Longitudinal Experts, All Data) has been used to evaluate outcomes for which no criterion standard currently exists, such as elder mistreatment (Wiglesworth et al., 2009; Wiglesworth et al., 2010) and quality of caretaking by Skilled Nursing Facilities (Liao et al., 2010). A panel of experts meets to review all the data or evidence for the cases or research participants. They compare the evidence for the outcome (e.g., physical abuse) against *a priori* criteria on the outcome category (abuse occurred or not, or the panel was 'unable to assess' whether abuse occurred, usually due to partial, but insufficient data). The criteria usually take the form of conceptual and operational definitions of each outcome to be

assessed. Members are polled to determine if there is consensus, and if there is not, further discussion takes place before a second round of polling.

III. Methods

The project was conducted in two phases. In Phase 1, data and information about elder suspicious deaths and the processes CME offices use for deciding to investigate them were collected from counties throughout California. At the end of Phase 1 the information collected was used in developing a screening tool (the ESDFS) designed to assist CME offices with the decision to investigate an elder death. In Phase 2, the tool was pilot tested and evaluated at three sites.

A. Phase 1

The Research Nurse conducted four interviews of coroners and medical examiners in three counties to solicit an overview of the CME system and procedures. Based on this information, a draft phone questionnaire was developed. The Multidisciplinary Advisory Board (MAB; Table 1) was assembled for the first time to review project objectives, provide input to project startup, recruitment strategies and the Phase 1 phone survey. Their recommendations were incorporated into the phone survey, which was submitted for IRB approval (Appendix A). One county was selected to field test the survey.

TABLE 1: Multidisciplinary Advisory Board

Board Member	Qualification
Jacque Berndt	Chief Deputy Coroner, Orange County, CA
Mike Gargiulo	District Attorney, Los Angeles CA
Lisa Gibbs, M.D.	Geriatrician, UC, Irvine, Elder Abuse Forensic Center, Elder Death Review Team, Orange County, CA.
Richard Harruff, M.D.	Chief Medical Examiner, Seattle King County Department of Public Health, Seattle WA
Cherie Hill	Detective, Anaheim Police Department, Anaheim CA
Patricia McFeeley, M.D.	Assistant Chief Medical Investigator, Office of the Medical Investigator, University of New Mexico
Laura Mosqueda, M.D.	Geriatrician, Chair of Family Medicine, UC Irvine, Director Center of Excellence on Elder Abuse and Neglect
Ed Smith	Assistant Coroner, Sacramento CA

Members of the MAB (JB, ES) announced the study at a meeting of the California State Coroner's Association (CSCA) and later made phone calls to county offices throughout the state of California to introduce the research project and elicit support and cooperation with the Research Nurse in scheduling phone surveys. The study was announced in the CSCA Newsletter on the association website. Soon afterwards all 58 county CME offices in California were approached to participate in the phone survey by email. If no response was forthcoming, those county CME offices were approached next by phone call (up to 3 times), and finally by letter.

Phone interviews were conducted, recorded and transcribed. All participating counties were invited to provide quantitative data on elder suspicious deaths. The data that were provided were coded and assembled into an SPSS data base for quantitative analyses, while qualitative data were assembled into a WORD document for qualitative analysis. Descriptive statistics, significant statistical findings (associations between variables) and other findings addressing study objectives (understanding the processes and the data used by California county coroner's offices) were presented back to the MAB. At the same meeting, criteria for selection of site visits were discussed, such as variation in population, geography and organization (both Coroner and Medical Examiner directed offices). The MAB recommended ten specific counties.

The research team developed a draft structured interview for site visits designed to better understand the current processes each office employs to assume jurisdiction or not over a reported death. The MAB reviewed the draft and recommended changes. IRB approval was obtained for the final version (Appendix B) and for visiting each site as a research location. The Research Nurse visited five sites and conducted recorded interviews. During the site visits, she observed the intake and dispatch functions and interviewed CME Investigators about the processes employed at the CME offices when taking in a report about a death. The interviews were transcribed and analyzed to provide input for the design of a screening tool, the Elder Suspicious Death Field Screen (ESDFS). Three of the sites agreed to participate in phase 2, the pilot study of the ESDFS.

Thematic analyses of transcriptions of Phase 1 site interviews were conducted to address the study objectives and research questions.

B. Phase 2

The research team drafted the ESDFS for use when fielding information about a reported death of an elderly adult (age 65 and above). It was based on findings from Phase 1 and input from members of the MAB. Combined Delphi and nominal group process method were used as a group decision-making tool by which the MAB formed a consensus of opinion concerning the questions to be used for the ESDFS. (Jones & Hunter, 1996; Murphy, Black, & Lamping, 1998)

The ESDFS was approved by the IRB and field tested in one county after training of CME Investigators there. The two-week field test assessed the usability and readability of the ESDFS prior to the implementation of the pilot study at the selected sites. Minor changes in the ESDFS (reordering of items for better workflow) were incorporated in the final version (Appendix C), which was implemented in the three participating county offices including two coroner offices and one medical examiner office. **Also, as a result of the field test, the decision was taken to use the ESDFS for NJA cases only.** That is, instead of integrating the ESDFS into current decision-making processes, those processes were to continue and only those cases that were waived (NJA or no jurisdiction assumed) were to be further screened using the ESDFS.

Full rollout of the ESFDS in the three sites followed one-on-one training of each CME Investigator on the use of the ESDFS. The Research Nurse was in contact with each of the three sites through the six month pilot study, sending weekly email reminders to site coordinators and monthly emails to each CME Investigator who had been trained for the pilot study.

With input from the MAB, criteria were developed for LEAD panel review of up to 20 ESDFS cases per site (Appendix D). Investigated cases and cases with a known caregiver and check-off of other items indicating potential evidence of mistreatment (e.g., a cluttered scene or body with marks on the skin) were preferred for LEAD review.

The two member LEAD panel consisted of a Geriatrician (LG) with experience as Co-director of an Elder Abuse Forensic Center and an Elder Death Review Team and a retired Medical Examiner and Assistant Chief Medical Investigator (PM). Both were also both members of the MAB. They were asked to determine the following outcome:

- If a case was investigated, was it appropriate that it was investigated?
- If a case was not investigated, should it have been investigated?
- Even if a case was investigated, should more investigation have occurred?

Conceptual and operational definitions of these outcomes were the *a priori* criteria for LEAD panel decisions (Appendix D). To reduce bias, the research team presented the cases randomly without revealing the sites where the cases were reported. Outcomes were recorded on a form designed for that purpose (Appendix E) for later entry into the ESDFS data base. Statistical analyses (SPSS) compared ESDFS data collected from the three sites. Tests conducted were nonparametric comparisons of multiple independent samples for continuous measures (Kruskall-Wallis) and Pearsons' Chi Square for categorical variables. Descriptive statistics of LEAD decisions were computed as well as their interrater reliability (kappa).

When the MAB met late during Phase 2, they recommend that, due to the low participation rate, two alternative Satisfaction Surveys be used: one for CME Investigators who used the ESDFS throughout the pilot study and the other (the Alternate Satisfaction Survey) for those who failed to use the ESDSFS or stopped using it before the end of the pilot study. The latter survey administered in the form of a structured interview consisted largely of questions about barriers to implementation of the ESDFS. Both surveys were approved by the UCI IRB (APPENDIX F and APPENDIX G).

To wrap up the project, the Research Nurse travelled to each site and administered all the satisfaction surveys as structured interviews with the Investigators. The interviews were recorded and transcribed. Because there were only two Satisfaction Surveys (as opposed to Alternate Satisfaction Surveys), the data were not compiled as quantitative data. Instead, qualitative analyses of all satisfaction survey structured interviews were conducted.

IV. Results

A. Samples

The Research Nurse interviewed CME Investigators in 46 of the 58 CME offices in California in Phase 1. When participant counties were categorized by population size, among those participating were 8 large counties (greater than 1 million in total population), 20 medium counties (greater than 100,00 and less than 1 million), 18 small counties (less than 100,000). The primary participating CIs for each county in Phase 1 are described in Table 2.

Elder death statistical information was obtained from 30 of the 46 counties that participated in the phone interview. Of those, 5 were large, 10 medium and 15 small counties. At the conclusion of the project, statistical information for investigations and autopsies that occurred during the year surrounding the pilot project (that is 6 months before and 6 months during its implementation) were collected from the three counties participating in the pilot project.

TABLE 2: CME Investigators Interviewed during Phase 1

Variable	N=46
Participant's Age (Mean ± Std Dev)	46.04 ± 8.775
Participant's Sex (% female)	30.4
Highest Degree Attained (Median)	Associate Degree (AA, AS)
Number of Years Working as Investigator (Mean ± Std Dev)	14.61 ± 7.343

Of the five county CME offices visited in Phase 1, three agreed to participate in the pilot study. The three are geographically diverse and cover a full range of organizational structures for CME offices in CA, and they are anonymous, as called for by the study protocol. A total of 28 CME Investigators from the three sites were trained to participate in the pilot study. Descriptive statistics were not collected from this sample.

For Phase 2, the complete sample of ESDFS cases consisted of 115 cases from the 3 sites, and 55 of these were selected for LEAD panel review.

Completing Phase 2 sampling, 18 Satisfaction Survey Interviews were conducted. Two of these were with CME Investigators who participated throughout the pilot study (APPENDIX F). The other 16 were Alternate Satisfaction Surveys (APPENDIX G) with CME Investigators who did not participate fully although they were trained to use the ESDFS at the beginning of the pilot study. The remaining ten trained CIs were not available to be interviewed either because they were no longer in the position, or they were otherwise unavailable or refused to participate in the interview.

B. Results for study objectives

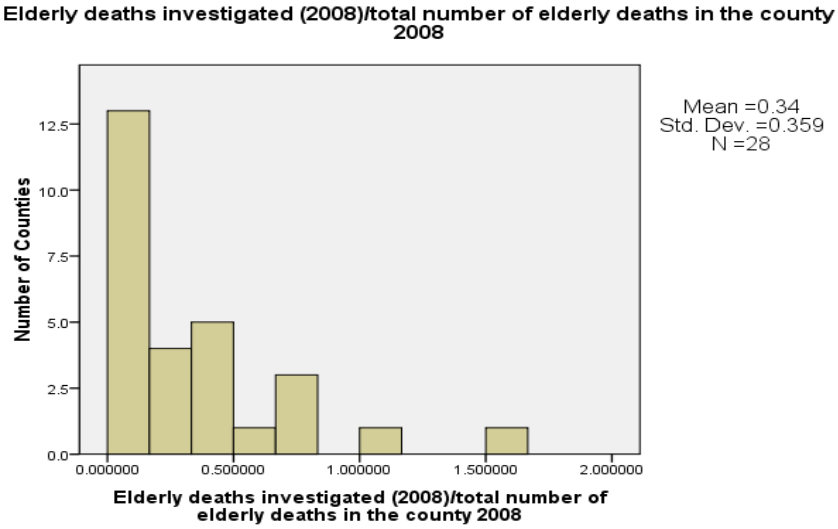
1. Results for Phase 1, Objective 1. Compile and analyze data associated with elder deaths collected by California County Coroner's Offices.

Phase 1 quantitative analysis results are found in Figures 1-7 and in the discussion below. The data are from 2008 and comprise data collected in Phase 1 as well as publicly available data on elder deaths by county during 2008. Based on discussions with all 46 counties participating in the study, those counties [16 (35%)] that failed to provide data, did so for the most part because of the effort it would require to assemble the data. The ones that readily provided data had implemented systems that made it easy to download data. The counties that provided partial data did so because the additional data elements were in paper files, not on automated systems that made them readily accessible. Another issue in collecting data became the lack of standards for some data elements we requested. For example, although 16 counties had computerized the "manner and circumstances of death and other medical conditions," CME professionals in CA have not adopted any standards for making these choices, and

certainly not for coding them. Therefore, these data were not incorporated in the data set for the study and they have not been analyzed.

Figure 1 addresses the research question: ***" What proportion of elder deaths in California is investigated by CME Investigators?"*** The data are presented as ratios with the total elder population by county to better indicate variability.

Figure 1



"Elderly deaths investigated" refers to the deaths for which the coroner's office assumed jurisdiction. With 28 counties providing data for Figure 1, there is a wide variation in proportions (range: 1.8% to 150%), with about one third of deaths investigated on average across counties. Two counties stand out: one as reporting that they investigate all elderly deaths, and this is the policy adopted for that small county with very few deaths occurring. The other outlier is shown investigating more than all deaths that year (150%); it is also a small county that likely investigated deaths from the prior year (2007) but reported them in the year of the investigation (2008). The data for number of deaths in the county came from a web site (Rand California, 2011).

Figure 2

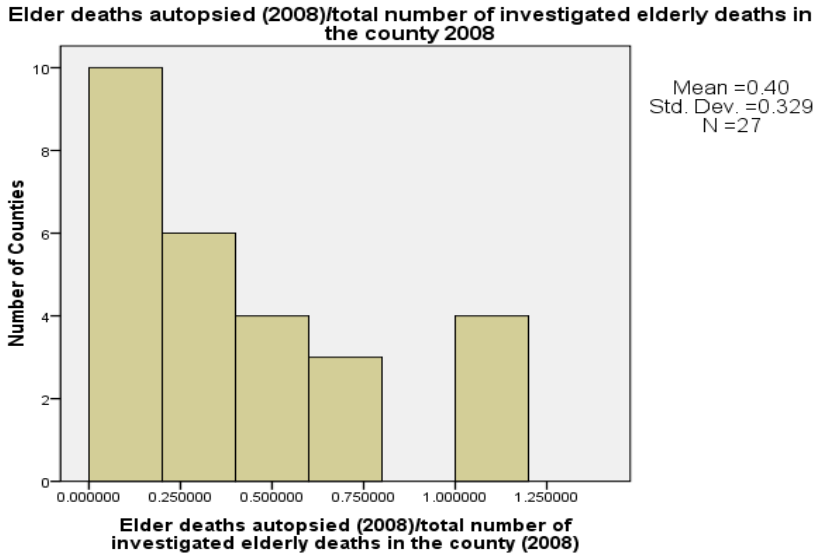


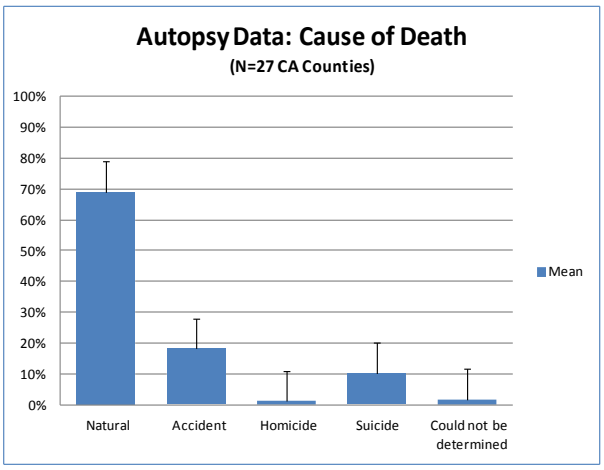
Figure 2 addresses the Research question: ***"What proportion of elder deaths in California goes to autopsy by county coroner and medical examiner offices?"*** The data are presented as ratios to the number of investigated cases.

On average across counties, 40% of investigated cases are autopsied with considerable variability in the sample (SD=32/9%, range: 2.6% to 100%). Four small counties autopsy every death they investigate. **Figures 3 and 4** address the Research Question: ***"What are the outcomes of elder death autopsies performed under the auspices of county coroner's in California (cause, manner and circumstances of death, other medical conditions)?"***

Thirty counties provided some autopsy data on cause of death, and 27 of these were analyzed (Three counties provided data that were inconsistent with the total number of autopsies, and these were excluded from the analyses.). Of the 30 counties, 19-21 also indicated place of death (For 2 counties, the data did not add up to the total number of autopsies.). Ratios of each type of death to the total numbers of autopsies were calculated and the means and standard deviation are shown in Figures 3 and 4.

Figure 3 shows the mean proportion and standard deviation for the causes of deaths to autopsies performed across the counties that provided this data. While analyzing the 'cause of death' data, we learned that (at least) two counties do not autopsy all accidental elder deaths, but will forgo these autopsies if a physician agrees to cosign the death certificate**. The example given by one county for such an accidental death not requiring autopsy is death resulting from an older adult's fall**. The same county also said that bodies of **all** victims of motor vehicle accidents are autopsied.

