

Fire Risk Reduction Needs and Expectations of the Slavic Community in Urbandale, Iowa

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

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Abstract

The Urbandale Fire Department (UFD) had never conducted a home fire risk assessment of the growing Slavic community in Urbandale. The purpose of this Applied Research Project (ARP) was to conduct a home fire risk assessment of the Slavic community to help identify risk reduction strategies for the leading causes of home fires. The following research questions were developed to attain results using the Descriptive Research Method: a) What data and research relating to ethnic behavioral issues in home fire risk currently exists for Slavic ethnic groups? b) What are the experiences of other fire departments in Iowa relating to the ethnic behavioral issues in home fire risk of Slavic ethnic groups in their community? c) What base fire risk knowledge does the Slavic community in Urbandale currently have regarding the leading causes of home fires? d) What fire risk reduction strategies can be identified for the Slavic community in Urbandale to help prevent or reduce the impact of a fire in the home?

Questionnaires were given to members of the Slavic community, as well as fire departments in Iowa. Interviews were conducted with UFD employees who are of Bosnian descent to obtain their experiences with fire safety in their native country. A literature review and comparison of census data was also used to compare Urbandale's population trends to other communities. Results of these procedures yielded that members of the Slavic community have fire safety needs and expectations comparable to most ethnic groups. Urbandale's Slavic community appears to be interested in exploring more interaction with home fire safety.

Establishing a formal home fire safety program, an annual fire safety survey, and initiating a Bosnian language training program for Urbandale City employees were identified as ways to help meet the needs and expectations of the Slavic community in Urbandale.

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Introduction

What is the real risk? That is a question that is posed to fire departments everyday when discussing the potential impact of fire. Many data resources are available that do a great job of showing the risk of fire, from injuries and deaths to the total cost of fire. Fire departments rely on this data to help justify their existence. It's easy to go to a website, find data you are looking for and then hit the print button. You can then take the data, make some nice color copies of it or incorporate it into a fancy powerpoint presentation. In a matter of minutes you have created a great fire risk presentation that you believe will impact the abilities of citizens and elected officials to understand the risk of fire. This sounds logical, but all too often fire departments take a simplistic approach like this to fire risk assessment.

The Fire Service is a trusted source when it comes to providing risk reduction education and initiatives. Unfortunately, the Fire Service does not always understand the needs and expectations of their customers. In times of economic downturn this is exacerbated by budget cuts that affect prevention and education efforts of fire departments. When a shift occurs that puts more emphasis on the reactive abilities of a department rather than the proactive it becomes more difficult to properly assess and initiate fire risk reduction strategies.

To identify the fire risk in your community you have to identify your customers. As communities grow and diversify this can become increasingly difficult. When fire department personnel encounter a customer they can't communicate with during an emergency due to language barriers it makes the mitigation more stressful for all parties. If a department makes no attempt to better prepare themselves for a similar incident in the future how can you expect a different, better outcome? How effective will your prevention and education efforts be if your

audience has difficulty communicating in English? This is something the Urbandale Fire Department has contemplated with the growing Slavic population in the City of Urbandale.

The problem is a home fire risk assessment has not been conducted with the Slavic community in the City of Urbandale. The purpose of this research is to conduct a home fire risk assessment of the Slavic community in Urbandale to help identify risk reduction strategies for the leading causes of home fires. Descriptive research will be used to answer the following questions and develop risk reduction strategies: a) What data and research relating to ethnic behavioral issues in home fire risk currently exists for Slavic ethnic groups? b) What are the experiences of other fire departments in Iowa relating to the ethnic behavioral issues in home fire risk of Slavic ethnic groups in their community? c) What base fire risk knowledge does the Slavic community in Urbandale currently have regarding the leading causes of home fires? d) What fire risk reduction strategies can be identified for the Slavic community in Urbandale to help prevent or reduce the impact of a fire in the home?

Background and Significance

The City of Urbandale is a northwest suburb of the Des Moines metropolitan area. There has been significant growth among the Des Moines suburbs for the past ten years. The 2010 U.S. Census showed Urbandale's population at 39,463 compared to 29,072 in 2000. The Urbandale Fire Department is a combination department comprised of 27 full time (FT), 10 part time (PT), and 9 paid-on-call (POC) employees as of April 2011. The employees operate out of two fire stations that cover 22 square miles. In 2010, UFD employees responded to 2,481 calls for service, completed 11,623 hours of training, and provided public education programs and events for 11,452 customers (UFD Annual Report, 2010).

As the City of Urbandale has grown so has the diversity of its population. In the past ten years the Urbandale Community School District has seen an increase in the number of Slavic students in the school district. Forty-three percent of current students enrolled in the English as a Second Language (ESL) program are of Bosnian and Serbian descent. The Slavic community in Urbandale is comprised primarily by individuals of Bosnian, Serbian, Croatian, and Slavic descent. Bosnian is the primary Slavic language spoken.

The Urbandale Fire Department has also had an increase in the amount of customer interaction with the Slavic community. Much of the interaction occurs during Fire and EMS incidents. A lot of this interaction also occurs during prevention related activities such as school visits and fire safety inspections of businesses. In the last five years the City of Urbandale has seen an increase in the number of businesses owned and operated by members of the Slavic community. The businesses have weathered the recent economic downturn and have established themselves well in the community.

Despite the increase in population the Urbandale Fire Department has not improved its abilities to identify the risk reduction needs and expectations of the Slavic community. UFD currently has prevention related materials in English and Spanish. These are readily available through several sources such as the United States Fire Administration (USFA), the National Fire Protection Association (NFPA) and promotional companies. However, UFD has no fire prevention materials available that are translated for our Slavic population. The only translated materials we have for the Slavic population are related to gathering pertinent medical information from patients on EMS incidents. This two-page sheet was developed several years ago with the assistance of the school district after a motor vehicle crash where there were multiple patients who only spoke Bosnian.

UFD has never completed a fire risk assessment for any ethnic group in the City of Urbandale. Fire prevention is a priority with our department. But without a means to identify the fire risk of the Slavic community how can the department adequately identify risk reduction strategies? And without translated materials it will be difficult for community members to internalize any recommendations if they can't understand the information they have been given.

Since 2007, UFD has hired three Firefighter/EMTs who were born in Slavic countries and moved to Iowa when they were children. Their insight to the social and cultural customs of the Slavic community has been very helpful to department employees. With their assistance our ability to communicate with Slavic community members who speak limited English has improved. The mission statement of the Urbandale Fire Department is "To preserve life, protect property, and promote safety through education." Urbandale's Slavic community deserves a fire department that can provide the best possible fire prevention. Completing a fire risk assessment is a logic first step.

