

## **Presentation to the NGO Committee on Ageing**

### **Alzheimer's Disease and Elder Abuse**

**Dr. Gregory Paveza, June 3, 2010**

Good Afternoon. I want to begin by offering my thanks to the NGO Committee on Ageing for inviting me to make this presentation today. Let me briefly outline what I want to accomplish in our discussion this afternoon. I am going to begin by providing a brief history of how I came to focus on Alzheimer's Disease and its relation to Elder Abuse. I will then discuss the framework that I and others have used to look at the relationship of various life events and elder abuse. Following on this, I will discuss some of the specific findings of the research that my colleagues and I have done on families caring for a member with Alzheimer's Disease and finally I will provide some thoughts concerning the international implications of the research.

I had been actively engaged in research on family violence as I was pursuing my doctorate in infectious disease epidemiology. As a graduate student, who prior to returning to university spent almost 10 years in the practice of clinical social work with children, adolescents, older adults and their families, I became convinced that the field methods used to investigate infectious disease outbreaks and the statistical methods utilized to analyze that data held particular promise for conducting research on the various forms of family violence. My initial work on father-daughter sexual abuse confirmed my suspicion about the utility of these methods for conducting research in family violence. At about the same time that I was publishing my findings on father-daughter sexual abuse my own interests were turning toward concerns of later life. And as luck would have it, and I was fortunate enough to be involved in some of the early research of the

National Institute on Aging targeted at developing diagnostic protocols for and gathering data concerning Alzheimer's Disease (which at times during this talk I will simply refer to as AD).

This involvement with research related to AD allowed me to turn my attention to violence in families caring for a member with the disease. Let me expand a bit further on how I came to focus on this relatively narrow area of family violence. As the field of elder mistreatment research began to emerge in the late 80's and early 90's, there were two issues in elder mistreatment research about which as an epidemiologist I felt increasingly concerned. The first was the tendency in most of the early research to aggregate all forms of elder mistreatment into one category. The argument for this at that time was, and to some extent remains that given the low incidence of all forms of elder mistreatment that samples would be too small to permit any significant conclusions concerning sub-populations in elder mistreatment. I felt then and continue to believe that this is somewhat akin to suggesting that all of the rarer cancers should be studied as a single entity. If we suggested this to our colleagues in cancer research I am sure that they would look at us rather quizzically and wonder how we could come to such a conclusion. They would quickly point out that while some of the risk factors for various cancers might overlap, that there are others that are unique and that these unique factors would be missed, or wrongly applied to all the combined cancers. This would make it all that more difficult to identify both personal life style factors and environmental factors that might have an impact on a specific form of cancer and make it all the more difficult to develop and implement appropriate prevention strategies. Addressing elder mistreatment in the way we have, as a single entity, aggregating physical abuse, intentional caregiver neglect, unintentional caregiver neglect, verbal abuse, psychological abuse, and in some instance financial exploitation, places the study of elder

mistreatment in much the same situation. The only risk factors likely to emerge are those that impact the spectrum of elder mistreatment. What the approach misses as I have suggested in several places are the nuances, the fact that a specific factor that emerges when you look at the combined grouping of elder mistreatment may not be a factor for a specific form of elder mistreatment, or that a factor that is unique for a specific form of elder mistreatment does not emerge as important because it fails to reach significance because of the impact of the risk factors that are cross-cutting. I would like to suggest, as would our friends in cancer research, that this aggregation of type of elder mistreatment make it all the more difficult to develop useful prevention programs.

The second area of my concern is the twin of the first. This is the tendency in elder mistreatment research to assume that all sub-populations of older adults are the same. By this I mean that the way in which samples are constructed for research assume that the factors that increase the likelihood of any particular form of elder mistreatment are exactly the same for persons with a dementing disorder, as they are for a person with cancer, as they are for a person who is simply among the oldest-old, as they are for a person with a long-term debilitating illness. The argument for not looking at sub-populations by type of mistreatment is much the same as the argument for not dividing the types of elder mistreatment. There is concern for sample size. While not an unwarranted concern, I would suggest that the answer to the problem is not to throw up our hands and say, "Let's just keep everything together," but rather to more effectively address the way in which we identify and gather our populations for use in our research.