Figure 3 **Figure 4**



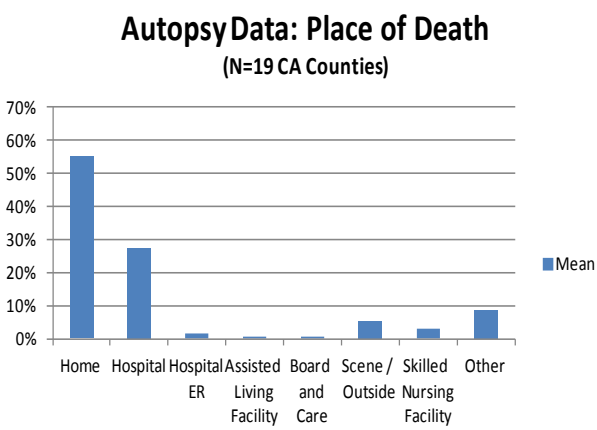


Figure 4 shows the place of death for autopsies in the 19 counties that provided this data. In addition, some counties were able to provide additional automated data on the decedent brought to autopsy (As above, data inconsistent with the total number of autopsies for that county were excluded.): 19 reported sex (males as a mean proportion of total autopsies: 69%±22%, range 23-100%), 16 reported marital status (married and widowed as mean proportions of total autopsies: 44%±20%, range 0-90% and 31%±23%, range 0-100%, respectively) , 15 counties gave detailed aging demographics (e.g., numbers of total elder deaths or for each 5 year range), 14 reported the education level, 18 reported Hispanic ethnicity, 14 reported country of origin for Hispanics, and 16-18 reported race with country of origin. As was mentioned in the introduction to this section, although 16 counties provided data on the manner and circumstances of death and other medical conditions of autopsied deaths, the lack of standardization of these data made their consolidation impractical.

Figures 5 and 6 address the research question: "***How many autopsies resulted in a finding of elder death by homicide, abuse or neglect?"***

Figure 5

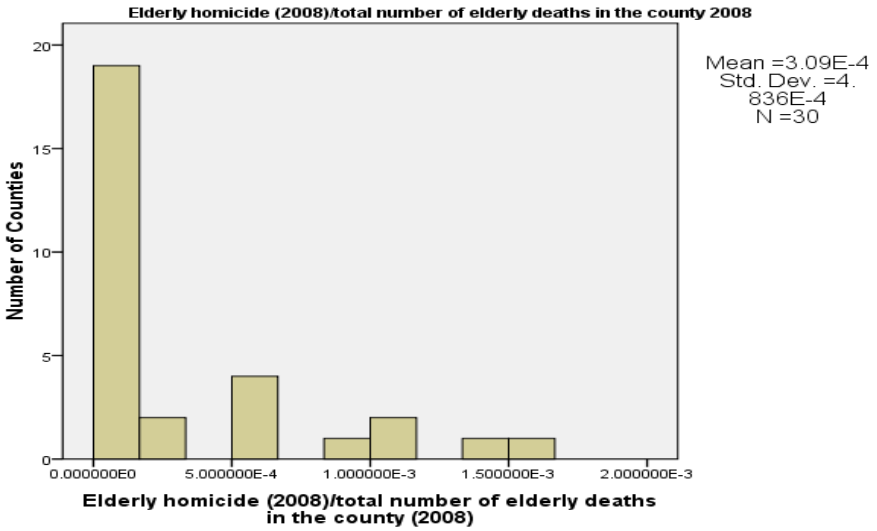


Figure 6

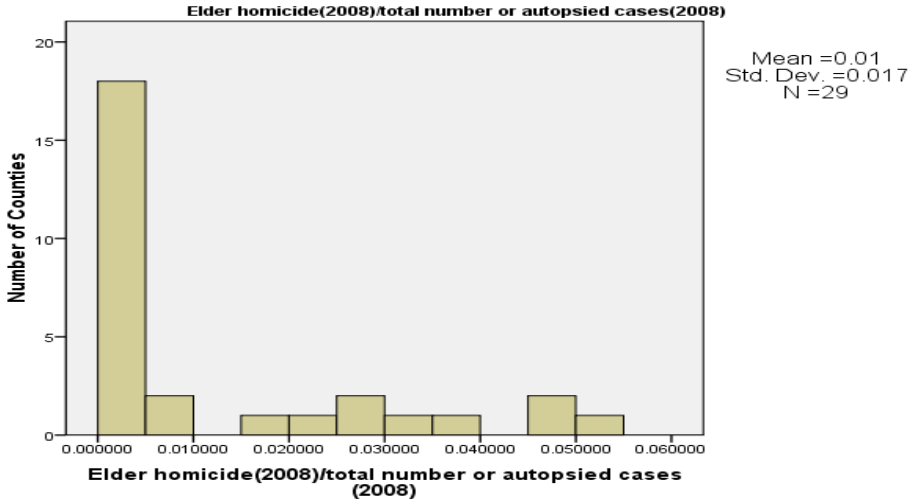


Figure 5 data indicate the proportion of elder homicides to elder deaths. **No reports of deaths by abuse or neglect were contained in the data provided by any county, though some volunteered that these events are included in the counts of homicides.** Of the thirty counties providing data, 18 reported no homicides in 2008. The mean rate of homicides was 0.03% and the range was from 0 to 0.16%. Further analysis resulted in a statistically significant finding: that there are more elderly homicides per total number of elderly deaths in larger and medium counties than in small counties (One Way Analysis of Variance (ANOVA), F=3.481, p<.05). Similarly, Figure 6 shows homicides per total number of autopsied cases. The mean number of elder homicides per elder autopsy was 1% and the range was 0 to 5%. There were significantly more homicides per total number of autopsied cases in larger and medium counties than in small counties (One Way ANOVA, F=1.995, p<.001).

Research Question: "How do the data elements on elder deaths that are collected and maintained by California County Coroners vary from one county to the next?" The answer to this question is partially determined by those that did and did not provide full or partial data. Only 65% of participating counties contributed automated data, for the most part because it was collected and maintained on a computerized system. About half of these provided only partial data, again because the requested data elements were not automated, but in paper files. The details are contained in the responses above, that is, the indication of how many counties provided which data elements. The variation in automation was in part driven by data base reporting systems used by the participating counties. **Eight of the 46 counties that were interviewed stated that they did not use a computerized system. Among the other 38, 18 different computer systems were used** and one participant was "not sure" of the system used. The following systems were used by multiple counties: Coroner Medical Examiner System (CME; 10), Sirron Software Corporation's Coroner Information System (Sirron; 6) Sun Ridge System's Computer Aided Dispatch system (RIMS-CAD; 5), and Records Management System (2). Six said they used a system developed in house, while eight others mentioned systems unique among the survey responses.

Regarding the variation in data elements provided by 30 counties, in addition to the differences in data elements related to investigated and autopsied elder deaths mentioned above, criminal justice outcomes of homicide cases (e.g., arrest made, perpetrator identified, criminal charges outcome, etc.) were provided for 17 counties, however the data were largely coded as 0, while allowable values were specified only as greater than 0 (e.g., 1=acquittal, 2=conviction, etc.), such that, in effect, no useful data

of this nature were provided and are apparently not being maintained by most counties even though they have the ability to automate it.

The issue of lack of standards for some data elements we requested also comes into consideration here. As was previously mentioned, 16 counties had computerized the "manner and circumstances of death and other medical conditions," but CME professionals in CA have not adopted any standards for making these choices or coding them.

There were also concerns about consistency of the data elements that were consolidated. An unanticipated and still poorly understood source of variation in the data is the lack of standard definitions of some data elements. Some counties may define 'investigation' in different ways, based on site interview responses that described levels of investigation (2.b.viii. below). Some of the variability in the proportion of investigations of elder deaths to the number of elder deaths across counties may be caused by agencies counting investigations based on different definitions. Additional evidence that data were not comparable across counties came from the counts of the separate "causes of death" that added up to be consistent with the total number of autopsies in most counties, but not all of them. Further questioning uncovered some reasons for this discrepancy (i.e., in one county all waived cases (which are not autopsied) were categorized as 'natural; 'not all 'accidental' deaths were autopsied).

Research Question: "After adapting the data based on elder population by county, how much variability is there from county to county for 1-4?" The data reported above is for the most part converted to percentages of total numbers of autopsies or of total elder deaths in the county, and the means and standard deviations are either shown in a graph or provided in text. For some variables, ranges are also provided, however the extremes within the ranges are largely due to outliers from very small counties, for example where there were less than 100 deaths or less than 5 autopsies during the reporting year.

Some comparative analyses were conducted to seek factors that might contribute to variability, such as the size of the county or organizational structure of the county agency, and these associations appear to be limited to the reported difference in homicides related to county population group.

2. Results for Phase 1, Objective 2. Compile the set of processes employed by California County Coroner's Offices in making the decision to take jurisdiction when an elder death occurs, along with any information evaluating the success of these processes.

a. Phone survey results

Questions from the Phase 1 phone interview provided preliminary data relevant to this issue for 46 counties.

- ***"Would you characterize your agency as a Coroner system or a Medical Examiner system?"***

    - Coroner System for 41 (89%)
    - Medical Examiner System for 2 (4%)
    - Hybrid for 3 (7%)

- ***"Is your office co-located within the Sheriff's Department?"***

- Yes, 31 counties (67%)
- No, 15 (33%)

- ***"Does your office employ a Pathologist? If so how many?"***

  - Yes, 19 (41%): 1 by 10 counties, 2 by 3 counties, 3 by 1 county, more than 3 by 4 counties.
  - No, 27 (59%) who responded that pathologists were brought in on a contractual basis

Only five counties use forensic nurses, two employed, two on contract and one volunteer.

- ***"Do you have designated Coroner or Medical Examiner (CME) Investigators employed within your office?"***

  - 33 (72%) county offices employ designated CME Investigators
  - 13 (28%) responded that patrol officers have a dual role, also serving as CME Investigators

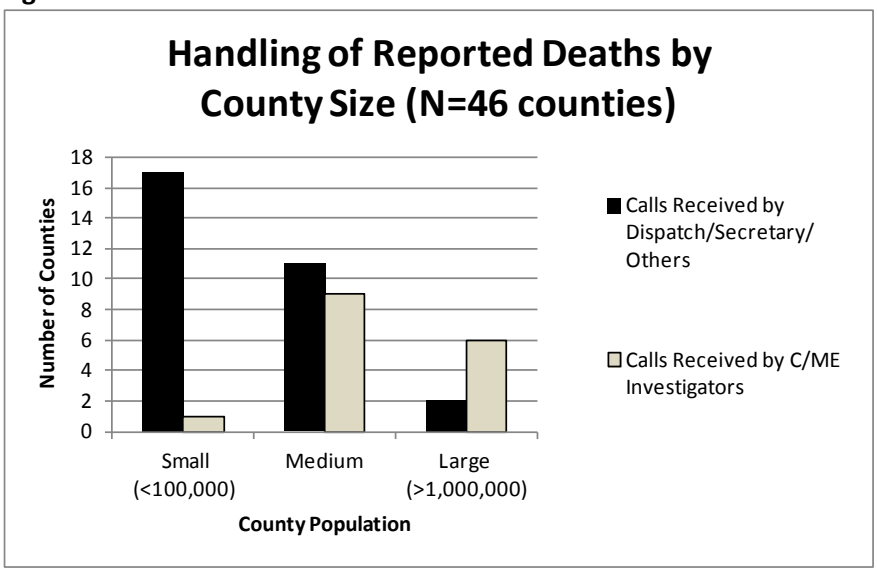
The number of investigators was (Mean and SD) 14.7±15.9, range: 1 (patrol officer) through 60

- ***"Who receives the call about a death?"***

  - 16 (35%) of offices have CME Investigators handling the incoming calls.
  - 30 (65%) of offices have a dispatch function.

Figure 7 shows a further breakdown of these data by size of the county.
CME Investigators

Figure 7



- ***"Who decides the next step?"***

    - Unit Supervisor 2 (4%)
    - Patrol officer/Coroner 11 (24%)
    - CME Investigator 30 (65%)
    - Medical Examiner Investigator 3 (7%)

- ***"Do you currently have a screening process to help you decide on whether or not to dispatch an investigator to the scene?" If yes, what is your screening tool?***

    - 25 (54%) offices stated that they don't have a screening process
    - 9 (20%) county offices stated that they use the statute directly to screen (Government Code 27491)
    - 8 (17%) reported use of their own policy and procedures as their screening tool
    - 1 (2%) stated that their screening is an online "coroner's module"
    - 1(2%) that they developed a Telephone Survey for screening
    - 1 (2%) called their screening tool "First Call Screen"
    - 1(2%) said that they use what they called the "hospice form" for screening of hospice patients only

    Phone survey respondents for seven small and two medium sized county CME offices (9 (20%) stated that they dispatch someone to the scene of every reported death.

"If you were able to have something (like a checklist of red flags) to be used as a tool to help you make such determination, will you be willing to use the tool?")

- Yes, 17 (37%)
- No, 10 (22%)
- Maybe, 19 (41%)

- ***"What are the factors that trigger a field investigation?"***

Most replies referred to the factors dictated by the CA Government Code 27491 (Appendix H), which follows in part. The phrases in bold print show the triggers that were mentioned frequently in both phone and on-site interviews i.e., "**violent, sudden, or unusual deaths; unattended deaths**; deaths where the **deceased has not been attended by either a physician** or a registered nurse, who is a member of a hospice care interdisciplinary team, … **in the 20 days before death**; … **known or suspected homicide, suicide,** or accidental poisoning; deaths known or suspected as resulting in whole or in part from or related to accident or injury either old or recent; deaths due to drowning, fire, hanging, gunshot, stabbing, cutting, exposure, starvation, **acute alcoholism, drug addiction**, strangulation, aspiration … ; death in whole or in part occasioned by criminal means; deaths associated with a known or alleged rape ; … deaths known or suspected as due to **contagious disease** and constituting a public hazard; deaths from occupational diseases or occupational hazards; … deaths under such circumstances as to afford a reasonable ground to suspect that the death was caused by the criminal act of another; and any deaths reported by physicians or other persons having knowledge of death for inquiry by coroner."

It is worth noting here that the potential signs of neglect listed in the regulation were not mentioned in interviews, including "exposure," "starvation" and "deaths under such circumstances as to afford a reasonable ground to suspect the death was caused by the criminal act of another" (specifically, criminal neglect by a responsible caregiver).

- ***"When a case is not suspicious, do you call upon APS to help you decide on how to proceed with the investigation of an elderly death?"***

  - Yes, 4 (9%)
  - No, 42 (91%)

- ***"Do you have an Elder Death Review Team?"***

  - Yes, 16 (35%)
  - No, 26 (57%)
  - Combine with Child Death Review Team, 2 (4%)
  - Don't Know, 2 (4%)

- ***"If so, how often does it meet?"***

  - Monthly, 7 (15%)
  - Every other month, 1 (2%)
  - Quarterly, 8 (17%)
  - Don't know, 4 (9%)

- ***"How do you store standard information on reported deaths?"*** (Computer versus paper file).

  - Paper only, 8 (17.4%)
  - Computer only, 4 (9%)
  - Both paper and computer, 34 (74%)

  Specific software information for computer storage is provided in Objective 1, Item 5, above.

- ***"What level of interest do you think the prosecutors in your county have in prosecuting cases that you deem to be suspicious? Low, Medium, or High?"***

  - 11 (24%) said "low to medium"
  - 30 (65%) reported "medium to high"
  - 5 (11%) responded "no comment"

- ***"Have you or someone in your office attended a Coroner's Elder Death Investigation course?"***

  - Yes, 20 (44%)

- No, 24 (52%)
- Don't know, 2 (4%)

b. Site visit results that address Objective 2

- ***"What strategies are used in deciding which elder deaths to investigate, specifically when to assume jurisdiction in a death and assign a CME Investigator to the case?"***

Additional information pertinent Objective 2 (and Objective 3, below) came to light during site interviews. Data from these interviews is organized by theme, provided in Appendix I and summarized here.

i. Reliance on the Reporting Party

The CME Investigator or other person taking the call of a reported death is dependent on the reporting party for all the information they need to decide to assume jurisdiction of a case or not. A statement common to nearly every interviewee was "They are our eyes and ears." Specific to the suspicious death of an elder, a natural death is known to be the more likely result, and they expect the reporting party to let them know about the exceptions – the suspicious deaths. Many statements were made specifically about the reliance on medical personnel to recognize evidence of abuse or neglect, and some interviewees stated that the medical professionals who report deaths are the real experts and are knowledgeable and can be depended upon.

Some examples:

- "We usually rely upon the hospitals to kind of give us the information. The way we find out that most people have had some sort of abuse and neglect issues, usually comes from the hospital they usually say hey we noticed that when they came in they have XYZ wrong with them ..."
- "So we rely heavily on what the medics tell us. "
- "If you're a nurse I would value your opinion on what you're telling me. I'll ask your opinion as a licensed nurse. What is your opinion?"
- "Because they are really normally in tune of what an elderly death looks like. If there's any trauma to the body they are pretty forthcoming on that."
- "Doctors and nurses to report elder deaths have done a screening and they would rule that out and tell us on the phone or if they have any suspicion of abuse or neglect they contact APS."

