LINE FIRE FIGHTER ATTITUDES TOWARDS FIRE PREVENTION

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Vision 20/20
National Strategies for Fire Loss Prevention

Vision 20/20
Institution of Fire Engineers-USA Branch

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Prepared for:

Institution of Fire Engineers-USA Branch

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It was prepared by TriData.

Executive Summary

A short survey of 650 mostly line firefighters found surprisingly positive attitudes toward having their departments do more prevention, and engaging in home safety visits themselves. Key reasons given for making home visits included better public relations and giving the community more value for its fire service. These reasons ranked even higher than the more obvious reason of reducing civilian casualties. And reducing risk to firefighters was given almost as high a rating for undertaking home safety visits as was reducing civilian casualties. All of these reasons should be touted when trying to "sell" fire departments and individual firefighters on undertaking home safety visits as part of a more comprehensive community risk reduction program.

The leading reasons given for not undertaking home visits were lack of time, and concern about liability. Other high-ranking reasons were lack of training for visits, concern about government intrusion into the home, and concern about personal injury during the visits. These concerns all can be overcome relatively easily.

Results were broken out separately for volunteers and for firefighters assigned to operations, who were the real target of the survey. It turned out that there were less than expected variations across the groups.

The survey methodology was limited, and was not random. The survey focused on attitudes toward doing home safety visits, and was short. The request to fill out the survey questionnaire on behalf of Vision 20/20 was relayed through several fire service groups and on-line lists and publications. Some fire chiefs who got the message asked their firefighters to respond. So it was part self-selected, part requested, and voluntary. The group that responded probably was somewhat biased toward prevention. It would be good to repeat this survey with closer to a true random sample, and with a few more questions. Nevertheless, the 650 respondents were mostly operations personnel from departments large and small, spread across 42 states and 177 communities. They surely represent some significant fraction of the fire service if not the majority.

Introduction

Research on fire department best practices to improve residential fire safety found that the practice leading to the largest reduction in fire deaths was home safety visits, often conducted by firefighters.[i] During these visits, the firefighters test smoke alarms, replace faulty ones, and give one-on-one safety education.

One of the keys to a successful program is firefighter willingness to participate. In order to obtain firefighter cooperation, it was thought to be important to obtain their perceptions about whether home safety visits were or were not a good idea, and their willingness to participate in them. This was thought to be even more useful if their perceptions were viewed in the broader context of their experience in prevention, and their perceptions about prevention in general.

To that end, a survey was developed to determine firefighter attitudes about these issues. The survey was part of a broader effort on community risk reduction undertaken by the Vision 20/20 project of the Institution of Fire Engineers (IFE), and a parallel effort by the Washington State Association of Fire Marshals (WSAFM). Both of these efforts were funded largely by the FEMA Assistance to Firefighters Grant program (AFG).

This report summarizes the results of the national survey. It was preceded by a survey of 30 communities that had participated in home safety visit studies under previous AFG grants to IFE and WSAFM. The previous survey, of interest in itself and reported in a separate document, also served as a test of the questionnaire. The surveys were developed and analyzed for these organizations by the TriData Division of System Planning Corporation.

Survey Methodology

A link to a voluntary questionnaire was disseminated online through the auspices of several fire organizations

- Vision 20/20 email list
- FEMA Assistance to Firefighter Grants Program mailing list
- CRRNet
- EPARADE and NFLSE, two email groups focusing on life safety and code issues
- Fire Service trade media
- National Volunteer Fire Council (NVFC) on-line newsletter
- State fire associations
- Social media
- State fire marshals (some of whom passed on the survey request to their own mailing lists)

Survey participants reported the source that led them to the survey. The most frequently cited source was a Vision 20/20 email, accounting for 21% of responses. Another 10% of respondents cited their state associations as the source, and another 10% cited an AFG email distribution. CRRnet, EPARADE, National Volunteer Fire Council newsletter, the National Fire and Life Safety Educators NFLSE, and social media accounted for most of the rest.

Many fire chiefs and fire marshals forwarded the survey to their firefighters. Thus some of the respondents self-selected, and others were asked to respond. Knowing that the survey was about prevention probably biased the results toward those interested in prevention. It was not feasible within the resources and time to get a truly random sample, but, as will be discussed below, the sample obtained was large and well distributed, and consisted mostly of line firefighters not assigned to prevention, as was the survey target.

The firefighters filled out the questionnaire online, using the Survey Monkey website application that was used both to design the questionnaire and to record and analyze the results. The key questions on

the survey addressed the firefighters' experience in prevention, their attitudes toward prevention, and their willingness to participate in making home visits as part of Community Risk Reduction.

Respondent Profile

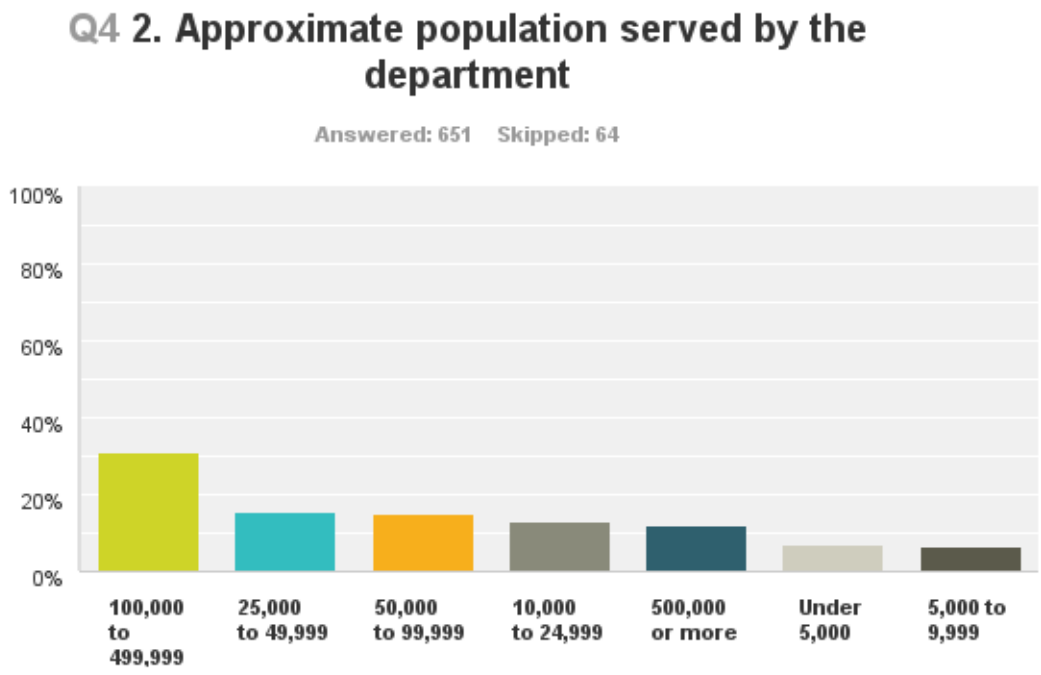
There were 711 firefighters who answered the first question, on how they found out about the survey. The vast majority of respondents, about 650 firefighters, went on to answer each question. About 72 respondents did not answer one or more of the additional questions.

The responding firefighters came from 177 fire departments in 42 states. Alaska had the most responses, mostly from the city of Anchorage. Alaska has often had the most fire deaths per capita among states. There were no respondents from eight states:

- Kansas
- Massachusetts
- Montana
- Nevada
- Rhode Island
- Utah
- Vermont
- West Virginia

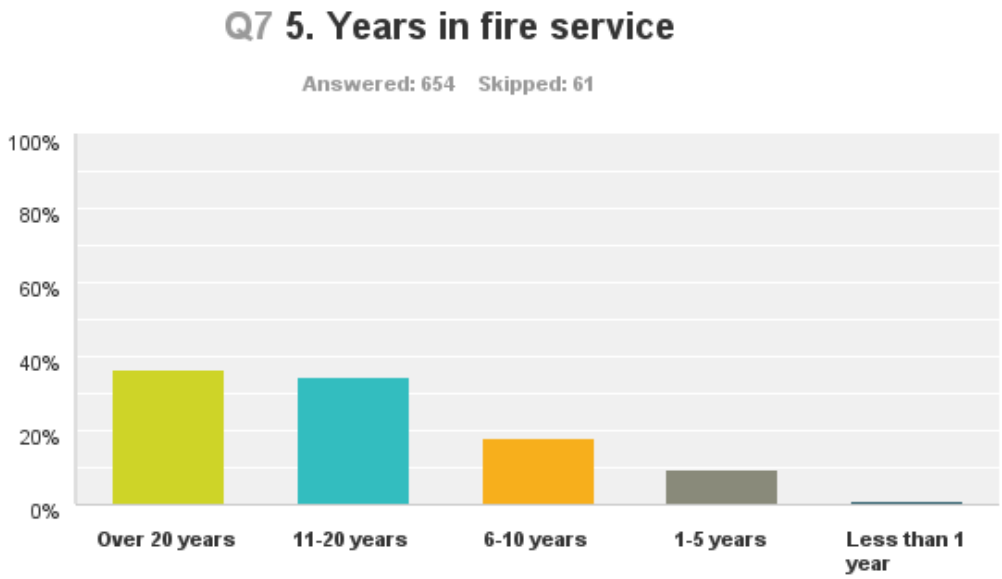
The fact that there were no responses from these states should not be interpreted as a lack of interest or activity. Since this was not a randomized survey, it could be simply that the information about the survey was not widely distributed in these states. Some other states had disproportionately low participation relative to population, notably NY. It seemed to vary by whether or not a fire chief sent the survey to their firefighters.