Besides my concerns for the need to recognize the necessity of studying sub-populations of both types of elder mistreatment and unique groupings of older adults, a third element began to emerge in my, and the thinking of my colleagues, as we discussed the development of the predictive models that would be needed for initiating preventative and intervention programs. This was the identification of a theory for developing predictive models. Note I am talking here not of an integrative theory describing underlying causes for elder mistreatment, though some authors have called for this, but rather a theory that suggests how models for describing those elements of human life which may increase the risk for elder mistreatment may be effectively constructed.

In looking for an appropriate model, we started by reviewing various health behavior models. The model that emerged as best meeting our needs was first discussed by Rose and Killen in 1983, and refined by Frost and Willette in 1994 for use in developing models for elder abuse. This model is generally described as a risk and vulnerability model. Predictive factors are divided into two categories relative to the outcome of interest. In the current case, we are interested in elder mistreatment and violence in families caring for a member with Alzheimer's Disease. Vulnerabilities can be thought of as those characteristics that are internal to the older adult. Included in these characteristics are such things as the presence of psychiatric symptoms, the severity of the AD patient's inability to perform basic activities of daily living, the older adult's previous exposure to family violence, the severity of the dementia and other personal traits. Risks can be seen as those things that are external to the older adult. Included in these characteristics are such things as depression in the caregiver, the caregiver's own levels of functional impairment, the fact of whether the caregiver him or herself is experiencing loss of

cognitive function, as well as factors such as the ease of mobility around the home, the ease of mobility around the neighborhood, and other environmental factors. Both risks and vulnerabilities contribute to the likelihood that an abusive event might occur.

The unique element that Terry Fulmer, I and our colleagues added to the model was the dyadic element. That is we did not see risks and vulnerabilities as two mutually exclusive categories. Rather we saw the potential for vulnerabilities and risk to interact with each other, and that these interactions may significantly increase the probability of an abusive event.

Thus the presence of depression in the AD patient interacting with the presence of depression in the caregiver adds to the overall magnitude of the occurrence of an abusive event in a fashion that is greater than the impact of either the presence of depression in the caregiver or the presence of depression in the patient independently.

I do want to note, that one must be careful, particularly when using a risks and vulnerabilities model to inform our understanding of elder abuse, to avoid falling into the trap of blaming the victim. While depression in the Alzheimer's Disease patient may make an abusive event more likely for example, the fact that they were physically abused is not the patient's fault. Responsibility for the abusive event still rests solely with the person who perpetrates the abuse, since as in almost all human actions no particular course of action is inevitable.

So we now have the three elements that were critical to my view for effective elder mistreatment research. They are a belief that various forms of abuse needed to be studied separately, a belief that subpopulations of older adults should be studied separately, and finally, a

viable useable model for describing the various elements that contribute to the likelihood of an abusive event.

With an understanding of the import of these three factors on my thinking about research in the field of elder mistreatment and our ability to better understand it's occurrence, you now have a foundation for understanding the course of my research in elder mistreatment and we can now turn our attention to the studies themselves. However, before we address the results forthcoming from these studies, it is important to provide some background about the studies themselves.