The CME offices need police officers reporting deaths to be experts in recognizing a crime scene or evidence trauma.

- "Because I'm basing it on what he is saying. If he says there's something suspicious I am going out there."
- "We rely heavily on local law enforcement to tell us what they see. And we trust them to be able to investigate to a certain extent as far as what's going on."

ii. Value of APS information

Knowledge of APS involvement is a trigger for investigation. If this knowledge is available through the reporting party, the investigator will raise the level of investigation, but some parties were concerned

that they are not always aware of an APS role in a case. One county complained that Social Services will not share the information; another praised APS's support of CME efforts.

Only one county saw a possible connection between known financial abuse and suspicious death.

iii. Evidence of Neglect: pressure sores and filthy living conditions

Most CME investigators agreed that decubitis ulcers/pressure sores and filthy living conditions were evidence of neglect sufficient to trigger and investigation, but there were dissenters, and no standards are in place for a threshold (e.g., stage 3 and 4 ulcers, but not stage 1 and 2) for triggering a higher level of investigation.

- "The nature of the house if it is dirty or cluttered, we need to investigate on those."
- "Many of peoples' home are in disarray and you can't use that as a factor."
- "Are there any bedsores? That is a big one for neglect that is probably easy to determine if somebody had some bedsores that have been unattended."
- "Pressure sores which isn't always a sign of neglect but it can be.
- "Anything stage 3 or 4 is considered elder abuse."

iv. The age of the decedent influences the decision to investigate/take jurisdiction.

CME Investigators take into consideration the age of the decedent and are less likely to pursue investigation of elder deaths.

- "Elderly and under the care of the doctor, that will usually become a non coroner's case." (That is waived or NJA; no investigation will occur.)
- "If it's natural causes, but the individual is 50 years old and has no medical history and there are no indications of trauma they become a full coroner's case."

v. Reluctance to seek out caregiver neglect cases

CME investigators spoke about caregiver neglect being hard to prove and to differentiate from self neglect. More than one mentioned the dilemma that arises because elders sometimes refuse care and so it appears they were neglected. They do not investigate if they suspect self neglect and they need to decide if a case is self-neglect or caregiver neglect. It appeared that the assumption is in favor of not-investigating when there are indications of neglect.

The following question from the site visit structured interview elicited the responses as listed.

"Assuming that the decedent was in frail condition with many medical problems, *what questions or types of questions do you ask to determine whether the death could have been hastened by neglectful care?"*

- Silence / pause

- "Please, repeat the question."
- "That's what we normally see in our county."
- "That's a very hard question."
- "Frail with many medical conditions? Sounds like all elderly people."

vi. Waived cases that are later investigated

A "waived case" is the terminology used by most counties in referring to death reports for which there is No Jurisdiction Assumed (NJA). It's possible that a waived case will later be investigated. These cases that "come back" are especially interesting in that they reveal the failure of original decision-making or screening process to select a suspicious elder death for investigation.

vii. Levels of investigation

If a scene investigation is not clearly warranted by Government Code 27491, the CME Investigator may employ other "levels of investigation" such as the following.

1) Phone call to primary MD, healthcare professional responsible for the deceased, family or caregiver.
2) Review of medical records
3) External examination of the body
4) Dispatching an Investigator to the scene

Of course the highest level of investigation will involve autopsy and may also include a toxicology investigation.

3. Results for Phase 1, Objective 3. Develop a 'best practice' brief questionnaire [or Elder Suspicious Death Field Screen (ESDFS)] to assist County Coroner's Offices in their decision making regarding taking jurisdiction and investigating an elder death.

- "What questions should be included on an Elder Suspicious Death Field Screen (ESDFS) to be used by county coroner's office intake workers or dispatchers to effectively shed light on the decision to assume jurisdiction for an elder death?"

These questions, listed in the project proposal, were modified and augmented based on Phase 1 findings and input from the MAB. Although the ESDFS addresses a list of "red flags" associated with caregiver neglect, it also introduces several innovations, listed here:

- Determining whether or not the decedent had a responsible caregiver
- Determining which activities of daily living (ADLs) were impaired before death to draw attention to whether the caregiver was addressing the impairment appropriately
- Determining whether the reporting party had viewed the entire body and if not, which parts were not viewed

ADLs list basic functional abilities needed to support life and when a someone loses any of these functions, a caregiver is needed. If there is no caregiver or the caregiver fails to provide functional

support, the result is neglect. Self neglect is not criminal, but neglect by a caregiver is a crime. Neglect causing death is homicide. Therefore, in looking for criminal neglect, the existence of a responsible caregiver is a prerequisite. If the caregiver is paid, their responsibility is clearly documented, whereas unpaid, informal caregivers may deny the responsibility. For that reason, the ESDFS begins by asking if there is a responsible caregiver and whether the caregiver is paid or unpaid.

Understanding the decedent's ADL status clarifies what matters to the case. For example, if the decedent had been completely ambulatory, there is no expectation of finding a wheelchair or ambulation device.

Finally, because reporting parties are not required by law to uncover or turn the body, there is the potential that marks on the body indicating neglect (e.g., bedsores) or physical abuse (e.g., bruises) will not be viewed. The body maps were introduced in an attempt to understand the impact of this issue. The study team and MAB were also interested in finding out to what degree the reporting parties were refusing the CME employees' requests to uncover , unclothe or turn the body, and if the refusal to do so generated further CME investigation so that the body would be fully viewed.

The list of red flags was drawn from the experience of the research team and reconfirmed by some of the Phase 1 interview data. Some of these follow.

- ☐ Has the deceased been a client of Adult Protective Services (APS)?
- ☐ Does the deceased have decubitis ulcers (pressure sores)?
- ☐ Is there evidence of malnutrition / dehydration?
- ☐ What is the general condition of the body – e.g., hygiene, presence of urine or feces, evidence of trauma?
- ☐ What is the condition of the residence?

APPENDIX C contains the ESDFS used in Phase 2.

4. Results for Phase 2, Objective 4. Pilot test and evaluate the effectiveness of the ESDFS in a selected subset of California counties.

a. <u>ESDFS and LEAD Panel findings</u>

The counts of endorsed items on the ESDFS are listed in Appendix J. Although a number of the survey items resulted in an indication of 'unknown' or 'unable to assess data,' or no response (missing data), none of the items stands out as problematic and nearly all items were endorsed by some CME Investigators. The 'unknown' data indicate that the reporting party stated that the information was unknown and a box was checked on the ESDFS to indicate this fact. Missing data indicate that one or more CME investigators failed to endorse any response category for that ESDFS item.

Posterior body parts were viewed less often than anterior body parts, and head, neck and forearms were viewed more frequently than other anterior body parts. One of the sites viewed least often were the feet (due to socks that were not removed), and heels are frequent sites of decubitis ulcers.

Summaries of the comments written on the forms by the CME Investigators indicate that most comments provided additional information about the case (e.g., "Hospice" or "Assisted Living Facility" to indicate the Level of Care; "wife" or "paid and unpaid" to indicate relationship of caregiver;" "below the

knee amputation" or "unable to view or examine top of feet due to socks" to account for undocumented body maps sites). In some cases the comment informs about the lack of a response, for example, when nothing was known about the scene in the home, 'N/A 'or 'died in hospital' were frequent responses.

One comment was pertinent to the pilot study's feasibility:

- "This is what we're dealing with w/ Hospice care:
  - Extremely poor attitude about having to answer these questions. Asked WHY she needed to answer these Q's multiple times.
  - She was unaware of medical history
  - She was so upset by being subjected to wasting her time with these questions that she asked to speak to a supervisor."

One Investigator noted the following but made no further effort to investigate:

- "Broken skin: box checked because Med Hx had 'bilateral heel ulcers' but officer responded with "no" because feet were covered with socks."

Table 3 contains the ESDFS responses compared by county. The proportion of body sites viewed is a simple ratio of the number of sites viewed over the total number of sites on the body map. The tests of comparison indicate that the samples differed significantly as indicated on the ESDFS. The following differed significantly: 'presence of a responsible caregiver,' 'overall scene condition,' 'overall body condition,' all Activities of Daily Living and the proportion of body sites viewed.

TABLE 3: Site Comparison for ESDFS data: All Data (N=115)

ESDFS Items	Site 1 n=49	Site 2 n=51	Site 3 n=15	Test Statistic[1]	Significance
	Mean ± SD or n (%) / # reported as 'Unknown' or 'Unable to Assess'				
Responsible caregiver (yes)	45 (91.8) / 1	32 (62.7) / 11	10 (50.0) / 1	15.945	.003
Relationship to decedent (paid)	29 (65.9)[2]	19 (63.3)[3]	4 (50.0)[3]	0.739	.691
Level of care (full care)	32 (78.0) / 4	18 (75.0) / 8	5 (55.6) / 1	4.018	.404
Overall scene condition (neat-well kept)	29 (59.2) / 17	18 (40.9) / 23[4]	10 (71.4) / 1	20.522	.025
Overall body condition (excellent hygiene)	34 (70.8) / 6[4]	25 (51.0) / 1[5]	7 (46.7)	26.601	.001
Activity of Daily Living (impaired)					
bathing, getting dressed/undressed	40 (81.6) / 3	17 (34.0) / 18[4]	6 (40.0) / 3	26.626	p<.001
toileting	39 (79.6) / 4	19 (38.0)/ 17[4]	4 (26.7) / 5	23.326	p<.001
transferring	40 (81.6) / 3	16 (32.7) / 18[4]	7 (46.7)	34.747	p<.001
ambulation	18 (38.3) / 16[5]	10 (20.0) / 24[4]	3 (20.0) / 1	15.821	.003
eating and hydration	32 (71.1) / 5[6]	14 (29.2) /18[7]	2 (13.3) /3 [4]	26.840	p<.001
APS involvement	3 (6.4)[5]	0 (0.0) / 12[5]	0 (0.0) [7]	16.240	
Proportion of body sites viewed	86.1 ± 25.8	68.2 ± 36.7	53.0 ± 26.2	15.726	p<.001

1. Pearson's Chi Square for nominal variables (all but 'proportion of body sites viewed.') For continuous variables, the non-parametric test independent samples Kruskall-Wallis test was used.
2. Missing data for 1 responsible caregiver
3. Missing data for 2 responsible caregivers
4. Missing data for 1
5. Missing data for 2
6. Missing data for 5
7. Missing data for 3

Based on selection criteria (Appendix D), a total of 55 case files (Table 4) were reviewed and presented to the LEAD panel members. Twenty cases from 2 sites and all 15 cases from the third site were presented to the LEAD members.

Further insight into the significant differences shown in the overall sample (Table 3) may be derived the variables collected for the LEAD panel (See Table 4) for the individual counties. In both tables, Chi Square tests that would have yielded empty cells were not conducted. The differences are likely reflective of the caseload of the participating CME Investigators rather than the counties as a whole for sites 2 and 3 where there was only light participation in the pilot study. For example, the Site 2 LEAD sample included no residential deaths, and all locations reported were hospital deaths. In general, the reporting parties for site 1 (Table 3 and Table 4) stated that the decedents were significantly more impaired in their ADLs, and they were able to view a larger proportion of the body, finding that the overall body condition was one of excellent hygiene in a majority (63.2%) of cases. The Site 1 reporting parties also were more likely to identify a responsible caregiver, caregivers were more likely to be paid and more decedents were under full care. Data on the place of death for the LEAD Panel cases indicate that Site 1 consisted of a cross-section of decedents who died at home (45%) at the hospital (20%) or in a facility (35%). For the Site 2 sample, 80% died in the hospital, resulting in a large amount of reported unknown or otherwise missing data (e.g., about the caregiver, scene description (in the home), or functional level of the decedent). For the site 3 sample, 73.3% were residential deaths and this is consistent with a sample that was higher functioning just prior to death and had fewer paid caregivers.

The samples presented to the LEAD panel have a number of interesting features. Though some of the cases had been investigated by phone, **none resulted in dispatching of a CME Investigator to the site nor were any autopsies ordered within the sample.** For this reason, it was not possible to assess the sensitivity or specificity of the ESDFS, that is, its ability to correctly identify individual deaths that required investigation and rule out those that do not. The panel was unable to assess whether there was evidence of neglect on the basis of information available to them for two thirds of the cases. A large subsample (35-73.3%) from each site was judged to have needed investigation or further investigation than was actually done. Similarly, the LEAD members found someone should have viewed the entire body to confirm the finding for an apparent natural death for a large proportion (30 – 73.3%) of each site's cases.

Table 4: Site Comparison for LEAD Cases (N=55)

Variables	Site 1 N=20	Site 2 N=20	Site 3 N=15	Test Statistic[1]	Significance
	Mean ± SD or n (%) / # reported as 'Unknown' or 'Unable to assess'				
Age	84.5 ± 7.9	85.5 ± 8.8	84.6 ± 8.6	.221	.895
Gender (female)	13 (65.0)	13 (65.0)	10 (66.7)	.013	.993
Race (white)	16 (84.2)[2]	0 (00.0)[3]	10 (76.9)[4]		
Reporting party (hospital nurse)	5 (25.0)	14 (70.0)[5]	2 (13.3)	54.468	p<.001
Location of death (hospital)	4 (20.0)[6]	16 (80.0)[7]	2 (13.3)[8]	39.153	p<.001
Responsible caregiver (yes)	18 (90.0) / 1	12 (60.0) / 3	10 (66.7) / 1	5.592	.232
Relationship to decedent (paid)	14 (77.8)	7 (70.0)[9]	4 (50.0)[10]	2.016	.365
Level of care (full care)	12 (75.0) / 2	6 (54.5.0) / 1[2]	5 (55.6)[8]	3.527	.474
Overall body condition (excellent hygiene)	12(63.2)/3[2]	9(47.4)/1[2]	7(46.7)	14.476	.070
Overall scene condition (neat-well kept)	10 (50.0) / 8	11 (55.0) / 5[7]	10 (71.4) / 1[2]	14.761	.141
Activity of Daily Living (impaired)					
bathing, getting dressed/undressed	16 (80.0) / 3	6 (31.6) / 6[2]	6 (40.0) / 3	11.617	.020
toileting	15 (75.0) / 4	6 (31.6) / 6[2]	4 (26.7) / 5	11.795	.019
transferring	17 (85.0) / 2	6 (31.6) / 6[2]	7 (46.7)	18.713	.001
ambulation	11 (55.0) / 6	3 (15.8) / 8[2]	3 (20.0) / 1	16.647	.002
eating and hydration	13 (65.0) / 3[2]	6 (31.6) / 5[2]	2 (13.3) / 3[2]	11.955	.018
APS involvement	3 (15.8) / 1	0 (0.0) / 4	0 (0.0) / 4		
Proportion of body sites viewed	76.3 ± 32.2	51.4 ± 36.4	53.0 ± 26.2	6.705	.035
LEAD Findings	n (%) / # with LEAD determination of 'Unable to assess'				
Evidence of Neglect (yes)	6 (25.0) / 12	0 (0.0) / 13	0 (0.0) / 11		
Appropriateness of Investigation (Did not occur and should have occurred)	11 (55.0)	7 (35.0) / 5	11 (73.3) / 1	15.614	.210
Appears to be a natural death, but they should have looked at the body	6 (30.0)	10 (50.0)	11 (73.3)	9.060	.060

1. Pearson's Chi Square for nominal variables (all but 'age' and 'proportion of body sites viewed.') For continuous variables, the non-parametric test independent samples Kruskall-Wallis test was used.
2. Missing data for 1
3. Missing data for 20
4. Missing data for 2
5. Missing data for 5
6. Nine (45.0%) of reported deaths were in private residences.
7. Missing data for 4
8. Eleven (73.3%) of reported deaths were in private residences.
9. Missing data for 1 responsible caregiver
10. Missing data for 2 responsible caregivers

There was consistency between two panel members in their findings (Table 5), with interrater reliability approaching or exceeding the acceptable threshold value (kappa=.8) for all decisions. When disagreements occurred, they held to a pattern: one panel member elected a specific outcome while the other concluded the she was "Unable to Assess" the outcome with the information provided.

