STRATEGIES FOR COMMUNITY RISK REDUCTION

Frederick County Division of Fire and Rescue Services Community Risk Reduction

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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.

Signed: ____________________
Abstract

The problem was the Frederick County Division of Fire and Tri-Data Corporation (Gene Mellin, personal communication, September, 2007) informed Rescue Services (FCDFRS) that the department does not have a community risk reduction program. The purpose of the research was to identify the components needed to develop a community risk reduction program. Descriptive methodology was used to guide the study in answering four research questions related to the standards for community risk reduction program. Literature stressed the necessity of fire departments having a community risk reduction program and questionnaire results, along with interviews confirmed this. It is recommended that the FCDFRS train career staff, budget money and consider developing standard operating guidelines for a community risk reduction program.
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Introduction

The fire service has taken on more than suppression activities in order to keep up with the demands from the customers it serves. Progressive departments take care of hazardous materials, trench collapse, confined space rescue, terrorism threats and swift water rescue incidents (Collins, 2005). Fire Departments should be prepared and committed to providing their customers with a quality of service that includes proper equipment and personnel trained to mitigate emergencies. It is also the responsibility of the jurisdictional fire department to have in place a means to be proactive in helping the communities prepare for the emergencies prior to them happening. This leads to the research problem that will be addressed in this applied research project.

The research problem is that the Frederick County Division of Fire and Rescue Services lacks a community risk reduction program. This problem is based on the fact that a current study of the department by Tri-Data Corporation (Gene Mellin, September 25, 2007) revealed there was a need for a community risk reduction program to be established.

The purpose of this research is to identify the components needed to prepare the Frederick County Division of Fire and Rescue Services with a community risk reduction program. Descriptive research was used to guide this research in answering the following research questions: What are the components of a Community Risk Reduction Program? What are the components of Community Risk Reduction Programs utilized by other fire departments? What does the Frederick County Division of Fire and Rescue Services administration, line officers and firefighters currently do in regards to Community Risk Reduction? How would a Community Risk Reduction Program become part of the day-to-day activities of the Frederick County Division of Fire and Rescue Services?
Background and Significance

The Frederick County Division of Fire and Rescue Services (FCDFRS) is comprised of 334 career staff that provides fire and emergency medical services, along with hazmat, confined space rescue, trench rescue and swift water rescue. Frederick County encompasses 664 square miles and is the largest county landmass in the state of Maryland. Frederick County’s population was 215,877 in 2005 (United States Census Bureau, 2001). Frederick County is subjected to hurricanes, winter storms, flash flooding, and hot summers. There are 84,685 housing units and 5,825 business and retail establishments as of 2001. There are 35 elementary schools, 13 middle schools, and 10 high schools. (United States Census Bureau, 2001). The career staff supplements the volunteers in 21 stations throughout the county.

Frederick County has a large elderly population, numerous bike trails, many families with small children, and a large mountain range and river that run through the county. Due to these factors Frederick County citizens are prone to many community risks.

Career firefighters and volunteer firefighters are dispatched to mitigate a large multitude of emergencies such as the following: 22,445 in 2002, 23,561 in 2003, 24,669 in 2004, 23,742 in 2005 and 24,342 in 2006 (William Adams, personal communication, August 29, 2007). There is not a formal community risk reduction program in place to allow staff to be a proactive in reducing community risks.

A major goal from the Executive Development (National Fire Academy [NFA], 2005) course is to focus attention of the executive fire officers as leaders in their departments to not walk by problems, but to find solutions. A community risk reduction program would be one approach for the FCDFRS to solve a lack of preparedness in lowering risk to the citizens of Frederick County, Maryland. This directly relates to the United States Fire Administration
Operational Objective number four, “to promote within communities a comprehensive, multi-hazard risk reduction plan led by the fire service organization” (p.3).

In summary, this research is significant because it provided the Frederick County Division of Fire and Rescue Services with a guide, grounded in good research and literature appropriate to the subject. The following section begins this journey by reviewing literature reflection the components of a Community Risk Reduction Program.

**Literature Review**

The literature review for this applied research began during the researcher’s participation in the pilot of Strategies of Community Risk Reduction course (NFA, 2007) at the National Fire Academy in Emmitsburg, Maryland. The on-line card catalog was useful in locating books and journals on the subject of community risk reduction. The Internet was used to do additional searches for community risk reduction programs.

Driving down community risk in the community is a strategy that is vital to the operations of the Derbyshire Fire and Rescue Service (Community Safety Strategy, 2006). “The strategies are not framed in isolation but collectively form a drive to reduce the probability and severity of undesired events which include fire, traffic collisions, environmental damage and other related emergencies” (p.3). For this to happen the Derbyshire Fire and Rescue Service (DFRS) fosters prevention through the use of education, training and information. Commitment to risk reduction is prioritized in community activities by operational staff, inspection officers, and support personnel. The DFRS inspection department enforces actions to protect occupants from fire at the premises. “This is done to provide safe escape from buildings, reducing damage to property and the environment and minimizing the risk presented to their operational crews engaged in intervention activities” (p.4). The DFRS measures how much of a difference each of
their initiatives contributes to a safer society in order to ensure they are doing the right things to drive down risk. This department wants to provide value for money, efficiency and effectiveness; the strategies provide the approach and means to evaluate this performance. To accomplish the DFRS strategy of lowering risk reduction the department promotes changing their behavior. “Safe behavior is influenced through training information, instruction, and other means under the umbrella of education” (Community Safety Strategy, 2006, p.9). Table A provides the DFRS Community Fire Safety Plan.

Table A: Community Fire Safety Plan

- Determining what the risk is
- Identifying where the risk is
- Defining who is at risk
- Researching what needs to be done to reduce the risk
- Undertaking initiatives to reduce the risk

(Community Safety Strategy, 2006, p.9)

The Community Fire Safety plan for DFRS helps the department to determine which risk reduction initiatives and national community fire safety campaigns will be incorporated into fire station action plans. The risk reduction initiatives utilized by the DFRS are identified in Table B. To follow up the initiatives the DFRS measures and reviews the performance.
Table B: Fire Risk Reduction Initiatives

Free home fire safety checks
Free smoke detector fitting
Schools education program
Sixty plus initiative
Arson reduction
Partnership working for a safer community
Promoting use of sprinklers in homes and schools
Working with young people

(Community Safety Strategy, 2006, p.15)

The DFRS has done research that shows that “the threat to life from fire is dramatically reduced by providing education about the causes and spread of fire, fire escape plans and ensuring smoke detectors are installed and are working in order to provide for early detection of fire” (p. 16). Operational crews who have the knowledge, experience and understanding of the nature and behavior of fire carry out the Home Fire Safety checks. The DFRS has a partnership with social services, which enables social services to have vulnerable people call the fire department for a home fire safety check. Government funding has provided for free smoke detectors to be placed in homes. Because of this funding the DFRS intends to do 8000 free home safety checks each year and install 12,000 smoke detectors per year for the next four years (Community Safety Strategy, 2006). The DFRS suggested that commercial premises promote site security, improved waste management and the development of a challenging culture will help reduce the
opportunities for arson and lessen the effects should it happen. Working jointly with the police department will identify options for jointly promoting these messages. Through this community risk reduction strategy the DFRS focused on the fire department making Derbyshire a safer place to live and work.

The Phoenix Fire Department has a risk reduction program called Fire Fit Kids. “Fire Fit Kids is designed for firefighters to share their knowledge, enthusiasm, and experience to improve the motivation, knowledge and fitness of the community’s youth” (Phoenix Fire, 2007, p.1). Through the Phoenix Fire Department (PFD) has taught children fire prevention, survival behaviors, pool safety, and numerous other lessons that will make their lives better forever (p.1). Fire Fit Kids provides the community with a wellness message to help prevent the numerous illnesses associated with an unhealthy lifestyle and lack of fitness. Fire Fit Kids also gives youth with an exposure to the job of a firefighter, their need for high levels of fitness and the rewards of being fit. “The Fire Fit Kids is the family of the Phoenix Fire Department helping your family” (p.1). With the increasing obesity and inactivity more than 300,000 cancer, heart disease and diabetes deaths occur each year. Hence, the youth will become the fire department’s future customers if this trend continues; Fire Fit Kids can change this. Fire Fit Kids also addresses that wellness is more than physical fitness, it is maintaining a positive attitude, having more compassion, and increased motivation.