The first study was carried out during the late 80's and early 90's as part of an effort by the National Institutes of Health to develop both a gold standard for diagnostic protocols for Alzheimer's disease (what ultimately became known as the CERAD protocols), and to determine whether the development of a registry of AD patients was feasible and practical. A joint project between the University of Illinois at Chicago's School of Public Health and the University of Miami's Department of Psychiatry focused on the registry concept. The principal investigators for the project were Drs. Carl Eisdorfer and Donna Cohen. I was specifically brought on board for my understanding of field epidemiology and questionnaire development, as well as my interest in elder abuse and the broader issue of violence in caregiving families, particularly those caring for a family member with dementia. While over 1,400 families provided information to the registry, a smaller group were asked to provide more detailed information about their situation including information about violence in their families. The measure of violence used in this study was a modified version of the violence sub-scale of the Conflict Tactics Scale

developed by Strauss and Gelles. That sub-scale seeks information as to whether a person has been hit, punched, kicked, bitten, threatened with a weapon or had a weapon used on them. The specific modification for the study allowed for caregivers to complete the scale as part of a self-administered questionnaire. This study provided useable data from 187 patient-caregiver dyads.

The second study was conducted in Florida beginning in the late 90's with data collection ending in 2001, and data analysis concluding in early 2003. This study in many respects highlighted the difficulties in amassing a sufficient sample to conduct data analysis when seeking to look at both a sub-population and a specific form of abuse. Without going into extensive detail, participants were sought for the study by working with several Memory Disorder Clinics in Florida all of whom were receiving state-aid at the time to assist in the identification and diagnosis of AD patients, and the local chapters of the Alzheimer's Association. Using a rather elaborate procedure to ensure that families volunteering for the study were in fact free from any sense of coercion, initial contact was made on behalf of the study team by the memory disorder clinics or one of the five state AD chapters. Initial contact was by letter which indicated that if the family was interested in participating in this study, they should contact the University of South Florida (which for simplicities sake I will refer to as USF). Families that contacted the study team at USF were further screened for eligibility. If the family was determined to be eligible, the caregiver was informed as to the nature and the fact that we would be seeking information on behaviors that might need to be reported anonymously to Adult Protective Services. We further informed them that we did possess a federal certificate of confidentiality, and that while we were required to report if we suspected abuse or neglect at the time of the interview, that none of the specific information provided in the questionnaire or the interview

could be disclosed to APS without the caregiver's consent. We additionally informed them that the study consisted of two parts, a mailed questionnaire which they would receive about two weeks prior to a personal interview with a member of the study team. Almost 2,500 persons were initially contacted about participation in the study, with a total of 254 caregivers consenting to participate. Or to put in more succinctly, of the initial group of caregivers contacted, the study had a yield rate of 10.5%. This study reinforces the point I made earlier. Conducting adequate research on sub-populations of both types of abuse and types of victim populations is extremely resource intensive given that large numbers of potential participants will need to be contacted to arrive at a useable sample. There is little doubt then that these studies will cost money.

With this general description of the studies to serve as a base, I want to turn my attention to what we learned from them. I am going to present the findings in an aggregate format, and will only indicate what study the findings are derived from, if it seems particularly relevant to an understanding of the finding. Even though some of these findings are more than 10 years old, I believe they still offer valuable insights for understanding both the levels of violence in families caring for a member with Alzheimer's disease, as well as informing us about the risks and vulnerabilities contributing to violence in these families.

Let's start with some information about the families themselves. The average age of the persons with Alzheimer's Disease in these studies was almost 75 years of age, while the average age of the caregivers was ten years younger. This age discrepancy between person's with the disease and caregivers has often been reported in other research on caregiving and reflects that



many of the caregivers are children or spouses of children, as well as the fact that in the U.S. men tend to marry women who are younger. In the early study, women with the disease outnumbered men with the disease 2 to 1 and the same distribution of women to men appears in the distribution of caregivers. In the later study, the female to male ratio of patients was 3 to 2, while the caregiver ratio was 3 female caregivers to every male caregiver. This also is fairly consistent with findings from other studies looking at caregiving, in which the majority of caregiving is provided by women. The largest proportion of our sample in both studies was Caucasian, not of Hispanic descent, with greater than 80% of the sample falling into this category. This ethnic distribution is likely an artifact of the source of our samples, both drawn from tertiary care centers and in the later study from Alzheimer Association chapters. Other research has suggested that families of color are less likely to obtain services from tertiary care centers and to become involved with groups such as the Alzheimer's Association.