Table 5: LEAD Outcomes

LEAD Findings	Geriatrician LEAD Expert	Medical Examiner LEAD Expert	kappa
	N=55 n (%)		
Evidence of neglect			.748
Yes	2 (3.6)	2(3.6)	
No	12(21.8)	16(29.1)	
Unable to Assess	41(74.5)	37(67.3)	
Appropriateness of Investigation			.858
Did Not Occur- Should Not Have Occurred	9(16.4)	8(14.5)	
Did Not Occur- Should Have Occurred	28(50.9)	32(58.2)	
Did Not Occur- Unable to Assess	8(14.5)	5(9.1)	
Investigation Occurred- More Investigation Needed	9(16.4)	9(16.4)	
Investigation Occurred- Unable to Assess	1(1.8)	1(1.8)	
Body maps			.930
Appears to be a natural death, but should have looked at the body	28(50.9)	28(50.9)	
Some evidence of mistreatment, should have looked at the body	1(1.8)	1(1.8)	
Not Applicable	26(47.3)	26(47.3)	

An additional variable was added at the time of the LEAD panel (See Appendix E, at the bottom of the form: "**Regarding the body maps")**. As discussed above, the fact that the reporting party often failed or refused to view the entire body, and that this issue arose at all three sites, though not entirely unexpected, was a concern. The two LEAD experts agreed that the entire body was not viewed, and it should have been viewed to rule out neglect or physical abuse in 29 of the 55 cases. For 37 of the cases (67.3%) the LEAD panel agreed that some investigation (rather than none) or a higher level of investigation than was undertaken was appropriate (e.g., external examination of the body in addition to viewing of medical records).

- **Did use of the ESDFS result in more effective selection of suspicious elder deaths?**

The ESDFS was not effective in that its implementation had no apparent impact on the CME Investigators decision-making processes. However, from the point of view of the LEAD panel, the ESDFS did identify a number of cases that they felt were insufficiently investigated and that the Investigators involved inappropriately ruled out the possibility of a suspicious death.

b. Follow-up data findings

The number and proportion of elder death autopsies in prior six month time periods and those during the six-month pilot implementation of the screening tool were collected from the three participating counties. Given the light use of the survey in the two larger counties, and that none of the ESDFS cases resulted in an investigation at the site or an autopsy, it was not appropriate to look for a background trend effect. Nonetheless, a comparison of 2008 data provided at the outset of the study, with the Dec 2010 through November 2011 data (combined to make one year of data) led to little more than confusion. In some case, the counts provided by the same county were so disparate that it appeared there must have been a radical change in policy or definition of the variables (e.g., one county went from 4505 investigated deaths in 2008 to 604 in 2011, which is inconsistent with the Investigators claims of ever increasing workloads.) However, as a result of knowledge gained in the study, an additional data element (not collected at the outset of the study in 2009) was requested from these three sites: the number of **waived cases that were later selected for investigation**. While one site (the smaller county) counted none of these, the other two counties indicated there were 75 in one county and 103 in the other. These were 1.3% and 6.9% of the total waived cases for the same time period in those counties,

respectively. They indicate that **current screening methods are porous, letting through cases that should be investigated at the outset.** Of even greater concern is the **waived cases that should have been investigated and were never discovered.**

c. Satisfaction Survey findings

i. Analyses of the responses to the Satisfaction Survey structured interviews

Two CME Investigators who used the ESDFS throughout the six-month pilot commented on its contents and usefulness.

The ESDFS items

One CME Investigator commented that the questions were all "good questions" that "we usually ask," but that the form was useful in reminding him/her about each topic. Another stated: "I will probably incorporate some of the questions into my routine." The Investigator had not routinely asked about decubitis ulcers (bedsores) before and will from now on. The body map was new, and one investigator mentioned finding it "irritating," but also that it changed how s/he gets information now. S/he still does not ask about every site, but is **more careful to ask about the whole body**. The level of detail for **ADLs** was also new to the investigator and s/he liked "they were broken down" "**to figure out where a caregiver may have been lacking in caring for this person**."

Suggested changes to the ESDFS

Regarding missing content, one investigator suggested adding **a question about pain medications**, or any indication the decedent had been given too much medication. Added information about the type of caregiving, specifically **if the decedent was in a skilled nursing facility, assisted living, or at home** would be pertinent to understanding the level of care. The same investigator was not interested in whether the caregiver was paid or unpaid.

Reporting parties and the ESDFS

The ESDFS was called "a **good training tool for all reporting parties** as well." An investigator mentioned that it can be **difficult to get the reporting party to "roll the body**" especially if the decedent was "very overweight and they can't move them." However this situation did not trigger any further investigation.

ii. Analyses of the responses to the Alternate Satisfaction Survey structured interviews

After the pilot study ended, the Research Nurse conducted interviews with CME Investigators who did not cooperate with the pilot study or who stopped using the ESDFS after a short time. Several themes emerged.

Issues related to reporting parties

- Body maps are appropriate for medical people, but not for police officers reporting deaths.

- **Reporter** variation, that is, the person reporting the death was so variable and **rarely knew the answers to the questions.**
- The screening questions are not known by the reporter, but require investigation, so they are not appropriate for screening. That is the "screening" questions were actually more investigatory and **required more diligence and expertise to complete than the reporter could or would provide.**
- Some police do not look at bodies, making the body map nearly impossible to complete.

Resistance to looking for caregiver neglect

- **Neglect is not a reason to take jurisdiction according to their codes**. That is, they have a list of reasons that they should take jurisdiction over a death, and on that list, neglect is not listed.
- **Even if neglect present, it is not the cause of death.** That is, although neglect may be obvious, the person died of a natural cause, so there is no reason to take jurisdiction.
- Neglect is a matter of opinion. CME Investigators felt that **neglect was difficult to quantify or even prove, so it wasn't worth investigating.**
- Self neglect: many coroners mentioned that **self-neglect was prevalent** and not something worth further investigating.

Workload issues

- There was a **lack of time** to complete form
- Case load: the coroners felt they had **too many cases already**, so they are disincentivized to pick up extra cases, especially **if there is a likely natural cause** behind the death.
- **Burned out**: In general CME Investigators mentioned that they were burned out and used the interview sessions as a therapy session to vent about how overwhelmed they feel.

Workflow issues

- There was a lack of understanding of the research team of the workflow in the office and the reporting site. That is, many of the CME Investigators felt that the **survey did not fit into the normal workflow**/method in which they take down their information, making it cumbersome. For example, one of the counties does all of their interviewing via an electronic system and the paper nature of the survey was inconvenient.
- The form was redundant. That is, the Investigators felt as though they already asked the questions that were present on the survey, so it did little to add to the data they already collect.

Other

- They questioned the purpose/ownership over the study. Some of the CME Investigators felt that they had **little understanding of how this study would help them become better investigators or how it would help society as a whole**.
- They expressed a general sentiment about elderly people: how they act and how they die. In general, some of the CME Investigators **place less value on elderly people and felt resources should not be put towards investigating their deaths**.

- **Which ESDSF questions were most effective in selecting suspicious elder deaths for investigation by county coroner's offices?**

None of the questions were found to be ineffective, since all were triggered (with the one exception of "matted hair"). Some were redundant with the participating offices current screening procedures, and this was a flaw in implementation, which probably could not have been avoided in a pilot project. Ultimate integration of the ESDSF could not be assumed, and therefore disruption of current procedures would have been too intrusive for a functioning agency. Those who used the ESDFS remarked on the body maps, decubitis ulcers and ADL questions as changing the way they collect data from reporting parties.

From the perspective of the LEAD Panel, the body maps were most effective in uncovering a gap in the current process for selecting suspicious elder deaths. There were only three cases reviewed by the LEAD for which one or both panel members cited "Evidence of Neglect." These cases triggered multiple ESDFS items (Appendix C) related to the conditions at the 'Scene' and of the 'Body' (e.g., scene: unsafe, very cluttered, unsanitary condition, unpleasant smell; body: dirty clothing, feces present, urine soaked diaper, untrimmed nails, poor hygiene).

V. Discussion

The ultimate goal of this project was to recommend improvements to the process by which coroner's and medical examiner's offices decide to assume jurisdiction over suspicious elder deaths. The project called for a solution simple enough to be broadly applicable in diverse settings: county CME offices. In addition, the project attempted to address a related, but secondary issue: the lack of a data repository for both studying this issue and evaluating the effectiveness of attempted solutions. For this reason, **a secondary goal was to build a body of information on suspicious elder deaths to aid in describing the current state of elder death investigation and provide a foundation for suggesting and testing improvements to the system.** The study sites were the geographical, socioeconomic and culturally diverse counties of California, each with its own CME office.

The project was conducted in two phases. Phase one addressed the secondary goal by collecting data and conducting phone and site interviews. It was designed to set a baseline for elder suspicious death data from CME offices in CA and to understand current processes for deciding to take jurisdiction of cases. Among the deliverables for phase one was a draft screening tool, the ESDFS, for improving the process. Forty six (79%) of CA CME offices cooperated with the study by participating in a phone interview. Thirty CME offices (52%) provided data. Five of these agreed to and hosted site interviews that further elucidated the processes currently in place in these offices. In phase two, three of the five agreed to pilot test the ESDFS for six months, and at the conclusion interviews were conducted to assess the feasibility of using the ESDFS and what was learned from the pilot project about taking jurisdiction for suspicious elder deaths. Finally, an expert panel reviewed cases that were part of the pilot study to assess whether investigations had been conducted as they deemed appropriate.

There are three major areas for discussion. **Some of the lessons from the study derive from the data** collected in Phase 1 and from the pilot study counties at the end of Phase 2. **Lessons about the Improving the process of assuming jurisdiction for elder deaths** emerged from interviews as well as from the pilot study cases. Finally, **the ESDFS is evaluated as a tool** for use by CME offices to assist in making the decision to assume jurisdiction over an elder's death or not.

A. Lessons from CA CME data

This study made the first known effort to effort to consolidate and compare data on elder death investigations from individual counties in California. The lack of standards for the information was clearly an impediment to the effort. The diversity in processes and practices that could contribute to variability associated with death investigation were evident from interviews with employees from counties that provided data. Some counties lacked automation and were unable to provide data efficiently and therefore declined to do so. Others, downloaded data on elder death investigations from their computerized systems, but there was little replication in types of systems across those counties.

Slightly more than half of the CA CME offices provided data to the study. To a large degree it is clear that the scarcity of data was due to lack of automation of administrative systems for maintaining it. In addition, the degree of automation affected how much data each county provided and the lack of consistency in the data across counties (e.g., manner and circumstances of death) affected the ability to consolidate the data for meaningful comparison. It is less clear, but highly likely that a lack of commitment to the project kept some CME offices from providing data. Given that the project had the support of the state coroner's association, increasing workloads coupled with staff reductions, a frequent topic in structured interviews, are the most likely factor affecting cooperation with the researchers. Regardless, the data that were provided clearly demonstrate some initial findings about CME offices in CA and their handling of reports and investigations of elder deaths.

Most of the study questions addressed with the collected data relate to comparability and variability across counties, such as the proportion of deaths investigated and autopsied and the distribution of autopsy outcomes. Measurable factors potentially contributing to the variation were also requested and coded from interviews so that their association with the data (adjusted for each county's elder population) could be investigated in statistical tests. A state with California's range of demographic differences across counties, especially their population size and density, will always produce variation in elder death data, and the smallest counties with low elder populations may report significant variation from year to year as well. As expected, the counties reported organizational (i.e., Coroner or Medical Examiner or hybrid organization; reporting structures) and staffing variation (e.g., types and number s of positions; dedicated or mixed responsibilities; employed or contracted) from county to county. However, their impact on the data was not detectible in statistical analyses, except that that county population size (categorized as small, medium and large) was associated with staffing and numbers of autopsies classified as homicides. The type of screening or decision process leading to investigation was not easily categorized, so that analysis of the impact of decision processes on the data remained unclear. The very wide range of counts of investigations, autopsies and outcomes of autopsies that were reported was not explained by the analyses.

An unanticipated and still poorly understood source of variation in the data is the lack of standard definitions of some data elements. That autopsy findings do not adhere to standard options within categories is known,(Schraeder et al., 2006) but the investigators for this study found indications that counties may also define 'investigation' in different ways, given that there are levels of investigation that can be undertaken. Is an investigation a case that results in phone research, medical records review, investigation of the site, viewing of the body, autopsy or toxicology, or some combination of these? It is entirely possible that some of the variability in the proportion of investigations of elder deaths to the number of elder deaths across counties is due to the fact that the agencies count investigations based on different definitions. Similarly, the number of autopsies or homicides per investigation is affected by the scope of the investigation counts. There was additional evidence that data were not comparable

across counties: the counts of the separate "causes of death" added up to be consistent with the total number of autopsies in most counties, but not all of them. These findings indicate the need for a future study to systematically address this issue of the inconsistency of CME agency data.

Only a few counties maintained data to track the ultimate outcomes of autopsies that are found to be homicides. One quarter of participating agencies said that the interest in prosecuting these cases is low to medium in their county, a potential disincentive for them to investigate suspicious deaths. Another 11% refused to comment when asked about interest in prosecutions in their county.

All these issues contribute to variability in consolidated data, and qualify any conclusions drawn from them. The wide variation in the proportions of investigations and autopsies is at least consistent with the concurrent finding that the structure and function of the agencies and their decision processes also vary.

Some key findings from CA CME data

Although the consolidation of CA CME may have raised more questions than it answered, a few findings were relevant especially to the ultimate goal of improving the process for detecting elder suspicious deaths.

1. CME offices are not collecting data on abuse or neglect as the cause of elder's deaths. Such findings are said to be included among the homicide counts. A policy of counting occurrences of abuse and neglect causing or contributing to an elder's death could raise CME investigators consciousness of these events.

2. There are counties in CA who have a policy of allowing doctors to sign off on an accidental death not requiring autopsy, for example an elder's death thought to result from a fall. On the other hand, it appears that all victims of motor vehicle accidents are autopsied. Perpetrators of physical elder abuse have been known to claim that injuries they inflicted are due to the elder falling (A. Wiglesworth, Kemp, & Mosqueda, 2008). The science for discriminating between inflicted and accidental injuries in older adults is limited, and it is unlikely that most physicians are aware of it (A. Wiglesworth et al., 2009). In addition, that some physicians sign death certificates despite suspicious circumstances is a known problem (Orange County CA Elder Death Review Team, 2003-2008). Although more science is needed, the counties who fail to autopsy all accidental deaths may be missing some physical abuse cases that appear to be accidental. Indeed investigation of these cases is an opportunity to advance the science for discriminating elders' accidental deaths from homicides.

3. The three counties that participated in the pilot study were asked to provide data on the number of waived (NJA) cases that were later investigated during a one year period (December 2010 – November 2011). This happens when evidence emerges that leads CME agencies to reclassify a waived case as a suspicious death. The implication is that with better screening at the time the death was reported, an earlier and potentially more effective investigation could have occurred (e.g., a perpetrator had time to disturb the scene of a homicide). The two larger of the three counties reported significant counts of these cases (1-7% of investigated cases). Of course, the number of waived cases that should have been investigated but never came to light is unknown, and high profile cases(Glover, 2008) as well as Elder Death Review Teams have drawn attention to this concern.(EDRT Report Subcommittee, 2006)

B. The deciding which deaths to investigate

This study begins to address the lack of published information regarding how CME agencies decide to take jurisdiction of an elder death. Both phases of the project shed light on some key issues in the process. Perhaps the most useful lesson involves the poor understanding by CME investigators of the role that neglect by a caregiver can play in elder deaths. Their **attitudes regarding neglect** are clearer as a result of this study. In addition, the researchers learned of the **crucial role played by the reporting parties** and some impediments to gaining information from these key sources of information to support the CME decision. Important information for the decision is gained from **viewing the body** and yet this study discovered it is common practice to release a body for burial without either the reporting party or a CME investigator viewing the entire skin. Other impediments to investigation of suspicious elder deaths include the **expectation that elders die natural deaths** and **overworked investigators**.

1. CME Investigators attitudes toward caregiver neglect

Many CME Investigators see a finding of caregiver neglect causing or contributing to an elder death as either impossible to detect, or not within their purview. Some evident signs of neglect on the body include decubitis ulcers (bedsores), malnutrition and dehydration. Adding confusion to this evidence are the fact that self neglect is not uncommon, and yet only neglect by a responsible caregiver is criminal. Based on interviews, Investigators were inclined to handle this confound by assuming that evident neglect is self-neglect rather than investigating for signs that it is criminal neglect or not. As for malnutrition and dehydration, they also accompany deaths not involving neglect, and require laboratory testing to verify their presence. Although death by starvation requires investigation according to the regulations, no interviewees mentioned signs of starvation as a trigger for an elder suspicious death investigation. Indeed, even decubitis ulcers frequently are not investigated when they are reported. Some interviewees admitted that they leave it to the reporter to tell them about bedsores rather than asking about them, and others said (correctly) that bedsores are not necessarily indicative of neglect, and for this reason they often do not investigate when there is a bedsore.