The Richmond Virginia Fire Department has started a “Village Fire Department” (Village Model, 2007, p.1). Chief Robert A Creecy has started a reeducation of his Richmond Fire Department (RFD) to make it more progressive. This program resembles community policing, an approach that police departments utilize. Specific fire stations take ownership for their service area. “The officers and firefighters alike interact with the residents, speak at
schools and essentially imbed themselves in the community in order to develop better fire prevention tactics for that area” (p. 1). Deputy Chief Chris Garrett in the Owasso Oklahoma Fire Department (OFD) uses this same philosophy. Chief Garrett states “that it makes the fire company a more integral and visible component of the community and allows the companies to manage themselves and try to find their own fixes” (Village Model, 2007, p. 1). The concept simply connects the closest fire station to its community with the goal being to change the focus of the department from local fire prevention to community guardianship. RFD and OFD secured Fire Act grant money to train and certify the community officers in NFPA-1031 Fire Inspector and NFPA-1035 Fire Education courses (p.1). Training was needed due to giving these officers new roles and responsibilities. It requires that the firefighters in each station to change the way they think. Both chiefs want the firefighters to think of the area they service as their community. Chief Garrett stated “that once the model is in place, each local station will be able to identify the incident trends and target specific problems within the community” (Village Model, 2007, p.2). This allowed the officers to develop risk reduction programs that are tailored to that area’s needs. Both chief’s agree that no matter how big or small the city, every department can make use of the Village Model, RFD serves 500,000 people while Owasso serves 35,000 people (Village Model, 2007). Chief Garrett states “that the fire department has had to think outside the box due to the fact that police ranks have been increasing while the RFD has gone down in number of firefighters” (p.2). The most important part to implementing this village model is employee buy in. Chief Garrett states “it will not work unless the employees are on board” (p.2). The chief’s state “that they are not asking the firefighters to do more, they are just asking them to do it in another way, the days of playing checkers, sitting around in the station waiting for the big one is over” (p.2).
In July of 2004 the Staffordshire Fire and Rescue Service (SFD) received new legislation which enabled the department to take a proactive community education program. The effects of this program caused reductions in the following: fire related deaths, fire related injuries, incidence of fire, number of arson related fires, number of road traffic collisions, and number of people killed or seriously injured in road traffic collisions.

The SFD intended to afford to all children lifelong learning and preventing disaffection (Stratford Fire, 2007). Children ages 9 – 11 get to hear from firefighters in their schools about the importance of home escape plans, the importance of having smoke detectors and knowledge of the fire tetrahedron. The SFD and the Staffordshire County Council’s road safety unit have teamed together to go over crash investigation with 14-17 year olds in area high schools. During this class the following subjects are discussed; speeding, drugs, drinking while driving, peer pressure and not wearing seatbelts. A road traffic collision road show is given to children 15 – 16, by the SFD, Police, Accident and Emergency Team, Victim Support and Youth Service, and is aimed at reducing the number of fatalities and serious injuries that occur on roads (Stratford Fire, 2007). The SFD also has partnership with the Staffordshire Police and Ambulance Services, and the Staffordshire Newsletter to encourage children that are 9 – 14 to participate in a countywide safety competition. The children are shown an incident, to which they have to produce a front-page newspaper article, a news item suitable for television and a radio report. The outcomes are to highlight the risks of fire and the consequences of irresponsible behavior.

The SFD also has a series of fifteen generic community safety lecture packages that are handed out to each station. The subjects covered include Arson, BBQ Safety, Candle Safety, Carbon Monoxide Safety, and Fire Safety for the Disabled, Electric Blanket Safety, Electrical Safety, Farm Safety, Countryside Safety, Fireworks/Bonfire Safety, Hoax Calls, Garden/Rubbish
Fires and Water Safety. The SFD also takes part in community clean up activities by carrying out home fire risk assessments as well as carrying out safety demonstrations.

The police departments use a tool called community policing to get them involved in their communities. Community policing involves dividing the jurisdiction into specific beats and giving officers ownership of those areas. This helps to forge a new collaborative relationship with the community of people who live and work there (Bucqueroux, 2007). Working together with youth can create the successes that encourage people to work together in the future. This process of working together develops networks and relationships that can be used to deal with community problems. In order for community policing to work Dr. Robert Trojanowicz, the pioneer of community policing, “identified the following six groups whose support is essential; the police, the community, civic officials, the business community, other agencies and the media” (Bucqueroux, 2007, week 2, p.1). Mobilizing neighborhoods requires understanding the importance of formal and informal leaders. The first challenge when the police officer gets a beat is to learn all the officer can about the area and the people. The six groups mentioned would assist in determining assets and liabilities in the area. “Research has shown that people in communities are the real experts in assessing the level of risk in their neighborhoods” (Bucqueroux, 2007, week 2, p.4).

David L. Carter has researched community policing. His research suggested that total quality management (TQM) was similar in wisdom to community policing due to police officers proactively dealing with crime and order maintenance of problems (Carter, 2000). “TQM followed by value added service, continuous quality improvement, and benchmark management all produced philosophical changes in management practices directed toward customers which have positive implications for policing” (p.8). “Police Chief David Couper, a former Chief in
Madison, Wisconsin, referred to community policing as quality policing” (Carter, 2000, p.8). A field test of community policing in Garden Grove, California, Greensboro, North Carolina and Toledo, Ohio provided some important findings that can be found in Appendix H.

“Community policing is a matter of applying a best practice to address crime and community problems, however it is not the answer to crime problems” (Carter, 2000, p. 12) In order for effective organizational change to take place several components are necessary. There must be a leader with a vision willing to take the first step in challenging the status quo. The administration must be committed and provide on going support for a philosophical change (Carter, 2000). Officers must be given good evidence to support the change. Input must be taken from all levels. Sufficient time must be given for experimentation, evaluation, and fine-tuning of the new ideas.

The Spring Lake Park – Blaine – Mounds View Fire Department (S.B.M. FD) goes out in the community with many proactive risk reduction programs (Brooks, 2007). One program is the Fire and Apartment Safety Survey. The goal of the survey is to encourage life safety, prevent injuries and improve occupant’s awareness of existing conditions and or hazards. This survey is not connected with the Fire Marshall or Code Enforcement. It is merely an advisory service, free of charge, to promote fire and life safety. Another program is the Public Fire Extinguisher training program. This program explains the steps in fighting a fire and demonstrates the uses of hand held fire extinguishers to control or extinguish fires. They also hold a false alarm program to explain to audiences why it is wrong to pull a fire alarm, which gets involved when an alarm gets pulled, and what are some possible consequences that could happen from a false alarm. The S.B.M. FD also offers a fireworks program which discusses the properties of fireworks, what are the state laws regarding fireworks, what are some of the dangers of fireworks and how they can
be used safely. There is also a Fire and Burn prevention program to understand the power of fire, identify hazards of fire and learn how to prevent burn injuries along with treatment of them. The fire department also gives cardio pulmonary resuscitation classes. In 2006 the S.B.M. FD budgeted 2,541 hours for public education and $19,000 for materials (Brooks, 2007). The Bureau Chief and Educators determined what community risk program component would be used to address current risks by utilizing the five step planning process of identification, selection, design, implementation and evaluation.