Who does provide care to these patients? In general spouses provide the greatest proportion of the care, with wives providing slightly more than 34% of the care, husbands just slightly more than 18%, and children just slightly more than 38% of the care. All other types of caregivers, such as siblings, friends, grandchildren and others make up just 14% of our caregivers. This is not surprising and reinforces what we know from other studies, that is, that the majority of caregiving provided to community-dwelling older adults with AD is provided by spouses and children.

While, the majority of care is provided by immediate family, an interesting note is the nature of the living arrangement. Our data suggests that living arrangements are mixed. Fully

one fifth of our AD patients live independently, that is without either a spouse or other family members being present in the living situation. About 51% live only with their spouse, some 6% reside in a setting in which the spouse and other family are present, about 18% live in a setting with family, but in which the spouse is no longer present, and some 5% reside in some other type of non-institutional living arrangement. I have always found it somewhat interesting fact that 20% of our sample lived independently in spite of the fact that they had been diagnosed with a dementing disorder in a tertiary care setting.

Before turning to a discussion of the levels of violence and the characteristics that influence the risk for violence, I want to share one more important fact about the patients and caregivers. We looked at the presence of depression in both caregivers and the AD patients. As our measure of caregiver depression, we used the Center for Epidemiologic Studies Depression Scale. Almost 57% of our caregivers reported symptoms that put them in the category of being moderately to severely depressed. Our measure of depression in the patients was the Cornell Depression Scale. This is an observational measure of depressive symptoms developed for use with persons not capable of reporting their own symptoms. In our sample, controlling for the presence of dementia, about one quarter of the sample was described as having no depression, while the other three quarters had symptoms that classified them as ranging from either minor depression through definite major depression.

Let us shift our focus now from the general demographics of the population, to those findings that offer us some insight into the scope of violence and abuse in these families and the vulnerabilities and risks that increase the probability of an abusive event. Let us first consider the

differences in rates of described violence in the two studies. In the earlier study, caregivers responding to the modified version of the severe violence sub-scale of the Conflict Tactics Scale described earlier in this talk, indicated that about 16% of the patients engaged in violent behavior toward the caregivers. By the time of second study, using the same sub-scale but this time asked as part of the personal interview, that percentage as reported by caregivers had risen to just under 74%. In the initial study, just under 5.5 % of caregivers admitted to being violent toward the AD patient. By the time of the second study that percentage had risen to more than 17% of caregivers. Across the time span of the two studies, we see at least a three-fold increase in the amount of violence reported by both AD patients and their caregivers. It is difficult to determine from the studies themselves whether this change reflects a true shift in the levels of violence, or the greater probability, that in the second study, given the method of data collection, we arrived at a more genuine estimate of the levels of violence in these families. Assuming that this is the case, it suggests that families caring for a family member with AD are at significant risk for experiencing violence in the course of providing care to their loved one. Moreover, based on the reports for general population studies the risk for elder abuse, I would suggest, is significantly greater than the risk of elder abuse in the general population.

Of equal importance, however, is the finding from the second study concerning the amount of verbal abuse experienced in these families. Caregivers indicated that 74% of the AD patients, using the Verbal Aggression sub-scale of the Conflict Tactics Scale, were verbally aggressive. And fully 60% of the caregivers admitted that they also engaged in verbally aggressive behavior toward the family member with Alzheimer's disease.