All population sizes were well represented, from metro cities to small towns and rural districts. About 49% of the respondents who answered questions were from all-career departments, 30% from combination departments, and 13% (89) from volunteer departments. (We analyzed the volunteers as a separate group as well as part of the total group, because of their special problems in doing prevention work on a large scale.)



Almost half (46%) of respondents were firefighters; another 30% were officers below battalion chief; 16% were battalion chiefs or higher.

Most respondents were highly experienced (71% had more than 10 years of service), while only 1% had less than a year of experience).



Some cities had large numbers of firefighters responding, evidently from the chief asking them to do so. Others had only one or two respondents.

About 79% said their primary assignment was operations, which was the target group. Another 6% were in management services; 4% in prevention; 1% support services; and the rest did not answer. About 5% of respondents were female.

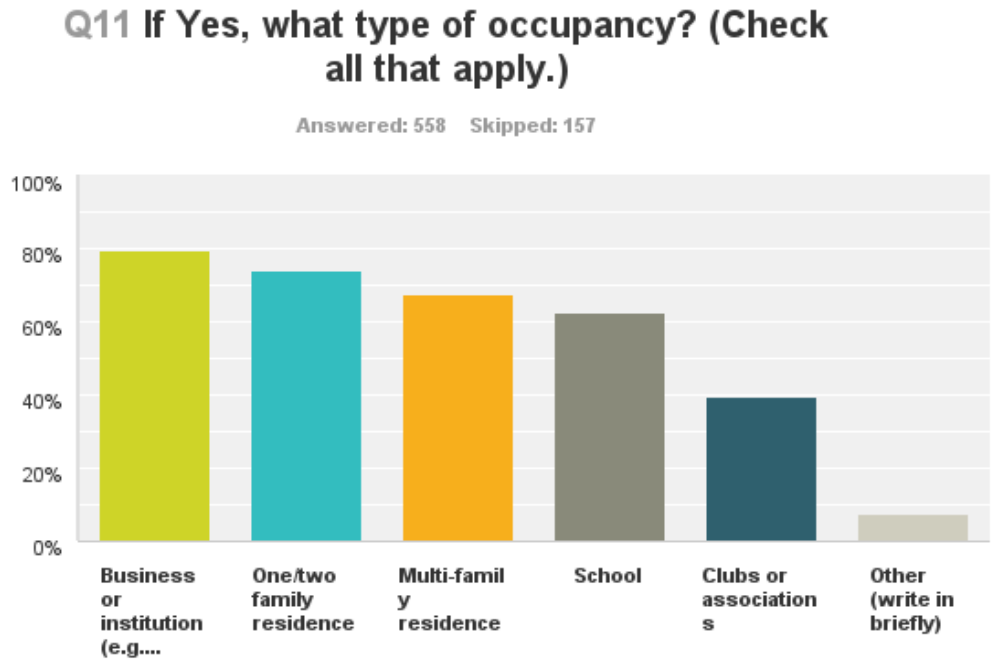
Overall, this was a good distribution though not a pure random sample. It would be highly desirable to repeat the survey with a more random sample. Still, getting opinions from 650 firefighters spread across the nation, with most in operations, is probably not going to be too far from what we would expect from a purely random sample.

The main analysis below used all of the data from all respondents. In the Appendix, we present bar charts comparing the overall answer distribution with the subgroups of those in operations and those in volunteer department.

Findings

1. **Participation in Inspections—** 78% of the firefighters said they had participated in a fire safety inspection during their career. This seemed high and encouraging. It possibly reflected a self-selection of firefighters with above-average interest and experience in prevention, but also may reflect growing use of line firefighters for at least simple inspections.

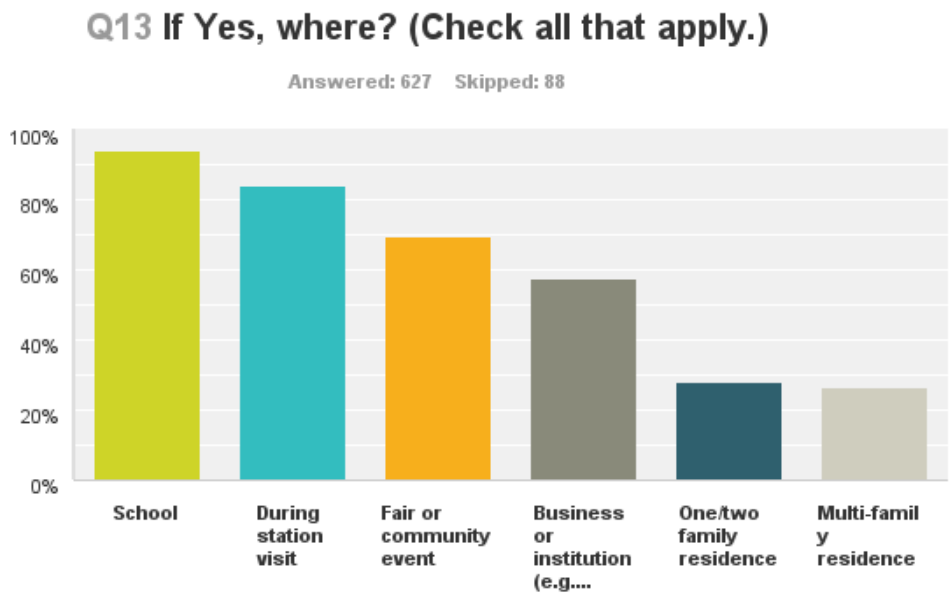
79% also said they had inspected businesses or institutions, and a very surprising two-thirds or more said they had done inspections in the occupancy categories of single-family homes, multi-family dwellings, and schools. Many had done at least some inspections in residential and commercial occupancies. It is very encouraging that even a biased sample of line firefighters would have that broad inspection experience as part of their careers, and that the ice had been broken on making single-family dwelling visits by many. We did not ask about the frequency of the visits, nor about the nature of the inspection, which would be good details to collect on future surveys.



2. **Participation in Public Education—** Even higher than the participation in inspections was participation in public education; 88% of the firefighters said they had participated in public fire education. Of these:

- 94% said their fire safety education experience had occurred in schools. (It is common practice for fire units to visit their neighborhood schools.)
- 84% said they had participated in fire safety education during station visits by the public. Those visits, too, are a very common practice, especially during National Fire Prevention Week.

- 70% said they participated in public education during fairs and community events; which is again not surprising.
- 58% said they conducted public education efforts in businesses or institutions
- 30% said they did some fire safety education in one- or two-family residences, multi-residences or both. So about a quarter of all firefighters who responded had some experience in conducting fire safety education in the home. This is a relatively low number, but also indicates that there is potential for growing the number of line firefighters involved in home safety visits.



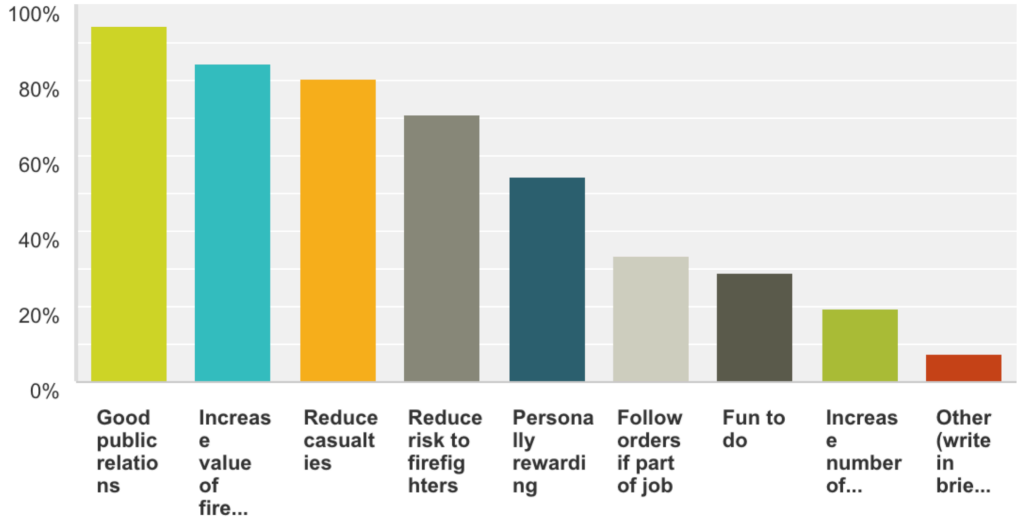
3. Views about Home Fire Safety Visits— When asked if they thought that their fire department should make home fire safety visits, 55% said 'Yes'. And 68% of respondents indicated that they personally would be willing to participate in home fire safety visits.