The Beaufort County, South Carolina Fire Department has a fast growing Hispanic population, due to many migrant farmers who travel to the area to work in agricultural fields. This increase brought with it an increase in challenges to provide essential services. “Even though the 911 call volume has increased, the amount of emergency calls involving the Hispanic population remained constant with other populations, but fire officials still made reaching them a priority” (Beaufort, 2007, p. 1). The Beaufort County Fire Department (BCFD) wanted to provide proactive, efficient and effective prevention services to the Hispanic population. This posed a problem not only because of the language barriers, but cultural differences, along with the distrust some of these foreigners may have of government services (Beaufort, 2007). The BCFD firefighters had to educate the families that their purpose was to make sure they were safe. The fire department was fortunate to have two firefighters that spoke Spanish. This enabled the fire department to form a partnership with a Hispanic News / Television program to get the fire safety message out to the Hispanic community. A special phone line was established for Hispanic families to call in and request smoke detectors or have a safety question answered. Monthly safety tips were sent to a Hispanic newspaper. The two Spanish-speaking firefighters participated in a summer Migrant Safety Camp that targeted the migrant workers children each
summer. BCFD firefighters are present at Hispanic voter registration drives and church events to hand out Spanish fire safety pamphlets, meet the people, and Sparky the fire dog thrills the children (Beaufort, 2007). The firefighters also take part at English as a Second language classes to do home fire safety training and fire extinguisher training. Fire extinguishers and smoke detectors are given to those that need them for free. Lieutenant Daniel Byrne stated “that with the country in turmoil over immigration, and tensions high in many communities, it is now more important than ever to reach out to this cultural group” (Beaufort, 2007, p. 3).

The National Fire Protection Association Standard (NFPA) 1035 for Professional Qualifications for Public Fire and Life Safety Educator (NFPA 1035, 2005) supports comprehensive community fire and injury prevention programs designed to eliminate or mitigate situations that endanger lives, health, property or the environment. The strategy for promoting this is an organizations comprehensive plan that is designed, through public fire and life safety education programs, campaigns, and initiatives, to eliminate or mitigate risks. It is suggested in NFPA Standard 1035 that departments have a public fire and life safety educator to remain current on educational methodology, technology and the technical content of programs. Appendix A lists the minimum requirements for the three levels of public fire and life safety educator.

“A white paper produced by the North American Coalition for Fire and Life Safety Education states that one reason the fire death rate is higher in the United States than in Western Europe is the emphasis on fire prevention activities” (Brice, 2004, p.5). This paper stated that the United States places the emphasis on fire suppression. In Chickasha City Oklahoma there were four fatal fires over three years in which six people lost their lives. “In each of these incidents the smoke detectors were not working and alcohol was a contributing factor in three of
“The Menlo Park Fire Protection District in Menlo Park, California, along with the majority of the San Francisco Bay Area did not understand the concept of risk assessment nor did they have a clear perception of its importance to the fire service in relation to community life challenges” (Aus, 2003, p.28) All the career staff in fire districts in which the concept of risk assessment is taught learn the process and procedures for identification and mitigation or elimination of life safety hazards. An understanding of the dynamics of a risk assessment process in combination with a formal plan for implementation and evaluation is critical to identify the true challenges and solutions to meet threats to life safety (Aus, 2003).

The Hudson, New Hampshire Fire Department (HFD) saw an increase in the older adult population. However, the HFD did not have a specific educational program that addresses community risk reduction and fire safety toward this high-risk group. Older adults are considered a higher risk for falls and injuries due to age and decreased mobility. The HFD Fire Chief Shawn Murray saw that there needed to be a change in the focus and mindset from one of strictly fire related prevention and education to a broader initiative that targets high risk groups (Murray, 2004).

Tom Kiurski, Director of Fire Safety Education for the Livonia Fire Department, in Michigan, wrote that “firefighters are not expected to fight fires without training, nor could they perform emergency medical services without certification, yet in some departments, they are sent out into the community to teach fire safety without the least bit of educational training” (Kiurski, 1999, p.1). Director Kiurski also states that “firefighters may be dedicated to responding to
emergencies, yet, as a group they choose not to teach fire prevention and safety” (Kiurski, 1999, p.1). This suggests that firefighters should keep in mind that if they are going to protect the community, then their overall strategy must include education.

Fire service leaders have a primary responsibility to educate, sell, and market safety issues to the public (Gramer, 2006). The lessons taught by fire safety educators are lessons learned for life. Company level fire safety inspections are valuable to insure public and firefighter safety (Gramer, 2006). Engine and truck company inspections are cost effective tools for assuring public safety. Fire departments will have to commit adequate resources to public education campaigns to help prevent fires and educate the townspeople on a variety of public safety issues (Buchman, 2005) through effective and ongoing fire prevention programs, it is possible to reduce the number of fires that occur. The impact that this reduction has on a community is significant (Buchman, 2005) “Public safety education proactive programs that serve to instruct citizens in actions that will prevent loss or injury, when effective, should decrease the demand for other types of emergency services” (Barr, 2003, p.1063). “The greatest objective is to change the behavior of the individuals through various educational programs in order to prevent injury, death, or loss due to fire or other types of incidents”(Barr, 2003, p. 1064). A list of types and kinds of public safety education programs can be found in Appendix B.

Cost benefit analysis is an indispensable step in the decision procedure for responding to risk (Posner, 2004). “To assume that risks can be ignored if they cannot be measured is a head in the sand response” (Posner, 2004, p.171). Croughy et al. (2005) states “the main difference between our initiatial conception of risk and a more formal treatment of it is the use of statistics to define the extent and potential cost of any exposure”. (p.5) According to Croughy et al.
“the capacity to make forward looking choices about risk in relation to reward lies at the heart of the management process of all enduring successful corporations” (p. 1). Mark Dorfman states “the Law of large numbers states that the greater the number of observations of an event based on chance, the more likely will the actual result approximate the expected result” (Dorfman, 2002, p.15).

A five-step process has been developed to assist fire departments in addressing community risk reduction concerns. This process can be found in Appendix C. “Partnerships are established so that the community as a whole is involved in the solutions which aids in reducing the cost” (NFA, 2002, p. 3). When your department supports community education, other community partners will join in the effort. Community fire and life safety education should be included in the mission statement of fire departments (NFA, 2002).

Community risk reduction will require research and effort on the part of fire departments along with a change in philosophy. Dr. Denis Onieal (2007) stated in the International Fire Service Journal of Leadership and Management the following words of wisdom the fire departments can apply to this:

The long fight to learn knowledge and truth will take courage for the world of the fire service is filled with opinion and conjecture. To use the knowledge and share the truth is an even more burdensome task, for it requires you to help people change their opinions and their way of thinking (p. 6).

Leaders in the fire service whom are going to be proponents of community risk reduction will have to follow Ronald Heifetz’s and Marty Linsky’s (2002) wisdom of “to meet challenges by walking the line step forward, make a difference, take the heat and survive to delight in the fruits of your labor” (p.3). Leaders must also remember that “to lead is to live dangerously
because when leadership counts, when you lead people through difficult change, you challenge what people hold dear, their daily habits, tools, loyalties and ways of thinking with nothing more to offer perhaps than a possibility” (Heifetz, 2002, p.2). We can learn and are sometimes transformed by encountering differences that challenge our own experience and assumptions (Heifetz, 2002).

Telephone interviews were conducted with the following to see what the community risk reduction components are of other fire departments; Public Educator Lieutenant Beverly Walker from the Gainesville, Georgia Fire Department, Mary Marchone, a Public Education Specialist with NFPA, Paula Rohrs a Public Education Coordinator from Round Lake, Illinois, Deputy Chief Chris Garrett of the Owasso, Oklahoma, William Delaney Program Manager of Community Safety Education for the Montgomery County Maryland, and Chief Robert Creezy of Richmond, Virginia. These people were chosen to interview to assist in answering what are the components of a community risk reduction program and what are the components used by other fire departments for community risk reduction. The following were interviewed to answer what does the Frederick County Division of Fire and Rescue Services administration, line officers, and firefighters currently do in regards to community risk reduction and how would a community risk reduction program become part of the day to day activities of the FCDFRS; Chief Gene Mellin, Battalion Chief Tom Coe, Battalion Chief Dennis Wenner and Emergency Management Director Jack Markey, from Frederick County were all interviewed in person. The findings will be found in the Results Section.