Also of interest to the research team was the movement of caregivers from one style of conflict resolution prior to the onset of symptoms, to a different form of conflict resolution after the onset of symptoms. In the year prior to the development of symptoms, caregivers reported that the primary method of conflict resolution, again as measured by the appropriate sub-scale on the Conflict Tactics Scale, was reasoning. This was true both for caregivers and AD patients. Moreover, the caregivers reported that only about 10% of both the caregivers and the AD patients used verbal aggression prior to the development of dementia symptoms, and that only 3% of caregivers and patients used violence to resolve conflicts. Yet in the year after symptom development, the proportion of caregivers using reasoning to resolve conflict fell to just 66%, and the proportion of AD patients fell to 45%. While the ability of AD patients to continue to use reasoning is not unexpected given the loss of executive functioning that accompanies a dementing disorder, the almost matching response in the caregivers is worth noting. It suggests that caregivers recognize that the previously employed method of resolving conflict will no longer work. What is troubling however from our data is the choice of alternative conflict resolution styles. As I noted above fully 60% of caregivers choose to use verbal aggression as a means for conflict resolution, and 17% move to the use of violence as the means for resolving conflict.

It appears then that rather than seeking methods of conflict resolution that acknowledge the changes in the ability of the AD patient to use reasoning, methods such as redirection for instance, a significant proportion of caregivers find themselves using more and more aggressive forms of conflict resolution.

Since our data suggests that a rather significant percentage of caregivers engage in either verbally aggressive or violent behavior, the next logical question becomes what are the characteristics that either increase or decrease the likelihood for either verbally aggressive or violent behavior. In order to look at these characteristics, it is important that we briefly return to the explanatory model which I described earlier. As I noted, this model suggests that there are patient characteristics (vulnerabilities) and external characteristics (risks) that contribute to the increased or decreased likelihood of some form of elder mistreatment. Additionally, the model suggests that there are likely interactions across both the vulnerabilities and risks that similarly increase or decrease the probability of some form of elder mistreatment occurring.

The study team chose to look at two caregiver behaviors, verbal aggression and violent behavior toward the AD patient, in relation to characteristics that might tell us something about increased risk. Using logistic regression modeling techniques, we explored a variety of characteristics which have been suggested as increasing the chance of elder mistreatment. These characteristics were divided into the two categories of vulnerabilities and risks. Included in the vulnerabilities category were such characteristics as the patient's age, gender, ethnicity, severity of the dementia, the presence of depression, the level of functional impairment and whether the patient was verbally aggressive or violent. Among the risks that were considered were the caregiver's age, gender and ethnicity race, the level of caregiving hassle experienced by the caregiver, the caregiver's level of functional impairment, the caregiver's cognitive status, perceived level of social support, presence of depression in the caregiver, level of caregiver self-esteem, presence of alcohol abuse in the caregiver, and the caregiver's coping style. Additionally, a series of first and second order interactions were considered, including such things as the

severity of the patient's dementia and the presence of depression in the caregiver, or the presence of verbal aggression in the patient and the presence of alcohol abuse in the caregiver. These interaction terms were developed from an initial regression in which characteristics identified either as significant vulnerabilities or risks were paired with each other in some logical fashion. Models were then constructed that included the principal variables and the interaction terms.

Let me first address the findings from our look at the use of verbal aggression by caregivers. The model resulted in three patient vulnerabilities as possibly protective, and one that increased the risk for verbal aggression. Age was shown as protective, with younger AD patients being at reduced risk for verbal aggression. Similarly, the severity of the dementia was also seen as protective with less severity resulting in decreased risk. Finally, lower the levels of depression in the patient also reduced the risk for verbal aggression by the caregiver. The one vulnerability that increased the risk for verbal aggression by caregivers was if the patient engaged in verbally aggressive behavior, with a greater than eight-fold increase in the risk of verbal aggression by the caregiver. The model identified no protective risks, but did identify several risks that increased the likelihood of verbal aggression. Being a female caregiver increased the risk of verbal aggression almost two-fold. Similarly, the greater the number of psychiatric symptoms present in the caregiver, the greater the severity of depression in the caregiver, or the greater the perceived caregiving hassle described by the caregiver all increased the risk of verbal aggression about two-fold. Decreased cognitive status in the caregiver increased the likelihood of verbal aggression by more than four-fold. Finally, two interactive variables emerged as significant. One coupled the severity of the patient's dementia with the presence of caregiver depression and this interaction resulted in a four-fold increase in the

likelihood of verbal aggression. The second combined the presence of patient depression, with the level of caregiving hassle perceived by the caregiver and with the presence of psychiatric symptoms in the caregiver. This interaction resulted in a six-fold increase in the likelihood for verbal aggression.