It seems very important to know and apply what firefighters think are the benefits of home safety visits when promoting such visits to the fire service. It also seems very important to know why some firefighters do not want to make home visits, to see if the barriers can be overcome or are in fact based on false assumptions.

Why do home visits?—The two leading reasons given for doing home safety visits were **good public relations** and increasing the value of the fire department to the community. (Improved public relations were, in fact, a result of home visit programs in at least some of the cities that have done extensive home visits.). Other key reasons given by more than 80% of the firefighters for undertaking home visits were the **reduction of risk to the firefighter and reduction of risk to the public**. That is an important pairing for the fire service to appreciate: not only will you reduce civilian casualties, but also reduce the risk to yourself.

If Yes, why? (Check all that apply.)

Answered: 489 Skipped: 227



Answer Choices		Responses	
Good public relations		94.27%	461
Increase value of firefighters to community		84.46%	413
Reduce casualties		80.37%	393
Reduce risk to firefighters		70.96%	347
Personally rewarding		54.60%	267
Follow orders if part of job		33.74%	165
Fun to do		29.24%	143
Increase number of firefighter positions		19.43%	95
Other (write in briefly)	Responses	7.57%	37
Total Respondents: 489			

More than half of respondents replied that home visits would be personally rewarding, and about one-third stated that it would be a fun activity. But about one-third (34%) of respondents said that they would participate in home visits only if they were following orders as a part of their job duties. Thus it may be necessary to make clear in work contracts that prevention activities such as home visits are to be considered part of the job, not something special.

A significant number of respondents wrote in that conducting fire safety home visits was an opportunity to preplan houses and increase area familiarization. Examples of other reasons written in:

"It is good for the community to know the faces of its firefighters."

"It's better to be proactive than reactive."

"It's the right thing to do"

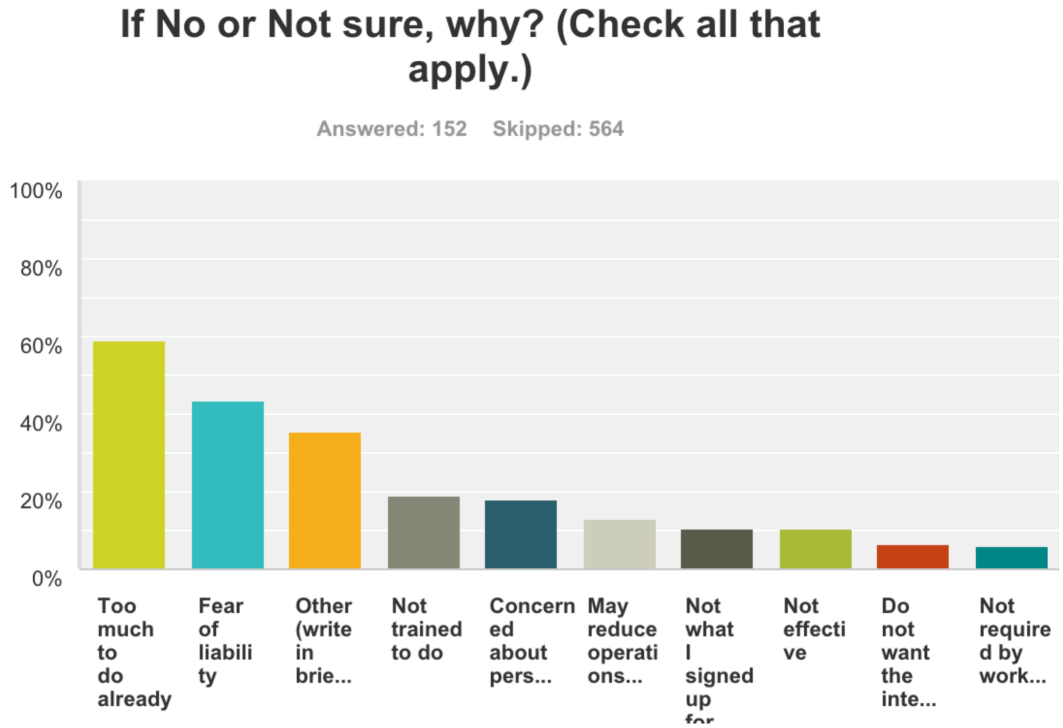
"Lead By example"

"Prevent the 911 call."

"Opportunity for recruitment."

"What if the one you installed saved a life?! Awesome!"

3. **Why not do home visits?—** The main reason given by those who said they did not want to do home visits was **lack of time** to do them. This suggests the need for a true community risk reduction strategy that considers all of the things firefighters do, and balances priorities. Making time for home visits in a busy department may have to be achieved by reducing other tasks. The irony is that a strong home visit program that results in more working smoke alarms and better safety education may reduce calls for minor fires. In other words, home visits made in a busy department may reduce its activity.



Answer Choices	Responses	
Too much to do already	59.21%	90
Fear of liability	43.42%	66
Other (write in briefly) Responses	35.53%	54
Not trained to do	19.08%	29
Concerned about personal safety	17.76%	27
May reduce operations jobs	13.16%	20
Not what I signed up for	10.53%	16
Not effective	10.53%	16
Do not want the interaction with occupants	6.58%	10
Not required by work contract	5.92%	9
Total Respondents: 152		

Many dentists opposed fluoridation because it would reduce cavities and was bad for business. But much of the dentists' occupation shifted to plying prevention skills, and they are as busy as ever, just doing a different mix of activities to improve dental hygiene. The same may happen with firefighting.

The second leading reason given for not making home visits (43% of respondents) was concern about **liability**. Again, this is important for those promoting home visits to know. Liability is rarely an issue. Firefighters need to know that, and perhaps have some sort of insurance safety net, so they don't have to worry about liability. Liability can be further reduced in some states by having the occupant sign a waiver about any smoke alarms given to their household.

Also illuminating are the almost 20% of respondents who indicated that a **lack of training** and concerns about **personal safety** were reasons not to make home visits. A lack of training is easily remedied, through the introduction of home visit policies and procedures. It does not take long to train a firefighter on how to conduct a home safety visit and test smoke alarms. Vision 20/20 and the Washington State Fire Marshals Association have recently developed a step-by-step manual for conducting home visits, which can be used as the basis for a home visit training program.

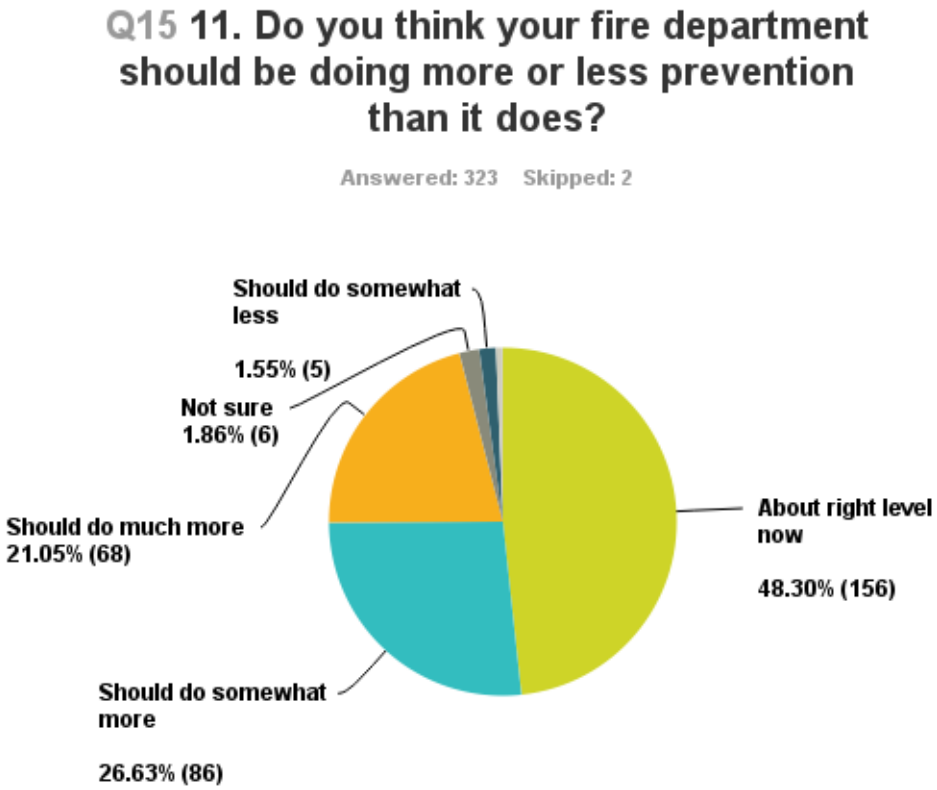
The concerns about personal safety (whether from lack of training or fears about interactions with the public, especially in high-risk areas, may be assuaged through the presentation of safety programs citing the low statistics of assaults or injuries from home visits, and the SOP of working in pairs. Home safety visits are conducted only with the concurrence of the residents in homes. The visits are not mandatory, and not called inspections.