There were two questionnaires developed to gain input for the research to help answer the four problem questions. One questionnaire was sent to all the career staff of the FCDFRS to gain input on answering what does the Frederick County Division of Fire and Rescue Services
administration, line officers and firefighters currently do in regards to Community Risk Reduction? The other questionnaire was sent to metro fire departments in each state to find input for what are the components of Community Risk Reduction Programs utilized by other fire departments? The findings of these questionnaires can be found in the appendix.

The literature review provided a look at how one can see that it is important to lessen the risks to citizens through community risk reduction programs that will also make it safer for the occupation of firefighters. Hence, the need for a proactive, efficient and effective fire department community risk reduction program that makes the firefighters part of the neighborhoods that they serve. In the following section descriptive procedures used in searching for answers to the research questions are reviewed.

Procedures

The procedures for the ARP started with finding out who are the leading authorities in community risk reduction through web sources. Books were read dealing with community risk reduction. TRADENET was utilized to try to determine fire departments that have community risk reduction programs in place. Responses to a TRADENET search provided names and email addresses for contacts to send the questionnaires. The questionnaire was developed to help answer the research problem questions. This questionnaire was developed based on information from reading the NFPA 1035, reviewing community policing articles and reading literature on community risk reduction gained in the literature review and from interviews. The cover letter for the questionnaire is in Appendix D and the questionnaire was to address research question two and the results can be found in Appendix E. The departments that assisted in giving a reply to the questionnaire can be found in Appendix F. There was a response from 43 of the 75 questionnaires sent to Metro Fire Departments. A questionnaire was sent to the career staff in
Frederick County to get a reply from them in regards to support for a community risk reduction program. This questionnaire addressed research questions three and four and can be found in Appendix G. There were 176 responses out of 334 career staff in the department.

The National Fire Protection Association Standard 1035 was identified as relevant to community risk reduction and was analyzed to determine what national components had been recommended.

Telephone interviews were conducted with the following, whom were found by doing web searches on the topic of community risk reduction and these informants would suggest others to contact, to see what the community risk reduction components are of other fire departments; Public Educator Lieutenant Beverly Walker from the Gainesville, Georgia Fire Department, Mary Marchone, a Public Education Specialist with NFPA, Paula Rohrs a Public Education Coordinator from Round Lake, Illinois, Deputy Chief Chris Garrett of the Owasso, Oklahoma, William Delaney Program Manager of Community Safety Education for the Montgomery County Maryland, and Chief Robert Creezy of Richmond, Virginia. These interviews addressed the research question of what are the components of a Community Risk Reduction Program?

Safe Kids coalition representatives from various hospitals around the United States were interviewed to gain insight on how they provide a community risk reduction program to the public. They were picked due to the fact that most Safe Kids operate out of hospitals, whom provide community risk reduction programs which could provide input for the research question of what are the components of a community risk reduction program? The following gave input; Karen Hardington of the University of Maryland Center in Baltimore, Corri Miller Hobbs of the
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Virginia Commonwealth University Health System, and Kim Martin from the North East Georgia Medical Center.

The police departments were also analyzed to see how they perform community risk reduction. Input was gained from Paul Paskoff, Director for Research and Planning with the Charlotte-Mecklenburg, North Carolina police department and from Master Police Officer Joseph Britte with the Crime Prevention and Public Relations in the Gainesville, Georgia police department. Paul Paskoff and Joseph Britte were found while doing web searches on community policing. Community policing also provides community risk reduction as well as addressing the question of what are the components of a community risk reduction program? Both gave input into the community-policing program utilized by police to perform community risk reduction.

The following were interviewed from the Frederick County Division of Fire and Rescue Services; Chief Gene Millen, Battalion Chief Tom Coe, and Battalion Chief Dennis Wenner. Emergency Management Director Jack Markey was also interviewed to gain his insight. They addressed the research question of what does the Frederick County Division of Fire and Rescue Services administration, line officers and firefighters currently do in regards to Community Risk Reduction? Chief Gene Millen, Battalion Chief Tom Coe, and Battalion Chief Dennis Wenner also addressed the research question of how would a community risk reduction program become part of the day-to-day activities of the Frederick County Division of Fire and Rescue?

The interviews varied in time from fifteen minutes to an hour. The interviews of FCDFRS personnel were done in person. Interviews of the following sources were carried out by telephone calls: Mary Marchone, Lieutenant Beverly Walker, Paula Rohrs, Paula Rohrs, William Delaney, Chief Robert Creezy, Deputy Chief Chris Garrett, Paul Paskoff, Joseph Britte, Karen Hardington, Corri Miller Hobbs and Kim Martin.
Definition of Terms

TRADENET – an electronic mail forum through the National Fire Academy to exchange information to subscribers.

Community Policing – Community policing involves dividing the jurisdiction into specific beats and giving officers ownership of those areas. This helps to forge a new collaborative relationship with the community of people who live and work there (Bucqueroux, 2007).

Limitations

The researcher attempted to contact departments thought to have community risk reduction programs in place and were serving a similar size population with similar needs by emailing a questionnaire in Appendix E to them. It was difficult to determine prior to the questionnaires being sent out as to which departments met this criteria. Also, the researcher believes some of the respondents to the questionnaires were not familiar with community risk reduction programs or components for such programs. Some fire departments that answered the questionnaire did not post their departments name and may not be reflected in the list of questionnaire participants. It was also determined that having essay questions on a questionnaire is time consuming and may limit the readers ability to see the detail of the essays.

Results

The overall results of the research identified the components needed for a community risk reduction program. The research questions used to guide this study were: What are the components of a Community Risk Reduction Program? What are the components of Community Risk Reduction Programs utilized by other fire departments? What does the Frederick County Division of Fire and Rescue Services administration, line officers and
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firefighters currently do in regards to Community Risk Reduction? How would a Community Risk Reduction Program become part of the day-to-day activities of the Frederick County Division of Fire and Rescue Services? However, FCDFRS had not officially adopted or put in place a community risk reduction program. The components needed to prepare the FCDFRS for implementing a community risk reduction program were determined.

The first research question asked what are the components of a Community Risk Reduction Program? Corri Miller Hobbs, (personal communication, September 14, 2007) from Virginia Commonwealth University Health System, stated that her system looks at the injuries of the children that come into the hospital to see if they need a car safety seat, a bike helmet, or a special needs car seat to prevent these injuries from happening. Mrs. Hobbs educates her staff so that they can teach children about pedestrian and bike injury prevention behaviors. They also educate children about fire prevention. One unique program she heads is to have a pizza night when pizzas are delivered to the customers and if they have working smoke detectors, the pizza is given to them for free. If the smoke detector does not work, then they pay a reduced price for the pizza and the fire department is notified of the address and they take smoke detectors to the home and install them. Mrs. Hobbs also does exhibits to the public as well as maintaining a web site.

Karen Hardington, from the University of Maryland Health Center Baltimore, (personal communication, September 13, 2007) stated that a community risk reduction program needs good data on specific issues. Once this is determined, a plan can be developed to address the issues. It is important to evaluate the program to see if you are making an impact (Karen Hardington, personal communication, September 13, 2007) Mrs. Hardington’s fire department had a high increase in children killed in fires. Their plan was to target first, second and third
grades in schools with fire safety education. This amounted to between 7000 and 8000 students a year. The fire departments also assist Mrs. Hardington in promoting the use of car safety seats and pedestrian safety.

Mary Marchone, an expert in public fire education with NFPA, (personal communion, September 13, 2007) stated that a community risk reduction program must consist of personnel commitment, organization commitment from the union and the fire chief, and it must have buy in from the community. In addition, there must be education, enforcement, evaluation, engineering and emergency response to make the risk reduction program a success. It is important to want to prevent risk in the community in a proactive manner and it shows firefighters do more than respond in a reactive mode (Mary Marchone, personal communication, September 13, 2007).