As I mentioned, the other area of interest focused on by the research team was the likelihood of violence by the caregiver directed toward the AD patient. This model resulted in one vulnerability being identified as protective, and three vulnerabilities as increasing risk for violence. The protective vulnerability was gender in which being male decreases the risk for being the victim of violence. The vulnerabilities that increase the risk for being a victim of violence were the severity of the dementia, which suggests a four-fold increase in risk, the level of functional impairment of the patient, a two-fold increase in risk, and violent behavior exhibited by the patient, a four-fold increase in risk. The model also resulted in one risk being identified as protective and one risk as increasing the likelihood of violence. The protective risk was caregiver self-esteem, with the greater the caregiver's self-esteem the lower the risk for violence. The negative risk was the presence of alcohol abuse which suggests a three-fold increase in the likelihood of the violence. One interactive factor was shown to increase risk, this was the combination of the severity of the patient's dementia and the presence of depression in the caregiver, which suggested a greater than five-fold increase in risk for caregiver violence.

What can we glean from these findings. Let me first put forward a caveat. Given the nature of the samples, it is important that the results of the studies not be carried too far. At the

same time, I believe that the findings provide important information when it comes to working with families caring for members with Alzheimer's disease.

Violence in these families is not trivial. Given the large proportion of caregivers who both identify violence in the AD patient and violence in themselves, many of the families caring for persons with Alzheimer's disease experience some form of violence on a regular basis. Many of these families similarly experience levels of verbal aggression which are very different from the levels of verbal aggression which they experienced prior to the onset of the disease. The same is true for the levels of violence. Many families appear to move from the use of the more standard methods for dealing with conflict such as reasoning to more aggressive forms of conflict resolution. In the case of verbal aggression, the use of verbal aggression as a conflict resolution style by caregivers seems in many cases to be ignited by the verbally aggressive behavior of the patient. It can be speculated that the caregiver rather than seeing the patient's verbally aggressive behavior as a symptom of the illness, perceives it as a personal attack and responds in kind. Similarly, when it comes to violence in these families, it would appear that once again if the patient exhibits violent behavior, the caregiver rather than seeing the violent behavior as a symptom of the illness reacts to it on a personal level and responds in like fashion.

The findings also suggest to me that one must address what I at times think of as the negative caregiving spiral. The number of dementia symptoms grows with time, increasing the hassle of caregiving. This results in a series of changes within the caregiver including an increase in general psychiatric symptoms and the beginning of or deepening of the caregiver's own depression. As this spiral proceeds downward, the use of dysfunctional conflict resolution styles



increases with the caregiver choosing to engage in either verbally aggressive or physically violent behavior. We must identify ways to help break this negative caregiving spiral. This idea is reinforced when we look at the fact that increased levels of positive self-esteem in the caregivers decreases the likelihood of violence. I would suggest that interventions with caregivers need to focus on helping the caregiver separate out the adequacy of the caregiving being provided from the progressive nature of the disease, should allow the caregiver to maintain their sense of self-esteem. I would further suggest that some of our current interventions, such as respite, while useful in helping decrease the physical demand on the caregiver, unless properly structured, unintentionally increases a lowered sense of self-esteem.