Some other concerns about making home visits that were written-in:

> "[Whether to undertake home visits] would depend on how the program was set up. Firefighters are well regarded in the community. If we were to INSIST that we enter people's homes… our stature is subject to change. People do not view the invasion of privacy very well. If the program was VOLUNTARY on the part of the homeowner it would be openly accepted and a great benefit to the Community and Department. [The home visit programs are voluntary, which indicates the lack of awareness of this crucial detail.]
>
> "It would be good to do [home visits], but we are so short on manpower that we have a hard time doing the extras let alone the calls." [This begs the question of whether home visits should be considered "an extra".]
>
> "Let the people visiting homes be a paid position where that is all they do. I am also not opposed to doing them myself on my days off." [if firefighters are totally busy, this would be less expensive than using firefighters; if there is some time apart from training and answering calls, then it is less expensive to use the incremental time of firefighters for home visits.]
>
> "With the limited time modern urban fire departments have to conduct public education, the time would be [better] spent with larger audiences rather than one household at a time."
>
> "I do not wish to interfere with the individual rights of homeowners in an official capacity."

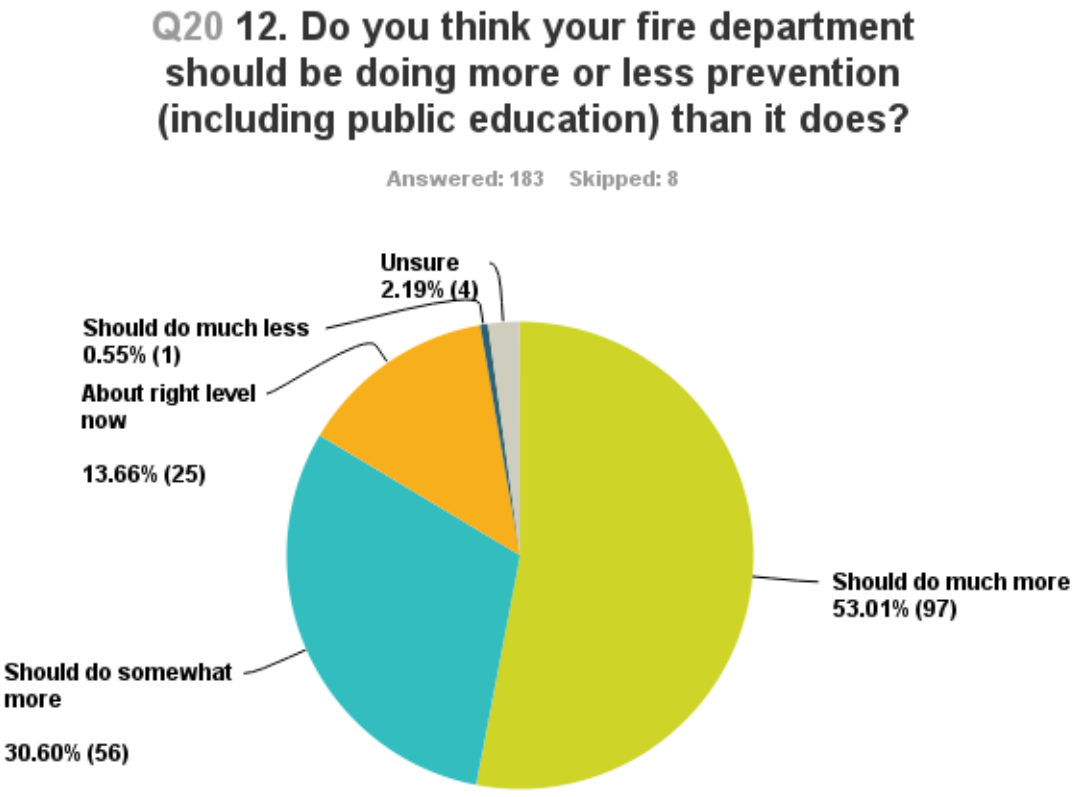
Because this survey was not based on a random sample, we don't know how closely the results would match those of a larger, more random sample. But the answers all ring true in our experience in working to implement home visit programs in 30 fire departments over the past five years. Surely most of the pros and cons apply to many departments. It might be a good idea for individual departments to use the questionnaire to do their own internal survey to understand how their firefighters are thinking about prevention, and home visits in particular, and then address the issues found.

4. Volume of fire prevention activities - For career departments, when personnel identified as being in operations, almost half of the respondents (48%) felt that their department was doing "about the right level" of fire prevention activities.



Career Departments, Operations Personnel

However, in a parallel survey done of fire prevention managers, only 14% of the respondents from career departments/prevention personnel said that they were at the right level now, representing a significant difference in attitude between the two disciplines.



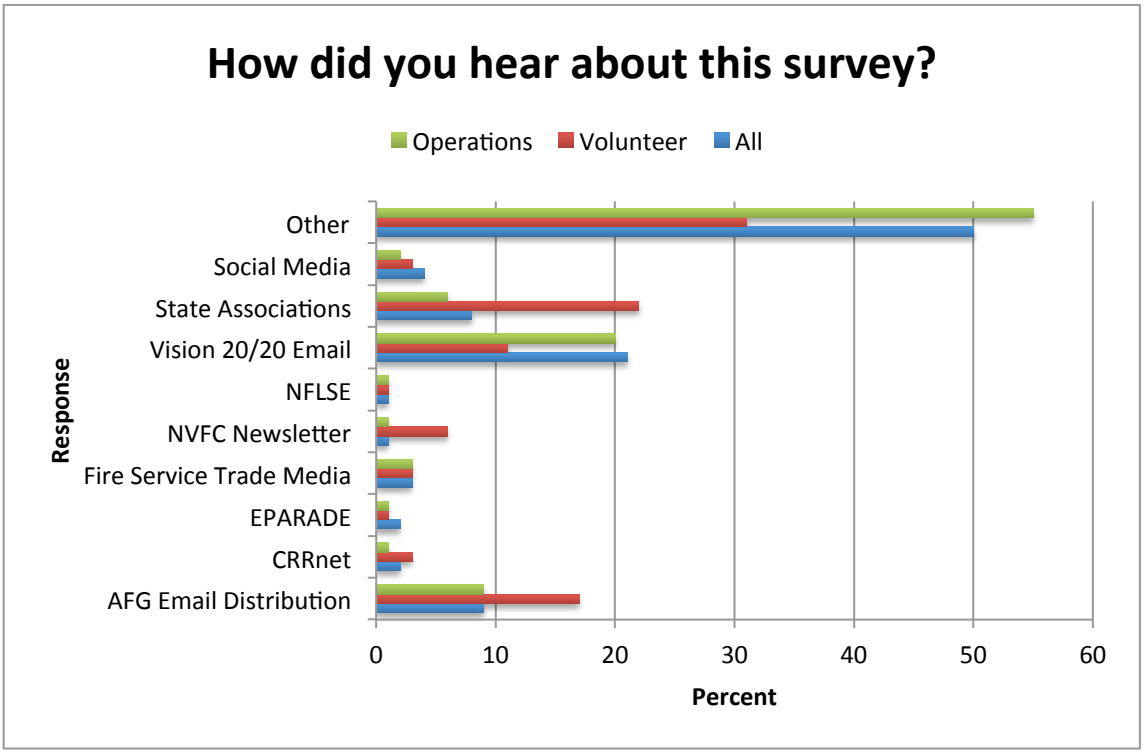
Career Departments, Prevention Personnel

APPENDIX – Comparison of survey results from different fire service groupings

The following diagrams illustrate the comparative answers from the total survey population and two subsets, Volunteers and Operations personnel.