Paul Paskoff, Director for Research and Planning of the Charlotte-Mecklenburg North Carolina police department, (personal communication, September 17, 2007) stated that community policing is a holistic approach to community risk reduction utilized by the police departments. It involves the fire department, communities, and business stakeholders coming together as a partnership. Community Policing utilizes the SARA model (Paul Paskoff, personal communication, September 17, 2007), which stands for Scan, Analysis, Response and Assessment. Utilizing the SARA model police can look at a drug problem in a city to see who is being arrested, the time of day, the day of the week, and other contributing factors. From these factors they can determine which risks need to be addressed, how they will be addressed, and evaluate the program. Through this philosophy the police have seen crime statistics drop (Paul Paskoff, personal communication, September 17, 2007).

Carter (2000) has researched community policing. His research suggested that total quality management (TQM) was similar in wisdom to community policing due to police officers
proactively dealing with crime and order maintenance of problems. “TQM followed by value added service, continuous quality improvement, and benchmark management all produced philosophical changes in management practices directed toward customers which have positive implications for policing” (p.8).

Master Police Officer Joseph Britte of the Crime Prevention and Public Relations Division of the Gainesville Georgia police department is a strong supporter of the community risk reduction philosophy of community policing (personal communication, September 18, 2007) The community and officers must meet the precincts needs. This was accomplished by rich communication with the residents and their own officer (Joseph Bitte, personal communication, September 18, 2007). This builds a tight community like a community watch program. It enables the police to get inside information from the public on problems in the community. All of the precincts offices are located in apartments in the housing authorities. There is no cost to the police department for use of the electricity, phones, apartment or other utilities. This enables the police to bridge the gap in a positive note (Joseph Bitte, personal communication, September 18, 2007). The officers participating in this program get a grade higher pay and they are a select group of officers and patrolmen. Their schedules are arranged to meet the specific needs of the precinct in which they serve. The officers work with Safe Kids, the local fire department and receive donations from businesses to do various community risk reduction activities.

Kim Martin, Safe Kids Coordinator at the North East Georgia Medical Center in Gainesville Georgia (personal communication, September 18, 2007) is a strong proponent of community risk reduction. Mrs. Martin has a large Hispanic population in her area due to poultry farms that use Hispanic employees. Hence, she has safety flyers printed in English and Spanish. She established a program dealing with car safety seat education due to seeing so many
Hispanic children riding around in vehicles without car safety seats. Her programs include safety lectures in churches, toy testing for lead paint, lead testing exam for children, and numerous car safety seat installations throughout the year.

The second research question asked what are the components of Community Risk Reduction Programs utilized by other fire departments? Lieutenant Beverly Walker, from the Gainesville, Georgia Fire Department, (personal communication, September 14, 2007) stated that the community risk reduction program in her department consist of education, codes and enforcement, legislative support and risk management. Lieutenant Walker’s department has a smoke detector and carbon monoxide detector program that the engine and truck companies participate in checking and installing. The Gainesville Fire Department (GFD) has firefighters participate in public education programs in schools, childcare facilities and doing preplanning. The GFD firefighters even go to schools and eat lunch with the students. Lieutenant Walker (personal communication, September 14, 2007) stated that the firefighters want to get involved in this program and she wants the stations to find their own niche in their community. The firefighters must take a 16-hour course as part of the recruit school that is required for later promotions dealing with community risk reduction. Also, the GFD recruits are given a class on building inspections, which is also required for future promotions. Lieutenant Walker stated (personal communication, September 14, 2007) that the firefighters see the fruits of their efforts by lower deaths and fewer fires. In order for the GFD community risk reduction program to survive it takes developing a relationship with the community. One problem Lieutenant Walker does have is an increase in the Spanish speaking population and her firefighters whom speak Spanish cannot keep up with the growth.
Public Education Coordinator Paula Rohrs, of the Round Lake, Illinois Fire Department (personal communication, September 13, 2007) stated that a community risk reduction component that is necessary is to look at the call statistics for the specific community. You must identify the problems in the community, decide on a plan of action and implement corrective action and set up an evaluation plan. The Round Lake Fire Department (RLFD) conducts car safety seat inspections, installs and checks smoke detectors, utilizes the learn not to burn program, offers baby sitter safety classes, provides birthday parties at fire stations, provides senior fire and fall classes and offers CPR classes. All the RLFD fire apparatus carry smoke detectors on them. The firefighters in the RLFD make community risk reduction a priority (Paula Rohrs, personal communication, September 13, 2007).

Deputy Chief Chris Garrett, of the Owasso Fire Department, (personal communication, September 17, 2007) stated that there are three important components to his community risk reduction program, commitment, planning, and resources. He stated that you must get the partnerships of the firefighters and give them flexibility along with autonomy to come up with the way to address the risk in their first due area (Chris Garrett, personal communication, September 17, 2007). The firefighters risk reduction programs address the risks that are specific to the village the fire department serves as its community. The fire chief and the fire marshal establish a broad set of goals and then past them down to the lieutenants to accomplish based on the risks in their communities (Chris Garrett, personal communication, September 17, 2007). It is important for the city government to provide in its budget the funds needed for overtime to fill the gap when firefighters on their regular shift do not have time to address the risk (Chris Garrett, personal communication, September 17, 2007). Money is also needed for posters, door hangers and smoke detectors. Deputy Chief Garrett stresses that the firefighters must refer to the
community in which they work as their community and the community should refer to the firefighters as my firefighters (personal communication, September 17, 2007). The concepts of the village model of community risk reduction, as Deputy Chief Garrett refers to it, are very fundamental and must require firefighters to take ownership for the program (personal communication, September 17, 2007). Deputy Chief Garrett stated that it takes a special person as a firefighter to drive an hour to work every third day to think of their work response area as their community as if they lived there (personal communication, September 17, 2007). His firefighters know the area they serve like the back of their hand. Deputy Chief Garrett asks more of the firefighters and gives them autonomy to make decisions, thus giving the firefighters ownership in the program (personal communication, September 17, 2007).

William Delaney, Program Manager of Community Safety Education for the Montgomery County Maryland Department of Fire and Rescue, was interviewed to address the research question of what are the components of Community Risk Reduction utilized by other fire departments? Mr. Delaney stated that the community risk reduction program for his department began in the early 1980’s. He has been the head of the program since 2000. There are three people assigned to his division, one takes care of the Risk Watch program, one takes care of the car safety seat program and Mr. Delaney takes care of the rest (personal communication, October 2, 2007). His division gets assistance from the engine and truck companies that have crews on duty as well as pulling in off duty personnel on overtime. Mr. Delaney stated he can easily justify more positions. In March he is to get a senior outreach person to address the problem of fire fatalities, which is 75% for people 65 and over (William Delaney, personal communication, October 2, 2007). Mr. Delaney has gotten acceptance from the Montgomery County Division of Fire and Rescue to require the recruits to take the NFPA
Q119 Public Life Safety Educator class before completing their first year of probation. The department utilizes a master calendar so that engine and truck companies know what activities they will be utilized for in advance. The fire engines and trucks have go bags on them for the firefighters to utilize to spread the public life safety message at any time, as well as having smoke detectors in them to hand out to the public. Mr. Delaney is also using a Blog talk show on the radio to get out the public life safety message. The public can email him or call in for assistance. There are no formal standard operating procedures for the department at this time. Mr. Delaney would like to see the department adopt some.