A direct question about investigating potential neglect cases was met with confusion and resistance. Some objections were due to the difficulty of identifying these cases as separate from natural death and self neglect cases (and therefore investigating all these cases would greatly increase the number of investigations.) Some interpreted the regulations as not requiring them to investigate neglect cases. Indeed caregiver neglect is not listed specifically in the regulations, and some “reading between the lines” may be required. Clearly the reasoning that they are not required to investigate neglect is flawed in that homicides can and do occur due to caregiver neglect.

It is interesting to note that 35% of the counties that participated in the interviews and all of the counties that allowed site visits had EDRTs. Much of what is known about elder death by neglect has been discovered by these multidisciplinary teams (County of Sacramento Elder Death Review Team, 2008; Orange County CA Elder Death Review Team, 2003-2008), and yet this research found limited awareness of potential evidence of caregiver neglect and resistance to detecting and investigating these cases at the time of the death report.

2. The role of the reporting party

CME interviewees were often frustrated with the poor cooperation of the reporting party at the scene, and yet they "rely heavily" not only on the cooperation of reporting parties but also on their expertise.

CME offices were united in their agreement that they are dependent on the information provided by reporting parties as they make the decision to take jurisdiction or not. Some assumed that medical personnel were knowledgeable and would report evidence of abuse or neglect without being prompted to do so. Law enforcement were sometimes described as competent at investigating the scene. And yet, there is no reason to expect that these individuals have any special knowledge of elder abuse and neglect. (Harruff, 2008) Indeed, CME Investigators complained that some reporting parties are not trained to provide good information at the death scene. During the ESDFS pilot study, some reporting parties refused to cooperate with being questioned about signs of neglect, perhaps indicating a lack of unawareness of the importance of their role or of the potential for abuse and neglect to occur.

3. Viewing the body

"Viewing the body" emerged an important and a difficult issue. Reporting parties are within their rights to refuse to view the entire body, and disturbing a scene of death that may be a suspicious death may not be the best strategy. However, given that there are not adequate CME resources to investigate every death, having the reporting party uncover, remove clothing and roll over the body to look for signs of abuse or neglect could be the best choice. However, first responders are not trained to be comfortable and competent in this role. Realistically, investigations are seldom if ever triggered when a older adult's body has not been viewed, and suspicious deaths are going undetected. A compromise is needed, and the most efficient choice is to have the person already at the scene report on the condition of the body. Training, perhaps even certification, for this role should be made available to those professionals who are put in the position of reporting deaths. The training should include recognition of evidence of abuse or neglect at the site as well as on the body.

4. Expectation that elders die natural deaths

The CME investigators shared that deaths of younger adults and children are more likely to warrant investigation because of their untimely nature. When elders die, and there is a likely natural cause due to prior disease, their decision is weighted toward release of the body rather than investigation. This study found that this logic, assuming that a death is natural rather than confirming that it is, was used even in the face of evidence that could be attributed to a suspicious death (e.g., advanced bedsores) or failure of the reporting party to view the entire body to rule out a suspicious death. Elder homicides will go undetected as long as the underlying assumption that elder deaths are natural deaths remains unchallenged, a finding that is not unique to this study. (Cherpitel, 1994)

5. CME workload

Some CME Investigators told us that they had "too many cases already," or that they were "burned out." They talked of increasing workloads and staff reductions. On the other hand, there was no reason to doubt the CME Investigators commitment to the important work assigned to them. It is likely due to the scarcity of resources to conduct investigation that CME Investigators make decisions that reflect aging bias and rely on inadequate information.

C. The ESDFS pilot study

Phase two involved implementation of a screening tool, the ESDFS, in three CME sites. The tool was designed to collect information that could indicate that caregiver neglect had contributed to the elder's death, thus triggering further investigation. In the three counties, CME investigators took calls reporting deaths and made the NJA decision. All of them were trained to use the ESDFS after completion of their normal decision process. Many of them never used the tool or abandoned use of it soon after the project commenced. The evaluation of the ESDFS's feasibility and usefulness is based on the Investigators comments in interviews about the form and its implementation as well as on the data collected on the form itself.

Those investigators who abandoned use of the ESDFS complained about the time it required and its lack of integration into their work process, for example, because it was a paper form and they conducted most death report calls using an online system. They did not feel obligated to participate in the pilot study and some stated that they saw little benefit to their work or to the greater good. Some stated that some ESDFS items were redundant with their current screening process.

When a reporter was in the hospital rather than at the scene of death in a residence, that reporter knew little about the decedent and could not answer the questions. When some reporters had no medical experience, the questions were perceived as too challenging.

Some CME Investigators described the body maps for indicating which parts of the body were viewed both as "irritating" and inappropriate for the level of training of non-medical reporters. The irritation with the body maps may have been due to their detail (36 sites on the anterior and posterior body), or due to the failure of reporting parties to view the entire body for a large proportion of reported deaths. It is hoped they also gave the CME Investigators an opportunity to reflect on and document what they did not know about these cases, and that they routinely are required to make decisions based on incomplete information.

Although the sensitivity and specificity of the ESDFS could not be assessed given that it triggered no site investigations or autopsies, it's clear that it registers suspicious circumstances that the LEAD panel felt should have been investigated. In this respect and **for this study, the ESDFS was more useful as a data collection instrument for understanding how CME agencies deal with information about potential elder neglect than as a screening tool to assist them in doing their work**. Until CME offices decide that the screening process needs to be more focused on caregiver neglect, no true test of the usefulness of the ESDFS can take place. In that event, the contents of the ESDFS could be automated and integrated for the best workflow with any duplicate items eliminated, decision trees to skip items that are not applicable, and missing data controlled through electronic editing at data entry. A more efficient means of establishing how much of the body has been viewed could be automated as well, including the option to forgo the level of detail required with the paper form under appropriate circumstances.

VI. Limitations

The CME function in one state, California was studied, and although there is diversity in the implementation of this decentralized function, the findings may not extend to other jurisdictions. Twelve of 58 CA county CME agencies chose not to participate in this study. Limitations in the data

provided by the other 46, discussed at some length above, necessarily limit any conclusions drawn regarding the variability in investigation workloads among CME agencies in CA.

Poor participation in the pilot study precluded the validation of the screening tool developed as a part of this study. For those who did participate, the failure of the screening process to trigger any investigations or autopsies meant that the specificity and sensitivity of the questions in identifying cases that should be investigated could not be calculated.

Many of the findings are from qualitative data collected in interviews. Qualitative analyses are appropriate early in the cycle of a new area of research. Transcribed interviews were fully analyzed by 'raters,' with a single rater analyzing site interviews and another single rater analyzing Satisfaction Survey interviews.

VII. Conclusions, Recommendations and Future Directions

The findings from this study are robust based on the cooperation of 79% (46) of CA CME offices in phone interviews, 52% (30) sharing data on elder death investigations, and five of these hosting site visits. They are also limited by the poor cooperation of two out of three sites involved in a pilot study. The findings from the interviews and data uncovered a number of areas that could be addressed to improve the process for assuming jurisdiction of elder suspicious deaths. The lack of cooperation in the pilot study is itself a key result. CME offices appear to have neither the resources nor the knowledge to deal with the issue of deaths involving elder abuse and neglect. That the two sites dropped the study after previously committing to it supports an overall finding that CME offices are not in a position to cope with investigation of deaths that involve elder abuse and neglect. Detection of elder mistreatment post mortem is problematic in part because the resources are inadequate and the personnel poorly trained for the purpose, but also, and perhaps primarily, because the science of differentiating abuse and neglect from natural causes of death is in its infancy. The prevalence of these occurrences is unknown and as long as they go undetected, it will remain so. That CME offices will need more resources and training to do the job "right" is clear, but unless the science of detection is advanced, those resources will never be sufficient and the shortcuts and inverted logic that go into decisions not to investigate deaths that could be suspicious is likely to continue.

At least one other country has developed standards that improve communication and data collection about death investigation (*Data Dictionary for the National Coroners Information System: Version 2,* 2007). As long as the CME function remains decentralized in this country, it is not clear that there is an incentive to address this issue here. However, the drawbacks in the current CME system have been drawing media attention (Thompson, 2011), and one can only hope that concern about undetected elder homicides will also draw the attention of funding sources and enter the national consciousness as well.

The following recommendations were derived from the results of this study.

- Adequately fund CME agencies so that they can afford to take a proactive position toward investigating suspicious deaths of older adults.

- Promote research and other initiatives that move in the direction of standardizing definitions for language CME agencies use to describe death investigations.

- Require CME offices to investigate when an elder death is apparently due to an accidental fall.

- Modify the regulations if necessary to make it clear that CME offices are responsible for investigating deaths when caregiver neglect is suspected.

- Introduce regulations that require CME offices to report the number of investigations that result in findings that elder abuse or caregiver neglect of an elder caused or contributed to an elder's death. Otherwise encourage CME agencies to develop more aggressive decision criteria for finding elder abuse or caregiver neglect.

- Train CME investigators to recognize signs, symptoms and factors associated with abuse and neglect of older adults. Examples of these are prior APS reports of financial abuse and presence of a caregiver (especially a paid caregiver) concurrent with other evidence at the scene or on the body.

- Promote communications between CME and APS offices, similar to the programs already implemented in many locales that have an EDRT. CME staff needs to be able to find out quickly if any older or disabled decedent was an APS client, and a history as an APS client should trigger further investigation.

- Train first responders, hospice and hospital staff who report deaths so that they understand the reasons for and importance of viewing the body and the other information they provide to CME staff. Focus the training on signs of elder abuse and neglect and viewing the body. Consider certification of the death reporting function as a long term goal.

- Eliminate impediments to having the reporting party uncover and turn over a body. When no one views the entire body for signs of abuse and neglect such as inflicted injuries and bedsores, cases of abuse and neglect are missed or detected too late to recover evidence at the scene.

- Fund research that partners with CME offices to discover prevalence of elder abuse and caregiver neglect contributing to or causing and elder's death and advances the science for discriminating elder's natural deaths from homicides due to abuse and caregiver neglect.

VIII. Implications for Criminal Justice Policy and Practice

The current study has produced significant new insights into understanding how CMS offices deal with elder deaths, and determining which deaths are suspicious enough to warrant investigation. It also pilot tests a screening questionnaire for improving the way decisions are made to investigate elder deaths, specifically by targeting potential evidence of caregiver neglect. Without timely evidence - death scene investigations and autopsy reports - homicides that are difficult to prove cannot be brought to justice. Suspicious elder deaths due to abuse and neglect of vulnerable older Americans are being systematically ignored by most CME agencies. The study findings include recommendations that will alter CME and first responder policies and practices from the bottom up, including suggested regulatory changes. This study documents current practices that overlook potential suspicious elder deaths and suggests further basic

detection research as well as training for reporting parties and CME Investigators so that they may better detect these crimes.

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Coroners Final Report Appendices

APPENDIX A – Phase 1 Phone Questionnaire

APPENDIX B – Structured Interview Questions (Phase 1 Site Visit)

APPENDIX C – Elder Suspicious Death Field Screen

APPENDIX D - LEAD Panel Procedures (Phase 2)

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APPENDIX H - Government Code

APPENDIX I – Site Visit Qualitative Analysis

APPENDIX J- ESDFS Item Endorsement

APPENDIX A
PHASE 1 PHONE QUESTIONNAIRE

QUESTIONS ABOUT THE Participant

1) Please provide us your age and sex.
2) What is your title?
3) What is your highest degree attained?
4) How many years have you been working at the County Coroner's office?

QUESTIONS ABOUT Staffing:

a) Does your office employ forensic pathologists and forensic nurses?
b) If so, how many?
c) Would you characterize your agency as a Coroner system or a Medical Examiner system?
d) How many coroner investigators are employed within your office? (Coroner System)
e) How many medical examiner investigators are employed within your office? (Medical Examiner System)

QUESTIONS ABOUT ORGANIZATIONAL HIERARCHY AND POSITIONING WITHIN COUNTY GOVERNMENT:

1) Can you provide us with your organizational hierarchy?
2) What is the reporting structure within your county office?
3) Is your office co-located with the Sheriff's Department?

PHONE SURVEY INSTRUMENT:

1) Who receives the call about a death and who decides the next step?

2) How do you decide whether or not to dispatch an investigator to the scene? Do you currently have a screening process to make that determination? (If yes, ask if the process is written or formalized, if so, then ask if we can obtain a copy. If no, ask "If you were able to have something (like a checklist of red flags) to be used as a tool to help you make such determination, will you be willing to use the tool?")

3) What are the factors that trigger a field investigation?

4) When a case is not suspicious, do you call upon APS to help you decide on how to proceed with the investigation of an elderly death?

5) Do you have an Elder Death Review Team? If so, how often does it meet?

6) Do you collect on any standard information on reported deaths? How do you store it? (Computer versus paper file).

   (If the answer is computer, then ask "What database do you use? Can your database provide the following?"

   Note: The research nurse will ask who to call at a later date to provide the data or give them the option to complete an online survey).

7) What level of interest do you think the prosecutors in your county have in prosecuting cases that you deem to be suspicious? Low, Medium, High?

8) Have you or someone in your office attended a Coroner's Elder Death Investigation course?

APPENDIX B
STRUCTURED INTERVIEW QUESTIONS (Phase 1 Site Visit)

1) a) Please take me through the process for taking down information about a reported death?

   Alternate wording: When a report comes in, what information do you always ask for?

   b) Can you please show me logs, intake forms or computer data screens used for intake?

   Alternate wording: Can you please show me how you log the information at intake whether it's on a paper or on a computer, or both?

2) What questions or types of questions do you ask about the decedent; what about the scene?
   a) Does your office ask the same questions for each death report?
   b) If yes to (a), do you have a written copy of those questions?
   c) Does your office ask any special questions in the case of an elder death report?

3) Please tell me how your office determines if a reported death needs to be investigated?

4) Please tell me how your office decides whether or not to send a coroner investigator to the scene.

5) Are you satisfied with the way your office handles elder death investigations?

6) Assuming that the decedent was in frail condition with many medical problems, what questions do you ask to determine whether the death could have been hastened by neglectful care?

7) If we were to implement an Elder Suspicious Death Field Screen (ESDFS) at your office, are you willing to support its implementation and data collection? If yes, what is an acceptable number of questions to include in an ESDFS?

8) The data we have shows that you collect information on the following (present data that was shared during the phone interview), has there been a significant change in the way you collect and store data from last year? If the answer is yes, Can you please discuss with me the changes you have implemented?

If an EDRT is available and open to a visit:

1) What is their perspective on the decision for coroner investigations of suspicious elder deaths? What have they learned about this issue and what recommendations have been implemented?
3) Are they interested in participating in an evaluation of the ESDFS?
4) How frequently do they meet?

APPENDIX C
ELDER SUSPICIOUS DEATH FIELD SCREEN

CASE TYPE AND NUMBER: _____ **C/ME INVESTIGATOR CODE: _____**

This form is to be used by ME/coroner investigators when they are fielding information about a reported death of a person aged 65 or older: specifically, a verbal (generally telephone) initial report from whoever is at the scene.

1. CAREGIVER

a) Is there a responsible caregiver?

- ☐ **Yes**
- ☐ **No**
- ☐ **Unknown**

If "YES," relationship of the caregiver to the decedent:

Paid

Unpaid

b) What is the level of care being provided by the caregiver?

- ☐ **Full care**
- ☐ **Assisted Care**
- ☐ **Unknown**

Rate the "helpfulness" of the item in determining whether neglect or abuse occurred		
1 Not Helpful	2 Helpful	Comment:

2. SCENE

a) CHECK ALL THAT APPLY

- ☐ **UNSANITARY CONDITION (very dirty, unwashed dishes, trash, litter)**
- ☐ **UNPLEASANT SMELL (rotting food, human waste or animal waste)**
- ☐ **VERY CLUTTERED**

Rate the "helpfulness" of the item in determining whether neglect or abuse occurred		
1 Not Helpful	2 Helpful	Comment:

b) How does the house look?

(Please circle the appropriate response using the scale below.)

Neat/Well Kept		Poorly Maintained		Unsafe		Unable to Assess
0	1	2	3	4		5

3. BODY

a) CHECK ALL THAT APPLY

- ☐ **Matted Hair**
- ☐ **Dirty Clothing**
- ☐ **Unpleasant odor (urine and fecal odor)**
- ☐ **Long, dirty untrimmed nails (hands and feet)**
- ☐ **Feces present**
- ☐ **Urine soaked diaper/clothing**
- ☐ **Very thin**
- ☐ **Broken skin (includes open sores)**

  (If checked, please fill out the information below)

  Location(s): _____

  Size (describe, for example: "the size of an orange"): _____

  Description (color, odor): _____
- ☐ **Marks or discolorations on the body**

  (If checked, please fill in the information below)

  Location(s): _____

  Size (describe, for example: "the size of an orange"): _____

  Description (color, odor): _____

Rate the "helpfulness" of the item in determining whether neglect or abuse occurred		
1 Not Helpful	2 Helpful	Comment:

CONTINUATION #3.

b) How does the decedent look?
(Please circle the appropriate response using the scale below.)