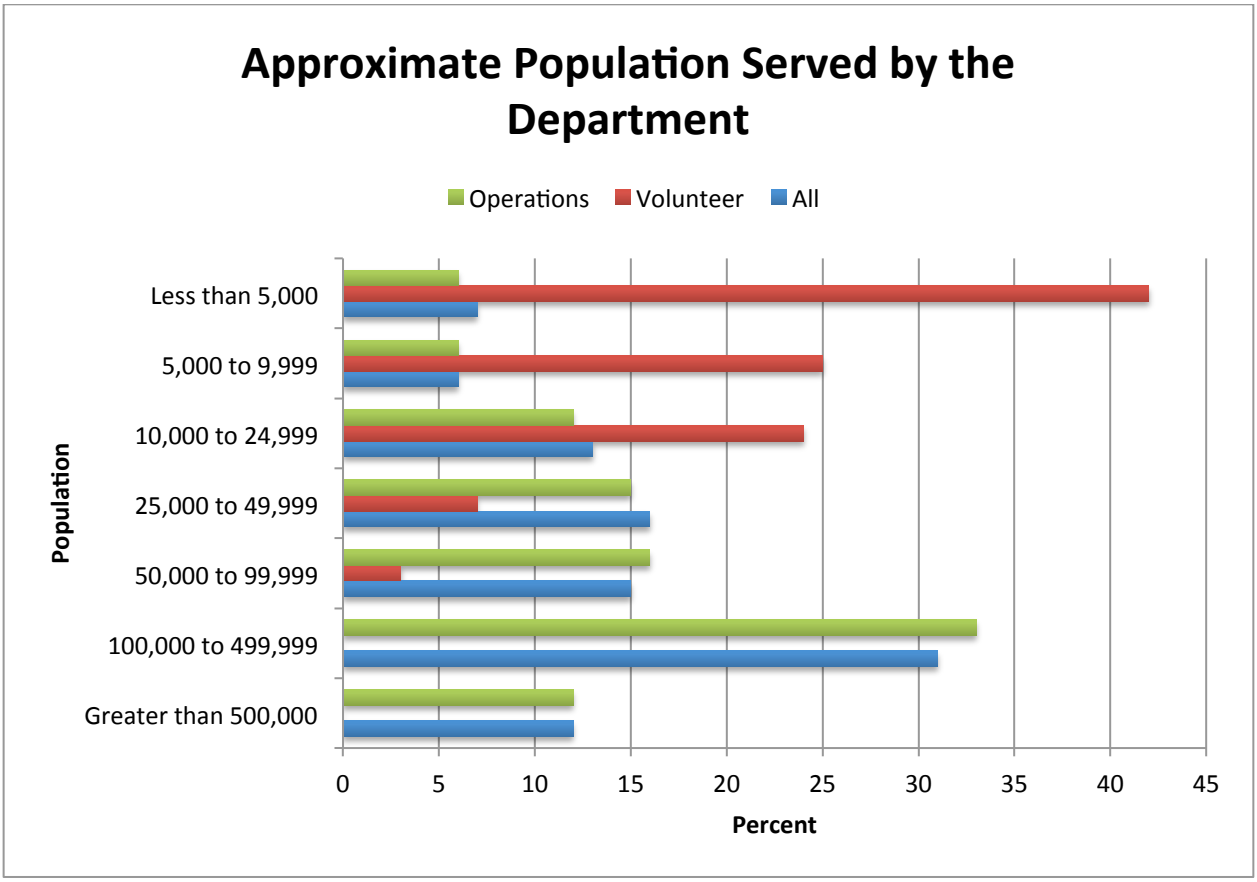
Source Question: How did you hear about this survey?

Volunteers heard about the survey more from state associations and from the AFG mailing than did other groups.



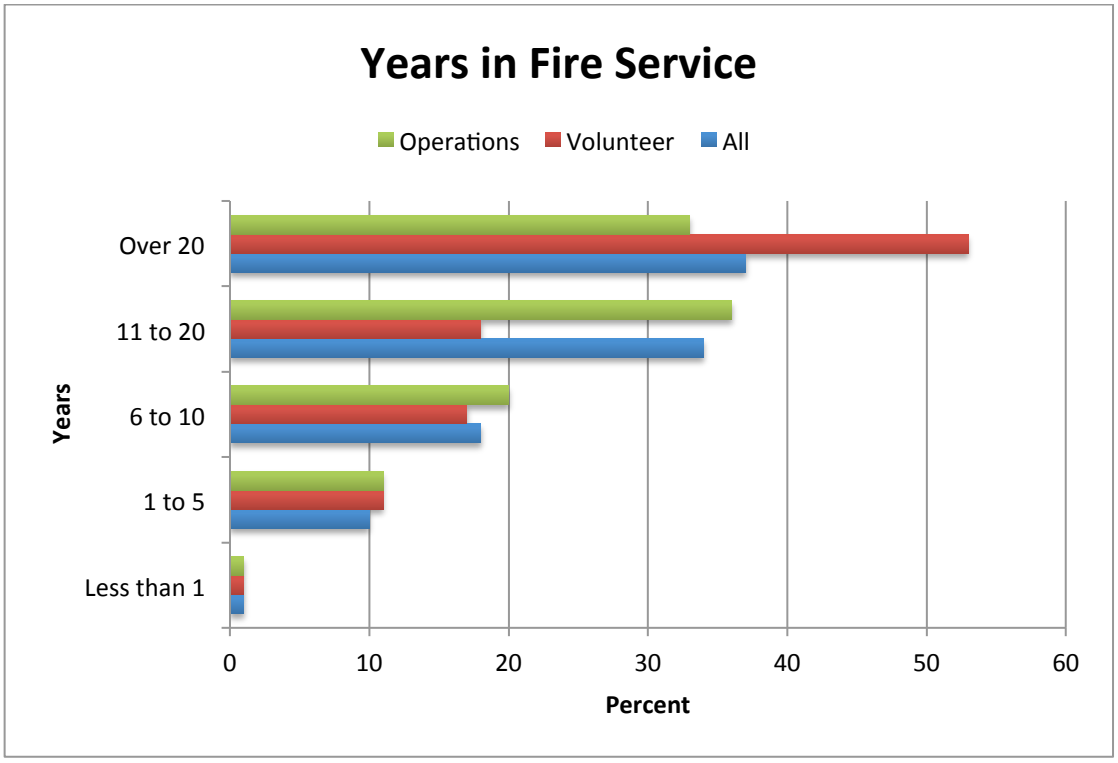
Question 2: Approximate Population Served by the Department

As would be expected, the volunteers tended to come from departments under 25,000 population.



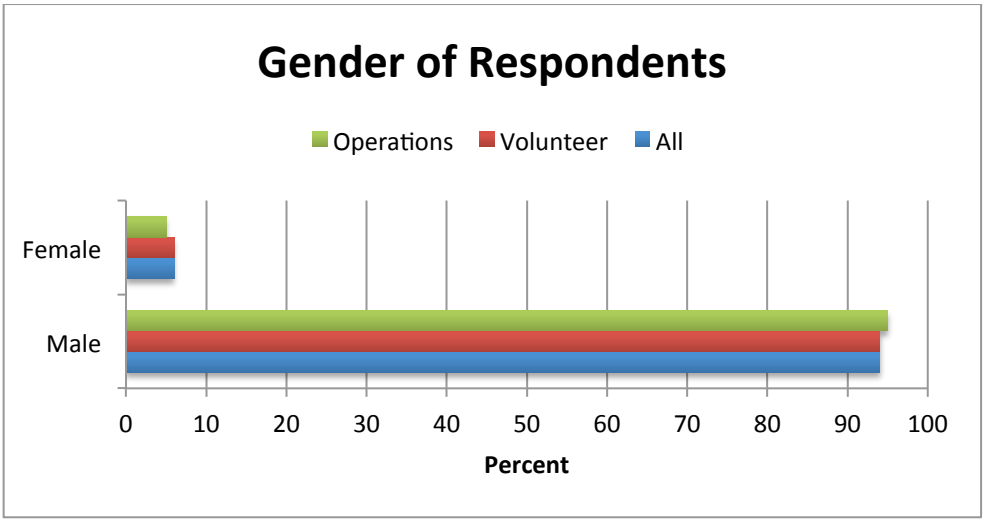
Question 5: Years in Fire Service

Rather surprising, the volunteers who responded tended to have been in the fire service longer than career respondents.