Chief Robert Creecy, of the Richmond, Virginia Fire Department has come up with the village model for community risk reduction. Through this his department can embrace the community the way little villages across the nation use to do (Robert Creeey, personal communication, September 28, 2007). Chief Creecy is a change agent within his department since he has made the department more efficient and effective through a proactive means. Value has been created in his stations by enabling the neighborhoods to be served by the station lieutenants and firefighters as they deem necessary for the area they serve. This is due to the fact that the station personnel should know more about their community and the administration will support it. Chief Creecy stated that a community risk reduction program must look at the causes of medical emergencies. The time between calls Chief Creecy calls the dash and this time is just as important as the calls are. The dash is time to get out in the community and get to know the people. During this time you can create a menu of community risk from which to decide what is most important to address. Buy in from the firefighters along with responding to calls are the most challenging part of the village model. However, Chief Creecy stated that the village model is the way his department is doing business now (personal communication, September 28, 2007).
In addition, in order for future officers to be promoted they must educate Chief Creecy on the components and importance of the village model. Through this corporate policy Chief Creecy’s value of the village model creates value from the public in his department’s philosophy of service and the need is not forgotten as the city grows.

The Derbyshire Fire and Rescue Service foster prevention through the use of education, training, and information. Commitment to risk reduction is prioritized in community activities by operational staff, inspection officers and support personnel. The Phoenix Fire Department “Fire Fit Kids is designed for firefighters to share their knowledge, enthusiasm, and experience to improve the motivation, knowledge and fitness of the communities youth” (Phoenix Fire, 2007, p. 1) Chief Robert Creecy has taken a progressive step in his Village Model which “the officers and firefighters alike interact with the residents, speak at schools and essentially imbed themselves in the community in order to develop better fire prevention tactics for that area” (Village Model, 2007, p. 1). The Straffordshire Fire Department received new legislation which enabled the department to take a proactive community education program.

The questionnaire sent out to the Metro Chiefs findings was in an essay format for the following questions: 1, 2, 3, 8, 9, 10, 12, and 13. An analysis of the essays discovered emergent trends that suggest the importance placed in community risk reduction. Many components were listed. Some of the components include: public service announcements, leadership support and commitment, grant funded programs that include free bike helmets, giving away smoke detectors, school based education programs, safety education for the elderly, company inspections and preplans, engine companies going out to neighborhood meetings and schools, and working closely with county emergency manager. The actual responses to all the essay
questions were too large to include in the research paper, but they may be reviewed by contacting the researcher.

The third research question asked what does the Frederick County Division of Fire and Rescue Services administration, line officers, and firefighters currently do in regards to Community Risk Reduction? Chief Gene Mellin of the Frederick County Division of Fire and Rescue stated that a research group, Tri Data Corporation, said that the Frederick County Division of Fire Rescue is weak in the area of risk reduction (personal communication, September 25, 2007). Chief Mellin also stated that currently the department does not do enough in the risk reduction area (personal communication, September 25, 2007). Currently the department does some fire prevention activities, however most of them occur during fire prevention week and are not consistent when presented. Lieutenants and firefighters do not have a formalized lesson plan to present to the public addressing various risks that Frederick County is susceptible to throughout the year. The department does do a good job with its car safety seat program and it is done on a daily basis (Gene Mellin, personal communication, September 25, 2007). The Fire Marshall’s office does a good job with code enforcement, education of codes and cooperating with businesses, developing a crowd management class and having the county adopt a residential sprinkler system (Gene Mellin, personal communication, September 25, 2007)

Battalion Chief Tom Coe stated that he would support a community risk reduction program in the FCDFRS due to the safety it can provide the firefighters by keeping the community safer (personal communication, September 26, 2007). It will be good for the department’s image also due to the fact that we currently do not have a set program to go by. Battalion Chief Coe stated that the only program that is currently doing well is the car safety seat installations (personal communication, September 26, 2007).
Emergency Management Director Jack Markey stated that the Department of Natural Resources does a good job of utilizing the Firewise program to lower risk to homeowners in a mountainous area of Frederick County, however the fire department currently is not involved in this (personal communication, September 25, 2007). Director Markey would like the assistance of the career staff of the Frederick County Division of Fire and Rescue Services to assist the Emergency Management department. Director Markey stated that his department could use the engine companies to go out and meet with the public to do various risk reduction programs to include flash flooding awareness, river flooding, winter preparedness and use of bike helmets (personal communication, September 25, 2007). Director Markey would like to see the engine and truck companies take an active role in school fire drills (personal communication, September 25, 2007).

The findings of the questionnaire sent to all 334-career firefighters in FCDFRS had a return of 176. From these responses a majority would like to have engine and truck companies do residential and commercial inspections. This is an activity that a majority responded that they do not perform now. A majority would like to take part in a community risk reduction program but stated the department does not have one in place at this time.

The fourth research question asked how a Community Risk Reduction Program would become part of the day- to- day activities of the Frederick County Division of Fire and Rescue Services? Chief Mellin stated he would give full backing to an organized community risk reduction program (personal communication, September 25, 2007). Chief Mellin would like to see the development of an officer of Public Fire Education and an assistant that is a Public Education Specialist. The chief also stated he wants a yearlong risk reduction program in place. Chief Mellin would like to see the engine and truck companies not be sequestered to the fire
stations so that they can be out in the public and become part of the community they serve (personal communication, September 25, 2007). The engine and truck companies could develop relationships with businesses to suggest ways of addressing life safety issues. Chief Mellin stated the department has enough field personnel to make a community risk reduction program a success (personal communication, September 25, 2007). The chief would also like to see the staff that serve particular communities in Frederick County, Maryland, but live outside the county, think of the Frederick County community as their second community and take ownership for it (Gene Mellin, personal communication, September 25, 2007). By reduction of risk in the community the department will reduce the risk to the firefighters. Chief Mellin also supports a fitness program for firefighters to reduce risk to them. The chief would also like to see a children’s village built in Frederick County that would address fire safety, injury prevention, bike safety, swimming safety and disaster awareness along with other risk reduction concerns (Gene Mellin, personal communication, September 25, 2007). Chief Mellin stated that community risk reduction would become part of the daily responsibilities from the chief to the firefighters in the Frederick County Division of Fire and Rescue in the very near future (personal communication, September 25, 2007).

Battalion Chief Dennis Wenner, whom is responsible for special operations and safety, would like to see an all inclusive safety and health program in the fire service as part of the community risk reduction program (personal communication, October 2, 2007). Physical fitness and fit for duty testing along with proficiency for doing firefighting tasks would be beneficial. This should become a way of life as well as a cultural change in the FCDFRS. Battalion Chief Wenner wants the staff to leave the department in better shape then when they were hired. By doing this type of community risk reduction program everyone will go home safely.
Battalion Chief Coe would like to see the company level officers trained first in public safety education so that they can get buy in from the firefighters as well as deliver a good program to the public in a proactive and efficient manner (personal communication, September 26, 2007).

The findings of the questionnaire sent to the FCDFRS shows that the chief officers, battalion chiefs, lieutenants and firefighters want community risk reduction to be a way of life in their department. The staff responsible for training responded with an overwhelming majority willing to train staff to do community risk reduction. Question five of the questionnaire was an essay response in which a summary of the responses are following: We should participate in more of these programs, I think it would be beneficial to our communities in that they see us out participating in their homes or offices making sure things are safe, above all, its good community relations, The best defense is a good offense-better to discover and correct potential issues before they become foreground problems, Working with the community educates and empowers everyone to be part of the solution, I do not think there is a negative side to this, I love it – this is way over due, and my opinion is it is a very good approach to community involvement of the fire service today. The essay responses to the essay question were too large to include in the research paper, but may be reviewed by contacting the researcher.

When your department supports community education, other community partners will join in the effort. Community fire and life safety education should be included in the mission statement of fire departments (NFA, 2002). According to Croughy et al. (2005) “the capacity to make forward looking choices about risk in relation to reward lies at the heart of the management process of all enduring successful corporations” (p. 1). Mark Dorfman (2002) states “ the Law of large numbers states that the greater the number of observations of an event based on chance, the more likely will the actual result approximate the expected result” (p. 15).
Utilizing the Haddon Matrix decisions can be made on what proactive actions can be taken to increase safety and lower injuries to citizens (Mary Marchone, personal communication, October 12, 2007). An example of the Haddon Matrix tool being utilized can be found in Appendix I.