The issue of completing a fire risk assessment relates to the topic of assessing community risk that was a key component of the Executive Analysis of Community Risk Reduction (EACRR) course. By analyzing the community, identifying hazards and causal factors you develop a more comprehensive perspective of the risks in the community. Assessing the vulnerability of a community is key to determining whether an initiative such as a fire risk assessment of the Slavic community is needed. This also helps to establish risk reduction priorities based on factual data, not on assumptions. This is a more efficient and effective approach than just handing out generic prevention materials and assuming individuals will understand and apply the information in their home.

Completing a fire risk assessment also relates to the USFA's Operational Goals and Objectives. Meeting the USFA goals can only be possible if fire departments have a good understanding of the needs and expectations of their community members. USFA Goal #1 states: "Reduce risk at the local level through prevention and mitigation." If fire departments choose to put more of an emphasis on the reactive nature of our services they will never be able to keep up with the fire safety needs and expectations of the community. Unfortunately, it often takes the fire department to help motivate community members to take a proactive stance on fire safety. Conducting a fire risk assessment of the Slavic community in Urbandale is a way to help fulfill this USFA goal and provide valuable data to help us with USFA Goal #2: "Improve local planning and preparedness."

Literature Review

Fire risk assessments can be influenced by a variety of factors. Social and cultural norms of the target population can influence decisions. The behavior process people go through in preparation for and during an event can have many variables that can affect how people will mitigate a fire. These views can also be influenced by media sources an individual has been exposed to or personal experience they have had with fire. Over the past several years research related to these topics has yielded interesting and useful data for the fire service.

Evaluating the impact of disasters such as fires requires input from many disciplines. Kunreuther and Useem (2010) found that whatever the risk assessment process method, four basic elements for assessing risk remain the same: hazard, inventory, vulnerability, and loss. These elements are critical for emergency personnel to help develop and evaluate strategies to manage risk. This framework is also necessary to get a better understanding of how the public perceives the risk.

Research has demonstrated that risk perceptions have an enormous impact on behavior, regardless of the objective conditions. Researchers have generally found that people tend to assess low-probability, high-consequence events by focusing on one end of the likelihood spectrum or the other. This can also impact how individuals view the importance of preventative measures. Many individuals will not invest in protective measures for a property unless they believe they can recoup their investment in two or three years, even though the measures will be of benefit as long as the property stands (Kunreuther & Useem, 2010).

There are other factors that influence one's emergency preparedness levels. In their qualitative study of homeowners' emergency preparedness, Diekman, Kearney, O'Neil, and Mack (2007) found three factors influenced personal levels of emergency preparedness. First, preparedness varied depending on the type of emergency situation. Second, participants indicated that they prepared differently depending on the season. Third, some participants noted that their level of preparedness depended on personal experiences. For example, when describing how experiencing a fire influenced the level of preparedness for household fires one participant stated: "Since I went through a fire, I am totally terrified of fire. That's what my focus is."

This research also found that most focus group members were familiar with and understand the most basic household emergency preparedness warning messages and recommendations. But when individuals don't adhere to these it may be the result of their beliefs, not necessarily their knowledge. In the context of household emergency preparedness, one should not expect an individual to effectively prepare his/her household if there has been no internalization of a perceived threat, even if that individual believes that the threat can be averted

by taking appropriate precautions (Diekman, Kearney, O'Neil, & Mack, 2007). Fire prevention and risk reduction strategies must be designed with this in mind.

But can we trust that individuals will make the right decision when confronted by a fire? Understanding how people might behave in fire emergencies is an important field of research in the fire protection engineering profession. A 2008 study by the Society of Fire Protection Engineers (SFPE) found that Americans' first reactions to fire could place them in greater danger. Only 28% of Americans indicated that their first action would be to leave the burning building. Exiting the building was not even among the top five things people do when they know there is a fire (Jelenewicz, 2008). The SFPE study also found that more people feel safer from fire in their own homes than in high-rise buildings. These perceptions are contrary to current U.S. fire data.

Considering the time and effort most fire departments invest on fire safety education results like the ones in the SFPE study are concerning. Media also plays a role in shaping risk perceptions. A recent study of risk perception and movies helps shed some light. Engelberg and Sjoberg (2010) investigated the effect of availability of a hazard and/or emotion on risk perceptions by exposing participants to films depicting risk scenarios involving nuclear power or fire (*The Tearing Inferno*). Their hypothesis suggested that there would be an increase in perceived risks specifically related to the theme of the films. Media exposure of a risk should make it seem more likely and the risk should therefore be judged as larger, whenever media have devoted extensive attention to it.

Researchers found evidence of idiosyncratic effects of the movies, that is, people reacted immediately after the movies with enhanced or diminished risk beliefs. However, these reactions faded after ten days. Media can provide genuinely new information and in this way

affect risk perceptions, but people may have many risk notions which they may have constructed on other grounds than media content (Engelberg & Sjoberg, 2010). Programs about an already known hazard may be nothing more than a reminder, not adding to the perceived risk.

In a building fire, the phases and the factors that influence each action are specific to the occupants in the building, the building itself, and the fire event. Kuligowski (2009) found that in order to develop predictive theory of human behavior in fires, the factors that influence an occupant to take certain actions must be identified. This can be difficult due to the direct and indirect factors that influence each phase of the behavior process. Pre-event factors that may increase the likelihood of risk perception include having some type of knowledge or training about fires. There are also occupant-based event factors and cue-based factors that influence the behavior process.

Each action taken by an occupant influences the behavior process of response to a fire. Occupants will begin a behavioral process when presented with cues or information that interrupts their daily routine (Kuligowski, 2009). A new process begins each time the occupant receives new information relating to the event, and a specific action is likely to occur based on whether the information is perceived, the interpretation of the situation and the risk, and the decisions made regarding what to do. During a fire evacuation, occupants repeat this process as they engage in a variety of different activities.

A study on Taiwan of individuals who have experienced fire incidents provides interesting data related to human behavior. A majority of the sampling participants learned some fire safety knowledge through mass media while the second highest was through school or institution education. The study showed that the highest percentage of escape routes was the route evacuees passed through everyday (57.3%). Those taking an alternate route were 16.2%.

It reveals habits influence behavior in an emergency (Liang, Shen, & Tseng, 2009). Most people who escaped safely did not re-enter the building. However, there were around one quarter of people who returned to assist in firefighting, save their property, and/or rescue their family. This study also analyzed evacuation behavior through correlations between gender, education, and occupation. Researchers found no significant differences related to behaviors in fires.