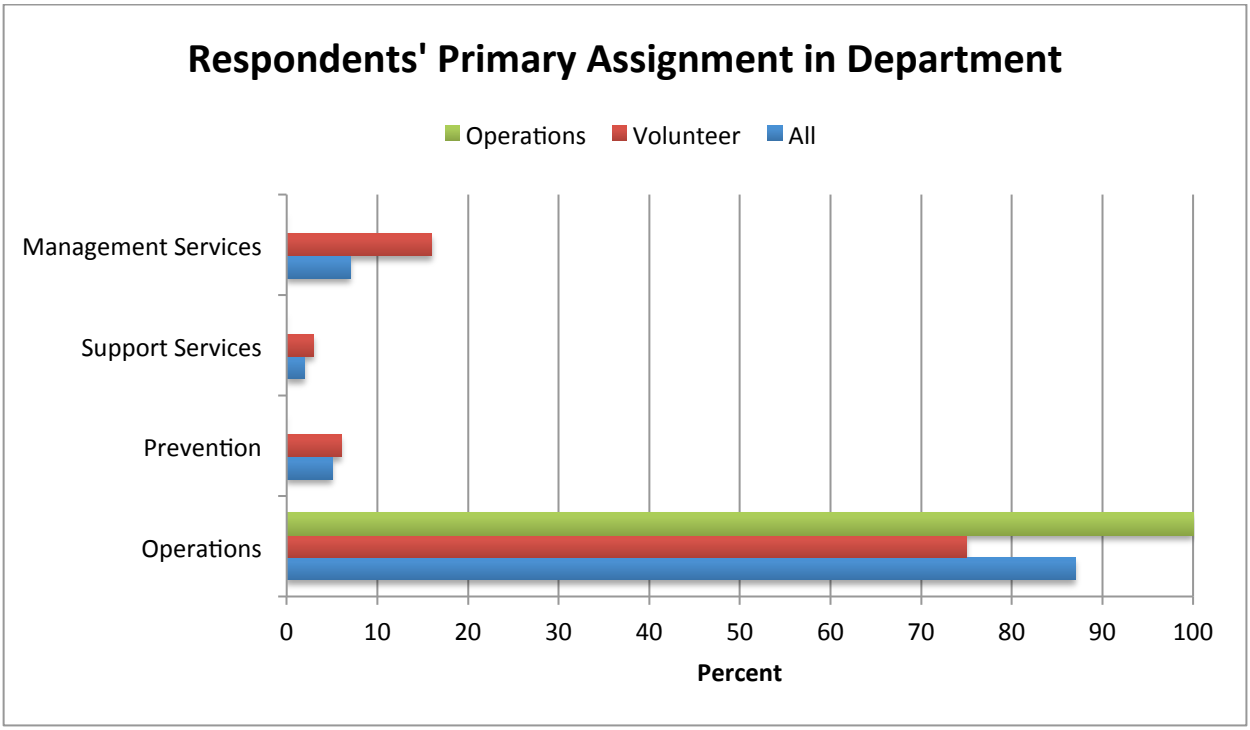
Question 6: Gender

Quite similar across the groups.



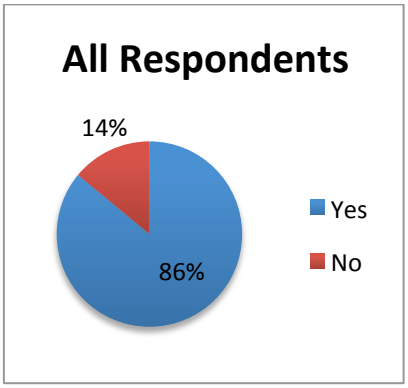
Question 7: Primary Assignment in Department

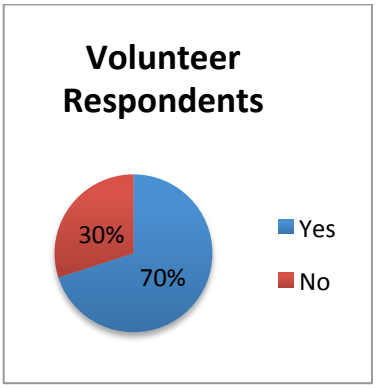
Somewhat more of the volunteer respondents tended to be in management, which was consistent with their greater years of service.

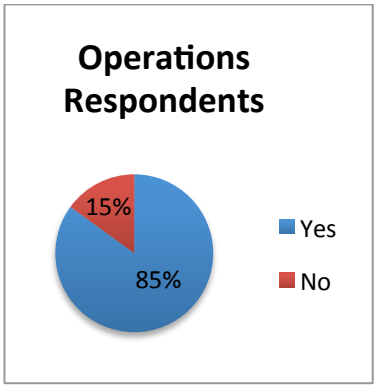


Question 8: Have you ever participated in a fire safety inspection or home visit of any kind?

A somewhat higher percentage of the operations respondents (85%) had been involved in inspections or home visits than the volunteers (70%).

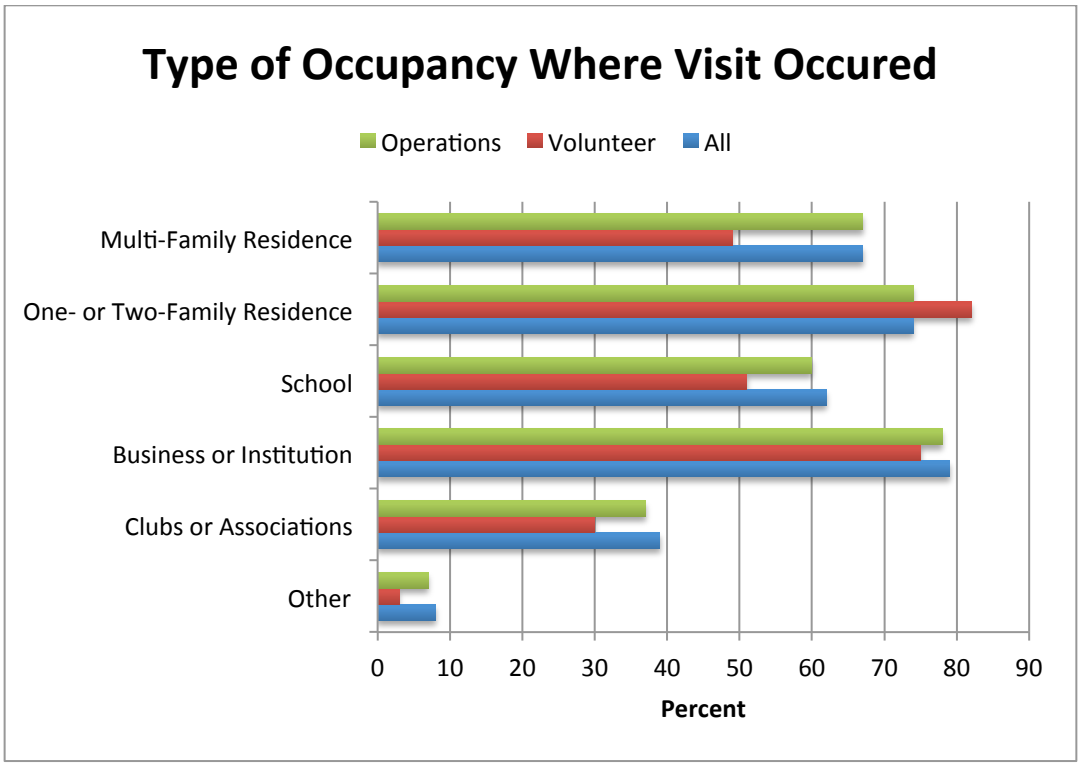




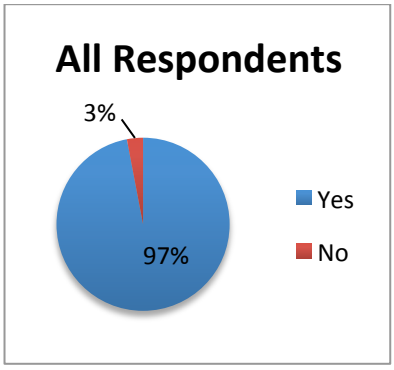


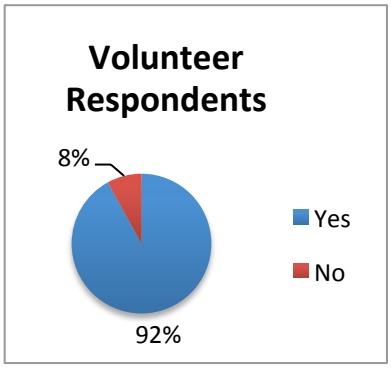
Question 8a: If Yes, where?

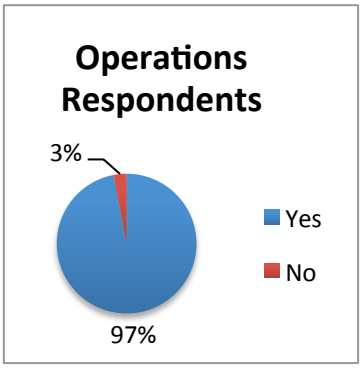
Quite similar across groups.



Question 9: Have you ever participated in conducting fire safety education?