As seen from the many sources in the field of community risk reduction a community risk reduction program could be a valuable tool for the FCFDRS day-to-day operations. The Safe Kids coalition with hospitals stresses community risk reduction in their goals. Community Policing is putting the police officers in the community to get a pulse on the area the officers serve to better able them to lower the risks associated with their individual beats. The components utilized by the Safe Kids and Community Policing could be utilized in the fire service.

Discussion

What are the components of a Community Risk Reduction Program? From the questionnaire sent out to the career personnel in the Frederick County Division of Fire and Rescue it appears that the FCFDRS needs to break new ground by establishing a community risk reduction program. The survey showed a willingness of FCFDRS staff to want to go out and perform residential and commercial inspections. A majority of the respondents showed a willingness to participate in a community risk reduction activity two or more shifts per month. These components included, but were not limited to, safety education for the elderly, year round safety education, a smoke detector program and going to community meetings. Sixteen percent even wanted to do it each shift.

What are the components of Community Risk Reduction Programs utilized by other fire departments? The Metro Fire Chiefs questionnaires responses showed an emergent response as
assessments of community needs, commitment, perseverance, willingness to assist, and a willingness to change are important components that their departments use. The Metro Chiefs also place buy in from the political leaders, buy in from the community, and developing a self-help attitude is important so that there is no appearance of heavy hand enforcement. This would be important for the FCDFRS to have as components to make this new program a success. It will take open communication along with letting the station officers have the authority to make decisions that are best suited for their respective area of coverage.

What does the Frederick County Division of Fire and Rescue Services administration, line officers and firefighters currently do in regards to Community Risk Reduction? Currently from the questionnaire sent out to the career staff in FCDFRS it was evident that there is not a formal community risk reduction program. This was seen by the 88% responding that a program does not exist and 12% saying there is one. The only program being addressed that is working in the FCDFRS is a car safety seat program (T. Coe, personal communication, September 26, 2007). Some of the emergent responses to the essay questionnaire sent to FCDFRS staff stated that this type of program would get them out of the station, prevent stagnation, get them away from the television and sleeping in the stations, and get the department away from being apathetic and lazy. Hence, they will have a new philosophy to follow which will be good.

How would a Community Risk Reduction Program become part of the day-to-day activities of the Frederick County Division of Fire and Rescue Services? Chief Mellin stated that Tri-Data Corporation research shows that FCDFRS does not have a community risk reduction program in place (personal communication, September 25, 2007). Heifetz and Linsky (2002) suggest the following:
“Leaders must also remember that “to lead is to live dangerously because when leadership counts, when you lead people through difficult change, you challenge what people hold dear, their daily habits, tools, loyalties and ways of thinking with nothing more to offer perhaps than a possibility”. (p.2)

By Chief Mellin following this and instilling in his staff this philosophy community risk reduction can become a reality for the FCDFRS. Value has been created in Chief Creecy Village Model stations by enabling the neighborhoods to be served by the station lieutenants and firefighters as they deem necessary for the area they serve. Through the use of the results of the two questionnaires, literature review and interviews the FCDFRS can gain input in establishing a proactive community risk reduction program.

Recommendations

After conducting descriptive research through reading reference books, conducting interviews and viewing feedback from two questionnaires the results identified the components needed for the Frederick County Division of Fire and Rescue Services Community Risk Reduction program. Other Fire Department programs, such as the Richmond Virginia Fire Department Village Model and the Derbyshire Fire Department community risk reduction program demonstrate just how proactive and efficient fire departments are making a difference in the community. Personnel from the FCDFRS answered a questionnaire, which showed what the FCDFRS administration, line officers and firefighters currently do not have a formalized and standardized community risk reduction program. The research also answered how community risk reduction will become part of the day- to- day activities of the FCDFRS through Chief Mellin and his administration making this program part of doing daily business. The FCDFRS community risk reduction program can be determined by utilizing the following: utilize the
Haddon Matrix during the research portion to find what are the community risks that need attention, adopt NFPA Standard 1035 for public fire educators, train staff in how to deliver the public safety programs, budget for the materials and possible overtime, and utilize the five E’s – enforcement, education, evaluation, emergency response, economics, and consider developing standard operating procedures.

Also, based on the research questionnaires and personal communications it is in the publics and the department’s best interest to take on a proactive role as a leader in community risk reduction. Getting out into the public to get a pulse on what is actual happening as well as getting information first hand as to what the concerns are of the public will help make community risk reduction a vital part of daily shift activities for engine and truck companies.

From the research the following components were identified to be considered by FCFDRS for a standard operating procedure for a community risk reduction program. These are presented in Table C.
Table C: Considerations for Standard Operating Procedures

To continuously identify problems which impact the community and the department and through community involvement develop solutions. This shall be done on a departmental wide basis as well as through specialized Community Risk Reduction programs.

Goals and objectives are to be formulated by Lieutenants on a quarterly basis. The goals shall be forwarded to the Battalion Chief. These goals should be progressive, detailed, quality in content and achievable within the next quarter.

Lieutenants will complete and forward a self assessment report to the Battalion Chief outlining their progress or lack of from quarter to quarter, which will be forwarded to the Chief of Operations for review.

Battalion Chiefs shall report to the Chief of Operations a quarterly report that will assess the integrity, productivity and status of the individual stations. The report will contain an assessment of manpower needs, program productivity and a study of community impact.

Shifts will be given time each shift to perform community risk reduction activities.

The department will support the Emergency Management Division and the Fire Marshalls office in community risk reduction projects.

Supplies needed for Community Risk Reduction will come from a Community Risk Reduction budget.

There is a need to standardize and formalize the delivery of a community risk reduction program to serve in making Frederick County, Maryland a safer and better place to live. The
results show that following this recommendation the firefighters will be adding value to the lives of the public that they serve as well as increasing their likelihood of everyone goes home safely.
References


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Appendix A

Minimum Requirements for the Three Levels of Public Fire and Life Safety Educator

Public Fire and Life Safety Educator I

Certification at this level requires that the individual demonstrates the ability to coordinate and deliver existing educational programs and information as specified in the standard.

Public Fire and Life Safety Educator II

Certification at this level requires that the individual demonstrates the ability to prepare educational programs and information to meet identified needs as specified in the standard.

Public Fire and Life Safety Educator III

Certification at this level requires that the individual demonstrates the ability to create, administer and evaluate educational programs and information as specified in the standard.

(NFPA 1035, 2005)
Appendix B

Types and Kinds of Public Safety Education Programs

Home escape plan
Smoke detectors
Burn and scald
Home fire prevention
Natural disaster
Man made disaster
Smoke detectors
Carbon monoxide
Car safety seats
Fire drills
Fire extinguishers
Fire works
Hazardous materials
Brigade safety
Baby sitting
CPR and AED

(Barr, 2003, p.1066)
Appendix C

Public Fire Education Planning: A Five-Step Process

1. Conduct Community Analysis
   Process that identifies the fire and life safety problems and the demographic characteristics of those at risk in a community.

2. Develop Community Partnerships
   The most effective risk reduction efforts are those that involve the community in the planning and solution process.

3. Create an Intervention Strategy
   An intervention strategy is the beginning of the detailed work necessary for the development of a successful fire or life safety risk reduction process. The most Successful risk reduction efforts involve combined prevention interventions:
   - Education – Provide information about the risks and prevention
   - Engineering- Use of technology to create safer products of modifying the environment where the risk is occurring.
   - Enforcement – Rules that require the use of a safety initiative.
   - Economics - Have a budget to provide for the program.
   - Emergency Response – Be prepared to respond to the communities needs when an emergency arises.