Social and cultural influences on hazard preparation play an important role in public hazard education strategies. The often complex and infrequent nature of hazard events increases people's uncertainty and their reliance on obtaining information about hazards. When applied to risk management, this means that it is not information per se that determines whether or not people decide to prepare for hazards. People may first have to determine what consequences they could face, workout what would be an effective response, and then consider what information and resources they require to enact their mitigation strategies (Burgelt et al., 2010).

Regardless of the available influences, some researchers argue that people, irrespective of culture, will rely to some extent on expert sources for information. Burgelt et al. (2010) found risk management strategies that deal with community development activities are more likely to be perceived by community members and civic authorities alike, as offering a solution that has immediate benefits by facilitating the development of social capital that will show a return on investment in everyday life, and not just in the event of an occurrence at some indeterminate time in the future.

Research on the cultural appropriateness of emergency preparedness communication shows the importance of social capital. It is widely recognized that special populations have gaps in needs within present disaster prevention, preparedness, response, and recovery domains. Available information is often lacking cultural sensitivity and cultural appropriateness. Research

of emergency preparedness risk communication materials among the emergency management county and municipality offices in Maryland by Hawkins, James, and Rowel (2007) found only four of twenty-six offices offered information translated in Spanish on their website. Only two offices provided information translated into other common languages spoken by minority immigrants.

What impact does the fire service have in communicating fire risk knowledge? A study by Lloyd and Roen (2002) examined the interactions between firefighters and lay people using the Actor Network Theory (ANT). This theory deals with tracing the networks through and in which social order is accomplished. Using this model is not to directly question the validity of expert knowledge on the causes of fire, or on the preferred means of reducing fire, nor is it necessarily critical of the risk factor approach. Instead, it asks how fire safety knowledge is made effective in the social worlds where fires take place. Particular connections amongst people, place, and system will be deemed to produce a fire-prepared household, or an at-risk household. But even when these connections produce appropriate answers to fire safety questions the task still remains to put such knowledge into practice for the next household and its inhabitants.

In this study firefighters conducted fire safety assessments in homes with an interviewer present to engage the firefighters and home occupants. Firefighters used various methods to build rapport quickly with research participants. The interviewers found that firefighters used a variety of methods to deliver the fire safety messages. The translation of the messages was difficult at times if the features of the home made it impossible to act on certain fire safety tips (e.g. not all rooms have two viable exits). Other message variations occurred as different firefighters have different understandings, and as they each respond to a specific household's

circumstances. We cannot simply assume that repetition of basic ‘safety facts’ is occurring – there is always translation, hence transformation (Lloyd & Roen, 2002). In the end, it’s the interaction that counts. Firefighters are forced to formulate answers relative to the residents’ concerns, and indeed to their own concerns about what exactly their role is and how to translate their fire safety knowledge and experience.

Procedures

This Applied Research Project (ARP) utilized the Descriptive Research Method to identify the risk reduction needs and expectations of the Slavic community in Urbandale. The process to design the project, attain information, organize, interpret information, and make recommendations involved several steps.

The process began by developing two questionnaires to attain information from members of the Slavic community in Urbandale and other fire departments in the State of Iowa. The first questionnaire (Appendix A) was distributed during the week of February 28, 2011 to fire departments in Iowa via email to members of the Iowa Fire Marshal’s Association (IFMA), Iowa Association of Professional Fire Chiefs (IAPFC), and Iowa Fire Chief’s Association (IFCA). The questionnaire focused on the following topics: a) What limited English populations are prevalent in the community? b) Has the department done a fire risk assessment of any limited English populations? c) Does the department have adequate resources to communicate and educate limited English population prevalent in the community? d) Has the department ever been requested to provide fire safety education to limited English populations in the community? e) What does the future look like for the department in regards to dealing with limited English populations?

The second questionnaire (Appendix B) was distributed to Slavic students currently enrolled in the Urbandale Community School District (UCSD) on March 1, 2011. Of the 258 questionnaires provided to the students seventy-nine were provided in Bosnian and the remaining 179 were provided in English. Student services staff at UCSD provided UFD with this number breakdown. The students were given until March 11, 2011, to return the completed questionnaire to their school. UFD employees then collected the questionnaires from the schools. In an effort to maximize the target population for the fire risk assessment UFD contacted the two private schools that exist in the city along with an additional elementary school that is located within the city limits but is part of a neighboring school district. St. Pius X School (grades K-8) indicated that based on their current records they do not have any students of Slavic descent. This was also the case at Des Moines Christian School (grades K-12). Walnut Hills Elementary School (grades K-5) indicated that based on their current records they have two students of Slavic descent. Consequently, no questionnaires were provided to students at the three schools.

The questionnaire focused on the following topics: a) What fire protection features are currently in the home? b) What do you feel are the leading causes of home fires? c) What is the current use of candles, extension cords, and alternate heating sources? d) How do you extinguish a grease fire? e) Is there anything the fire department can do that would help the Slavic community regarding fire safety in the home? A version of this questionnaire (Appendix C), translated into Bosnian, was placed in five businesses in the community that are owned, operated, and have a large volume of customers of Slavic descent. These businesses were identified as locations where there was the greatest potential to reach members of the Slavic community besides the UCSD. Questionnaires were placed in a clear letter holder attached to a

plastic box near the main entrance at each business during the week of February 28, 2011. The boxes were marked with the UFD patch and verbiage in Bosnian asking for people to take, complete, and return the questionnaire to the box at the business by Friday March 18, 2011. The purpose of the questionnaires is to provide a base set of information related to the current beliefs, capabilities, and base fire safety knowledge of the Slavic community.

UFD has never done a fire risk assessment such as this. However, the questionnaire for Slavic community members presents limitations that must be acknowledged. Of the 258 questionnaires distributed to UCSD students only 28 were completed and returned for a response rate of 10.8%. For the questionnaires that were available at local businesses only 48 were completed and returned. While efforts were made to limit the amount of personal data in the questionnaire people may have been reluctant to complete it due to having no prior interaction with UFD on fire prevention. The small sample size may be viewed as insufficient for analysis purposes. But, considering this is the first time UFD has conducted a fire risk assessment for the Slavic community the information obtained could be viewed as a benchmark for future study of fire risk in the community.

The next process entailed retrieving literature resources on the topic of fire risk assessment and human behavior in fires and disasters. Initial subject searches were completed on Internet search engines such as Googletm and Bingtm. The Learning Resource Center (LRC) at the National Fire Academy (NFA) was used to find literature sources along with Cowles Library at Drake University in Des Moines, Iowa.

Data was retrieved from the U.S. Census Bureau website to try and obtain specific population numbers for Slavic community members. While general population numbers are available for states finding numbers for the specific Slavic groups represented in Urbandale is

not attainable at this time. The purpose of trying to obtain this data was to help provide numbers over the last several years showing the increase in Urbandale's Slavic population.