Excellent Hygiene	Adequate Hygiene	Inadequate Hygiene		Very Poor Hygiene		Unable to Assess
0	1	2	3	4		5

4. ACTIVITIES OF DAILY LIVING

a) Did the decedent need help with bathing, getting dressed or undressed?

☐ **Yes No**
☐ **Unknown**
☐

Rate the "helpfulness" of the item in determining whether neglect or abuse occurred		
1 Not Helpful	2 Helpful	Comment:

b) Did the decedent need help going to the bathroom?

Yes No
☐ **Unknown**
☐

c) Did the decedent need help moving from chair to bed, bed to chair or from a sitting to a standing position?

Yes No
Unknown
☐

d) Did the decedent use a cane, walker or a wheelchair?

☐ **Yes** **If "YES" please fill in the information below:**
No **TYPE (Cane, wheelchair, walker):**
LOCATION (where was the cane, wheelchair or walker?
☐ **In close proximity to the decedent? Yes No**
☐ **DISTANCE in relation to the body:** _____

Unknown

e) Did the decedent need help with eating and drinking fluids? ☐ ☐

Yes No
☐ **Unknown**

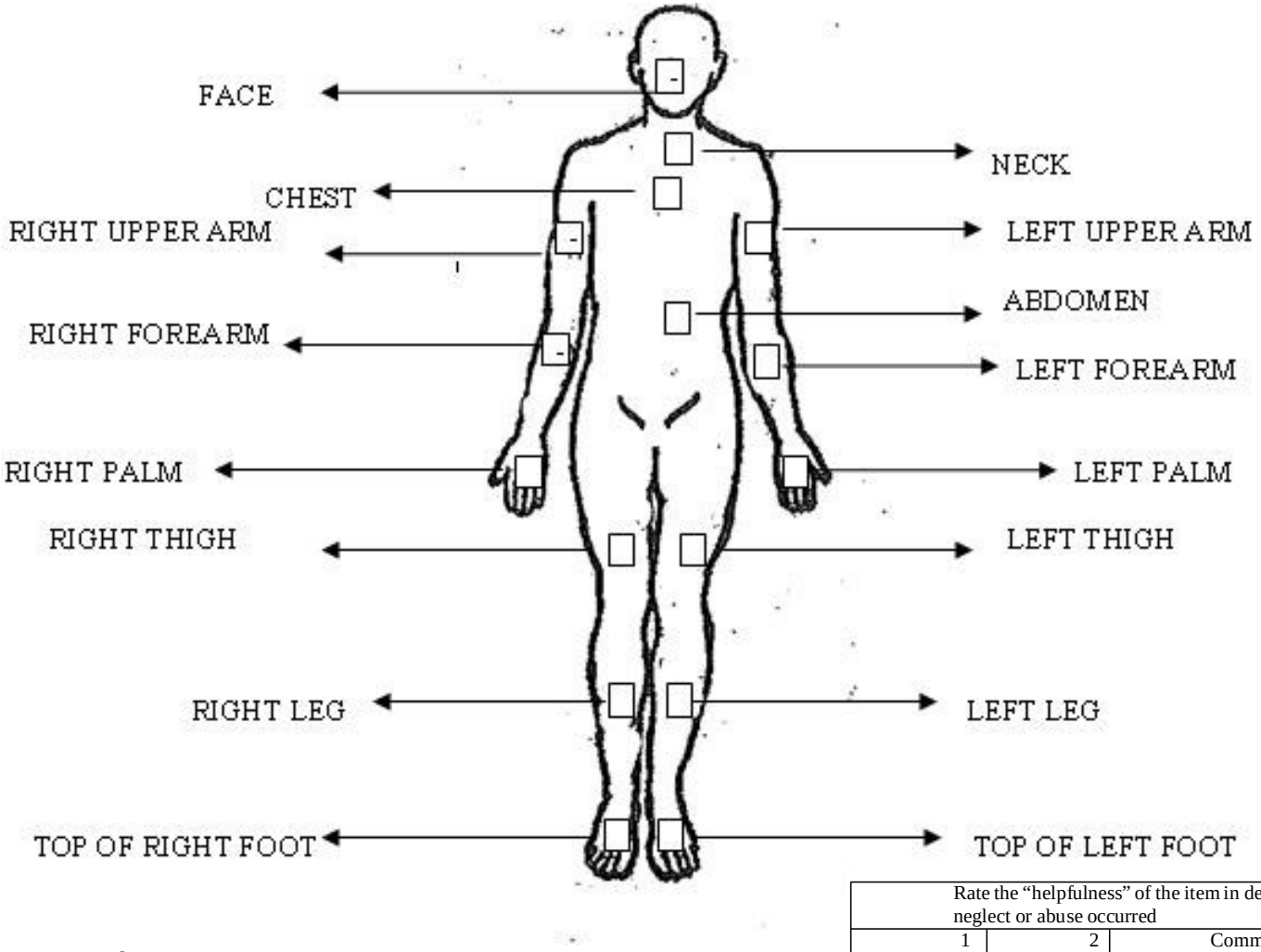
f) Are you aware of any Adult Protective Services (APS) involvement?

☐ **Yes**
☐ **No**
Unknown

☐
☐
☐

BODY PARTS EXAMINED

Anterior View



Rate the "helpfulness" of the item in determining whether neglect or abuse occurred		
1 Not Helpful	2 Helpful	Comment:

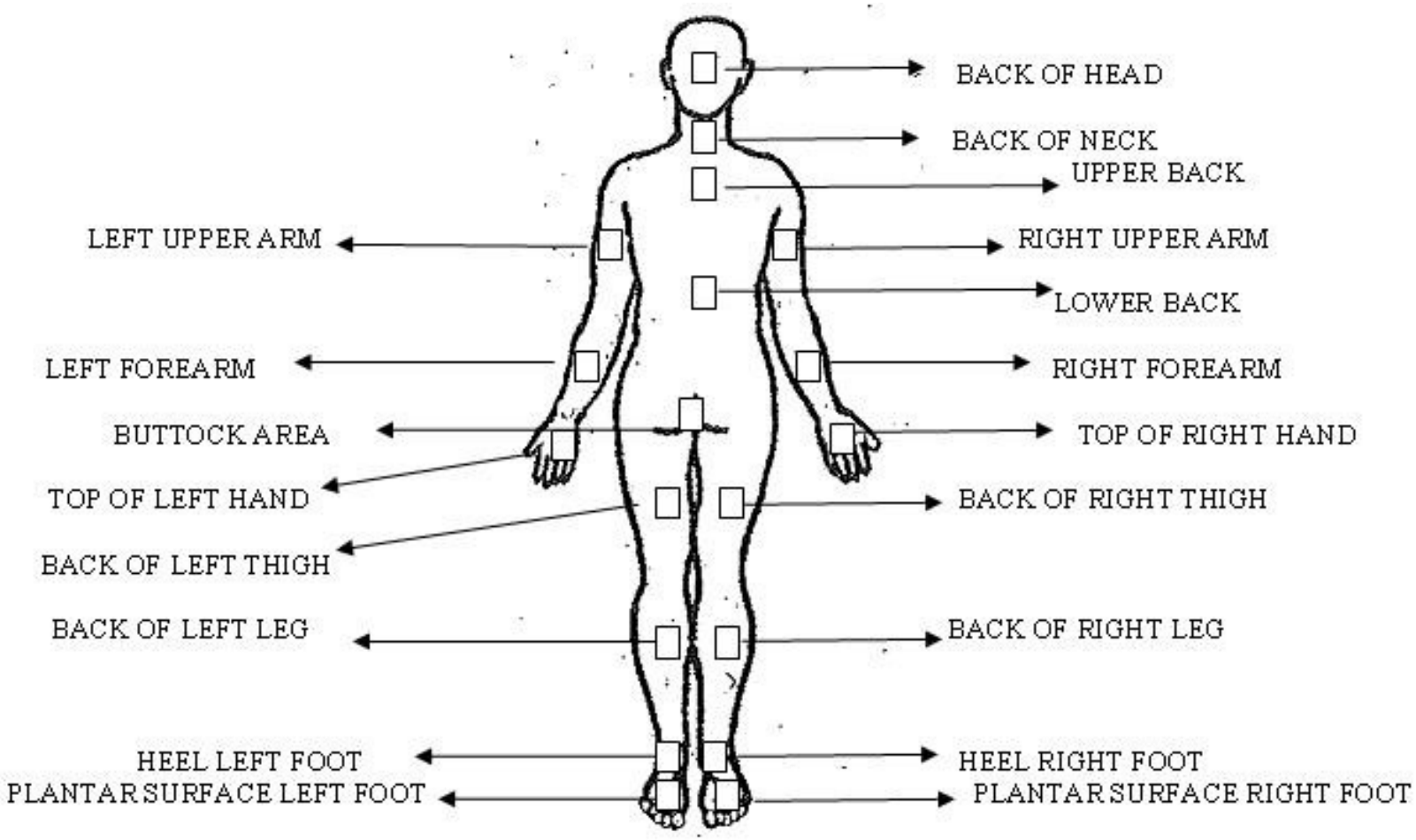
Please indicate the following on the Body map

a. **Mark with a check (√) each body part viewed by the reporting party**..
b. **Mark with an "R" if the reporting party refused to look at or examine the body part.**
c. **Mark with a "U" if the reporting party was unable to view or examine the body part.**

Rate the "helpfulness" of the item in determining whether neglect or abuse occurred		
1 Not Helpful	2 Helpful	Comment:

BODY PARTS EXAMINED

Posterior View



Please indicate the following on the Body map

a. **Mark with a check (√) each body part viewed by the reporting party**.
b. **Mark with an "R" if the reporting party refused to look at or examine the body part.**
c. **Mark with a "U" if the reporting party was unable to view or examine the body part**

References

Orange County CA Elder Death Review Team. (2003-2008). *Case recommendations.* (). Santa Ana, CA:

d.

APPENDIX D

LEAD PANEL PROCEDURES (Phase 2)

I. <u>The LEAD decision: Appropriateness of an Investigation (select one):</u>

1. **If a case was investigated, was it appropriate that it was investigated?**
2. **If a case was not investigated, should it have been investigated?**
3. **If a case was investigated, should more investigation have occurred?**

II. <u>"All Data"</u>

1. **The intake information for the case**
2. **The investigation file if the case was investigated**
3. **The ESDFS responses and any comments written on the ESDFS by the person who filled it out**

NOTE: LEAD PANEL –reviews all the evidence from the ESDFS, intake and or case file and makes the decision about the appropriateness of investigation

III. <u>The study sample (20 cases per county that were screened with the ESDFS)</u>

(The ESDFS was used after the current screening procedures and it was not used for any cases being investigated due to the current screening procedures.)

1. All cases in the pilot study (that is for which there was an ESDFS) that were investigated (up to 10 per county).
2. Random sampling of cases (10 or up to a total of 20 including investigated cases (1)) that
   a) have "Responsible Caregiver" checked as yes (paid or unpaid, full care or assisted care).
   b) triggered any of the "check all that apply" on "SCENE" and an overall score of 2 (Poorly Maintained) or greater.
   c) triggered any of the "check all that apply" on "BODY" and an overall score of 2 (Inadequate Hygiene) or greater.
   d) Body maps indicate body parts not visible

IV. <u>Conceptual Definition for an Appropriate Investigation of an Elder (age 65 and above) Suspicious Death:</u>

An appropriate decision for assuming jurisdiction occurs when evidence indicates the death may have occurred in suspicious circumstances, or when there is insufficient information to make that decision.

V. <u>Operational Definition of an appropriate decision for assuming jurisdiction of an elder suspicious death (conducting an investigation) or not.</u>

<u>An investigation was or would have been appropriate if:</u>

A. An investigation uncovered evidence of suspicious death

OR

B. If a waived case/non coroner's case/reportable case was later investigated due to suspicious evidence

OR

C. Caregiver was identified **AND**
Home was unsanitary/Unpleasant smell/Very cluttered **OR**
Overall condition rated as "2" or more (Poorly Maintained-Unsafe)

OR

D. Caregiver was identified **AND**
Decedent lacked assistance with bathing, getting dressed **AND**
any one of the following: matted hair, dirty clothing, unpleasant odor, long, dirty fingernails, feces present, urine soaked diaper/clothing

OR

E. Caregiver was identified **AND**
Decedent lacked assistance with toileting **AND**
Any one of the following: unpleasant odor, feces present, urine soaked diaper/clothing

OR

F. Caregiver was identified **AND**
Decedent lacked assistance with transferring and use of assistive device **AND**
Assistive device was not in close proximity to the decedent

OR

G. Caregiver was identified **AND**
Decedent lacked assistance with eating/drinking **AND**
Any indications of poor nutrition ("Very thin")

OR

H. Caregiver was identified **AND**
APS involvement

OR

I. Caregiver was identified **AND**
Broken Skin (Presence of Stage 2-4 Ulcers)

OR

J. Caregiver was identified **AND**
Marks/Bruises (On face, trunks and extremities)

OR

K. Any Body Parts NOT visible to the reporting party (whether a caregiver was identified or not)

For letters C-K – An investigation was or would have been appropriate if, there was enough evidence or follow up questions or documentation in the intake or investigative case file to warrant further inquiry of a possible elder suspicious death.

DEFINITIONS:

Investigation– further inquiry about a case that may be categorized as:

a) **Phone call to primary MD, healthcare professional responsible for the deceased, family or caregiver.**
b) **Review of medical records**
c) **External examination of the body**

These may lead to a decision to perform a scene investigation, autopsy or toxicology.

What constitutes an Investigative File?

An investigative file (Coroner's or ME's file) is a report generated by the C/ME office once jurisdiction is assumed over a reported death. The report consists of the basic demographics for the decedent, next of kin information, reporting party information, circumstances surrounding the death (events leading up to the death), location of death, other agencies' involvement, brief medical history (may be extensive depending on the medical records requested, autopsy and histology reports, if applicable).

An investigative file summarizes (narrative section) information obtained from the doctor, APS, law enforcement, public guardian and any other agencies contacted. The information obtained from the other agencies may be essential in determining the cause of death. However, these files are not public records, only investigative files are public records. Once the decision has been made about the cause of death, the files obtained from other agencies are destroyed and not kept with the investigative file.

APPENDIX E
LEAD OUTCOMES FORM

Case Number: _____

Reviewed By: _____

Lead Panel Findings

Evidence of neglect	**No**	**Yes**	**Unable to Assess**

Appropriateness of Investigation/assuming jurisdiction	**Investigation should not have occurred**	**Investigation should have occurred**	**More Investigation should have occurred**	***Unable to Assess***
Investigation did not occur				
Investigation occurred				

Degree of Certainty/Confidence that decision was appropriate	**Low**	**Medium**	**High**

Regarding the body maps:
□ Appears to be a natural death, but they should have looked at the body
□ Some evidence of mistreatment, and they should have looked at the body.
□ Not applicable.

APPENDIX F

PHASE 2 SATISFACTION SURVEY

PART A: USAGE

1) Was the screening tool easy to implement?

Yes (explain)

No (explain)

2) What problems did you encounter in implementing the ESDFS?

3) Were the items contained in the ESDFS easy to read and did it blend in with your day to day job procedures?

4) How likely are you to continue using the screening tool?

Very likely

Somewhat likely

Neutral

Somewhat unlikely

Unlikely

5) On a scale of 1-5 (5 being the highest and 1 being the lowest), overall, how would you rate the effectiveness of the ESDFS in screening cases of elder abuse and neglect?

Not very useful

Somewhat useful

Neutral

Useful

Very useful

PART B: ITEMS ON ESDFS

1) Which questions contained in the screening tool were most helpful to you and why?

2) Are there other questions you think might be important to ask to screen for potential elder abuse or neglect?

3) How did you define “caregiver” as it relates to the use of the screening tool?

4) In your opinion, do the items contained in the ESDFS enhance your ability to evaluate the elder death reports in your county office? Why and why not?

5) Are you going to continue to use ESDFS in screening calls about elderly deaths? If so, why, if not, why not?

6) What else would you like to tell us about the screening tool?

7) Were you provided adequate and clear training on the use of ESDFS?

APPENDIX G

ALTERNATE SATISFACTION SURVEY (Phase 2)

1) Most investigators did not use the ESDFS screening tool and we are trying to understand why. What are some of your thoughts about this?

2) What were your reasons for not using the survey? Can you help us with understanding what we could have done differently to make it more likely/more convenient for you to use the screening tool?

3) Were there specific problems or items you did not like about the survey (for example; survey took too long to complete, tool was confusing, or contained too much detail).