4. Implement the Strategy
   Implementing strategy involves testing the interventions and then putting the Plan into action in the community. It is essential that the implementation is well Coordinated and sequenced appropriately.
5. Evaluate the Results

The primary goal of the evaluation process is to demonstrate that the risk reduction efforts are reaching target populations, have the planned impact, and are demonstrably reducing loss. The evaluation plan measures performance on several levels, outcome, impact, and process objectives.

Chief of Department,

I am currently a student at the National Fire Academy in the Executive Fire Officer Program. I recently completed a Pilot class on Strategies of Community Risk Reduction. After completion of the class students are required to write an applied research project. I am writing mine on developing a Community Risk Reduction Program for the Frederick County, Maryland Department of Fire and Rescue Services. I am a lieutenant in this department. Your assistance in answering the attached questionnaire would be greatly appreciated. If you need any clarification on any of the questions feel free to give me a call. Thanks in advance to taking the time to assist me in my research!

Lieutenant George L. Thomas IV

Frederick County Division of Fire and Rescue Services

Phone – 301-748-2875
1. Community Risk Reduction programs address hazards, safety concerns, injury prevention and fire safety – just to name a few- in a proactive manner. This get the engine and truck companies out in their neighborhoods and helps them take ownership in the community they serve. This is a new approach and requires a change in culture. What is you view on this type of community risk reduction program?

2. What do you believe are the components of a Community Risk Reduction program?

3. If your department has a Community Risk Reduction program, what are the components of the program?

4. As Chief of your department, would you support a Community Risk Reduction Program?

   Yes  100%

   No   0

5. Do you believe you would get buy in for participation in a Community Risk Reduction program from your Battalion Chiefs and Lieutenants?

   Yes   85%

   No   15%

6. Do you believe you would get buy in on participation for a Community Risk Reduction program from firefighters?

   Yes   85%

   No   15%
7. Does your department have in place a Community Risk Reduction program?
   Yes  43%
   No   57%

8. If you have a community risk reduction program in place, what type of standard operating procedures do you use to back the program?

9. If you have a Community Risk Reduction program in place, what is the annual budget for it?

10. If you have a community risk reduction program in place, what type of training is required for the participants?

11. If you have a community risk reduction program in place, how often do the engine and truck companies take part in community risk reduction activities?

12. What value does your department gain from having a Community Risk Reduction program?

13. If you have a Community Risk Reduction program, what value do the citizens of your communities gain from it?

14. If you do not mind, please list what fire department responded to this questionnaire.
   The actual responses to the essay questions were too large to include in the research paper, but may be viewed by contacting the researcher.
Appendix F

Departments that Assisted in the Questionnaire

Auburn Fire Division, Alabama
Evanston Fire Department, Illinois
Tuscaloosa Fire Department, Alabama
Palm Beach Gardens Fire Department, Florida
Wadsworth Fire and EMS, Ohio
Eastside Fire and Rescue, Washington
Caldwell Fire and Rescue, Idaho
Copperas Cove Fire Department, Texas
Rockford Fire Department
Cheney Fire Department, Washington
Memphis Fire Department, Tennessee
Rosemont Fire Department, Minnesota
Nevada Division of Forestry, Nevada
Casper Fire – EMS, Wyoming
Suffolk Department of Fire and Rescue, Virginia
Garland Fire Department, Texas
Copley Fire Department, Ohio
Shreveport Fire Department, Louisiana
Indianapolis Fire Department, Indiana
Colorado Springs Fire Department, Colorado
Cottleville Fire Protection District, Missouri
Spanish Lake Fire Protection District, Missouri
Vancouver Fire Department, Canada
Lincoln Fire and Rescue, Nebraska
Nashville Fire Department, Tennessee
Jackson Fire Department, Michigan
U.S. Virgin Islands Fire Service, St. Thomas Virgin Island
Loudoun County Department of Fire and Rescue, Virginia
Houston Fire Department, Texas
Syracuse Fire Department, New York
Northwest Fire District Tucson, Arizona
Henrico County Division of Fire, Virginia
United Fire Authority of Greater Salt Lake, Utah
Alexandria Fire Department, Virginia
City of Miami Department of Fire and Rescue, Florida
Fresno Fire Department, California
Sioux Falls Fire Rescue, South Dakota
Appendix G:

Frederick County Division of Fire and Rescue Community Risk Reduction Questionnaire

1. Would you like to see engine and truck companies doing residential and commercial inspections?
   
   Yes  76%
   
   No   24%

2. Do you currently take part in commercial or residential inspections?
   
   Yes  13%
   
   No   87%

3. If you are a firefighter, would you take part in a community risk reduction program?
   
   Yes  88%
   
   No   12%

4. Would you participate in a community risk reduction activity?
   
   Each Shift  15%
   
   Only during fire prevention week  8%
   
   Two or more shifts a month  70%
   
   Never  7%

5. Community Risk Reduction programs address hazards and concerns in communities in a proactive mode by sending engine and truck companies out in the public during their shift. This is a new approach for firefighters. It is balanced by training, physical training, station duties and emergency calls. What is your opinion of this type of approach?
The results were in essay format and were too large to include in the research paper, but they may be viewed by contacting the researcher. The analysis suggests that the Frederick County Division of Fire and Rescue is ready to support a community risk reduction program.

6. If you are a Lieutenant, would you support this program during your shift?
   Yes  86%
   No   14%

7. If you are a Battalion Chief, would you support a community risk reduction program?
   Yes  100%
   No   0

8. If you are a Chief, would you support a community risk reduction program in your department?
   Yes  100%
   No   0

9. If you are involved in training, would you be able to give the training needed to educate the staff in delivering a community risk reduction program?
   Yes  80%
   No   20%

10. Does your department currently have in place a community risk reduction program?
    Yes  12%
    No   88%
Appendix H:

Community Policing Implications

1. Police departments can achieve a sizable reduction in the number of non-emergency calls for service handled by immediate mobile dispatch, without sacrificing citizen satisfaction.

2. The results of the baseline citizen surveys showed an overall high public willingness to accept alternatives to immediate dispatch of a patrol unit for non-emergency calls.

3. Three of four callers were willing to accept delays of up to an hour for non-emergency calls.

4. As expected, there was a greater willingness to accept delays for calls that did not involve potential danger or threats.

5. Citizen satisfaction with alternative services provided was high.

6. Alternative responses are less costly than traditional mobile responses, and productivity levels are much higher for personnel using alternatives.

(Carter, 2000, p. 10)
## Haddon Matrix

### All Terrain Vehicles (ATV) Colliding into each other

<table>
<thead>
<tr>
<th>Pre-Event</th>
<th>Host/Human</th>
<th>Vehicle</th>
<th>Physical Environment</th>
<th>Social Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Child on ATV</td>
<td>Model and size</td>
<td>lay of the land</td>
<td>Laws addressing safe use of ATV's</td>
</tr>
<tr>
<td></td>
<td>age and experience</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Event | | | | |
|-------| | | | |
|       | Not wearing a helmet | Vehicle size | Cluttered path | Attitudes about wearing protective equipment |

| Post-Event | | | | |
|------------| | | | |
|            | Age/health | Gas tank integrity | Fixed objects | New attitude towards wearing helmet |

### Motor vehicle collisions with bicycles

<table>
<thead>
<tr>
<th>Pre-Event</th>
<th>Host/Human</th>
<th>Vehicle</th>
<th>Physical Environment</th>
<th>Social Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Child on bike</td>
<td>Automobile</td>
<td>Separate bike paths from auto traffic and parked cars</td>
<td>Support for safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improve headlights</td>
<td>on cars</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mount fluorescent flags on bikes to increase visibility</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Event | | | | |
|-------| | | | |
|       | Have children wear helmets | Reduce size of automobiles | Make roads and shoulders softer | Attitudes about wearing protective equipment |

| Post-Event | | | | |
|------------| | | | |
|            | Teach children first aid | Have vehicles | Install public call boxes to EMS on bike routes | Ensure access to physical rehabilitation services |
|            | carry first aid kits | | | |