In order to gain insight into the experience of Slavic residents who were born and raised in Slavic countries interviews were conducted with two Firefighter/EMTs at UFD who are of Bosnian descent. The interviews were conducted at UFD during the week of May, 9, 2011 with follow-up questions via email. The author felt that the experiences of these gentlemen growing up in Bosnia would be beneficial in the discussion of fire risk assessment of the Slavic community in Urbandale. Interviewees were asked questions related to the following: a) What was the population of the city/town where you were born and raised? b) Growing up in Bosnia, what formal fire safety education did you receive? c) Upon coming to Iowa, what was your first experience with fire safety education? d) Do you feel the Slavic community in Urbandale would be receptive to risk reduction strategies provided by UFD? e) What do you feel are the greatest challenges to reaching and educating the Slavic community on fire safety?

Results

The five research questions designed to generate needed information were: a) What data and research relating to ethnic behavioral issues in home fire risk currently exists for Slavic ethnic groups? b) What are the experiences of other fire departments in Iowa relating to the ethnic behavioral issues in home fire risk of Slavic ethnic groups in their community? c) What base fire risk knowledge does the Slavic community in Urbandale currently have regarding the leading causes of home fires? d) What fire risk reduction strategies can be identified for the Slavic community in Urbandale to help prevent or reduce the impact of a fire in the home? Information gained through the Descriptive Method of research, combined with the

questionnaires and interviews, provided substantial data and insight for each of the questions posed.

On the issue of current data and research available relating to ethnic behavioral issues in home fire risk, little information was found for Slavic ethnic groups. Several studies were available detailing the effects of the wars that occurred during the 1990s involving groups such as the Serbians and Croatians. However, the author was unable to locate any pertinent data related specifically to fire risk of Slavic populations.

The most definitive information on this issue came from the interviews of the two Slavic Firefighter/EMTs (FF/EMT) on the Urbandale Fire Department. Demir Miljkovic has been employed by UFD since 2007. He was born in Bosnia and spent the first eight years of his life in a city of 80,000 people. When he and his family moved to Urbandale he could not speak English. His first fire safety education did not occur while living in Bosnia. It occurred as a student at Karen Acres Elementary School in Urbandale. The school had a fire drill one day and staff did not inform Demir what this was. He states: *“When the fire alarms went off and being a kid growing up in a war; sirens meant air raid, not fire.”*

The lack of formal fire safety education growing up in Bosnia was also experienced by FF/EMT Aldin Ramic. He was fifteen years old when his family moved to the United States. His first recollection of fire safety education in the U.S. was watching a “Smokey the Bear” commercial on TV. Aldin and Demir agree that the amount of fire safety education in the U.S. far exceeds any exposure they had to it growing up in Bosnia. In terms of behavioral aspects, both feel the Slavic populations can be stubborn at times which can make it difficult when presenting new information such as fire safety. Mr. Ramic noted that many families have been

in the U.S. for more than ten years now and have adapted to the American lifestyle very well, so they would accept more education since they never had it provided to them before.

Both men agree that challenges do exist to providing fire safety education to the Slavic community in Urbandale. The language barrier and ability to reach the full Slavic population in general are the greatest concerns. When it comes to items that cost money such as smoke detectors, batteries, and fire extinguishers some may not be willing to spend money on those items. Mr. Ramic further explained this by stating: *“they have been getting away with it for so long that they might not understand what the consequences might be without proper fire protection.”*

Regarding the experiences of other fire departments (FDs) relating to the ethnic behavioral issues in home fire risk of Slavic ethnic groups in their community ninety-three departments completed questionnaires. Seventy-one percent of the departments are volunteer, 22% are combination, and 7% are career. The top three limited-English populations prevalent in these communities are Hispanic, Slavic, and “other.” Answers provided by FDs for the “other” classification included African-Tribal languages, Burmese, Ukrainian, and Micronesian. Regardless of the limited-English populations present in the communities none of the ninety-two departments has ever done a fire risk assessment in the community.

Eighty-three percent of the departments feel they do not have adequate resources to communicate with limited-English populations in their community. Lack of multi-lingual personnel, funding, personnel to identify fire safety needs of limited-English populations, and not knowing what populations are in the community were the top four things identified that impact the ability to have adequate resources.

The primary resources used to acquire fire safety education materials for limited-English populations are promotional companies and organizations such as the USFA. Thirteen of the departments indicated that they make their own materials while nine departments have utilized organizations such as the Red Cross and local community agencies. The top three stakeholders utilized to help distribute fire safety information are the school district, churches, and social services.

Ninety-one percent of the departments have never offered personnel training in foreign languages. Of the departments that did offer training Spanish was the only language offered. Eighty-five percent of the departments do not have resources readily available in their vehicles to assist in communicating with limited-English persons during incidents. However, 54% have a dispatch/communications center capable of assisting with multi-lingual communication.

The last five questions of the fire department questionnaire dealt with current and future realities of limited-English population in their community. Ninety-seven percent have never been requested to provide fire safety education to the limited-English population in their community. Only 2% have conducted or sent personnel to training that involved how to develop fire risk reduction strategies for these populations. A majority of the departments are not sure what the projections are for the limited-English populations in their community over the next five years. Forty-one percent of the departments feel that over the next five years there will be no difference from the current resources and abilities to provide fire safety resources for populations in their community. Twenty-two departments provided additional comments related to fire risk assessments of limited-English populations. These comments can be found in Appendix D.

Regarding the base fire risk knowledge of the Slavic community in Urbandale, a total of 76 questionnaires were completed. Fifty-one of the respondents live in a single-family residence while the remaining 25 live in an apartment building. These residences contain a total of 272 persons (167 over age 18). Ninety-six percent of the respondents have smoke detectors in the home of which 73% have a detector on each level of the home. Thirty-eight percent know their smoke detectors are less than ten years old. Twenty-two percent are not sure when the last time was they replaced the batteries in their smoke detectors or have never replaced them. At least one carbon monoxide detector is present in 43% of homes.

When asked what the leading causes of fire are respondents provided a wide range of answers. The most common answers provided were: smoking, cooking, electricity, and gas leaks. Thirty-nine percent of the respondents who have a fire extinguisher in the home report that they know what types of fires it can be used on. Respondents state that the living room and bathroom are the most common areas of the home where candles are used. Extension cords for appliances such as TVs, computers, and entertainment media are being used by 47% of the respondents. Fifty-six percent of respondents state that they have a home escape plan.