Another finding of note was the increased risk for verbal aggression with a decrease in the cognitive status of the caregiver. As a social worker, I seldom forget the importance of the person in the environment. Too often we become so focused on the identified patient, that is the person with Alzheimer's disease, that we fail to take note of the gradual changes that are occurring in the caregiver's cognitive functioning. While significant loss of cognitive status is not inevitable in all persons, there is also nothing to suggest that only one member of a dyad will experience cognitive loss. Nor that the cognitive loss will necessarily occur in some parallel fashion. When working with caregivers, I believe it is critical for those of us in the helping professions to look for and pay attention to the subtle changes that may take place in some of our caregivers that suggest that the caregiver is also beginning to experience cognitive loss. We need to anticipate this, and have an alternative plan, that compensates for this eventuality and ensure that both patient and caregiver remain protected.

Similarly, we need to be cognizant of the research on late-life alcohol abuse. Our data suggests that the presence of alcohol abuse increases risk of violence. Other research clearly allows us to draw the link between the on-set of late life depression and the on-set of late life alcohol abuse. Other research clearly links the burden of caregiving to the on-set of depression. The final link in this chain then is the relationship between the growing functional impairment as dementia progresses and the perceived burden of caregiving. The causal spiral then is not to difficult to deduce as we look at the interconnectedness of the process from increased need for care, to caregiver depression, to abuse of alcohol, to the occurrence of verbal aggression or violence.

The trick to intervention is determining where for each family the appropriate point of intervention lies. I choose these words deliberately, since while the path may be similar for many families, when and where best to intervene may and will in fact be different. This is why intervention is never simply the application of best practices, but the art of combining best practices with the patient and family currently in front of us.

Let me conclude my remarks, by attempting to broaden this out to a somewhat international perspective. I find myself somewhat reluctant to do this, since the data that I have discussed today is very much drawn from two largely Caucasian samples of United States citizens. While Florida at the time that we did the later study was generally considered to be reflective of where the U.S. population would be in 10 to 15 years, it would be foolish to suggest that the population of Florida included in this study is reflective of an international population.

That said, let me offer some thoughts concerning violence in families caring for a member with Alzheimer's disease across cultures.

There is ample evidence to suggest that different cultures view the caregiving experience differently. In those cultures in which there is a link between a person's self-esteem and the adequacy of the care provided, it may be critical to work with caregivers so that they understand that no level of care will stop the progression of the disease. It may also be important for them to understand that the need for care will continue to increase as the disease increases. To the degree that this is unclear, the risk of abuse may increase.

If, as our data suggests, there is a link between alcohol abuse and risk of violence, then the levels of alcohol abuse in any particular culture may be worthy of note. There may be other factors that vary within different cultures, such as the levels of depression, or the manner in which functional capabilities deteriorate. Each of these risks needs to be viewed in terms of their unique expression in any particular culture.

I believe the most important consideration actually brings us full circle. When I began this presentation, I noted that I chose to study elder abuse looking at subpopulations of mistreatment behavior and specifically in situations in which the person experiencing mistreatment were the victims of Alzheimer's disease. There is an additional perspective that needs to be considered. While, it seems clear from the literature that elder mistreatment is cross cultural, I believe the data is grossly inadequate as to the characteristics that increase this risk in various cultures and sub-populations within those cultures. As I look at the present body of published research what is clear to me is that we are only now beginning to see findings that

suggest risks and vulnerabilities from other cultures. I believe there is a need for research that is conducted in various cultures, and ultimately for the meta-analysis that looks across cultures. It may be that both the phenomena of elder mistreatment and some of the risks and vulnerabilities are cross-cultural. But just as likely, the risks and vulnerabilities that place persons in jeopardy for experiencing violence or verbal aggression, as well as other forms of elder mistreatment vary across cultures.

While I am generally reluctant to conclude with a call for more research, in this case, I believe that if the world community sees elder mistreatment as an issue that must be addressed in order to preserve the dignity of the aged, then to the degree needed research must be supported that helps us determine the similarities and differences in vulnerabilities and risks for elder abuse across cultures.

Thank you. I'll be happy to take questions after our discussant has had the opportunity to deliver his thoughts and comments.