4) Was it difficult or burdensome to implement the survey to your routine? (If yes, help me understand in what way it interfered or complicated your routine?)

5) Do you think that elder death by neglect is rare? What makes you think that?

6) Is death by neglect hard to distinguish from a natural death of an older adult-just because of the ways older people die? Tell me more.

7) What kinds of red flags would make you suspect that elder neglect might have occurred and further investigation is needed?

8) If the physician signs the death certificate is that a good reason not to investigate death by neglect? Would you expect the physician to recognize death by neglect and tell you?

9) If you were to use the screen, and decided to investigate, do you think you would find more deaths from neglect? Or do you think it would be a waste of your time?

APPENDIX H
GOVERNMENT CODE

27491. It shall be the duty of the coroner to inquire into and determine the circumstances, manner, and cause of all violent, sudden, or unusual deaths; unattended deaths; deaths where the deceased has not been attended by either a physician or a registered nurse, who is a member of a hospice care interdisciplinary team, as defined by subdivision (e) of Section 1746 of the Health and Safety Code in the 20 days before death; deaths related to or following known or suspected self-induced or criminal abortion; known or suspected homicide, suicide, or accidental poisoning; deaths known or suspected as resulting in whole or in part from or related to accident or injury either old or recent; deaths due to drowning, fire, hanging, gunshot, stabbing, cutting, exposure, starvation, acute alcoholism, drug addiction, strangulation, aspiration, or where the suspected cause of death is sudden infant death syndrome; death in whole or in part occasioned by criminal means; deaths associated with a known or alleged rape or crime against nature; deaths in prison or while under sentence; deaths known or suspected as due to contagious disease and constituting a public hazard; deaths from occupational diseases or occupational hazards; deaths of patients in state mental hospitals serving the mentally disabled and operated by the State Department of Mental Health; deaths of patients in state hospitals serving the developmentally disabled and operated by the State Department of Developmental Services; deaths under such circumstances as to afford a reasonable ground to suspect that the death was caused by the criminal act of another; and any deaths reported by physicians or other persons having knowledge of death for inquiry by coroner. Inquiry pursuant to this section does not include those investigative functions usually performed by other law enforcement agencies. In any case in which the coroner conducts an inquiry pursuant to this section, the coroner or a deputy shall personally sign the certificate of death. If the death occurred in a state hospital, the coroner shall forward a copy of his or her report to the state agency responsible for the state hospital. The coroner shall have discretion to determine the extent of inquiry to be made into any death occurring under natural circumstances and falling within the provisions of this section, and if inquiry determines that the physician of record has sufficient knowledge to reasonably state the cause of a death occurring under natural circumstances, the coroner may authorize that physician to sign the certificate of death.

For the purpose of inquiry, the coroner shall have the right to exhume the body of a deceased person when necessary to discharge the responsibilities set forth in this section.

Any funeral director, physician, or other person who has charge of a deceased person's body, when death occurred as a result of any of the causes or circumstances described in this section, shall immediately notify the coroner. Any person who does not notify the coroner as required by this section is guilty of a misdemeanor.

27491.2. (a) The coroner or the coroner's appointed deputy, on being informed of a death and finding it to fall into the classification of deaths requiring his or her inquiry, may immediately proceed to where the body lies, examine the body, make identification, make inquiry into the circumstances, manner, and means of death, and, as circumstances warrant, either order its removal for further investigation or disposition or release the body to the next of kin.

(b) For purposes of inquiry, the body of one who is known to be dead from any of the causes or under any of the circumstances described in Section **27491** shall not be disturbed or moved from the position or place of death without permission of the coroner or the coroner's appointed deputy. Any violation of this subdivision is a misdemeanor.

27491.25. The coroner, or the coroner's appointed deputy, on being notified of a death occurring while the deceased was driving or riding in a motor vehicle, or as a result of the deceased being struck by a motor vehicle, shall take blood and urine samples from the body of the deceased before it has been prepared for burial and make appropriate related chemical tests to determine the alcoholic contents, if any, of the body. The coroner may perform other chemical tests including, but not limited to, barbituric acid and amphetamine derivative as deemed appropriate.

The detailed medical findings, resulting from those examinations that are conducted, shall either be reduced to writing or permanently preserved on recording discs or other similar recording media and shall include all positive and negative findings pertinent to the presence or absence of any alcoholic or other substance content.

This section shall not apply to the testing of deceased persons under the age of 15 years, unless the surrounding circumstances indicate the possibility of alcoholic, barbituric acid, and amphetamine derivative consumption, nor shall it apply when the death has occurred more than 24 hours after the accident.

27491.3. (a) In any death into which the coroner is to inquire, the coroner may take charge of any and all personal effects, valuables, and property of the deceased at the scene of death or related to the inquiry and hold or safeguard them until lawful disposition thereof can be made. The coroner may lock the premises and apply a seal to the door or doors prohibiting entrance to the premises, pending arrival of a legally authorized representative of the deceased. However, this shall not be done in such a manner as to interfere with the investigation being conducted by other law enforcement agencies. Any costs arising from the premises being locked or sealed while occupied by property of the deceased may be a proper and legal charge against the estate of the deceased. Unless expressly permitted by law, any person who enters any premises or tampers with or removes any lock or seal in violation of this section is guilty of a misdemeanor.

(b) Any property or evidence related to the investigation or prosecution of any known or suspected criminal death may, with knowledge of the coroner, be delivered to a law enforcement agency or district attorney, receipt for which shall be acknowledged.

(c) Except as otherwise provided in subdivision (d), any person who searches for or removes any papers, moneys, valuable property of weapons constituting the estate of the deceased from the person of the deceased or from the premises, prior to arrival of the coroner or without the permission of the coroner, is guilty of a misdemeanor. At the scene of any death, when it is immediately apparent or when it has not been previously recognized and the coroner's examination reveals that police investigation or criminal prosecution may ensue, the coroner shall not further disturb the body or any related evidence until the law enforcement agency has had reasonable opportunity to respond to the scene, if their purposes so require and they so request. Custody and control of the body shall remain with the coroner at all times. Reasonable time at the scene shall be allowed by the coroner for criminal investigation by other law enforcement agencies, with the time and location of removal of the remains to a convenient place to be determined at the discretion of the coroner.

(d) A peace officer may search the person or property on or about the person of the deceased, whose death is due to a traffic accident, for a driver's license or identification card to determine if an anatomical donor card is attached. If a peace officer locates such an anatomical donor card which indicates that the deceased is an anatomical donor, the peace officer shall immediately furnish such information to the coroner having jurisdiction.

"Peace officer," as used in this subdivision, means only that person designated in Sections 830.1 and 830.2 of the Penal **Code**.

27491.4. (a) For purposes of inquiry the coroner shall, within 24 hours or as soon as feasible thereafter, where the suspected cause of death is sudden infant death syndrome and, in all other cases, the coroner may, in his or her discretion, take possession of the body, which shall include the authority to exhume the body, order it removed to a convenient place, and make or cause to be made a postmortem examination or autopsy thereon, and make or cause to be made an analysis of the stomach, stomach contents, blood, organs, fluids, or tissues of the body. The detailed medical findings resulting from an inspection of the body or autopsy by an examining physician shall be either reduced to writing or permanently preserved on recording discs or other similar recording media, shall include all positive and negative findings pertinent to establishing the cause of death in accordance with Medicolegal practice and this, along with the written opinions and conclusions of the examining physician, shall be included in the coroner's record of the death. The coroner shall have the right to retain only those tissues of the body removed at the time of the autopsy as may, in his or her opinion, be necessary or advisable to the inquiry into the case, or for the verification of his or her findings. No person may be present during the performance of a coroner's autopsy without the express consent of the coroner.

(b) In any case in which the coroner knows, or has reason to believe, that the deceased has made valid provision for the disposition of his or her body or a part or parts thereof for medical or scientific purposes in accordance with Chapter 3.5 (commencing with Section 7150) of Part 1 of Division 7 of the Health and Safety Code**,** the coroner shall neither perform nor authorize any other person to perform an autopsy on the body unless the coroner has contacted or attempted to contact the physician last in attendance to the deceased. If the physician cannot be contacted, the coroner shall then notify or attempt to notify one of the following of the need for an autopsy to determine the cause of death: (1) the surviving spouse; (2) a surviving child or parent; (3) a surviving brother or sister; (4) any other kin or person who has acquired the right to control the disposition of the remains. Following a period of 24 hours after attempting to contact the physician last in attendance and notifying or attempting to notify one of the responsible parties listed above, the coroner may perform or authorize the performance of an autopsy, as otherwise authorized or required by law.

(c) Nothing in this section shall be deemed to prohibit the discretion of the coroner to conduct autopsies upon any victim of sudden, unexpected, or unexplained death or any death known or suspected of resulting from an accident, suicide, or apparent criminal means, or other death, as described in Section 27491**.**

27491.41. (a) for purposes of this section, "sudden infant death syndrome" means the sudden death of any infant that is unexpected by the history of the infant and where a thorough postmortem examination fails to demonstrate an adequate cause of death.

(b) The Legislature finds and declares that sudden infant death syndrome (SIDS) is the leading cause of death for children under age one, striking one out of every 500 children. The Legislature finds and declares that sudden infant death syndrome is a serious problem within the State of California, and that public interest is served by research and study of sudden infant death syndrome, and its potential causes and indications.

(c) (1) to facilitate these purposes, the coroner shall, within 24 hours, or as soon thereafter as feasible, perform an autopsy in any case where an infant has died suddenly and unexpectedly.

(2) However, if the attending physician desires to certify that the cause of death is sudden infant death syndrome, an autopsy may be performed at the discretion of the coroner. If the coroner performs an autopsy pursuant to this section, he or she shall also certify the cause of death.

(d) The autopsy shall be conducted pursuant to a standardized protocol developed by the State Department of Health Services. The protocol is exempt from the procedural requirements pertaining to the adoption of administrative

rules and regulations pursuant to Article 5 (commencing with Section 11346) of Chapter 3.5 of Part 1 of Division 3 of Title 2 of the Government Code**.**
The protocol shall be developed and approved by July 1, 1990.

(e) The protocol shall be followed by all coroners throughout the state when conducting the autopsies required by this section. The coroner shall state on the certificate of death that sudden infant death syndrome was the cause of death when the coroner's findings are consistent with the definition of sudden infant death syndrome specified in the standardized autopsy protocol. The protocol may include requirements and standards for scene investigations, requirements for specific data, criteria for ascertaining cause of death based on the autopsy, and criteria for any specific tissue sampling, and any other requirements. The protocol may also require that specific tissue samples must be provided to a central tissue repository designated by the State Department of Health Services.

(f) The State Department of Health Services shall establish procedures and protocols for access by researchers to any tissues, or other materials or data authorized by this section. Research may be conducted by any individual with a valid scientific interest and prior approval from the State Committee for the Protection of Human Subjects. The tissue samples, the materials, and all data shall be subject to the confidentiality requirements of Section 103850 of the Health and Safety Code**.**

(g) The coroner may take tissue samples for research purposes from infants who have died suddenly and unexpectedly without consent of the responsible adult if the tissue removal is not likely to result in any visible disfigurement.

(h) A coroner shall not be liable for damages in a civil action for any act or omission done in compliance with this section.

(i) No consent of any person is required prior to undertaking the autopsy required by this section.

27491.44. Notwithstanding any other provision of law, the coroner is authorized to do all of the following:

(a) Assist the people of this state, as appropriate, in the implementation of the Uniform Anatomical Gift Act contained in Chapter 3.5 (commencing with Section 7150) of Part 1 of Division 7 of the Health and Safety **Code**, and in the otherwise lawful utilization of medically proven organ and tissue transplant procedures.

(b) Cooperate in the authorized removal and timely disposition of human organs and tissue from the bodies of deceased persons, including victims of homicide, in accordance with law and accepted medical practice.

(c) Assist medical and health service agencies in identifying donors of human organs and tissues, for purposes of providing life-enhancing benefits of transplant surgery to recipients under duly sanctioned medical conditions.

(d) Ask the deceased person's next of kin, at the time of notification of death, whether the deceased was a donor or if the family was a donor family. If not, the coroner is authorized to inform them of their option to donate viable organs and tissues.

(e) Enter into agreements with one or more procurement organizations to coordinate organ recovery procedures within that coroner's jurisdiction or in cooperation with other coroners throughout the state.

(f) Contract with or receive assistance of any kind from any public or private entity for the purpose of providing education and training to his or her personnel in pathology or any other area of the healing arts and sciences that will assist in timely determination of the causes of death.

27491.45. (a) (1) The coroner shall have the right to retain parts of the body, as defined in subdivision (g) of Section 7150.1 of the Health and Safety Code**,** removed at the time of autopsy or acquired during a coroner's investigation as may, in the opinion of the coroner, be necessary or advisable for scientific investigation and training. The coroner may employ or use outside laboratories, hospitals, or research institutions in the conduct of the coroner's scientific investigation or training.

(2) Parts of the body retained pursuant to paragraph (1) may be released by the coroner to hospitals, medical educational research institutions, and law enforcement agencies for noncoroner training, educational, and research purposes, either upon consent of the decedent or other person, as specified in Section 7151 of the Health and Safety Code, or after a reasonable effort has been made to locate and inform persons listed in subdivision (a) of Section 7151 of the Health and Safety Code of their option to consent or object to the release, and the appropriate person consents or that effort has been unsuccessful. A reasonable effort shall be deemed to have been made when a search for the persons has been underway for at least 12 hours. The search shall include a check of local police missing persons records, examination of personal effects, and the questioning of any persons visiting the decedent before his or her death or in the hospital, accompanying the decedent's body, or reporting the death, in order to obtain information that might lead to the location of any persons listed in subdivision (a) of Section 7151 of the Health and Safety Code.

(b) The coroner may, in his or her discretion, allow removal of parts of the body by a licensed physician and surgeon or trained transplant technician for transplant, or therapeutic, or scientific purposes pursuant to Chapter 3.5 (commencing with Section 7150) of Part 1 of Division 7 of the Health and Safety Code, only if the following conditions are met:

(1) The provision of the part will not unnecessarily mutilate the body or interfere with the autopsy.

(2) The decedent or other person, as specified in Section 7151 of the Health and Safety Code, has consented to the provision of the part, as prescribed by Section 7154 of the Health and Safety Code**,** or after a reasonable effort has been made to locate and inform persons listed in subdivision (a) of Section 7151 of the Health and Safety Code of their option to consent or object to the release, and the appropriate person consents, or that effort has been unsuccessful. A reasonable effort shall be deemed to have been made when a search for the persons has been underway for at least 12 hours. The search shall include a check of local police missing persons records, examination of personal effects, and the questioning of any persons visiting the decedent before his or her death or in the hospital, accompanying the decedent's body, or reporting the death, in order to obtain information that might lead to the location of any persons listed in subdivision (a) of Section 7151 of the Health and Safety Code. In obtaining this gift, the coroner shall notify the donor of the specific part or parts requested and shall obtain the donor's informed consent, as provided in Section 7150.5 or 7151 of the Health and Safety Code.

(c) Nothing in this section shall be construed as limiting any right provided for in Section 7152 of the Health and Safety Code.

(d) For purposes of this section, "trained transplant technician" means a person who has completed training in tissue removal for transplant or therapeutic or scientific purposes, which the coroner determines to be adequate for the purposes.

27491.5. The cause of death appearing on a certificate of death signed by the coroner shall be in conformity with facts ascertained from inquiry, autopsy and other scientific findings. In case of death without medical attendance and without violence, casualty, criminal or undue means, the coroner may, without holding an inquest or autopsy, make the certificate of death from statements of relatives, persons last in attendance, or persons present at the time of death, after due medical consultation and opinion has been given by one qualified and licensed to practice medicine and so recorded in the records of the death, providing such information affords clear grounds to establish the correct medical cause of death within accepted medical practice and within the requirements for accuracy prescribed by the Division of Vital Statistics of the State Department of Health Services. The coroner shall not finally exclude crime, suicide, or accident as a cause of death because of lack of evidence.

Health & Safety Code

102850. A physician and surgeon, physician assistant, funeral director, or other person shall immediately notify the coroner when he or she has knowledge of a death that occurred or has charge of a body in which death occurred under any of the following circumstances:

(a) Without medical attendance.

(b) During the continued absence of the attending physician and surgeon.

(c) Where the attending physician and surgeon or the physician assistant is unable to state the cause of death.

(d) Where suicide is suspected.

(e) Following an injury or an accident.

(f) Under circumstances as to afford a reasonable ground to suspect that the death was caused by the criminal act of another.

Any person who does not notify the coroner as required by this section is guilty of a misdemeanor.

102855. The coroner whose duty it is to investigate such deaths shall ascertain as many as possible of the facts required by this chapter.