For questions related to home heating and experience with fire 41% of the respondents have a fireplace. Twenty-one percent use alternate means to heat their home. Most of these heating devices are located in the basement or living room areas of the home. Thirty percent have someone that smokes in the home. Seven percent have had a fire in the home of which 1% needed the fire department to extinguish it. When asked how to extinguish a grease fire respondents cited placing a towel or other cover and water as the best ways to extinguish the fire. The last question on the questionnaire asked if there is anything the fire department can do to help the Slavic population. A total of 15 comments were made and can be found in Appendix E.

On the issue of identifying fire risk reduction strategies for the Slavic community in Urbandale results of the questionnaires show a need for further involvement with the Slavic community. Answers on questions such as how to extinguish a grease fire show education is needed on how to deal with fires such as this. Smoke detector coverage and replacement of detectors also stood out as areas that need attention. Risk reduction strategies will need involvement with multiple stakeholders to assure information will be disseminated effectively.

Discussion

This author made an assumption that the questionnaires from the Slavic community and fire departments in Iowa would yield atypical results based on the question set provided. However, the results fall in line with the current literature available on the issue of risk assessment. The interviews with UFD's two Bosnian FF/EMTs and comments by respondents on the questionnaire for Slavic residents showed that there are potential barriers to providing fire risk information to community members. Clerveaux, Katada, and Spence (2010) found that some of the primary challenges faced in the promotion of disaster awareness in a mixed cultural setting include language acquisition, need for appropriate multimedia, diversity in mixed cultural groups, and cost-effectiveness. Culture groups that are not fluent in national languages are disadvantaged in terms of their access to the information through the traditional channels of radio, TV, and printed media.

Clerveaux, Katada, and Spence (2010) also noted that immigrants not only transfer cultural characteristics from countries of origin to destinations but in addition, they carry with them the perceptions, behaviors, attitudes, and interpretations of disaster risk management issues. The interviewees noted the lack of formal fire safety education they had growing up in Bosnia.

Mr. Miljkovic's story about his first fire drill experience in the U.S. help illustrate the impact perceptions and interpretations of risk management have on risk management issues.

Could these transferred perceptions, attitudes, and interpretations explain the answers to the questionnaire from Slavic residents? For the question on how to extinguish a grease fire respondents consistently indicated you should throw a towel on it or use water. Are answers like this the result of social influences? In their research of personal, social, and cultural influences of hazard mitigation Burgelt et al. (2010) found social context factors were important in all countries, reinforcing findings that suggest that social networks influence the formulation of risk beliefs and mitigation strategies.

The answers provided by the Slavic community are consistent with research on risk reduction. It is easy to become unsettled when water is chosen by respondents as a primary way to extinguish a grease fire. Recent research has shown we must account for the gap in expectations between "insiders" and "outsiders": those who are affected by disasters and those from the outside who come to help. Most insiders do not distinguish vulnerability between the hazards and their normal everyday lives. Most outsiders consider that we have to reduce people's vulnerability to hazards. The two often have different assumptions on risk management. Part of this mismatch is the outsider having concerns that are not the same as the insider: outsiders have a supposedly rational approach to risk reduction that assumes the same logic among people who have been affected by disasters before or who know that they can be (Cannon, 2010). Since only 7% of respondents indicated that they have ever had a fire in the home it is plausible that in their own view, putting water on a grease fire would be an acceptable way to handle the situation.

Ninety-six percent of the respondents indicated that they have smoke detectors in the home. But does the mere presence of smoke detectors in the home lead itself to positive outcomes in the event of a fire? Successful evacuation, or otherwise, is influenced by human reactions and behavior, even when sufficient fire safety systems are in place (Liang, Shen, & Tseng, 2009). If only 56% have an escape plan can UFD expect them to react and evacuate properly? Considering the numbers of respondents that check their smoke detector batteries and know the age of their detectors, maybe 96% is misleading when discussing the total number of homes that have smoke detectors present? Even if the risk reduction technology is in place (smoke detectors) the technology still heavily relies on the behavior and knowledge of those living in the home to assure its overall effectiveness.

Questions like these lead to established research on the process of human behavior in fires. Kuligowski (2010) noted that each process begins with new cues and information from the physical and social environment. First, cues need to be perceived, then interpreted, and then a decision is made as to what action is undertaken. If we apply this to someone using a fire extinguisher we would also need to account for the factors that influence whether the individual perceives the fire threat, factors that influence what type of interpretation the individual forms about the situation and risk, and factors that influence the decision about an action. Someone's prior experience using an extinguisher in a fire could influence their decision making in the event they are confronted by another fire.

Answers to the question on the leading causes of home fires shows that risk perceptions often don't match what current statistics show. There is no clear indication as to why respondents feel that smoking, electricity, and gas leaks are the leading causes of home fires. In their research on media influence in risk perception Engelberg and Sjoberg (2010) found that

people can construct judgments about concepts they have little knowledge about and with which they have not previously been concerned. In July 2010, a fire caused by a leaking gas grill propane tank destroyed a 30-unit condominium building in the City of Urbandale. The high media exposure of this event put a focus on the perceived threat of gas leaks in propane tanks. Could the exposure to this type of media have influenced respondents to view gas leaks as a leading cause of home fires?

In the questionnaire, respondents were asked if there is anything the fire department can do to help the Slavic community regarding fire safety in the home. More fire safety education, smoke detectors, and fire extinguishers were requested by respondents. More involvement with the Bosnian community was also requested, especially the older adult population who speak very little English. Comments like these help to illustrate that there is still a lot of education that needs to take place.

As previously discussed, technology is only as good as it can be properly maintained. How someone perceives the fire threat is equally as important. In their research on factors influencing emergency preparedness levels Diekman, Kearney, Mack, and O'Neil (2007) noted the need to design prevention messages that help internalize personal risks for experiencing household emergency situations by raising the perceived threat of such events. Messages should increase the public's perceived susceptibility to these events by relaying the risk of experiencing these events in ways that are more understandable to the public.

The ability of fire departments in Iowa to facilitate the communication of fire safety information to their limited-English populations has challenges. Such challenges are not specific to fire departments in Iowa. Hawkins, James, and Rowel (2007) noted that the effectiveness of public emergency prevention and response efforts rely substantially on the effectiveness of the

dissemination of risk communication messages and materials by both the government and community agencies. With none of the ninety-three departments having done a fire risk assessment in their community it would seem a logical first step would be to conduct one. Fire departments in Iowa are already using a variety of community stakeholders to help distribute fire safety information in the community. With most departments lacking personnel and funding to do this on their own departments should plan on utilizing available stakeholders to their maximum potential.