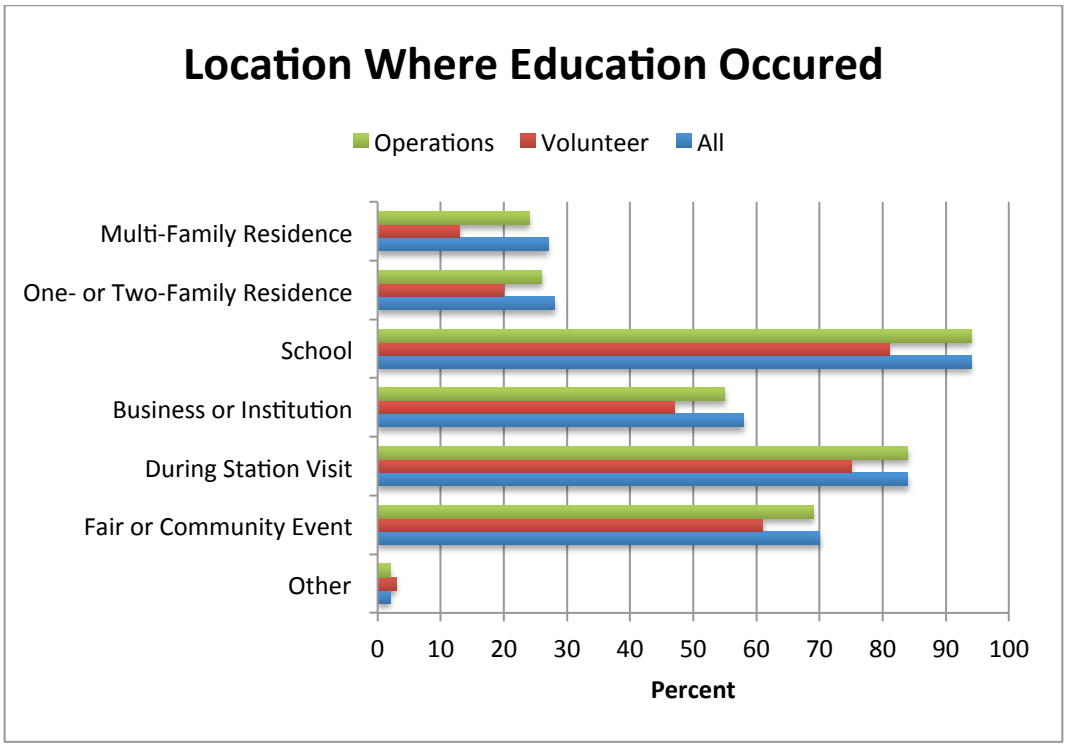






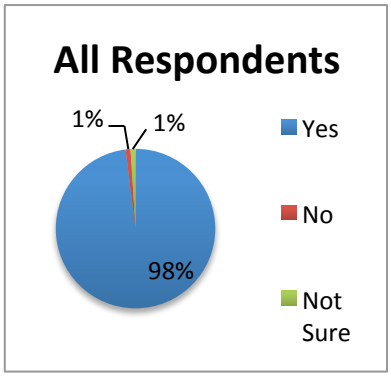
Question 9a: If Yes, where did the education occur?

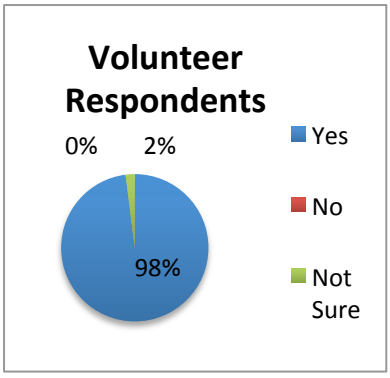
Fewer volunteers did home visits.

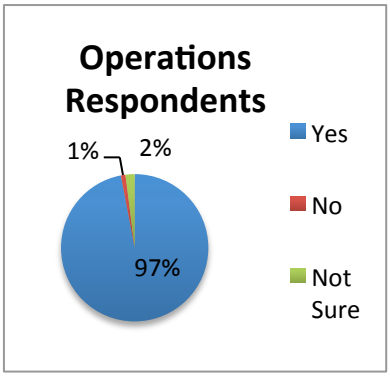


Question 10: Do you think fire/injury prevention is important for your department to do?

Virtually all thought it important.







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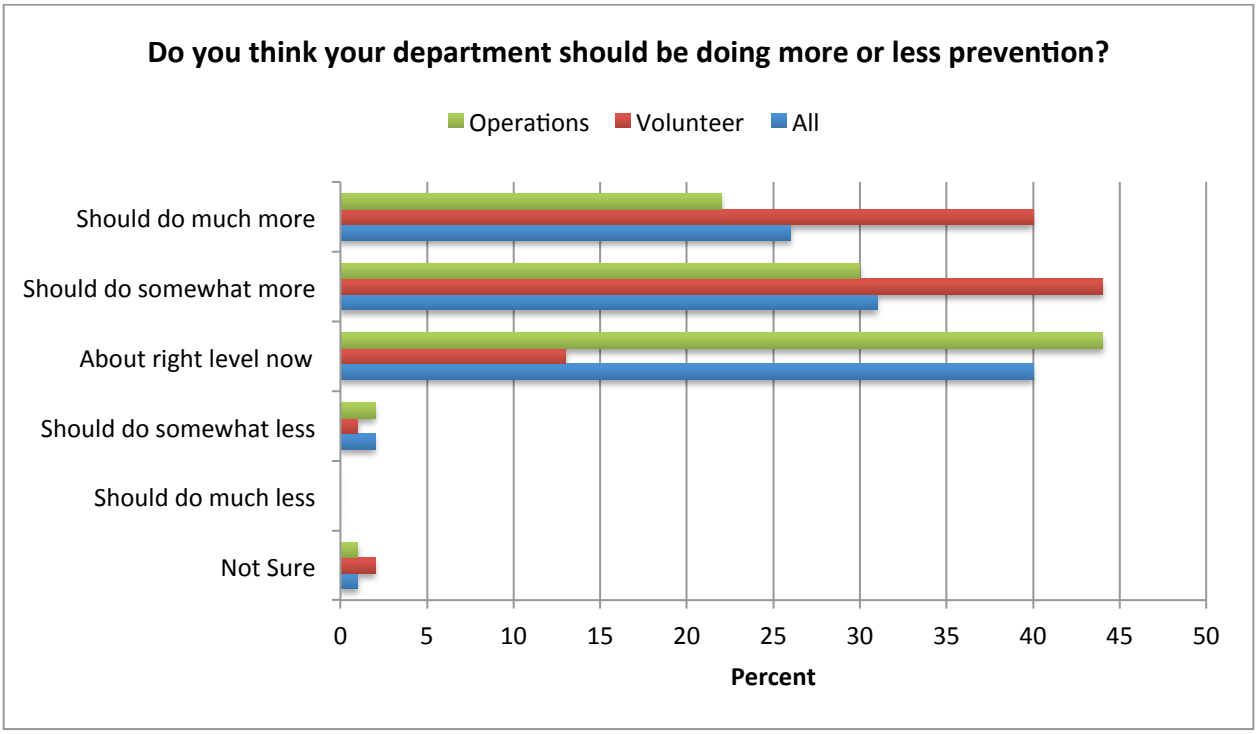
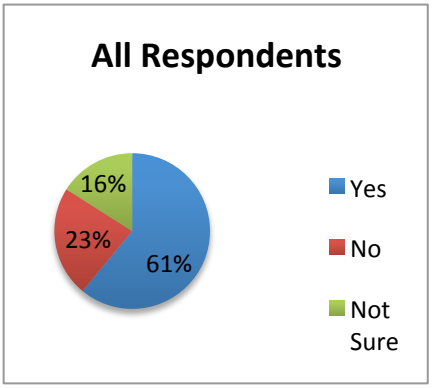
Question 11: Do you think your fire department should be doing more or less prevention than it does?

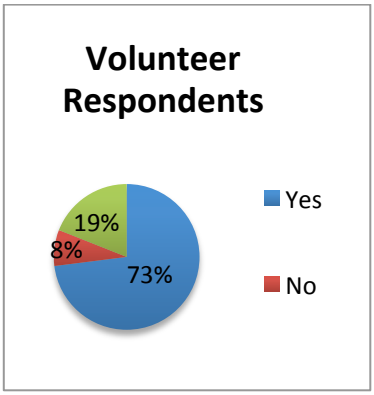
Much larger percentages of the volunteers thought their department should do much more prevention than the other groups. Many volunteer departments do little prevention, because most of the volunteered time is in training or answering calls.

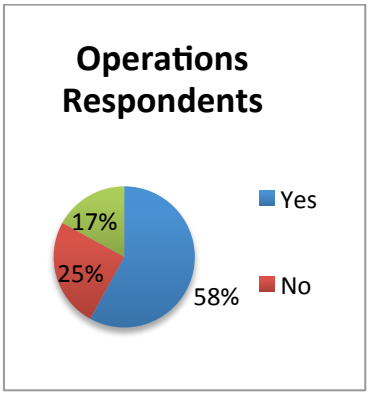


Question 12: Do you think your department should make home fire safety visits?