APPENDIX I
SITE VISIT QUALITATIVE ANALYSIS

Reliance on the reporting party

The level of investigation is dealt with on a "case by case basis." Coroners and Medical Examiners (C/ME) investigators rely heavily on the reporting party, a nurse, paramedic or a police officer to give information if there are suspected elder abuses or neglect cases.

"They are our eyes and ears out there." Police officers are trained to look for anything suspicious, nurses and paramedics are expected to have "looked" at the body and report something suspicious."

"There should be cooperation with the officers on getting this information."

"Coming from the police officers, if there are concerns. If there have been reports they will come up with it."

"If there's anything that the officers suggest that we come out, we investigate the scene."

"Anything that is a red flag for them let us know. If he is bedridden, as long as it appears that they are cared for. They are our eyes at the scene. Describe what they see and if everything's okay and they wouldn't mind if their grandma is living in that condition, then it is okay."

"It is a case by case basis. A lot of time we rely on the officers on scene. They are our eyes. They are trained as well. So if they tell us they are concerned, then we will go out and see for ourselves."

"It is interesting though because the police officers are at a scene, they are at somebody's house, they are in the backyard, it could be an alley, or at the parking lot, again right off the bat what kind of death does it look like. Because hopefully it will tell me he's hanging from a tree or a car accident as opposed to someone who has coronary artery disease."

"An officer will give you a different perspective than the nurse. They don't know the medical stuff. But they know how to pick up on other things. They'll say well everything looks good but he's got a couple of things here that based on my training and experience makes me think that he's got a meth lab at his bathroom. They are our eyes and ears out there. I don't know what's going on."

"Or sometimes the officer will say you know sounds stupid but it is just weird here. I can't put my finger on it. Some things just weird. I'll take the officer's word and I'm going out."

"You hope that medical staff had ruled that out (elder abuse and neglect)."

"If there is abuse and neglect, the hospital staff will tell you for example there are decubitus ulcers that are stage III. Unfortunately, they are our eyes and ears, the doctors, the nurse says, the police officers, we have to be able to rely on them."

"We usually rely upon the hospitals to kind of give us the information. The way we find out that most people have had some sort of abuse and neglect issues, usually comes from the hospital they

usually say hey we noticed that when they came in the have XYZ wrong with them or the deputy saying, I don't feel comfortable with this case."

"So we rely heavily on what the medics tell us. "

"If it's residential, and the police department is there, we are relying a lot on the officer that is there."

"You are asking an officer to use his investigative skills to look and see if anything in this scene looks suspicious."

"If the police on scene with his expertise tell me that there are no signs of trauma."

"You're relying a lot on the officer that is there on the scene to make his observation because first thing I'm thinking in my mind on a residential death of an elderly person is, is it natural? This is probably, more likely to be of natural causes. Because once you look up the medical history you find out that they are 80 then you find out some type of medical information and then of course you're asking the police officer there are there any suspicions or anything that we need to rule out. Because I'm basing it on what he is saying. If he says there's something suspicious I am going out there."

"If you're talking to the staff at a hospital they had seen if there is anything suspicious or unusual. They will talk openly to you. It's basing a lot from what they tell us. Like hospice would say something and bring out the red flag."

"So we are relying a lot on the staff, medical doctors are police officers reporting to us, if they start to have some kind of suspicions me personally I'm going to the scene."

"If you're a nurse I would value your opinion on what you're telling me. I'll ask your opinion as a licensed nurse. What is your opinion?"

"Because they are really normally in tune of what an elderly death looks like. If there's any trauma to the body they are pretty forthcoming on that."

"If it is a residential death it will be based on what the officers see on scene they would normally let us know if it is something that we need to go out on. "

"Some officers are pretty adamant about us coming out. It comes with experience you just kind of get that feeling that something is not right or maybe they have been a methadone user. The police officers usually know if they have an APS report issued in the past they would normally tell us but if they tell us there is one we automatically bring them in just in case it is something that they may have been abused."

"We rely heavily on local law enforcement to tell us what they see. And we trust them to be able to investigate to a certain extent as far as what's going on."

"If there is a feeling that I get from the officer for example is he competent is he giving me information that is reliable, is he competent enough. We have to trust the people who were calling us. And sometimes the phone call is brief and short so you have to trust them to give you the correct information. And if I don't feel that comfort then I would go ahead and ask more questions."

“Doctors and nurses to report elder deaths have done a screening and they would rule that out and tell us on the phone or if they have any suspicion of abuse or neglect they contact APS.”

“I always ask if there's something suspicious. For a cop that means one thing they are looking for anything suspicious. For nurses I would ask, do you see any unusual marks, bruises, skin tears, ulcers, anything that looks like they are not being well taken care of.”

Neglect (Caregiver versus Self)

Coroner/Medical Examiner investigators spoke about caregiver neglect being hard to prove and to differentiate from self neglect.

“It kind of goes from there but if they say no, they are very active and stubborn, they like to do stuff on their own they never like it when they need to go to the bathroom to get up on their own but they do tend to trip over the carpet and even if they've been told to use a walker or they wouldn't do it.”

“A lot of times people self neglect.”

“Sometimes we are forced into a full-scale investigation knowing that it would not go anywhere because the nature of self-neglect is what it is, you can't get a criminal charge. And most of our cases are self neglect cases.”

“That is a gray area that we get caught up in. Sometimes it is hard to determine whether there is neglect in care because the elderly person is saying I don't want to eat. So that is a self neglect. We cannot prove there is neglect on that.”

Value of Adult Protective Services information

We asked C/ME investigators two separate questions pertaining to special questions that are asked when taking in information about a reported death of an elderly to determine if an investigation is needed. The first question was: “**Does your office ask any special questions in the case of an elder death report?”** the second question being: **“Please tell me how your office determines if a reported death needs to be investigated.”** Participants spoke of prior APS report as significant on whether or not the case will be fully investigated as stated by these participants…..

“The minute you hear the nurse say we filed an APS report that it is a whole different picture.”

“If I ran APS and that was neglect automatically I'm going to head out there will probably bring the person for autopsy.”

“Question whether there is APS history is always helpful.”

“Specific ones would be APS involvement. Have they had previous visits, if they do know the social worker who was in charge or the lead investigator so to speak? I get as much information that they know about so that if I call APS they would know how to search and look. But I'll talk to the APS worker and value what they tell me the story why you became involved.”

In contrast, one investigator talked about the difficulty he's faced with when obtaining information from APS…

"I always find it difficult to deal with social services right now. In my opinion, one of the worst agencies to deal with. They are so protective of the information it gets some social workers that are willing to help you and can provide information with the snap of a finger and some think why should I give you this information. If there's a streamline and a communication: with them that would be best."

One CME office works closely with the Adult Protective Services agency in their county. Screening of daily logs of reported elderly deaths are electronically submitted to APS. Any "hits" on the APS database is reported back to the C/ME office. Reports of the allegations of abuse or neglect and the time frame by which these allegations were made are reviewed by a team of pathologists and investigators. Decisions are made based on the relevance of the alleged accusation on the cause of the death.

Financial Abuse

A significant issue was raised by some of the C/ME investigators on the uncertainty about financial abuse relating to the death of an elderly person.

"A lot of the abuse cases are financial abuse not physical abuse or neglect cases so those cases we don't usually get involved. Because it's not something that an autopsy will help them prosecute a financial abuse case. Because financial abuse may have not be related to their death. So in a lot of cases we get the information but we don't necessarily do anything more."

"Financial abuse; we can't do anything about that. We let the law enforcement handle it on their end."

"How does this relate to death?"

One county C/ME office takes into consideration allegations of financial abuse as a possible cause of death.

"Even financial abuse we take a look at those. It is a fine line. If they are doing it financially may be they are doing it physically. So even if it's not physical abuse and neglect we will look at those."

"We would respond to 9 out of 10 that's financial abuse and we don't usually get involved." "If the law enforcement is getting involved, then we get involved."

Pressure Sores/Decubitus Ulcers

Many of our participants elaborated that presence of pressure sores on a deceased person typically indicates neglect….

"Anything stage III or IV is considered elder abuse."

"Decubitus ulcers are a big concern to us."

“Decubitus ulcers are not trauma related but are key indicators if neglect was involved.”

“Are there any bedsores? That is a big one for neglect that is probably easy to determine if somebody had some bedsores that have been unattended.”

On the contrary, there are investigators who brought up the uncertainty of presence of pressure sores as a sign of neglect……

“Decubitus, bed sores, we don’t always investigate them because of the condition of the person. If they were bedridden because of stroke that happened a few years ago, and that’s what we expect. They may have a couple of sores.”

“Bed sores can be explainable but we want to make sure that it is documented.”

“Pressure sores which isn't always a sign of neglect but it can be.

“The number one I see is decubitus ulcers when they come from a nursing home. That's always the problem. And that is very tricky because did it result from the elderly person not being able to move or the nursing care was negligent. I'll verify with the doctor or if the sores were being properly taken care of.”

Filthy Living Condition

The condition of the decedent’s house was one of the many factors taken into consideration when coroners/medical examiner investigators determine whether or not they will assume jurisdiction over a reported death.

“Because the scene that itself would tell you how the person was treated.”

“We need to have them describe it to us like is there trash everywhere, is it filthy?”

“The nature of the house if it is dirty or cluttered, we need to investigate on those.”

“If it is an unkempt house, what kind of house it is what is the condition of the house, the home in shambles, is it dirty, then we start looking into it more. Then you have a conversation with the deputy on scene because it is based on what he sees, he is there, he is looking and a lot of them they will say, what do you mean by suspicious.”

One coroner investigator shared his opinion about using “filthy living condition” as unimportant…..

“Many of peoples home are in disarray and you can’t use that as a factor.”

Age and Medical History

C/ME investigators stated that age of the decedent plays an important factor in the level of investigation. The responses shared below suggest that disease process or medical histories oftentimes are correlated with old age.

“Elderly and under the care of the doctor, that will usually become a non coroner’s case.”

“If they are 53, they are kind of young, we are going to look on that further because maybe they don't have any medical history. If the decedent is 83, with medical history we verify that there's no outside trauma or elder abuse or any injury or any overdose because they may be taking a lot of painkillers.”

“Because if they don't have any medical history we would be responding.”

“One can have a ton of medical history but still doesn't die a natural death.”

“Older people can be very hard because there are a lot of medical conditions.”

“Frail with many medical conditions? Sounds like all elderly people.”

Someone who doesn't see a regular doctor or just because of age, a 14-year-old who suddenly collapsed. If they are young without any disease processes it goes without saying I need to investigate.”

“Children sometimes would become a case because no one is expecting them to die at that age. Middle age we will ask if they have major medical problems.”

“Younger people we look at three major medical problem. The older they get the less we rely on the medical diagnosis.”

“If it's natural causes, but the individual is 50 years old and has no medical history and there are no indications of trauma they become a full coroner's case.”

Prosecutable Cases

One participant elaborated on the critical role district attorneys influence is on assuming jurisdiction.

“The district attorney will sometimes say this is not a prosecutable case and that happens a lot. Sometimes you know of abuse is occurring but we don't know what is prosecutable to begin with. Our basic policy is if law enforcement has an active investigation for abuse and neglect then we would assume jurisdiction and bring the body in.

APPENDIX J
ESDFS ITEM ENDORSEMENT

Responsible caregiver

- 87 yes
- 15 no
- 13 unknown

If a there was a responsible caregiver,

- 52 paid
- 30 unpaid
- 5 unknown or missing data

If there was a caregiver, level of care

- 55 full care
- 19 assisted care
- 13 unknown or missing data

Scene

- Unsanitary condition: 3 of 115 checked
- Unpleasant smell: 2
- Very cluttered: 3

Overall condition (of the scene)

- 57 Neat/well kept
- 6 Neat-poorly maintained
- 1 Poorly maintained
- 1 Poorly maintained-unsafe
- 1 Unsafe
- 41 Unable to Assess
- 8 missing data

Body

- Matted hair: none checked
- Dirty clothing: 4
- Unpleasant odor: 2
- Long, dirty Untrimmed nails: 2
- Feces present: 2
- Urine soaked diaper/clothing: 2
- Very thin: 6
- Broken skin: 8
- Marks/discoloration: 5

Overall condition (of the body)

- 66 Excellent hygiene
- 36 Adequate hygiene
- 1 Inadequate hygiene
- 2 Very poor hygiene
- 7 Unable to assess
- 3 Missing data

Activities of Daily Living (Yes indicates needing help with the ADL)

Bathing, getting dressed/undressed
- 63 Yes
- 27 No
- 24 unknown
- 1 missing data

Toileting
- 62 Yes
- 26 No
- 26 unknown
- 1 missing data

Transferring
- 63 Yes
- 29 No
- 21 unknown
- 2 missing data

Ambulation
- 31 Yes
- 40 No
- 41 unknown
- 3 missing data

Eating and hydration
- 48 Yes
- 33 No
- 26 unknown
- 8 missing data

APS Involvement
- 3 Yes
- 93 No
- 15 unknown
- 4 missing data

Anterior body parts examined

Face
- 107 Viewed
- 0 Refused to view
- 3 Unable to view
- 5 Missing data

Neck
- 104 Viewed
- 0 Refused to view
- 6 Unable to view
- 5 Missing data

Chest
- 94 Viewed
- 0 Refused to view
- 15 Unable to view
- 6 Missing data

Right upper arm
- 97 Viewed
- 0 Refused to view
- 11 Unable to view
- 7 Missing data

Left upper arm
- 97 Viewed
- 0 Refused to view
- 11 Unable to view
- 7 Missing data

Abdomen
- 93 Viewed
- 0 Refused to view
- 16 Unable to view
- 6 Missing data

Right forearm
- 103 Viewed
- 0 Refused to view
- 7 Unable to view
- 5 Missing data

Left forearm
- 104 Viewed
- 0 Refused to view
- 6 Unable to view
- 5 Missing data

Right palm
- 91 Viewed
- 0 Refused to view
- 5 Unable to view
- 19 Missing data

Left palm
- 91 Viewed
- 0 Refused to view
- 5 Unable to view
- 19 Missing data

Right thigh
- 93 Viewed
- 1 Refused to view
- 13 Unable to view
- 8 Missing data

Left thigh
- 93 Viewed
- 1 Refused to view
- 13 Unable to view
- 8 Missing data

Right leg
- 95 Viewed
- 1 Refused to view
- 11 Unable to view
- 8 Missing data

Left leg
- 96 Viewed
- 1 Refused to view
- 11 Unable to view
- 7 Missing data

Top right foot
- 97 Viewed
- 0 Refused to view

- 9 Unable to view
- 9 Missing data

Top left foot
- 83 Viewed
- 0 Refused to view
- 23 Unable to view
- 9 Missing data

Posterior body parts

Back of head
- 83 Viewed
- 0 Refused to view
- 23 Unable to view
- 9 Missing data

Back of neck
- 81 Viewed
- 0 Refused to view
- 25 Unable to view
- 9 Missing data

Upper back
- 79 Viewed
- 0 Refused to view
- 27 Unable to view
- 9 Missing data

Left upper arm
- 81 Viewed
- 0 Refused to view
- 25 Unable to view
- 9 Missing data

Right upper arm
- 79 Viewed
- 0 Refused to view
- 26 Unable to view
- 10 Missing data

Lower back
- 77 Viewed
- 0 Refused to view
- 28 Unable to view

- 10 Missing data

Left forearm
- 81 Viewed
- 0 Refused to view
- 24 Unable to view
- 10 Missing data

Right forearm
- 82 Viewed
- 0 Refused to view
- 23 Unable to view
- 10 Missing data

Buttock
- 78 Viewed
- 0 Refused to view
- 27 Unable to view
- 10 Missing data

Top left hand
- 74 Viewed
- 0 Refused to view
- 18 Unable to view
- 23 Missing data

Top right hand
- 82 Viewed
- 0 Refused to view
- 19 Unable to view
- 14 Missing data

Back left thigh
- 78 Viewed
- 0 Refused to view
- 28 Unable to view
- 9 Missing data

Back right thigh
- 79 Viewed
- 0 Refused to view
- 27 Unable to view
- 9 Missing data

Back left leg

- 77 Viewed
- 0 Refused to view
- 27 Unable to view
- 11 Missing data

Back right leg
- 77 Viewed
- 0 Refused to view
- 27 Unable to view
- 11 Missing data

Heel left foot
- 79 Viewed
- 0 Refused to view
- 25 Unable to view
- 11 Missing data

Heel right foot
- 79 Viewed
- 0 Refused to view
- 25 Unable to view
- 11 Missing data

Plantar left foot
- 79 Viewed
- 0 Refused to view
- 24 Unable to view
- 12 Missing data

Plantar right foot
- 80 Viewed
- 0 Refused to view
- 24 Unable to view
- 11 Missing data