There are some examples of best practices for reaching immigrant and ethnic groups. In Part 3 of their report on global concepts in residential fire safety TriData (2009) found that in countries such as Canada, innovative strategies like utilizing community ambassadors, purchasing ads for buses, putting safety messages in local ethnic media, and partnering with English as a Second Language (ESL) schools to provide basic home fire safety information serve as effective ways to interact with community members. Most of these initiatives do not require extensive funds or require significant time commitments for departments. Establishing partnerships can facilitate an effective delivery of fire safety to all members of the community.

To properly identify risk reduction strategies for the Slavic community in Urbandale it is important to evaluate the risk assessment process method. Being that this is the first fire risk assessment done by UFD, how do we gauge the overall effort? Kunreuther and Useem (2009) provided a framework that highlights the importance of linking risk assessment and risk perception in designing strategies for managing risks in our increasingly interconnected world. The authors proposed six areas for improving risk management: risk forecasting, communicating risk information, economic incentives, private-public partnerships, financial instruments, and resiliency/sustainability.

Further identifying areas of the city where Slavic residents live can assist with identifying fire trends in these neighborhoods, as well as assist in getting fire risk information distributed to the proper individuals. Helping Slavic residents understand the economic incentive of a properly working smoke detector or a CO detector may be a good way to encourage compliance. Partnering with local businesses to help provide low-income residents with life safety devices could help distribute costs so UFD is not burdened with all expenses. Buy-in from the business community may also open doors in the future for other partnerships. Emphasizing the potential financial value of having a home protected by a fire sprinkler system may help gain further acceptance and education on the importance of these life safety systems. Making sure the community understands the total cost of fire will be key to maintaining resiliency and sustainability.

The other key ingredient to all of this is the UFD personnel who will be involved in the risk reduction strategies. Domestic fire safety is not simply about retrieving knowledge, 'handing it over' and then assuming that it will be put into practice (Lloyd and Roen, 2002). The promotion of risk reduction will require personnel to be interactive and engaging with community members. It is important that they know what is expected of them, how it benefits the organization, and what messages need to be conveyed to community members based on the risk assessment findings. How UFD personnel translate the messages to residents will also need evaluation to assure a level of consistency is being maintained.

Having the ability to provide risk reduction strategies to Urbandale's Slavic community is exciting and concerning at the same time. It is important the UFD reaches out to our customers in a way we never have before. Based on the results of the questionnaires we know we can help educate community members to help them lead safer lives. We are fortunate to have two very

competent FF/EMTs who are of Slavic descent. Their ability to speak and write in Bosnian was critical to this fire risk assessment process and will be for safety materials that may be developed in the future. The fact that no other fire department that participated in our questionnaire has done a fire risk assessment makes our experience in Urbandale important not only for us, but also as a potential benchmark if other departments conduct a similar assessment in their community.

This research disproved a pre-conceived notion I had about the base fire safety knowledge of the Slavic community in Urbandale. I expected lower percentages on the questions about having smoke detectors in the home and having a home escape plan. It was also surprising that water would be one of the top answers on how to extinguish a grease fire. But, considering UFD has never done a fire risk assessment before what expectations should there be? One could say it's just a firefighter thinking of the worst-case scenario. Or, like Mr. Ramic stated during my interview with him, maybe since most of the families have been in the community for about ten years they have adjusted to the American lifestyle. This could explain why the percentages were higher than I expected. UFD interacts with thousands of community members each year on fire safety. Perhaps this interaction is reflected in the overall percentages found with the questionnaire results. We now have data to help gauge the effectiveness of future risk reduction strategies.

It is obvious from the research that developing strategies and follow-up methods will present immediate and long-term implications. Although UFD has a lot of general fire risk information we will need to get it translated so all members of the Slavic community have access. Even with our two employees who are fluent in Bosnian backup plans for the translation of materials must be considered. Without developing a tool to assess the quality of risk

reduction strategies it will be nearly impossible to show changes in risk reduction knowledge. Current staffing limitations at UFD highlight the importance of recognizing the investment in personnel hours that will be needed to continue all aspects of risk assessments and risk reduction strategies. This will become critical if UFD chooses to perform fire risk assessments and provide risk reduction strategies for other limited-English populations in the community.

Recommendations

Urbandale's growing Slavic community has led to an increase in the interaction with community members during emergency responses and public education activities. Questionnaires completed by fire departments in Iowa provided valuable insight into the challenges departments face with limited-English populations in their communities. This questionnaire, combined with the literature review and the results of the questionnaire completed by the Slavic community in Urbandale provide the basis for three recommendations to help address the fire risk reduction needs and expectations of the Slavic community.

A formal home fire safety program should be developed. The program should incorporate classroom and practical exercises to facilitate the learning process. From results attained from the questionnaire smoke detectors, home escape plans, cooking safety, and hazard recognition should be the focus of the initial program. Materials used in the program shall need to be made available in English and Bosnian. To facilitate this process, UFD should establish translation resource contacts through the UCSD and business community. The delivery of the program should take place at a variety of locations throughout the community. Cost-effective locations could include fire stations, public library, city hall, and schools throughout the community. Fostering support and participation from businesses owned by Slavic community members may be an effective way to help market the home fire safety program.

The establishment of an annual fire safety survey for the Slavic community could help gauge the effectiveness of fire safety initiatives. Survey results could help guide the expansion and modification of existing initiatives. Partnering with the stakeholders used for this current research project will be essential. Data from surveys can be measured against the baseline data obtained from the original research. Any and all results should be shared with community members, UFD personnel, elected officials, and the business community. This may also set the foundation to expand the survey out to other limited-English populations. Care must be taken to assure that the appropriate resources for translation and data recording are identified and acquired prior to marketing the survey. The continuous data collection and evaluation of surveys and programs shall require diligence and sufficient resources from UFD to assure consistency in efforts.

A Bosnian language training program should be offered to all City of Urbandale employees. In the event of a fire, UFD is not the only city agency that may respond. The Urbandale Police Department also serves as a first responder to fire calls. After significant incidents, the Urbandale Building Department and Urbandale Water Department may also need to respond to evaluate structural hazards and help coordinate the control of utilities. Employees from these departments may find language training like this helpful for communicating with community members regardless of the situation. Utilizing current city employees and those from the UCSD who speak Bosnian should be explored as a cost-effective way to provide this training. Upon completion, consideration should be given to providing language training programs for other ethnic languages common in the community.

Future readers who may wish to replicate any portion of this research should establish a list of translation resources available prior to developing questionnaires for the target population.