The majority of all groups thought their department should make home visits, but the volunteers even more so.

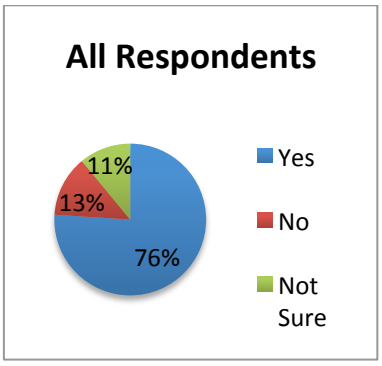


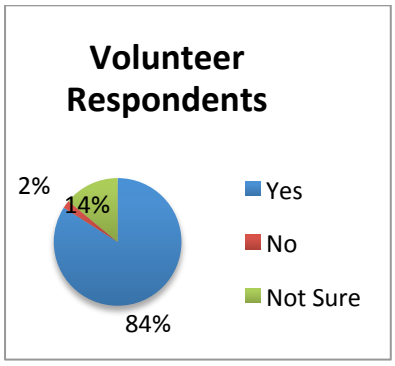


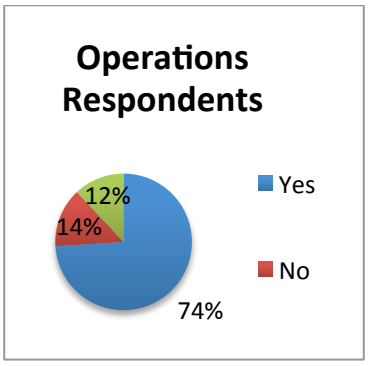


Question 13: Would you be willing to conduct home visits as part of your job?

The majority of all were willing, but again even more of the volunteers.

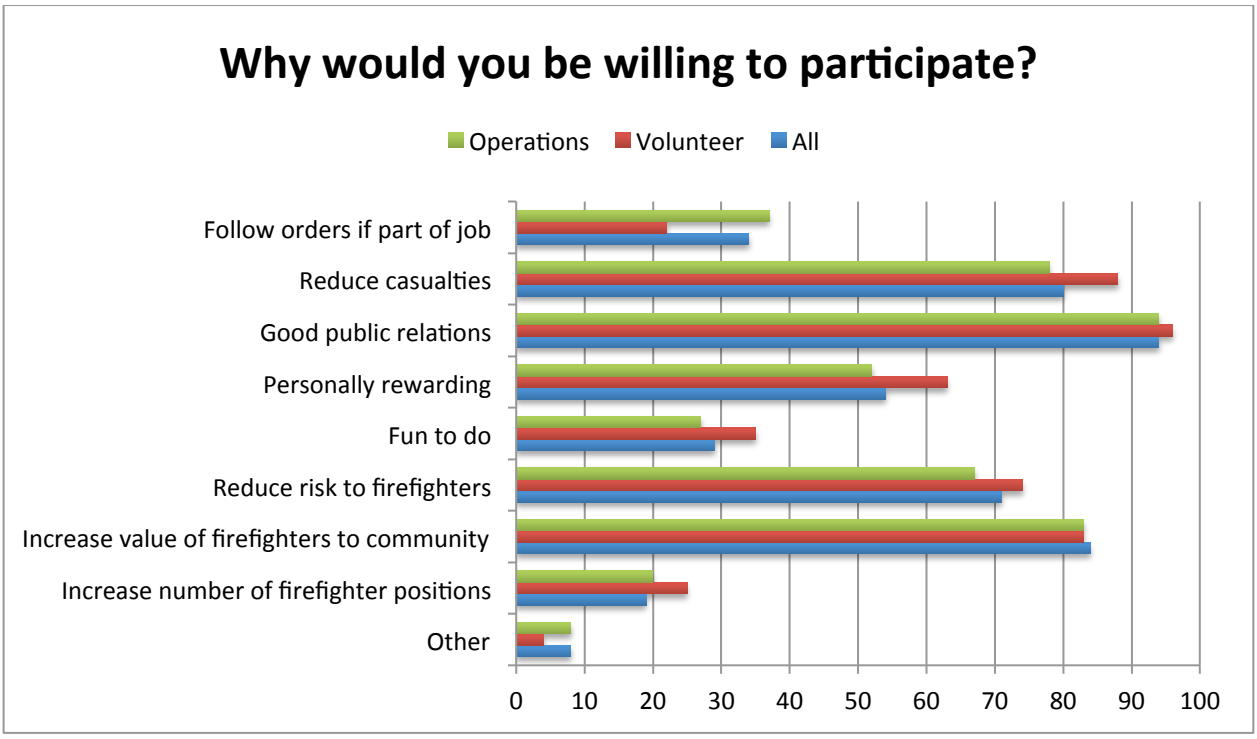






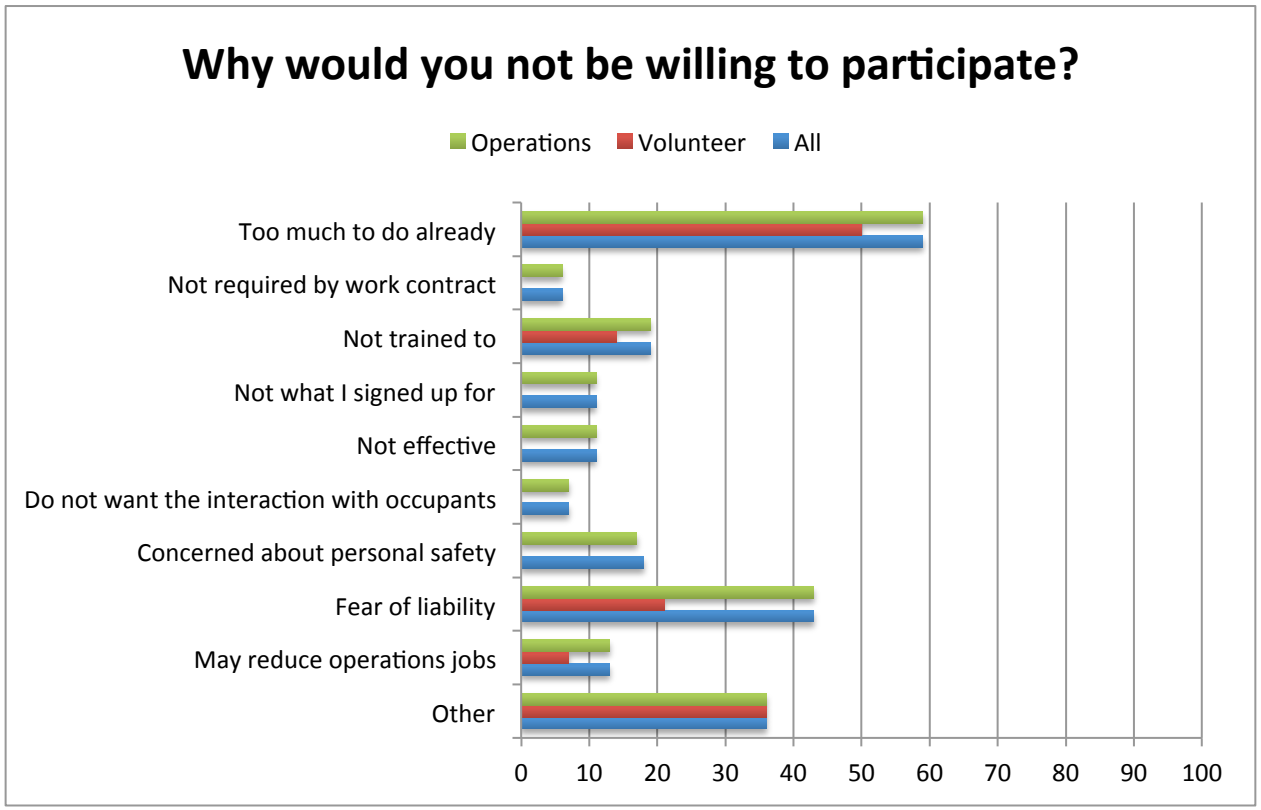
Question 13a: If Yes, Why?

Reasons given were generally similar across groups.



Question 13b: If No, Why not?

There are some surprises here. First, while all groups gave as a reason for not doing home visits that there was too much to do already, the volunteers noted this somewhat less (50%) than the others (59%.) One might have expected the volunteers to feel they had less time to devote to visits than the others. Volunteers had much less concern about liability or personal safety, and some of the work contract reasons did not apply to them.



[i] Philip Schaenman et al, Global Concepts in Residential Fire Safety, Parts 1-3, 2007-2000, TriData, undertaken for CDC and AFG.