The time commitment needed to translate data and results should also be factored into the overall time commitment required for the translation resources. These resources can also be beneficial in identifying ways to market the questionnaire to the target population. Prior to developing recommendations, readers should thoroughly evaluate all programs and initiatives already in place for persons who speak English. Recommending fire risk reduction strategies for a limited-English population should incorporate aspects of other programs while addressing the specific needs identified through a risk assessment process.

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Appendix A

Fire Department Questionnaire on Fire Risk Assessment of Limited-English Populations

1. What type of fire department do you have?
 - a. Volunteer
 - b. Combination
 - c. Career

2. What Limited-English populations are prevalent in your community? (check all that apply)

| | |
|---|-----------------------------------|
| <input type="checkbox"/> Hispanic | <input type="checkbox"/> Russian |
| <input type="checkbox"/> Czech | <input type="checkbox"/> Sudanese |
| <input type="checkbox"/> Slavic (Bosnian, Croatian) | <input type="checkbox"/> Korean |
| <input type="checkbox"/> Vietnamese | <input type="checkbox"/> Chinese |
| <input type="checkbox"/> Other _____ | |

3. Has your department done a fire risk assessment for any of the populations noted in Question 2?
 - a. Yes
 - b. No

4. If you answered "yes" on Question #3 were you able to identify and implement risk reduction strategies for the limited-english populations in your community?
 - a. Yes
 - b. No
 - c. Still trying to implement strategies

5. Do you feel your department has adequate resources to communicate with limited-english populations in your community about fire safety?

- a. Yes
- b. No

6. If you answered “No” on Question #5, what impacts your ability to have adequate resources?

- Lack of multi-lingual personnel
- Lack of funding
- Lack of personnel to identify fire safety needs of limited-english populations
- Lack of community support towards fire safety and prevention
- Lack of department support towards fire safety and prevention
- Do not know what limited-english populations are in the community
- Other: _____
- _____

7. Where do you get fire safety education resources for limited English populations? (Check all that apply)

- FEMA (includes USFA)
- NFPA
- Promotional companies (Alert-All, Positive Promotions, etc.)
- We make our own
- Other: _____

8. What, if any, community stakeholders have you utilized to help distribute fire safety information to limited-english populations in your community? (Check all that apply)

- Food Pantry
- Chamber of Commerce
- Community Action Groups
- Charity Organizations
- Churches
- Social Services
- School District
- Realtors
- Other: _____

9. Has your department ever offered training in foreign languages for your department personnel?
- a. Yes
 - b. No
10. If you answered "Yes" on Question #9, which foreign languages were offered?
-
11. Does your department currently have any resources in your vehicles to assist with communicating with limited-english persons during incidents?
- a. Yes
 - b. No
12. Does your dispatch/communications center have resources available to assist your department personnel with communicating with limited-english persons during incidents?
- a. Yes
 - b. No
13. Has your department ever been requested to provide fire safety education to limited-english populations in your community?
- a. Yes
 - b. No
14. Does your department conduct post-incident follow-ups with limited-english persons involved in preventable fire safety events such as unattended cooking fires or fires involving the misuse of extension cords?
- a. Yes
 - b. No
15. Within the last 5 years, has your department conducted or sent personnel to training that involved how to develop fire risk reduction strategies for limited-english populations?

a. ____ Yes

b. ____ No

16. What are the projections for the limited-english populations in your community over the next 5 years?

a. ____ They will increase

b. ____ They will decrease

c. ____ They will stay the same

d. ____ Not sure

17. What do you think will happen with your department's ability to communicate and provide fire safety resources for limited-english populations in your community over the next 5 years?

a. ____ We will have more resources/abilities

b. ____ We will have less resources/abilities

c. ____ No difference from current resources/abilities

d. ____ Not sure

18. Do you have any other thoughts or comments related to fire risk assessments of limited English populations?

Thank you for your time and assistance with my project!

Appendix B

Questions about Home Fire Safety for the Slavic Community.
Please have an adult answer the following questions and then return the questionnaire to the school or one of the locations noted on the back page.

1. Do you live in a: ____ House ____ Apartment? Do you currently live in the City of Urbandale?
____ Yes ____ No. How many people age 18 and over live in the home? ____
How many are under age 18? ____
2. Do you have smoke detectors in your house? ____ Yes ____ No. If yes, is there at least one smoke
detector on every level of your home (including the basement)? ____ Yes ____ No
3. Are your smoke detectors less than 10 years old? ____ Yes, ____ No, ____ I Don't Know
4. When did you last change the batteries in your smoke detector(s)? ____ < 6 months ago, ____ 6-12
months ago, ____ > 1 year ago, ____ Not sure, ____ I've never changed the batteries
5. Do you know what a home fire escape plan is? ____ Yes ____ No. If yes, do you currently have one for
your home? ____ Yes ____ No
6. What do you think are the leading causes of home fires?

7. Do you have a fire extinguisher in your home? ____ Yes ____ No. If yes, what types of fires can it
be used on? _____
8. Do you use candles in your home? ____ Yes ____ No. If yes, what areas of your home do you
typically use candles? _____
9. Are you currently using extension cords for any appliances in your home? ____ Yes ____ No. If yes, what
types of appliances or equipment are you using them for?

10. Does your home have a fireplace? ____ Yes ____ No. If yes, have you ever had it cleaned and
inspected? ____ Yes ____ No
11. Do you use any other means to heat your home such as a space heater? ____ Yes ____ No. If yes,
where are these heaters located in your house?

12. Does anyone in your home smoke? ____ Yes ____ No. If yes, what is used for ash trays in the home?

13. Have you ever had a fire at your current home? ____ Yes ____ No. If yes, did the fire department have to put the fire out? ____ Yes ____ No
14. If you experienced a grease fire in your home like the picture below, what do you think would be the best way to put the fire out? _____



15. Do you have a carbon monoxide detector in your home? ____ Yes ____ No. If yes, where is it located in your home? _____
16. Is there anything that you think the fire department can do that would help the Slavic population regarding fire safety in the home?

The Urbandale Fire Department appreciates your assistance with our project! Our goal is to improve communication and increase fire safety awareness with the Slavic population in Urbandale. **Please return this questionnaire to one of the following locations:**

1. Urbandale Food Pantry - 7611 Douglas Ave., Suite #34
2. Luna Grocery Store - 8036 Douglas Ave.
3. Europa Grocery Store - 3839 Merle Hay Rd., Suite 116
4. ADO Import - 1985 NW 94th St., Suite E100
5. Ezan - 6228 Douglas Ave.

If you have additional questions about this questionnaire or fire safety, Please contact the following people:

1. Demir Miljkovic - Urbandale Firefighter 515-278-3970
2. Aldin Ramic - Urbandale Firefighter 515-278-3970
3. Jon Rech - Urbandale Fire Marshal 515-278-3970

Appendix C

PITANJA O KUCNOJ ZASTITI OD VATRE

Molim odgovori na sledeca pitanja I ostavite ovaj obrazac na jednu od lokacija navedenih na zadnjoj stranici do 18 Mart 2011.

1. Da li zivite u: ___ kuci ili u ___ stanu ? Dali trenutno zivite u Urbandale ? ___ Da ___ Ne. Koliko osoba starijih od 18 godina zivi u vasoj kuci? ___ Koliko osoba mladih od 18 godina zivi u vasoj kuci? ___
2. Da li imate alarm za dim u svojoj kuci ? ___ Da ___ Ne. Ako imate , je li imate najmanje jedan u svakom spratu svoje kuce (ukljucujuci prizemlje –basement) ? ___Da ___Ne
3. Jesu li vasi alarmi stariji od deset godina ? ___Da ___Ne ___ Nisam siguran
4. Kada ste zadnji put promijenili baterije u svojim alarmima za dim? ___Prije sest mjeseci ___ Od sest do dvanaest mjeseci ___ Prije godinu dana ___ Nisam siguran ___Nisam nikad promjenio.
5. Da li znate sta je pravilan plan za izbjek iz zapaljene kuce ? ___Da ___Ne Ako znate , da li trenutno imate takav plan za svoju kucu/porodicu ? ___Da ___Ne
6. Sta vi mislite sta je najcesci uzrok pozara u kucama ?

7. Da li vi imate vatrogasni aparat u svojoj kuci ? ___Da ___Ne Ako imate za koje vrste pozara moze biti koristen?

8. Da li koristite vatrene svijece u svojoj kuci ? ___ Da ___Ne Ako koristite , u kojem dijelu kuce obicno koristite svijece ?

9. Da li trenutno koristite proizvodne kablove za bilo koji od kucni aparata u svojoj kuci ? ___Da ___Ne Ako koristite , za kakve aparate ih koristite ?

10. Da li vasa kuca ima kamin ? ___ Da ___ Ne Ako ima Kamin jeli ikad ciscen I pregledan ? ___Da ___Ne
11. Da li koristite neku drugu vrstu grijanja u svojoj kuci kao elektricne I plinske grijace ? ___Da ___Ne Ako koristite , u kojem dijelu kuce ih koristite ?

12. Da li pusite u vasoj Kuci? ___Da ___Ne Ako se pusi, sta koristi za pepeo posudu.

13. Da li ste ikad imali pozar u vasoj kuci ? ___DA ___ Ne Ako jeste , da li su vatrogasci gasili pozar? ___Da ___Ne

14. Ako se požar desi u vasoj kuci kao na slici ispod , sta vi mislite kako bi se na najbolji nacin ugasio ovaj požar ?
-



15. Da li imate CO(Ugljen-monoksid) alarm u vasoj kuci ? ___Da ___Ne Ako imate gdje je postavljen u vasoj kuci?
-

16. Da li ima nesto da bi vatrogasna sluzba mogla da uradi da bi poboljsali protiv požarnu zastitu u vasoj kuci ?
-
-

Vatrogasna Sluzba Urbandale vam se zahvaljuje na pomoci sa ovim projektom. Nas cilj je da poboljsamo komunikaciju sa vama I da povecamo vatrogasnu sigurnost za gradzane grada Urbandale.

Molimo vas ostavite ispunjen ovaj obrazac na sljedece adrese.

- 1. Urbandale Food Pantry – 7611 Douglas Ave. Suite #34**
- 2. Luna Grocery Store – 8036 Douglas Ave.**
- 3. Europa Grocery Store – 3839 Merle Hay Rd., Suite 116**
- 4. ADO Import – 1985 NW 94th St., Suite E100**
- 5. Ezan – 6206 Douglas Ave**

Ako imate pitanja u vezi ovog obrazca , molimo vas nazovite slijedece osobe:

- 3. Demir Miljkovic – Urbandale Vatrogasac 515-278-3970**
- 4. Aldin Ramic – Urbandale Vatrogasac 515-278-3970**
- 5. Jon Rech – Urbandale Pozara Marsal 515-278-3970**

Appendix D

Question 18 – Responses to: *Do you have any thoughts or comments related to fire risk assessments of limited-English populations?*

“This is a good thing. We are very rural but have several Hispanics working on farms and living in our district. We should think about doing more for this population in our area.”

“We have many different languages traveling down I-80 but none in town. We don’t know what we are going to run into.”

“We live in a multi-cultural community and we could do better in our prevention efforts to reach the limited-english citizens.”

“Very small limited-english population.”

“Small rural town. No longer have a school in town.”

“Small Spanish speaking community and have not been involved with them too much.”

“We have done little to address this issue.”

“Our community is growing and in the future may have to look at doing something like this with our department.”

“Responses/contact with limited English populations has been very minimal.”

“Dedicating extensive resources to train or develop those resources may not be efficient, especially in light that it’s a transient population.”

“Most problems arise with the interpreter not speaking English well enough to communicate effectively and most people not having the time to stand around and be sure of the wants and needs of the subject.”

“Great issue to be concerned about however, this is not a high priority for our department.”

“I do agree we need to address this, but at this point the problem is more of a “out-of-site-out-of-mind.” I hate to say it that way, but it is honest.”

“We really do have a small problem with our limited-english population. I wish we had more guidance in this area.”

“Our best resource at this point is through the children. We educate them and they educate their parents at this point and it seems to work.”

“It is not a problem in our area.”

“Non-english speaking population is shy of 1%.”

“We have Monsanto in town with support help that are Hispanic. Monsanto helps with what we need.”

“It’s going to be a problem getting funding and the department to get info and someone to speak enough languages to sufficiently interact.”

“This is not a problem in our area.”

“Need language training available.”

“At this current time we don’t have many or any non-english speaking members in our community. If someone or a family was to move in the immediate area we would set up a procedure or know of who could translate if needed in an emergency.”

Appendix E

Question 16 – Responses to: *Is there anything that you think the fire department can do that would help the Slavic population regarding fire safety in the home?*

“Educate people about fire safety.”

“No.”

“Build more fire departments.”

“Yes.”

“They should give us fire extinguisher and teach us how to use them and when to use them.”

“Living room.”

“Come around, explain things, give us handouts.”

“Not sure.”

“Don’t know.”

“Nothing. Everything’s great. Thanks for asking.”

“Give us new smoke detectors.”

“More education on developing plans for fire exits and having them in Bosnian.”

“More involvement with the Bosnian community and for Bosnians to involve themselves with better education on how to promote safety.”

“More education.”

“More education to older Bosnians who don’t speak English.”